

PHASE 1 B

SERVICES WORKS - OFFICE TOWER

PROPOSED KOTDA COMPLEX DEVELOPMENT
FOR KONZA TECHNOPOLIS DEVELOPMENT
AUTHORITY ON LAND PARCEL NO. 74

KONZA TECHNOCITY, KENYA

NOMINATED TENDER NO: KOTDA/019/2016-2017

Bidding document
for
Supply, Delivery, Installation, Testing and Commissioning
of
500KVA AND 200KVA Generator Sets.

CLIENT / EMPLOYER

KONZA TECHNOPOLIS DEVELOPMENT AUTHORITY,

P.O BOX 30519-00100,

NAIROBI

Project Consultants

Architect
SK Archplan Architects,
P. O. Box 50725-00800
Nairobi

Structural/Civil Engineers
Cas Consultants Limited,
P.O. BOX 58624-00200
Nairobi

Quantity Surveyors
Integrated YMR Partnership,
P. O. Box 2403-00606
Nairobi

Service Engineers
Servconsult
P. O. Box 41693-00100
Nairobi

July, 2017



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DEFINITIONS

The following terms and expressions used in the contract document shall have the following meanings:

The Employer: Konza Technopolis development Authority.
P.O. Box 30519-00100

Consulting Architect: SK Archplan Architects
P. O. Box 50725-00100
NAIROBI

Consulting Elect. & Mech. Engineer: Servconsult
P. O. Box 41693-00100
NAIROBI

Consulting Quantity Surveyor: Integrated YMR Partnership
P. O. Box 2403-00606
NAIROBI

Consulting Structural Engineer : Cas Consultants Limited
P. O. Box 20023-00200
NAIROBI

Main Contractor: The firm appointed to carry out Builder's and Civil Works

Sub- Contractor: The firm appointed to carry out Supply, Delivery, Installation, Testing and Commissioning of 500KVA AND 200KVA Generator sets.

Site: Konza City Konza.

SPECIAL NOTES

1. These notes shall form part of the Instructions to Tenderers and Conditions of Contract.
2. The tenderer is required to check the number of pages in this document and should he find any missing, or in duplicate, or indistinct he should inform the Servconsult Engineering consultants.
3. Should the tenderer be in any doubt about the precise meaning of any item or figure, for any reason whatsoever, he must inform the Servconsult, in order that the correct meaning may be decided before the date of submission of tender.
4. No liability will be admitted nor claim allowed, in respect of errors in the tender due to mistakes in the specification, which should have been rectified in the manner, described above.
5. All tenderers must make a declaration that they have not and will not make any payment to any person which can be perceived as an inducement to enable them to win this tender.
6. Any tenderer whose firm uses the titles "Engineer" and "Engineers" must produce evidence of registration of at least one of the directors by the Engineers Registration Board of Kenya to avoid disqualification.

FORM OF TENDER

To: Konza Technopolis development Authority.
P.O. Box 30519-00100
NAIROBI.

Dear Sir,

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 500KVA AND 200KVA GENERATOR SETS FOR THE PROPOSED KOTDA COMPLEX DEVELOPMENT.

- 1. In accordance with the Instructions to Tenderers, Conditions of Contract, Specifications and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of:

Kshs.....[Amount in figures]

Kenya Shillings.....
.....
.....[Amount in words]

- 2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Employer’s Representative’s notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.
- 3. We agree to abide by this tender for a period of 120 days from the date of tender opening and shall remain binding upon us and may be accepted at any time before that date.
- 4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.
- 5. Understand that you are not bound to accept the lowest or any tender you may receive.

Dated this day of20.....

Signaturein the capacity of

duly authorized to sign tenders for and on behalf of:

.....[Name of Tenderer]

of.....[Address of Tenderer]

PIN No.

VAT CERTIFICATE No.

Witness: Name
Address
Signature

FORM OF TENDER SECURITY FROM BANK

WHEREAS(hereinafter called "the Tenderer") has submitted his tender dated for the supply, delivery, installation, testing and commissioning of 500KVA and 200KVA generator set for the Proposed KoTDA Complex development for Konza Technopolis Development Authority.

KNOW ALL PEOPLE by these presents that WE

Having our registered office at

(hereinafter called "the Bank"), are bound unto

(hereinafter called "the Employer") in the sum of Kshs.....

for which payment will and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank thisDay of20

THE CONDITIONS of this obligation are:

- 1. If after tender opening the Tenderer withdraws his tender during the period of tender validity specified in the instructions to Tenderers
Or
2. If the Tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:
(a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
(b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by his is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force for a period of 150 days from the date of tender opening, and any demand in respect thereof should reach the Bank not later than the said date.

.....
(Date)

.....
(Signature of the Bank)

.....
(Witness)

.....
(Seal)

FORM OF TENDER SECURITY FROM INSURANCE

WHEREAS(hereinafter called "the Tenderer") has submitted his tender dated for the supply, delivery, installation, testing and commissioning of 500 KVA and 200KVA Generator Set the Proposed KoTDA Complex development for Konza Technopolis Development Authority.

KNOW ALL PEOPLE by these presents that WE Having our registered office at (hereinafter called "the Insurance"), are bound unto (hereinafter called "the Employer") in the sum of Kshs..... for which payment well and truly to be made to the said Employer, the Insurance binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Insurance thisDay of20

THE CONDITIONS of this obligation are:

- 3. If after tender opening the Tenderer withdraws his tender during the period of tender validity specified in the instructions to Tenderers
Or
4. If the Tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:
(a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
(b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by his is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force for a period of 150 days from the date of tender opening, and any demand in respect thereof should reach the Insurance not later than the said date.

.....
(Date)

.....
(Signature of the Insurance)

.....
(Witness)

.....
(Seal)

SECTION A:

INSTRUCTIONS TO TENDERERS

INSTRUCTIONS TO TENDERERS

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INSTRUCTION TO TENDERERS

Note: The tenderer must comply with the following conditions and instructions and failure to do so is liable to result in rejection of the tender.

GENERAL

1. Definitions

- (a) "Tenderer" means any person or persons partnership firm or company submitting a sum or sums in the Bills of Quantities in accordance with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications, Drawings and Bills of Quantities for the work contemplated, acting directly or through a legally appointed representative.
- (b) "Approved tenderer" means the tenderer who is approved by the Employer.
- (c) Any noun or adjective derived from the word "tender" shall be read and construed to mean the corresponding form of the noun or adjective "bid". Any conjugation of the verb "tender" shall be read and construed to mean the corresponding form of the verb "bid."
- (d) "Employer" means a Central Government, Ministry, Local Authority, State Corporation or any other Public Institution.

2. Eligibility and Qualification Requirements

- 2.1 This invitation to tender is open to all tenderers.
- 2.2 To be eligible for award of Contract, the tenderer shall provide evidence satisfactory to the Employer of their eligibility under Sub clause 2.1 above and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to update the following information already submitted during prequalification: -
 - (a) Details of experience and past performance of the tenderer on the works of a similar nature within the past five years and details of current work on hand and other contractual commitments.
 - (b) The qualifications and experience of key personnel proposed for administration and execution of the contract, both on and off site.

- (c) Major items of construction plant and equipment proposed for use in carrying out the Contract. Only reliable plant in good working order and suitable for the work required of it shall be shown on this schedule. The tenderer will also indicate on this schedule when each item will be available on the Works. Included also should be a schedule of plant, equipment and material to be imported for the purpose of the Contract, giving details of make, type, origin and CIF value as appropriate.
- (d) Details of subcontractors to whom it is proposed to sublet any portion of the Contract and for whom authority will be requested for such subletting in accordance with clause 4 of the Conditions of Contract.
- (e) A draft Program of Works in the form of a bar chart and Schedule of Payment which shall form part of the Contract if the tender is accepted. Any change in the Program or Schedule shall be subjected to the approval of the Engineer.
- (f) Details of any current litigation or arbitration proceedings in which the Tenderer is involved as one of the parties.

2.3 Joint Ventures

Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements: -

- (a) The tender, and in case of a successful tender, the Form of Agreement, shall be signed so as to be legally binding on all partners.
- (b) One of the partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
- (c) The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the Contract including payment shall be done exclusively with the partner in charge.
- (d) 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 under (b) above as well as in the Form of Tender and the Form of Agreement (in case of a successful tender).
- (e) A copy of the agreement entered into by the joint venture partners shall be submitted with the tender.

3. Cost of Tendering

The tenderer shall bear all costs associated with the preparation and submission of his tender and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

4. Site Visit

4.1 The tenderer is advised to visit and examine the Site and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract. The costs of visiting the Site shall be the tenderer's own responsibility.

4.2 The tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon premises and lands for the purpose of such inspection, but only upon the express condition that the tenderer, his personnel or agents, will release and indemnify the Employer from and against all liability in respect of, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission, would not have arisen.

4.3 The Employer shall organize a site visit at a date to be notified. A representative of the Employer will be available to meet the intending tenderers at the Site.
Tenderers must provide their own transport. The representative will not be available at any other time for site inspection visits.
Each tenderer shall complete the Certificate of Tenderer's Visit to the Site, whether he in fact visits the Site at the time of the organized site visit or by himself at some other time.

TENDER DOCUMENTS

5. Tender Documents

5.1 The Tender documents comprise the documents listed here below and should be read together with any Addenda issued in accordance with Clause 7 of these instructions to tenderers.

- a. Form of Invitation for Tenders
- b. Instructions to Tenderers
- c. Form of Tender
- d. Appendix to Form of Tender
- e. Form of Tender Surety
- f. Statement of Foreign Currency Requirements
- g. Form of Performance Security
- h. Form of Agreement
- i. Form of Advance payment Bank Guarantee
- j. Schedules of Supplementary Information
- k. General Conditions of Contract – Part I
- l. Conditions of Particular Application – Part II
- m. Specifications
- n. Bills of Quantities
- o. Drawings

- 5.2 The tenderer is expected to examine carefully all instructions, conditions, forms, terms, specifications and drawings in the tender documents. Failure to comply with the requirements for tender submission will be at the tenderer's own risk. Pursuant to clause 22 of Instructions to Tenderers, tenders which are not substantially responsive to the requirements of the tender documents will be rejected.
- 5.3 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".

6. Clarification of Tender Documents

- 6.1 A prospective tenderer requiring any clarification of the tender documents may notify the Employer in writing or by telex, cable or facsimile at the Employer's mailing address indicated in the Invitation to Tender. The Employer will respond in writing to any request for clarification which he receives earlier than 28 days prior to the deadline for the submission of tenders. Written copies of the Employer's response (including the query but without identifying the source of the inquiry) will be sent to all prospective tenderers who have purchased the tender documents.

7. Amendment of Tender Documents

- 7.1 At any time prior to the deadline for submission of tenders the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the tender documents by issuing Addenda.
- 7.2 Any Addendum will be notified in writing or by cable, telex or facsimile to all prospective tenderers who have purchased the tender documents and will be binding upon them.
- 7.3 If during the period of tendering, any circular letters (tender notices) shall be issued to tenderers by, or on behalf of, the Employer setting forth the interpretation to be placed on a part of the tender documents or to make any change in them, such circular letters will form part of the tender documents and it will be assumed that the tenderer has taken account of them in preparing his tender. The tenderer must promptly acknowledge any circular letters he may receive.
- 7.4 In order to allow prospective tenderers reasonable time in which to take the Addendum into account in preparing their tenders, the Employer may, at his discretion, extend the deadline for the submission of tenders.

PREPARATION OF TENDERS

8. Language of Tender

8.1 The tender and all correspondence and documents relating to the tender exchanged between the tenderer and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the tenderer with the tender may be in another language provided they are accompanied by an appropriate translation of pertinent passages in the above stated language. For the purpose of interpretation of the tender, the English language shall prevail.

9. Documents Comprising the Tender

9.1 The tender to be prepared by the tenderer shall comprise: the Form of Tender and Appendix thereto, a Tender Surety, the Priced Bills of Quantities and Schedules, the information on eligibility and qualification, and any other materials required to be completed and submitted in accordance with the Instructions to Tenderers embodied in these tender documents. The Forms, Bills of Quantities and Schedules provided in the tender documents shall be used without exception (subject to extensions of the schedules in the same format and to the provisions of clause 13.2 regarding the alternative forms of Tender Surety).

10. Tender Prices

10.1 All the insertions made by the tenderer shall be made in INK and the tenderer shall clearly form the figures. The relevant space in the Form of Tender and Bills of Quantities shall be completed accordingly without interlineations or erasures except those necessary to correct errors made by the tenderer in which case the erasures and interlineations shall be initialed by the person or persons signing the tender.

10.2 A price or rate shall be inserted by the tenderer for every item in the Bills of Quantities whether the quantities are stated or not items against which no rate or price is entered by the tenderer will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bills of Quantities.

The prices and unit rates in the Bills of Quantities are to be the full [all-inclusive] value of the work described under the items, including all costs and expenses which may be necessary and all general risks, liabilities and obligations set forth or implied in the documents on which the tender is based. All duties and taxes and other levies payable by the Contractor under the Contract or for any other cause as of the date 28 days prior to the deadline for the submission of tenders, shall be included in the rates and prices and the total tender prices submitted by the Tenderer.

Each price or unit rate inserted in the Bills of Quantities should be a realistic estimate for completing the activity or activities described under that particular item and the tenderer is advised against inserting a price or rate against any item contrary to this instruction.

Every rate entered in the Bills of Quantities, whether or not such rate be associated with a quantity, shall form part of the Contract. The Employer shall have the right to call for any item of work contained in the Bills of Quantities, and such items of work to be paid for at the rate entered by the tenderer and it is the intention of the Employer to take full advantage of unbalanced low rates.

- 10.3 Unless otherwise specified the tenderer must enter the amounts representing 10% of the sub-total of the summary of the Bills of Quantities for Contingencies and Variation of Prices [V.O.P.] payments in the summary sheet and add them to the sub-total to arrive at the tender amount.
- 10.4 The tenderer shall furnish with his tender written confirmation from his suppliers or manufacturers of unit rates for the supply of items listed in the Conditions of Contract clause 47 where appropriate.
- 10.5 The rates and prices quoted by the tenderer are subject to adjustment during the performance of the Contract only in accordance with the provisions of the Conditions of Contract. The tenderer shall complete the schedule of basic rates and shall submit with his tender such other supporting information as required under clause 47 of the Conditions of Contract Part II.

11. Currencies of Tender and Payment

- 11.1 Tenders shall be priced in Kenya Shillings and the tender sum shall be in Kenya Shillings.
- 11.2 Tenderers are required to indicate in the Statement of Foreign Currency Requirements, which forms part of the tender, the foreign currency required by them. Such currency should generally be the currency of the country of the tenderer's main office. However, if a substantial portion of the tenderer's expenditure under the Contract is expected to be in countries other than his country of origin, then he may state a corresponding portion of the contract price in the currency of those other countries. However, the foreign currency element is to be limited to two (2) different currencies and a maximum of 30% (thirty percent) of the Contract Price.
- 11.3 The rate of rates of exchange used for pricing the tender shall be selling rate or rates of the Central Bank ruling on the date thirty (30) days before the final date for the submission of tenders.
- 11.4 Tenderers must enclose with their tenders, a brief justification of the foreign currency requirements stated in their tenders.

12. Tender Validity

- 12.1 The tender shall remain valid and open for acceptance for a period of one hundred and twenty (120) days from the specified date of tender opening or from the extended date of tender opening (in accordance with clause 7.4 here above) whichever is the later.
- 12.2 In exceptional circumstances prior to expiry of the original tender validity period, the Employer may request the tenderer for a specified extension of the period of validity. The request and the responses thereto shall be made in writing or by cable, telex or facsimile. A tenderer may refuse the request without forfeiting his Tender Surety. A tenderer agreeing to the request will not be required nor permitted to modify his tender, but will be required to extend the validity of his Tender Surety correspondingly.

13. Tender Surety

13.1 The tenderer shall furnish as part of his tender, a Tender Surety in the amount stated in the Appendix to Instructions to Tenderers.

13.2 The unconditional Tender Surety shall be in Kenya Shillings and be in form of a certified cheque, a bank draft, an irrevocable letter of credit or a guarantee from a reputable Bank approved by the Employer located in the Republic of Kenya.

The format of the Surety shall be in accordance with the sample form of Tender Surety included in these tender documents; other formats may be permitted subject to the prior approval of the Employer. The Tender Surety shall be valid for twenty eight (28) days beyond the tender validity period.

13.3 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.

13.4 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible but not later than twenty eight (28) days after concluding the Contract execution and after a Performance Security has been furnished by the successful tenderer. The Tender Surety of the successful tenderer will be returned upon the tenderer executing the Contract and furnishing the required Performance Security.

13.5 The Tender Surety may be forfeited:

(a) if a tenderer withdraws his tender during the period of tender validity: or

(b) in the case of a successful tenderer, if he fails

(i) to sign the Agreement, or

(ii) to furnish the necessary Performance Security

(c) if a tenderer does not accept the correction of his tender price pursuant to clause 23.

14. No Alternative Offers

14.1 The tenderer shall submit an offer which complies fully with the requirements of the tender documents.

Only one tender may be submitted by each tenderer either by himself or as partner in a joint venture.

14.2 The tenderer shall not attach any conditions of his own to his tender. The tender price must be based on the tender documents. The tenderer is not required to present alternative construction options and he shall use without exception, the Bills of Quantities as provided, with the amendments as notified in tender notices, if any, for the calculation of his tender price.

Any tenderer who fails to comply with this clause will be disqualified.

15. Pre-Tender Meeting

- 15.1 The tenderer's designated representative is invited to attend a pre-tender meeting, which if convened, will take place at the venue and time stated in the Invitation to Tender. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 15.2 The tenderer is requested as far as possible to submit any questions in writing or by cable, to reach the Employer not later than seven days before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted in accordance with the following:
- (a) Minutes of the meeting, including the text of the questions raised and the responses given together with any responses prepared after the meeting, will be transmitted without delay to all purchasers of the tender documents. Any modification of the tender documents listed in --Clause 9 which may become necessary as a result of the pre-tender meeting shall be made by the Employer exclusively through the issue of a tender notice pursuant to Clause 7 and not through the minutes of the pre-tender meeting.
 - (b) Non-attendance at the pre-tender meeting will not be cause for disqualification of a bidder.

16. Format and Signing of Tenders

- 16.1 The tenderer shall prepare his tender as outlined in clause 9 above and mark appropriately one set "ORIGINAL".
- 16.2 The copy of the tender and Bills of Quantities shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the tenderer. Proof of authorization shall be furnished in the form of the written power of attorney which shall accompany the tender. All pages of the tender where amendments have been made shall be initialed by the person or persons signing the tender.
- 16.3 The complete tender shall be without alterations, interlineations or erasures, 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.

SUBMISSION OF TENDERS

17. Sealing and Marking of Tenders

- 17.1 The tenderer shall seal the original only tender in envelopes, duly marking the envelopes as "ORIGINAL." The envelopes shall then be sealed in an outer envelope.
- 17.2 The inner and outer envelopes shall be addressed to the Employer at the address stated in the Appendix to Instructions to Tenderers and bear the name and identification of the Contract stated in the said Appendix with a warning not to open before the date and time for opening of tenders stated in the said Appendix.
- 17.3 The inner envelopes shall each indicated the name and address of the tenderer to enable the tender to be returned unopened in case it is declared "late", while the outer envelope shall bear no mark indicating the identity of the tenderer.
- 17.4 If the outer envelope is not sealed and marked as instructed above, the Employer will assume no responsibility for the misplacement or premature opening of the tender. A tender opened prematurely for this cause will be rejected by the Employer and returned to the tenderer.

18. Deadline for Submission of Tenders

- 18.1 Tenders must be received by the Employer at the address specified in clause 17.2 and on the date and time specified in the Letter of Invitation, subject to the provisions of clause 7.4, 18.2 and 18.3.

Tenders delivered by hand must be placed in the "tender box" provided in the office of the Employer.

Proof of posting will not be accepted as proof of delivery and any tender delivered after the above stipulated time, from whatever cause arising will not be considered.

- 18.2 The Employer may, at his discretion, extend the deadline for the submission of tenders through the issue of an Addendum in accordance with clause 7, in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline shall thereafter be subject to the new deadline as extended.
- 18.3 Any tender received by the Employer after the prescribed deadline for submission of tender will be returned unopened to the tenderer.

19. Modification and Withdrawal of Tenders

- 19.1 The tenderer may modify or withdraw his tender after tender submission, provided that written notice of the modification or withdrawal is received by the Employer prior to prescribed deadline for submission of tenders.
- 19.2 The tenderer's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions for

the submission of tenders, with the inner and outer envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.

- 19.3 No tender may be modified subsequent to the deadline for submission of tenders.
- 19.4 No tender may be withdrawn in the interval between the deadline for submission of tenders and the period of tender validity specified on the tender form. Withdrawal of a tender during this interval will result in the forfeiture of the Tender Surety.
- 19.5 Subsequent to the expiration of the period of tender validity prescribed by the Employer, and the tenderer having not been notified by the Employer of the award of the Contract or the tenderer does not intend to conform with the request of the Employer to extend the prior of tender validity, the tenderer may withdraw his tender without risk of forfeiture of the Tender Surety.

TENDER OPENING AND EVALUATION

20 Tender Opening

- 20.1 The Employer will open the tenders in the presence of the tenderers' representatives who choose to attend at the time and location indicated in the Letter of Invitation to Tender. The tenderers' representatives who are present shall sign a register evidencing their attendance.
- 20.2 Tenders for which an acceptable notice of withdrawal has been submitted, pursuant to clause 19, will not be opened. The Employer will examine the tenders to determine whether they are complete, whether the requisite Tender Sureties have been furnished, whether the documents have been properly signed and whether the tenders are generally in order.
- 20.3 At the tender opening, the Employer will announce the tenderer's names, total tender price, tender price modifications and tender withdrawals, if any, the presence of the requisite Tender Surety and such other details as the Employer, at his discretion, may consider appropriate. No tender shall be rejected at the tender opening except for late tenders.
- 20.4 The Employer shall prepare minutes of the tender opening including the information disclosed to those present.
- 20.5 Tenders not opened and read out a tender opening shall not be considered further for evaluation, irrespective of the circumstances.

21 Process to be Confidential

- 21.1 After the public opening of tenders, information relating to the examination, clarification, evaluation and comparisons of tenders and recommendations concerning the award of Contract shall not be disclosed to tenderers or other persons not officially concerned with such process until the award of Contract is announced.
- 21.2 Any effort by a tenderer to influence the Employer in the process of examination, evaluation and comparison of tenders and decisions concerning award of Contract may result in the rejection of the tenderer's tender.

22 Clarification of Tenders

- 22.1 To assist in the examination, evaluation and comparison of tenders, the Employer may ask tenderers individually for clarification of their tenders, including breakdown of unit prices. The request for clarification and the response shall be in writing or by cable, facsimile or telex, but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm the correction of arithmetical errors discovered by the employer during the evaluation of the tenders in accordance with clause 24.
- 22.2 No Tenderer shall contact the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. If the tenderer wishes to bring additional information to the notice of the Employer, he shall do so in writing.

