PROPOSED BUFFALO PLAZA ON PLOT L.R. NO. 37/262/1 NAIROBI WEST-NAIROBI COUNTY

FOR

NYATI SACCO LIMITED

SPECIFICATIONS AND BILLS OF QUANTITIES

FOR

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING

OF

GENERATOR INSTALLATION WORKS

ARCHITECT
Dama Services Limited,
P.O. Box 9656-00100
Nairobi
Email:damaservices@gmail.com

ELECTRICAL ENGINEER
FluidSystem Engineers Limited,
P.O. Box 41309-00100
Nairobi
Email:fluidsystemengineers@gmail.com

QUANTITY SURVEYOR
Integra Consulting Limited
P.O. Box 27974-00100
Nairobi
Email:info@integraconsulting.co.ke

MECHANICAL ENGINEER
Fluidsystem Engineers Limited,
P.O. Box 41309-00100
Nairobi
Email:fluidsystemengineers@gmail.com

STRUCTURAL ENGINEER
Inticom Limited
P.O. Box 14105-00100
Nairobi
Email:inticomltd@gmail.com

CLIENT
Nyati Sacco,
P.O. Box 7601 –
00200NAIROBI
Email: info@nyatisacco.co.ke

JANUARY, 2022

TABLE OF CONTENTS

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF GENERATOR INSTALLATION WORKS

TABLE OF CONTENTS

CONTENTS: **PAGE**

DEFINITIONS

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

The Employer:	Nyati Sacco
Represented by:	Board of Management

ARCHITECT shall mean Dama Services Limited

ELECTRICAL ENGINEER shall mean Fluidsystem Engineers Limited,

QUANTITY SURVEYOR shall mean Integra Consulting Limited

MECHANICAL ENGINEER shall mean Fluidsystem Engineers Limited,

STRUCTURAL ENGINEER shall mean Inticom Limited

Employer's representative: This shall mean the Project Manager and shall be Dama ServicesLimited,

Main contractor	The firm appointed to carry out the builders works.
Contractor:	The firm appointed to carry out the supply, delivery, installation, testing and commissioning of Generator Installation works
Site:	Nairobi

NOTES TO ALL TENDERERS;

1. The tenderer is required to check the number of pages in this document and should any befound to be missing or the figures indistinct, he must inform the Engineer at once and havethe same rectified. Should the tenderer be in doubt the precise meaning of any item, word or figure. Or for any reason whatsoever observe any apparent omission of words or figures,he must inform the Engineer in order that the correct meaning may be decided upon beforethe date for the submission of the tenders.

2. No liability whatsoever will be admitted nor claim allowed in respect of errors in the completed tender due to mistakes in this document which should have been rectified in themanner described above.

3. The tenderer shall not otherwise qualify the text of this specification. Any alteration or qualification made without authority will be ignored and the text of the specification as printed will be adhered to.

4. The tenderer shall be deemed to have made allowances in his unit prices generally to coveritems of preliminaries or additions to prime cost Sums or other items. If those have not been priced against the respective items.

5. The tenderer's price shall include all government taxes including duties, VAT, etc which must be included in the rates. No claims whatsoever will be allowed in respect of duties, VAT etc if the tenderer does not price them as aforementioned.

6. In no case will expense incurred by the tenderer in preparation of this tenderer be reimbursed.

7. The copyright of this specification is vested in the Engineer and no part thereof may be reproduced without their express permission, given in writing.

8. The Sub-Contractor shall be solely responsible for the accurate ordering of materials in accordance with the drawings and these specifications.

9. The specifications must be priced in Kenya Shillings

10. This is a fixed price Contract and no claims shall be entertained on whatever ground. Thesub-contractor is advised to include all such costs as he projects may arise in his unit rates. Any variations in the exchange rate will also be no excuse for any variations in the contractsum.

Signed (As in form of Tender) .....

Date/Stamp .....

FORM OF TENDER

To: The Chief Executive
Officer,Nyati Sacco,
P.O. Box 7601 –
00200NAIROBI

Dear Sir,

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF GENERATOR INSTALLATION WORKS FOR THE PROPOSED CONSTRUCTION OF BUFFALO PLAZA ON LR 37/262/1

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 of ……20…..

