



**TENDER NO. KP1/9AA-2/OT/12-ID/16-17  
FOR  
PROVISION OF BUILDING AND CIVIL WORKS AT SIAYA 33/11 KV  
SUBSTATION**

**ALL TENDERERS ARE ADVISED TO READ CAREFULLY THIS TENDER  
DOCUMENT IN ITS ENTIRETY BEFORE MAKING ANY BID**

(E-PROCUREMENT TENDER OPENING SYSTEM)

**(ENSURE TO READ THE APPENDIX TO INSTRUCTIONS TO  
TENDERERS)**

**AUGUST 2016**

THE KENYA POWER & LIGHTING COMPANY LIMITED  
CENTRAL OFFICE, STIMA PLAZA,  
KOLOBOT ROAD, PARKLANDS,  
P.O. BOX 30099-00100,  
NAIROBI,  
KENYA.

Telephones: +254-020-3201000; 3644000 Pilot Lines  
Telephones: +254 -720-600070/1-5/; -733-755001/2-3 Cellular  
Facsimile: +254-20-3514485  
E-Mail: [Jochieng@kplc.co.ke](mailto:Jochieng@kplc.co.ke)  
Email 1: [GNyambare@kplc.co.ke](mailto:GNyambare@kplc.co.ke)  
Email 2: [ATheuri@kplc.co.ke](mailto:ATheuri@kplc.co.ke)  
Website: [www.kplc.co.ke](http://www.kplc.co.ke)

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**ABBREVIATIONS AND ACRONYMS**

1. BDS	Bid Data Sheet
2. BQ	Bills of Quantities
3. CC	Conditions of Contract
4. ICPAK	Institute of Certified Public Accountants of Kenya
5. JV	Joint Venture
6. KSh./ KES	Kenya Shillings
7. PM	Project Manager
8. PPDA 2005	Public Procurement and Disposal Act, 2005
9. PPDR 2006	Public Procurement and Disposal Regulations, 2006
10. PPOA	Public Procurement and Oversight Authority
11. VAT	Value Added Tax
12. KRA	Kenya Revenue Authority
13. LC	Letter of Credit
14. TCC	Tax Compliance Certificate
15. SCC	Special Conditions of Contract

## **SECTION I - INVITATION TO TENDER**

**DATE: August, 2016**

### **TENDER NO. KP1/9AA-2/OT/12-ID/16-17 FOR PROVISION OF BUILDING AND CIVIL WORKS AT SIAYA 33/11KV SUBSTATION**

1.1 The Kenya Power & Lighting Company Limited hereinafter referred to KPLC invites bids from eligible Tenderers for **Provision Of Building And Civil Works At Siaya 33/11kv Substation** Interested eligible Tenderers may obtain further information from the General Manager, Supply Chain , KPLC at Stima Plaza, 3<sup>rd</sup> Floor, Kolobot Road, P.O. Box 30099 – 00100 Nairobi, Kenya.

#### **1.2 Obtaining tender documents.**

1.2.1 Tender documents detailing the requirements may be viewed at KPLC E-Procurement Web Portal found on the KPLC website ([www.kplc.co.ke](http://www.kplc.co.ke)) beginning on **Friday 26<sup>th</sup> August, 2016.**

#### **1.3 Submission of Tender documents**

Completed Tenders are to be **saved as PDF** documents marked **KP1/9AA-2/OT/12-ID/16-17 FOR PROVISION OF BUILDING AND CIVIL WORKS AT SIAYA 33/11KV SUBSTATION** and submitted in the KPLC E-Procurement Web Portal found on the KPLC website ([www.kplc.co.ke](http://www.kplc.co.ke)) so as to be received on or before **22<sup>nd</sup> September, 2016 at 10.00 a.m.**

#### **1.4 Prices**

Offered Price should be inclusive of all taxes, duties, levies and delivery costs to the premises (where applicable) of KPLC or other specified site **must be in Kenya Shillings for local bidders** and shall remain valid for one hundred and twenty (120) days from the closing date of the tender.

#### **1.5 Opening of submitted Tenders**

Tenders will be opened electronically promptly thereafter in the presence of the Tenderer's or their representatives who choose to attend in KPLC Auditorium at Stima Plaza, Kolobot Road, Parklands, Nairobi.

**1.6** There will be a mandatory site/pre-bid meeting at 11.00am **on Thursday, 8<sup>th</sup> September, 2016** at **SIAYA 33/11kV** substation situated at about 0.2km **Off Siaya-Rang'ala Road approx. 3 km from Siaya Town.**

**SECTION II - TENDER SUBMISSION CHECKLIST**

This order and arrangement shall be considered as the Tender Submission Format, Tenderers shall tick against each item indicating that they have provided it in the same order.

<b>No.</b>	<b>Item</b>	<b>Tick Where Provided</b>
1	Tender Security	
2	Company or Firm's Registration Certificate	
3	PIN Certificate or its equivalent for foreign companies	
4	Valid Tax Compliance Certificate or its equivalent for foreign companies	
<b>GENERAL REQUIREMENTS</b>		
1	Form of Tender	
2	Price Schedule(s)	
3	Declaration Form	
4	Confidential Business Questionnaire (CBQ)	
5	Duly completed Qualification Information Form. This should include the required attachments as per the form	
6	Proposed Work program(Work method & schedule)	
7	Duly completed Site Visit Form	
8	Copy of Contractor's Certificate of Incorporation	
9	Copy of Contractor's Certificate of Registration for the relevant category.	
10*	Copy of Valid Tax Compliance Certificate	
11	List of previous clients of the Contractor for similar works indicating physical addresses.	
12	Reference letters from previous clients of the Contractor for similar works. Four Names with full contact as well as physical addresses of previous clients of similar works together with a letter from each of them confirming completion of the contracts on schedule.	
13	Copy of Sub-Contractor's Certificate of Registration	
14	Copy of Sub-Contractor's Certificate of Registration for the relevant category.	
15	List of previous clients of the Sub-Contractor for similar works indicating physical addresses.	
16	Reference letters from previous clients of the Sub-Contractor for similar works.	

No.	Item	Tick Where Provided
17	Priced Bill of Quantities (signed and stamped by bidder)	
18	Duly completed Tender Form (Financial)	
19	<p>Audited Financial Statements. The audited financial statements Required must be those that are reported within fifteen (15) Calendar months of the date of the tender document.</p> <p>2. For companies or firms that are registered or incorporated within the last one calendar year of the Date of the Tender Document, they should submit certified copies of bank statements covering a period of at least six months prior to The date of the tender document. The copies should be Certified by the Bank issuing the statements. The Certification should be original).</p> <p>3. Youth, Women and Persons with Disability whose Companies or firms have been registered or incorporated recently, they should submit certified copies of bank statements covering The period of existence. The certification should be original.</p>	
20	Any other document or item required by the Tender Document. (The Tenderer shall specify such other documents or items it has submitted)	

**\*NOTES TO TENDERERS**

- Valid Tax Compliance Certificate shall be one issued by the relevant tax authorities and valid for at least up to the tender closing date. All Kenyan registered Tenderers must provide a valid Tax Compliance Certificate.

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### **SECTION III - INSTRUCTIONS TO TENDERERS (ITT)**

#### **3.1 Definitions**

In this tender, unless the context or express provision otherwise requires: -

- a) *Any reference to any Act shall include any statutory extension, amendment, modification, re-amendment or replacement of such Act and any rule, regulation or order made there-under.*
- b) *“Date of Tender Document” shall begin with the first day and end on the last day of the month appearing on the cover page of the Tender Document.*
- c) *“Day” means calendar day and “month” means calendar month.*
- d) *“KEBS” wherever appearing means the Kenya Bureau of Standards or its successor(s) and assign(s) where the context so admits.*
- e) *“PPOA” wherever appearing means The Public Procurement Oversight Authority or its successor(s) and assign(s) where the context so admits.*
- f) *Reference to “the tender” or the “Tender Document” includes its appendices and documents mentioned hereunder and any reference to this tender or to any other document includes a reference to the other document as varied supplemented and/or replaced in any manner from time to time.*
- g) *“The Procuring Entity” means The Kenya Power and Lighting Company Limited or its successor(s) and assign(s) where the context so admits (hereinafter abbreviated as KPLC).*
- h) *“The Tenderer” means the person(s) submitting its Tender for the performance of Works in response to the Invitation to Tender. This may include a business name, joint venture, private or public company, government owned institution or any combination of one or more of them.*
- i) *Where there are two or more persons included in the expression the “Tenderer”, any act or default or omission by the Tenderer shall be deemed to be an act, default or omission by any one or more of such persons.*
- j) *words importing the masculine gender only, include the feminine gender or (as the case may be) the neutral gender.*
- k) *words importing the singular number only include the plural number and vice-versa and where there are two or more persons included in the expression the “Tenderer” the covenants, agreements and obligations expressed to be made or performed by the Tenderer shall be deemed to be made or performed by such persons jointly and severally.*
- l) *“Works” means the construction, repair, renovation or demolition of buildings, roads or other structures and includes the installation of equipment and materials, site preparation and other incidental services.*
- m) *Citizen contractors-a firm shall be qualified as a citizen contractor if its owners and shareholders are Kenyan citizens*
- n) *Local contractors- a firm shall be qualified as a local contractor if it is registered in Kenya.*

#### **3.2 Eligible Tenderers**

- 3.2.1 **This Invitation to Tender is open to all Tenderers eligible as described in the Bid Data Sheet.** Successful Tenderers shall perform the Works in accordance with this tender and the ensuing contract.
- 3.2.2 The classification of eligibility shall be in accordance with that maintained by Kenya's Ministry of Public Works or its successor responsible for the classification of contractors.
- 3.2.3 Government or government owned institutions in Kenya may participate only if they are legally and financially autonomous, if they operate under commercial law, are registered by the relevant registration board or authorities and if they are not a defendant agency of the Government.
- 3.2.4 Local Tenderers i.e. Kenyan registered companies whose operations are based in Kenya shall satisfy all relevant licensing and/or registration with the appropriate statutory bodies in Kenya such as the Ministry of Public Works or the Energy Regulatory Commission.
- 3.2.5 Tenderers shall provide such evidence of their continued eligibility satisfactory to KPLC as KPLC may reasonably request.
- 3.2.6 Tenderers (including all members of a joint venture and subcontractors) shall provide a statement that they are not associated, or have not been associated in the past, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for this project or being proposed as Project Manager for this Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the Works, and any of its affiliates, shall not be eligible to tender

### **3.3 Ineligible Tenderers**

- 3.3.1 Notwithstanding any other provisions of this tender, the following are not eligible to participate in the tender:-
- a) KPLC's employees, its Board or any of its committee members.
  - b) Any Minister or Assistant Minister of the Government of the Republic of Kenya (GoK)
  - c) Any public servant of GoK.
  - d) Any member of a Board or Committee or any department of GoK.
  - e) Any person appointed to any position by the President of Kenya.
  - f) Any person appointed to any position by any Minister of GoK.
- 3.3.2 For the purposes of this paragraph, any relative i.e. spouse(s) and child(ren) of any person mentioned in sub-paragraph 3.3.1 is also ineligible to participate in the tender. In addition, a Minister shall include the President, Vice-President or the Attorney General of GoK.

### **3.4 Declarations of Eligibility**

- 3.4.1 Tenderers shall not be under declarations of ineligibility for corrupt, fraudulent practices and are not amongst persons mentioned in sub-paragraphs 3.3.1 and 3.3.2 above.
- 3.4.2 Tenderers who are not under these declarations shall complete the Declaration Form strictly in the form and content as prescribed at Section XI (v).

- 3.4.3 Those that are under the Declaration for corrupt and fraudulent practices whether currently or in the past shall not complete the Form. They will submit a suitable Form giving details, the nature and present status of their circumstances.

### **3.5 Joint Venture**

- 3.5.1 Tenders submitted by a joint venture (JV) of two or more firms (consortium), as partners shall comply with the following requirements: -

- a) The Tender Form and in case of a successful tender, the Contract Agreement Form, shall be signed so as to be legally binding on all partners of the joint venture.
- b) One of the partners shall be nominated and authorized as being lead contractor. The authorization shall be evidenced by submitting a Power of Attorney signed by legally authorized signatories of all the partners/directors.
- c) The Power of Attorney which shall accompany the tender shall be granted by the authorized signatories of all the partners as follows:-
  - (i.) for local and citizen contractors, before a Commissioner of Oaths or a Notary Public or Magistrate of the Kenyan Judiciary.
  - (ii.) for a foreign bidder, before a Notary Public, or the equivalent of a Notary Public, and in this regard the bidder shall provide satisfactory proof of such equivalence.
- d) The lead contractor shall be authorized to incur liability and receive instructions for and on behalf of any and all the partners of the joint venture and the entire execution of the contract including payment shall be done exclusively with the lead contractor.

- 3.5.2 All partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a relevant statement to this effect shall be included in the authorization mentioned in paragraph 3.5.1 (b) above as well as in the Form of Tender and the Contract Agreement Form (in case of the accepted tender).

- 3.5.3 The JV must be in either of the following forms –

- a) A registered JV agreement. The registration may either be :-
  - At the Ministry of Lands or,
  - At the Office of the Attorney General, or
- b) A Letter of Intent to enter into a joint venture including a draft JV Agreement indicating at least the part of the Works to be executed by the respective partners.

The JV agreement should be signed by at least two directors from each company or firm that is a party to the JV

- a) The JV agreement must be under the company or firm seal
- b) The Letter of Intent should be signed by at least one director from each company or firm that is a party to the intended joint venture

- 3.5.4 A copy of the agreement entered into, or Letter of Intent by the joint venture partners shall be submitted with the tender.

### **3.6 Time for Completion of Works**

The successful Tenderer will be expected to complete the Works by the required completion period as specified in the BDS.

### **3.7 Source of Funding**

KPLC has set aside funds during the present financial year. It is intended that part of the proceeds of funds will be applied to cover the eligible payments under the ensuing contract for these Works.

### **3.8 Conflict of Interest**

3.8.1 A Tenderer (*including all members of a joint venture and subcontractors*) shall not have a conflict of interest. A Tenderer found to have a conflict of interest shall be disqualified. A Tenderer may be considered to have a conflict of interest with one or more parties in this tendering process if they:-

- a) are associated or have been associated in the past directly or indirectly with employees or agents of KPLC or a member of the Board or committee of KPLC
- b) are associated or have been associated in the past directly or indirectly with a firm or company or any of their affiliates which have been engaged by KPLC to provide consulting services for the preparation of the design, specifications, and other documents to be used for the execution, completion and maintenance of the Works under this Invitation to Tender
- c) have controlling shareholders in common
- d) receive or have received any direct or indirect subsidy from any of them
- e) have a relationship with each other, either directly or through common third parties, that puts them in a position to have access to information about, or influence on the tender of another Tenderer, or influence the decisions of KPLC regarding this tendering process
- f) submit more than one Tender in this tendering process.

3.8.2 A Tenderer will be considered to have a conflict of interest if they participated as a consultant in the preparation of the design or technical specification of the Works and related services that are the subject of this Tender.

### **3.9 One Tender per Tenderer**

3.9.1 A firm or company shall submit only one Tender in the same tendering process, either individually or as a partner in a joint venture.

3.9.2 No firm or company can be a sub-contractor while submitting a Tender individually or as a partner in a joint venture in the same tendering process.

3.9.3 A company or firm, if acting in the capacity of sub-contractor in any Tender may participate in more than one Tender but only in that capacity.

3.9.4 A Tenderer who submits or participates in more than one tender (*other than as a sub-contractor or in cases of alternatives that have been permitted or requested*) will cause all tenders in which the Tenderer has participated to be disqualified.

### **3.10 Site Visit and Pre-Bid Meeting**

- 3.10.1 The Tenderer, at the Tenderer's own responsibility and risk is advised to visit and examine the site of Works and its surrounding and obtain all information that may be necessary for preparing the tender and entering into a contract for the Works. The cost of visiting the site shall be at the Tenderer's own expense.
- 3.10.2 KPLC may conduct a site visit and pre-bid meeting. The purpose of the pre-bid meeting shall be to clarify issues and answer any questions that may be raised at that stage.
- 3.10.3 The Tenderer's designated representative is invited to attend a site visit and per-bid meeting which if convened will take place at the venue and time stipulated in the BDS.
- 3.10.4 The Tenderer is requested as far as possible to submit any questions in writing or by electronic means to reach the Project Manager before the pre-bid meeting.
- 3.10.5 Minutes of the pre-bid meeting including the text of the questions raised and the responses given together with any response prepared after the pre-bid meeting will be transmitted within the time stated in the BDS to all purchasers of the Tender Document.
- 3.10.6 Non-attendance during the site visit or the pre-bid meeting will be a cause of disqualification of the Tender unless specified to the contrary in the BDS.

### **3.11 Cost of Tendering**

- 3.11.1 The Tenderer shall bear all costs associated with the preparation and submission of its Tender. KPLC will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.
- 3.11.2 The price to be charged for the Tender Document shall be as indicated in the Invitation to Tender but in any case not exceeding Ksh 1,000/=.

### **3.12 Contents of the Tender Document**

- 3.12.1 The Tender Document comprises the documents listed below and Addendum (where applicable) issued in accordance with paragraph 3.14 of these Instructions to Tenderers: -
- a) *Invitation to Tender*
  - b) *Tender Submission Checklist*
  - c) *Instructions to Tenderers*
  - d) *Bid Data Sheet*
  - e) *Conditions of Contract*
  - f) *Special Conditions of Contract*
  - g) *Specifications*
  - h) *Drawings*
  - i) *Bill of Quantities*
  - j) *Summary of Evaluation Process*
  - k) *Tender Form*
  - l) *Confidential Business Questionnaire Form*
  - m) *Tender Security Forms*

- n) *Declaration Form*
- o) *Contract Form Agreement*
- p) *Performance Security Forms*
- q) *Evaluation Criteria*

3.12.2 The Tenderer is expected to examine all instructions, forms, provisions, terms and specifications in the Tender Document. Failure to furnish all information required by the Tender Document or to submit a tender not substantially responsive to the Tender Document in every respect will be at the Tenderer's risk and may result in the rejection of its Tender.

3.12.3 All recipients of the documents for the proposed Contract for the purpose of submitting a tender (whether they submit a tender or not) shall treat the details of the documents as "Private and Confidential".

### **3.13 Clarification of Documents**

A prospective Tenderer requiring any clarification of the Tender Document may notify the Procurement Manager in writing or by post at KPLC's address indicated in the Invitation to Tender. KPLC will respond in writing to any request for clarification of the Tender documents, which it receives not later than seven (7) days prior to the deadline for the submission of Tenders, prescribed by KPLC.

Written copies of KPLC's response (*including an explanation of the query but without identifying the source of inquiry*) will be sent to all prospective Tenderers that have duly received the Tender Document.

### **3.14 Amendment of Documents**

3.14.1 At any time prior to the deadline for submission of Tenders, KPLC, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, may modify the tender documents by amendment.

3.14.2 All prospective Tenderers that have received the tender documents will be notified of the amendment(s) (*hereinafter referred to or otherwise known as addendum*) in writing and will be binding on them.

3.14.3 In order to allow prospective Tenderers reasonable time in which to take the amendment into account in preparing their Tenders, KPLC, at its discretion, may extend the deadline for the submission of Tenders.

### **3.15 Language of Tender**

The Tender prepared by the Tenderer, as well as all correspondence and documents relating to the tender, exchanged between the Tenderer and KPLC, shall be written in English language, provided that any printed literature furnished by the Tenderer may be written in another language provided that they are accompanied by an accurate English translation of the relevant passages in which case, for purposes of interpretation of the Tender, the English translation shall govern. The English

translation shall be on the Tenderer's letterhead and shall be signed by the duly authorized signatory signing the Tender and stamped with the Tenderer's stamp.

### **3.16 Documents Comprising the Tender**

The Tender prepared and submitted by the Tenderers shall include but not be limited to all the following components: -

- a) *Declaration Form, Tender Form and Priced Bill of Quantities (BQ) duly completed*
- b) *Documentary evidence that the Works and any ancillary services thereto to be performed by the Tenderer conform to the tender documents*
- c) *Technical Proposal in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the Works requirements and the completion time. Those details should include the following:-*
  - (i.) *a statement of work methods i.e. Methodology*
  - (ii.) *major items of equipment proposed to carry out the Contract*
  - (iii.) *an undertaking that the items in c (ii) will be available for the execution of the Contract.*
- d) *Tender Security furnished in accordance with the Tender requirements*
- e) *Power of Attorney authorizing the signatory of the Tender to commit the Tenderer in accordance with the Tender requirements.*
- f) *A detailed list of previous clients as prescribed in the BDS for similar Works on tender and their contact addresses including e-mail shall be submitted with the Tender for the purpose of reference, or for evaluation*
- g) *Statement of Deviations, if any, from the tender requirements on a separate sheet of paper clearly indicating –*
  - (i.) *the specific tender document requirement*
  - (ii.) *the deviation proposed by the Tenderer*
  - (iii.) *the technical specifications of the deviation*
  - (iv.) *the design, if any, of the deviation*
  - (v.) *justification or reason for the deviation*
  - (vi.) *the Tenderer's cost of that deviation and the Tenderer's estimate of the cost of complying with KPLC's requirement without the deviation.*
- h) *In case of a tender submitted by a joint venture, either of the following –*
  - (i.) *the registered joint venture agreement, or,*
  - (ii.) *a Letter of Intent to enter into a joint venture including a draft JV agreement indicating at least the part of the Works to be executed by the respective partners.*
- j) *Any information or other materials required to be completed and submitted by Tenderers as specified in the Tender Document*

### **3.17 Tender Form**

The Tenderer shall complete and sign the Tender Form and all other documents furnished in the Tender Document, indicating the Works to be performed, a brief description of the Works, quantities, and prices amongst other information required.

### **3.18 Tender Rates and Prices**

- 3.18.1 The Tenderer shall indicate on the appropriate BQs, the unit rates and prices (where applicable) and total tender price of the Works it proposes to perform under the contract.
- 3.18.2 The Tenderer shall fill in rates and prices for all items of the Works described in the BQs. Items for which no rates or price is entered by the Tenderer will not be paid for by KPLC when executed and shall be deemed covered by other rates and prices in the BQs.
- 3.18.3 Prices and rates indicated on the BQ shall be of all costs for the Works including insurances, duties, Value Added Tax (V.A.T) and other taxes payable. No other basis shall be accepted for evaluation, award or otherwise.
- 3.18.4 BQ rates and prices to be submitted (quoted) by the Tenderer shall remain fixed for the contract duration.

### **3.19 Tender Currencies**

- 3.19.1 For Works that the Tenderer will provide from within or outside Kenya, the prices shall be quoted in Kenya Shillings, or in another freely convertible currency in Kenya. The currency quoted must be indicated clearly on the Price Schedule of Services.
- 3.19.2 The exchange rate to be used for currency conversion shall be the Central Bank of Kenya selling rate ruling on the Tender closing date. *(Please visit the Central Bank of Kenya website).*

### **3.20 Tenderer's Eligibility and Qualifications**

- 3.20.1 Pursuant to paragraph 3.16, the Tenderer shall furnish, as part of its Tender, documents establishing the Tenderer's eligibility to tender and its qualifications to execute, complete and maintain the Works in the contract if its Tender is accepted.
- 3.20.2 The documentary evidence of the Tenderer's qualifications to perform the contract if its Tender is accepted shall be established to KPLC's satisfaction –
  - a) *that the Tenderer has the financial capability necessary to perform the contract. The Tenderer shall be required to provide -*
    - (i.) *Audited Financial Statements (Audited Accounts) that are reported within fifteen (15) calendar months of the date of the tender document. The Statements must be stamped and signed. The Auditors must be currently registered by ICPAK.*
    - (ii.) *For companies or firms that are registered or incorporated within the last one calendar year of the Date of the Tender Document, they should submit certified copies of bank statements covering a period of at least six (6) months prior to the Date of the Tender Document. The copies should be certified by the Bank issuing the statements. The certification should be original.*



- *A valid and current Tax Compliance Certificate (TCC) issued by KRA. The Tenderer is strongly advised to confirm the authenticity of the TCC with KRA's Compliance Department to avoid rejection of its Tender.*
- (iv.) *evidence of adequacy of working capital for this Contract e.g. access to line(s) of credit and availability of other financial resources*
- b) *that the Tenderer has the technical and management capability necessary to perform the contract. These are as per the Qualification Information Form which includes:-*
  - (i.) *documents showing qualifications and experience of key site management and technical personnel proposed for the Contract.*
  - (ii.) *employment records including contracts of employment for all key personnel*
  - (iii.) *The Tenderer's undertaking that the key site management and technical personnel will be available for the contract*
  - (iv.) *List and evidence of ownership/lease of contractor's equipment proposed for carrying out the Works*
- c) *that the Tenderer is duly classified and currently registered by the Ministry of Public Works as capable of performing the Works under the contract. The Tenderer will furnish KPLC with a copy of the registration certificate and copy of renewal receipt. KPLC reserves the right to subject the certificate and receipt to authentication.*
- d) *information regarding any litigation or arbitration current or during the last five (5) years, in which the Tenderer is involved, the parties concerned and disputed amount; and*
- e) *detailed proposals for subcontracting components of the Works amounting to more than twenty percent (20%) of the Contract Price.*

3.20.3 Tenderers with a record of unsatisfactory or default in performance obligations in any contract shall not be considered for evaluation or award. For the avoidance of doubt, this shall include any Tenderer with unresolved case(s) in its obligations for more than two (2) months in any contract.