23 Determination of Responsiveness

- 23.1 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender is substantially responsive to the requirements of the tender documents.
- 23.2 For the purpose of this clause, a substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation and has a valid bank guarantee. A material deviation or reservation is one which affects in any substantial way the scope, quality, completion timing or administration of the Works to be undertaken by the tenderer under the Contract, or which limits in any substantial way, inconsistent with the tender documents, the Employer's rights or the tenderers obligations under the Contract and the rectification of which would affect unfairly the competitive position of other tenderers who have presented substantially responsive tenders.
- 23.3 Each price or unit rate inserted in the Bills of Quantities shall be a realistic estimate of the cost of completing the works described under the particular item including allowance for overheads, profits and the like. Should a tender be seriously unbalanced in relation to the Employer's estimate of the works to be performed under any item or groups of items, the tender shall be deemed not responsive.
- 23.4 A tender determined to be not substantially responsive will be rejected by the Employer and may not subsequently be made responsive by the tenderer by correction of the non-conforming deviation or reservation.

24 Correction of Errors

Tenders determined to be substantially responsive shall be checked by the Employer for any arithmetic errors in the computations and summations. Errors will be corrected by the Employer as follows:

- (a) Where there is a discrepancy between the amount in figures and the amount in words, the amount in words will govern.
- (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer, there is an obvious typographical error, in which case adjustment will be made to the entry containing that error.
- (c) The amount stated in the tender will be adjusted in accordance with the above procedure for the correction of errors and, with concurrence of the tenderer, shall be considered as binding upon the tenderer. If the tenderer does not accept the corrected amount, the tender may be rejected and the Tender Security may be forfeited in accordance with clause 13.

25 Conversion to Single Currency

- 25.1 For compensation of tenders, the tender price shall first be broken down into the respective amounts payable in various currencies by using the selling rate or rates of the Central Bank of Kenya ruling on the date twenty eight (28) days before the final date for the submission of tenders.
- 25.2 The Employer will convert the amounts in various currencies in which the tender is payable (excluding provisional sums but including Dayworks where priced competitively) to Kenya Shillings at the selling rates stated in clause 25.1.

26 Evaluation and Comparison of Tenders

- 26.1 The Employer will evaluate only tenders determined to be substantially responsive to the requirements of the tender documents in accordance with clause 23.
- 26.2 In evaluating tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:
 - (a) Making any correction for errors pursuant to clause 24.
 - (b) Excluding Provisional Sums and provision, if any, for Contingencies in the Bills of Quantities, but including Day works where priced competitively.
- 26.3 The Employer reserves the right to accept any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.

- 26.4 Price adjustment provisions in the Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in tender evaluation.
- 26.5 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in clause 29 be increased at the expense of the successful tenderer to a level sufficient to protect the Employer against financial loss in the event of subsequent default of the successful tenderer under the Contract.
- 26.6 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a non-indigenous sub-contractor.

AWARD OF CONTRACT

27 Award

- 27.1 Subject to clause 27.2, the Employer will award the Contract to the tenderer whose tender is determined to be substantially responsive to the tender documents and who has offered the lowest evaluated tender price subject to possessing the capability and resources to effectively carry out the Contract Works.
- 27.2 The Employer reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders, at any time prior to award of Contract, without thereby incurring any liability to the affected tenderers or any obligation to inform the affected tenderers of the grounds for the Employer's action.

28 Notification of Award

- 28.1 Prior to the expiration of the period of tender validity prescribed by the Employer, the Employer will notify the successful tenderer by cable, telefax or telex and confirmed in writing by registered letter that his tender has been accepted. This letter (hereinafter and in all Contract documents called "Letter of Acceptance") shall name the sum (hereinafter and in all Contract documents called "the Contract Price") which the Employer will pay to the Contractor in consideration of the execution and completion of the Works as prescribed by the Contract.
- 28.2 Notification of award will constitute the formation of the Contract.
- 28.3 Upon the furnishing of a Performance Security by the successful tenderer, the unsuccessful tenderers will promptly be notified that their tenders have been unsuccessful.
- 28.4 Within twenty eight [28] days of receipt of the form of Contract Agreement from the Employer, the successful tenderer shall sign the form and return it to the Employer together with the required Performance Security.

29 Performance Guarantee

29.1 Within twenty eight [28] days of receipt of the notification of award from the Employer, the successful tenderer shall furnish the Employer with a Performance Security in an amount stated in the Appendix to Instructions to Tenderers.

29.2 The Performance Security to be provided by the successful tenderer shall be an unconditional Bank Guarantee issued at the tenderer's option by an established and a reputable Bank approved by the Employer and located in the Republic of Kenya and shall be divided into two elements namely, a performance security payable in foreign currencies (based upon the exchange rates determined in accordance with clause 35.4 of the Conditions of Contract) and a performance security payable in Kenya Shillings. The value of the two securities shall be in the same proportions of foreign and local currencies as requested in the form of foreign currency requirements.

29.3 Failure of the successful tenderer to lodge the required Performance Security shall constitute a breach of Contract and sufficient grounds for the annulment of the award and forfeiture of the Tender Security and any other remedy under the Contract the Employer may award the Contract to the next ranked tenderer.

30 Advance Payment

An advance payment, if approved by the Employer, shall be made under the Contract, if requested by the Contractor, in accordance with clause 33.1 of the Conditions of Contract. The Advance Payment Guarantee shall be denominated in the proportion and currencies named in the form of foreign currency requirements. For each currency, a separate guarantee shall be issued. The guarantee shall be issued by a bank located in the Republic of Kenya, or a foreign bank through a correspondent bank located in the Republic of Kenya, in either case subject to the approval of the Employer.

12. ADD EVALUATION CRITERIA - Page (A-16) to (vi)

TENDER EVALUATION CRITERIA

After tender opening, the tenders will be evaluated in 3 stages, namely:

1. Determination of Responsiveness
2. Completeness of Tender Evaluation.
3. Technical data and Arithmetic error check.

STAGE 1- DETERMINATION OF RESPONSIVENESS

A) PRELIMINARY EXAMINATION

B)

This stage of evaluation shall involve examination of the pre-qualification Mandatory documents conditions as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document.

These Mandatory documents include the following:

- i) Category of Registration with the National Construction Authority (NCA) 1 and above.
- ii) Dully filled form of tender.
- iii) Certificate of registration/Incorporation.
- iv) Valid tax compliance certificate from KRA.
- v) Valid single business permit.
- vi) Certified audited reports for the last three (3) years (2014-2016).
- vii) Dully completed confidential business questionnaire and declaration form.
- (viii) Provision of Bid Security.
- ix) Any other conditions included in the advertisement notice/Invitation letter.

Note:

The bid security shall be in accordance with clauses 13 and 23.2 of Instruction to Tenderers which states as follows:

- Clause 13.1 of Instruction to Tenderers, "the tenderers shall furnish as part of his tenders a tender surety in the amount stated in the tender document in the Appendix to Instructions to Tenderers".

STAGE 2_COMPLETENESS OF TENDER DOCUMENT

The tender document shall be examined based on clause 2.2 of the Instruction to Tenderers which states as follows:

In accordance with clause 2.2 of Instruction to Tenderers, the tenderers will be required to provide evidence for eligibility of the award of the tender by satisfying the employer of their eligibility under sub clause 2.1 of Instruction to Tenderers and adequacy of resources to effectively carry out the subject contract. The tenderers shall be required to fill the Standards Forms provided for the purposes of providing the required information. The tenderers must attach the required information where requested.

The award of points for the STANDARD FORMS considered in this section shall be as shown below

<u>PARAMETER</u>	<u>MAXIMUM POINTS</u>
(i) Key personnel-----	25
(ii) Contract Completed in the last Five (5) years-----	25
(iii) Schedules of on-going projects-----	16
(iv) Schedules of contractor's equipment-----	14
(v) Audited Financial Report for the last 3 years-----	10
(vi) Evidence of Financial Resources-----	10
(vii) Method statement for the installations -----	10
	TOTAL <u>100</u>

The detailed scoring plan shall be as shown in table 1 overleaf: -

TABLE 1

Item	Description	Point Scored	Max. Point
i)	Key Personnel (Attach evidence of CV and both Academic & Professional certificates)		25
	Director of the firm <ul style="list-style-type: none"> o Holder of degree or diploma in relevant Engineering field--7 o Holder of certificate in relevant Engineering field-----5 o Holder of trade test certificate in relevant Engineering field-----3 o No relevant certificate-----0 		7
	At least 1No. degree/diploma of key personnel in relevant Engineering field. <ul style="list-style-type: none"> o Mechanical Engineer With over 10 years' relevant experience -----7 o Electrical Engineer With over 10 years' relevant experience -----7 		7
	At least 1No certificate holder of key personnel in relevant Engineering field <ul style="list-style-type: none"> o With over 10 years relevant experience ----- 5 o With over 5 years relevant experience ----- 3 o With under 5 years relevant experience -----1 o No relevant certificate-----0 		5
	At least 2No artisan (trade test certificate in relevant Engineering field) <ul style="list-style-type: none"> o Artisan with over 10 years relevant experience----- 3 o Artisan with under 10 years relevant experience ----- 2 o Non skilled worker with over 10 years relevant experience--1 o No relevant certificate-----0 		6
ii)	Contract completed in the last five (5) years (Max of 5 No. Projects Attach evidence) <ul style="list-style-type: none"> o Project of similar nature, complexity and magnitude -----5 o Project of similar nature but of lower value than the one in consideration----- 4 o No completed project of similar nature ----- 0 		25
iii)	On-going projects Project of similar nature and value (Attach evidence)		16
iv)	Schedule of contractor's equipment and transport (Must attach proof or evidence of ownership) <ul style="list-style-type: none"> o Means of transport (Vehicle)----- 4 o No means of transport ----- 0 		4
v)	Financial report (Must be validated)		10
	Audited financial status report (last three (3) years) <ul style="list-style-type: none"> o Turn over greater or equal to 5 times the cost of the project --- 		

	<p>----- 10</p> <ul style="list-style-type: none"> ○ Turn over greater or equal to 3 times the cost of the project --- ----- 6 ○ Turn over greater or equal to cost of the project ----- 4 ○ Turn over below the cost of the project ----- 2 		
vi)	<p>Evidence of Financial Resources (cash in hand, lines of credit, over draft facility).</p> <ul style="list-style-type: none"> ○ Has financial resources equal 30% or above the cost of the project----- 10 		10
vii)	<p>Method statement for installation of Generators installation proposed works programme (Builders works ends on 23rd Nov 2018).</p>		10
	TOTAL		100

Any bidder who scores 75 points and above shall be considered for further evaluation

STAGE 3 (A) - COMPLIANCE WITH TECHNICAL SPECIFICATIONS

In this section, the bid will be analyzed to determine compliance with General and Particular technical specifications for the works as indicated in the tender document.

The tenderer shall fill in the Technical Schedule as specified in the tender document for Equipment and Items indicating the Country of Origin, Model/Make/Manufacturer of the Item/Equipment they propose to supply.

Where the Equipment proposed by the tenderer differs with the models specified in the tender document, it is mandatory that the brochures/catalogues of the same be submitted with the tender document highlighting the catalogues Numbers of the proposed items. Such brochures/catalogues should indicate comprehensive relevant data of the proposed equipment/items which should include but not limited to the following:

- a) Standards of manufacture
- b) Performance ratings/characteristics
- c) Material of manufacture
- d) Electrical power ratings and
- e) Any other necessary requirements (Specify)
- f)

Following the above analyses, where the proposed equipment are found not to satisfy the specifications, the tender will be deemed Non – Responsive and will not be evaluated further.

STAGE 3 (A – ARITHMETIC ERRORS)

The parameter to be considered under this section includes the following:

- a) Arithmetic errors and comparison of rates;

A) EXAMINATIONS

The examination in the Financial Evaluation shall be in accordance with clause 26 of Instruction to Tenderers.

(1) Arithmetic Errors

The bid shall be checked for arithmetic errors based on the rates and the total sums indicated in the bills of quantities.

- a) Confirmation shall be sought in writing from the tenderers whose tender sums will be determined to have a significant arithmetic error to their disadvantage, to confirm whether they stand by their tender sums. The error shall be treated as per clause 24 of Instructions to Tenderers.

Noncompliance with the above shall lead to automatic disqualification from further evaluation.

Discount if any shall be treated as an error in pursuant to clause 26.3 of Instructions to Tenderers.

RECOMMENDATION

The lowest responsive bidder who score 75% and above may be recommended for award.

SECTION B:
CONDITIONS OF CONTRACT (MAIN WORKS)

CONDITIONS OF CONTRACT (MAIN WORKS)

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CONDITIONS OF CONTRACT (MAIN WORKS)

1. Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

"Equipment" is the Contractor's machinery and vehicles brought temporarily to the Site for the execution of the Works.

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

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

"Employer's Representative" is the person appointed by the Employer and notified to the Contractor for the purpose of supervision of the Works.

"Specification" means the Specification of the Works included in the Contract.

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

"A Sub-contractor" is a person or corporate body who has a Contract with the Contractor to carry out a part of the Work in the Contract, which includes Work on the Site.

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

"A Variation" is an instruction given by the Employer's Representative which varies the Works.

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

2. Contract Documents
 - 2.1 The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority:
 - (1) Agreement,
 - (2) Letter of Acceptance,
 - (3) Contractor's Tender,
 - (4) Conditions of Contract,
 - (5) Specifications,
 - (6) Drawings,
 - (7) Bills of Quantities or Schedule of Rates [whichever is applicable]
3. Employer's Representative's Decisions
 - 3.1 Except where otherwise specifically stated, the Employer's Representative will decide contractual matters between the Employer and the Contractor in the role representing the Employer.
4. Works, Language and Law of Contract
 - 4.1 The Contractor shall construct and install the Works in accordance with the Contract documents. The Works may commence on the Start Date and shall be carried out in accordance with the Programme submitted by the Contractor, as updated with the approval of the Employer's Representative, and complete them by the Intended Completion Date.
 - 4.2 The ruling language of the Contract shall be English language and the law governing the Contract shall be the law of the Republic of Kenya.
4. Safety, Temporary works and Discoveries
 - 5.1 The Contractor shall be responsible for design of temporary works and shall obtain approval of third parties to the design of the temporary works where required.
 - 5.2 The Contractor shall be responsible for the safety of all activities on the Site.
 - 5.3 Any thing of historical or other interest or significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Employer's Representative of such discoveries and carry out the Employer's Representative's instructions for dealing with them.
6. Work Programme and Sub-contracting
 - 6.1 Within seven days after Site possession date, the Contractor shall submit to the Employer's Representative for approval a programme showing the general methods, arrangements, order and timing for all the activities in the Works.
 - 6.2 The Contractor may sub-contract the Works (but only to a maximum of 25 percent of the Contract Price) with the approval of the Employer's Representative. However, he shall not assign the Contract without the approval of the Employer in writing. Sub-contracting shall not alter the Contractor's obligations.
7. The site
 - 7.1 The Employer shall give possession of all parts of the Site to the Contractor.
 - 7.2 The Contractor shall allow the Employer's Representative and any other person authorized by the Employer's Representative, access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
8. Instructions
 - 8.1 The Contractor shall carry out all instructions of the Employer's Representative which are in accordance with the Contract.
9. Extension of Completion Date
 - 9.1 The Employer's Representative shall extend the Completion Date if an occurrence arises which makes it impossible for completion to be achieved by the Intended Completion Date. The Employer's Representative shall decide whether and by how much to extend the Completion Date.
 - 9.2 For the purposes of this Clause, the following occurrences shall be valid for consideration:

Delay by:-

 - (a) *force majeure*, or
 - (b) reason of any exceptionally adverse weather conditions, or

- (c) reason of civil commotion, strike or lockout affecting any of the trades employed upon the Works or any of the trades engaged in the preparation, manufacture or transportation of any of the goods or materials required for the Works, or
- (d) reason of the Employer's Representative's instructions issued under these Conditions, or
- (e) reason of the contractor not having received in due time necessary instructions, drawings, details or levels from the Employer's Representative for which he specifically applied in writing on a date which having regard to the date for Completion stated in the appendix to these Conditions or to any extension of time then fixed under this Clause was neither unreasonably distant from nor unreasonably close to the date on which it was necessary for him to receive the same, or
- (f) delay on the part of artists, tradesmen or others engaged by the Employer in executing work not forming part of this Contract, or
- (g) reason of delay by statutory or other services providers or similar bodies engaged directly by the Employer, or
- (h) reason of opening up for inspection of any Work covered up or of the testing or any of the Work, materials or goods in accordance with these conditions unless the inspection or test showed that the Work, materials or goods were not in accordance with this Contract, or
- (i) reason of delay in appointing a replacement Employer's Representative, or
- (j) reason of delay caused by the late supply of goods or materials or in executing Work for which the Employer or his agents are contractually obliged to supply or to execute as the case may be, or
- (k) delay in receiving possession of or access to the Site.

10. Management Meetings

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

11. Defects

- 11.1 The Employer's Representative shall inspect the Contractor's work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities. The Employer's Representative may instruct the Contractor to search for a defect and to uncover and test any Work that the Employer's Representative considers may have a defect. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However, if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.
- 11.2 The Employer's Representative shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the Appendix to Conditions of Contract.
- 11.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Employer's Representative's notice. If the Contractor has not corrected a defect within the time specified in the Employer's Representative's notice, the Employer's Representative will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

12. Bills of Quantities/Schedule of Rates

- 12.1 The Bills of Quantities/Schedule of Rates shall contain items for the construction, installation, testing and commissioning of the Work to be done by the Contractor. The Contractor will be paid for the quantity of the Work done at the rates in the Bills of Quantities/Schedule of Rates for each item. Items against which no rate is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the rates for other items in the Bills of Quantities/Schedule of Rates.
- 12.2 Where Bills of Quantities do not form part of the Contract, the Contract Price shall be a lump sum (which shall be deemed to have been based on the rates in the Schedule of Rates forming part of the tender) and shall be subject to re-measurement after each stage.

13. Variations

- 13.1 The Contractor shall provide the Employer's Representative with a quotation for carrying out the variations when requested to do so. The Employer's Representative shall assess the quotation and shall obtain the necessary authority from the Employer before the variation is ordered.
- 13.2 If the Work in the variation corresponds with an item description in the Bill of Quantities/Schedule of Rates, the rate in the Bill of Quantities/Schedule of Rates shall be used to calculate the value of the variation. If the nature of the Work in the variation does not correspond with items in the Bill of Quantities/Schedule of Rates, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 13.3 If the Contractor's quotation is unreasonable, the Employer's Representative may order the variation and make a change to the Contract Price, which shall be based on the Employer's Representative's own forecast of the effects of the variation on the Contractor's costs.

14. Payment Certificates and Final Account

- 14.1 The Contractor shall be paid after each of the following stages of Work listed here below (subject to re-measurement by the Employer's Representative of the Work done in each stage before payment is made). In case of lump-sum Contracts, the valuation for each stage shall be based on the quantities so obtained in the re-measurement and the rates in the Schedule of Rates.
- (i) Advance payment "it may be granted subject to PPADA Act 2015 " (*percent of Contract Price, after Contract execution to be inserted by the Employer*).
 - (ii) First stage (*define stage*) *AS PER PROGRESS*
 - (iii) Second stage (*define stage*) *AS PER PROGRESS*
 - (iv) Third stage (*define stage*) *AS PER PROGRESS*
 - (v) After defects liability period.
- 14.2 Upon deciding that Works included in a particular stage are complete, the Contractor shall submit to the Employer's Representative his application for payment. The Employer's Representative shall check, adjust if necessary and certify the amount to be paid to the Contractor within 21 days of receipt of the Contractor's application. The Employer shall pay the Contractor the amounts so certified within 30 days of the date of issue of each Interim Certificate.
- 14.3 The Contractor shall supply the Employer's Representative with a detailed final account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer's Representative shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer's Representative shall issue within 21 days a schedule that states the scope of the corrections or additions that are necessary. If the final account is still unsatisfactory after it has been resubmitted, the Employer's Representative shall decide on the amount payable to the Contractor and issue a Final Payment Certificate. The Employer shall pay the Contractor the amount so certified within 60 days of the issue of the Final Payment Certificate.
- 14.4 If the period laid down for payment to the Contractor upon each of the Employer's Representative's Certificate by the Employer has been exceeded, the Contractor shall be entitled to claim simple interest calculated pro-rata on the basis of the number of days delayed at the Central Bank of Kenya's average base lending rate prevailing on the first day the payment becomes overdue. The Contractor will be required to notify the Employer within 15 days of receipt of delayed payments of his intentions to claim interest.

15. Insurance

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

16. Liquidated Damages

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

17. Completion and Taking Over
- 17.1 Upon deciding that the Work is complete the Contractor shall request the Employer's Representative to issue a Certificate of Completion of the Works, upon deciding that the Work is completed.
- The Employer shall take over the Site and the Works within seven days of the Employer's Representative issuing a Certificate of Completion.
18. Termination
- 18.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These fundamental breaches of Contract shall include, but shall not be limited to, the following:
- (a) the Contractor stops Work for 30 days continuously without reasonable cause or authority from the Employer's Representative;
 - (b) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (c) a payment certified by the Employer's Representative is not paid by the Employer to the Contractor within 30 days after the expiry of the payment periods stated in Sub-Clauses 14.2 and 14.3 here above.
 - (d) the Employer's Representative gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time.
- 18.2 If the Contract is terminated, the Contractor shall stop Work immediately, and leave the Site as soon as reasonably possible. The Employer's Representative shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.
19. Payment Upon Termination
- 19.1 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on Site, plant, equipment and temporary works.
- 19.2 The Contractor shall, during the execution or after the completion of the Works under this Clause, remove from the Site as and when required within such reasonable time as the Employer's Representative may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to him, and in default thereof, the employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor.
- 19.3 Until after completion of the Works under this Clause, the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefor the Employer's Representative shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract, the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.
20. Corrupt Gifts and Payments of Commission
- 20.1 The Contractor shall not:
- (a) Offer or give or agree to give to any person in the service of the Employer any gifts or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract with the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract with the Employer.
 - (b) Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the Laws of Kenya.

21. Settlement of Disputes

- 21.1 Any dispute arising out of the Contract which cannot be amicably settled between the parties shall be referred by either party to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed by the chairman of the Chartered Institute of Arbitrators, Kenya branch, on the request of the applying party.

APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS

Name: Konza Technopolis development Authority.
P.O. Box 30519-00100
NAIROBI

Name of Employer's Representative: Konza Technopolis Development Authority P.O. Box 30519-00100
NAIROBI

The name (and identification number) of the Contract is Proposed Konza Technopolis development Authority.

KOTDA/019/2016-2017

The works consist of supply, delivery, installation, testing and commissioning of 500 KVA and 200 KVA Generator sets installations for the Proposed Konza Technopolis development Authority.

The Start Date shall be as in agreement with the main contractor

The Intended contract period for the whole of the Works shall be as per the letter of acceptance.

The following documents also form part of the Contract; as listed in Clause 2 i.e.

Agreement - The latest agreement and conditions of subcontract for building works by the Kenya Association of Building and Civil Engineering Contractors (KABCEC) signed between the main contractor and the subcontractor.