   Signature ……in the capacity of …….

   duly authorized to sign tenders for and on behalf of:

   ……*[Name of Tenderer]*

   of ……*[Address of Tenderer]*

FORM OF TENDER SECURITY

WHEREAS

……(her einafter called "the Tenderer") has submitted his tender dated …… For thesupply, delivery, installation, testing and commissioning of generator Installation works for the Proposed Construction of Buffalo Plaza on 37/262/1

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/Insurance binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank this ……Day of ……20 ……

THE CONDITIONS of this obligation are:

1. If after tender opening the Tenderer withdraws his tender during the period oftender 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)*

PART A:

PRELIMINARIES AND GENERAL CONDITIONS

PART A - PRELIMINARIES AND GENERAL CONDITIONS

NAMES OF PARTIES

The following will be inserted in the Articles of Agreement:-

Architects:	AS PER MAIN WORKS
Engineer:	AS PER MAIN WORKS
Employer:	AS PER MAIN WORKS

2. DEFINITIONS OF TERMS

The terms, phrases and abbreviations shall be deemed to have the following meaningswherever used hereinafter and in all contract documents.

"Engineer" shall in the Electrical works mean **'project Electrical engineer"** and, or in the event of any of their deaths, or ceasing to be the Engineers for the purposes of this Sub-contract, such other person as the client shall nominate for thatpurpose. For the purpose of **Electrical** engineering works the Engineer shall be deemed vested with the duties of, and be the representative of the Architect, except on respect of variations which involve the sub-contract sum.

"Main Contractor" shall mean the person or persons, partnership, firm or company, whose tender for the main contract has been accepted, and who has or have, signed the main contract and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives. For the purposes of this work, the terms "Main Contractor" and "Contractor" shall have the same meaning.

"Sub-Contractor" shall mean the person or persons, partnership, firm or company, whose tender for the sub-contract for the electrical and mechanical works has been accepted, and who has or have, signed the sub-contract and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives.

"Works" shall mean all or part of the works, material and articles, wherever the sameare being manufactured or prepared, which are to be used in the execution of this sub-contract and whether the same may be on the site or not.

"Approved" shall mean approved by the Engineer/Architect at his absolute discretion.
"Directed" shall mean directed by the Engineer/Architect at; his absolute discretion.

"Selected" shall mean selected by the Engineer/Architect at his absolute discretion.

"M^3" shall mean cubic metre

"M^2" shall mean square metre

"M" shall mean linear millimetre

"Kg" shall mean Kilogram

"No." shall mean Number

"Prs" shall mean Pairs

"B.S." shall mean the current British Standard Specification published by the British Standards institution, 2 Park Street, London, W.I. England

"As before" shall mean in all respects as earlier described in the same or previous bill

"Ditto" shall mean the whole of the preceding description except as qualified in the description. Where it occurs in descriptions of succeeding terms it shall mean the whole of the preceding description which is contained within the appropriate brackets.

"Fix Only" shall mean take delivery on site (unless otherwise stated), unload where necessary, transport within site compound, store, unpack, check contents against orders and packing lists, assemble as necessary, distribute to position, hoist and fix only.

3. TENDER CONDITIONS

Any act of collusion that may distort normal competitive conditions may cause the rejection of the tenders concerned. By participating in the tendering, tenderers certifynot to be involved in such acts of collusion.

Tenders containing abnormally high or low unit prices and /or lump sums may be rejected. Before such rejection, however the sub-contractor may be given the opportunity of giving a detailed explanation.

Tenders must be returned complete and tenderers, or their assigned representatives are at liberty to witness the tender opening at the time and venue stated in the letterof invitation to tender. Tenders received after the stated time will be returned unopened and incomplete tenders will be rejected.

Tenders are invited in strict accordance with the documents issued, counter offers submitted with tenders will not be considered, letters of qualifications with tenders may be ignored if they have the effect of modifying either the terms of a tender or thecompatibility of a tender with the other tenders. However should a tenderer. In goodfaith wish to propose modifications to the tender terms, conditions and contents for the purposes of reducing the tender amount then he shall contact the Engineer in writing well before the date of tender opening. Should the Engineer approve the proposed modification, all tenderers will be advised in due time for the modification oftheir tenders. No proposed modification will be considered unless this procedure has been followed.