### **3.21 Conformity of Works to Tender Documents**

3.21.1 The Tenderer shall furnish, as part of its tender, documents establishing the conformity to the Tender Document of all the Works that the Tenderer proposes to perform under the contract.

3.21.2 The documentary evidence of conformity of the Works to the Tender Document may be in the form of literature, drawings, and data, and shall (where applicable) consist of: -

- a) *a detailed description of the essential technical and performance characteristics of the Works whether in brochures, catalogues, drawings or otherwise,*
- b) *a list giving full particulars, including available source and current prices of spare parts, special tools and other incidental apparatus necessary for the proper and continuing performance of the Works for a minimum period of six (6) months following usage of the Works after the official handing over to KPLC, and,*
- c) *duly completed BQs' in compliance with KPLC's BQs' requirements or, a Statement of Deviations and exceptions to the provisions of KPLC's BQs'.*

3.21.3 For purposes of the documentary and other evidence to be furnished pursuant to sub-paragraphs 3.21.1, 3.21.2 and paragraph 3.22, the Tenderer shall note that standards for workmanship, material, and equipment, designated by KPLC in its BQs' are intended to be descriptive only and not restrictive. The Tenderer may adopt higher standards in its Tender, provided that it demonstrates to KPLC's satisfaction that the substitutions ensure substantial equivalence to those designated in the BQs'.

### **3.22 Demonstration(s), Inspection(s) and Test(s)**

3.22.1 Where required, all Tenderers shall demonstrate ability of performance of the required Works in conformity with the Bills of Quantities and Specifications.

3.22.2 KPLC or its representative(s) shall have the right to inspect/ test the Tenderer's capacity, equipment, premises, and to confirm their conformity to the tender requirements. This shall include the quality management system. KPLC's representative(s) retained for these purposes shall provide appropriate identification at the time of such inspection/ test.

3.22.3 KPLC shall meet its own costs of the inspection/ test. Where conducted on the premises of the Tenderer(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to KPLC.

3.22.4 Demonstration, Inspection/ Test Report(s) shall be completed upon conclusion of the inspection/ tests. This Report will be considered at time of evaluation and or award.

### **3.23 Warranty**

3.23.1 Where required in the Tender, all Tenderers must also provide a Warranty that warrants that any part of the Works that comprises any equipment, the equipment to be provided under the contract are new, unused and or are of the most recent or current specification and incorporate all recent improvements in design and materials unless provided otherwise in the Tender. The Warranty shall also warrant that the equipment in the Tenderer's bid have no defect arising from manufacture, materials or workmanship or from any act or omission of the Tenderer that may develop under normal use or application of the equipment under the conditions obtaining in Kenya.

3.23.2 The Warranty will remain valid for a minimum of six (6) months after the equipment, or any part thereof as the case may be, have been used or provided or performed as indicated in the contract.

### **3.24 Tender Security**

3.24.1 The Tenderer shall furnish, as part of its Tender, a tender security for the amount specified in the BDS.

3.24.2 The tender security shall be either one or a combination of the following:-

- a) an original Bank Guarantee that is strictly in the form and content as prescribed in the Tender Security Form (Bank Guarantee) in the Tender Document.

- b) For local bidders, Standby Letters of Credit (LC). All costs, expenses and charges levied by all banks party to the LC shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to KPLC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
- c) For foreign bidders, Standby Letters of Credit (LC) confirmed by a bank in Kenya. All costs, expenses and charges levied by all banks party to the LC including confirmation charges shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to KPLC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
- d) An original Guarantee by a deposit taking Microfinance Institution, Sacco Society, Youth Enterprise Development Fund or the Women Enterprise Fund, that is strictly in the form and content as prescribed in the Tender Security Form

3.24.3 The Tender Security is required to protect KPLC against the risk of the Tenderer's conduct which would warrant the security's forfeiture pursuant to paragraph 3.24.10.

3.24.4 The Tender Security shall be denominated in Kenya Shillings or in another freely convertible currency, and shall be issued by a commercial bank licensed by the Central Bank of Kenya. The bank must be located in Kenya.

3.24.5 **The Tender Security shall be valid for thirty (30) days beyond the validity of the tender.**

3.24.6 KPLC shall seek authentication of the Tender Security from the issuing bank. It is the responsibility of the Tenderer to sensitize its issuing bank on the need to respond directly and expeditiously to queries from KPLC. The period for response shall not exceed five (5) days from the date of KPLC's query. Should there be no conclusive response by the bank within this period, such Tenderer's Tender Security may be deemed as invalid and the bid rejected.

3.24.7 Any Tender not secured in accordance with this paragraph will be rejected by KPLC as non-responsive, pursuant to paragraph 3.35.

3.24.8 The unsuccessful Tenderer's Tender Security will be released as promptly as possible, in any of the following circumstances: -

- a) *the procurement proceedings are terminated*
- b) *KPLC determines that none of the submitted Tenders is responsive*
- c) *a contract for the procurement is entered into*
- d) *the Tenderer does not qualify for Financial Evaluation in accordance with paragraph 3.37.*

3.24.9 The successful Tenderer's Tender Security will be released upon the successful Tenderer's signing the contract, pursuant to paragraph 3.47 and furnishing an authentic Performance Security, pursuant to paragraph 3.48.

3.24.10 The Tender Security shall be forfeited –

- a) *if the Tenderer withdraws its Tender after the deadline for submitting Tenders but before the expiry of the period during which the Tenders must remain valid*
- b) *if the Tenderer rejects a correction of an arithmetic error*
- c) *if the Tenderer fails to enter into a written contract in accordance with paragraph 3.47*

- d) *if the successful Tenderer fails to furnish the performance security in accordance with paragraph 3.48*
- e) *if the Tenderer fails to extend the validity of the tender security where KPLC has extended the tender validity period in accordance with paragraph 3.25.*

3.24.11 In cases of a JV bid, without prejudice to the provisions relating to a JV, the Tender Security may be in the name of any or all parties to the JV and the above provisions on Tender Security shall apply.

### **3.25 Validity of Tenders**

- 3.25.1 Tenders shall remain valid for one hundred and twenty (**120**) days after the date of tender opening as specified in the Invitation to Tender or as otherwise may be prescribed by KPLC, pursuant to paragraph 3.30. A Tender that is valid for a shorter period shall be rejected by KPLC as non-responsive.
- 3.25.2 In exceptional circumstances, KPLC may extend the Tender validity period. The extension shall be made in writing. The tender security provided under paragraph 3.24 shall also be extended. A Tenderer shall not be required nor permitted to modify its tender during the extended period.

### **3.26 Alternative Offers**

Only main offers shall be considered, as alternative offers are not acceptable.

### **3.27 Number of Sets of and Tender Format**

- 3.27.1 The Tenderer shall prepare three complete sets of its Tender, identifying and clearly marking the “ORIGINAL TENDER”, “COPY 1 OF TENDER”, and “COPY 2 OF TENDER” as appropriate. Each set shall be properly bound. The copies shall be a replica of the Original. Each copy will be deemed to contain the same information as the Original.
- 3.27.2 The Tender shall be bound and divided clearly in descending order as listed in the Tender Submission Checklist. The divisions are for clear identification and marking of the respective documents or information that are serially numbered in the Checklist.
- 3.27.3 The order and arrangement as indicated in the Tender Submission Checklist will be considered as the Tender Formats.
- 3.27.4 Any Tender not prepared and signed in accordance with this paragraph, and in particular subparagraphs 3.27.1, 3.27.2 and 3.27.3 may be rejected by KPLC as non-responsive, pursuant to paragraph 3.35.

### **3.28 Preparation and Signing of the Tender**

- 3.28.1 The Original and all copies of the Tender shall be typed or written in indelible ink. They shall be signed by the Tenderer or a person or persons duly authorized to bind the Tenderer to the contract.
- 3.28.2 The authorization shall be indicated by a written Power of Attorney granted by the Tenderer to the authorized person before any of the following persons:-
- a) *For local Tenderers, a Commissioner of Oaths or a Notary Public or a Magistrate of the Kenyan Judiciary.*
  - b) *For foreign Tenderers, a Notary Public in the country of the Tenderer.*
- In either case above, the Power of Attorney shall accompany the Tender.
- 3.28.3 All pages of the Tender, including un-amended printed literature, shall be initialed by the person or persons signing the Tender and serially numbered.
- 3.28.4 The Tender shall have no interlineations, erasures, or overwriting except as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialed by the person or persons signing the Tender.
- 3.28.5 KPLC will assume no responsibility whatsoever for the Tenderer's failure to comply with or observe the entire contents of this paragraph.
- 3.28.6 Any Tender not prepared and signed in accordance with this paragraph may be rejected by KPLC as non-responsive, pursuant to paragraph 3.35.

### **3.29 Sealing and Outer Marking of Tenders**

- 3.29.1 The Tenderer shall seal the Original and each Copy of the Tender in separate envelopes or packages, duly marking the envelopes or packages as "ORIGINAL", "COPY 1 OF TENDER" and "COPY 2 OF TENDER". The envelopes or packages shall then be sealed in outer envelopes or packages.
- 3.29.2 The inner and outer envelopes or packages shall -
- a) *be addressed to KPLC at the address given in the Invitation to Tender,*
  - b) *bear the tender number and name as per the Invitation to Tender and the words, "DO NOT OPEN BEFORE .....as specified in the Invitation to Tender.*
- 3.29.3 All inner envelopes or packages shall also indicate the name and full physical, telephone, e-mail, facsimile and postal contacts of the Tenderer to enable the Tender to be returned unopened in circumstances necessitating such return including where Tenders are received late, procurement proceedings are terminated before tenders are opened.
- 3.29.4 If the envelopes or packages are not sealed and marked as required by this paragraph, KPLC will assume no responsibility whatsoever for the Tender's misplacement or premature opening. A tender opened prematurely for this cause will be rejected by KPLC and promptly returned to the Tenderer.

### **3.30 Deadline for Submission of Tenders**

- 3.30.1 Tenders must be received by KPLC by the time and at the place specified in the Invitation to Tender.
- 3.30.2 KPLC may, at its discretion, extend this deadline for submission of Tenders by amending the tender documents in accordance with paragraph 3.14, in which case all rights and obligations of KPLC and the Tenderer's previously subject to the initial deadline, will therefore be subject to the deadline as extended.

### **3.31 Modification and Withdrawal of Tenders**

- 3.31.1 The Tenderer may modify or withdraw its Tender after it has submitted it, provided that written notice of the modification, including substitution or withdrawal of the Tender is received by KPLC prior to the deadline prescribed for submission of tenders.
- 3.31.2 The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of paragraphs 3.27, 3.28 and 3.29. A withdrawal notice may also be sent by facsimile, electronic mail, cable or telex but followed by an original signed confirmation copy, post marked not later than the deadline for submission of Tenders.
- 3.31.3 No Tender may be modified after the deadline for submission of Tenders.
- 3.31.4 No Tender may be withdrawn in the interval between the deadline for submission of tenders and the expiration of the period during which the Tender must remain valid. Withdrawal of a Tender during this interval shall result in forfeiture of the Tenderer's Tender Security.

### **3.32 Opening of Tenders**

- 3.32.1 KPLC shall open all Tenders promptly after the tender closing date and time, at the location specified in the Invitation to Tender or as may otherwise be indicated.
- 3.32.2 The Tenderer's names, tender modifications or withdrawals, the presence or absence of requisite Tender Security, the number of sets of tender documents duly received and such other details as KPLC, at its discretion, may consider appropriate, will be announced at the opening.
- 3.32.3 **At the Tender opening, tender prices, discounts, and such other details as KPLC, at its discretion, may consider appropriate will be read out.**
- 3.25.4 The Tenderers or their representatives may attend the opening and those present shall sign a register evidencing their attendance.

### **3.33 Process to be Confidential**

- 3.33.1 After the first opening of tenders, information relating to the examination, clarification, evaluation and comparisons of tenders and recommendations arising there-from shall not be disclosed to a Tenderer or other person(s) not officially concerned with such process until conclusion of that process.
- 3.33.2 Conclusion of that process shall be deemed to have occurred, at the latest, by the date and time KPLC announces to qualified bidder(s) the date and time for the second opening of the tenders i.e. of the detailed Financial Sets. In any event, official disclosure by KPLC of any information upon conclusion of that process shall only be to the unsuccessful bidders and may contain only the information permissible by law in summary form.

- 3.33.3 After the second opening of tenders, information relating to the further examination, clarification, evaluation and comparisons of tenders and recommendations concerning the award of Contract shall not be disclosed to a Tenderer or other person(s) not officially concerned with such process until the award of Contract is announced.
- 3.33.4 Any effort by a Tenderer to influence KPLC or any of its staff members in the process of examination, evaluation and comparison of tenders and information or decisions concerning award of Contract may result in the rejection of the Tenderer's tender.

### **3.34 Clarification of Tenders and Contacting KPLC**

- 3.34.1 To assist in the examination, evaluation and comparison of Tenders KPLC may, at its discretion, ask the Tenderer for a clarification of its Tender. The request for clarification and the response shall be in writing, and no change in the rates and prices or substance of the Tender shall be sought, offered, or permitted.
- 3.34.2 The Tenderer is required to provide timely clarification or substantiation of the information that is essential for effective evaluation of its qualifications. It is the responsibility of the Tenderer to provide in writing the clarification or substantiation which should reach KPLC within five (5) days from the date of KPLC's query. Such writing may include by electronic mail, facsimile or postal mail. Should there be no conclusive response within this period, it shall result in the Tenderer's disqualification.
- 3.34.3 Save as is provided in this paragraph and paragraph 3.33 above, no Tenderer shall contact KPLC on any matter related to its Tender, from the time of the tender openings to the time the contract is awarded.
- 3.34.4 Any effort by a Tenderer to influence KPLC in its decisions on tender evaluation, tender comparison, tender recommendation(s) or contract award may result in the rejection of the Tenderer's Tender.

### **3.35 Preliminary Evaluation and Responsiveness**

- 3.35.1 Prior to the detailed Technical and Financial evaluation, KPLC will determine the substantial responsiveness of each Tender. For purposes of this tender, a substantially responsive Tender is one that conforms to the requirements of Preliminary Evaluation. KPLC's determination of a Tender's responsiveness is to be based on the contents of the Tender itself without recourse to extrinsic evidence.
- 3.35.2 KPLC will examine the Tenders to determine whether they conform to the Preliminary Evaluation Criteria set out in Section X Summary of Evaluation Process (*Evaluation Criteria*).
- 3.35.3 Notwithstanding the contents of the foregoing sub-paragraphs, if a Tender is not substantially responsive, it will be rejected at the earliest stage of evaluation by KPLC and cannot subsequently be made responsive by the Tenderer by correction of any non-conformity.

### **3.36 Minor Deviations, Errors or Oversights**

- 3.36.1 KPLC may waive any minor deviation in a Tender that does not materially depart from the requirements of the Works set out in the Tender Document.

3.36.2 Such minor deviation -

*3.36.2.1 shall be quantified to the extent possible*

*3.36.2.2 shall be taken into account in the evaluation process, and,*

*3.36.2.3 shall be applied uniformly and consistently to all qualified Tenders duly received by KPLC.*

3.36.3 KPLC may waive errors and oversights that can be corrected without affecting the substance of the Tender.

3.36.4 A material deviation or reservation is one –

- a) which affects in any substantial way the scope, quality, or performance of the works;
- b) which limits in any substantial way, inconsistent with the tendering documents, KPLC's rights or the Tenderer's obligations under the Contract; or,
- c) whose rectification would affect unfairly the competitive position of other Tenderers presenting responsive tenders.

### **3.37 Evaluation Criteria– Preliminary, Technical and Financial**

- (a) The Tenders submitted will be evaluated in three stages; Preliminary, Technical and Financial. Tenderers will proceed to the Technical Stage only if they qualify in compliance with Preliminary Evaluation. Only technical bids that attain a minimum score of 75% will be eligible for financial evaluation as detailed in (c) below.

The evaluation criteria will be based on the following weights:

- a. Technical score weight - 100%
- (b) The criteria to be followed at the Technical Evaluation stage is contained in Evaluation Process, and Bidders are urged to follow the format outlined therein which is critical in determining the responsiveness of the bids.
- (c) The Evaluation Committee will determine whether the financial proposals are complete (i.e. whether the tenderer has costed all the items of the corresponding Technical Proposal and correct any computational errors). The cost of any unpriced items shall be assumed to be included in other costs in the proposal. In all cases, the total price of the Financial Proposal as submitted shall prevail.

### **3.39 Preferences**

3.39.1 In the evaluation of tenders, exclusive preference shall be given to citizen contractors where the amount of the tender as evaluated is below KShs. 500 Million in respect of services.

3.39.2 For purposes of this paragraph the Tenderer shall submit with its Tender, the following documents:-

- a) a valid copy of certificate or letter of Confirmation of Ownership or Partnerships and Shareholding issued and signed by the Registrar of Companies or Registrar of Business Names both of the Office of the Attorney General of Kenya.



- b) The certificate must not be more than three (3) months old from the Date of the Tender Document. KPLC reserves the right to subject the certificate to authentication.
- c) A copy of the Memorandum and Articles of Association of the company
- d) In JV, sub-contracting or other contractual arrangements, copies of the Memorandum and Articles of Association of each company in the JV, sub-contracting or other contractual arrangements.

### **3.40 Tender Evaluation Period**

- 3.40.1 The tender evaluation committee may conduct and complete a preliminary and technical evaluation of the tender within TEN (10) days of the validity period from the date of the first opening of the Tender.
- 3.40.2 The tender evaluation committee may conduct the financial evaluation of the tender within five (5) days of the validity period from the date of the second opening of the Tender.
- 3.40.3 Notwithstanding the above, the overall evaluation period for the tender shall be FIFTEEN (15) days in the validity period of the tender.

### **3.41 Debarment of a Tenderer**

A Tenderer who gives false information in the Tender about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

### **3.42 Confirmation of Qualification for Award**

- 3.42.1 KPLC may confirm to its satisfaction whether the Tenderer that is selected as having submitted the lowest evaluated responsive tender is qualified to perform the contract satisfactorily.
- 3.42.2 The confirmation will take into account the Tenderer's financial, technical, and performance capabilities. It will be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to paragraph 3.20 as well as confirmation of such other information as KPLC deems necessary and appropriate. This may include factory, office and other facilities inspection and audits.
- 3.42.3 An affirmative confirmation will be a pre-requisite for award of the contract to the Tenderer. A negative confirmation will result in rejection of the Tenderer's Tender, in which event KPLC will proceed to the next lowest evaluated responsive tender to make a similar confirmation of that Tenderer's capabilities to perform satisfactorily.

### **3.43 Award of Contract**

- 3.43.1 KPLC will award the contract to the successful Tenderer whose Tender has been determined to be substantially responsive, compliant with the evaluation criteria and has been determined to be the lowest evaluated tender, and further, where deemed necessary, that the Tenderer is confirmed to be qualified to perform the contract satisfactorily.

### **3.44 Termination of Procurement Proceedings**

- 3.44.1 KPLC may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.
- 3.44.2 KPLC shall give prompt notice of the termination to the Tenderers, and, on request from any Tenderer, give its reasons for termination within fourteen (14) days of such request.

### **3.45 Notification of Award**

- 3.45.1 Prior to the expiration of the period of tender validity, KPLC shall notify the successful Tenderer in writing that its Tender has been accepted.
- 3.45.2 The notification of award shall not constitute the formation of the contract until one is finally signed by both parties.
- 3.45.3 Simultaneously, and without prejudice to the contents of paragraph 3.34, on issuance of Notification of Award to the successful Tenderer, KPLC shall notify each unsuccessful Tenderer.
- 3.45.4 A notification of the tender outcome does not reduce the validity period for any tender security whether the Tenderer is successful or not, except where such tender security is officially released to the Bank and/or the Tenderer and such Bank discharged of all its obligations by KPLC prior to the expiry of its stated validity period.

### **3.46 Clarifications with Lowest Evaluated Successful Tenderer**

- 3.46.1 Clarifications may be undertaken with the lowest responsive evaluated Tenderer relating to any or all of the following areas:-
- a) A minor alteration to the technical details of the BQ's
  - b) Reduction of quantities for budgetary reasons where the reductions in excess of any provided for in the Tender Document
  - c) A minor amendment to the Special Conditions of Contract.
  - d) Finalizing payment arrangements (*excluding any Advance Payment*)
  - e) Mobilization arrangements e.g. operational details (*excluding any Advance Payment*)
  - f) Agreeing final delivery or Work Plans to accommodate and changes required by KPLC.
  - g) Methodology and Staffing
  - h) Clarifying details that were not apparent or could not be finalized at the time of tendering
- 3.46.2 Clarifications shall not change the substance of the Tender.

### **3.47 Signing of Contract**

- 3.47.1 At the same time as KPLC notifies the successful Tenderer that its Tender has been accepted, KPLC will send the Tenderer the Contract Agreement provided in the Tender Document together with any other necessary documents incorporating all agreements between the Parties.
- 3.47.2 Within seven (7) days of the date of notification of award, the successful Tenderer shall only sign the Contract Form and all the documents specified in that Form and return them to KPLC within that period of seven (7) days.
- 3.47.3 KPLC shall sign and date the Contract in the period between not earlier than seven (7) days from the date of notification of contract award and not later than thirty (30) days after expiry of tender

validity. Further, KPLC shall not sign the contract until and unless the authentic performance security is received in accordance with paragraph 3.48.

- 3.47.4 Failure of the successful Tenderer to sign the Contract, the award shall be annulled and its tender security forfeited in which event KPLC shall notify the next lowest evaluated Tenderer that its Tender has been accepted.
- 3.47.5 Paragraph 3.45 together with the provisions of this paragraph 3.47 will apply with necessary modifications with respect to the Tenderer notified under sub-paragraph 3.47.4.

### **3.48 Performance Security**

- 3.48.1 Within fourteen (14) days of the date of notification of award from KPLC, the successful Tenderer shall furnish KPLC with a Performance Security which shall be either one or a combination of the following:
- a) an original Bank Guarantee that is strictly in the form and content as prescribed in the Performance Security Form (Bank Guarantee) in the Tender Document.
  - b) For local bidders, Standby Letters of Credit (LC). All costs, expenses and charges levied by all banks party to the LC shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to KPLC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
  - c) For foreign bidders, Standby Letters of Credit (LC) confirmed by a bank in Kenya. All costs, expenses and charges levied by all banks party to the LC including confirmation charges shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to KPLC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
- 3.48.2 The Performance Security shall be issued by a commercial bank licensed by the Central Bank of Kenya. The bank must be located in Kenya.
- 3.48.3 The successful Tenderer shall furnish a Performance Security being the sum of ten percent (10%) of the contract price.
- 3.48.4 KPLC shall seek authentication of the Performance Security from the issuing bank. It is the responsibility of the successful Tenderer to sensitize its issuing bank on the need to respond directly and expeditiously to queries from KPLC. The period for response shall not exceed five (5) days from the date of KPLC's query. Should there be no conclusive response by the Bank within this period, such successful Tenderer's Performance Security may be deemed as invalid.
- 3.48.5 Failure of the successful Tenderer to furnish an authentic Performance Security, the award shall be annulled and the Tender Security forfeited, in which event KPLC may notify the next lowest evaluated Tenderer that its Tender has been accepted.
- 3.48.6 Paragraph 3.45, 3.47 together with the provisions of this paragraph 3.48 will apply with necessary modifications, and as far as circumstances permit, with respect to the Tenderer notified under sub-paragraph 3.48.5.

### **3.49 Corrupt or Fraudulent Practices**

- 3.49.1 KPLC requires that Tenderers observe the highest standard of ethics during the procurement process and execution of contracts. When used in the present Regulations, the following terms are defined as follows: -
- a) *“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of public official in the procurement process or in contract execution;*
  - b) *“Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of KPLC, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive KPLC of the benefits of free and open competition.*
- 3.49.2 KPLC will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- 3.49.3 Further, a Tenderer who is found to have indulged in corrupt or fraudulent practices risks being debarred from participating in public procurement in Kenya.

**SECTION IV - BID DATA SHEET (Appendix to Instructions To Tenderers)**

The following information regarding the particulars of the tender shall complement and or amend the provisions of the Instructions to Tenderers *hereinafter abbreviated as ITT*. Wherever there is a conflict between the provisions of the ITT and the Bid Data Sheet, the provisions of the BDS shall prevail over those of the ITT.