Letter of acceptance – letter addressed to the main contractor by the project manager instructing the main contractor to enter into the sub contractor agreement with the nominated subcontractor.

Contractors tender – the completed tendering document submitted by the subcontractor to the employer.

Conditions of contract – refers to the conditions of contract in the main works and conditions of subcontract as described in the subcontract agreement (KABCEC).

Specifications – specifications of subcontract works as described in the document.

Bills of Quantities or schedule of Rates (Whichever is applicable) – as described in this document.

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

The Site Possession Date shall be as per the letter of acceptance.

Clause 7

The Site is located within Konza City.

Amount of Tender Security is Kshs. 200,000.00

Clause 1 & 11

The Defects Liability Period is 12 Months.

The name and Address of the Employer's representative for the purposes of submission of tenders is Konza Technopolis Development Authority P.O. Box 30519-00100 NAIROBI

The tender opening date and time is as stated in the invitation to tender.

The amount of performance security is 5% percent Bank Guarantee of the Contract Price.

Period of final measurement..... 3 months from practical completion

PART II

SUB-CONTRACT AGREEMENT (KABCEC)

**AGREEMENT AND CONDITIONS
OF SUB-CONTRACT FOR
BUILDING WORKS**



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and
The Architectural Association of Kenya

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ORIGINAL
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COUNTERPART
embossed stamp

10. AGREEMENT

1.1 This agreement is made on

between

of (or whose registered office is situated at)

.....

(hereinafter called "the Contractor") of the one part

and

of (or whole registered office is situated at)

.....

(hereinafter called "the Sub-Contractor") of the other part:

1.2 SUPPLEMENTAL to an agreement(hereinafter referred to as the "the main contract")

made on

Between

.....
(hereinafter called "the Employer") of the one part and the Contractor of the other part based on the Agreement and Conditions of Contract for Building Works, published by the Joint Building Council, Kenya edition.

1.3 WHEREAS the contractor is desirous of sub-letting to the Sub-Contractor

.....

.....

.....

hereinafter called "the sub-contractor works" at.....
on Land Reference No.....being part of the main contract works.

1.4 And whereas the Su-Contractor has supplied the Contractor with a priced copy of the bills of quantities (hereinafter referred to as "the sub-contractor bills"), where applicable, which together with the drawings numbered.....

.....
(hereinafter referred to as "the sub-contract drawings), the specifications and the conditions of sub-contract have been signed by or on behalf of the parties thereto.

And whereas the Sub-Contractor has had reasonable opportunity of inspecting the main contract or a copy thereof except the detailed prices of the Contractor included in the bills of quantities or schedule of rates.

1.5 And whereas the Architect, with the approval of the Employer, has nominated the Sub-Contractor to carry out the works described at clause 1.3 herein:

NOW IT IS HEREBY AGREED AS FOLLOWS:

- 1.6 For the consideration herein stated, the Sub-Contractor shall upon and subject to the conditions annexed hereto carry out and complete the sub-contract works shown upon the sub-contract drawings and described by or referred to in the sub-contract bills, specifications and in the said conditions.
- 1.7 The Contractor shall pay the Sub-Contractor the sum of the Kshs (in words).....
.....
.....Kshs.....)
(hereinafter referred to as "the sub-contractor price") or such sum as shall become payable hereinafter at the time and in manner specified in the said conditions.
- 1.8 The term 'Architect', 'Quantity Surveyor' and 'Engineer', where applicable, shall refer to the persons appointed by the Employer to administer the sub-contract in accordance with the main contract agreement. Where applicable, reference to the Architect shall be deemed to include reference to the Engineer
- 1.9 In the even of the need to appoint a replacement Architect, Quantity Surveyor, Engineer or other specialist (whether named in this agreement or not) the Employer shall make such appointment as soon as practicable after the need for such appointment arises and shall communicate the appointment to the Sub-Contract through the Contractor.
- 1.10 Where the sub-contract does not incorporate bills of quantities, the term "sub-contract bills" and "bills of quantities" wherever appearing shall be deemed deleted and replaced with the term "schedule of rates" as applicable.
- 1.11 The terms defined in clause 1.0 of the main contract shall have the same meaning in this sub-contract as that assigned to them therein.

1.12 AS WITNESS the hands of the said parties;

Signed by the said
.....(Contractor)

In the presence of
Name
Address

Signed by the said
.....(Sub-Contractor)

In the presence of
Name
Address

CONDITIONS OF SUB-CONTRACT

2.0 GENERAL OBLIGATIONS OF THE CONTRACTOR

The Contractor shall:

- 2.1 Timeously obtain from the Architect on behalf of the Sub-Contractor all drawings, necessary details, instructions and other information required by the Sub-Contractor for the proper carrying out of the sub-contract works.
- 2.2 Provide all such facilities and attend upon the Sub-Contractor as required and as provided in the specifications, bills of quantities and these conditions to the extent compatible with the provisions of the main contract
- 2.3 Observe, perform and comply with all the provisions of the main contract and of this sub-contract on the part of the Contractor to be observed, performed and complied with to ensure satisfactory completion of the sub-contract works.

3.0 GENERAL OBLIGATIONS OF THE SUB-CONTRACTOR

- 3.1 The Sub-Contractor shall be deemed to have notice of all the provisions of the main contract except the detailed prices of the Contractor included in the bills of quantities or in the schedule of rates.
- 3.2 The Sub-Contractor shall carry out and complete the sub-contract works in accordance with this sub-contract and in all respects to the reasonable satisfaction of the Contractor and of the Architect and in conformity with all reasonable directions and requirements of the Contractor regulating the due carrying out of the contract works.
- 3.3 The Sub-Contractor shall observe, perform and comply with all the provisions of the main contract on the part of the Sub-Contractor to be observed, performed and complied with so far as they relate and apply to the sub-contract works or any portion thereof and are not inconsistent with the expressions of this sub-contract as if all the same were set out herein.
- 3.4 Without prejudice to the generality of the foregoing requirements, the Sub-Contractor shall especially observe perform and comply with the provisions of clauses 9.0, 18.0, 19.0 22.0, 30.0, 31.0, 34.0 and 36.0 of the main contract as they apply to the sub-contract works

4.0 SUB-CONTRACT DOCUMENTS

- 4.1 The sub-contract documents for use in the carrying out of the sub-contract works shall be:-
 - 4.1.1 The agreement and these conditions
 - 4.1.2 The sub-contract drawings as listed in the agreement
 - 4.1.3 The sub-contract bill of quantities or schedule of rates as applicable
 - 4.1.4 The specifications as separately supplied or as contained in the sub-contract bills.
- 4.2 Upon the execution of the sub-contract, the Contractor shall register the agreement with the relevant statutory authority and pay all fees, charges, taxes, duties and all costs arising therefrom.
- 4.3 The manner of supplying contract documents, their custody, display on site and their interpretation in the event of discrepancies shall be as provided in the main contract in respect of the main contract documents with the necessary amendments made to refer to the sub-contract.

5.0 GENERAL LIABILITY OF THE SUB-CONTRACTOR

- 5.1 The Sub-Contractor shall be liable for and shall indemnify the Contractor against and from:
 - 5.1.1 Any breach, non-observance or non-performance by the Sub-Contractor, his servants or agents of any of the said provisions of the main contract and of this sub-contract.
 - 5.1.2 Any act or omission of the Sub-Contractor, his servants or agents which involve the Contractor in any liability to the Employer under the main contract
 - 5.1.3 Any claim, damage, loss or expense due to or resulting from any negligence or breach of duty on the part of the Sub-Contractor, his servants or agents.
 - 5.1.4 Any loss or damage resulting from any claim under any statute or common law by an employee of the Sub-Contractor in respect of personal injury or death arising out of or in the course of his employment.
- 5.2 Provided that nothing contained in this sub-contract shall impose any liability on the Sub-Contractor in respect of any negligence or breach of duty on the part of the Employer, the Contractor, other sub-contractors or their respective servants or agents nor create any privity of contract between the Sub-Contractor and the Employer or any other sub-contractor.

6.0 INSURANCE AGAINST INJURY TO PERSONS AND PROPERTY

- 6.1 Without prejudice to his liability to indemnify the Contractor under clause 5.0 above, the Sub-Contractor shall maintain:-
- 6.1.1 Such insurances as are necessary to cover the liability of the Sub-Contractor in respect of injury or damage to property including damage to the works arising out of or in the course of or by reason of the carrying out of the sub-contract works except for liability against the contingencies specified at clause 6.3 herein.
 - 6.1.2 The insurances required under sub clause 6.1.1 and 6.1.2 above shall be placed with insurers approved by the Contractor and the Architect.
- 6.2 Notwithstanding the provisions of clause 23.0 of these conditions, the Contractor shall not be obliged to make payments to the Sub-Contractor before the said policies have been provided.
- 6.3 Where clause 13.0 of the main contract applies, the sub-contract works, including materials and goods of the sub-Contractor delivered to the works, shall as regards loss or damage by the contingencies stated at clause 13.0 therein, namely, fire, earthquake, fire following earthquake, lightning, explosion, storm, tempest, flood, bursting or overflowing of water tanks, apparatus or pipes, aircraft and other aerial devices or articles dropped therefrom, riot and civil commotion, be at the sole risk of the contractor. The Contractor shall cover his liability for the works by procuring insurances as required in the said clause.
- 6.4 Where clause 14.0 or 15.0 of the main contract applies, the sub-contract works, including materials and goods of the Sub-Contractor delivered to the works shall, as regards loss or damage by the contingencies stated therein be at the sole risk of the Employer. The Employer shall cover his liability for the works by procuring insurances as required in the said clause.
- 6.5 The Sub-Contractor shall observe and comply with the conditions contained in the policy or policies of insurance of the Contractor or of the Employer, as the case may be, as regards loss or damage which may be caused by the stated contingencies. For this purpose, the Contractor or the Employer as the case may be, shall avail the said policies to the Sub-Contractor for his perusal.
- 6.6 If any loss or damage affecting the sub-contract works or any part thereof or any unfixed goods or materials is occasioned by any one or more of the said contingencies, then,
- 6.6.1 The occurrence of such loss or damage shall be disregarded in computing any amounts payable to the Sub-Contractor under the sub- contract, and
 - 6.6.2 The Sub-Contractor shall, with due diligence, restore the work damaged, replace or repair any unfixed materials or goods which have been destroyed or damaged, remove and dispose of any debris and proceed with the carrying out and completion of the sub-contract works.
 - 6.6.3 The restoration of work damaged the replacement and repair of unfixed materials and goods and the removal of debris shall be deemed to be a variation required by the Architect. Such work shall be paid for in accordance with clause 30.0 of the main contract.

7.0. PERFORMANCE BOND

Before commencing the works, the Sub-Contractor shall provide one surety who must be an established bank or insurance company to the approval of the Contractor and who will be bound to the Contractor in the sum equivalent to seven and a half per cent (7.5%) of the sub-contract price for the due performance of the sub-contract until the certified date of practical completion. Notwithstanding the provisions of clause 23.0 of these conditions, no payments shall be made to the Sub-Contractor before the said bond is provided.

8.0. POSSESSION OF SITE AND COMMENCEMENT OF WORKS

- 8.1. Within the period stated in the appendix to these conditions, the Contractor shall give possession of the site works to the Sub-Contractor and such access as may be necessary to enable the Sub-Contractor to commence and proceed with the sub-contract works in accordance with the sub-contract.
- 8.2. On or before the date for commencement of works stated in the appendix to these conditions, the Sub-Contractor shall commence the carrying out of the sub-contract works and shall proceed regularly and diligently with the same in accordance with the sub-contract programme, the main contract programme and or with the progress of the main contract works and complete on or before the date stated in the appendix to these conditions as the date for practical completion or within any extended time granted under clause 25.0 of these conditions.

9.0. ARCHITECT'S INSTRUCTIONS

- 9.1. The Sub-Contractor shall forthwith comply with all the instructions issued to him by the Architect, either directly or through the Contractor, in regard to any matter in respect of which the Architect is expressly empowered by the main contract conditions to issue instructions.
- 9.2. The manner of complying with or querying the validity of an Architect's instruction shall be as provided in clause 22.0 of the main contract. The Sub-Contractor shall not be obliged to carry out instructions not issued in the manner provided therein.

10.0. VARIATIONS

- 10.1. The term "variation" shall have the meaning assigned to it at clause 30.0 of the main contract.
- 10.1.1. The valuation of variations shall be made by the Quantity Surveyor in accordance with sub-clause 3 of the main contract.
- 10.2. Effect shall be given to the measurement and valuation of variations in interim certificates and by the adjustment of the sub-contract price.

11.0. LIABILITY FOR OWN EQUIPMENT

The construction equipment and other property belonging to or provided by the Sub-Contractor and brought onto the site for carrying out the works shall be at the sole risk of the Sub-Contractor. Any loss or damage to the same or caused by the same shall, except for any loss or damage due to any negligence, omission or default of the Contractor, be at the sole risk of the Sub-Contractor who shall indemnify the Contractor against loss, damage or claims in respect thereof. Insurance against any such loss, damage or claims shall be the sole responsibility of the Sub-Contractor.

12.0. PROVISION OF FACILITIES BY THE CONTRACTOR

Where provided in the main contract, the Contractor shall supply at his own cost all necessary water, lighting, electric power, telephones and security required for the sub-contract works. Where not so provided, the Sub-Contractor shall provide the said services at his own cost. Except as otherwise provided in the main contract, the Sub-Contractor shall construct at his own expense all necessary workshops, stores, offices, workers' accommodation and other temporary buildings required for the carrying out of the works at such places on site as the Contractor shall identify. The Contractor undertakes to give the sub-Contractor the required space and all reasonable facilities for such construction. Upon practical completion of the works, the Sub-contractor shall remove the said facilities and reinstate disturbed surface to the satisfaction of the Contractor.

- 12.3 The Contractor shall provide, without charge, general attendance to the Sub-Contractor to facilitate the carrying out of the works which attendance shall include facilities for access to and movement within the site and sections or parts of the building or buildings where the sub-contract works are being carried out, the use of temporary roads, paths and access ways, sanitary and welfare facilities.
- 12.4 The Contractor shall permit the Sub-Contractor to use, without charge, at all reasonable times, any scaffolding and hoisting equipment belonging to or provided by the Contractor while it remains so erected upon the site. The use by the Sub-Contractor of any other equipment, facilities or services provided by the Contractor for the works shall be subject to private arrangements between the parties hereto and shall not be regulated by these conditions.
- 12.5 Provided that such use of the scaffolding and hoisting equipment shall be on the express condition that no warranty or other liability on the part of the Contractor shall be created or implied in regard to fitness, condition or suitability for the intended purpose except that the Sub-Contractor shall be liable for any damage caused thereto or thereby.
- 12.6 Where required, the Contractor shall provide the facilities, equipment and the like and carry out any necessary builder's works within a reasonable time of the request by the Sub-Contractor to enable timely performance of the sub-contract.

13.0 LIABILITY FOR OWN WORK

13.1 The Contractor and the Sub-Contractor shall be liable for the due carrying out of their respective works in accordance with their respective contracts without causing damage or injury to the works of the other sub-contractors, and in particular:

13.2 Should the carrying out of the sub-contract works cause injury or damage to the main contract works, or to the work of the other sub-contractors, the Sub-contractor shall rectify the damage so caused at his own cost.

13.3 Should the carrying out of the main contract works cause damage or injury to the sub-contract works, the Contractor shall rectify the damage at his own cost.

14.0 CO-OPERATION IN USE OF FACILITIES

14.1 The Contractor and the Sub-Contractor undertake to co-operate with each other and co-ordinate work arrangements and procedures required in carrying preventing interference, disruption or disturbance to the progress of the works or to the activities of other sub-contractors.

14.2 The Contractor and the Sub-Contractor undertake not to wrongfully use or interfere with equipment, scaffolding, appliances, ways, temporary works, temporary buildings and other property belonging to or provided by the other part or by other sub-contractors.

14.3 Provided that nothing contained in this clause shall prejudice or limit the rights of the Contractor or of the sub-Contractor in carrying out their respective statutory and or contractual duties under this sub-contract or under the main contract.

15.0 ASSIGNMENT AND SUBLETTING

15.1 Neither the Contractor nor the Sub-Contractor shall, without the written consent of the other and the Employer, assign this sub-contract.

15.2 The Sub-Contractor shall not sub-let the whole of the works without the written consent of the Contractor and the Architect.

15.3 Provided that any assignment and any sub-contracts as well as this sub-contract shall terminate immediately upon (for whatever reason) of the main contract.

16.0 WORK PRIOR TO APPOINTMENT OF CONTRACTOR

16.1 Where the Sub-Contractor is appointed before the Contractor is appointed, any work done by the Sub-Contractor prior to the said appointment shall be treated as a separate contract between the Employer and the Sub-Contractor and shall be valued by the Quantity Surveyor and paid for directly by the Employer without the involvement of the Contractor.

16.2 Where the Sub-Contractor is appointed before the Contractor is appointed, the Sub-Contractor shall be permitted, when the identity of the Contractor is known and within 30 days thereof, to raise objections (on reasonable grounds) against entering into a sub-contract with the Contractor

16.3 Where work which is outside the sub-contract is ordered directly by Employer or the Architect, that work shall be treated as a separate contract between the Sub-Contractor and the Employer and shall be valued and paid for directly to the Sub-Contractor in accordance with sub-clause 16.1 herein without the involvement of the Contractor. The cost of equipment, facilities and the like provided by the Contractor to the Sub-contractor and any builder's work carried out by the Contractor with regard to such work shall be paid directly by the Sub-Contractor to the Contractor.

17.0 SUB-CONTRACTOR DESIGN

Where the sub-contract includes a design component by the Sub-Contractor, the design shall be to the approval of the Architect and the Employer. Notwithstanding and approvals, the Sub-Contractor shall be liable directly to the Employer for any consequences of failure of the design to comply with the requirements of the Employer or to be fit or suitable for the purposes for which the sub-contract works or the relevant part thereof were intended.

18.0 SPECIFICATION OF GOODS, MATERIALS AND WORKMANSHIP

18.1 All materials, goods and workmanship shall, so far as procurable, be of the respective kinds and standards described in the sub-contract bills, specifications and drawings.

18.2 The provisions of clause 23.0 of the main contract regulating the procurement, specification and quality assurance of materials, processes and workmanship and the requirements of clause 24.0 therein dealing with the provision of samples and the carrying out of specified tests shall apply to the sub-contract in the same manner as they apply to the main contract.

19.0 COMPLIANCE WITH STATUTORY AND OTHER REGULATIONS

The Sub-Contract shall comply with all statutory and other regulations of competent authorities regulating the carrying out of the works in accordance with the provisions of clause 17.0 of the main contract, as applicable.

20.0 ROYALTIES AND PATENT RIGHTS

20.1 All royalties or other sums payable in respect of the supply and use of any patented articles, processes or inventions in carrying out the works as described by or referred to in the sub-contract bills, specifications or drawings shall be deemed to have been included in the sub-contract price.

20.2 The provision of clause 25.0 of the main contract dealing with the same shall apply to the sub-contract in the same manner as they apply to the main contract.

21.0 ANTIQUITIES AND OTHER OBJECTS OF VALUE

All fossils, antiquities and other objects of interest or value which may be found on the site or in excavating the same during the progress of the sub-contract shall be dealt with in accordance with the provisions of clause 44.0 of the main contract.

22.0 SUSPENSION OF WORKS

22.1 An instruction by the Architect to postpone or suspend the works under clause 28.0 of the main contract shall have the same effect on the sub-contract works as it has on the main contract works.

22.2 If the suspension arises due to default by the contractor and the sub-contract works are adversely effected by the suspension, the sub-contractor shall be entitled to reimbursement by the contractor of all expenses arising therefrom.

22.3 If the suspension arises due to default by the sub-contractor, the sub-contractor shall be liable to the contractor for all expenses arising therefrom.

22.4 A notice by the contractor to suspend the works under clause 29.0 of the main contract shall have the same effect on the sub-contract works as it has on the main contract works.

22.5 Should the sub-contract works be adversely affected by suspension under clause 29.0 of the main contract, the sub-contractor shall be entitled to the remedies provided for at clauses 25.0 and 26.0 of this sub-contract.

23.0 PAYMENTS

23.1 Procedures for originating and processing applications for payments and payment certificates as regards the sub-contract works shall be the same as those prescribed for the Contractor in the main contract at clause 34.0. All references therein to the contractor shall be deemed to include references to the Sub-contractor.

23.2 Before submitting an application for payment to the Quantity Surveyor in accordance with clause 34.1 of the main contract, the Contractor shall give the Sub-Contractor a notice of not less than 7 days to submit the details of the amounts which the Sub-Contractor considers himself entitled to for the relevant period. Such details, when received, shall be annexed to the said Contractor's application.

23.3 Where it is necessary to measure the sub-contract works for purpose of interim valuation or for the preparation of the final account, the Quantity Surveyor shall give the Sub-Contractor a reasonable opportunity to be present at the time of the measurements and to take notes and measurements as he may require.

23.4 Neither the Quantity Surveyor nor the Architect shall be bound to issue a valuation or a payment certificate in respect of the sub-contract works, as the case may be, whose value is less than the amount stated in the appendix to these conditions as the minimum amount of a payment certificate before the issue of the certificate of practical completion of the main contract or of the sub-contract, as applicable.

23.5 Provided that where the minimum amount of a certificate inserted in the appendix to these conditions has been achieved but the corresponding minimum inserted in the appendix to the main contract in respect of the Contractor's work has not been achieved, or the Contractor has not applied for payment within the stated period, the Architect may with the consent of the Contractor, issue a payment certificate directly to the Sub-Contractor for payment by the Employer.

23.6 Within 7 days of receipt by the Contractor of payment by the Employer, the Contractor shall notify and pay to the Sub-Contractor the total value certified therein in respect of the sub-contract works less the portion of the retention money attributable to the sub-contract works and less amounts previously paid to the Sub-Contractor.

23.7 Where certificates are not paid by the Employer within the prescribed period, the Sub-Contractor shall be entitled to be paid by the Contractor, upon receipt of payment from the Employer, the interest certified for the delay in accordance with sub-clause 34.6 of the main contract in respect of the portion of the sub-contract works included in the certificate.

23.8 Where the Contractor has received payment from the Employer but has not released the appropriate amount to the Sub-Contractor within the stated period, the Contractor shall pay to the Sub-Contractor in addition to the amount not paid, simple interest on the unpaid amount for the period it remains unpaid at the commercial bank lending rate in force during the period of default.

23.9 If, upon application by the Sub-Contractor and Architect agree, or if the Contractor fails to make payment to the Sub-Contractor in accordance with sub-clause 23.6 herein and continues such default for 14 days thereafter, the Architect may issue a payment certificate directly to the Sub-Contractor for payment by the Employer, where applicable, and deduct the amount from subsequent payment to the Contractor.

23.10 Upon the issue of the certificate of practical completion and the release of one half of the total amount of the retention of money to the Contractor, the Contractor shall pay the portion attributable to the sub-contract to the Sub-Contractor within 7 days of receipt of the payment.