The client is not bound to accept the lowest or any tender, nor is the client bound to divulge reasons for the acceptance or non-acceptance of any tender. Any tender maybe accepted by the client within the stated period unless previously withdrawn by thetenderer.

All deletions, additions and corrections to figures inserted in the tender document areto be counter signed by the tenderer.

In the event of two or more tenders being in the same sum, tenderers may be given 7days within which to revise their tender prices. Should there again be two or more tenders in the same sum, and in the absence of any qualities to give one tenderer preference over the other(s), then the sub-contract may be awarded by drawing lots inthe presence of the tenderers concerned.

4. DESCRIPTION OF SITE

The site of the works is within **Nairobi**. Due care will be required during constructionso that the occupants and facilities in the adjacent premises and the premisesthemselves are not interfered with in any way.

The sub-contractor is recommended to visit the site and will be deemed to have satisfied himself with regard to the relevant details of preliminary. If the sub-contractor, for whatever reason, feels specialised attendance will be required, with significant financial implications or requires specialised mobilisation to start the works, he should spread the cost of such works in his unit rates.

No claims whatsoever by the sub-contractor for additional payment will be allowed on the grounds of any misunderstanding or misapprehension in respect of any such matters or otherwise, should the sub-contractor be required to offer specialisedattendance prior to, or during, the performance of the contract.

5. TENDER EVALUATION PROCEDURES

Following the return of the tenders for the works measured in these bills of quantities,arithmetical and other analysis will be carried out in order to select the lowest acceptable tender in terms of responsive and realistic pricing, etc. This section will beat the sole discretion of the Employer.

The unit rates offered by the selected tenderer will then be applied to new quantitiesmeasured by the Engineer for the revised scope of works.

The resultant total, together with the priced preliminaries and any modified prime cost and provisional sums will be consolidated into a sum for which the sub-contractwill be signed. This procedure will be applied only to the selected tender. Neither the Client nor the Consultants will enter into discussion or any correspondence with the other tenderers after the selection process has been carried out and no reasons will begiven for selection or non-selection.

Any tenderer unable to comply with these procedures will be disqualified from the selection process

6. ACCESS TO SITE AND SECURITY

Means of access to the site will be as directed by the Architect; no other access will bepermitted in any circumstances.

7. AREA TO BE OCCUPIED BY THE SUB-CONTRACTOR

Areas to be occupied by the sub-contractor for use as storage shall be as directed by the Project Architect.

8. DRAWINGS

8.1 The sub-contractor will be deemed to have examined the drawings before tendering and to have satisfied himself regarding their details and regarding the nature and extent of the works and the method of installation involved. No claims arising out of misapprehension in these respects will be allowed.

8.2 The sub-contractor shall at his own risk and costs execute and perform the works described in the conditions of contract and bills of quantities and detailed in thedrawings provided and supplied to the sub-contractor for the purpose of works and completely finish the said works in a good workmanship and with the utmostexpedition.

8.3 The sub-contractor shall satisfy himself as to the correctness of all drawings andmeasurements. If the sub-contractor finds any discrepancy in the drawing or between the drawing and the specifications he shall immediately refer the same tothe Engineer who will decide which shall be followed.

Figured dimensions shall be taken in preference to the scale mentioned on or attached to any drawing. Details shown on drawings shall be taken in preferenceto items and quantities in the specification.

8.4 Two copies of all drawings and of the specifications will be furnished free of cost tothe sub-contractor (whose tender has been accepted) for his own use. Any extra copies will be paid for.

9. VALUATIONS OF LUMP SUMS AND PRELIMINARY COSTS

Lump sums entered in these bills of quantities against any item of general condition or preliminaries will be included in appropriate valuations according to reasonable assessment of actual costs involved in the item.

10. PAYMENT FOR MATERIALS ON SITE

All materials for incorporation in the works must be properly installed before payment is effected unless specifically exempted by the Engineer/Architect. This is toinclude the materials of the sub-contractor, and his nominated suppliers.

11. CONTRACT AGREEMENT AND CONDITIONS

11.1 General

The articles of Agreement and conditions shall be the agreement and schedule ofconditions of building contract forms published by the Kenya Association of Building and Civil Engineering Contractors' (KABCEC).