No.	ITT Reference Clause	Particulars of Appendix
1.	<b>3.2.1 Eligible Tenderers</b>	<i>Building and Civil Engineering Registration with NCA category of NCA class 1-5</i>
2.	<b>3.6 Time for Completion of works</b>	<b>40 WEEKS</b>
3.	<b>3.10.3 a) Site Visit /Pre- Bid Meeting</b>	<p><i>SIAYA 33/11 KV Sub-Station, site visit/pre-bid shall be on Thursday 8<sup>h</sup> September, 2016 at 11:00am. Bidders shall meet at SIAYA 33/11KV SUBSTATION</i></p> <p><b><u>*Note:</u></b> <i>The Site Visit/Pre-Bid is Mandatory. Bidders are to ensure that the Site Visit forms are signed and stamped by a KPLC representative at site.</i></p>
4.	<b>3.16(f) – List of Previous Customers</b>	<i>The Tenderer shall submit at least four (4) names with full contact including telephone, email and physical addresses of previous clients of similar Works and letters from the previous clients confirming satisfactory completion of the contracts and on schedule.</i>
5.	<b>3.21 Number of Sets of and Tender Format</b>	There will be only one document submitted on the E-procurement portal.
6.	<b>3.22 Preparation and Signing of the Tender</b>	There will be only one document submitted on the e-procurement portal. <b><i>Bidders shall ensure that they upload all the required documents into the portal.</i></b>
7.	<b>3.23 Sealing and Outer Marking of Tenders</b>	For purposes of this tender, this is not applicable as the tender is being submitted electronically <b><i>However the Original Tender Security in a clearly labeled envelope shall be deposited in the Tender Security Box on 3<sup>rd</sup> Floor Supply Chain Reception on or before the opening time.</i></b>
8	<b>3.24.1 Tender Security</b>	Tender Security shall be Kshs. 280,000.00. <b><i>However the Original Tender Security in an envelope clearly labeled</i></b>

		<i>with the tender number &amp; name, shall be deposited in the Tender Security Box on 3<sup>rd</sup> Floor Supply Chain Reception on or before the opening time.</i>
9	<b>3.26 Opening of Tenders</b>	The tender shall be opened electronically at Stima Plaza Auditorium at 10.30 a.m. and bidders are Encouraged to participate.
10	<b>3.43 Award of Contract</b>	<i>Award shall be to the lowest compliant evaluated Bidder.</i>
11	<b>3.48 Performance Security</b>	<i>Performance Security shall be 10% of the contract sum.)</i>

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## 1. Definitions

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

**“Bill of Quantities”** means the priced and completed Bill of Quantities forming part of the tender.

**“Compensation Events”** are those defined in Clause 24 hereunder.

**“The Completion Date”** means the date of completion of the Works as certified by the Project Manager, in accordance with Clause 31.

**“The Contract”** means the agreement entered into between the Employer and the Contractor as recorded in the Agreement Form and signed by the parties including all attachments and appendices thereto and all documents incorporated by reference therein to execute, complete, and maintain the Works,

**“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 and thereafter as adjusted in accordance with the provisions of the Contract.

**“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 Project Manager upon correction of defects by the Contractor.

**“The Defects Liability Period”** is the period named in the Contract Data and calculated from the Completion Date.

**“Drawings”** include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

**“Day works”** are Work inputs subject to payment on a time basis for labour and the associated materials and plant.

**“Employer”**, or the **“Procuring entity”** as defined in the Public Procurement Regulations (i.e. Central or Local Government administration, Universities, Public Institutions and Corporations, etc) 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.

**“The Intended Completion Date”** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

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

**“Plant”** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

**“Project Manager”** is the person named in the Special Conditions of Contract (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract and shall be an “Architect” or a “Quantity Surveyor” registered under the Architects and Quantity Surveyors Act Cap 525 or an “Engineer” registered under Engineers Registration Act Cap 530.

**“Site”** is the area defined as such in the Appendix to Condition of Contract.

**“Site Investigation Reports”** are those reports that may be included in the tendering documents which are factual and interpretative about the surface and subsurface conditions at the Site.

**“Specifications”** means the Specifications of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

**“Start Date”** is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with the Site possession date(s).

**“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 Project Manager which varies the Works.

**“The Works”** are what the Contract requires the Contractor to construct, install, and turnover to the Employer, as defined in the Special Conditions of Contract.

## 2. Interpretation

- 2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning in English Language unless specifically defined. The Project Manager will provide instructions clarifying queries about these Conditions of Contract.
- 2.2 If sectional completion is specified in the Special Conditions of Contract, reference in the Conditions of Contract to the Works, the Completion Date and the Intended Completion Date apply to any section of the Works (other than references to the Intended Completion Date for the whole of the Works).
- 2.3 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) Special Conditions of Contract,
  - (5) Conditions of Contract,
  - (6) Specifications,
  - (7) Drawings,
  - (8) Bill of Quantities,
  - (9) Any other documents listed in the Special Conditions of Contract as forming part of the Contract.

Immediately after the execution of the Contract, the Project Manager shall furnish both the Employer and the Contractor with two copies each of all the Contract documents. Further, as and when necessary the Project Manager shall furnish the Contractor [always with a copy to the Employer] with three [3] copies of such further drawings or details or descriptive schedules as are reasonably necessary either to explain or amplify the Contract drawings or to enable the Contractor to carry out and complete the Works in accordance with these Conditions.

### **3. Language and Law**

- 3.1 Language of the Contract and the law governing the Contract shall be English language and the Laws of Kenya respectively unless otherwise stated.

### **4 Project Manager's Decisions**

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

### **5 Delegation**

- 5.1 The Project Manager may delegate any of his duties and responsibilities to others after notifying the Contractor.

## **6 Communications**

- 6.1 Communication between parties shall be effective only when in writing. A notice shall be effective only when it is delivered.

## **7 Subcontracting**

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

## **8 Other Contractors**

- 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities etc. as listed in the Special Conditions of Contract and also with the Employer, as per the directions of the Project Manager. The Contractor shall also provide facilities and services for them. The Employer may modify the said List of Other Contractors etc., and shall notify the Contractor of any such modification.

## **9 Personnel**

- 9.1 The Contractor shall employ the key personnel named in the Qualification Information, to carry out the functions stated in the said Information or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Qualification Information. If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Work in the Contract.

## **10 Works**

- 10.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings. 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 Project Manager, and complete them by the Intended Completion Date.

## **11 Safety and Temporary Works**

- 11.1 The Contractor shall be responsible for the design of temporary works. However before erecting the same, he shall submit his designs including specifications and drawings to the Project Manager and to any other relevant third parties for their approval. No erection of temporary works shall be done until such approvals are obtained.

11.2 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary works and all drawings prepared by the Contractor for the execution of the temporary or permanent Works, shall be subject to prior approval by the Project Manager before they can be used.

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

## **12. Discoveries**

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

## **13. Work Program**

13.1 **Within the time stated in the Special Conditions of Contract, the Contractor shall submit to the Project Manager for approval a program showing the general methods, arrangements, order, and timing for all the activities in the Works. An update of the program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Work, including any changes to the sequence of the activities.**

The Contractor shall submit to the Project Manager for approval an updated program at intervals no longer than the period stated in the Special Conditions of Contract. If the Contractor does not submit an updated program within this period, the Project Manager may withhold the amount stated in the said Appendix from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted. The Project Manager's approval of the program shall not alter the Contractor's obligations. The Contractor may revise the program and submit it to the Project Manager again at any time. A revised program shall show the effect of Variations and Compensation Events.

## **14. Possession of Site**

14.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Special Conditions of Contract, the Employer will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.

## **15. Access to Site**

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

## **16. Instructions**

16.1 The Contractor shall carry out all instructions of the Project Manager which are in accordance with the Contract.

## **17. Extension or Acceleration of Completion Date**

- 17.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Work, which would cause the Contractor to incur additional cost. The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager in writing for a decision upon the effect of a Compensation Event or variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay caused by such failure shall not be considered in assessing the new (extended) Completion Date.
- 17.2 No bonus for early completion of the Works shall be paid to the Contractor by the Employer.

## **18. Management Meetings**

- 18.1 A Contract management meeting shall be held as per schedule and in any event not less than once a month and attended by the Project Manager and the Contractor. Its business shall be to review the plans for the remaining Work and to deal with matters raised in accordance with the early warning procedure. The Project Manager shall record the minutes of management meetings and provide copies of the same to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

## **19. Early Warning**

- 19.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

- 19.2 The Contractor shall cooperate with the Project Manager in making and considering proposals on how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the Work and in carrying out any resulting instructions of the Project Manager.

## **20. Defects**

- 20.1 The Project Manager 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 Project Manager may instruct the Contractor to search for a defect and to uncover and test any Work that the Project Manager considers may have a defect. 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.
- 20.2 The Project Manager shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the Special Conditions of Contract. The Defects Liability Period shall be extended for as long as defects remain to be corrected.
- 20.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Project Manager's notice. If the Contractor has not corrected a defect within the time specified in the Project Manager's notice, the Project Manager 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.

## **21. Bills Of Quantities**

- 21.1 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 rate in the Bills of Quantities for each item.
- 21.2 If the final quantity of the Work done differs from the quantity in the Bills of Quantities for the particular item by more than 25 percent and provided the change exceeds 1 percent of the Initial Contract price, the Project Manager shall adjust the rate to allow for the change.
- 21.3 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bills of Quantities.

## **22. Variations**

- 22.1 All variations shall be included in updated programs produced by the Contractor.
- 22.2 The Contractor shall provide the Project Manager with a quotation for carrying out the variations when requested to do so. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period as may be stated by the Project Manager and before the Variation is ordered.

- 22.3 If the work in the variation corresponds with an item description in the Bills of Quantities and if in the opinion of the Project Manager, the quantity of work is not above the limit stated in Clause 21.2 or the timing of its execution does not cause the cost per unit of quantity to change, the rate in the Bills of Quantities shall be used to calculate the value of the variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the variation does not correspond with items in the Bills of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 22.4 If the Contractor's quotation is unreasonable, the Project Manager may order the variation and make a change to the Contract price, which shall be based on the Project Manager's own forecast of the effects of the variation on the Contractor's costs.
- 22.5 If the Project Manager decides that the urgency of varying the Work would prevent a quotation being given and considered without delaying the Work, no quotation shall be given and the variation shall be treated as a Compensation Event.
- 22.6 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
- 22.7 When the Program is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast.

### **23. Payment Certificates, Currency of Payments and Advance Payments**

- 23.1 The Contractor shall submit to the Project Manager monthly applications for payment giving sufficient details of the Work done and materials on Site and the amounts which the Contractor considers himself to be entitled to. The Project Manager shall check the monthly application and certify the amount to be paid to the Contractor within 14 days. The value of Work executed and payable shall be determined by the Project Manager.
- 23.2 The value of Work executed shall comprise the value of the quantities of the items in the Bills of Quantities completed; materials delivered on Site, variations and compensation events. Such materials shall become the property of the Employer once the Employer has paid the Contractor for their value. Thereafter, they shall not be removed from Site without the Project Manager's instructions except for use upon the Works.
- 23.3 Payments shall be adjusted for deductions for retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of issue of each certificate. If the Employer makes a late payment, the Contractor shall be paid simple interest on the late payment in the next payment. Interest shall be calculated on the basis of number of days delayed at a rate three percentage points above the Central Bank



of Kenya's average rate for base lending prevailing as of the first day the payment becomes overdue.

- 23.4 If an amount certified is increased in a later certificate or as a result of an award by an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 23.5 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
- 23.6 The Contract Price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya Shillings and foreign currency in the proportion indicated in the tender, or agreed prior to the execution of the Contract Agreement and indicated therein. The rate of exchange for the calculation of the amount of foreign currency payment shall be the rate of exchange indicated in the Special Conditions of Contract. If the Contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services the Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services. The Employer and the Project Manager shall be notified promptly by the Contractor of any changes in the expected foreign currency requirements of the Contractor during the execution of the Works as indicated in the Schedule of Foreign Currency Requirements and the foreign and local currency portions of the balance of the Contract Price shall then be amended by agreement between Employer and the Contractor in order to reflect appropriately such changes.
- 23.7 In the event that an advance payment is granted, the following shall apply:-
- a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of 10% (ten percent) of the original amount of the Contract. The advance shall not be subject to retention money.
  - b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.
  - c) Reimbursement of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by means of the formula:

$$R = \frac{A(x^1 - x^{11})}{x^1 - x^{11}}$$

80 – 20

Where:

- R = the amount to be reimbursed
- A = the amount of the advance which has been granted
- X<sup>1</sup> = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.
- X<sup>11</sup> = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.
- d) With each reimbursement the counterpart of the directly liable guarantee may be reduced accordingly.

**24. Compensation Events**

24.1 The following issues shall constitute Compensation Events:

- (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Appendix to Conditions of Contract.
- (b) The Employer modifies the List of Other Contractors, etc., in a way that affects the Work of the Contractor under the Contract.
- (c) The Project Manager orders a delay or does not issue drawings, specifications or instructions required for execution of the Works on time.
- (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon the Work, which is then found to have no defects.
- (e) The Project Manager unreasonably does not approve a subcontract to be let.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to tenderers (including the Site investigation reports), from information available publicly and from a visual inspection of the Site.
- (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The effects on the Contractor of any of the Employer's risks.

- (j) The Project Manager unreasonably delays issuing a Certificate of Completion.
  - (k) Other compensation events described in the Contract or determined by the Project Manager shall apply.
- 24.2 If a compensation event would cause additional cost or would prevent the Work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 24.3 As soon as information demonstrating the effect of each compensation event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.
- 24.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having co-operated with the Project Manager.
- 24.5 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Special Conditions of Contract.
- 24.6 The Contractor shall give written notice to the Project Manager of his intention to make a claim within thirty days after the event giving rise to the claim has first arisen. The claim shall be submitted within thirty days thereafter. Provided always that should the event giving rise to the claim of continuing effect, the Contractor shall submit an interim claim within the said thirty days and a final claim within thirty days of the end of the event giving rise to the claim.

## **25. Price Adjustment**

- 25.1 The Project Manager shall adjust the Contract Price if taxes, duties and other levies are changed between the date 30 days before the submission of tenders for the Contract and the date of Completion. The adjustment shall be the change in the amount of tax payable by the Contractor.
- 25.2 The Contract Price shall be deemed to be based on exchange rates current at the date of tender submission in calculating the cost to the Contractor of materials to be specifically imported (by express provisions in the Contract Bills of Quantities or Specifications) for permanent incorporation in the Works. Unless otherwise stated in the Contract, if at any time during the period of the Contract exchange rates shall be varied and this shall affect the cost to the Contractor of such materials, then the Project Manager shall assess the net difference in the cost of such materials. Any amount from time to time so assessed shall be added to or deducted from the Contract Price, as the case may be.

- 25.3 Unless otherwise stated in the Contract, the Contract Price shall be deemed to have been calculated in the manner set out below and in sub-clauses 25.4 and 25.5 and shall be subject to adjustment in the events specified thereunder;
- (i) The prices contained in the Contract Bills of Quantities shall be deemed to be based upon the rates of wages and other Emoluments and expenses as determined by the Joint Building Council of Kenya (J.B.C.) and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Special Conditions of Contract.
  - (ii) Upon J.B.C. determining that any of the said rates of wages or other emoluments and expenses are increased or decreased, then the Contract Price shall be increased or decreased by the amount assessed by the Project Manager based upon the difference, expressed as a percentage, between the rate set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of labour incorporated within the amount of Work remaining to be executed at the date of publication of such increase or decrease.
  - (iii) No adjustment shall be made in respect of changes in the rates of wages and other emoluments and expenses which occur after the date of Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.
- 25.4 The prices contained in the Contract Bills of Quantities shall be deemed to be based upon the basic prices of materials to be permanently incorporated in the Works as determined by the J.B.C. and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Special Conditions of Contract.
- 25.5 Upon the J.B.C. determining that any of the said basic prices are increased or decreased then the Contract Price shall be increased or decreased by the amount to be assessed by the Project Manager based upon the difference between the price set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of the relevant materials which have not been taken into account in arriving at the amount of any interim certificate under clause 23 of these Conditions issued before the date of publication of such increase or decrease.
- 25.6 No adjustment shall be made in respect of changes in basic prices of materials which occur after the date for Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.
- 25.7 The provisions of sub-clause 25.1 to 25.2 herein shall not apply in respect of any materials included in the schedule of basic rates.

## **26. Retention**

- 26.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Special Conditions of Contract until Completion of the whole of the Works. On Completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and the remaining half when the Defects Liability Period has passed and the Project Manager has certified that all defects notified to the Contractor before the end of this period have been corrected.

## **27. Liquidated Damages**

- 27.1 The Contractor shall pay liquidated damages to the Employer at the rate stated in the Special Conditions of Contract for each day that the actual Completion Date is later than the Intended Completion Date. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not alter the Contractor's liabilities.
- 27.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rate specified in Clause 23.30

## **28. Performance Security**

- 28.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a commercial bank licensed by the Central Bank of Kenya, and denominated in Kenya Shillings. The Performance Security shall be valid until a date sixty (60) days beyond the date of issue of the Certificate of Completion.
- 28.2 The Performance Security shall be either one or a combination of the following:
- a) an original Bank Guarantee that is strictly in the form and content as prescribed in the Performance Security Form (Bank Guarantee) in the Tender Document.
  - b) For Local bidders, Standby Letters of Credit (LC). All costs, expenses and charges levied by all banks party to the LC shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to KPLC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
  - c) For Foreign bidders, Standby Letters of Credit (LC) confirmed by a bank in Kenya. All costs, expenses and charges levied by all banks party to the LC including confirmation charges shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to KPLC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
- 28.3 The successful Tenderer shall furnish a Performance Security being the sum of ten percent (10%) of the contract price.
- 28.4 KPLC shall seek authentication of the Performance Security from the issuing bank. It is the responsibility of the successful Tenderer to sensitize its issuing bank on the need to respond

directly and expeditiously to queries from KPLC. The period for response shall not exceed five (5) days from the date of KPLC's

query. Should there be no conclusive response by the Bank within this period, such successful Tenderer's Performance Security may be deemed as invalid.

- 28.5 Failure of the successful Tenderer to furnish an authentic Performance Security, the award shall be annulled and the Tender Security forfeited, in which event KPLC may notify the next lowest evaluated Tenderer that its Tender has been accepted.

3.40.6 Paragraph 3.38, 3.39 together with the provisions of this paragraph 3.40 will apply with necessary modifications, and as far as circumstances permit, with respect to the Tenderer notified under sub-paragraph 3.39.4

## **29. Dayworks**

- 29.1 If applicable, the Dayworks rates in the Contractor's tender shall be used for small additional amounts of Work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
- 29.2 All work to be paid for as Dayworks shall be recorded by the Contractor on Forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the Work being done.
- 29.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

## **30. Liability and Insurance**

- 30.1 From the Start Date until the Defects Correction Certificate has been issued, the following are the Employer's risks:
- (a) The risk of personal injury, death or loss of or damage to property (excluding the Works, Plant, Materials and Equipment), which are due to;
    - (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works, or
    - (ii) negligence, breach of statutory duty or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
  - (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in Employer's design, or due to war or radioactive contamination directly affecting the place where the Works are being executed.
- 30.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is the Employer's risk except loss or damage due to;

- (a) A defect which existed on or before the Completion Date.
- (b) an event occurring before the Completion Date, which was not itself the Employer's risk
- (c) the activities of the Contractor on the Site after the Completion Date.

30.3 From the Start Date until the Defects Correction Certificate has been issued, the risks of personal injury, death and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risk are Contractor's risks.

The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts stated in the Special Conditions of Contract for the following events;

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

30.4 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation required to rectify the loss or damage incurred.

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

30.6 Alterations to the terms of insurance shall not be made without the approval of the Project Manager. Both parties shall comply with any conditions of insurance policies.

### **31. Completion and taking over**

31.1 Upon deciding that the Works are complete, the Contractor shall issue a written request to the Project Manager to issue a Certificate of Completion of the Works. The Employer shall take over the Site and the Works within seven [7] days of the Project Manager's issuing a Certificate of Completion.

### **32. Final Account**

32.1 The Contractor shall issue the Project Manager with a detailed account of the total amount that the Contractor considers payable to him by the Employer under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 30 days a schedule that states the scope of the corrections or additions that are necessary. If the final account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and

issue a Payment Certificate. The Employer shall pay the Contractor the amount due in the Final Certificate within 60 days.

### **33. Termination**

- 33.1 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 when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Project Manager;
  - (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
  - (c) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
  - (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 30 days (for Interim Certificate) or 60 days (for Final Certificate) of issue.
  - (e) the Project Manager gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
  - (f) the Contractor does not maintain a security, which is required.
- 33.2 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Clause 33.1 above, the Project Manager shall decide whether the breach is fundamental or not.
- 33.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 33.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible. The Project Manager 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.

### **34. Payment Upon Termination**

- 34.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the Work done and materials ordered and delivered to Site up to the date of the issue of the certificate. Additional liquidated damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable by the Contractor.
- 34.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the



value of the Work done, materials ordered, the reasonable cost of removal of equipment, repatriation of the Contractor's personnel employed solely on the works, and the Contractor's costs of protecting and securing the works.

- 34.3 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 the Site, plant, equipment and temporary works.
- 34.4 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 Project Manager may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to or hired by him, and in default 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.

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 therefore the Project Manager 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.

### **35. Release from Performance**

- 35.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop Work as quickly as possible after receiving this certificate and shall be paid for all Work carried out before receiving it.

### **36. Corrupt gifts and payments of commission**

The Contractor shall not;

- (a) Offer or give or agree to give to any person in the service of the

Employer any gift 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 for the Employer or for showing or forbearing to show favour or disfavor to any person in relation to this or any other contract for the Employer.

- (b) Enter into this or any other contract with the Employer in connection with which commission has been paid or agreed to be paid by him or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms

and conditions of any agreement for the payment thereof have been disclosed in writing to the Employer.

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 provisions of the Public Procurement Regulations issued under The Exchequer and Audit Act Cap 412 of the Laws of Kenya.

### **37. Settlement Of Disputes**

37.1 In case any dispute or difference shall arise between the Employer or the Project Manager on his behalf and the Contractor, either during the progress or after the completion or termination of the Works, such dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed by the Chairman or Vice Chairman of any of the following professional institutions;

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

On the request of the applying party. The institution written to first by the aggrieved party shall take precedence over all other institutions.

37.2 The arbitration may be on the construction of this Contract or on any matter or thing of whatsoever nature arising thereunder or in connection therewith, including any matter or thing left by this Contract to the discretion of the Project Manager, or the withholding by the Project Manager of any certificate to which the Contractor may claim to be entitled to or the measurement and valuation referred to in clause 23.0 of these conditions, or the rights and liabilities of the parties subsequent to the termination of Contract.

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

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

- 37.5 Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:
- 37.5.1 The appointment of a replacement Project Manager upon the said person ceasing to act.
- 37.5.2 Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
- 37.5.3 Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- 37.5.4 Any dispute or difference arising in respect of war risks or war damage.
- 37.6 All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Employer and the Contractor agree otherwise in writing.
- 37.7 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.
- 37.8 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.
- 37.9 The award of such Arbitrator shall be final and binding upon the parties.

**SECTION VI - SPECIAL CONDITIONS OF CONTRACT**

CONDITIONS OF CONTRACT	CLAUSE	REQUIREMENT(S)
Employer		<b>Kenya Power and Lighting Company Ltd, P. O. Box 30099-00100, Nairobi, Kenya</b>
Project Manager		The Project Manager's address is: Name - <b>George Nyambare</b> Address – <b>P.O.Box 30099, 00100, Nairobi, Kenya.</b> Telephone - <b>+254 711031209</b>
The Name and identification number of the contract		<b>TENDER NO. KP1/9AA-2/OT/12-ID/16-17 FOR PROVISION OF BUILDING &amp; CIVIL WORKS SIAYA 33/11 KV SUBSTATION</b>
The work consist of		a) Construct a new control room b) Demolish and cart away existing gates house and toilet and build new ones. c) Rehabilitate station by drainage and ballasting, access roads and associated civil works d) Construction of Tx plinths, switchgear foundations and cable trenches. e) Boundary wall construction.
Start Date		<b>To be decided by client</b>
Intended Completion Date for the whole of the works		<b>As per accepted tender</b>
Other documents to form part of the contract		<b>As per tender</b>
The number of days within which the contractor shall submit a revised program for the Works after delivery of the Letter of Acceptance		<b>7 days</b>
The Site Possession Date		<b>To be decided</b>
Site Location and Drawing Number		SIAYA SK. No. 07424/A SHEET 1/A
Defects Liability Period (in days)		<b>180 days</b>
The period between program updates (In days)		<b>14 days</b>

The amount to be withheld for late submission of an updated Program		<b>Kshs 200,000/-</b>
The proportion of payment to be retained (in Percent)		<b>5%</b>
The Price Adjustment Clause (Shall/shall not apply)		<b>Shall not apply</b>
The liquidated damages for the whole of the works in Kshs (per week)		<b>0.5% of the project cost</b>
Maximum Limit of liquidated damages		<b>10% of Contract Value</b>
Performance Security (as a percentage of the Contract Price)		<b>10% of Contract Value</b>
Completion Period for the works (in weeks)		<b>40 weeks</b>
The rate of exchange for calculation of foreign currency payments		<b>The ruling interbank market rate on the date of actual payment.</b>
Advance payment (Shall/ Shall not be granted)		<b>Not applicable in this tender.</b>
Percentage of Retention (Of the Interim Payment Certificate)		<b>5% of interim Payment Certificate.</b>
Minimum amount of interim certificates		<b>5% of contract price.</b>
Time (in days) after which payment is to be made after Interim Payment Certificate signed by Project Manager and date of receipt of Invoice.		<b>30 days</b>
Time after which payment to be made after Final Payment Certificate signed by Project Manager and date of receipt of Invoice.		<b>30 days</b>

Signature of Tender.....Date.....