23.11 Upon the issue of the certificate of rectification of defects and receipt of the balance of the retention money by the Contractor, the Contractor shall pay the balance of the portion of the retention money attributable to the sub-contract to the Sub-Contractor within 7 days of receipt of the payment.

23.12 The sub-contract final account shall be agreed between the Sub-Contractor, the Contractor, the Quantity Surveyor and the Architect and shall be annexed to the Contractor's final accounts which shall be agreed as provided for in the main contract. For purpose of finalizing the accounts, the Quantity Surveyor may request the Sub-Contractor to submit further documents as he may deem necessary.

23.13 The final certificate issued under sub-clause 34.21 of the main contract shall be final and binding on the Sub-Contractor in the same manner it is binding on the Contractor.

23.14 If the Architect desires to secure final payment to the Sub-Contractor before final payment is due to the Contractor, the provisions of sub-clause 31.10 of the main contract shall apply.

23.15 The Contractor shall be entitled to deduct from or set off against any money due from him to the Sub-Contractor in interim certificates any sum or sums which the Sub-Contractor is liable to pay to the Contractor arising under or in connection with the sub-contract.

24.0 PRACTICAL COMPLETION AND DEFECTS LIABILITY

24.1 The Sub-Contractor shall proceed with the works regularly and diligently and complete the same within the period stated in the appendix to this sub-contract or within such extended period as may be granted under clause 25.0 of this sub-contract

24.2 Where the sub-contract works are to be completed in sections or where the sub-contract works are to be completed in advance of the main contract works, the provisions of clause 42.0 of the main contract shall apply, as appropriate, to the sub-contractor in the same manner as they apply to the main contract.

24.3 The procedures for certifying practical completion and for dealing with defects in the sub-contract works as well as the main contract works are as prescribed at clause 41.0 of the main contract. Upon the issue of the certificate of practical completion of the whole of the works or of the sub-contract works, as applicable, the Sub-contractor shall be entitled to release of one half of the retention money attributable to the sub-contract works within 7 days after the Contractor has received payment.

24.4 The balance of the retention money shall be released to the Sub-Contractor after the defects appearing in the works have been rectified in accordance with sub-clause 41.6 and 41.7 of the main contract and after the Contractor has received the said payment as provided for in sub-clause 34.16.3 of the main contract.

25.0 EXTENSION OF TIME

25.1 Upon it becoming reasonably apparent that the progress of the sub-contract works is or will be delayed, the Sub-Contractor shall forthwith give written notice of the cause of the delay to the Contractor and to the Architect with supporting details showing the extent of delay caused or likely to be caused. Thereafter, the Architect shall evaluate the information supplied by the Sub-Contractor and if in his opinion the completion of the works is likely to be or has been delayed beyond the date for practical

completion stated in the appendix to these conditions or beyond any extended time previously fixed under this clause, by any of the reasons entitling the Contractor to extension of time under sub-clause 36.1 of the main contract, then the Architect shall, so soon as he is able estimate the length of the delay beyond the date or time aforesaid, recommend to the Contractor a fair and reasonable extension of time to be granted for the completion of the sub-contract works.

25.2 Thereupon, the Contractor shall grant in writing to the Sub-Contractor the recommended time. Provided that the Contractor shall not grant any extension of time to the Sub-Contractor without the written recommendation of the Architect. And provided that the Sub-Contractor shall constantly use his best endeavors to prevent delay and shall do all that may be reasonably required to proceed with the works.

25.3 The procedures for dealing with requests for extension of time and the observance of time limits prescribed at clause 36.0 of the main contract shall apply to the sub-contract in the same manner as they apply to the main contract.

26.0 LOSS AND EXPENSE CAUSED BY DISTURBANCE OF REGULAR PROGRESS

26.1 If upon written application being made by the Sub-Contractor to the Contractor and to the Architect, the Architect is of the opinion that the Sub-Contractor has been involved in direct loss and or expense, for which he would not be reimbursed by a payment made under any other provision in this sub-contract, by reasons of the regular progress of the sub-contract works or any part thereof having been materially affected by any of the reasons which would entitle the Contractor to reimbursement under clause 37.0 of the main contract, the Quantity Surveyor shall assess the amount of such loss and or expense.

26.2 Any amount so assessed shall be added to the sub-contract price and if an interim certificate is issued after the date of assessment, any such amount shall be added to the amount which would otherwise be stated as due in such certificate as regards the Sub-Contractor's entitlement.

26.3 The procedures for dealing with loss and or expense claims prescribed at clause 37.0 of the main contract shall apply to the sub-contract in the same manner as they apply to the main contract, as appropriate.

27.0 DAMAGES FOR DELAY IN COMPLETION

27.1 If the Sub-Contractor fails to complete the sub-contract works by the date for practical completion stated in the appendix to these conditions or within any extended time fixed under clause 25.0 herein, and the Architect certifies in writing that in his opinion the same ought reasonably so to have been completed, then the Sub-Contractor shall pay or allow to the Contractor a sum calculated at the rate stated in the said appendix as liquidated damages for the period during which the works shall so remain or have remained incomplete.

27.2 The Contractor may deduct such sum from any money due or to become due to the Sub-Contractor under the sub-contract or recover the same from the Sub-Contractor as a debt. Provided that the Contractor shall not be entitled to recover any liquidated damages from the Sub-Contractor without first obtaining the Architect's certificate of delay prescribed herein.

28.0 FLUCTUATIONS

28.1 Unless otherwise stated in the sub-contract bills or specifications, the sub-contract price shall be deemed to have been calculated to include all duties and taxes imposed by statutory and other competent authorities in the country where the works are being carried out, and

28.2 The sub-contract price shall be deemed to be based on currency exchange rates current at the date of tender as regards materials or goods to be specifically imported for permanent incorporation in the works.

28.3 Should duties, taxes and exchange rates vary during the period of the contract, compensation thereof shall be calculated in accordance with sub-clause 35.1 and 35.2 of the main contract.

28.4 Compensation for change in prices of goods and materials incorporated in the works and in the rates of wages provided for at sub-clause 35.3,35.4 and 35.5 of the main contract shall not apply to the sub-contract unless specifically provided for in the bill of quantities or specifications.

29.0 TERMINATION OF MAIN CONTRACT

29.1 If, for any reason, the contractor's employment is terminated either under clause 38.0, 39.0 or 40.0 of the main contract, this sub-contract shall thereupon also terminate.

29.2 Upon termination, the sub-contractor shall cease all work and vacate the site. He shall not remove any equipment or any materials brought onto the site for the carrying out of the works without the written approval of the contractor and the Architect

29.3 Where the termination of the main contract occurs without the default of the sub-contractor, the sub-contractor shall be paid by the contractor for work done in the like manner as the Contractor is paid at clause 39.5 of the main contract.

29.4 Where the termination of main contract arises from the default by the sub-contractor, the adjustment of the sub-contract accounts shall be performed in the like manner as is provided at sub-clause 38.8 of the main contract regarding the main contract accounts.

30.0 TERMINATION OF SUB-CONTRACT.

30.1 Without prejudice to any other rights and remedies which the contractor may possess, if the sub-contractor shall make default in any one or more of the respects which would entitle the employer to terminate the main contract under clause 38.0 therein, the contractor shall give the sub-contractor a notice, with a copy to the Architect and to the employer by registered post of recorded delivery specifying the default. Should the sub-contractor continue the default for 14 days after receipt of such notice or at any time thereafter repeat such default and should the Architect certify that the sub-contractor is in default, the contractor may terminate the Sub-contract forthwith after the expiry of the notice provided that the notice is not given unreasonably or vexatiously. The termination letter shall be copied to the Architect and to the Employer.

30.2 Where the sub-contract is terminated due to the default of the sub-contractor as in sub-clause ,

30.3

30.1 herein, the adjustment of sub-contract accounts shall be performed in the like manner as is provided at sub-clause 38.8 of the main contract regarding the main contract accounts.

30.3 Without prejudice to any other rights and remedies which the Sub-Contractor may possess, if the Contractor shall make default in one or more of the respects which, if committed by the Employer, would entitle the contractor to terminate the main contract under clause 39.0 therein, the Sub-Contractor shall give the Contractor a notice, with a copy to the Architect and to the Employer, by registered post or recorded delivery specifying the default. Should the contractor continue the default for 14 days after receipt of such notice or at any time thereafter repeat such default, and should the Architect certify that the contractor is in default, the Sub-Contractor may terminate the sub-contract forthwith after expiry of the notice, provided that the notice is not given unreasonably or vexatiously. The termination letter shall be copied to the Architect and to the Employer.

30.4 If the Sub-Contract is terminated due to the default of the Contractor as in sub-clause 30.3 herein, the Contractor shall pay the sub-contractor for work done in the like manner as the Contractor would be paid at sub-clause 39.5 of the main contract where the termination is done by the Contractor.

30.5 Where the sub-contract is terminated due to the default of the Contractor, all expenses arising from the termination shall be done wholly by the Contractor and the termination shall not create any liability on the Employer.

30.6 Where the sub-contract is terminated due to the default of the Sub-Contractor, the sub-contractor shall be liable to the contractor for all expenses arising therefrom.

31.0 SETTLEMENT OF DISPUTES

31.1 In case any dispute or difference shall arise between the Contractor and Sub-Contractor, either during the progress or after the completion or abandonment of the sub-contract 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 30 days of the notice.

31.2 The dispute shall be referred to the arbitration and final decision of a person to be agreed by the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointment by the Chairman or Vice Chairman of the Architectural Association of Kenya or the Chairman or Vice Chairman of The Chartered Institute of Arbitrators, Kenya Branch, at the request of the applying party.

31.3 The arbitration may be on the construction of this sub-contract or on any matter or thing of whatsoever nature arising thereunder or in connection therewith including the rights and liabilities of the parties during the currency of the sub-contract and subsequent to the termination of the sub-contract.

31.4 Where the sub-contractor is aggrieved by the manner in which the Architect has exercised or failed to exercise his powers stipulated in the main contract, or in the sub-contract or by any action or inaction of the Employer, and in particular, if he is aggrieved by:

- 31.4.1 The failure or refusal of the Architect to recommend to the contractor an extension of sub-contract time, or
- 31.4.2 The extend of the recommended time, or
- 31.4.3. The amount certified to the sub-contractor either in an interim in a final certificate, or
- 31.4.4 The issue of an instruction which the sub-contractor contends is not authorised by the main contract or the sub-contract, or
- 31.4.5. Any other matter left to the discretion of the Architect in the main contract or in the sub-contract, then.

31.5 Subject to the Sub-Contractor giving the Contractor such indemnity and security as the Contractor may reasonably require, the Contractor shall allow the Sub-Contractor to use the contractor's name and, if necessary, shall join the Sub-Contractor in arbitration proceeding against the employer to decide the matters in dispute or in difference.

31.6 Provided that no arbitration proceedings shall be commenced on any dispute or difference where notice of a dispute or difference where notice of a dispute or difference has not been given by the applying party within 90 days of the occurrence or discovery of the matter or issue giving rise to the dispute or difference.

31.7 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.

31.8 In any event, no arbitration shall commence earlier than 90 days after the service of the notice of a dispute or difference, except as provided for at sub-clause 31.9 herein.

31.9 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 sub-contract without having to comply with sub clause 31.8 herein.

31.9.1 Whether or not the issue of an instruction by the Architect is authorized by the main contract or these conditions, and Whether or not a payment certificate has been improperly withheld or is not in accordance with the main contract or these conditions or though issued, it has not been honoured.

31.10 All other matters in dispute shall only be referred to arbitration after the practical completion or alleged practical completion of the works or abandonment of the works or termination or alleged termination of the sub-contract, unless the Architect the contractor and the sub-contractor agree otherwise in writing.

31.11 The Arbitrator shall, without prejudice to the generality of his powers, have power 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 or included in any payment certificate.

31.12 The Arbitrator shall, without prejudice to the generality of his powers, have power 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.

31.13 Provided that any decision of the Architect which is final and binding on the contractor under the main contract shall be final and binding between the contractor and the sub-contractor.

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

SUB CONTRACTOR'S PERFORMANCE BOND

BY THIS AGREEMENT we(SURETY)

of

are bound to(CONTRACTOR)

in the sum of Kenya shillings

.....(Kshs.)

to be paid by us to the said(CONTRACTOR)

WHEREAS by an agreement in writing dated

.....(SUB-CONTRACTOR)

entered into a sub-contract with(CONTRACTOR)

to carry out and complete the works therein stated in the manner and by the time therein

specified all in accordance with he provisions of the said sub-contract, namely:

(description of works)

.....

NOW the condition of the above written bond is such that if the said sub-contractor, his executors, administrator, successors or assigns shall duly perform his obligations under the sub-contract, of if on default by the sub-contractor the surety shall satisfy and discharge the damages sustained by the contractor thereby up to the amount of the above written bond, then this obligation shall be void, otherwise it shall remain in full force and effect. Upon default, and without prejudice to his other rights under the sub-contract, the contractor shall be entitled to demand forfeiture of the bond and we undertake to honour the demand in the amount stated above.

PROVIDED always and it is hereby agreed and declared that no alteration in the terms of the said sub-contract or in the extend or nature of the works to be carried out and no extension of time by the contractor under the sub-contract shall in any way release the surety from any liability under the above written bond.

IN WITNESS whereof we have set out hand this..... day of

.....

.....

Surety

Witness

Authorized by Power of Attorney No

APPENDIX	Clause
Name of sub-contractor's insurers	6.0
Name of sub-contractor's surety	7.0
Amount of surety	7.0
Period of possession of site	8.1
Date of commencement of works	8.2
Date for practical completion	8.2
Interval for application of payment certificates	23.1
Minimum amount of payment certificate	23.4
Percentage of certified value retained	23.6
Limit of retention fund, if any	23.6
Name of the sub-contractor's bank for purposes of interest calculation.	23.7,23.8
Defects liability period	23.11
Period of final measurement and valuation	23.12
Damages of delay in completion	27.1 at the rate of Kshs

Signed by the said:

.....

CONTRACTOR

.....

SUB-CONTRACTOR

APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS

Name: Konza Technopolis Development Authority.
P.O. Box 30519-00100
NAIROBI

The name (and identification number) of the Contract is The Proposed Konza Office Block

KOTDA/019T/2016-2017

The works consist of supply, delivery, installation, testing and commissioning of 500 & 200 KVA Generator Set for the Proposed for the Proposed KoTDA Complex Development Offices.

The Start Date shall be as agreed with the project manager

The Intended contract period for the whole of the Works shall be 120 weeks from the date of commencement

The following documents also form part of the Contract: (Only as listed in Clause 2)

The Site Possession Date shall be as stated in the letter of acceptance.

The Sites is located in Konza City

The Defects Liability Period is 180 days

Amount of Tender Security is Kshs. 200,000.00

The name and Address of the Employer's representative for the purposes of submission of tenders is Konza Technopolis Development Authority, P.O. Box 30519-00100, NAIROBI

Clause 16

Liquidated and Ascertained damages: At the rate of Kshs. 10,000.00 per week or part thereof

Prime cost sums for which the: Nil
Contractor desires to tender

Clause 14.1

Period of interim certificate: Monthly

Clause 14.2

Period of honouring certificate: 45 days

Clause 26.1 (Main Contractor's Conditions)

Percentage of certified value retained: 10%

Clause 32.1 (Main Contractor's Conditions)

Limit of retention fund: 5%

Note: Clauses 26.1 and 32.1 mentioned above are in the Main Contractor's Document.

SECTION C:
SUB-CONTRACT PRELIMINARIES
AND
GENERAL CONDITIONS

CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

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SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

- 1.01 Examination of Tender Documents
The tenderer is required to check the number of pages of this document and should he find any missing or indistinct, he must inform the Engineer at once and have the same rectified.
- All tenderers shall be deemed to have carefully examined the following:
- Work detailed in the Specification and in the Contract Drawings.
- The Republic of Kenya Document "General Conditions of Contract for Electrical and Mechanical Works".
- Other documents to which reference is made
He shall also be deemed to have included for any expenditure which may be incurred in conforming with the above items (a), (b), (c) and observe this expense as being attached to the contract placed for the whole or any part of the work.
- The tenderer shall ensure that all ambiguities, doubts or obscure points of detail, are clarified with the Engineer before submission of his tender, as no claims for alleged deficiencies in the information given shall be considered after this date.
- 1.02 Discrepancies
The Contractor shall include all work either shown on the Contract Drawings or detailed in the specification. No claim or extra cost shall be considered for works which has been shown on the drawings or in the specification alone.
- Should the drawing and the specification appear to conflict, the Sub-contractor shall query the points at the time of tendering and satisfy himself that he has included for the work intended, as no claim for extra payment on this account shall be considered after the contract is awarded.
- 1.03 Conditions of Contract Agreement
The Contractor shall be required to enter into a Sub-contract with the Main Contractor.
- The Conditions of the Contract between the Main Contractor and any Sub-contractor as hereinafter defined shall be the latest edition of the Agreement and Schedule of Conditions of Kenya Association of Building and Civil Engineering Contractors as particularly modified and amended hereinafter.
- For the purpose of this contract the Agreement and Schedule of Conditions and any such modifications and amendments shall read and construed together. In any event of discrepancy the modifications and amendments shall prevail.
- 1.04 Payment
Payment will be made through certificates to the Main Contractor. All payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site.
- 1.05 Definition of Terms
Throughout these contract documents units of measurements, terms and expressions are abbreviated and wherever used hereinafter and in all other documents they shall be interpreted as follows:
- i) Employer: The term "Employer" shall mean CEO KOTDA.
 - ii) Architect: The term "Architect" shall mean The Architect Consulting.
 - iii) Quantity Surveyor: The term "Quantity Surveyor" shall mean Consulting.
 - iv) Civil/Structural Engineers: The term "Civil/Structural Engineers" shall mean Consulting.
 - v) Engineer: The term "Engineer" shall mean Consulting.
 - vi) Main Contractor: The term "Main Contractor" shall mean the firm or company appointed to carry out the Building Works and shall include his or their heir, executors, assigns, administrators, successors, and duly appointed representatives.

Sub-contractor: The term "Sub-contractor" shall mean the persons or person, firm or Company whose tender for this work has been accepted, and who has entered into a contract agreement with the Contractor for the execution of the Sub-contract Works, and shall include his or their heirs, executors, administrators, assigns, successors and duly appointed representatives.

viii) Sub-contract Works: The term "Sub-contract Works" shall mean all or any portion of the work, materials and articles, whether the same are being manufactured or prepared, which are to be used in the execution of this Sub-contract and whether the same may be on site or not.

Contract Drawings: The term "Contract Drawings" shall mean those drawings required or referred to herein and forming part of the Bills of Quantities.

Working Drawings: The term "Working Drawings" shall mean those drawings required to be prepared by the Sub-contractor as hereinafter described.

xi) Record Drawings: The term "Record Drawings" shall mean those drawings required to be prepared by the Sub-contractor showing "as installed" and other records for the Sub-contract Works.

xii) Abbreviations:
CM shall mean Cubic Metre
SM shall mean Square Metre
LM shall mean Linear Metre
LS shall mean Lump Sum
mm shall mean Millimetres
No. shall mean Number
Kg. shall mean Kilogramme
KEBS or KS shall mean Kenya Bureau of Standards
BS shall mean Current standard British Standard Specification published by the British Standard Institution, 2 Park Street, London W1, England

"Ditto" shall mean the whole of the preceding description in which it occurs. Where it occurs in description of succeeding item it shall mean the same as in the first description of the series in which it occurs except as qualified in the description concerned. Where it occurs in brackets it shall mean the whole of the preceding description which is contained within the appropriate brackets.

1.06 Site Location

The site of the Contract Works is situated Konza City. The tenderer is recommended to visit the site and shall be deemed to have satisfied himself with regard to access, possible conditions, the risk of injury or damage to property on/or adjacent to the site, and the conditions under which the sub-contract Works shall have to be carried out and no claims for extras will be considered on account of lack of knowledge in this respect.

1.07 Duration of Sub-Contract

The Contractor shall be required to phase his work in accordance with the Main contractor's programme (or its revision).

1.08 Scope of Contract Works

The contractor shall supply, deliver, unload, hoist, fix, test, commission and hand-over in satisfactory working order the complete installations specified hereinafter and/or as shown on the Contract Drawings attached hereto, including the provision of labour, transport and plant for unloading material and storage, and handling into position and fixing, also the supply of ladders, scaffolding the other mechanical devices to plant, installation, painting, testing, setting to work, the removal from site from time to time of all superfluous material and rubbish caused by the works.

The contractor shall supply all accessories, whether of items or equipment supplied by the Sub-Contractor but to be fixed and commissioned under this contract.

1.09 Extent of the Sub-contractor's Duties

At the commencement of the works, the contractor shall investigate and report to the Engineer if all materials and equipment to be used in the work and not specified as supplied by the others are available locally. If these materials and equipment are not available locally, the contractor shall at this stage place orders for the materials in question and copy the orders to the Engineer. Failure to do so shall in no way relieve the contractor from supplying the specified materials and equipment in time.

Materials supplied by others for installation and/or connection by the Contractor shall be carefully examined in the presence of the supplier before installation and connection. Any defects noted shall immediately be reported to the Engineer.

The contractor shall be responsible for verifying all dimensions relative to his work by actual measurements taken on site.

The Contractor shall mark accurately on one set of drawings and Indicate all alterations and/or modifications carried out to the designed System during the construction period. This information must be made available on site for inspection by the Engineer.

1.10 Execution of the Works

The works shall be carried out strictly in accordance with:

- a) All relevant Kenya Bureau of Standards Specifications.
- b) All relevant British Standard Specifications and Codes of Practice (hereinafter referred to B.S. and C.P. respectively).
- c) General specifications of materials and works Section D of this document
- d) The Contract Drawings.
- e) The Bye-laws of the Local Authority.
- f) The Architect's and/or Engineer's Instructions.

The Contract Drawings and Specifications are to be read and construed together.

1.11 Validity of Tender

The tender shall remain valid for acceptance within 120 days from the final date of submission of the tender, and this has to be confirmed by signing the Tender Bond. The tenderer shall be exempted from this Bond if the tender was previously withdrawn in writing to the Employer before the official opening.

1.12 Firm – Price Contract

Unless specifically stated in the documents or the invitation to tender, this is a firm-price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract. No claims will be allowed for increased costs arising from the fluctuations in duties and/or day to day currency fluctuations. The Sub-contractor will be deemed to have allowed in his tender for any increase in the cost of materials, which may arise as a result of currency fluctuation during the contract period.

1.13 Variation

No alteration to the Contract Works shall be carried out until receipt by the Contractor of written instructions from the Project Manager.

Any variation from the contract price in respect of any extra work, alteration or omission requested or sanctioned by the Engineer shall be agreed and confirmed in writing at the same time such variations are decided and shall not affect the validity of the Contract. Schedule of Unit Rates shall be used to assess the value of such variations. No allowance shall be made for loss of profit on omitted works.

Where the Architect requires additional work to be performed, the Sub-contractor, if he considers it necessary, will give notice within seven (7) days to the Main Contractor of the length of time he (the Sub-contractor) requires over and above that allotted for completion of the Contract.

If the Sub-contractor fails to give such notice he will be deemed responsible for the claims arising from the delay occasioned by reason of such extension of time.

1.14 Prime Cost and Provisional Sums

A specialist Sub-contractor may be nominated by the Project Manager to supply and/or install any equipment covered by the Prime Cost or Provisional Sums contained within the Contract documents.

The work covered by Prime Cost and Provisional Sums may or may not be carried out at the discretion of the Project Manager.

The whole or any part of these sums utilized by the Contractor shall be deducted from the value of the Contract price when calculating the final account.

1.15 Bond

The tenderer must submit with his tender the name of one Surety who must be an established Bank only who will be willing to be bound to the Authority for an amount equal to 7½ % of the Contract amount as Clause 28 of the Conditions of Contract.

1.16 Government Legislation and Regulations

The Contractor's attention is called to the provision of the Factory Act 1972 and subsequent amendments and revisions, and allowance must be made in his tender for compliance therewith, in so far as they are applicable.

The Contractor must also make himself acquainted with current legislation and any Government regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc.

The Contractor shall allow for providing holidays and transport for work people, and for complying with Legislation, Regulations and Union Agreements.

1.17 Import Duty and Value Added Tax

The Sub-contractor will be required to pay full Import Duty and Value Added Tax on all items of equipment, fittings and plant, whether imported or locally manufactured. The tenderer shall make full allowance in his tender for all such taxes.

1.18 Insurance Company Fees

Attention is drawn to the tenderers to allow for all necessary fees, where known, that may be payable in respect of any fees imposed by Insurance Companies or statutory authorities for testing or inspection.

No allowance shall be made to the contractor with respect to fees should these have been omitted by the tenderer due to his negligence in this respect.

1.19 Provision of Services by the Main Contractor

In accordance with Clause 1.08 of this Specification the Contractor shall make the following facilities available to the Sub-contractor:

- a) Attendance on the Sub-Contractor and the carrying out of all work affecting the structure of the building which may be necessary, including all chasing, cutting away and making good brickwork, etc., except that all plugging for fixing, fittings, machinery, fan ducting, etc., and all drilling and tapping of steel work shall be the responsibility of the Sub-contractor. Any purpose made fixing brackets shall not constitute Builder's Work and shall be provided and installed by the Sub-contractor unless stated hereinafter otherwise.
- b) The provision of temporary water, lighting and power: the Contractor pay for all these services utilized.
- c) Fixing of anchorage and pipe supports in the shuttering shall be supplied by the Contractor who shall also supply the Project Manager with fully dimensioned drawings detailing the exact locations.
- d) i) Provision of scaffolding, cranes, etc. It shall be the Contractor's responsibility to liaise with the Project Manager to ensure that there is maximum co-operation with other nominated Sub-contractors in the use of scaffolding, cranes, etc.
ii) Any specialist scaffolding, cranes, etc. by the Contractor for his own exclusive use shall be paid for by the Sub-contractor.

1.20 Suppliers

The Contractor shall submit names of any supplier for the materials to be incorporated, to the Engineer for approval. The information regarding the names of the suppliers may be submitted at different times, as may be convenient, but no sources of supply will be changed without prior approval.

Each supplier must be willing to admit the Engineer or his representative to his premises during working hours for the purpose of examining or obtaining samples of the materials in question.

1.21 Samples and Materials Generally

The Contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated.

1.22 Administrative Procedure and Contractual Responsibility

Wherever within the Specification it is mentioned or implied that the Contractor shall deal direct with the Employer or Engineer, it shall mean "through the Project Manager who is responsible to the Employer for the whole of the works including the Sub-contract Works.

1.23 Bills of Quantities

The Bills of Quantities have been prepared in accordance with the standard method of measurement of Building Works for East Africa, first Edition, Metric, 1970. All the Quantities are based on the Contract Drawings and are provisional and they shall not be held to gauge or to limit the amount or description of the work to be executed by the Contractor but the value thereof shall be deducted from the Contract Sum and the value of the work ordered by the Engineer and executed thereunder shall be measured and valued by the Engineer in accordance with the conditions of the Contract.

All work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow measurements needed for such adjustment to be taken by the Quantity Surveyor or Engineer. Immediately the work is ready for measuring the Contractor shall give notice to the Quantity Surveyor or Engineer to carry out measurements before covering up. If the Contractor shall make default in these respects he shall, if the Engineer so directs, uncover the work to enable the necessary measurements to be taken and afterwards reinstate at his own expense.

1.24 Contractor's Office in Kenya

The Contractor shall maintain (after first establishing if necessary) in Kenya an office staffed with competent Engineer Manager and such supporting technical and clerical staff as necessary to control and coordinate the execution and completion of the Contract Works.

The Engineer Manager and his staff shall be empowered by the Contractor to represent him at meetings and in discussions with the Project Manager, the Engineer and other parties who may be concerned and any liaison with the Contractor's Head Office on matters relating to the design, execution and completion of the Contract Works shall be effected through his office in Kenya.

It shall be the Contractor's responsibility to procure work permits, entry permits, licences, registration, etc., in respect of all expatriate staff.

The Contractor shall prepare a substantial proportion of his Working Drawings at his office in Kenya. No reasons for delays in the preparation or submission for approval or otherwise of such drawings or proposals will be accepted on the grounds that the Sub-contractor's Head Office is remote from his office in Nairobi or the site of the Contract Works or otherwise.

1.25 Builder's Work

All chasing, cutting away and making good will be done by the Contractor. The Contractor shall mark out in advance and shall be responsible for accuracy of the size and position of all holes and chases required.

The Contractor shall drill and plug holes in floors, walls, ceiling and roof for securing services and equipment requiring screw or bolt fixings.

Any purpose made fixing brackets shall be provided and installed by the Contractor.

1.26 Structural Provision for the Works

Preliminary major structural provision has been made for the Contract Works based on outline information ascertained during the preparation of the Specification.

The preliminary major structural provision made will be deemed as adequate unless the Contractor stated otherwise when submitting his tender.

Any major structural provision or alteration to major structural provisions required by the Contractor shall be shown on Working Drawings to be submitted to the Engineer within 30 days of being appointed.

No requests for alterations to preliminary major structural provisions will be approved except where they are considered unavoidable by the Engineer. In no case will they be approved if building work is so far advanced as to cause additional costs or delays in the works.

1.27 Position of Services, Plant, Equipment, Fittings and Apparatus

The Contract Drawings give a general indication of the intended layout. The position of the equipment and apparatus, and also the exact routes of the ducts, main and distribution pipework shall be confirmed before installation is commenced. The exact siting of appliances, pipework, etc., may vary from that indicated.

The routes of services and positions of apparatus shall be determined by the approved dimensions detailed in the Working Drawings or on site by the Engineer in consultation with the Contractor.

Services through the ducts shall be arranged to allow maximum access along the ducts and the services shall be readily accessible for maintenance. Any work, which has to be re-done due to negligence in this respect, shall be the Sub-contractor's responsibility.

The Sub-contractor shall be deemed to have allowed in his Contract Sum for locating terminal points of services (e.g. lighting, switches, socket outlets, lighting points, control switches, thermostats and other initiating devices, taps, stop cocks) in positions plus or minus 1.2m horizontally and vertically from the locations shown on Contract Drawings. Within these limits no variations in the Contract Sum will be made unless the work has already been executed in accordance with previously approved Working Drawings and with the approval of the Engineer.

- 1.28 **Checking of Work**
The Contractor shall satisfy himself to the correctness of the connections he makes to all items of equipment supplied under the Contract agreement and equipment supplied under other contracts before it is put into operation. Details of operation, working pressures, temperatures, voltages, phases, power rating, etc., shall be confirmed to others and confirmation received before the system is first operated.
- 1.29 **Setting to Work and Regulating System**
The Contractor shall carry out such tests of the Contract Works as required by British Standard Specifications or equal and approved codes as specified hereinafter and as customary.
- No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer unless otherwise stated by him (Contractor's own preliminary and proving tests excepted).
- It will be deemed that the Contractor has included in the Contract Sum for the costs of all fuel, power, water and the like, for testing and commissioning as required as part of the Contract Works. He shall submit for approval to the Engineer a suitable programme for testing and commissioning. The Engineer and Employer shall be given ample warning in writing, as to the date on which testing and commissioning will take place.
- The Contractor shall commission the Contract Works and provide attendance during the commissioning of all services, plant and apparatus connected under the Contract Agreement or other Sub-contract Agreements, related to the project.
- Each system shall be properly balanced, graded and regulated to ensure that correct distribution is achieved and where existing installations are affected, the Contractor shall also regulate these systems to ensure that their performance is maintained.
- The proving of any system of plant or equipment as to compliance with the Specification shall not be approved by the Engineer, except at his discretion, until tests have been carried out under operating conditions pertaining to the most onerous conditions specified except where the time taken to obtain such conditions is unreasonable or exceeds 12 months after practical completion of the Contract Works.
- 1.30 **Identification of Plant Components**
The Contractor shall supply and fix identification labels to all plant, starters, switches and items of control equipment including valves, with white traffolyte or equal labels engraved in red lettering denoting its name, function and section controlled. The labels shall be mounted on equipment and in the most convenient positions. Care shall be taken to ensure the labels can be read without difficulty. This requirement shall apply also to major components of items of control equipment.
- Details of the lettering of the labels and the method of mounting or supporting shall be forwarded to the Engineer for approval prior to manufacture.
- 1.31 **Contract Drawings**
The Contract Drawings when read in conjunction with the text of the Specification, have been completed in such detail as was considered necessary to enable competitive tenders to be obtained for the execution and completion of the Contract works.
- The Contract Drawings are not intended to be Working Drawings and shall not be used unless exceptionally they are released for this purpose.
- 1.32 **Working Drawings**
The Contractor shall prepare such Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works.
- If the Contractor requires any further instructions, details, Contract Drawings or information drawings to enable him to prepare his Working Drawings or proposals, the Contractor shall accept at his own cost, the risk that any work, commenced or which he intends to commence at site may be rejected.
- The Engineer, in giving his approval to the Working Drawings, will presume that any necessary action has been, or shall be taken by the Contractor to ensure that the installations shown on the Working Drawings have been cleared with the Project Manager and any other Sub-contractors whose installations and works might be affected.
- If the Contractor submits his Working Drawings to the Engineer without first liaising and obtaining clearance for his installations from the Project Manager and other Sub-contractors whose installations and works might be affected, then he shall be liable to pay for any alterations or modification to his own, or other Sub-contractor's installations and works, which are incurred, notwithstanding any technical or other approval received from the Engineer.

Working Drawings to be prepared by the Contractor shall include but not be restricted to the following:

Any drawings required by the Engineer to enable structural provisions to be made including Builder's Working Drawings or Schedules and those for the detailing of holes, fixings, foundations, cables and paperwork ducting below or above ground or in or outside or below buildings.

General arrangement drawings of all plant, control boards, fittings and apparatus or any part thereof and of installation layout arrangement of such plant and apparatus.

Schematic Layout Drawings of services and of control equipment.

Layout Drawings of all embedded and non-embedded paperwork, ducts and electrical conduits.

Complete circuit drawings of the equipment, together with associated circuit description.

Such other drawings as are called for in the text of the Specification or Schedules or as the Engineer may reasonably require.

Three copies of all Working Drawings shall be submitted to the Engineer for approval. One copy of the Working Drawings submitted to the Engineer for approval shall be returned to the Contractor indicating approval or amendment therein.

Six copies of the approved Working Drawings shall be given to the Project Manager by the Sub-contractor for information and distribution to other Sub-contractors carrying out work associated with or in close proximity to or which might be affected by the Sub-contract Works.

Approved Working Drawings shall not be departed from except as may be approved or directed by the Engineer.

Approval by the Engineer of Working Drawings shall neither relieve the Contractor of any of his obligations under the Sub-contract nor relieve him from correcting any errors found subsequently in the Approved Working Drawings or other Working Drawings and in the Sub-contract Works on site or elsewhere associated therewith.

The Contractor shall ensure that the Working Drawings are submitted to the Engineer for approval at a time not unreasonably close to the date when such approval is required. Late submission of his Working Drawings will not relieve the Contractor of his obligation to complete the Contract Works within the agreed Contract Period and in a manner that would receive the approval of the Engineer.

1.33 Record Drawings (As Installed) and Instructions

During the execution of the Contract Works the Contractor shall, in a manner approved by the Engineer record on Working or other Drawings at site all information necessary for preparing Record Drawings of the installed Contract Works. Marked-up Working or other Drawings and other documents shall be made available to the Engineer as he may require for inspection and checking.

Record Drawings, may, subject to the approval of the Engineer, include approved Working Drawings adjusted as necessary and certified by the Contractor as a correct record of the installation of the Contract Works.

They shall include but not restricted to the following drawings or information:

Working Drawings amended as necessary but titled "Record Drawings" and certified as a true record of the "As Installed" Sub-contract Works. Subject to the approval of the Engineer such Working Drawings as may be inappropriate may be omitted.

Fully dimensioned drawings of all plant and apparatus.

General arrangement drawings of equipment, other areas containing plant forming part of the Contract Works and the like, indicating the accurate size and location of the plant and apparatus suitability cross-referenced to the drawings mentioned in (b) above and hereinafter.

Routes, types, sizes and arrangement of all pipework and ductwork including dates of installation of underground pipework.

Relay adjustment charts and manuals.

Routes, types, sizes and arrangement of all electric cables, conduits, ducts and wiring including the dates of installation of buried works.

System schematic and trunking diagrams showing all salient information relating to control and instrumentation.

Grading Charts

Valve schedules and locations suitability cross-referenced.

Wiring and piping diagrams of plant and apparatus.

Schematic diagrams of individual plant, apparatus and switch and control boards. These diagrams to include those peculiar to individual plant or apparatus and also those applicable to system operation as a whole.

Operating Instruction

Schematic and wiring diagrams shall not be manufacturer's multipurpose general issue drawings. They shall be prepared specially for the Contract Works and shall contain no spurious or irrelevant information.

Marked-up drawings of the installation of the Contract Works shall be kept to date and completed by the date of practical or section completion. Two copies of the Record Drawings of Contract Works and two sets of the relay adjustment and grading charts and schematic diagrams on stiff backing shall be provided not later than one month later.

The Contractor shall supply for fixing in sub-stations, switch-rooms, boiler houses, plant rooms, pump houses, the office of the Maintenance Engineer and other places, suitable valve and instructions charts, schematic diagrams of instrumentation and of the electrical reticulation as may be requested by the Engineer providing that the charts, diagrams, etc., relate to installations forming part of the Contract Works. All such charts and diagrams shall be of suitable plastic material on a stiff backing and must be approved by the Engineer before final printing.

Notwithstanding the Contractor's obligations referred to above, if the Contractor fails to produce to the Engineer's approval, either:-

The Marked-up Drawings during the execution of the Contract Works or

The Record Drawings, etc., within one month of the Section or Practical Completion

The Engineer shall have these drawings produced by others. The cost of obtaining the necessary information and preparing such drawings, etc., will be recovered from the Contractor.

1.34 Maintenance Manual

Upon Practical Completion of the Contract Works, the Contractor shall furnish the Engineer four copies of a Maintenance Manual relating to the installation forming part of all of the Contract Works.

The manual shall be loose-leaf type, International A4 size with stiff covers and cloth bound. It may be in several volumes and shall be sub-divided into sections, each section covering one Engineering service system. It shall have a ready means of reference and a detailed index.

There shall be a separate volume dealing with Air Conditioning and Mechanical Ventilation installation where such installations are included in the Contract Works.

The manual shall contain full operating and maintenance instructions for each item of equipment, plant and apparatus set out in a form dealing systematically with each system. It shall include as may be applicable to the Contract Works the following and any other items listed in the text of the Specifications:
System Description.

Plant

Valve Operation

Switch Operation

Procedure of Fault Finding

Emergency Procedures

Lubrication Requirements

Maintenance and Servicing Periods and Procedures

Color Coding Legend for all Services

Schematic and Wiring Diagrams of Plant and Apparatus

Record Drawings, true to scale, folded to International A4 size

Lists of Primary and Secondary Spares.

The manual is to be specially prepared for the Contract Works and manufacturer's standard descriptive literature and plant operating instruction cards will not be accepted for inclusion unless exceptionally approved by the Engineer. The Contractor shall, however, affix such cards, if suitable, adjacent to plant and apparatus. One spare set of all such cards shall be furnished to the Engineer.

1.35 Hand-over

The Contract Works shall be considered complete and the Maintenance and Defects Liability Period shall commence only when the Contract Works and supporting services have been tested, commissioned and operated to the satisfaction of the Engineer and officially approved and accepted by the Employer.

The procedure to be followed will be as follows:

On the completion of the Contract Works to the satisfaction of the Engineer and the Employer, the Contractor shall request the Engineer, at site to arrange for handing over.

The Engineer shall arrange a Hand-over Meeting or a series thereof, at site.

The Contractor shall arrange with the Engineer and Employer for a complete demonstration of each and every service to be carried out and for instruction to be given to the relevant operation staff and other representatives of the Employer.

In the presence of the Employer and the Engineer, Hand-over will take place, subject to Agreement of the Hand-over Certificates and associated check lists.

1.36 Painting

It will be deemed that the Contractor allowed for all protective and finish painting in the Contract Sum for the Contract Works, including color coding of service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications.

1.37 Spares

The Contractor shall supply and deliver such spares suitably protected and boxed to the Engineer's approval as are called for in the Specifications or in the Price Schedules.

1.38 Testing and Inspection – Manufactured Plant

The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials.

The right of the Engineer relating to the inspection, examination and testing of plant during manufacture shall be applicable to Insurance companies and inspection authorities so nominated by the Engineer.

The Contractor shall give two week's notice to the Engineer of his intention to carry out any inspection or tests and the Engineer or his representative shall be entitled to witness such tests and inspections.

Six copies of all test certificates and performance curves shall be submitted as soon as possible after the completion of such tests, to the Engineer for his approval.

Plant or equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Contractor's own risk and should the test certificate not be approved new tests may be ordered by the Engineer at the Contractor's expense.

The foregoing provisions relate to tests at manufacturer's works and as appropriate to those carried out at site.

1.39 Testing and Inspection -Installation

Allow for testing each section of the Contract Works installation as described hereinafter to the satisfaction of the Engineer.

1.40 Labour Camps

The Contractor shall provide the necessary temporary workshop and mess-room in position to be approved by the Architect.

The work people employed by the Contractor shall occupy or be about only that part of the site necessary for the performance of the work and the Contractor shall instruct his employees accordingly.

If practicable, W.C. accommodation shall be allocated for the sole use of the Contractor's workmen and the Sub-contractor will be required to keep the same clean and disinfected, to make good any damage thereto and leave in good condition.

- 1.41 **Storage of Materials**
The Contractor shall provide storerooms and workshop where required. He shall also provide space for storage to nominated sub-contractors who shall be responsible for these lock-up shades or stores provided.
- Nominated Sub-contractors are to be made liable for the cost of any storage accommodation provided specially for their use. No materials shall be stored or stacked on suspended slabs without the prior approval of the Project manager.
- 1.42 **Initial Maintenance**
The Contractor shall make routine maintenance once a month during the liability for the Defects Period and shall carry out all necessary adjustments and repairs, cleaning and oiling of moving parts. A monthly report of the inspection and any works done upon the installation shall be supplied to the Engineer.
- The Contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of inspection.
- The Contractor shall allow in the contract Sum of the initial maintenance, inspection and break-down service and shall provide for all tools, instruments, plant and scaffolding and the transportation thereof, as required for the correct and full execution of these obligations and the provision, use or installation of all materials as oils, greases, sandpaper, etc., or parts which are periodically renewed such as brake linings etc., or parts which are faulty for any reason whatsoever excepting always Acts of God such as storm, tempest, flood, earthquake and civil revolt, acts of war and vandalism.
- 1.43 **Maintenance and Servicing After Completion of the Initial Maintenance**
The Contractor shall, if required, enter into a maintenance and service agreement with the employer for the installation for a period of up to five years from the day following the last day of the liability for Defects Period which offers the same facilities as specified in Clause 1.41 (Initial Maintenance).
- The terms of any such agreement shall not be less beneficial to the employer than the terms of Agreements for either similar installation.
- The Contractor shall submit with his tender for the works, where called upon a firm quotation for the maintenance and service of the installation as specified herein, which shall be based upon the present day costs and may be varied only to take into account increases in material and labour unit rate costs between the time of tendering and the signing of the formal maintenance and service agreement and which shall remain valid and open for acceptance by the Employer to and including the last day of the fifth complete calendar month following the end of the liability for Defects Period.
- 1.44 **Trade Names**
Where trade names of manufacturer's catalogue numbers are mentioned in the Specification or the Bills of Quantities, the reference is intended as a guide to the type of article or quality of material required. Alternate brands of equal and approved quality will be acceptable.
- 1.45 **Water and Electricity for the Works**
These will be made available by the Contractor who shall be liable for the cost of any water or electric current used and for any installation provided especially for his own use.
- 1.46 **Protection**
The Contractor shall adequately cover up and protect his own work to prevent injury and also to cover up and protect from damage all parts of the building or premises where work is performed by him under the Contract.
- 1.47 **Defects after Completion**
The defects liability period will be 6 months from the date of practical completion of the Works in the Contract and certified by the Engineer.
- 1.48 **Damages for Delay**
Liquidated and Ascertained damages as stated in the Contract Agreement will be claimed against the Contractor for any unauthorized delay in completion. The Contractor shall be held liable for the whole or a portion of these damages should he cause delay in completion.
- 1.49 **Clear Away on Completion**
The Contractor shall, upon completion of the works, at his own expense, remove and clear away all plant, equipment, rubbish and unused materials, and shall leave the whole of the works in a clean and tidy state, to the satisfaction of the Engineer. On completion, the whole of the works shall be delivered up clean, complete and perfect in every respect to the satisfaction of the Engineer.