**SECTION VII – SPECIFICATIONS**



**STANDARD SPECIFICATIONS**  
**SUBSTATIONS CIVIL WORKS**

## **CIVIL AND BUILDING WORKS SPECIFICATIONS**

All materials, plants and other supplies to be permanently incorporated in the works shall be new, unused, of the most recent or current models and incorporating all recent improvements in designs and materials unless provided otherwise in the contract.

### **1.0 GENERAL SPECIFICATIONS**

The following shall apply to all sections hereinafter:

#### **1.1 Alternations, Additions and Extensions**

In all alterations or extensions to existing Buildings and/or external works, new works is to match up in all respects to the existing work unless otherwise specified, shown on the Drawing or approved before hand by the Employer/Engineer.

#### **1.2 Units Of Measurements and Standardization**

The international system of the units (SI) shall be used in the connection with this contract and all materials fittings, component items of plant and equipment supplied for incorporation in the works shall be standardized accordingly. SI unit shall be used in all correspondence, documentation, calculations, drawings, measurement etc.

#### **1.3 Surveying Instruments**

The contractor shall supply and keep on site such surveying instruments as are necessary for the complete and accurate setting out and construction of the works. The instrument shall be in excellent condition and accurate in all respects. They shall be available for use by the Employer/ Engineer if so required.

#### **1.4 Setting Out**

The Engineer will establish a line from which he contractor shall set out the works.

**1.5** The contractor shall provide on-site sufficient labour, plant, materials and all other things necessary to carry out the works to satisfactory completion.

#### **1.6 Safeties and Cleanliness of Plant and Materials**

The Contractor shall at all times maintain good housekeeping at the site to avoid any accidents.

#### **1.7 Contractors Area**

An area will be allocated by the Employer, to the contractor for his offices, the storage of plant and any necessary fabrications during the execution of the contract.

#### **1.8 Site Electricity Supply**

The contractor will make his own arrangements to have electricity power supplied to the site for his use and pay all bills.

## **1.9 Site Water Supply**

The contractor will make his own arrangements to have water supply on site for his use and pay. Contractor will provide any piping or water storage necessary for the execution of the contract works. The contractor will pay all water bills during the execution of the contract.

## **2.0 Ground Conditions**

The contractor shall satisfy himself as to the ground conditions on site i.e. nature of strata, obstructions, possibility of flooding and shall allow for provisions necessary to carry out the work most suitably. If in the Engineer's opinion any plant or method of working is considered unsuitable, the contractor shall carry out the work by alternative method approved by the Engineer at no cost to the Employer.

### **2.1 Materials**

Materials, commodities, components and equipment are to be new and unused unless otherwise specified. Handle, store, fix and protect all commodities with care to ensure that they are in perfect condition when incorporated into the work and handed over on completion.

### **2.2 Manufacturers' Recommendations**

Handle, store and fix every commodity strictly in accordance with the printed or written recommendations of the manufacturer and/or supplier. Supply the Employer/Engineer with copies of manufactures' recommendations. Inform the Employer/Engineer if the recommendations conflict with any other specified requirements, and obtain his instructions before processing.

### **2.3 Standards**

Where commodities or workmanship are specified by reference to British Standards (B.S.) or Codes of Practice (C.P.) OR International (I.S.O.) or other standards, such stands are deemed to be latest published at the time of tendering. The contractor will be deemed to have read and understood the stands specified, and no claim for want of knowledge will be allowed. The substitution must be made in writing in sufficient time to allow adequate investigation. Obtain Certificates of Compliances with standards and supply to the Employer/Engineer on request.

### **2.4 Local Conditions**

All materials, commodities or components and equipment must be suitable for use in tropical climates.

## ***PARTICULAR SPECIFICATION CIVIL WORKS***

### **General**

#### **Location of the Works**

The locations of the sites are as described under the relevant clauses in scope of works in Volume 2.



- AA
- Control and protection Panel room to accommodate the necessary control panels and space for future expansion. Space for feature panels for additional equipment.

In addition a guardhouse with toilet facilities located at the main gate shall be constructed.

### Sequence of Construction

The Contractor must complete all the civil works in time to provide a clean and complete site for the mechanical and electrical erection.

The Contractor shall be responsible for timely delivery of materials to site and for compliance with the specified or agreed construction programme.

### Drawings

The Drawings issued with these documents are for tendering purposes only and specific to this project as per KPLC standards. the contractor must provide a set of as built drawings after completion

### Use of Site

The Contractor will restrict his activities to within the Sites. Access for others to work on the site concurrently with this Contract shall be maintained as far as possible. Where it is necessary for persons on foot or in vehicles, including other Contractors, to cross the site whilst work is in progress, the Contractor shall provide warning signs on either side of the Work and flagmen if necessary to guide such persons safely across the Site. The cost of maintaining access for others and assisting the passage of others across the Site shall be deemed to be covered by and included in the rates entered by the Contractor in the Price Schedules.

### Plan of Operations and Temporary Works

The Contractor shall, in accordance with Conditions of Contract and before commencing work on Site, submit to the Project Manager a fully detailed programme showing the order of procedure and method by which he proposes to carry out the construction and completion of the Civil Engineering works, and particulars of the organisation and staff proposed to direct and administer the performance of the Works.

The information to be supplied to the Project Manager shall include Drawings showing the general arrangements of his temporary offices, camps, storage sheds, buildings and access roads, and details of Constructional Plant and Temporary Works proposed.

### Contractor's Office and Accommodation, etc.

The Contractor shall be responsible for his offices, accommodation, storage and workshops. The Contractor may fence this area for his own security for the duration of the Contract but any such fence erected together with all buildings, plant and materials shall be removed, all holes filled in and the site left in a tidy and level condition upon completion of the Contract.

### Dealing with Water

The Contractor shall keep the whole of the Works free from water and he will be deemed to have included in his rates in the Price Schedules for all pumping, shoring, temporary drains, and sumps and other measures and provisions necessary for such purposes and for clearing away and making good to the satisfaction of the Project Manager damage caused thereby.

The Contractor shall keep all existing drainage channels clear and shall not obstruct the passage of water to or away from any such drainage channels.

### Liason with Police and Other Officials

Contractor shall cooperate closely with the Police and other officials of the area concerned regarding their requirements in the control of workmen, movement of traffic, or other matter.

## Explosives and Blasting

The Contractor shall use explosives for blasting in connection with the work only at such times and places and in such a manner as the Project Manager may approve, but such approval shall not relieve the Contractor from his responsibility for injury, loss, inconvenience and annoyance to persons, the Work and adjoining structures, roads, places and things and injury or damage to animals and property consequent on the use of such explosives. The Contractor shall be entirely liable for any accident that shall occur and shall save the Project Manager harmless and indemnified from all claims arising from such use of explosives.

The Contractor shall keep in his office at the Site copies of Laws applying to the transport, storage and use of explosives and shall also submit to the Project Manager a copy of any instructions or notices which the Contractor may issue to his staff or workmen or post about the site in compliance with such Laws.

The Contractor shall submit to the Project Manager details of the explosives, which he proposes to use, and of his proposals for the transport and storage of explosives.

## Works Executed by the Project Manager or by Other Contractors

The Project Manager reserves the right to execute on the site, works not included under this Contract and to employ for this purpose either his own employees or other contractors.

The Contractor shall ensure that neither his own operations nor trespass by his own employees shall interfere with the operations of the Project Manager or his Contractors employed on such works and the same obligations shall be imposed on the Project Manager or his contractors in respect of work being executed under the Contract.

The Contractor shall provide unhindered access to all parts of the site to the Project Manager, authorized representatives of the Project Manager and of public bodies and corporations, and to contractors employed by the Project Manager, and he shall make available to such authorized persons the use of all temporary access tracks in or about the site.

Where works are being carried out concurrently in one area careful co-ordination of operations will be required so that interference can be minimized. The Project Manager shall have the power to regulate and rearrange the order of execution of the Works under this Contract to achieve the best co-ordination practicable. The Contractor's programme shall take into consideration all information on co-ordination available at the time of its preparation and it shall be flexible enough to allow for subsequent changes that may become necessary. The rates tendered for the Works shall include the costs of complying with the requirements of this Clause.

## Water Supplies for the Works

The Contractor shall make his own arrangements for the supply of potable water for his staff on site and water for the Works.

The Contractor must make all arrangements including the supply of pumps and motors, labour and the like to abstract water and must pay royalty to the owners. These costs shall be included in his prices.

If the Contractor fails to obtain permission to utilize existing water sources, he may have to drill boreholes near the sites at suitable locations.

The Contractor shall obtain the Employer's or the Project Manager's prior approval before utilizing any water source for the Works.

## Employer's Approval of Finished Works

The Contractor shall obtain the approval of the Project Manager for each section and each stage of construction. Approval of any section of any stage will not be given, and the Contractor shall not proceed with any subsequent stage, until all tests required by the Project Manager have been carried out, and the results have shown that the section complies with the Specification. Any works rejected by the Project Manager as not complying with the Specification shall be replaced by the Contractor at his own expense.

## Preservation of Trees

No tree shall be removed without prior permission of the Project Manager who will limit the removal of trees to the minimum necessary to accommodate the permanent Works.

## Survey Beacons

During the progress of the Works, the Contractor shall not remove, damage, alter or destroy in any way any permanent beacons or survey beacons. Should the Contractor consider that any survey beacon will be interfered with by the Works, he will notify the Project Manager, who, if he considers necessary, will make arrangements for the removal and replacement of the beacon.

If the Contractor removes or disturbs a beacon without the prior permission of the Project Manager he shall be liable for the full cost of its replacement together with the full cost of re-establishing the data relevant to it.

## Basic Survey and Setting Out

The Contractor will survey the sites in detail, and the exact locations shall be agreed with the Project Manager. The details of beacons and benchmarks shall be provided in the site survey drawings.

The Works are located on the drawings and the Contractor shall appoint a suitably qualified Surveyor to set out the Works from the beacons and shall plot cross sections at 10 m intervals and submit to the Project Manager for approval.

No separate payment will be made for any work in connection with the setting out of the Works, nor any other Works required by the Contractor to ensure the accurate location and construction of the Works.

# EARTHWORKS

## Bush Clearing

The areas of the platform and borrow pit shall be cleared of all trees, vegetation and roots. These shall be neatly stockpiled within 3 km of the site at locations agreed with the Project Manager and shall remain the property of the land owner.

## Access and Internal Roads

An access road as shown in the drawing from the main road to the substation site shall be provided, and join the substation road in the substation at the gate. Loading and offloading bay for transformers and access to the control building through paving walk path slabs shall be provided.

### **Access road.**

The contractor should put in consideration the accessibility to the substation from the main road, by ensuring that the gradient of the slope and the turning angles are easily attainable by any vehicle to and from the substation. The main road tee-off works to the Substation works shall also be approved by the local Council

The Access road, shall be compacted to 100% MDD and 150mm thick rolled approved murrum finish compacted to 100%MDD, on a well compacted and formed approved hardcore base well compacted in layers of 150mm thick and shall attain 95% compaction density. The access road shall be 150mm above the existing ground level unless otherwise stated where the road is used for draining purposes. Appropriate sized culverts shall be installed. Cable ducts **MUST** be provided as marked at road crossings.

### **Internal Roads**

Substation road and walk paths shall be compacted to 95% MDD after grading shall have a well done paving block finish that can withstand load weight of not less than 80mm, 49N/mm<sup>2</sup>. The roads shall also be lined with a kerb line and

channels and shall be constructed to a fall that will allow proper drainage of the road.

**a) Existing Bitumen Standard Access and Internal Roads**

Existing roads shall be reinstated to their original standard of materials and construction.

**b) Quality Control**

Tests shall be performed by the contractor on soils and gravels undergoing compaction under the supervision of and at frequencies determined by the Project Manager and shall include:

- Determination of the Atterberg Limits in accordance with BS 1377.
- Determination of particle size distribution in accordance with BS 1377.
- Determination of dry density / moisture content relationship in accordance with BS standard compaction and modified AASHTO T180 as appropriate.
- California Bearing ratio (CBR) in accordance with AASHTO T193.
- Field dry density as set out in BS 1377.

**CONSTRUCTION OF SUB-BASE AND BASES**

**18.4.1 General**

The term “gravel” used throughout this section shall be deemed to include; lateritic gravel, Quartzitic gravel, some forms of weathered rock, soft stone, coral rag and conglomerate.

A “grade” base will be made up of one of these natural gravels, or of sand or clay sand, or of a combination of these materials, without the addition of any stabilizing agent.

**18.4.2 Material requirements**

Unless otherwise specified or directed by the Engineer, the material shall comply with the following requirements:-

California bearing ratio:

- a). The material for base shall have CBR of least 80.
- b).The material for sub-base shall have a CBR of at least 30.
- c)Unless otherwise specified, the CBR shall be measured at a dry density corresponding to 95% MDD (heavy compaction) and after 4 days.

**18.4.3 Requirements for gravel:**

In addition to the CBR requirements, the gravel material shall comply with the following specification:-

Gravel for		Base	Sub-base
Plasticity Index	- Maximum	15	25
Loss Angels value	- Maximum	30	70
Aggregate Crushing value	- Maximum	35	75

**Quarry waste**

Quarry waste shall mean material to the same specification as crusher dust, except as follows:- The material may have up to 35% of stones not larger than 38mm provided that the material passing the 5mm sieve is within the limits specified.

Quarry waste shall be clean and completely free from earth, organic or other foreign matter.

- i). The plasticity index taken on material passing the No. 36 sieve shall not exceed 16%

## Removal of Top Soil

The top soil within the areas of platform and shall be stripped to an approximate depth of 300 mm and stockpiled at locations agreed with the Project Manager for later use on embankment slopes.

Overburden in the borrow pit shall also be stripped to a depth specified by the Project Manager and stockpiled for later use in rehabilitation.

## Order of Work

The construction of cuttings, side drains and embankments shall proceed in a methodical and orderly manner. It shall be solely the Contractor's responsibility to arrange his methods and programme of work so as to ensure that the earthworks are carried out by the most efficient and economical method possible with the type of plant employed on the Works.

All trimming of cuttings, and embankments, drains and shoulders to the specified slopes and shapes, shall be carried out concurrently with the earthworks that are being carried out at that particular site and level.

## Fill Material

"Fill-material" shall mean material deposited in accordance with these specifications from any of the classes specified in order to build up an earthworks construction to formation level as shown on the Drawings or as ordered by the Project Manager. The Contractor shall obtain the fill material from a source approved by the Project Manager.

Fill materials will generally be obtained from cuttings. If the material obtained from this source is insufficient or unsuitable extra material shall be obtained from borrow areas. All fill material (other than rock fill in lower layers) shall pass 75mm BS sieve size.

The following materials are generally unsuitable for construction of fills.

- All materials containing more than 5% by weight of organic matter (such as top soil, materials from swamps, plants and vegetable matter)
- All expansive soils such as black cotton soils with swells of more than 3% as measured in the CBR test.
- All clay soils with plasticity index exceeding 50.
- All materials having a moisture content of 105% of the optimum moisture content (standard compaction)

Rock fill can be used provided that boulders greater than 0.2 M<sup>3</sup> in volume or 600 mm in size are not used and that this material is not placed within the top 600 mm to formation level. The best materials from cuttings or borrow areas should be reserved for the upper layers of the fill.

## Compaction of fill

Materials other than rock fill shall be placed in layers of compacted thickness not exceeding 300 mm. Thicker layers can only be permitted where very heavy compacting equipment is available and trial sections have proved that the required compaction will be readily achieved over the layer depth. The minimum layer thickness shall be twice the maximum particle size of the compacted material.

Fill material shall be compacted throughout to a dry density of at least 95% MDD at OMC (standard Compaction AASHTOT99) except the top 300 mm of the fill which shall be compacted to 100% MDD (AASHTO T99).

Where rock fill is used it should be placed in the bottom of the embankment. The largest sizes but shall be placed in layers of 1.0 meter thick. The interstices shall then be filled with smaller rocks and approved filler material. The whole layer shall then be compacted until the interstices are completely filled or until the required settlement is obtained. Heavy vibratory rollers are generally the most suitable machines for compacting rock fill.

The specified compaction shall be achieved over the full width of the embankment. Any area inaccessible to the roller shall be consolidated and compacted using approved mechanical tampers.

### **Compaction of In situ Sub grades**

After removing the top soil and/or 600 mm of expansive soils and before placing fill, improved sub grade or gravel wearing course, the upper 300 mm of in situ sub grade will be compacted to 100% MDD standard compaction. Compaction in cuts without improved sub grade will likewise be compacted to 100% MDD standard compaction

### **Spoil Material**

"Spoil-material" shall mean material excavated in accordance with these specifications from any of the classes specified, and which, being obtained from the excavation of side drains, cuttings or below the road, embankment is unsuitable for the requirements of the Works. Spoil material shall be removed from the Site to a spoil tip which should be to a site acceptable by respective local authorities and shall be approved by the Project Manager.

### **Expansive Material**

When expansive material is encountered, it shall be removed to a depth 600 mm below the formation or the existing ground level, whichever is greater. Material removed shall be stockpiled for later use in slope protection or spoiled to a tip as instructed by the Project Manager.

### **Surplus Material**

"Surplus-material" shall mean material excavated in accordance with these specifications from any of the classes specified and which is temporarily surplus to the fill requirements and shall be carted to a designated stockpile for re-use later elsewhere in the Works, or to an approved spoil tip.

### **Side Drains**

Where side drains are required excavating the lines, slopes and widths as designed by the Contractor and approved by the Project Manager shall shape them. The side drains shall be finished off so that the formation levels and camber or super elevation of the formation, level and cross fall of the shoulders, and shape and invert levels of the side drains are everywhere in accordance with the Drawings.

Any excess depth or width excavated from the side drains shall be backfilled and made good to the satisfaction of the Project Manager at the Contractor's expense.

All other types of drains are specified separately in this Specification.

### **Excavation in "Rock"**

#### a) Excavation Level

Unless otherwise directed, the formation of the platform can be founded on rock. However, rock shall be excavated to an average level 150 mm below the formation and in no place less than 100 mm below the formation.

#### b) Backfilling for Surfaces

Any excess excavation in rock below the formation shall be backfilled and compacted. Excess excavation in the invert of drains shall not be backfilled, but the rock surfaces shall be trimmed, and all loose particles removed, to allow free drainage of water.

#### c) Excess Excavation of Slopes

Where side slopes are over-excavated no backfilling will be required but the slopes shall be trimmed to a neat shape and safe angle as is acceptable to the Project Manager. The sloping sides of all cuttings shall be cleared of all rock fragments, which move when prised with a crowbar.

#### d) Hard Material

The provisions of this Clause do not apply to hard and common materials, which materials shall be excavated to the lines and levels shown on the Drawings or as instructed, within the permitted tolerances.

### Setting Out and Preparation for Earthworks

The Contractor shall set out the earthworks and the tops of cuttings and toes of embankments at intervals 10 m. Reference pegs shall be provided clear of the earthworks and at right angles to the centre lines, from which the centre lines and levels can be re-established at any time.

Before the construction of any earthworks in the fills, the levels of the existing ground shall be agreed between the Contractor and the Project Manager. If the Contractor fails to take the requisite levels then the ground levels determined by the Project Manager shall be taken as correct.

### Construction of Earthworks to Formation

All earthworks up to formation shall be formed and completed to the correct lines, slopes, widths and levels shown on the Drawings and with the sub grade parallel to and at the correct depth below the profile, camber, cross fall or super elevation shown for the finished level, unless otherwise directed by the Project Manager.

Embankments and fills shall be constructed only of suitable material obtained from the excavation of cuttings. If the Contractor encounters material which he considers unsuitable for earthworks, then he shall forthwith inform the Project Manager, who shall instruct the method of use or disposal of such material. If insufficient material can be obtained from the cuttings, additional material may be borrowed from approved borrow pits.

The Project Manager may direct that certain soils be excluded from certain layers and other soils set apart or obtained from borrow and used only for these layers, in which case the Contractor shall comply with the Employer's or the Project Manager's directions and shall allow in his price for such selection of materials.

### Unsuitable Material Information

Where, in the opinion of the Project Manager, unsuitable material occurs in cuttings, the Contractor shall excavate it to the depths and widths directed and replace it with selected fill material to form an improved formation.

### Spreading and Compaction of Embankment and Fills

Embankments and fills shall be laid out and compacted to achieve a stable platform with sufficient bearing capacity and stability.

### Drainage of Works

All cuttings, embankments and borrow pits shall be kept free of standing water and drained during the whole of the construction.

Should water accumulate on any part of the earthworks, either during construction or after construction, until the end of the maintenance period, giving rise to soaking or eroding conditions in the earthworks, the Project Manager may order the Contractor to remove and replace at the Contractor's expense any material which has been so affected.

All drains shall be maintained throughout the Contract in proper working order.

The Contractor must allow in his price for draining the earthworks satisfactorily at all stages during the construction and arrange his methods and order of working accordingly.

### Sub-grade Layer

During this process the sub grade layer shall be graded to level, parallel to the cross fall or chamber and profile shown on the approved design drawings or directed by the Project Manager and to agreed tolerance.

### Tolerances

The following tolerances will be permitted in the finish of the formation to roads and platform:

- a) The level of the formation should be within +/- 100 mm and - of that specified.
- b) On the final trimmed slope of earthworks a variation of + or - one fifth of the specified slope will be allowed.
- c) The tolerances permitted in the overall width of the bottom of cuttings shall be plus or minus 150 mm in the distance between center lines and the toe of cuttings slopes, and plus 150 mm in the case of embankments.

### Protection of Embankment Slopes

The top soil and expansive material removed from the Works shall be placed on embankment slopes as directed by the Project Manager. The slopes shall be trimmed to form a gradient not less than 1 on 5 unless otherwise directed.

### Grassing of Slopes

The surface of embankment slopes, after placing of top soil, shall be planted with grass. Unless instructed otherwise by the Project Manager, the type of grass shall be indigenous. While planting, the area shall be irrigated for as long as necessary to ensure that the grass is properly established and has completely covered the ground. Grass should only be planted in the rainy season.

### Borrow Pits

Where it is necessary to borrow material for construction, suitable pits shall be provided by the Contractor to the approval of the Project Manager.

All borrow pits must be carefully cross sectioned before and after excavation in order to determine the quality of earth excavated.

After removal of material for use, the area must be rehabilitated by the Contractor so that it will not prove a hazard to man or beast or a source of erosion. The sides of the excavation must first be sloped and then any previously stockpiled top soil spread as far as possible.

At some borrow pit locations, further cleaning and fencing etc., may be required.

### Soil Sterilization

In order to stop the growth of vegetation and incidence of ants, the Contractor shall apply an approved herbicide before any spreading of stone over the platform area.

Insecticide to be used around Switchgear building.

### Earth Electrode

The Contractor shall install earthing electrodes in trenches as outlined in the Specifications for Earthing in chapter 4.1. Particular specifications.

### Platform Areas

The substation platform areas shall be at least 1.5 times the area required by to equipment to be installed.

## MATERIALS FOR THE WORKS

### General

All materials shall comply with appropriate local or regional standards unless otherwise required hereinafter. Such standards shall be to the approval of the Project Manager.

The Contractor shall before placing any order for materials or manufactured articles for incorporation in the Civil Works, submit for the approval of the Project Manager the names of the firms from whom he proposes to obtain such materials, etc., together with a list of the materials and manufactured articles giving the origin, quality, weight, strength, description, etc., which he proposes that the firms should



supply. No materials or manufactured articles shall be ordered or obtained from any firm of which the Project Manager shall not have previously approved.

All materials shall be delivered to the site a sufficient period of time before they are required for use in the Works to enable the Project Manager to take such samples as he may wish for testing and approval. Any materials condemned as unsuitable for Works shall be removed from the Site at the Contractor's expense.

The Contractor may propose alternative materials to those specified, provided that they are of equivalent quality and, subject to the Employer's or the Project Manager's approval such materials may be used in the Works.

### Standards

Concrete pipes, porous concrete pipes, cast iron manhole covers and gratings, bricks, concrete kerbs, bituminous surfacing, cement, steel and aggregates shall comply with local or regional standard to be approved.

### Filter Backfill for Sub-soil Drains

This shall be graded crushed stone as for platform surfacing (below).

### Stone for Pitching

Stone for pitching to drains, inlets and outlets of culverts, to embankments and around structures shall consist of sound un-decomposed rock. Precast concrete tiles may also be used.

### Stone for Platform Surfacing

The stone shall be hard and durable crushed rock with a maximum particle size of 60 mm and not more than 15% shall pass a 9.5 mm sieve.

The stone layer to be spread uniformly over the finished surface of the platform shall have a thickness of 100 mm.

## DRAINAGE AND STORM WATER

### Drainage

The Contractor shall provide sub-soil and storm water drainage, including drainage of cable ducts. The drainage system shall be to the approval of the Project Manager.

## FENCING

### Fencing

The Contractor shall construct fencing along the perimeter of sub-stations, including gates where necessary and shall comply with the requirements of the following Clauses.