- 1.50 Final Account
On completion of the works the Contractor shall agree with the Engineer the value of any variations outstanding and as soon as possible thereafter submit to the Engineer his final statement of account showing the total sum claimed sub-divided as follows:
- Statement A - detailing the tender amounts less the Prime Cost and Provisional Sums, included therein.
- Statement B - detailing all the variation orders issued on the contract.
- Statement C - Summarizing statement A and B giving the net grand total due to the Contractor for the execution of the Contract.
- 1.51 Fair Wages
The Contractor shall in respect of all persons employed anywhere by him in the execution of the contract, in every factory, workshop or place occupied or used by him for execution of the Contract, observe and fulfil the following conditions:
- The Contractor shall pay rates of the wages and observe hours and conditions of labour not less favourable than those established for the trade or industry in the district where work is carried out.
- In the absence of any rates of wages, hours or conditions of labour so established the Contractor shall pay rates and observe hours and conditions of labour are not less favourable than the general level of wages, hours and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.
- 1.52 Supervision
During the progress of the works, the Contractor shall provide and keep constantly available for consultation on site experienced English - speaking Supervisor and shall provide reasonable office facilities, attendance, etc., for the Supervisor.
- In addition, during the whole of the time the works are under construction, the Contractor shall maintain on site one experienced foreman or charge-hand and an adequate number of fitters, etc., for the work covered by the Specification. The number of this staff shall not be reduced without the prior written approval of the Project manager or Engineer.
- Any instructions given to the Supervisor on site shall be deemed to have been given to the sub-contractor.
- One copy of this Specification and one copy of each of the Contract Drawings (latest issue) must be retained on site at all times, and available for reference by the Engineer or sub-contractor.
- 1.53 Test Certificates
The Contractor shall provide the Engineer with three copies of all test reports or certificates that are or may be required by this Specification.
- 1.54 Labour
The Contractor shall provide skilled and unskilled labour as may be necessary for completion of the contract.
- 1.55 Discounts to the Main Contractor
No discount to any Sub-Contractor will be included in the tender for this installation.
- 1.56 Guarantee
The whole of the work will be guaranteed for a period of six months from the date of the Engineer's certification of completion and under such guarantee the Sub-contractor shall remedy at his expense all defects in materials and apparatus due to faulty design, construction or workmanship which may develop in that period.
- 1.57 Direct Contracts
Notwithstanding the foregoing conditions, the Authority reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C Sum in the Bills of Quantities and to pay for the same direct. In any such instance, profit relative to the P.C Sum in the priced Bills of Quantities will be adjusted as deserved for P.C Sum allowed.
- 1.58 Attendance upon the Tradesmen etc
The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this contract every facility for carrying out their work and also for the use of ordinary scaffolding. The contractor however, shall not be required to erect any special scaffolding for them.

- 1.59 Trade Unions
The contractor shall recognize the freedom of his work people to be members of trade unions.
- 1.60 Local and other Authorities notices and fees
The contractor shall comply with and give all notices required by any Regulations, Act or by Law of any Local Authority or of any Public Service, Company or Authority who have any jurisdiction with regard to the works or with those systems the same are or will be connected and he shall pay and indemnify the Government against any fees or charges legally demandable under any regulation or by-law in respect of the works; provided that the said fees and charges if not expressly included in the contract sum or stated by way of provisional sum shall be added to the contract sum.
- The contractor before making any variation from the contract drawings or specification necessitated by such compliance shall give the Project Manager written notice specifying and giving the reason for such variation and applying for instructions in reference thereto.
- If the contractor within seven days of having applied for the same does not receive such instructions, he shall proceed with the works in conforming to the provision regulation or by-law in question and any variation thereby necessitated shall be deemed to be a variation in accordance to the conditions of contract.
- 1.61 Assignment or subletting
The contractor shall not without the written consent of the Project Manager assign this contract or sublet any portion of the works, provided that such consent shall not be unreasonably withheld to the prejudice of the contractor.
- 1.62 Partial Completion
If the Authority shall take over any part or parts works, apparatus, equipment etc. then within seven days from the date on which the Authority shall have taken possession of the relevant part, the Project Manager shall issue a Certificate stating his estimate of the approximate total value of the works which shall be the total value of that part and practical completion of the relevant part shall be deemed to have occurred, and the Defects Liability Period in respect of the relevant part be deemed to have commenced on the date Authority shall have taken possession thereof.
- The contractor shall make good any defects or other faults in the relevant part that had been deemed complete. The contractor shall reduce the value of insurance by the full value of the relevant part
The contractor shall be paid for the part of works taken possession by the Authority
- 1.63 Temporary Works
Where temporal works shall be deemed necessary, such as Temporary lighting, the contractor shall take precaution to prevent damage to such works.
- The contractor shall include for the cost of and make necessary arrangements with the Project Manager for such temporary works. For temporary lighting, electricity shall be metered and paid for by the contract
- 1.64. Patent Rights
The contractor shall fully indemnify the Authority of Kenya: against any action, claim or proceeding relating to infringement of any patent or design rights, and pay any royalties which may be payable in respect of any article or any part thereof, which shall have been supplied by the contractor to the Project Manager. In like manner the Authority of Kenya shall fully indemnify the contractor against any such action, claim or proceedings for infringement under the works, the design thereof of which shall have been supplied by the Project Manager to the contractor, but this indemnify shall apply to the works only, and any permission or request to manufacture to the order of the Project Manager shall not relieve the contractor from liability should he manufacture for supply to other buyers.
- 1.65 Mobilization and Demobilization
The contractor shall mobilize labour plant and equipment to site according to his programme and schedule of work. He shall ensure optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and equipment. Where necessary he shall demobilize and mobilize the labour, plant and equipment, as he deems fit to ensure optimum progress of the works and this shall be considered to be a continuous process as works progress. He shall make provision for this item in his tender. No claim will be entertained where the contractor has not made any provision for mobilization and demobilization of labour, plant and equipment in the preliminary bills of quantities or elsewhere in this tender.

- 1.66 **Extended Preliminaries**
Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the total Contractor works. Where called upon in the Appendix to these Preliminaries the Contractor shall insert his percentage per month for extended preliminaries that shall form basis for compensation.
- Lack of inserting the percentage shall mean that the sub-contractor has provided for this requirement elsewhere in the Bills of Quantities.
- 1.67 **Supervision by Engineer and Site Meetings**
A competent Project Engineer appointed by the Engineer as his representative shall supervise the Contract works. The Project Engineer shall be responsible for issuing all the site instructions in any variations to the works and these shall be delivered through the Contractor with the authority of the Project Manager. Any instructions given verbal shall be confirmed in writing.
- The project engineer and (or) the Engineer shall attend management meetings arranged by the Project Manager and for which the Contractor or his representative shall also attend. For the purpose of supervising the project, provisional sums are provided to cover for transport and allowances. The Contractor shall in his tender allow for the provision of management meetings and site inspections, as instructed by the Engineer, and also profit and attendance on these funds. The funds shall be expended according to Project Manager's instructions to the contractor.
- 1.68 **Amendment to Scope of Contract Works**
No amendment to scope of sub-contract works is expected and in case of amendment or modification to scope of work, these shall be communicated to all tenderers in sufficient time before the deadline of the tender submission. However during the contract period and as the works progress the Project Manager may vary the works as per conditions of contract by issuing site instructions.
- No claims shall be entertained on account of variation to scope of works either to increase the works (pre-financing) or reduction of works (loss of profit-see clause 1.70)
- 1.69 **Contractor Obligation and Employers Obligation**
The sub-contractor will finance all activities as part of his obligation to this contract. The employer shall pay interim payment for materials and work completed on site as his obligation in this contract, as the works progresses. No claims will be entertained for pre-financing of the project by the sub-contractor, or for loss of profit (expectation loss) in case of premature termination, reduction or increase of works as the sub-contractor shall be deemed to have taken adequate measures in programming his works and expenditure and taken necessary financial precaution while executing the works. No interest shall be payable to the Contractor, except as relates to late payment as in the conditions of contract clause 23.3. The contractor shall where called upon, insert his price to compensate for any of the occurrence stated here (premature termination, reduction or increase of works), as a percentage of the contract sum in the Appendix to this section.

1.70 APPENDIX TO SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

- 1 OMIT CLAUSE 1.12
This is not a firm price contract
- 2 MODIFY CLAUSE 1.15
Amount of performance security will be Five per cent (5%)
- 3 ADD TO CLAUSE 1.17
Prices quoted shall include 16% VAT. In accordance with Government policy, the 16% VAT and 3% Withholding Tax shall be deducted from all payments made to the sub-contractor, and the same shall subsequently be forwarded to the Kenya Revenue Authority (KRA).
- 4 ADD TO CLAUSE 1.40
There are no labour camps.
5. ADD TO CLAUSE 1.66
The amount or percentage that may be inserted in the bills of quantities for this item should not exceed the anticipated Liquidated damages amount for the same period.

SECTION D:

GENERAL ELECTRICAL SPECIFICATIONS

SECTION D

GENERAL ELECTRICAL SPECIFICATION

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GENERAL ELECTRICAL SPECIFICATION

2.01 General

This section specifies the general requirement for plant, equipment and materials forming part of the Sub-contract Works and shall apply except where specifically stated elsewhere in the Specification or on the Contract Drawings.

2.02 Quality of Materials

All plant, equipment and materials supplied as part of the Sub-contract Works shall be new and of first class commercial quality, shall be free from defects and imperfections and where indicated shall be of grades and classifications designated herein.

All products or materials not manufactured by the Sub-contractor shall be products of reputable manufacturers and so far as the provisions of the Specification is concerned shall be as if they had been manufactured by the Sub-contractor.

Materials and apparatus required for the complete installation as called for by the Specification and Contract Drawings shall be supplied by the Sub-contractor unless mention is made otherwise.

Materials and apparatus supplied by others for installation and connection by the Sub-contractor shall be carefully examined on receipt. Should any defects be noted, the Sub-contractor shall immediately notify the Engineer.

Defective equipment or that damaged in the course of installation or tests shall be replaced as required to the approval of the Engineer.

2.03 Regulations and Standards

The Sub-contract Works shall comply with the current editions of the following:

- a) The Kenya Government Regulations.
- b) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.
- c) The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.
- d) British Standard and Codes of Practice as published by the British Standards Institution (BSI)
- e) The Local Council By-laws.
- f) The Electricity Supply Authority By-laws.
- g) Local Authority By-laws.
- h) The Kenya Building Code Regulations.
- i) The Kenya Bureau of Standards

2.04 Electrical Requirements

Plant and equipment supplied under this Sub-contract shall be complete with all necessary motor starters, control boards, and other control apparatus. Where control panels incorporating several starters are supplied they shall be complete with a main isolator.

The supply power up to and including local isolators shall be provided and installed by the Electrical Sub-contractor. All other wiring and connections to equipment shall form part of this Sub-contract and be the responsibility of the Sub-contractor.

The Sub-contractor shall supply three copies of all schematic, cabling and wiring diagrams for the Engineer's approval.

The starting current of all electric motors and equipment shall not exceed the maximum permissible starting currents described in the Kenya Power and Lighting Company (KPLC) By-laws.

All electrical plant and equipment supplied by the Sub-contractor shall be rated for the supply voltage and frequency obtained in Kenya, that is 415 Volts, 50Hz, 3-Phase or 240Volts, 50Hz, 1-phase.

Any equipment that is not rated for the above voltages and frequencies shall be rejected by the Engineer.

2.05 Transport and Storage

All plant and equipment shall, during transportation be suitably packed, crated and protected to minimise the possibility of damage and to prevent corrosion or other deterioration.

On arrival at site all plant and equipment shall be examined and any damage to parts and protective priming coats made good before storage or installation.

Adequate measures shall be taken by the Sub-contractor to ensure that plant and equipment do not suffer any deterioration during storage.

Prior to installation all piping and equipment shall be thoroughly cleaned.

If, in the opinion of the Engineer any equipment has deteriorated or been damaged to such an extent that it is not suitable for installation, the Sub-contractor shall replace this equipment at his own cost.

2.06 Site Supervision

The Sub-contractor shall ensure that there is an English-speaking supervisor on the site at all times during normal working hours.

2.07 Installation

Installation of all special plant and equipment shall be carried out by the Sub-contractor under adequate supervision from skilled staff provided by the plant and equipment manufacturer or his appointed agent in accordance with the best standards of modern practice and to the relevant regulations and standards described under Clause 2.03 of this Section.

2.08 Testing

2.08.1 General

The Sub-contractor's attention is drawn to Part 'C' Clause 1.38 of the "Preliminaries and General Conditions".

2.08.2 Material Tests

All material for plant and equipment to be installed under this Sub-contract shall be tested, unless otherwise directed, in accordance with the relevant B.S Specification concerned.

For materials where no B.S. Specification exists, tests are to be made in accordance with the best modern commercial methods to the approval of the Engineer, having regard to the particular type of the materials concerned.

The Sub-contractor shall prepare specimens and performance tests and analyses to demonstrate conformance of the various materials with the applicable standards.

If stock material, which has not been specially manufactured for the plant and equipment specified is used, then the Sub-contractor shall submit satisfactory evidence to the Engineer that such materials conform to the requirements stated herein in which case tests of material may be partially or completely waived.

Certified mill test reports of plates, piping and other materials shall be deemed acceptable.

2.08.3 Manufactured Plant and Equipment – Work Tests

The rights of the Engineer relating to the inspection, examination and testing of plant and equipment during manufacture shall be applicable to the Insurance Companies or Inspection Authorities so nominated by the Engineer.

The Sub-contractor shall give two week's notice to the Engineer of the manufacturer's intention to carry out such tests and inspections.

The Engineer or his representative shall be entitled to witness such tests and inspections. The cost of such tests and inspections shall be borne by the Sub-contractor.

Six copies of all test and inspection certificates and performance graphs shall be submitted to the Engineer for his approval as soon as possible after the completion of such tests and inspections.

Plant and equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Sub-contractor's own risk and should the test and inspection certificates not be approved, new tests may be ordered by the Engineer at the Sub-contractor's expense.

2.08.4 Pressure Testing

All pipe work installations shall be pressure tested in accordance with the requirements of the various sections of this Specification. The installations may be tested in sections to suit the progress of the works but all tests must be carried out before the work is buried or concealed behind building finishes. All tests must be witnessed by the Engineer or his representative and the Sub-contractor shall give 48 hours notice to the Engineer of his intention to carry out such tests.

Any pipe work that is buried or concealed before witnessed pressure tests have been carried out shall be exposed at the expense of the Sub-contractor and the specified tests shall then be applied.

The Sub-contractor shall prepare test certificates for signature by the Engineer and shall keep a progressive and up-to-date record of the section of the work that has been tested.

2.09 Colour Coding

Unless stated otherwise in the Particular Specification all pipe work shall be color coded in accordance with the latest edition of B.S 1710 and to the approval of the Engineer or Architect.

2.10 Welding

2.10.1 Preparation

Joints to be made by welding shall be accurately cut to size with edges sheared, flame cut or machined to suit the required type of joint. The prepared surface shall be free from all visible defects such as lamination, surface imperfection due to shearing or flame cutting operation, etc., and shall be free from rust scale, grease and other foreign matter.

2.10.2 Method

All welding shall be carried out by the electric arc processing using covered electrodes in accordance with B.S. 639.

Gas welding may be employed in certain circumstances provided that prior approval is obtained from the Engineer.

2.10.3 Welding Code and Construction

All welded joints shall be carried out in accordance with the following Specifications:

a) Pipe Welding

All pipe welds shall be carried out in accordance with the requirements of B.S.806.

b) General Welding

All welding of mild steel components other than pipework shall comply with the general requirements of B.S. 1856.

2.10.4 Welders Qualifications

Any welder employed on this Sub-contractor shall have passed the trade tests as laid down by the Government of Kenya.

The Engineer may require to see the appropriate certificate obtained by any welder and should it be proved that the welder does not have the necessary qualifications the Engineer may instruct the Sub- contractor to replace him by a qualified welder.

SECTION E:
PARTICULAR SPECIFICATIONS
FOR
GENERATOR SET & ATS INSTALLATIONS

1.00 GENERATOR SETS

1.01 General Description (A LETTER OF AUTHORIZATION MUST BE SUBMITTED FROM PRODUCER)

Generating sets, rated as shown on the drawing for 0.8PF, powered by turbocharged Diesel engine running at 1500 RPM and directly coupled to a single bearing alternator, enclosure IP21, Brushless, Synchronous, self-excited, self regulated, insulation and temperature class H, 240/415V, 3 phase, 4 wires, regulated at +/- 1%, 50 Hz.

Generator set rating shall be prime rated and shall be applicable for Continuous Power supply at variable load in lieu of commercially purchased power, 10 % overload capacity shall be available for a period of operation

The Genset shall be equipped, with set mounted AMF control panel and complete with:

- Heavy duty fabricated steel skid type base frame with anti-vibration mountings.
- Set mounted radiator with engine driven blower type fan and protecting guards.
- 12V Electric starting system with starter motor, heavy duty lead acid batteries mounted into a rack and battery charger alternator.
- Residential exhaust silencer, 29 dB attenuation equipped with flanged and supplied loose.
 - Air, fuel and lubricating oil filters.
 - Mechanical governor.
 - Automatic engine shutdown protection for:
 - Low lub oil pressure
 - High water temperature
 - Overspeed
 - Earth fault
- Built in/day fuel service tank, if any (suitable for 8 Hours operation at full Load)
- Storage tank for 48 hours-Underground pit of 4mX2.5mX1.5m is available. Provide biggest tank possible. Dimensions of tank on drawings is minimum requirement.
 - Jacket water heater
 - Instruction manuals and electrical wiring diagrams.

Engine

- a. The engine design is to be four stroke cycle, direct injection, turbo charged industrial type.
- b. The engine shall operate on fuel to BS 2869 : 1983 Class A.
- c. The overload capacity of the engine is to be 10 % of the full load for one hour in any 12 hours period.
- d. The engine shall have a flywheel complete with coupling fitted to ensure smooth running of the engine under various load conditions. A flywheel sheet metal guard is to be furnished for full protection of the personnel.
- e. The engine is to be equipped with a sensitive mechanical speed governor with a hydraulic servo gear for operating the fuel pump control.

Cooling System:

- a. Cooling of engines to be achieved using engine driven radiators.
- b. Radiators are to be capable of dissipating the required amount of heat from the engine jacket cooling water and the engine lubricating oil, with an ambient temperature of 50 deg. C.
- c. Radiators are to be rated 130 % of actual load.
- d. Heat transfer matrix is to be composed of standard, interchangeable, individually removable elements, built-up using brass tubes with copper fins solder bonded together for maximum thermal efficiency and mechanical strength

Exhaust System

- a. Engine exhaust gases are to be ducted from the engine mounted turbocharger outlet flanges to a higher performance type exhaust silencer.
- b. Exhaust silencer are to be residential type, vertical cylinder with side entry and top outlet.
- c. Exhaust silencers are to be adequately supported on the unit.
- d. Exhaust silencer are to be provided with flanged inspection and cleaning points, positioned to allow all parts of their interiors to be inspected and cleaned with appropriate equipment.

Alternator

- a. Alternator are to be specifically suited for direct coupling to the diesel driving engines previously specified. They are to be suitable for mounting on a combined engine / alternator base plate.
- b. The alternator is to be brushless, self ventilated, three-phase, salient pole synchronous type. The revolving field shall be incorporated on a common shaft, with the excitation system and the rotating diode assembly.
- c. Alternator rating to be defined on a continuous base in accordance with BS5000 Part 3 and capable of sustaining a 10 % overload for one hour in any 12 hours period.
- d. Alternator Characteristics are to be as follows:
 - speed : 1500 r.p.m.
 - output : net as per schedule kw at 0.3 lagging , after deducting power required by engine auxiliaries.
 - Voltage and frequency: 415 Volts, 3-phase, 50 Hz, with earth neutral through neutral earthing link.
 - Overload : capable of taking for one hour in every 12 hours , an overload of 10 % at the rated voltage and p.f. of 0.8 without the temperature rise of any part exceeding the limits specified for full load continuous running.
 - Insulation : Suitable for class "H" to BS 2757
temperature rises at a maximum air inlet temperature of 50 deg.C.
- e. Low voltage power supply to the automatic voltage regulator and the excitation system is to be made via an auxiliary power wiring connection are to be made at terminal blocks at one location in the unit.
- f. Alternator is to be fitted with surge suppression equipment to protect the rotating diodes against effect of external faults and faulty synchronizing.
- g. The alternator should be of single bearing type with solid forged half coupling for bolting to the engine flywheel.

- h. The alternator bearing is to be of the oil lubricated sleeve type, ring of the disc lubricated and insulated to eliminate the risk of shaft / bearing currents.

Alternator Excitation System:

- a. The excitation system is to be brushless type, the exciter is to be consist of a three phase A.C. generator with revolving armature and a stationary field. Solid state hermetically sealed rectifiers are to be mounted directly on the generator armature.
- b. The exciter rectifier output shall be directly connected to the revolving generator field windings without brushless, slipring or commutators.

Set mounted control panel:

Set mounted AMF panel, mounted into a rack to enable easy access for maintenance and enclosed inside a heavy gauge cubicle, complete with:

- *In Front:
- 1 ammeter, DIN 72
 - 1 ammeter selector switch, 4 position
 - 1 voltmeter, DIN 72
 - 1 voltmeter phase selector switch 7 position
 - 1 combined Frequency / Tachometer
 - 1 hour run meter
 - 1 test lamps push button
 - 1 panel front lighting, dia. 28mm
 - 1 fuel contents gauge
 - 1 battery condition voltmeter
- *Controls:
- 1 emergency stop push button
 - 1 selector switch (auto/manual/test/stop) with reset facility.
 - 1 selector switch (start/stop)
 - 2 Nos. Volt free (i.e., 1NO + 1 NC) contacts for status indication

- *LED's Indicators:
- battery loading
 - low fuel oil level
 - failure to start

- *Inside :
- Contacts for to receive remote order to start
 - Adjustable timers for automatic sequence:
 - Starting on mains failure: 0.5 sec.
 - Stabilization of generator :0.5-3.0sec.
 - Connection to the load: 0.5-3.0sec
 - Mains return: 60-420sec.
 - Cooling down: 90-900sec.
 - Engine shutdown on overload or overheat: 30-360sec.
 - Mains monitoring , 3 phase type.
 - Static battery charger- (12 or 24)
 - Jacket water heater outgoing feeder.
 - Contacts to trip the ATS.
 - Timers for automatic sequence
 - Pre-set attempt to start : 3 or 6
 - facility on terminal to received remote order to start

- set mounted manual Circuit Breaker, 4 pole , fix pattern, adequately rated, for alternator protection against overload and short circuit.

Engine alternator parameters, alarms and shutdown shall be displayed on LCD text screen. An audible alarm and LED indication shall be available for each alarm and shutdown. A mute button shall be provided to mute the alarm.

Parameter Displays

AC Voltage L to L and L to N on 3 phases
AC current (on 3 phases)

Power factor
KW - total
KVAR - total
KVA - total
KWH - total
DC voltage
Frequency
Tachometer (RPM)
Coolant temperature
Lube Oil Pressure
Hours run
Operator Controls

Run/Off/Auto control switch
Emergency stop pushbutton
Membrane keypad with tactile feedback
Crank Delay/Duration/Repeats
Shutdowns

Fail to start
High coolant temperature
Low oil pressure
Overvoltage
Undervoltage
Overfrequency
Underfrequency
Overspeed
Underspeed
Emergency stop operated

Alarms

Approaching high eng. temp
Approaching low oil pressure
Battery charger failure
Not in auto mode
Low battery voltage
Status Indicators
Visual alarm
Panel mounted audible alarm
Fault log memory for minimum 20 faults.
Password protected operator levels

Synchronizing modules to be supplied.

The control panel shall be provided with RS485 open type modbus protocol for BMS interface.

Duty+standby pump, if any and diesel piping network complete with all accessories and valves to be provided for generators. Provide BMS interfacing.

Also provide duty+stanby pump, tank, piping, valves and all accessories for oven. Provide BMS interfacing for pump.

1.01.01 Tests

The Contractor shall carry out the testing of the diesel generator plant and all ancillary equipment both at the manufacturers works and on site in accordance with the specifications. Manufacturer standard test certificate shall be supplied with the generator.