All the substation fences unless otherwise stated in the scope of works, shall be of dressed Natural stone. electric fence shall be installed on top of the perimeter wall

### Dimensions:

This shall apply to chain link fences;

Height of the stone fence:	2 400 mm
Height of chain link fabric:	2 000 mm

Barbed wire:3 wires above fabric, height of 300 mm, on supporting arms facing outwards from Site at 45degree angle.

Maximum distance between posts: 3 000 mm, except where interrupted by gate.

Terminal posts: including end, corner and straining posts; 89 mm outside diameter 114 mm outside diameter at gates.

Embedment lengths of terminal posts:

-	Corner and straining posts	1 100 mm
-	End posts	1 200 mm
-	Gate posts	1 400 mm

Tension bars and bands: locate at terminal posts to fix fabric, bottom wire and barbed wire.

Top rail: "extra-strong" pipe, 43 mm outside diameter.

Braces: "extra-strong" pipe, 43 mm outside diameter for attaching end and gate posts to adjoining posts. Use two braces at corner and restraining posts.

Gate width: free distance between 2 gate posts, 1 500 mm for single gate, 5 000 mm double gates.

Double gates: one leaf for normal traffic, other leaf to remain closed by means of drop bolt locking into canter rest, inoperable from exterior.

Gates: able to open in either direction to 90°.

Gate hardware: three hinges, latch with padlock accessible from either side of gate, latch catch.

Top of posts and uprights: weatherproof tops.

## Materials

Fabric: ASTM A 392, 2 000 mm high, 3.8 mm diameter (No. 9 gauge) steel wire, 50 mm diamond pattern, twisted and barbed finish at top, knuckled wires at bottom, zinc coated.

Pipes: ASTM A 120, steel pipe, hot-dipped zinc coated after welding, diameter and weight size as shown on drawings, unthreaded ends, free from burrs.

Fence fittings: ASTM F 626, hot-dipped zinc coated according to ASTM A 123.

Barbed wire: ASTM A 121, 2.51 mm diameter wire in strand (No.12-1/2 gauge), 2 strands with 4-point barbs spaced at 125 mm, Class 3 zinc coating.

Bottom wires: 5 mm (No. 6 gauge) steel wire, 500 g/m<sup>2</sup> zinc coating. This shall be surrounded by a concrete beam (C20) as shown on the drawings.

Fence fittings: ASTM F 626, steel tension bars and bands, nuts and bolts, weather proof tops of commercial aluminum alloy, malleable cast iron, or rolled or pressed steel, cast iron and steel fittings hot-dipped galvanized with 500 g/m<sup>2</sup> according to ASTM A123.

Concrete: 20MPa at 28 days

## Installation

Install fencing and gates according to ASTM F 567 unless otherwise indicated, and to drawings and this Specification.

Level ground surface so that space between finished ground surface elevation and bottom of fabric does not exceed 50 mm.

Plumb and align posts to within 10 mm.

Install posts of a gate at same elevation regardless of difference in ground level.

Set posts in concrete footings in form of truncated cone, according to ASTM F 567, and as follows:

FOUNDATIONS (Dimensions)	ORDINARY SOIL		SOLID ROCK	
	Line Posts	Terminal Posts	Line Posts	Terminal Posts
Depth	1000 mm	1600 mm	300 mm	500 mm
Diameter at top	250 mm	300 mm	150 mm	150 mm
Diameter at bottom	350 mm	400 mm	150 mm	150 mm

Make joints in fabric at terminal posts.

Fasten as follows:

- a) Every 450 mm along top rail, braces and bottom wire;
- b) Every 300 mm on line posts.

Secure barbed wire to terminal and gate posts with tension bands, and to gate uprights with hooks.

Install bottom wire in middle of last line of mesh.

## CONCRETE AND BUILDING WORKS

### Earthworks

#### Soil Investigations

The Contractor shall be required to perform sub-soil tests within the area of the switchyard to the depth and by the method of test specified by the Project Manager. The details of performing the test, tools and equipment to be used for, shall be submitted to the Project Manager for approval.

The sub-soil tests shall be carried out by any method as stated hereafter under the supervision of a qualified person, who shall be subject to approval of the Project Manager.

#### Excavation

Excavation for concrete foundations shall be carried out in strict accordance with the requirements of the Project Manager and to fit in with the programme of construction.

#### Shoring and Timbering of Excavation

The Contractor shall be entirely responsible for the safety of all excavations, for the prevention of injury to workmen and for the stability of the faces of the excavation.

The adjacent road surfaces must remain trafficable, and cracking or cave-ins must be avoided. All shoring and timbering shall be done to the approval of the Project Manager, who may order such shoring or timbering to be strengthened or altered if he considers this necessary in the interests of the work or to safeguard against accidents to workmen or cave-ins. For the purpose of measurement the following categories of shoring shall apply:

#### Dewatering

The whole Works shall be constructed in the dry and the Contractor shall be held responsible for keeping all excavations free from water, whatever the source or cause may be, and shall properly deal with and dispose of water by use of sufficient temporary works, plant and appliances so as to ensure that the whole Works is executed in a satisfactory dry and safe manner, and costs for all dewatering operations shall be included in the price for civil works.

#### Excavation to be Approved

In no case shall broken stone for under drainage or concrete be placed in an excavation until the surface on which such materials are to be placed has been approved by the Project Manager.

The Contractor shall advise the Project Manager whenever the bottom of any excavation is ready for inspection or whenever it is necessary to cover up the work. In default of such notice the foundation

shall on the order of the Project Manager be uncovered by the Contractor and reinstated without extra charge.

#### Disposal of Excavated Material

All material excavated under this Contract shall be disposed of in accordance with the instructions issued by the Project Manager. Selected material required for back-filling shall be removed to a tip found by the Contractor and the Contractor shall be responsible for ensuring that the required amount of spoil is set aside.

#### Other Services

Where trenches pass near or across other services, the Contractor shall take every precaution against damaging such services. These services shall be properly supported in the trench until back-filling is complete and the back-filling shall be thoroughly compacted under and around such services.

#### Backfilling

Back-filling shall be carried out either with selected spoil as set aside, or with imported selected spoil, or other material to the approval of the Project Manager.

No back-filling shall be done until all the formwork has been removed together with pieces of timber, cement bags, vegetation and or other rubbish.

All back-filling shall be compacted in layers not exceeding 150 mm thick and shall be sprayed with water to bring the moisture content to the optimum for dense compaction.

Compaction shall be to approved standard.

### 5.6.4 Tolerance

All in-situ concrete shall be dimensionally accurate to within the following non-accumulative tolerances:-

- a) Between the centre lines of principal member columns or beams ..... +/- 5mm
- b) Up to 5 metre centres ..... +/- 5mm
- c) Over 15 metre centres ..... +/- 5mm  
(Note:- The +/- 5mm is floor to floor).
- d) In storey height ..... +/- 5mm floor to floor.
- e) In plumpness of columns and walls ... +/- 10 mm on any storey or overall the structure.
- f) In level of floors ..... +/- 5 mm/ - 3 mm of the true prescribed horizontal surface level.
- g) In cross sectional dimensions of column, beams and walls ..... +/- 5 mm/ - 3 mm
- h) In any dimensions up to 2 metres overall +/- 10 mm/ - 3 mm
- i) Cover to reinforcement..... + 5 mm/ - 0 of the stated covers.

### **5.6.5 Miscellaneous Items**

Holes, chases, indentations and the like shall be provided where indicated on the drawings. All such shall be formed in the concrete and not cut after concrete has hardened.

Should the Contractor or any Sub-contractor require additional holes of the like, these requirements shall be submitted to the Architect at least two days prior to concreting, for his approval.

Pipes, conduits, fixing bolts and other such cast-in items shall be provided where indicated on the drawings.

Should the Contractor or any Sub-contractor require additional cast-in items, these requirements shall be submitted to the Architect at least two days prior to concreting, for this approval.

### **5.6.6 Ready Mixed Concrete**

Ready Mixed Concrete shall be used only with the approval of the Architect. When such approval is given, it shall be supplied in accordance with B.S. 5328, except where this conflicts with this specification, wherein this specification shall prevail.

Truck mixer units and their mixing and discharge performance shall comply with the requirement of B.S. 4251.

The use of ready mixed concrete shall not relieve the Contractor of any of his obligations, and the appropriate clauses of this specification shall apply equally to the ready mixed concrete.

Concrete test cubes and slump tests shall be taken on site at the point and time of discharge in accordance with this specification irrespective of any cubes that the supplier may take at his own risk.

#### Material

##### Aggregates

- a) Shall conform to BS 882.
- b) Shall be heaped separately on hard, self-draining surfaces.
- c) Normal size of coarse aggregate shall be 20 mm.

##### Water

Shall be fit to drink

##### Reinforcement

Shall conform to BS 4449.

##### Cement shall

- a) Conform to BS 12.
- b) Be either normal Portland or P.C. 15.

- c) Be used within 6 weeks of manufacture.
- d) Be stored in a manner to exclude any moisture.
- e) Be stored in a manner to ensure use of the earliest consignment.
- f) Different types of cement from different manufacturers shall not be mixed for a single cast or structural element.
- g) If concrete is to be exposed Item 4.f to apply for whole project.

Additives shall not be used

Before concreting

Design Mixes

Not less than 2 weeks before the start of concrete work, the Contractor shall submit to the Project Manager for his approval a statement of proposed mix proportions for the various grades required in the project. (Note: the grade is the characteristic strength or the cube strength below which not more than 5% of the result may be expected to fall when tested at 28 days).

The statement shall include proportions of cement, fine and coarse aggregate, and water, the maximum and minimum slump and the target strength for each grade.

A certificate by recognized laboratory that the proposed mix will meet the requirements must accompany the statement.

The proportions stated may not later be altered without the written approval of the Project Manager.

Cost of mix designs to be borne by the Contractor.

Formwork

Formwork shall be sufficient to leave the concrete finishes specified on drawings and to be within the tolerances specified in the following table and to provide an acceptable surface for applied finished, where required.

Line and Level	1 mm per metre not exceeding 5 mm
Pockets, Sleeves etc.	+/- 5 mm
Bases	+/- 50 mm

The concrete shall have a smooth finish free of projections, voids, etc. The type of ties to be used shall be such that the required finish is achieved and does not become marred by subsequent corrosion. Ties to be set out to definite pattern to the Employer's or the Project Manager's approval. Rubbing down is allowed only after the Employer's or the Project Manager's approval of the surface to be treated.

Reinforcement

Shall not be heated or re-bent without the Employer's or the Project Manager's permission.

Shall be free from any material likely to impair bond or initiate corrosion.

Shall be bent and fixed according to the Project Manager bending schedules.

Shall be tied with soft iron wire.

Shall be supported to maintain the following minimum cover during concreting.

- a) The greater of the diameter of the bar or 40 mm for external un-plastered face.
- b) The greater diameter of the bar or 15 mm for internal face.

Shall be inspected by the Project Manager.

NOTE: Holding down bolts shall be supplied under the civil works part or by the main contractor if he so decides, and in any case be included in the turnkey price.

#### Construction Joints

Shall be avoided if possible, but if inevitable shall be pre-planned in consultation with the Project Manager and temporary stop ends inserted. Before placing of concrete against a construction joint, the formed face shall be hacked down to expose the coarse aggregate, kept continuously wet for 24 hours. Vertical faces should be covered with cement/water slurry and horizontal faces should be covered with 15 mm layer of cement/sand grout. New concrete should then be placed immediately.

#### Camber

To formwork shall not be at the expense of the overall depth of the concrete.

#### Weather

Concrete shall not be placed if temperatures above 30 degrees Celsius or below 0 degrees Celsius are expected during concreting

#### Batching

shall

- a) Be by mass in accurately calibrated scales or be volume in soundly constructed gauge boxes making due allowance for bulking of the fine aggregate.
- b) Be in proportion to whole sacks of cement.

#### Mixing

shall

- a) Be in a machine in good condition, large enough to carry the whole mix, controlled by a competent experienced operator.
- b) Be for sufficient time to ensure complete mixing of the ingredients.

#### Placing

shall

- a) Be under the control of a competent, experienced overseer.
- b) Be in a manner to prevent separation of the ingredients.
  - c) Be a continuous process until the pour is complete.

#### Compaction

- a) Shall be by immersion (poker) vibrator in the hands of experienced operators.
- b) Concrete shall not be moved by vibrator.
  - c) Shall be sufficient to remove all air pockets and honey-combing and to ensure complete dense concrete cover to all reinforcement.

#### Testing

- a) Making of concrete cubes by Contractor under Project Manager's supervision. Contractor shall arrange for transport of cubes to approved testing laboratories. Cubes to be in sets of 3.

#### Curing

- a) Shall commence early on the morning following the placing of the concrete.
- b) Shall be effected by keeping the concrete in a permanently wet state.
- c) Membranes shall not be used.
- d) Shall continue for a minimum of seven (7) days or such longer time as may be required by the Project Manager.

#### Stripping of Formwork

- a) To soffits shall not be struck until 7 days after placing of concrete (but see below for (props)).
- b) To vertical faces shall not be struck until 14 days after placing concrete.
- c) Props to soffits shall not be struck until 14 days after placing concrete.
  - d) Shall not be stripped without the Employer's or the Project Manager's approval who has the power to vary the above items.

#### Patching

- a) To defective work shall not be undertaken before the item has been shown to the Project Manager.
- b) Is a sign of poor workmanship. The Project Manager shall have the right to reject the complete element if an unreasonable amount of patching has to be done, or if patching will spoil the appearance of the finished concrete.

#### Records

Are to be kept by the Contractor, showing date and time of each concrete pour, the weather conditions, the temperature, the number of the cubes which represent the concrete, the slump and any other items which the Contractor and/or the Project Manager consider relevant. These records are to be made available for the Project Manager inspection when required.



## FOUNDATIONS

Foundations to Transformers and for circuit breakers, switches and insulators pedestals shall be at a depth not less than 1200 mm from the existing ground level.

## BUILDER'S WORK

### Setting out Walling

The Contractor shall provide proper setting out rods and set out all work on the same for courses, openings, heights, etc. and shall build the walls and piers, etc. to the widths, depths and heights indicated on the drawings and as directed and approved by the Project Manager.

### Materials

- a) Cement  
Cement shall be as described in concrete Works, Part 6B.
- b) Fine Aggregates  
Fine aggregates for concrete blocks shall be as described for fine aggregate in Concrete Works.
- c) Coarse Aggregate  
Coarse aggregate for concrete blocks shall be good, hard, clean aggregates from an approved quarry. It shall be free from all de-composted materials and shall be graded up to 7 mm, and all as described for coarse aggregate, Concrete Works.

### Concrete Blocks

Concrete blocks for walling shall be provided by the Contractor complying with B.S. 6073, and made in approved block manufacturing machines.

Minimum thickness of blocks in external walls shall be 150 mm, and in internal walls the thickness shall be minimum 100 mm.

Blocks in external walls shall be hollow type. The volume of the cavities shall be not more than 50 % of the gross volume, and the dimensions of the cavities arranged so that each cavity is vertically continuous when the blocks are bonded. Blocks in internal walls shall be of the solid type. Samples of the proposed block types shall be approved by the Project Manager before any walling work is commenced.

Blocks shall be cast under sheds in suitable block manufacturing machines either power driven or hand operated. The form shall be of steel, and accurately made to size to give the required shape and squareness of block. The concrete shall be vibrated during casting to achieve a dense and uniform concrete. The material shall contain only sufficient water to obtain full chemical reaction of the cement and to give proper workability of the constituents.

The ratio of combined aggregate to cement shall not exceed 3:1. The Contractor shall present his proposal for mix recipe supported by test results for the Project Manager's approval.

Concrete shall have a minimum 28 days strength of 25 N/mm<sup>2</sup> in accordance with B.S. 1881. Mixing shall take place in mechanical mixers so as to thoroughly mix the constituents to a uniform consistency before casting.

On removal from the machine the blocks shall be carefully deposited on edge on boarding or a clean concrete floor under sheds so as to prevent drying out by the sun for 3 days. During this time blocks shall be kept constantly damp. The blocks may then be laid on edge in the open and kept damp by spraying or covering with wet hessian or by other means for a further 5 days. The blocks may then be stacked if required, but not more than one metre high, and in such a way as to prevent damage to the edges and corners.

No blocks may be used in building or be transported to site before having reached required 28 days strength criterion. All concrete blocks shall be of even texture and properly mixed ingredients and all portions of the block shall be properly set and hardened concrete.

Blocks shall be free from cracks or blemishes and shall be true to shape and size with clean sharp edges and corners and with corners truly square. Damaged blocks shall immediately be removed from the site. No dimension of a block shall deviate individually by more than 3 mm from the correct size. The average length, width and height of a sample of 15 blocks should neither be longer nor less than 2 mm than the correct size.

Dressed natural stone blocks at least 200mm width may be used as alternative to the concrete blocks.

#### Cement Mortar

The cement mortar is to be mixed in the proportions of 1 Cement, 4 Sand, and thoroughly incorporated with a sufficiency of water. Any cement mortar which has been left for more than one hour shall not be used in the Works.

#### Building Walling

All blockwork shall be laid in raking stretcher bond solidly bedded, jointed and flushed up in mortar. Where wall faces are to be plastered the joints shall be raked out to form a key. The blocks shall be thoroughly wetted for at least 24 hour before laying. Walls shall be carried up evenly course by course. During laying an open joint not less than 15 mm wide shall be left between the ends of all concrete lintels, whether pre-cast or cast in-situ and the blocks adjacent to these ends. These open joints shall be left as long as possible during construction and not filled until plastering or other works render such filling necessary. All such joints shall be properly filled in before the completion of the work. External walls shall be reinforced with two 8 mm high yield steel bars in every third horizontal mortar joint.

Blockwork which is not to be rendered or plastered shall be finished with a fair face and the blocks shall be selected for even texture and unmarked faces, regular shape and square unbroken arrisses. The blockwork shall be pointed as the work proceeds with a neat joint. Where blockwork is to be rendered or plastered the joint shall be raked out 10 mm deep as the work proceeds to form an adequate key.

galvanised steel ties with fishtailed end cast into the concrete spaced at alternate courses and extending not less than 150 mm into the block joints. All mortar joints are not to exceed 15 mm or less than 12 mm.

#### Lintels

Concrete lintels shall be used for all openings and shall be reinforced with two 12 mm high yield steel bars. Lintels shall have a minimum bearing of 500 mm at the ends.

#### Structural Steelworks Switchgear building

Structural steelwork shall be shop-fabricated from structural shapes of medium grade carbon steel in suitable lengths for easy transport and erection. The structural members shall be jointed or fixed on site by bolting or welding. Site welds should be minimised.

All workmanship and fabrication shall be in accordance with the best practice and shall generally comply with the requirements of B.S. 449. The greatest accuracy shall be observed to ensure that all parts fit together correctly on erection within the tolerances stated in this section. Steelworks shall include all materials, bolts and attachments, cleats, brackets, gussets, etc.

Where required in the Contract, the Contractor shall design the steelwork to comply with the information given on the Contract Drawings. Loading and factors of safety shall comply with relevant codes and regulations. Shop drawings shall be prepared using welding symbols to B.S. 499 where appropriate. design calculations and shop drawings must be submitted to the Project Manager for his approval prior to fabrication of members. The approval of shop drawings and calculations by the Project Manager shall not relieve the Contractor of the full responsibility for any discrepancies, errors, omissions or failure arising therefrom.

All steelwork shall be transported, handled, stored on Site and erected so that members are not damaged or subjected to excessive stresses. Fabrication and erection shall comply with B.S. 5950 Part 2.

## **ROOFING**

### **9.1.0 ROOFING SHEETS PRE-PAINTED MILD STEEL/G.C.I. SHEETING**

### **9.1.1 Generally**

Pre-painted corrugated mild steel sheeting shall be No. 24 Gauge of best quality in accordance with B.S. 3038, and shall conform to Uganda Bureau of Standards.

### **9.1.2 Laps**

Sheets shall be laid with 150 mm end laps and side laps of 30 mm corrugations on the side away from the prevailing wind.

### **9.1.3 Fixing of steel and timber**

The sheets shall be fixed to mild steel angle purlins with 6 mm diameter pre-painted mild steel hook bolts 50 mm longer in the shank than the depth of the steel purlins to which they are fixed each with one diamond shaped bitumen washer, one, pre-painted steel washer, and one pre-painted steel nut. The sheets shall be fixed to timber purlins by using 14 gauge drive screw with bituminous felt washer backed by cranked diamond shaped aluminium washer.

### **9.1.4 Holes**

Holes for bolts or screws shall be punched from the inside of the sheet and through the ridges of corrugations NOT in the hollows. A clearance of 0.80 mm on the bolt or screw must be allowed.

### **9.1.5 Ridges, Valleys, Flashings**

The ridges, valleys, flashings etc. shall be formed of No. 24 gauge pre-painted mild steel sheeting of a quality equal to the sheeting on each side at 450 mm centres maximum with 6 mm diameter seam bolts 20 mm long each with one diamond shaped bitumen washer, one pre-painted steel washer and one pre-painted steel nut.

Ridges and valleys shall not be less than 375 mm girth.

### **9.1.6 Bolts and Screws**

All fixing bolts and screws shall comply with B.S. 1494.

Materials, accessories and fixings shall be ordered from an approved supplier and the Contractor shall as and when required by the Project Manager, submit and deliver samples of nay materials for inspection and testing.

Roof sheeting shall be hot dip galvanised troughed mild steel sheeting and shall be of minimum thickness 0.6 mm. The sheeting shall have approved plastic coating on face side. Type and brand of such sheeting shall be proposed by the Contractor with his Tender together with supporting specifications.

The sheets shall be laid with 200 mm end laps and double corrugation side laps away from the prevailing wind. The sheets shall be fixed to lightgauge steel purlins with galvanised coach screws and seating washers.

Holes for screws shall be carefully drilled in the ridges of the corrugations. Great care shall be exercised to avoid damage and disfiguration to the surface coating of the sheets. At eaves and exposed edges the corrugations shall be closed with purpose made corrugation closers.

Maximum load acting on the building in accordance with local or regional standards.

#### Switchgear building - ceiling

All rooms included 11 kV switch-gear is assumed to have ceilings consisting of protective RCC slab 150mm.

#### Roof Drainage

Gutters and down pipes shall, unless otherwise shown on the drawings, be approved plastic coated steel of diameters 200 mm and 150 mm respectively. One down pipe shall be provided for approximately every 50 m<sup>2</sup> roof area.

Joints shall be lapped 150 mm in the direction of the flow and soldered. Slip joints shall be provided to allow for expansion. All hangers, brackets, and fastenings should be of the same metal as the gutter or of compatible materials. Gutters and down pipes including supports shall be designed for a concentrated load of 100 kg. Screens or strainers shall be provided to prevent debris from clogging the down pipes.

#### Metalwork

Unless otherwise specified, metalwork shall be carried out in accordance with the provision of B.S. 5950 and other relevant BSI standards.

All steel shall unless otherwise specified, be hot dip galvanised.

Prior to fabrication the Contractor shall submit shop drawings to the Project Manager for approval.

#### Metal Doors

Metal doors shall comply to the standard drawing issued.

##### a) General

Metal doors shall be supplied by approved manufacturers.

All doors shall be painted as specified under Painting and Decorating. All locks shall be master-keyed with three master keys supplied in addition to three regular keys for each door or gate.

Doors shall be measured by the number of doors of specified dimensions. The rate shall include all supplies, site works, painting and hardware.

##### b) Doors

Door frames shall be pressed steel frames made from minimum 2 mm thick steel sheeting and reinforced where door closers are fixed.

Thresholds shall be made from rolled steel sheeting approximately 100 mm wide and 12 mm high.

Door shall be filled with mineral wool acoustic insulation and lined both sides with steel sheeting minimum 1.25 mm thick. Total thickness of door shall be 45-55 mm.

All doors shall have fire rating Class A 30.

Placing of doors in accordance with Switchgear building drawing.

Internal door frames are to be built to walls truly vertical and square with six ties per frame.

External door frames are to be built in to walls truly vertical and square with eight/ten ties per frame.

All door frames are to be from an approved manufacturer and illustrated in the Manufacturer's Catalogue.

Door frames are to be complete with 100 mm, loose pin steel hinges welded in position and adjustable striking plate.

Frames shall generally be built-in during construction of the walls and securely fixed. A gap shall be left between the top of the frame and the soffit of the lintel during construction. Frames shall be adequately strutted to prevent distortion and shall be protected from damage during other work.

Door frames and similar components shall be fixed with countersunk screws or bolts with heads set into the frames.

Walls shall be built as close as possible to the frames and the gap filled solid with mortar at each course. Render shall be neatly brought up to the frame and well tamped into any remaining cavities. The junctions between window frames or external door frames and external finish or blockwork shall be caulked tight with approved mastic or mortar wherever required, and neatly pointed. Mastic so used shall have long-term resistance against weather, insects and ultra-violet light.

Doors wider than 800 mm shall have three 100 mm hinges. Other doors may have two hinges except where specified or detailed otherwise.

Door stops shall be fitted by screwed fixings where necessary.

The following type of timber doors shall be used unless otherwise instructed by the Project Manager and shall be of approved manufacture, true to shape and free from twists or warps:

internal doors shall be hollow core doors consisting of skeleton frames covered with 4 mm plywood for painting. They shall be 47 mm thick overall unless otherwise approved.