The Contractor shall provide at his own expense all materials, equipment and service necessary to perform the tests given below, but not being limited to fuel, electricity, water, labour and test instrumentation.

In addition to any tests normally carried out by the manufacturer, the engine shall be subjected to the following tests at site:

- i. A 100% load test using unity power factor resistive load bank for 1 hour to be conducted to prove the performance of generator. The full details of the test arrangement shall be submitted to the Engineer in writing at least two weeks before the test date.
- ii. Any other tests or inspection deemed necessary by the Engineer to prove that the plant complies with the specifications.

1.02 AUTOMATIC TRANSFER SWITCH

1.02.01 REFERENCE

Read and conform to all electrical Sections of these specifications. The general instructions for electrical Division, apply to and form part of all electrical sections.

1.02.02 SHOP DRAWINGS

Submit shop drawings as specified.

1.02.03 EQUIPMENT CRITERIA

The automatic load transfer equipment shall be designed to comply with the following criteria:

ATS shall comply the IEC specification & EN60947-6-1 switching requirements.

Monitor voltage of normal power supply.

Initiate cranking of the generator on failure of normal power.

Transfer load from normal supply to generator when it reaches its rated speed voltage and frequency.

ATS By-Pass solution is not only a switch it should complaint with International IEC Standard IEC 6947-6-1

Re-transfer load from generator to normal power supply when normal power is restored.

Shut down generator unit.

Co-ordinate with generator supplier to ensure compatibility for control operation.

1.02.04 EQUIPMENTS

The automatic transfer switches shall be 415V, three phase, and neutral 4pole contactor type in double throw arrangement with microprocessor controls.

The switches shall be transfer-bypass type, with draw out transfer mechanism and controls. Bypass switches shall permit maintenance of the transfer switching and controls without interruption of service.

The enclosures shall be (IP42), finished in light gray enamel. The front panel shall be hinged for access for inspection & maintenance. All sections shall be 2mm zinc coated with corrosion resistant treatment.

The switches shall be double throw, mechanically and electrically interlocked, an mechanically held in both positions.

Failure of any electrical component or disarrangement of any part shall not permit the switch to remain in a neutral position.

The operating mechanism shall obtain its power from the source to which the load is being transferred.

An auxiliary contact shall close, starting the engine -alternator set, when the voltage in any phase falls to 75% of rated for an adjustable period of 0.5-6 seconds, factory set a 2 seconds. When the alternator voltage has risen to 90% of rated on all phases, the switches shall transfer from the normal to the emergency source.

The switch shall retransfer to the nominal source when all phases have remained above 90% of rated, for an adjustable time period of 0 to 30 minutes.

The switch shall be equipped with a timer to keep the engine running for an adjustable period of 0 to 5 minutes after the load has been retransferred to the normal source.

The switch shall be equipped with an in-phase monitor or equivalent arrangement for retransferring to the normal source.

Mimic diagram with full vision of the ATS By-pass through LED light or fluorescent bar labels with pilot lights.

One 4-position off-auto-run-test control switch shall be provided on the front of the enclosure. The run position shall start the engine without operating the transfer switch. The test position shall simulate a power failure and shall transfer the load to the emergency source.

The switch shall transfer when the voltage in any phase falls to 75% of rated, and shall retransfer when all phases have remained above 90% of rated, for an adjustable time period of a to 30 minutes.

The switch shall be equipped with a timer to delay transfer for an adjustable period of 0 to 30 seconds, to prevent transferring during testing of the standby power system.

One 3-position off-auto-test switch shall be provided on the front of the enclosure.

All control gear shall be calibrated for operating conditions in a 50°C ambient temperature.

ATS panel shall be capable of providing function of (a) Normal Mode (b) By pass mode (c) Test Mode (d) Emergency Stop.

- (a) When the by-pass product are out of power, they will not carry fault currents. All the changeover functionalized are ensured by the ATS.
- (b) ATS is by-pass and fully isolated, the load is supplied by either source shall be trough the manual change over.
- (c) Load is not supplied by ATS but through the manual changeover switch – ATS shall be tested without any perturbation on the load (d) Shut down the generating set and prevent from starting while servicing of generator.

Demo (1) Schedule training with 4 hr notice.

(2) Train end user technical team for starting / stopping trouble shooting, cause and effect matrix.

(3) Co-ordinate with generator equipment.

ATS shall be communicable and open end functionality with RS4-85/bus / MODBUS Standard and shall be interoperable.

Optional module shall be available to operate through Ethernet (communication mode). This should allow the functions like (a) Alarm management (SNMP Protocol) (b) Data logging (c) Remote Control.

1.02.05 INSTALLATION

Locate, install and connect transfer equipment.

Check relays and solid state monitors and adjust as required.

Install and connect battery and remote alarms.

1.02.06 TESTING CONTRACTOR

Before Emerging Equipment.

Perform the field Quality Control testing in addition to test recommended by Manufacturer.

- (i) Measure insulation resistance – ph-ph, ph-Gr.
- (ii) Check Electrical continuity of circuits and for short circuits.
- (iii) Inspect for physical damage proper installation & connection integrity of the barrier, curves and safety feature.
- (iv) Verify the manual warning.
- (v) Perform manual transfer operation.

After Emerging the Equipment

- (i) Simulate power failures of normal source to ATS and EM source with normal source.
- (ii) Verify time-delay setting.
- (iii) Verify pickup and dropper voltage by data reading inspection and control setup.
- (iv) Test Bypass / isolator unit functional modes and related ATS operator.
- (v) Verify proper sequence and testing of anti engine starting transfer time delay, retransfer, Engine isolation and shut down sequence.

2.0

COMMISSIONING

The sub-contractor shall include for fully commissioning the set and its control equipment and, for the purpose of the required tests, shall provide all necessary tools, instruments, fuel and lubricating oil.

The following tests and checks as applicable shall be carried out by the sub-contractor in the presence of the Engineer or his representative.

- (a) Check that the main frame level in all directions, engine and alternator shafts are in proper alignment and the vibration absorbing devices are properly installed and located.
- (b) Check water and sump oil levels and that the water jacket and radiator heaters (if fitted) are in working order
- (c) Check the battery electrolyte levels and the specific gravity.

- (d) Examine the containers in which the fuel and lubricating oils were delivered and check that the type and grade of oils are as recommended for the unit.
- (e) Ensure that sufficient fuel oil is in the fuel tank for a two hour test run.
- (f) Check that all radiator and engine block water drain points are free from sludge and other blockages.
- (g) Check engine bolts, main drive coupling, valve clearances, fuel pumps settings, governor settings, pipeline connections, water hose, exhaust couplings, flexible pipework etc., and where a separate cooling water tank is fitted, that the water level is satisfactory and ball valve and overflow work.
- (h) Check all outgoing connections on the generator and at the control panel. All lugs for principal connections shall have clean and bright contact surfaces. A suitable abrasive materials shall be used where necessary.
- (i) Check access panels and doors for proper opening and closing and for functioning of any interlocks fitted.
- (j) With the set isolated from the main supply and the selector switch in the 'Manual' position, start the engine by means of the 'Start' push button and allow it to run up normal speed. Check that the main battery charge is automatically switched off to avoid its being overloaded by the reduction in voltage across the battery. Where a battery charging dynamo is fitted, check that the mains battery charger is disconnected by the operation of the auxiliary contactor during the time the engine is running.
- (k) Check instruments and gauges for normal operation and response and that the generator voltage is being maintained within the prescribed limits, making due allowance for no-load conditions. Compare the reading of the frequency meter with that of the engine tachometer, where both are fitted.
- (l) Stop engine by turning selector switch 'OFF' position. Disconnect the sensing circuit supply and check that the set starts, the mains contactor opens, and the generator contactor closes in correct order.
- (m) Reconnect the sensing circuits to verify that the engine stops on restoration of the mains supply and that the contactors operate correctly. Check voltage sensing and time delays on each phase in turn and also that the push buttons for the mains failure simulation and engine stopping operate correctly.

NOTE: Running of the engine for any length of time under no-load conditions is undesirable and tests calling such operation should be carried out in as short a time as possible consistent with thoroughness.

- (n) Operate the necessary isolators and switches to put the set on standby for the essential services network with the selector switch in the 'Auto' position and using mains failure simulation push , verify that the set operates correctly with the appropriate time delay for taking up load and that the carrying of the load and its distribution over the three phases are satisfactory.
- (o) Run the set at various loads for periods totaling at least 30 minutes. Check that the voltage and frequency are being maintained within the required limits with large alterations of load. Note the rate of charge of the dynamo ammeter with the engine running (if a dynamo is fitted), and the rate of charge of the battery charging ammeter with the engine stopped. Check against manufacturer's recommendations and adjust charging rates if necessary.
- (p) Check that the various engine safeguards operate satisfactory.
- (q) Check the vibration absorbing devices for proper operation and that performance of all flexible connections, both mechanical and electrical, is satisfactory.
- (r) When all tests are satisfactory and agreed with the Engineer or his representative, the lubricating oil and water levels shall be finally checked, the fuel oil tank replenished and the set left in normal operating order.
- (s) An initial supply of all lubricating oils and greases shall be provided by the sub-contractor.
- (t) Additional lubricating oil shall be provided for recharging the engine sump once together with a supply of lubricating oils and greases to cover the normal use and servicing of the set during the 12 months maintenance period referred to in section 14 of part B.

INFORMATION TO BE SUPPLIED

1. GENERAL

The tenderer shall complete section 2 Part D in full with details of the set he is offering.

Any equipment which he wishes to offer but which does not comply with the Specification shall be fully detailed in Section 3 Part D, together with details of any other deviations or omissions which he may wish to make.

Any tender which is submitted without filling these sections may not be considered

2 – INFORMATION ON THE SET TO BE SUPPLIED

ITEM	EQUIPMENT	DETAILS
1.	<u>Diesel Engine</u>	
	Make	
	Type	
	Bore	mm
	Stroke	
	Net continuous rating (B.S. 649)	
	(a) at sea level	KVA
	(b) at site	KVA
	Speed	rev/min
	Years this type put into service	
	Total number sold	
	(a) World wide	
	(b) In East Africa	
	(c) In Kenya	
	Supercharger:-	
	Make	
	Type	
	Number in use	
	Thermometers:-	
	Make	
	Type	

ITEM	EQUIPMENT	DETAILS
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Pyrometers:-

Make

Type

Air Cooling:-

Quantity of air required

cubic metres/sec

Details of ducting

Water cooling:-

Details of water cooling circuits

Radiator:-

Make

Type

Length

mm

Breadth

mm

Height

mm

* delete where necessary

Aspiration: - Method

Quantity of air required

cubic metres/sec

2. Auxiliaries

Make Type Other Relevant

Lubricating oil circuits

Filters

Coolers

Primary pumps

Tachometer and drive

ITEM	EQUIPMENT	DETAILS
------	-----------	---------

Special cold start devices

Running hours meter

Safety devices:-

High temperature

Low pressure (lubricating oil)

Cooling water flow trip

Overspeed trip

Speed sensing devices

Lubricating oil thermometers:-

Number

Position (s)

Water thermometer:-

Position

Starting battery

Battery charger

Immersion heater

3. Lubrication

Recommended oil (s)

Grade Quantity (1.)

Sump

Elsewhere (state where)

ITEM	EQUIPMENT	DETAILS		
4.	<u>Alternator and Exciter</u>			
	Make and type			
	Bearings			ball/roller/plain
	Insulation Class (B.S. 2757)			
	Quantity of cooling air required			cubic metres/sec
5.	<u>Electrical Control Panel</u>	Make	Type	Rating
	Main circuit breaker			A.
	Bypass switches			A.
	Automatic change over contactor			A.
	Automatic voltage regulator			
	Control switches			
	Control fuse – No. _____ *			
	Relays			
	Indicator lamps – No. _____ *			V.
	Ammeter switch			
	Voltmeter switch			
	Frequency meter			
	Ammeters – No. _____ *			A.
	Voltmeters – No. _____ *			V.
	Power factor meter			
	Other equipment – give details			

* Tenderer to give total number to be fitted

ITEM	EQUIPMENT	DETAILS	
6.	<u>Performance Data</u>		
	Fuel consumption	<u>Rated output</u>	<u>Consumption</u>
		%	Kg. /KWh
		110	
		100	
		75	
		50	
	Maximum Output	<u>Ambient temperature</u>	<u>Output</u>
		C	KVA
		40	
		30	
		20	
		10	
17	Immersion heater loading		W.
	Critical Speed		rev./min
	Cyclic irregularity		
	Voltage regulation		%
	Frequency regulation		%
	Time to accept 75% full load from 5 C		sec
	Time to accept 100% full load from 5 C		sec
	Time to accept 100% full load from 40 C		sec

ITEM	EQUIPMENT	DETAILS
------	-----------	---------

7. Physical Details

Daily service tank for 24 hour operation – capacity	1.
Size	mm
Total weight of set	Kg.
Overall dimensions of set	
Weather proofing	

8. Operational Details

Description of operation sequence of the automatic control.
 Details of drawings, literature, etc., included with the tender.

3. DEVIATIONS FROM THE SPECIFICATION

The tenderer shall give below details of any equipment which does not meet the specification, or any other deviations, omissions, additions or alternatives in respect of the set which he is offering.

If none, write none

PART E

Price Schedule

- (i) The schedules hereinafter must be priced and executed by the sub-contractor whose signature and official stamp must be inserted in the Price Summary Schedules.
- (ii) The total prices in the Main Summary of Prices Schedules shall be deemed to include for the whole of the sub-contract works in accordance with the Specification.
- (iii) Any prices omitted from any section or part of prices schedule shall be deemed to have been included in another section or part.
- (iv) All prices shall be duty paid and shall also be inclusive of all taxes current at the time of tendering.
- (v) The tenderer shall submit with his tender two copies of full description data of plant equipment to support his tenderer as requested in section 4 of Part B.

SECTION F:
BILLS OF QUANTITIES
AND
SCHEDULE OF UNIT RATES

BILLS OF QUANTITIES AND SCHEDULE OF UNIT RATES

CONTENTS

<u>CLAUSE No.</u>	<u>PAGE</u>
1. GENERAL NOTES TO TENDERERS.....	F-1
2. DECLARATION FORM	F-2
3. BILLS OF QUANTITIES	F-3 to F-4
4. SUMMARY PAGE.....	F-6
5. SCHEDULE OF UNIT RATES.....	F-8

SPECIAL NOTES

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings and general specifications of materials and works.
2. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes (including 16% VAT).

In accordance with Government policy, the 16% VAT and 3% Withholding Tax shall be deducted from all payments made to the Tenderer, and the same shall be forwarded to the Kenya Revenue Authority (KRA).
3. All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part thereof.
4. The brief description of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the sub-contractor shall adhere. Otherwise alternative brands of equal and approved quality will be accepted.

Should the sub-contractor install any material not specified here in before receiving written approval from the Project Manager, the sub-contractor shall remove the material in question and, at his own cost, install the proper material.
5. The grand total of prices in the price summary page must be carried forward to the Form of Tender for the tender to be deemed valid.
6. Tenderers must enclose, together with their submitted tenders, detailed manufacturer's Brochures detailing Technical Literature and specifications on all the equipment they intend to offer.

DECLARATION FORM

Date _____

To _____

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

_____ declare the following:

- a) Has not been debarred from participating in public procurement.
- b) Has not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement.

Title

Signature

Date

(To be signed by authorized representative and officially stamped)

BILLS No. 1

A) PRICING OF PRELIMINARIES ITEMS.

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

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

a. Preliminaries – Bill 1

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

b. Installation Items – Other Bills

- i. The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.
- ii. The unit of measurements and observations are as per those described in clause 3.05 of the section

c. Summary

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

This grand total tender sum shall be entered in the Form of Tender provided elsewhere in this document

BILL No. 1 PRELIMINARIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS	cts
1	Discrepancies clause 1.02					
2	Conditions of sub-contract Agreement clause 1.03					
3	Payments clause 1.04					
4	Site location clause 1.06					
5	Scope of Contract Works clause 1.08					
6	Extent of the Contractor's Duties clause 1.09					
7	Firm price contract clause 1.12					
8	Variation clause 1.13					
9	Prime cost and provisional sum clause 1.14 (insert profit and attendance which is a percentage of expended PC or provisional sum.)					
10	Bond clause 1.15					
11	Government Legislation and Regulations clause 1.16					
12	Import Duty and Value Added Tax clause 1.17 (Note this clause applies for materials supplied only. VAT will also be paid by the sub-contractor as allowed in the summary page)					
13	Insurance company Fees clause 1.18					
14	Provision of services by the Main contractor clause 1.19					
15	Samples and Materials Generally clause 1.21					
	SUB-TOTAL CARRIED TO PAGE F-6					

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS	cts
16	Supplies clause 1.20					
17	Bills of Quantities clause 1.23					
18	Contractor's Office in Kenya clause 1.24					
19	Builder's Work clause 1.25					
20	Setting to work and Regulating system clause 1.29					
21	Identification of plant components clause 1.30					
22	Working Drawings clause 1.32					
23	Record Drawings (As Installed) and Instructions clause 1.33					
24	Maintenance Manual clause 1.34					
25	Hand over clause 1.35					
26	Painting clause 1.36					
27	Testing and Inspection – manufactured plant clause 1.38					
28	Testing and Inspection – Installation clause 1.39					
29	Storage of Materials clause 1.41					
30	Initial Maintenance clause 1.42					
	SUB-TOTAL CARRIED TO PAGE F-6					

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS	cts
31	Attendance Upon Tradesmen, etc. (Insert percentage only) clause 1.58					
32	Local and other Authorities notices and fees clause 1.60					
33	Temporary Works clause 1.63					
34	Patent Rights clause 1.64					
35	Mobilization and Demobilization Clause 1.65					
36	Extended Preliminaries Clause 1.66(see appendix on page C- 24)					
37	Supervision by Engineer and Site Meetings Clause 1.67					
38	Allow for profit and Attendance for the above					
39	Amendment to Scope of Sub-contract Works Clause 1.68					
40	Contractor Obligation and Employers Obligation clause 1.69(see appendix page C- 24)					
41	Any other preliminaries;					
	Subtotal above					
	Subtotal brought forward from page F-4					
	Subtotal brought forward from page F-5					
	TOTAL FOR BILL NO. 1- PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY					

SCHEDULE NO.1

Generating Sets

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
1	Supply and deliver to site 415V. 3 phase, 4 wire 50 Hertz diesel generating set, as specified in the foregoing specification with a standby rated output of 500 KVA at 0.8 lagging power factor complete with sound proof canopy. (To be UL Listed/CE marked & NFPA 508 recognized) NB: A letter of Authorization from producer must be submitted. Preffered Make : Cummins or Caterpillar or Equal and approved.)	1	No.			
2	Installation, testing and commissioning of item No.1 above	1	Item			
3	Any other work					
4	Supply and deliver to site 415V. 3 phase, 4 wire 50 Hertz diesel generating set, as specified in the foregoing specification with a standby rated output of 200 KVA at 0.8 lagging power factor complete with sound proof canopy. (To be UL Listed/CE marked & NFPA 508 recognized) Preffered Make : Cummins or Caterpillar or Equal and approved.	1	No.			
5	Installation, testing and commissioning of item No.4 above	1	Item			
6	Any other work	1	Item			
Page Total						

SCHEDULE NO.2
Generating Set Control Panels

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
1	Supply and deliver to site an Electrical Control Panel complete with incoming two isolating 1250A T.P.&N. switches of suitably rated contactors for automatic change over operation including synchronising panel facility for parallel operation of both generators, load sensing devices for automatic transfer of power load from the 200 KVA generator to the 500 KVA generator when the power requirement exceeds 200KVA. Allow for both the generators to run simultaneously when the load exceeds 500 KVA. Include for all accessories as specified in paragraph 9.3 part C of this Specification. Cost to include Voltage free contacts with inbuilt level sensors for both daily and main fuel tanks provision for intergration to BMS Monitoring on BACnet protocol. (Control to meet NFPA 110, CE-marked, EN 50081-1,2 and EN 50082-1,2, UL 508 recognized CSA C282-M1999)	1	No.			
2	Allow for cost of factory acceptance tests at the manufacturing plant witnessed by the Client representative and Project Engineer inclusive of 4 star accomodation, business class means of travel and all related costs	1	Item			
3	As item no 1 above but with 400A TPN by-pass switches for 200KVA standby generator set	1	No.			
4	Install, interwire with the M.V. switchboard, test and commission the control panel for Item No.1 items Nos. 1 and 3	1	Item			
5	Supply and deliver to site starter battery and charger as specified in paragraph 9.6 Part C of this Specification,	2	No.			
6	Supply and deliver to site 24 V. batteries as specified in this Specification	2	No.			
7	Attendance by Electrical Sub-contractor for interface cabling between the generator control cubicle and M.V. board	1	Item			
8	Any other work					
	Interconnecting cabling					
9	4C/120mm ² in parallel pvc/swa/pvc copper cable	80	m			
10	4Core/2.5mm ² pvc/swa/pvc copper signal cable	80	m			
11	Cable glands, lugs termination and bonding to earth	1	Item			
12	Allow for the extension of each exhaust pipe by 40m which shall be terminated at a location to be indicated on site by the Electrical Engineer	1	Item			
13	Supply and fit 2 No replacable smoke carbon filters which shall be to LEED requirements as per specifications	1	Item			
Page Total						

SCHEDULE NO.3

Recommended Spare Parts and Lubricants

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
	For the supply to site of the following spare parts and lubricators:-					
1	Oil Filters	10	No.			
2	Air Filters	10	No.			
3	Injector to suit the set	2	No.			
4	Set of fan belts comprising of belts*	4	No.			
5	Set of indicator lenses comprising of bulbs	2	No.			
6	Set of indicator bulbs comprising of bulbs	2	No.			
7	Set of fuses comprising of fuses	2	No.			
8	200 litre drum od sump oil of grade*	2	No.			
9	2 Kilogram tin of grease of grade.....*	2	No.			
10	10 litre plastic container of distilled water	2	No.			
11	Overhaul kit	2	No.			
12	Any other spare parts recommended by the Tenderer:-					
Page Total						

SCHEDULE NO.3 (continued)

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
	<p>* Tenderer to fill in the details and price of Item 12 above but the price not to be included in total carried forward.</p>					
Page Total						

SCHEDULE NO.4

Tools to be supplied with the set

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
	For the supply to site of the following tools:-					
1	Metal box with lock and two keys	2	No.			
2	Set of 8 No. Chrome Vanadium ring spanners in sizes to suite the ring	2	No.			
3	Set of 3 screw drivers, 75mm., 200mm. and 300mm, plus one 200mm. Philips type	2	No.			
4	Ditto but open ended spanners	2	No.			
5	Set of feeler gauges	2	No.			
6	Grease gun to suit greasing points	2	No.			
7	Oil can, trigger type	2	No.			
8	Hydrometer and plastic filler bottle with pouring spout	2	No.			
9	Any other special tools which the tenderer recommends should be purchased as an optional extra:-					
	*Tenderer to give details and price of Item 9 but the price not to be included in the total carried forward					
Page Total						