#### Aluminium or Steel Windows

Unless otherwise indicated windows shall consist of steel subframe with clear glass. Windows shall be from an approved supplier and the details thereof shall be approved by the Project Manager. Windows shall be operable and provided with corrosion resistant metal insect screens.

Frames shall generally be built-in during construction of the walls and securely fixed.

Placing of windows in accordance with Switchgear building drawings. Windows are to be built in to walls truly vertical square with six ties per frame.

All aluminium or steel windows are to be from an approved manufacturer and illustrated in the Manufacturer's Catalogue.

Windows are to be fitted complete with casement fastening, stays etc.

All windows shall have approved burglar bars, and approved means of opening/locking.

#### Door and Window Furniture

Ironmongery shall be strongly made, well finished, good quality "stock pattern" articles. Ironmongery for windows and doors shall be galvanised or other approved manufacture for external use. Samples of all items shall be submitted to the Project Manager for approval before they are used for the Works.

All doors shall be lockable. External doors shall have approved security locks.

Three keys for each lock, clearly labelled, shall be handed over to the Project Manager and all ironmongery shall be cleaned, oiled, adjusted and left in perfect working order.

#### MV Switch-gear, Room

Openings for pressure release

In the MV switch-gear room it is necessary to arrange for openings for pressure release in case of explosion in one of the switch-gears.

To avoid damage in the room/building any pressure shall be released through the openings as described.

Location of these openings must be beneath the ceiling on both longitudinal walls in the switch-gear room. The Contractor must calculate number and size of this pressure openings, and submit his proposal for approval.

Switchgear building finishes

Switchgear building: External/internal colour in accordance with approval of the employer. As per kplc colour codes. all fascia, lintels and skirting to be painted as per codes

## **CONCRETE SWITCH GEAR PLINTHES**

All concrete shall be class 25(20) vibrated unless otherwise specified. The vibration shall be carried out by experienced operators and with immersion type vibrations to the Architect's satisfaction. Concrete classes will be a specified in the bills. All plinths should be 300mm above ground level and 150mm above ballast spread.

Ballasting shall be done at the yard 150mm thick. polythene sheeting to be underlain to suppress emergence of weeds. Ballast aggregate within the range of 30-50mm will be used. All plinths shall be plastered with smoothing with neat 'NIRU' coat.

Where bolts have been grouted, accurate is setting out to be done both diagonally and linearly. Tolerances over 2mm for bolts will not be accepted. Bolt threads to be covered during concreting and proper cleaning with wire brush to any concrete on the bolts.

Placing of concrete shall be carried out in layers not exceeding 500 mm deep and in sequence from one end of the form to the other.

Concrete in foundations and other underground work shall be protected from contamination with falling earth or rock during and after placing.

Concrete structures shall NOT be loaded until the concrete is at least 21 days old or 28 days in the case of cantilevers. With the prior approval of the Architect the structure may be loaded before this time but in no case will loading be greater than the final design loading be permitted.

## **PLASTER AND FLOOR COVERINGS**

### ***FLOOR COVERINGS***

The switchgear and control room shall have terrazzo floor finish and skirting to employer's approval. The office room shall have ceramic tile floor finish and skirting

### ***PLASTER COVERINGS***

Materials

Cement and water to be as before described. The sand to be screened through a sieve of 10 to 15 and meshes to 1 cm and to be washed if directed.

Mixing

All materials for mixing are to be used in proper gauge boxes and they are to be strike measured and not tamped down in boxes. Proper non-absorbent stages are to be used for mixing and storing mortar. No foreign matter must be mixed with the mortar.

The materials are to be mixed dry before adding water through a fine hose spray. No cement mortar which has taken its initial set will be allowed to be used.

#### Plaster Thickness

Unless otherwise specified all wall plasters should not be less than 13 mm thick and not more than 19 mm thick.

#### Cement Plaster

Cement plaster for external use to be composed of one part cement to four parts sand and for internal use to be one part cement to five parts sand.

#### Form Key

Rake out joints and roughen if necessary to form key for plaster.

For concrete surfaces, hack and apply 1:1 cement sand slush to form key. Continuously wet for 7 days and then apply plaster.

All brickwork and concrete works should be brushed down to remove dust and any other loose material.

#### Wetting

All internal and external brick or concrete surfaces are to be wetted well before plastering.

All cement plaster must be kept wet for at least 7 days.

#### Repairing Defects

All defective plaster, cracks, hollows, etc., are to be cut out to a rectangular shape, the edges undercut to form a dovetail key and to be made good to finish flush with the edge of the surrounding plasterwork.

All patches will be to the approval of the Project Manager and if the defects can not be made good satisfactorily then the whole surface is to be removed and re-plastered at the Contractor's expense.

## GLAZING AND PAINTING

#### Glass

All glass is to be of approved manufacture, free from bubbles, waviness, scratches or other imperfections and is to be well bedded, puttied and backputtied and secured with glazing pins or clips in steel sashes or with sprigs in wood sashes.

All glass shall be carefully cut to the required sizes so that all panes of figured or textured glass are uniform in appearance with the pattern parallel to the edges and wired glass shall be so cut that the wires are parallel to the edges.

#### Putty

Putty for glazing to steel sashes is to be of approved proprietary brand.. Rebates are to be thoroughly back puttied before glazing and all putty is to be carefully trimmed and cleaned off so that back putty finishes level with the top of sections internally, external putty covers sight lines exactly and finished straight and true. Rough surfaces to putty will not be allowed and any defective putty will be cut out and replaced at the Contractor's expense.

Rebates of wood sashes are to be given one coat of priming immediately before glazing.

#### Mirrors

Glass mirrors are to be of the thickness specified, of selected quality glass, silvered on back, with protective sealing coat and arrised edges, unless otherwise described.

#### Generally

Allow for removing and replacing all cracked, broken or defective glass and leave thoroughly clean and perfect at completion.

#### Materials for Decoration

All paints, primers, varnishes, emulsions, stopping, etc., to be of approved manufacture.

The contractor is to use proprietary ready mixed paints obtained from an approved supplier.

When a coat of proprietary paint is applied, the manufacturer's priming and previous coats suitable for the particular type are to be used.

All materials must be brought on to the site in unopened tins, and no dilution or adulteration will be permitted, unless approved by the Project Manager.

#### Emulsion Paint

Emulsion paint shall be PVA (Polyvinyl Acetate) alkali-resisting formulated with high washability and capable of resisting a 8 000 scrub test. The first coat to be specially formulated base coat for direct application to the specified surface.

#### Fillers

Higher grade cellulose fillers are to be used internally and premixed filler to be used externally.

#### High Gloss Paints

Primers for application to bare metal to be red oxide primer for iron and steel. For galvanised metal to be an approved zinc chromate or galvanised iron primer. For application on wood or plaster etc., to be an approved alkali primer.

#### Finish enamels

Finish enamels to be synthetic enamel high capacity paint with high coverage and high gloss finish unless otherwise described.

#### Workmanship

All surfaces are to be free from moisture, dust, grease and dirt and rubbed down smooth according to approved practice.

All plaster to be free from efflorescence and treated with one coat of petrifying liquid, approved sealer or alkali primer if required. Hardwall plaster to be glass papered before decorating.

Rectifying defects to decorated surfaces due to dampness, efflorescence, chemical reaction, etc., will be to the Contractor's account, as these surfaces must be checked and the appropriate precautions taken before applying the decoration.

Metalwork must be scraped free of rust, primed as described and finished as later specified.

Galvanised sheet iron, pipes, etc., are to be cleaned down to remove manufacturer's ammoniated dichromate protective covering, primed as described and finished as later specified.

Coated pipes are to be cleaned down, stopped and primed with one coat of aluminium primer and finished as later specified.

All knots in woodwork to be treated to prevent bleeding. Large or loose knots to be cut out and be replaced with sound wood, or cut back and filled. Small knots to be treated with two thin coats of Shellac in methylated spirits. Woodwork to be glass papered to a smooth surface with all sharp arrises removed, all cracks, crevices, holes, etc., to be scraped out, primed as described and stopped with hard stopping, faced up and rubbed down to an even surface and finished as later specified.

All metal and woodwork to have the specified number of coats in addition to the priming coat.



Every coat of paint must be a good covering coat and must dry hard and be well rubbed down to a smooth surface before the next coat is applied, otherwise the Contractor will be required to apply extra coats at his own expense.

Each coat of paint to be of a distinctive colour: sample colours are to be prepared for the final coat which is to be an approved colour scheme and must not be applied without the permission of the Project Manager. After undercoats are on, the painter shall check all work and grainfill as necessary with filler as described.

NOTE:

- a) All paints specified are to be obtained from an approved manufacturer and used in strict accordance with their instructions. Their representative will check the paints being used and the method of application and will advise accordingly.
- b) This section of the work to be carried out by an approved firm of decorators who must allow for the very best finish possible and of the highest quality obtainable.
- c) The prices must allow for the removal and refitting of all beads, fittings, fastenings, ironmongery, etc., removed for decoration purposes to be carried out by skilled tradesmen of the appropriate trade.

## **SUBSTATION BUILDING SIZES.**

Proposed substation control buildings should be in conformity with relevant building codes with regard to room size and safety, and as per KPLC design standards. The building must meet the requirements described in the scope of work and take into consideration future expansion. The buildings will be classified as 16panel, 13panel, metering rooms. PS24 Panel room shall be 13 panel standard control room as shown in drawings.

## **IRONMONGERY AND METALWORK**

### **General**

All ironmongery shall be of the best respective types required and no alternative articles will be accepted unless approved. Articles described as brass must be solid brass and not brass finish. Chromium plated articles must be plated satin finish on solid brass or other approved metal.

Where items for ironmongery are required to be fitted to steel door frames, etc., the Contractor must ensure that the Manufacture makes provisions for the correct fitting or lock striking plates, hinges, cleat holes, bolt keeps, etc.

### **Locks and Keys**

Locks are to be two lever unless otherwise described. All locks are to be provided with two keys which must be handed over to the owner on completion of the Works with identification labels attached.

### **Steel**

Steelwork for general building construction is to be of approved manufacture complying generally with the appropriate British Standards and free from all defects, oil, dirt, loose rust, scale or other deleterious matter.

## **METALWORK**

### **STANDARDS AND CODES OF PRACTICE**

The requirements of the following British Standards and Codes of Practice shall be observed:-

### 13.1.1 British Standards

- |    |                    |  |
|----|--------------------|--|
| a) | B.S. 4 part 1      | Structural steel, hot rolled screws                                      |
| b) | B.S. 4 part 2      | Structural steel, hot rolled hollow sections.                            |
| c) | B.S. 325           | Black cup and countersunk bolts and nuts.                                |
| d) | B.S. 916           | Black bolts screws and nuts.   |
| e) | B.S. 4174          | Self tapping screws and metallic drive screws.                           |
| f) | B.S. 405           | Metal washers for general engineering purposes.                          |
| g) | 1161 and addendum  | Aluminium and aluminium alloy sections for general engineering purposes. |
| h) | B.S. 938           | Metal ore welding of structural steel tubes.                             |
| i) | B.S. 1856          | Metal ore welding of mild steel.   |
| j) | B.S. 729 part 1    | Hot dip galvanized coating iron and steel articles.                      |
| k) | B.S. 1474          | Wrot aluminium and aluminium alloy                                       |
| l) | B.S. 990 parts 1+2 | Steel windows (domestic and similar buildings)                           |

### Codes of Practice

- |    |           |   |
|----|-----------|---|
| a) | C.P. 499  | Metal railings and balustrades.   |
| b) | C.P. 117  | Composite construction in structural steel and concrete.                                  |
| c) | C.P. 2008 | Protection of iron and steel structures from corrosion.                                   |
| d) | C.P. 3012 | Cleaning and preparation of metal surfaces.   |
| e) | NOTE:     | The contractor's attention is drawn to Section "P" of the Standard Method of Measurement. |

## **MATERIALS AND WORKMANSHIP**

Iron and steel where galvanised shall comply with the requirements of B.S. 729, part 1 entirely coated with fine fabrication by complete immersion in a zinc bath in one operation and all excess carefully removed.

The finished surfaces shall be clean and uniform.

All work in aluminium shall comply with the requirements of the standard mentioned above.

All smiting and bending shall be soundly and neatly executed, care being taken not to overheat.

All strap bolts and similar work shall be forged neat and clean from the anvil.

All welded connections shall be ground to a smooth finish and rates shall be deemed to allow for this.

Steel windows shall comply with the requirements of the standard mentioned above and shall be fixed in accordance with the manufacturer's instructions.

All mild steel except galvanised shall be cleaned of rust and scale, painted one coat red lead priming paint before delivering to site and the rates shall include for this.

## **PLUMBING AND ENGINEERING INSTALLATIONS**

### **STANDARDS AND CODES OF PRACTICE**

The requirements of the following British Standards and Codes of Practice shall be observed:-

#### **British Standards**

- |    |                |  |
|----|----------------|--|
| a) | B.S. 416       | Cast Iron spigot and socket soil, waste and ventilating pipes (sand cast and spun) and fittings. |
| b) | B.S. 2871 part | Copper and Copper Alloy Tubes (for water, gas and sanitation)                                    |
| c) | B.S. 864 part  | Capillary and compression fittings of copper and copper alloy.                                   |
| d) | B.S. 1184      | Copper and Copper Alloy Traps  |

- |    |                              |   |
|----|------------------------------|---|
| e) | B.S. 4576                    | Unplasticised P.V.C. rainwater goods.   |
| f) | B.S. 3974                    | Pipe supports.  |
| g) | B.S. 1494                    | Fixing accessories for building purposes (gutter bolts, pipe brackets)              |
| h) | B.S. 1212 part 1+2           | Ball valves (excluding floats)  |
| i) | B.S. 2456                    | Floats for ball valves (plastic) for cold water.                                    |
| k) | B.S. 1125                    | W.C. flushing cisterns.   |
| l) | B.S. 417 part 1+2            | Galvanised mild steel cisterns, covers, tanks and cylinders.                        |
| m) | B.S. 2760                    | Pitch-impregnated fibre pipes and fittings.   |
| n) | B.S. 1387                    | Steel cubes and tubulars.   |
| o) | B.S. 4514                    | Unplasticised P.V.C. solid and ventilating pipe, fittings and accessories.          |
| p) | B.S. 3505                    | Unplasticised P.V.C. pipes for cold water services                                  |
| q) | B.S. 143 and 1256            | Malleable cast iron and cast copper alloy, screwed pipe fittings.                   |
| r) | B.S. 78 part 2 and B.S. 1180 | Cast iron spigot and socket pipes (vertically cast) and spigot and socket fittings. |
| s) | B.S. 1010 part 1+2           | Draw-off taps and stop valves for water services.                                   |

### **Codes of Practice**

- |    |          |                                 |
|----|----------|---------------------------------|
| a) | C.P. 304 | Sanitary pipework above ground. |
| b) | C.P. 310 | Water supply                    |
| c) | C.P. 305 | Sanitary appliances.            |

d) NOTE:

01. The contractor's attention is drawn to Section "Q" of the Standard Method of Measurements.
02. The whole of the work shall be executed by an approved licensed sub-contractor.

## **PIPEWORK AND FITTINGS**

Black steel and pipework up to 65 mm nominal bore shall be manufactured in accordance with B.S. 21. All fittings shall be of malleable iron and manufactured in accordance with B.S. 143.

Pipe joints shall be screwed and socketed and sufficient coupling and unions shall be allowed so that fittings can be disconnected without cutting the pipe. Running nipples and long screws shall not be permitted unless exceptionally approved by the architect.

All black steel pipework - 80 mm nominal bore up to 150 mm nominal bore, shall be manufactured to comply in all respects with the specifications for 65 mm pipe, except that screwed and bolted flanges shall replace union and couplings for the pointing of pipes to valves and other items of plant.

All flanges shall comply with the requirements of B.S. 10, to relevant classifications contained hereinafter.

## **ELECTRICAL INSTALLATION**

### **Scope of Works**

This section of the specification relates to the supply, installation, testing and commissioning of the complete electrical services within the switchgear building, including:

1. LV Switchgear
2. Lighting
3. Small Power

The switchgear building consists of a switchgear room.

A full specification of the electrical equipment proposed by the contractor shall be included in the Bid.

The Employer reserves the right to reject any of the contractor suppliers if he feels the product does not meet with the contract specification.

### **Electrical Services General Description**

The complete electrical installation shall comply with all local standards and rates.

Should there be any conflict between local standards and what has been specified the sub-contractor should draw it to the attention of the Project Manager.

### **Lighting**

- a. Luminaries shall be fluorescent lamps except for the toilets and outdoor lighting (except switchyard and perimeter lighting) where GLS lamps can be utilised. In switchgear room: 250 lux is required. In offices 500 lux is required.
- b. All luminaries shall be supplied, installed and tested by the electrical sub-contractor.
- c. All metal work on the luminaries shall be connected to an insulated earth protective conductor.
- d. Lighting Control Switches
- e. Outdoor lighting shall be controlled from an automatic photo cell.
- f. Lighting control switches shall be flush pattern with white finished plates.
  - g. Grid switches shall have 5 or 10 amp rating, generally where fluorescent discharge luminaries are controlled switches have 10 amp rating where as with low energy PL lamp, 5 amp switches shall be installed.

#### Socket Outlets and Accessories

Reference should be made to the Standards given above for details on the socket outlets and accessories.

Socket outlets to be mounted at 300 mm above floor level.

Conduit cast into the building structure shall be of the heavy duty PVC type. PVC conduits shall not be fixed to the surface of the structure.

#### AC Installation

The Contractor shall supply and install wiring and insulator for the AC units, including final connection to the unit. fire extinguishers and smoke detectors shall be fixed as per specialist instruction.

### 4.1.4.6.9 JOINERY

#### STANDARD AND CODES OF PRACTICE

The requirements of the following British Standards and codes of Practice shall be observed:-

##### British Standards

a)	B.S.	565	Glossary of terms relating to timber and woodwork.
b)	B.S.	4471	Dimensions for softwood
c)	B.S.	1186 Part 1+2	Quality of timber and workmanship in joinery
d)	B.S.	373	Methods of testing small clear specimen of timber
e)	B.S.	4512	Methods of test for clear plywood
f)	B.S.	1142 part 3	Fibre building board (Insulation board softwood)

g)	B.S.	3444	Blockboard and laminated board
h)	B.S.	1445	Plywood manufactured from tropical hardwoods
i)	B.S.	3794	Decorative laminated plastic sheets
j)	B.S.	459 part 2	Flush doors
k)	B.S.	459 part 3	Fire check flush doors and wood and metal frame (1.5 hour and 1 hour types)
l)	B.S.	1567	Wood door frame and linings
m)	B.S.	584	Wood trims (softwood architrave skirtings, quadrants, etc)
n)	B.S.	1204 parts 1+2	Synthetic resin adhesive (phenolic and type MR-Moisture amino plastic) for wood Resistant Type INT - Interior
o)	B.S.	1210	Wood screws
p)	B.S.	1494 part 2	Fixing accessories for building purposes (bolts, screws, staples, etc)
q)	B.S.	4174	Felt tapping screws and metallic drive screws.

#### **Codes of Practice**

a)	C.P.	201	Timber flooring
b)	C.P.	201 parts 1+2	Flooring of wood and wood products
c)	C.P.	151	Doors and windows including frames and linings

d) **NOTE:** The contractor's attention is drawn to Section "M" of the Standard Method of Measurements.

#### **11.2.0 DEFINITIONS Selected**

The term “selected” shall be deemed to include keeping the material so described clean for staining, polishing, or any similar finish.

### **Hardwood or the like**

The term “hardwood or the like” which is used as a statement to which ironmongery is to be fixed, shall be deemed to include plywood and other manufactured materials, except when faced with metal, laminated plastics or the like.

## **MATERIALS**

### **Terminology**

All technical terms shall be as defined in the Glossary of Terms used in Timber Standards, KS 02 1976 and, where applicable, the British Standard Code of Practice No. 112.

### **Timber Generally**

Timber shall be sound, well conditioned, properly seasoned, containing not more than 15% moisture for joinery work or 18% moisture for carpentry work, and complying with the following performance specification:-

### **Performance Specifications**

These specifications refer to all conifer (soft-wood) and broad leaved (hard-wood) species and apply to timber sections incorporated in the building after they have had a sufficient time to season. The period required for green timber to season fully after installation under cover shall be assumed to be one month for each 25 mm thickness.

Unless noted elsewhere, timber shall conform to the listed specifications as follows:-

- |    |     |       |  |
|----|-----|-------|--|
| a) | F   | Grade | Furniture and high class joinery                                   |
| b) | GJ  | Grade | General joinery  |
| c) | S75 | Grade | Structural grade having grade stress value of 75% of basic stress. |
| d) | S50 | Grade | Structural grade having grade stress value of 50% of basic stress. |
| e) | C   | Grade | A general construction grade for non-stressed construction.        |



f) L Grade A low grade for low quality work.

Defects shall not exceed those specified in Tables, 1, 2 & 3 of KS 02-17.

### **WORKMANSHIP**

The timber for joinery shall be as specified in the Export Timber Ordinance of 1951 and obtained from an approved sawmill. All such timber shall be Prime Grade and reasonably straight, grained and shall be purchased immediately the contract is signed. It shall be open stacked on site for such further seasoning as may be required.

Timber which in the opinion of the architect does not satisfy the specification in character or condition or is not suitable for the requirements of the work because of the blemishes it contains shall not be used.

The following timber shall be used:-

- a) Podocarpus
- b) Mvule
- c) Cedar
- d) Elgon Olive
- a) Elgon Teak
- b) Camphor
- c) Mahogany
- d) Meru Oak
- e) Pamba Coffee
- f) Nkalati

All timber shall be wrot by machine dressings. Non-exposed faces and machine marks shall be removed with hand plane and sanded out, unless otherwise specified.

The dimensions and thickness stated in the Bills of Quantities are the finished sizes (unless otherwise stated) and the contractor will allow for all necessary waste.

The joinery shall be worked strictly in accordance with drawings, and is to be framed up and put together as soon as possible and stored in the drying room, for as long as possible before being wedged up. All joints and angles are to be glued and where necessary cross tongued with hardwood tongues and surfaces finished clean and smooth, with machine marks sand-papered out before fixing.

Should any of the joinery work shrink, warp, wind or deflect unduly before the end of the maintenance period of the contract, the work is to be taken down and rectified at the contractor's sole expense.

Tolerance in thickness shall conform with the following extracts from the Government of Kenya Grading Rules:-

Hardwood Grading: (First and Second Grades):-

- a) 1.6 mm over size on pieces up to 25 mm in thickness
- b) 3 mm oversize on pieces over 25 mm and up to 51 mm in thickness
- c) 6 mm over size on pieces over 51 mm in thickness; undersize will not be permitted.
- d) Softwood Grading: Appearance Grades (First and Second Grades); undersize will not be allowed.
- e) Oversize: All timber to be sawn oversize by 1.6 mm per 25 mm of thickness and width. Not more than 3 mm in thickness and not more than 6 mm in width.

Seasoning of timber shall be to moisture content of not more than 15%.

Pressure impregnation treatment shall be as for "Carpentry".

Where joinery is described as screwed, this is deemed to include sinking the head of the screw and pelling with similar timber, and to grain in with the finished joinery.

All hardwood joinery shall be finished for oil paint/varnish, unless otherwise stated.

The rates shall be deemed to allow for all nails and screws and fixing, all labour, cuttings, notching, halving, morticing, tenoning and wedges except where otherwise provided.

All work described as plugged shall be fixed with screws to plugs formed by drilling concrete walls, etc., with the proper tool of suitable size at 750 mm spacing and filling the holes completely with "philplug" rawl plastic or rawl plugs in accordance with the manufacturer's instructions. Alternatively and where so agreed by the architect,

hardwood dovetailed fixing slips in preservative and cut and primed or bedded in cement mortar (1:3) may be used.

The rates are to allow for all surfaces of joinery where in contact with walling or plaster, or where otherwise unexpected being treated before fixing with two coats of approved wood preservative.

Laminated plastic sheeting shall be “formica” manufactured by M/s Thomas de la Rue and Co. or equal and approved, 1.6 mm thick and accurately fixed with approved type water-proof impact adhesive and in the colours selected by the architect.

Blockboard shall comply with the standard as mentioned above.

Plywood shall comply with the standard as mentioned above and faced both sides unless otherwise stated.

Fibreboard shall be 12.7 “Celotex” or other equal approved softboard.

All joinery work shall be accurately set out and framed together soon after commencement of the building as is practicable but not to be wedged up or glued until the building is ready for fixing the same. Any portions that warp, wind or dent shall be removed and new ones fixed in their place together with other work which may be affected thereby all at the contractor’s expense.

All work shall be properly morticed, tenoned, housed, shouldered, dovetailed, notched, primed, bradded, etc. as directed and to the satisfaction of the architect and all glued up with the best quality glue.

Joints in joinery shall be as specified or detailed, and so designed and secured as to resist or compensate for any stresses to which they may be subjected. All nail strings, etc. are to be punched and puttied. Loose joints are to be where provisions for shrinkage is necessary; glued joints where shrinkage need not be considered and where conditions may be damp must be of the resin type. For non-load-bearing joints or where dry conditions may be guaranteed resin or organic glues may be used. All exposed surfaces for joinery shall be wrot and all arises “cased off” by planing and sand papered to an approved finish suitable to the specified treatment.

3 mm reduction of specified sizes will be allowed to each wrot face except in members 25 mm thick or less or where, described as finished sizes in which case joinery shall hold up the full dimensions.

In fixing all beads, fillets and small members shall be fixed with round or oval brads or nails well punched in and stopped. All large members shall be fixed with screws. Brass screws shall be used for fixing of all hardwoods, to the heads in and pellated over with wood pellets to match the grain.

Rates shall include for bedding frames, cills, etc in mortar or dressing surfaces of walls, etc in lieu.

Round wood plugs shall not be used, and screws or plugs shall be spaced at 750 mm centres.

All fixed joinery which in the opinion of the architect is liable to become bruised or damaged in any way shall be completely cased and protected by the contractor at his own expense until completion of works.

Bottom edges of doors shall be painted or polished with two coats of approved primer before fixing.

## **PARTICULAR SPECIFICATIONS**

### **Chipboard**

Chipboard shall comply with B.S. 5669.

### **Blockboard**

Blockboard shall be approved imported or local manufacture complying in all aspects with B.S.1142 of the thickness specified and softwood faced both sides unless otherwise described. Samples of blockboard veneered with hardwood as specified, shall be submitted to the Architect for his approval before any orders are placed.

### **Fibreboard**

Fibreboard shall be “Celotex”, or other equal and approved make, 12mm thick and complying in all aspects with the requirements of B.S. 1142.

### **Hardboard**

Hardboard shall be tempered and of approved manufacture, in accordance with B.S.1142, suitable for painting, prepared and fixed in accordance with the makers’ instructions.

### **Medium Density Fibreboard (MDF)**

MDF shall be used wherever possible in place of blockboard or chipboard. The MDF used shall be to the thickness specified, shall be flat, smooth, straight, without any imperfections, surface distortion, broken or chipped edges. MDF used in damp locations (i.e. toilets) shall be moisture resistant MDF.

### **Laminated Plastic Sheeting**

Laminated plastic sheeting shall be 1.5mm “Formica” or other approved sheeting complying with B.S.3794 Class 1, in colours to be selected by the Architect.

Prior to fixing laminated sheeting, the Contractor shall obtain the Architect’s written approval to a sample.

### **Pressure Impregnated Treatment**

All timber so described is to be vacuum pressure impregnated with “Celcure A” preservative to a dry salt nett retention of 10.5 kg “Celcure A” per cubic metre of timber and stacked until the moisture content returns to 18% or 15% as above described. Timber to be treated shall be machined to finished sections and cut to component lengths before impregnation. Cut ends, notchings, borings and faces of timber sawn after treatment are to be swabbed literally on cross cut ends with “Walmanol” end grain preservative, allowed to dry, and then applied in a similar manner a second time.

## **SANITARY APPLIANCES**

All sanitary appliances supplied and installed as part of the sub-contract works shall comply with the general requirements of B.S. Code of Practice 305 and the particular requirements of the latest applicable B.S. Specifications.

### **Plastic Pipes**

P.V.C. pipe work and fittings for the use above ground in connection with internal building services shall be in the Terrain soil, waste and ventilation system to B.S. 4514 in modified PVC. The sub-contractor is referred to Product Catalogues in respect of Terrain Plastics Systems for the Building Industry before and after submission of tenders as no claims for want of knowledge will be entertained.

## SECTION IX - BILL OF QUANTITIES

### **Notes for preparing Bills of Quantities**

1.0 The objectives of the Bills of Quantities are;

- (a) To provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and
- (b) When a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

2.0 The Bills of Quantities should be divided generally into the following sections:

**(a) Preliminaries.**

The preliminaries should indicate the inclusiveness of the unit prices, and should state the methods of measurement which have been adopted in the preparation of the Bill of Quantities and which are to be used for the measurement of any part of the Works.

The number of preliminary items to be priced by the tenderer should be limited to tangible items such as site office and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor's obligations should be included in the Contractor's rates.

**(b) Work Items**

(i) The items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.

(ii) Quantities should be computed net from the Drawings, unless directed otherwise in the Contract, and no allowance should be made for bulking, shrinkage or waste.

Quantities should be rounded up or down where appropriate.

(iii) The following units of measurement and abbreviations are recommended for use.

Unit	Abbreviation	Unit	Abbreviation
cubic meter	M3 or cu m	millimeter	mm
hectare	ha	month	mon
hour	h	number	nr
kilogram	kg	square meter	m <sup>2</sup> or sq m
lump sum	sum	square millimeter	mm <sup>2</sup> or sq mm
meter	m	week	wk
metric ton (1,000 kg)	t		

(iv) The commencing surface should be identified in the description of each item for Work involving excavation, boring or drilling, for which the commencing surface is not also the original surface. The excavated surface should be identified in the description of each item for Work involving excavation for which the excavated surface is not also the final surface. The depths of Work should be measured from the commencing surface to the excavated surface, as defined.

### **(c) Day work Schedule**

A Daywork Schedule should be included if the probability of unforeseen work, outside the items included in the Bill of Quantities, is relatively high. To facilitate checking by the Employer of the realism of rates quoted by the tenderers, the Daywork Schedule should normally comprise:

(i) a list of the various classes of labour, and materials for which basic Daywork rates or prices are to be inserted by the tenderer, together with a statement of the conditions under which the Contractor will be paid for Work executed on a Daywork basis; and

(ii) a percentage to be entered by the tenderer against each basic Daywork Subtotal amount for labour, materials and plant representing the Contractor's profit, overheads, supervision and other charges.

#### **(d) Provisional Quantities and Sums**

(i) Provision for quantity contingencies in any particular item or class of Work with a high expectation of quantity overrun should be made by entering specific “Provisional Quantities” or “Provisional Items” in the Bill of Quantities, and not by increasing the quantities for that item or class of Work beyond those of the Work normally expected to be required. To the extent not covered above, a general provision for physical contingencies (quantity overruns) should be made by including a “Provisional Sum” in the Summary of the Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a “Provisional Sum” in the Summary of the Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises.

(ii) Provisional sums to cover specialized works normally carried out by Nominated Sub Contractors should be avoided and instead Bills of Quantities of the specialised Works should be included as a section of the main Bills of Quantities to be priced by the Main Contractor. The Main Contractor should be required to indicate the name (s) of the specialised firms he proposes to engage to carry out the specialized Works as his approved domestic sub-contractors. Only provisional sums to cover specialized Works by statutory authorities should be included in the Bills of Quantities.

#### **(e) Summary**

The Summary should contain a tabulation of the separate parts of the Bills of Quantities carried forward, with provisional sums for Daywork, for physical (quantity) contingencies, and for price contingencies (upward price adjustment) where applicable.

**The bill of quantities is as given;**



## **SECTION VIII -DRAWINGS**

The following drawings will form part of this tender

- a) SIAYA 33/11 Kv General arrangement layout
- b) Control Room drawing including
  - Foundation layout
  - RCC-Roof slab detail, beams and columns
  - Sections and elevations
- c) Civil works details on Road, IBD,
- d) Perimeter wall details
- e) Septic tank
- f) Oil sump
- g) Guard House
- h) Pit-latrine
- i) Solid Gate
- j) Control Room Steel Door
- k) Sample Sign-Board
- l) Access Culverts

## SECTION X- EVALUATION CRITERIA

Evaluation of duly submitted tenders will be conducted along the following stages: -

**6.1 Part 1 - Preliminary Evaluation Under Paragraph 3.28 of the ITT.** These are mandatory requirements. This shall include confirmation of the following:-

- 6.1.1 *Submission of Tender Security - Checking its validity, whether it is Original; whether it is issued by a local bank; whether it is sufficient; whether it is strictly in the format required in accordance with the sample Tender Security Form(s).*
- 6.1.2 *Submission of Declaration Form(s) duly completed and signed.*
- 6.1.3 *Submission and considering Tender Form, duly completed and signed.*
- 6.1.4 *Submission and considering the following:-*
  - 6.1.4.1 *For Local Tenderers*
    - a) *Company or Firm's Registration Certificate*
    - b) *PIN Certificate.*
    - c) *Valid Tax Compliance Certificate.*
  - 6.1.5 *That the Tender is valid for the period required.*
  - 6.1.6 *Site visit form signed and stamped by authorized staff.*
  - 6.1.7 *Valid certificate of registration with N.C.A (Class 1-5 and above)*
  - 6.1.8 *Submission and considering the Confidential Business Questionnaire:-*
    - a) *Is fully filled and signed. –No blanks*
    - b) *That details correspond to the related information in the bid.*
    - c) *That the Tenderer is not ineligible as per paragraph 3.2 of the ITT.*
  - 6.1.9 *Record of unsatisfactory or default in performance obligations in any contract shall be considered. This shall include any Tenderer with unresolved case(s) in its performance obligations for more than two (2) months in any contract. Or any delayed awarded or pending works with client without written request for extension, and /or any 1 current projects not past 50% completion.*
  - 6.1.11 *notwithstanding the above, considering any outstanding orders where applicable and the production capacity indicated by the tenderer.*

Tenders will proceed to the Technical Evaluation Stage only if they qualify in compliance with Part 1 above, Preliminary Evaluation under Paragraph 3.28.

**6.2 Part II – Technical Evaluation and Comparison of Tenders Under Paragraph 3.30 of the ITT.** These are mandatory requirements.

**6.2.1 Table 1: Mandatory Technical Requirements (against Tender Requirements and Technical Specifications).** Verification and consideration of the following:-

	<b>Criteria</b>	<b>KPLC Requirement</b>
1	<i>Proposed construction period</i>	<i>Proposed construction period for the project accompanied by a proposed Works Program Gantt Chart and method statement</i>
2	<i>Building and Civil Engineering</i>	<i>Registration with NCA (Category 1-5) both Civil and building</i>
3	<i>Safety officer</i>	<i>Details ,qualification, availability and competency levels of safety officer for the project including safety officer undertaking on availability, period of engagement etc.</i>

**6.2.2 Detailed Evaluation**

6.2.1 Tenderer shall be expected to indicate full compliance to Confirmation of compliance of previous contract(s) in accordance with its/ their terms and conditions where applicable.

**6.2.3 Further tender requirements based on a scoring criterion.**

6.2.3.1 The total marks are 100%. The pass mark is 75 %. Only those bidders who obtain the mandatory cut off point shall be considered for further evaluation.

<b>NO.</b>	<b>EVALUATION ATTRIBUTE</b>	<b>WEIGHTING %</b>
6.2.1	<p><i>Experience as main contractor in the construction of at least 5 years.</i></p> <ul style="list-style-type: none"> <li><i>a. Above 5 years– 5 marks</i></li> <li><i>b. Five years – 3marks</i></li> <li><i>c. Less than five years but not below 1 year - 2marks</i></li> <li><i>d. Extra marks for 2yrs experience in substation works-5marks</i></li> <li><i>e. Evidence of drainage and water projects- 5marks</i></li> </ul>	<b>15</b>
6.2.2	<p><i>A statement of work methods ((Methodology). Include Gantt Chart and brief description. marks for each concept on safety, method, execution, material testing and day works units.5extra marks for sequence and matching with BOQ</i></p>	<b>20</b>
6.2.3	<p><i>Qualified Technical staff in the company relevant to the building construction industry who will actively be involved in the proposed project. Provide employment/appointment letters, contracts of the key personnel including length of service and termination date, CV, Academic and professional certificates and evidence of registration with relevant professional bodies and Telephone contacts.</i></p> <ul style="list-style-type: none"> <li><i>i) Building or civil or Engineer or Quantity surveyor --- 5 marks</i></li> <li><i>ii) Diploma in Building or civil or Quantity surveyor.....2 marks</i></li> <li><i>iii)project manager with degree-5marks;diploma 2 marks</i></li> </ul> <p><i>Note: Bidders can only qualify in i or ii and iii to get maximum 10 marks.</i></p>	<b>10</b>
6.2.4	<p><i>Quality assurance policy, philosophy, certification in ISO standards OHS/QMS/membership in regulatory bodies.</i></p>	<b>5</b>
6.2.5	<p><i>Numbers of years of gainful employment of key staff</i></p> <ul style="list-style-type: none"> <li><i>1. Project Manager</i> <ul style="list-style-type: none"> <li><i>i. 5 years and above 5 years – 3marks</i></li> </ul> </li> </ul>	<b>15</b>

	<p>ii. <i>Less than 5 years – 1 marks</i></p> <p>2. <i>Project Engineer –</i></p> <p>i. <i>5 years and above 5 years – 3marks</i></p> <p>ii. <i>Less than 5 years – 1 marks</i></p> <p>3 <i>General Foreman –</i></p> <p>i. <i>5 years and above 3 years – 3 marks</i></p> <p>ii. <i>Less than 5 years – 1 marks</i></p> <p>4 <i>Safety officer</i></p> <p>i <i>5 years and above– 6 marks</i></p> <p>ii <i>Less than 5 years – 1 marks</i></p> <p><i>Employment records including length of service</i></p>	
6.2.6	<i>The Tenderer’s undertaking that the key site management and technical personnel will be available for the contract. full marks for employee commitment</i>	<b>10</b>
6.2.7	<p><i>Accomplishments: (previous &amp; current projects) Details of building projects undertaken successfully within the last 5 years with evidenced of 3 by letters of reference from clients, certificates of occupation and completion certificates for the respective projects. (For a project to qualify it must be at least 70% complete. For Projects that are not completed, letters of reference from respective Architects and Clients must be provided.</i></p> <p><b><i>Above 5 projects ----- 5 marks</i></b></p> <p><b><i>Two to five projects -----3 Marks</i></b></p> <p><b><i>1 project -----1 marks (5marks extra for 2 similar projects done)</i></b></p>	<b>10</b>
6.2.8	<p><i>Tools and equipment. Provide list and type of relevant building construction tools and equipment including evidence of ownership, purchase, lease etc.</i></p> <ul style="list-style-type: none"> <li>• <i>Heavy earthmoving machinery, dozers, JCB, cranes.....3marks</i></li> <li>• <i>Mixers vibrator, slip forms, scaffolds and trappers ....3marks</i></li> <li>• <i>Haul vehicles, dump trucks, tippers, wheel loaders.....3marks</i></li> <li>• <i>Hand tools-drills, masonry tools ,welding machines ,the theodolites, dumpy level or total station etc.....2 marks</i></li> <li>• <i>Drainage equipment-Submersible and suction pumps with Total Head 30m,water browser-3marks</i></li> </ul>	<b>15</b>

	<i>1 marks for listing only in each category, 1 extra mark for machine operators</i>	
	<b>TOTAL</b>	<b>100</b>

Tenderers will be invited for Financial opening of their tenders and proceed to Financial Evaluation stage only if they qualify in compliance with Parts I and II i.e. Preliminary and Technical stages.

**6.3 Part III – Financial Evaluation Criteria Under Paragraph 3.31 of the ITT. These are mandatory requirements.**

6.3.1 This will include the following: -

- a) *Confirmation of the authenticity of the submitted Tender Security.*
- b) *Confirmation of and considering Price Schedule duly completed and signed.*
- c) *Checking that the Tenderer has quoted prices based on all costs including duties and taxes*
- d)\* *Checking submission of audited financial statements required which must be those that are reported within fifteen (15) calendar months of the date of the tender document.*
- e) *Conducting a financial comparison, including conversion of tender currencies into one common currency,*
- f) *Taking into account the cost of any deviation(s) from the tender requirements,*
- g) *Ascertaining the financial capability through Last Financial Year's audited financial statements. The statements will provide details for determining the liquidity and solvency status of the bidders. The applicable and acceptable ratios are as follows;*
  - a) *The acceptable ratios to KPLC are as follows:-*
    - (i.) *Current ratios i.e. current assets: current liabilities should meet the threshold of at least 0.5:1*
    - ii) *Solvency ratios i.e. Debt to Assets Ratio. Should meet the threshold of at least 1:0.5*
    - iii) *Turnover in the Last Financial Year i.e. twelve months of at least 75% of the total tender value.*
  - b) *The Tenderer should have at least 20% of the total tender value in cash assets in the Balance Sheet provided as part of the audited financial statements.*
  - c)\* *For companies or firms that are registered or incorporated within the last one calendar year of the Date of the Tender Document, they will not be evaluated on (a) and (b) above, but will instead be evaluated on the basis of having at least a spot*

*balance of 20% of the total tender value evident from the certified bank statements provided.*

- h) Considering information submitted in the Confidential Business Questionnaire against other information in the bid including:-*
- a) Declared maximum value of business*
  - b) Shareholding and citizenship for preferences where applicable.*

6.3.2 Confirming the following: -

*6.3.2.1 that the contractor execution and completion Schedule meets KPLC's requirements.*

*6.3.2.2 that the contractor offered Terms of Payment meets KPLC's requirements.*

**\*NOTES: -**

1. For purposes of evaluation, the exchange rate to be used for currency conversion shall be the selling exchange rate ruling on the date of tender closing provided by the Central Bank of Kenya. (Visit the Central Bank of Kenya website).
2. Total tender value means the Tenderer's total tender price inclusive of Value Added Tax (V.A.T) for the services it offers to provide.
3. For companies or firms that are registered or incorporated within the last one calendar year of the Date of the Tender Document, they should submit certified copies of bank statements covering a period of at least six months prior to the date of the tender document. The copies should be certified by the Bank issuing the statements. The certification should be original.
4. The spot balance of 20% required will be that which is seen in the certified bank statements at least in any day of the month of the Date of the Tender Document.

## **SECTION XI - STANDARD FORMS**

- (i) Form of Tender
- (ii) Confidential Business Questionnaire
- (iii) Tender Security Form (Bank Guarantee)
- (iv) Tender Security Form (Letter of Credit)
- (v) Tender Security Form (Sacco Society, Micro Finance, Enterprise Fund)
- (vi) Tender Securing Declaration Form
- (vii) Declaration Form
- (viii) Letter of notification of award
- (ix) Letter of notification of regret
- (x) Contract Agreement Form
- (xi) Performance Security Form (Bank Guarantee)
- (xii) Performance Security Form (LC)
- (xiii) Letter of Acceptance
- (xiv) Qualification Information
- (xv) Site Visit Form



**(i) - TENDER FORM**

Date:.....

Tender No.....

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

Ladies and Gentlemen,

1. Having read, examined and understood the Tender Document including all Addenda, the receipt of which is hereby duly acknowledged, we, the undersigned Tenderer, offer construction services of *(the latter two where applicable)* ..... *(insert goods description)* in accordance and conformity with the said tender document for the sum of .....*(total tender amount inclusive of all taxes in words and figures)* or such sums as may be ascertained in accordance with the Price Schedule attached herewith and made part of this Tender.
2. We undertake, if our Tender is accepted, to deliver, install and commission the goods in accordance with the delivery schedule specified in the Schedule of Requirements.
3. If our Tender is accepted, we will obtain the performance security of a licensed commercial bank in Kenya in a sum equivalent to ten percent (10%) of the contract price for the due performance of the contract, in the form(s) prescribed by The Kenya Power & Lighting Company Limited.
- 4.\* We agree to abide by this Tender for a **period of.....days (Tenderer please indicate validity of your tender)** from the date fixed for tender opening as per the Tender Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

5. This Tender, together with your written acceptance thereof and your notification of award, shall not constitute a contract, between us. The contract shall be formed between us when both parties duly sign the written contract.
  
6. We understand that you are not bound to accept any Tender you may receive.

Yours sincerely,

\_\_\_\_\_  
Name of Tenderer

\_\_\_\_\_  
Signature of duly authorised person signing the Tender

\_\_\_\_\_  
Name and Capacity of duly authorised person signing the Tender

\_\_\_\_\_  
Stamp or Seal of Tenderer

**\*NOTES:**

1. KPLC requires a validity period of at least one hundred and twenty (120) days.
2. This form must be duly completed, signed, stamped and/or sealed.

**(ii) – CONFIDENTIAL BUSINESS QUESTIONNAIRE FORM**

All Tenderers are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2 (c) whichever applies to your type of business. Youth, Persons with disabilities and Women shall in addition complete part 2(d). Tenderers are advised that it is a serious offence to give false information on this form.

**Part 1 – General**

Business Name.....

Location of business premises.....

Plot No. ....Street/ Road .....

Postal Address ..... Postal Code .....

Tel No.....

Facsimile.....

Mobile and CDMA No.....

E-mail:.....

Nature of your business .....

Registration Certificate No.....

Maximum value of business which you can handle at any time KSh.....

Name of your Bankers .....Branch.....

**\*Names of Tenderer’s contact person(s) .....**

Designation/ capacity of the Tenderer’s contact person(s) .....

Address, Tel, Fax and E-mail of the Tenderer’s contact person(s) .....

.....
.....

**Part 2 (a) Sole Proprietor**

Your name in full .....  
Nationality .....Country of origin .....

**Part 2 (b) Partnership**

Give details of partners as follows: -

Names	Nationality	Shares (%)
1.....		
2.....		
3.....		
4.....		
5.....		

**Part 2 (c) Registered Company**

Private or Public .....

State the nominal and issued capital of company-

\*Nominal in KSh. ....

\*Total Issued KSh. ....

Give details of all directors as follows

Name	Nationality	Shares (%)
1.....		
2.....		
3.....		
4.....		
5.....		
5.....		

Name of duly authorized person to sign for and on behalf of the Tenderer  
.....

Capacity of the duly authorized person.....

Signature of the duly authorized person.....

**\*NOTES TO THE TENDERERS ON THE QUESTIONNAIRE**

1. *The address and contact person of the Tenderer provided above shall at all times be used for purposes of this tender.*
2. *The details on this Form are essential and compulsory for all Tenderers. **Failure to provide all the information requested shall lead to the Tenderer's disqualification.***
3. *For foreign Tenderers please give the details of nominal and issued share capital in the currency of the country of origin of the Tenderer.*

**\*NOTES TO THE TENDERERS ON THE QUESTIONNAIRE**

1. *The address and contact person of the Tenderer provided above shall at all times be used for purposes of this tender.*
2. *The details on this Form are essential and compulsory for all Tenderers. **Failure to provide all the information requested shall lead to the Tenderer's disqualification.***

**(iii) - TENDER SECURITY FORM – (BANK GUARANTEE)**

**(To Be Submitted On Bank’s Letterhead)**

**Date:**

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

**WHEREAS** ..... (name of the Tenderer) (hereinafter called “the Tenderer”) has submitted its Tender dated ..... for the supply, installation and commissioning of ..... (please insert KPLC tender no. and name) (hereinafter called “the Tender”);

**KNOW ALL PEOPLE** by these presents that **WE** ..... of ..... having our registered office at ..... (hereinafter called “the Bank”), are bound unto The Kenya Power and Lighting Company Limited (hereinafter called “KPLC” which expression shall where the context so admits include its successors-in-title and assigns) in the sum of ..... for which payment well and truly to be made to the said KPLC, the Bank binds itself, its successors, and assignees by these presents.

We undertake to pay you, upon your first written demand declaring the Tenderer to be in breach of the tender requirements and without cavil or argument, the entire sum of this guarantee being ..... (amount of guarantee) as aforesaid, without you needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This tender guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the date below.

This guarantee is valid until the ..... day of ..... 20.....

**EITHER**

**SEALED** with the )  
**COMMON SEAL** )

of the said **BANK** ) \_\_\_\_\_  
this ..... day ) **BANK SEAL**

of .....20.... )  
 )  
 in the presence of :- )  
 )  
 \_\_\_\_\_ )  
 )  
 and in the presence of:- )  
 )  
 \_\_\_\_\_ )

OR

**SIGNED** by the **DULY AUTHORISED REPRESENTATIVE(S)/ ATTORNEY(S)** of the **BANK**

\_\_\_\_\_  
 Name(s) and Capacity (ies) of duly authorised representative(s)/ attorney(s) of the Bank

\_\_\_\_\_  
 Signature(s) of the duly authorised person(s)

**NOTES TO TENDERERS AND BANKS**

1. *Please note that no material additions, deletions or alterations regarding the contents of this Form shall be made to the Tender Security to be furnished by the Tenderer. If any are made, the Tender Security shall not be accepted and shall be rejected by KPLC. For the avoidance of doubt, such rejection will be treated as non-submission of the Tender Security where such Security is required in the tender.*
2. *It is the responsibility of the Tenderer to sensitize its issuing bank on the need to respond directly and expeditiously to queries from KPLC. The period for response shall not exceed three (3) days from the date of KPLC’s query. Should there be no conclusive response by the Bank within this period, such Tenderer’s Tender Security shall be deemed as invalid and the bid rejected.*
3. ***The issuing bank should address its response or communication regarding the bond to KPLC at the following e-mail address – “guarantees@kplc.co.ke”***



4. *The Tender validity period is one hundred twenty (120) days as set out in the Invitation to Tender (at Section I of the Tender document) or as otherwise may be extended by KPLC. Therefore the Tender Security must at all times be valid for at least 30 days beyond the tender validity period.*

**(iv) - TENDER SECURITY – (LETTERS OF CREDIT)**

The Mandatory Conditions to be included in the Letters are in two parts, A and B.