SCHEDULE NO.5

Earthing

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
1	Supply and install, in configuration as directed by the Engineer 4 No. steel cored copper earth rods, 1800mm., x 15mm., threaded for extension, connected by brass clamps to 30m. Of 25mm. X 3mm. Copper earth tape laid in trenches of 300mm. minimum depth; and fixed to the wall of the generator room with brass spacer saddles at 1m. Intervals and thereafter connected to the Sub-Station earth bar via a brass test clamp	2	Set			
2	Additional earth rod of size 1800mm. X 15mm.	2	No.			
3	Additional copper earth tape of size 25mm. x 3mm.	2	m			
4	Any other work	1	Item			
*Unit cost to be supplied for Item 2 and 3 but the price not added to total carried forward						
Page Total						

SCHEDULE NO.6

Fuel Storage Tank

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts
1	Supply, install where directed by the Engineer and connect to the set a fuel service tank with an operational capacity of twenty four hours when both generators are running.The tank to be complete with stand and all interconnecting pipework. Cost to include Voltage free contacts with inbuilt level sensors for both daily and main fuel tanks provision for intergration to BMS Monitoring on BACnet protocol.	2	No.			
2	Supply and install a manual hand pump complete with all accessories and piping	2	No.			
3	Supply diesel to fill up the tank to run the generator on full load for 24 hours	2	Items			
4	Any other work	2	Item			
5	Allow for extension the exhaust pipes for both generators to the roof outlet approximately 45m.	1	item			
Page Total						

SCHEDULE NO.7
Foam Sprinkler system

Item No	Description	Quantity	Unit	Rate	Kshs.	Cts.
	<p>Foam system for Fuel tank - UL,FM Approved or LPCB listed (AREA 50m²)(Volume =200m³)</p> <p>Supply, deliver, install, test and commission the following Pre action Foam water LPCB rated Pre action Foam water Sprinkler System shall be of Double knock type confirming to the requirements of NFPA 11, 2007 Edition, NFPA 13, 2007 Edition & NFPA 16, 2007 Edition</p> <p>100Gal vertical bladder tank for AFFF Foam 3% inclusive of all other accessories water inlet ball valve, concentrate isolator,swing check valve , PRV Valve among others as Viking as per attached drawings to function.Cost to include Foam concentrate carrying pipe of stainless steel SS 316 and All fittings & valves.Cost to include control pannel with provision for intergration to BMS Monitoring on BACnet protocol.</p>	1	No.			
2	75mm straight through (grooved/grooved) deluge valve ,halar coated complete with Electric firm releave,convectonal deluge valve firm,Delouge Valves as Viking/Tyco Model DV 5, (UL and C-UL Listed. FM Approved).	1	No.			
3	3" threaded connection proportional controller.(As per manufacturer recommendation).	1	No.			
4	3" OS&Y Gate ,threaded connections bronze.	1	No.			
5	Tamper switch SPDT Potter.	1	No.			
6	3% Foam concetrate viking (Manufactured by chemetron)	1	No.			
7	75mm Y type Strainer ,cast iron ,flanged as muller steam.	1	No.			
8	Pendant sprinkler head ,Standards orifice brass -VK102	10	No.			
9	75mm Threaded bronze check valve	1	No.			
10	Pressure switch potter PS 10-2 (UL, cUL, and CSFM Listed, FM and LPC Approved, NYMEA Accepted, CE Marked)	1	No.			
11	Rate of rise and presence heat detector As Fenwal 12-X27121-000 with temperature rating of 87-108°C.	10	No.			
12	Any other accessories as per atatched drawing for proper function of the system	Item	Sum			
Page Total to collection page						

SUMMARY OF TENDER

Preliminaries.....	KShs.....
Schedule No.1.....	KShs.....
Schedule No.2.....	KShs.....
Schedule No.3.....	KShs.....
Schedule No.4.....	KShs.....
Schedule No.5.....	KShs.....
Schedule No.6.....	KShs.....
Schedule No.7 (Foam sprinkler system).....	KShs.....
Supply of 2 sets of Maintenance Manuals.....	KShs.....
Productions and supply of Working Drawings.....	KShs.....
Productions and supply of Record Drawings.....	KShs.....
Sub-total.....	<u>KShs.....</u>
Value Added Tax.....	KShs.....
Add 7.5% of the above sub-total for contingency to be used for authorised variations.....	KShs.....
Total carried to Form of Tender.....	<u>KShs.....</u>
Delivery time of the generator set to site.....	

NAME AND ADDRESS OF TENDERER:

SIGNATURE OF TENDERER:

DATE:

SECTION G:

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

CONTENTS

<u>CLAUSE No.</u>	<u>PAGE</u>
1. GENERAL NOTES TO THE TENDERER.....	(i)
2. TECHNICAL SCHEDULE.....	G-1
3. TECHNICAL DATA	G-3

TECHNICAL SCHEDULE

1. General Notes to the Tenderer

- 1.1 The tenderer shall submit technical schedules for all materials and equipment upon which he has based his tender sum.
- 1.2 The tenderer shall also submit separate comprehensive descriptive and performance details for all plant apparatus and fittings described in the technical schedules. Manufacturer's literature shall be accepted. Failure to comply with this may have his tender disqualified.
- 1.3 Completion of the technical schedule shall not relieve the Contractor from complying with the requirements of the specifications except as may be approved by the Engineer.

TECHNICAL SCHEDULE

The tenderer must complete in full the technical schedule. Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule (fill forms attached).

ITEM	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
1	Alternator Engine			
2	Alternator			
3	Oil filters			
4	Air filters			
5	Sump oil			
6	Lubrication grease			
7	Smoke carbon filters			

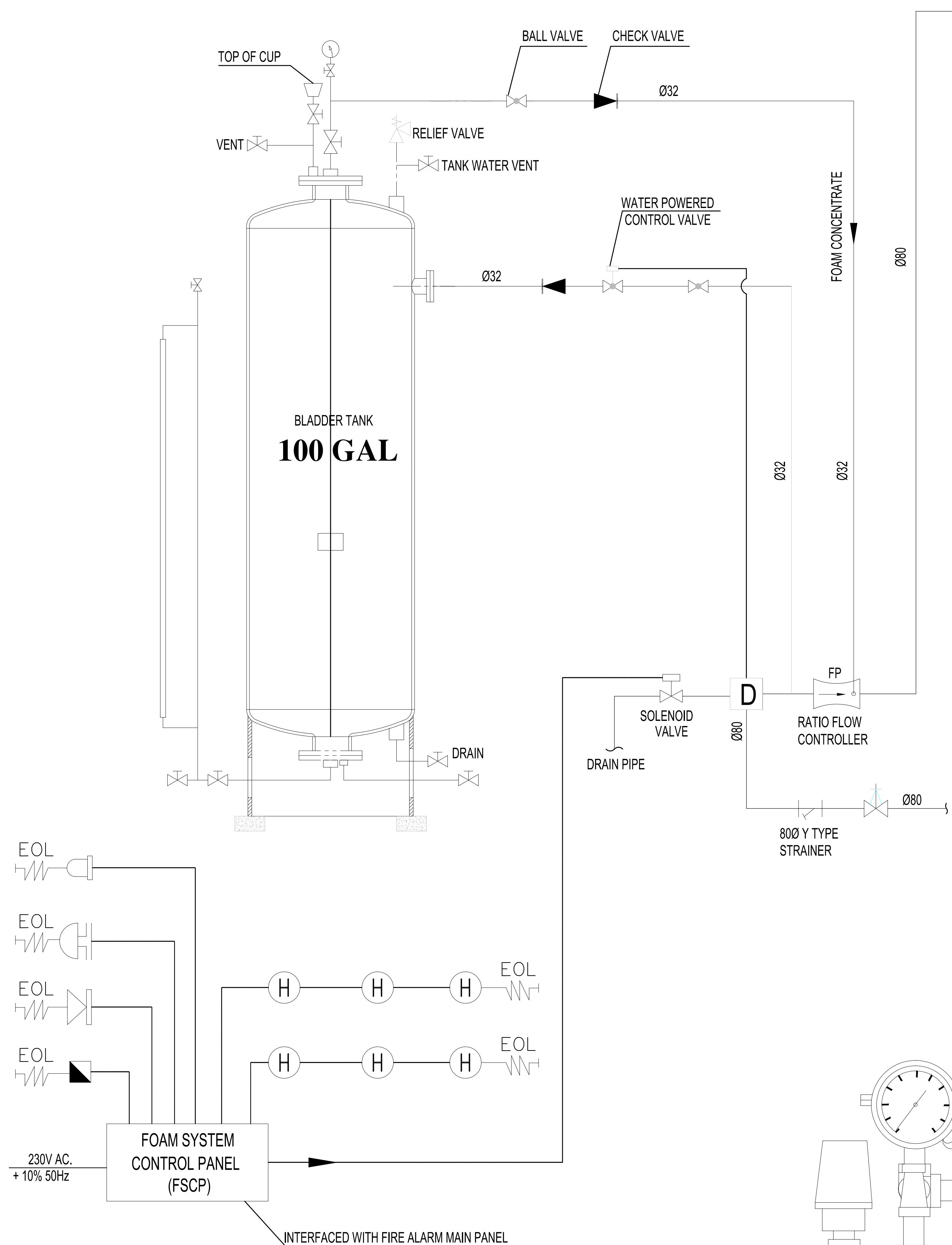
Catalogue must be attached for all the terms in the schedule of material above

SECTION H:

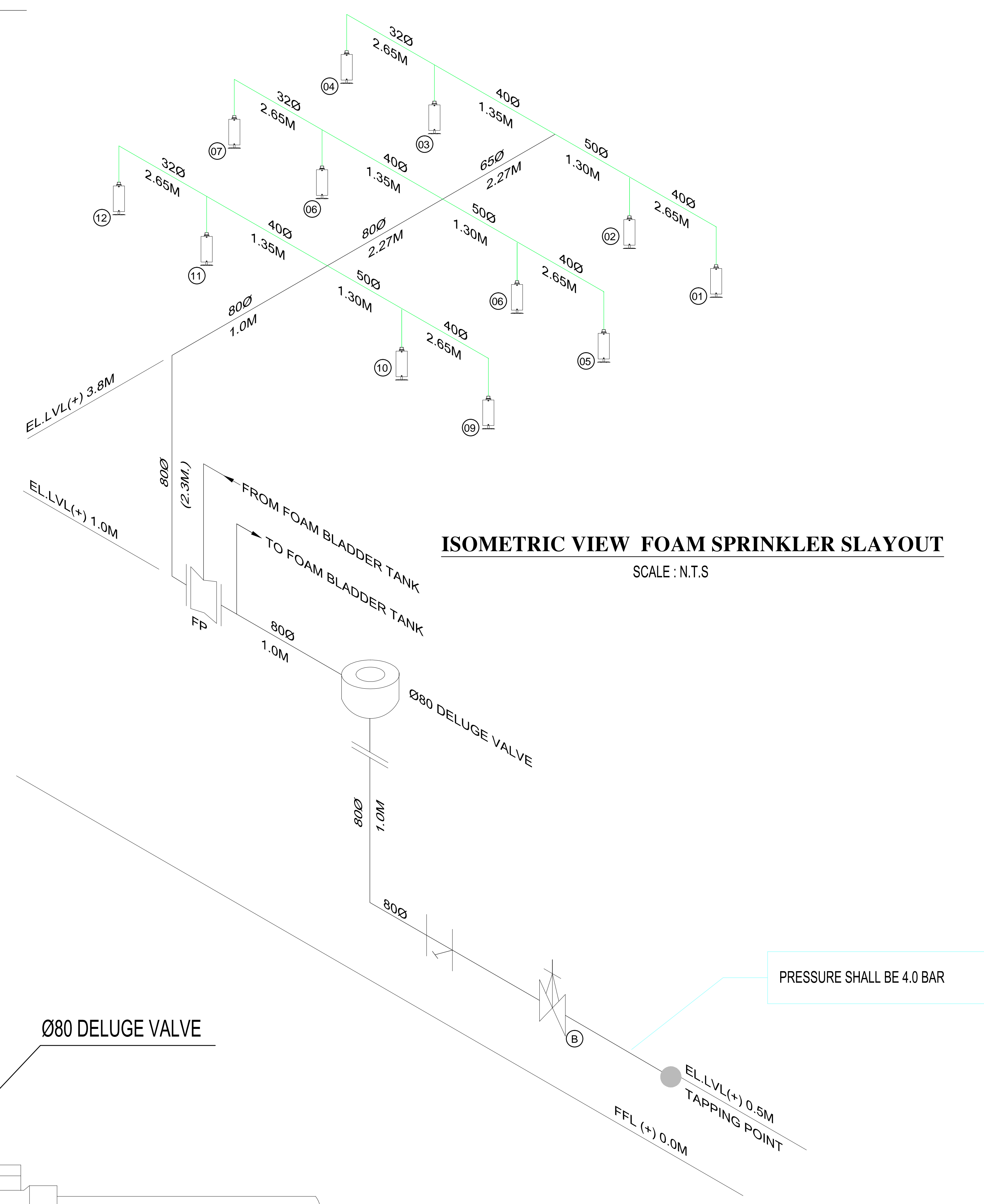
DRAWING SCHEDULE

CONTENTS

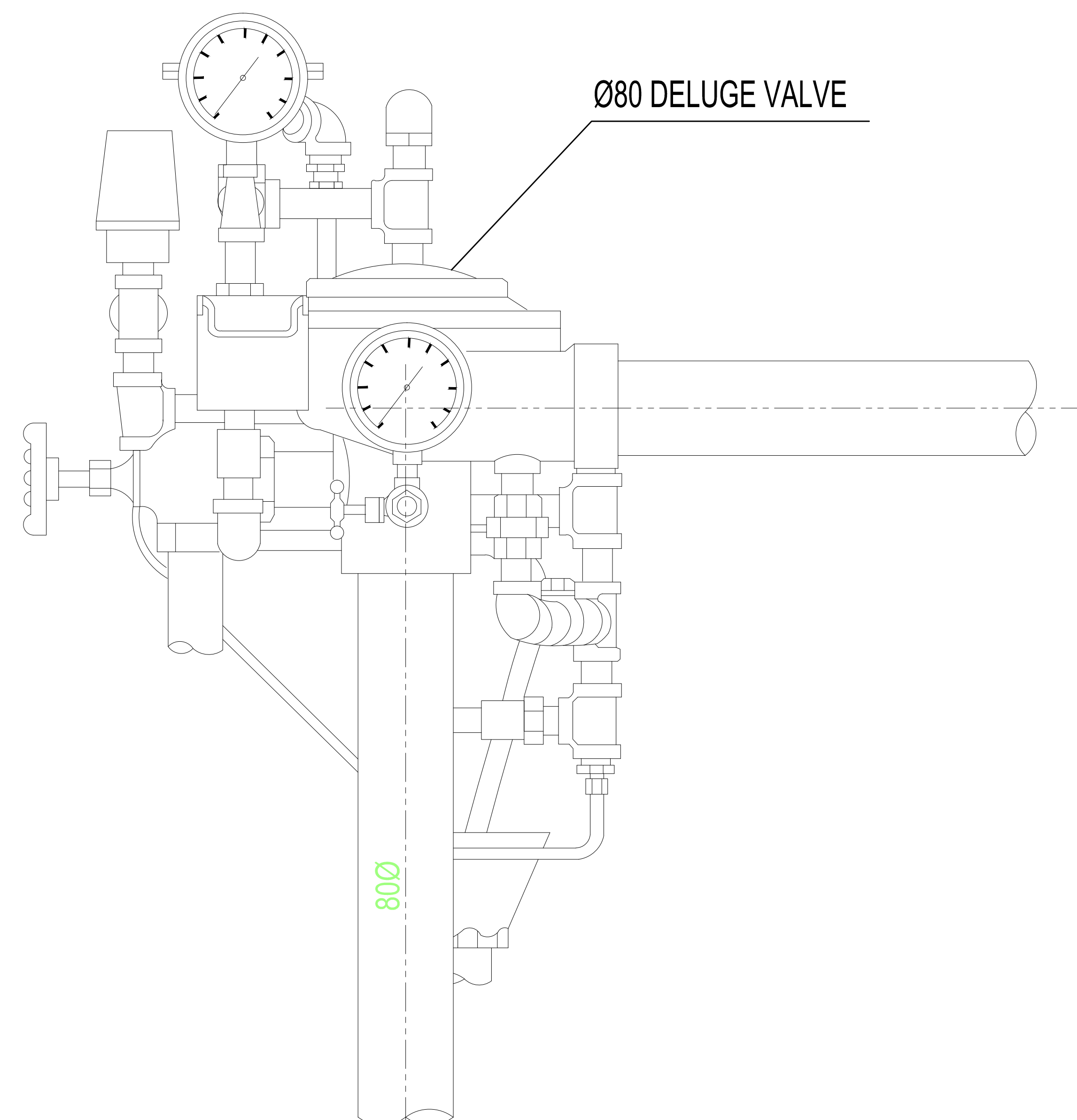
<u>CLAUSE No.</u>		<u>PAGE</u>
1.	DRAWING SCHEDULE.....	H-1




SCHMATIC DIAGRAM FOR FOAM SPRAY SYSTEM
SCALE : N.T.S



ISOMETRIC VIEW FOAM SPRINKLER SLAYOUT
SCALE : N.T.S



DELUGE VALVE DETAIL (FOAM SYSTEM)

PROJECT: KoTDA OFFICES - KONZA CITY - KENYA			
CLIENT:  KONZA TECHNO CITY KENYA			
CONSULTANT: SERVCONSULT ENGINEERING CONSULTANTS P.O BOX 41693 - 00100 PHONE 0202460404, +254725705722 N A I R O B I K E N Y A. E-MAIL: info@servconsult.co, servconsult87@gmail.com			
ARCHITECTS: SK ARCHPLANS			
DRAWING TITLE: FIRE FIGHTING FOAM SPRINKLER DRAWING 4			
SCALE: N.T.S	DRAWN BY: PAUL	CHECKED BY: PAUL	APPROVED BY: ENG ODUOR
DATE: 03/08/2017	PROJECT NO.:	DRAWING NO.:	SHT. NO. REV.
SC 454	M.FF-SD-4	1/1	

DRAWING SCHEDULE:

As shall be provided during project implementation.

SECTION I:

STANDARD FORMS

STANDARD FORMS

CONTENTS

<u>FORM</u>	<u>PAGE</u>
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7. SCHEDULE OF ON-GOING PROJECTS.....	I-8
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11. SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS.....	I-12

NOTE: ALL FORMS IN THIS SECTION MUST BE FILLED AS THEY SHALL BE PART OF THE EVALUATION CRITERIA

PERFORMANCE BANK GUARANTEE

To: The Director
Konza Technopolis development Authority.
P.O. Box 30519-00100

Dear Sir,

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

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

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of:

Kshs. (*amount of Guarantee in figures*)

Kenya Shillings

.....(*amount of Guarantee in words*),

and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings (*amount of Guarantee in words*) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This guarantee shall be valid until the date of issue of the Certificate of Completion.

SIGNATURE AND SEAL OF THE GUARANTOR

Name of Bank

Address

Date

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full names of Tenderer:
.....
2. Full address of Tenderer to which tender correspondence is to be sent (unless an agent has been appointed below):
.....
3. Telephone number (s) of Tenderer:
.....
4. Telex/Fax Address of Tenderer:
.....
5. Name of Tenderer's representative to be contacted on matters of the tender during the tender period:
.....
6. Details of Tenderer's nominated agent (if any) to receive tender notices. This is essential if the Tenderer does not have his registered address in Kenya (name, address, telephone, telex):
.....
.....

Signature of Tenderer

CONFIDENTIAL BUSINESS QUESTIONNAIRE

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

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

Part 1 – General

Business Name

Location of business premises: Country/Town.....

Plot No..... Street/Road

Postal Address..... Tel No.....

Nature of Business.....

Current Trade Licence No..... Expiring date.....

Maximum value of business which you can handle at any time:
Kenya Shillings.....

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

Your name in full..... Age.....

Nationality..... Country of Origin.....

Citizenship details

Part 2 (b) – Partnership

Give details of partners as follows:

	<i>Name in full</i>	<i>Nationality</i>	<i>Citizenship Details</i>	<i>Shares</i>
1.
2.
3.
4.

Part 2(c) – Registered Company

Private or Public

State the nominal and issued capita of the company:

Nominal KShs.

Issued KShs.

Give details of all directors as follows:

	<i>Name in full</i>	<i>Nationality</i>	<i>Citizenship Details*</i>	<i>Shares</i>
1.
2.
3.
4.

Part 2(d) Interest in the Firm:

Is there any person/persons in the employment of the Government of Kenya WHO has interest in this firm? Yes/No
..... (Delete as necessary)

I certify that the above information is correct.

.....
.....
Title

.....
Signature

Date

* *Attach proof of citizenship*

FORM OF WRITTEN POWER-OF-ATTORNEY

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

.....
(Name of Tenderer's Representative in block letters)

.....
(Address of Tenderer's Representative)

.....
(Signature of Tenderer's Representative)

KEY PERSONNEL

Qualifications and experience of key personnel proposed for administration and execution of the Contract.

POSITION	NAME	YEARS OF EXPERIENCE (GENERAL)	YEARS OF EXPERIENCE IN PROPOSED POSITION
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

I certify that the above information is correct.

.....
Title

.....
Signature

.....
Date

CONTRACTS COMPLETED IN THE LAST THREE (3) YEARS

Work performed on works of a similar nature and volume over the last five years.

<u>PROJECT NAME</u>	<u>NAME OF CLIENT</u>	<u>TYPE OF WORK AND YEAR OF COMPLETION</u>	<u>VALUE OF CONTRACT (Kshs.)</u>

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

.....
Title

.....
Signature

.....
Date

SCHEDULE OF ON-GOING PROJECTS

Details of on-going or committed projects, including expected completion date.

PROJECT NAME	NAME OF CLIENT	CONTRACT SUM	% COMPLETE	COMPLETION DATE

I certify that the above works are currently being carried out by ourselves.

.....
Title

.....
Signature

.....
Date

FINANCIAL REPORTS FOR THE LAST FIVE YEARS
(Balance sheets, Profits and Loss Statements, Auditor's reports, etc.
List below and attach copies)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

* *stamp this page*

EVIDENCE OF FINANCIAL RESOURCES TO MEET QUALIFICATION REQUIREMENTS
(Cash in Hand, Lines of credit, e.t.c. List below and attach copies of supportive documents.)

1. _____.
2. _____.
3. _____.
4. _____.
5. _____.
6. _____.
7. _____.
8. _____.
9. _____.
10. _____.

NAME, ADDRESS AND TELEPHONE, TELEX AND FACSIMILE OF BANKS
(This should be for banks that may provide reference if contacted by the employer)

NAME	ADDRESS	TELEPHONE	TELEX	FACSIMILE

DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS IN WHICH THE TENDERER IS INVOLVED AS ONE OF THE PARTIES

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING
OUT THE WORKS

ITEM OF EQUIPMENT	DESCRIPTION, MAKE AND AGE (Years)	CONDITION (New, good, poor) and number available	OWNED, LEASED (From whom?), or to be purchased (From whom?)