***Part A***

**Form of Documentary credit** - “Irrevocable Standby”

**Applicable rules** - “Must be UCP Latest Version” i.e. UCP 600 (2007 REVISION) ICC Publication No. 600.

**Place of expiry** - At the counters of the advising bank.

**The SBLC should be available** – “By Payment”

**Drafts should be payable at** - “SIGHT”

**Documents required** -

1. Beneficiary’s signed and dated statement demanding for payment under the letter of credit no..... (*Insert LC No.*) as..... (*Name of applicant*) (hereinafter called the “Tenderer”) indicating that the “Tenderer” has defaulted in the obligations of the Tenderer as stated by the Beneficiary.
2. The Original Letter of Credit and all amendments, if any.

**Additional Conditions** -

1. All charges levied by any bank that is party to this documentary credit are for the account of the applicant.
2. There should be no conditions requiring compliance with the specific regulations or a particular country’s Law and regulations.

**Charges** - All bank charges are for the account of the applicant.

\*Confirmation instructions – (See notes below)

***Part B***

The proceeds of these Letters are payable to KPLC -

- a) if the Tenderer withdraws its Tender after the deadline for submitting Tenders but before the expiry of the period during which the Tenders must remain valid.
- b) if the Tenderer rejects a correction of an arithmetic error
- c) if the Tenderer fails to enter into a written contract in accordance with the Tender Document
- d) if the successful Tenderer fails to furnish the performance security in accordance with the Tender Document.

- e) if the Tenderer fails to extend the validity of the tender security where KPLC has extended the tender validity period in accordance with the Tender Document.

**NOTES TO TENDERERS AND BANKS.**

1. *Please note that should the Tender Security (LC) omit any of the above conditions the LC shall not be accepted and shall be rejected by KPLC. For the avoidance of doubt, such rejection will be treated as non-submission of the LC where such LC is required in the Tender.*
2. *It is the responsibility of the Tenderer to sensitize its issuing bank on the need to respond directly and expeditiously to any queries from KPLC. The period for response shall not exceed three (3) days from the date of KPLC's query. Should there be no conclusive response by the Bank within this period, such Tenderer's Tender Security shall be deemed as invalid and the bid rejected.*
3. ***The issuing bank should address its response or communication regarding the bond to KPLC at the following e-mail address – “guarantees@kplc.co.ke”***
4. *The Tender validity period is ninety (120) days as set out in the Invitation to Tender (at Section I of the Tender document) or as otherwise may be extended by KPLC. Therefore the Tender Security must at all times be valid for at least 30 days beyond the tender validity period.*
5. *All Guarantees issued by foreign banks must be confirmed by a local bank in Kenya.*

**(v) - TENDER SECURITY FORM (SACCO SOCIETY, DEPOSIT TAKING MICRO FINANCE INSTITUTIONS, WOMEN ENTERPRISE FUND & YOUTH ENTERPRISE FUND)**

**(To Be Submitted On Institutions Letterhead)**

**Date:**

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

**WHEREAS**.....(hereinafter called “the Tenderer”) has undertaken, in pursuance of your Tender Number.....(*reference number of the Tender*) and its Tender dated .....(*insert Tenderer’s date of Tender taken from the Tender Form*) to supply .....(*description of the Goods*) (hereinafter called “the Contract);

**AND WHEREAS** it has been stipulated by you in the said Contract that the Tenderer shall furnish you with an Institution’s guarantee by an acceptable Institution for the sum specified therein as security for compliance of the Tenderer’s performance obligations in accordance with the Contract;

**AND WHEREAS** we have agreed to give the Tenderer a Guarantee;

**THEREFORE WE HEREBY AFFIRM** that we are Guarantors and responsible to you, on behalf of the Tenderer, up to a total of..... (*amount of the guarantee in words and figures*) and we undertake to pay you, upon your first written demand declaring the Tenderer to be in default under the Contract and without cavil or argument, any sum or sums within the limits of ..... (*amount of guarantee*) as aforesaid, without you needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the .....day of.....20....

**EITHER**

**SEALED** with the )

**COMMON SEAL** )

of the said **INSTITUTION** )

)

this .....day ) \_\_\_\_\_  
 )  
 of .....20.... ) INSTITUTION SEAL  
 in the presence of :- )  
 )  
 \_\_\_\_\_ )  
 )  
 and in the presence of:- )  
 )  
 \_\_\_\_\_ )

OR

**SIGNED** by the **DULY AUTHORISED**  
**REPRESENTATIVE(S)/ ATTORNEY(S)** of  
 The **INSTITUTION**

\_\_\_\_\_  
 Name(s) and Capacity(ies) of duly authorised representative(s)/ attorney(s) of the  
**Institution.**

\_\_\_\_\_  
 Signature(s) of the duly authorised person(s)

**NOTES TO SUPPLIERS AND INSTITUTIONS**

1. *Please note that no material additions, deletions or alterations regarding the contents of this Form shall be made to the Tender Security to be furnished by the Tenderer. If any are made, the Tender Security shall not be accepted and shall be rejected by KPLC. For the avoidance of doubt, such rejection will be treated as non-submission of the Tender Security where such Security is required in the tender.*
2. *It is the responsibility of the Tenderer to sensitize its issuing institution on the need to respond directly and expeditiously to queries from KPLC. The period for response shall not exceed three (3) days from the date of KPLC's query. Should there be no conclusive response by the institution within this period, such Tenderer's Tender Security shall be deemed as invalid and the bid rejected.*

3. *The issuing institution should address its response or communication regarding the Tender Security to KPLC at the following e-mail address – “guarantees@kplc.co.ke”*
  
4. *The Tender validity period is one hundred and twenty (120) days as set out in the Invitation to Tender (at Section I of the Tender document) or as otherwise may be extended by KPLC. Therefore the Tender Security must at all times be valid for at least 30 days beyond the tender validity period.*

**(vi) - DECLARATION FORM**

Date \_\_\_\_\_

**To:**

The Kenya Power & Lighting Company Limited,  
P.O Box 30099 – 00100,  
Stima Plaza, Kolobot Road, Parklands,  
Nairobi,  
KENYA.

Ladies and Gentlemen,

The Tenderer i.e. (full name and complete physical and postal address)

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

- a) That I/ We have not been debarred from participating in public procurement by anybody, institution or person.
- b) That I/ We have not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement anywhere.
- c) That I/We or any director of the firm or company is not a person within the meaning of paragraph 3.2 of ITT (Eligible Tenderers) of the Instruction to Tenderers.
- d) That I/ We are not insolvent, in receivership, bankrupt or in the process of being wound up and is not the subject of legal proceedings relating to the foregoing.
- e) That I/ We are **not** associated with any other Tenderer participating in this Tender.
- f) That I/We do hereby confirm that all the information given in this tender is accurate, factual and true to the best of our knowledge.

Yours sincerely,

\_\_\_\_\_  
Name of Tenderer

\_\_\_\_\_  
Signature of duly authorised person signing the Tender

\_\_\_\_\_  
Name and Capacity of duly authorised person signing the Tender

\_\_\_\_\_  
Stamp or Seal of Tenderer

**(vii) – DRAFT LETTER OF NOTIFICATION OF AWARD**

**To:** *(Name and full address of the Successful Tenderer).....*

**Date:**.....

Dear Sirs/ Madams,

**RE: NOTIFICATION OF AWARD OF TENDER NO. ....**

We refer to your Tender dated..... and are pleased to inform you that following evaluation, your Tender has been accepted as follows: -

.....  
.....  
.....  
.....

This notification does not constitute a contract. The formal Contract Agreement, which is enclosed herewith shall be entered into upon expiry of seven (7) days from the date hereof but not later than thirty (30) days after expiry of tender validity pursuant to the provisions of the Public Procurement and Disposal Act, 2005 *(or as may be amended from time to time or replaced)*.

Kindly sign, and seal the Contract Agreement. Further, initial and stamp on all pages of the documents forming the Contract that are forwarded to you with this letter. Thereafter return the signed and sealed Contract together with the documents to us within seven (7) days of the date hereof for our further action.

We take this opportunity to remind you to again note and strictly comply with the provisions as regards the Tender Security, Signing of Contract and Performance Security as stated in the Instructions to Tenderers.

We look forward to a cordial and mutually beneficial business relationship.

Yours faithfully,

**FOR: THE KENYA POWER & LIGHTING COMPANY LIMITED**

**CHIEF MANAGER, SUPPLY CHAIN & LOGISTICS**

Enclosures



**(viii) – DRAFT LETTER OF NOTIFICATION OF REGRET**

**To:** *(Name and full address of the Unsuccessful Tenderer)*.....

**Date:**

Dear Sirs/ Madams,

**RE: NOTIFICATION OF REGRET IN RESPECT OF TENDER NO.  
.....**

We refer to your Tender dated..... and regret to inform you that following evaluation, your Tender is unsuccessful. It is therefore not accepted. The brief reasons are as follows:-

1. ....
2. ....
3. .... etc...

The successful bidder was \_\_\_\_\_.

However, this notification does not reduce the validity period of your Tender Security. In this regard, we request you to relook at the provisions regarding the Tender Security, Signing of Contract and Performance Security as stated in the Instructions to Tenderers.

You may collect the tender security from our *Legal Department (Guarantees Section), on the 2<sup>nd</sup> Floor, Stima Plaza, Kolobot Road, Parklands, Nairobi* only after expiry of eighteen (18) days from the date hereof on Mondays and Wednesdays ONLY between 9.00 a.m to 12.30 pm and 2.00p.m to 4.00p.m.

It is expected that by that time KPLC and the successful bidder will have entered into a contract pursuant to the Public Procurement and Disposal Act, 2005 (*or as may be amended from time to time or replaced*). When collecting the Security, you will be required to produce the original or certified copy of this letter.

We thank you for the interest shown in participating in this tender and wish you well in all your future endeavours.

Yours faithfully,

**FOR: THE KENYA POWER & LIGHTING COMPANY LIMITED**

**CHIEF MANAGER, SUPPLY CHAIN & LOGISTICS**

**(ix) - CONTRACT AGREEMENT FORM**

**THIS AGREEMENT** made this.....day of.....**20....BETWEENTHE KENYA POWER & LIGHTING COMPANY LIMITED**, a limited liability company duly incorporated under the Companies Act, Chapter 486 of the Laws of Kenya, with its registered office situated at Stima Plaza, Kolobot Road, Parklands, Nairobi in the Republic of Kenya and of Post Office Box Number 30099-00100, Nairobi in the Republic aforesaid (*hereinafter referred to as the “KPLC”*) of the one part,

**AND**

..... (*Contractor’s full name and principal place of business*) a duly registered entity according to the laws of..... (*state country*) and of Post Office Box Number.....(*full address physical and postal of Contractor*)in the Republic aforesaid, (*hereinafter referred to as the “Contractor”*) of the other part;

**WHEREAS** KPLC invited tenders for certain works, that is to say for .....(*KPLC insert description of works*) under Tender Number..... (*KPLC insert tender number*)

**AND WHEREAS** KPLC has accepted the Tender by the Contractor for the services in the sum of .....(*KPLC specify the total amount in words which should include any payable taxes, duties and insurance where applicable e.g. Value Added Tax*) (*hereinafter called “the Contract Price”*).

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS: -**

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract and the Tender Document.
2. Unless the context or express provision otherwise requires: -
  - a) reference to “this Agreement” includes its recitals, any schedules and documents mentioned hereunder and any reference to this Agreement or to any other document includes a reference to the other document as varied supplemented and or replaced in any manner from time to time.
  - b) any reference to any Act shall include any statutory extension, amendment, modification, re-amendment or replacement of such Act and any rule, regulation or order made thereunder.

- c) the Official Purchase Order shall also mean the Official Order or Local Purchase Order.
  - d) words importing the masculine gender only, include the feminine gender or (as the case may be) the neutral gender.
  - e) words importing the singular number only include the plural number and vice-versa and where there are two or more persons included in the expression the “*Contractor*” the covenants, agreements obligations expressed to be made or performed by the Contractor shall be deemed to be made or performed by such persons jointly and severally.
  - f) where there are two or more persons included in the expression the “*Contractor*” any act default or omission by the Contractor shall be deemed to be an act default or omission by any one or more of such persons.
3. In consideration of the payment to be made by KPLC to the Contractor as hereinbefore mentioned, the Contractor hereby covenants with KPLC to perform and Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract provide the services and remedy any defects thereon in conformity in all respects with the provisions of the Contract.
4. KPLC hereby covenants to pay the Contractor in consideration of the proper performance and provision of the services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
1. The following documents shall constitute the Contract between KPLC and the Contractor and each shall be read and construed as an integral part of the Contract: -
- a) this Contract Agreement
  - b) Letter of Acceptance dated .....
  - a) Conditions of Contract
  - b) Special Conditions of Contract
  - c) Official Purchase Order where applicable.
  - d) Specifications
  - e) Drawings
  - h) Priced Bill of Quantities and agreed upon with KPLC.
  - i) Work program (work methods and schedule)
  - j) KPLC’s Notification of Award dated.....
  - k) Tender Form signed by the Contractor
  - l) Declaration Form signed by the Contractor/ successful Tenderer

m) Warranty

6. In the event of any ambiguity or conflict between the contract documents listed above, the order of precedence shall be the order in which the contract documents are listed in 5 above except where otherwise mutually agreed in writing.
7. The Commencement date shall be the working day immediately following the fulfillment of all the following: -
  - a) Execution of this Contract Agreement by KPLC and the Contractor.
  - b) Issuance of the Performance Bond by the Contractor and confirmation of its authenticity by KPLC.
  - c) Issuance of the Official Order by KPLC to the Contractor.
  - d) Where applicable, Opening of the Letter of Credit by KPLC.
8. The period of contract validity shall begin from the Commencement date and end at the expiry of the Defects Liability Period.  
Provided that the expiry period of the Warranty shall be as prescribed and further provided that the Warranty shall survive the expiry of the contract.
9. It shall be the responsibility of the Contractor to ensure that its Performance Security is valid at all times during the period of contract validity and further is in the full amount as contracted.
10. Any amendment, change, addition, deletion or variation howsoever to this Contract shall only be valid and effective where expressed in writing and signed by both parties.
11. No failure or delay to exercise any power, right or remedy by KPLC shall operate as a waiver of that right, power or remedy and no single or partial exercise of any other right, power or remedy.
12. Notwithstanding proper completion of performance or parts thereof, all the provisions of this Contract shall continue in full force and effect to the extent that any of them remain to be implemented or performed unless otherwise expressly agreed upon by both parties.
13. Any notice required to be given in writing to any Party herein shall be deemed to have been sufficiently served, if where delivered personally, one day after such delivery; notices by electronic mail and facsimile shall be deemed to be served one day after the date of such transmission and delivery respectively, notices sent by post shall be deemed served seven (7) days after posting by registered post (*and proof of posting shall be proof of service*), notices sent by

courier shall be deemed served two (2) days after such receipt by the courier service for Local contractors and five (5) days for Foreign contractors.

14. For the purposes of Notices, the address of KPLC shall be Company Secretary, The Kenya Power & Lighting Company Limited, 7<sup>th</sup> Floor, Stima Plaza, Kolobot Road, Post Office Box Number 30099–00100, Nairobi, Kenya, Facsimile + 254-20-3750240/ 3514485. The address for the Contractor shall be the Contractor's address as stated by it in the Confidential Business Questionnaire provided in the Tender Document.

**IN WITNESS** whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Kenya the day and year first above written.

**SIGNED** for and on behalf  
Of **KPLC**

---

GENERAL MANAGER, CORPORATE AFFAIRS & COMPANY SECRETARY

**SEALED** with the **COMMON SEAL**  
of the **CONTRACTOR**  
in the presence of:-

---

DIRECTOR

---

*Affix Contractor's Seal here*

---

DIRECTOR'S FULL NAMES

and in the presence of:-

---

DIRECTOR/ COMPANY SECRETARY

DIRECTOR/ COMPANY SECRETARY'S FULL NAMES

DRAWN BY: -

**Beatrice Meso**

**Advocate,**

C/o The Kenya Power & Lighting Company Limited,

7<sup>th</sup>Floor, Stima Plaza,

Kolobot Road, Parklands,

Post Office Box Number 30099-00100,

NAIROBI, KENYA,

Telephones: + 254-20-3201000/ 731

Facsimile: + 254-20-3514485/ 3750240

**(x) PERFORMANCE SECURITY FORM (BANK GUARANTEE)**

**(To Be Submitted On Bank’s Letterhead)**

**Date:**

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

**WHEREAS**.....(hereinafter called “the Contractor”) has undertaken, in pursuance of your Tender Number.....(*reference number of the Tender*) and its Tender dated .....(*insert Contractor’s date of Tender taken from the Tender Form*) to supply .....(*description of the works*) (hereinafter called “the Contract);

**AND WHEREAS** it has been stipulated by you in the said Contract that the Contractor shall furnish you with a bank guarantee by an acceptable bank for the sum specified therein as security for compliance of the Contractor’s performance obligations in accordance with the Contract;

**AND WHEREAS** we have agreed to give the Contractor a guarantee;

**THEREFORE WE HEREBY AFFIRM** that we are Guarantors and responsible to you, on behalf of the Contractor, up to a total of..... (*amount of the guarantee in words and figures*) and we undertake to pay you, upon your first written demand declaring the Contractor to be in default under the Contract and without cavil or argument, any sum or sums within the limits of .....  
(*amount of guarantee*) as aforesaid, without you needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the .....day of.....20....

EITHER

**SEALED** with the )  
**COMMON SEAL** )  
of the said **BANK** )  
)

this .....day ) \_\_\_\_\_  
 ) BANK SEAL  
 of .....20.... )  
 in the presence of :- )  
 )  
 \_\_\_\_\_ )  
 )  
 and in the presence of:- )  
 )  
 \_\_\_\_\_ )

OR

**SIGNED** by the **DULY AUTHORISED**  
**REPRESENTATIVE(S)/ ATTORNEY(S)** of  
 the **BANK**

\_\_\_\_\_  
 Name(s) and Capacity(ies) of duly authorised representative(s)/ attorney(s) of the Bank

\_\_\_\_\_  
 Signature(s) of the duly authorised person(s)

**NOTES TO CONTRACTORS AND BANKS**

1. *Please note that no material additions, deletions or alterations regarding the contents of this Form shall be made to the Performance Security Bond (the Bond) to be furnished by the successful Tenderer/ Supplier. If any are made, the Bond may not be accepted and shall be rejected by KPLC. For the avoidance of doubt, such rejection will be treated as non-submission of the Bond where such Bond is required in the tender and Contract.*
  2. *KPLC shall seek authentication of the Performance Security from the issuing bank. It is the responsibility of the Contractor to sensitize its issuing bank on the need to respond directly and expeditiously to queries from KPLC. The period for response shall not exceed five (5) days from the date of KPLC's query. Should there be no conclusive response by the Bank within this period, such Contractor's Performance Security may be deemed as invalid and the Contract nullified.*
- The issuing Bank should address its response or communication regarding the bond to KPLC at the following e-mail address – “guarantees@kplc.co.ke”***



**(xi) -PERFORMANCE SECURITY (LC)**

***Mandatory Conditions that should appear on the Performance Security (LC).***

**Form of Documentary credit** - “Irrevocable Standby”

**Applicable rules** - “Must be UCP Latest Version” i.e. UCP 600 (2007 REVISION) ICC Publication No. 600.

**Place of expiry** - At the counters of the advising bank.

**The SBLC should be available** – “By Payment”

**Drafts should be payable at** - “SIGHT”

**Documents required -**

1. Beneficiary’s signed and dated statement demanding for payment under the letter of credit no..... *(Insert LC No.)* as..... *(Name of Applicant)* (hereinafter called the “Contractor”) indicating that the “Contractor” has defaulted in the performance and adherence to and performance of the contract between the Beneficiary and the Contractor.
2. The Original Letter of Credit and all amendments, if any.

**Additional Conditions -**

1. All charges levied by any bank that is party to this documentary credit are for the account of the Applicant.
2. (Include) that there should be no conditions requiring compliance with the specific regulations or a particular country’s laws and regulations.

**Charges** - All bank charges are for the account of the Applicant.

Confirmation instructions – (See notes below)

**NOTES TO CONTRACTORS AND BANKS**

1. *Please note that should the Performance Security (LC) omit any of the above conditions the LC shall not be accepted and shall be rejected by KPLC. For the avoidance of doubt, such rejection will be treated as non-submission of the LC where such LC is required in the tender and Contract.*
2. *KPLC may seek authentication of the Performance Security (LC) from the issuing bank. It is the responsibility of the Contractor to sensitize its issuing bank on the need to respond directly and expeditiously to queries from KPLC. The period for*

*response shall not exceed five (5) days from the date of KPLC's query. Should there be no conclusive response by the Bank within this period, such Contractor's Performance Security (LC) may be deemed as invalid and the Contract nullified.*

- 3. *The issuing bank should address its response or communication regarding the bond to KPLC at the following e-mail address – “guarantees@kplc.co.ke”***
- 4. *All Guarantees issued by foreign banks must be confirmed by a local bank in Kenya.***

**(xii) - LETTER OF ACCEPTANCE**

**[letter-head 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 : Agreement

**(xiii) QUALIFICATION INFORMATION**

**1. Individual Tenderers or Individual Members of Joint Ventures**

1.1 Constitution or legal status of tenderer (attach copy of Incorporation Certificate)

Place of registration: \_\_\_\_\_

Principal place of business \_\_\_\_\_

Power of attorney of signatory of tender \_\_\_\_\_

1.2 Total annual volume of construction work performed in the last three years

Year	Volume	
	Currency	Value
Year 1		
Year 2		
Year 3		

1.3 Work performed as Main Contractor on works of a similar nature and volume over the last three years. Also list details of work under way or committed, including expected completion date.

Project Name	Name of Client and contact person (Address & Telephone No.)	Type of Work performed and year of completion	Value of contract

1.4 Major items of Contractor's Tools & Equipment proposed for carrying out the Works. List all information requested below. (Attach evidence of ownership or lease)

Item of Tools & Equipment	Description, Make and age (years)	Condition (new, good, poor) and number available	Owned, leased (from whom?), or to be purchased (from whom?)

_____	_____	_____	_____
_____	_____	_____	_____
_____ (etc .)	_____	_____	_____

- 1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract as required by Subsection 3.20 of the Instructions to Tenderer, Attach biographical data.

Bidders should provide the names of suitably qualified personnel.

<b>1.</b>	<b>Title of position*</b>
	<b>Name</b>
<b>2.</b>	<b>Title of position*</b>
	<b>Name</b>
<b>3.</b>	<b>Title of position*</b>
	<b>Name</b>
<b>4.</b>	<b>Title of position*</b>
	<b>Name</b>

Resume for **each** Proposed Personnel

The data on their experience should be supplied using the Form below for each candidate.

<b>Name of Bidder</b>
-----------------------

<b>Position</b>		
<b>Personnel information</b>	<b>Name</b>	<b>Date of birth</b>
	<b>Professional qualifications</b>	
<b>Present employment</b>	<b>Name of employer</b>	
	<b>Address of employer</b>	
	<b>Telephone</b>	<b>Contact (manager / personnel officer)</b>
	<b>Fax</b>	<b>E-mail</b>
	<b>Job title</b>	<b>Years with present employer</b>

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

<b>From</b>	<b>To</b>	<b>Company / Project / Position / Relevant technical and management experience</b>

1.6 Proposed Subcontractors for works

As per the requirements of Clause 3.20 of Conditions of Contract, following is a list of subcontractors and the portions of the Work to be subcontracted:

The following Subcontractors and/or manufacturers are proposed for carrying out the item of the facilities indicated. Bidders are free to propose more than one for each item

Sections of the Works	Value of Subcontract	Subcontractor (name and address)	Experience in similar work
_____	_____	_____	_____
_____	_____	_____	_____
(etc.)	_____	_____	_____

- 1.7 Financial reports for the last three years: balance sheets, profit and loss statements, auditor’s reports, etc. List below and attach copies of audited financial statements.

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- 1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of supportive documents.

---



---



---

- 1.9 Name, address and telephone, telex and facsimile numbers of banks and/or institution that may provide reference if contacted by the Employer.

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- 1.10 Statement of compliance with the requirements of Clause 3.2.6 of the Instructions to Tenderers.

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- 1.11 Proposed program (work method and schedule) in compliance with requirement of clause 3.6 of the Instructions to Tenderers.

Descriptions, drawings and charts, as necessary, to comply with the requirements of the tendering documents.

## **2 Joint Ventures**

- 2.1 The information listed in 1.1 – 1.10 above shall be provided for each partner of the joint venture.
- 2.2 The information required in 1.11 above shall be provided for the joint venture.
- 2.3 Attach the power of attorney of the signatory(ies) of the tender authorizing signature of the tender on behalf of the joint venture
- 2.4 Attach the Agreement among all partners of the joint venture ( and which is legally binding on all partners), which shows that:
  - a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
  - b) one of the partners will be nominated as being in charge, authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture; and
  - c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge



**(xiv) - SITE VISIT FORM**

**CONFIRMATION OF PRE-BID SITE VISIT**

Name of Tenderer.....

Date of Visit.....

Name, position and signature of the Tenderer's staff visiting the site.

Name:.....

Position.....

Qualification

Signature..... Tenderer's Official

Stamp.....

Site Visit conducted by Kenya Power Authorized Officer's

Name .....

Signature.....