11.2 Water and Electricity Supply

The main contractor will make water and electrical power available to the generator sub-contractor. The main contractor and the sub-contractor will mutually agree whether or not the latter should pay for the water / electricity used for the works. That notwithstanding, no excuse will be entertained for power failure or lack of water as the sub-contractor is required to make his own arrangements in such circumstances.

11.3 Sub-contractor's Materials

Purchase of materials by the sub-contractor and their storage on site for inclusionin payment certificates far in advance of reasonable requirements may be allowedat the sole discretion of the Engineer. This however is also subject to availabilityof such storage space. Storage space may be provided on site.

12. WARRANTY AND PERFORMANCE STANDARDS

The sub-contractor must furnish the client through the Engineer with a general written warranty covering quality of workmanship, material and equipment and be compelled thereby for a one year period after practical completion of the sub-contract.

The sub-contractor must make good, at his own expense, such repairs and replacements as may be required as a consequence of negligent workmanship or defective materials. The sub-contractor must also procure such warranties and guarantees as aforesaid from all manufacturers and/or suppliers of materials or equipment incorporated in the project under this contract.

The sub-contractor must comply in all respects with given standards of workmanshipas defined and described in the specifications and Bills of Quantities and relevant codes of Practice. The sub-contractor must also comply with all tests of materials as required and/or directed by the Engineer.

13. TOOLS, PLANTS, ETC

The sub-contractor shall allow for providing of all ladders, tools, plant and transport required for the works, except in so far as may be specifically stated otherwise.

14. SAFETY, HEALTH AND WELFARE OF WORKPEOPLE

The sub-contractor shall allow for providing for the safety, health and welfare of workpeople and for complying with any relevant ordinances, Regulations or Union agreement.

15. NATIONAL INSURANCE AND PENSIONS

The Sub-contractor shall allow for making any National Social Security Fund payments due in respect of workpeople.

16. HOLIDAY AND TRANSPORT OF WORKPEOPLE

The sub-contractor shall allow for providing holidays and transport for workpeople and for complying with any relevant ordinances or union agreement.

17. TRAINING LEVY

The sub-contractor's attention is drawn to legal notice no. 237 of October, 1971,which requires payments by the sub-contractor of a training levy on all contracts of more than Shs. 50,000/= in value and his tender must include for all costs arising or resulting there from. Proof of payment of those training levies will berequired.

18. EXISTING PROPERTY

The sub-contractor shall take every precaution to avoid damage to all existing property including flower beds, fences, roads, cables, office equipment, drains, adjacent buildings and other services and he will be held responsible for all damagesarising from the execution of this sub-contract to the afore-mentioned property andhe shall make good all such damage where directed at his own expenses to the satisfaction of the Engineer.

19. TESTING

The sub-contractor shall allow for all testing of material and installations required by these specifications and he shall be responsible for all expenses incurred in completing such tests, including costs of materials and labour, equipment, transportand all other costs.

20. SUPERVISION AND WORKING HOURS

The works shall be executed under the direction, and to the entire satisfaction in allrespects, of the Engineer who shall at all times during normal working hours have access to the works and to the yards and workshops of the sub-contractor or other places where work is being prepared for the sub-contractor.

The working hours shall be those generally worked by good employers in the building and civil engineering trades taking note of gazetted holidays unless the Engineer shall so direct.

No work shall be covered up in the absence of the clerk of works without the prior approval of the Engineer in writing.

21. SAMPLES

The Sub-contractor shall furnish at his own cost any samples of materials or workmanship that may be called for by the Engineer for his approval or rejection and any further samples in the case of rejection until such are approved by the Engineer, and the Engineer may reject any materials or workmanship not in his opinion up to the approved samples.

The Engineer shall instruct for the testing of such materials as he may at his discretion deem desirable and the testing shall be made at the sub-contractor's cost. The sub-contractor shall allow in his tender for such samples and tests.

22. MATERIALS, TOOLS, PLANT ETC.

All materials and workmanship used in the execution of works shall be of the best quality and description unless otherwise described. Any materials for the works condemned by the Engineer shall immediately be removed from the site at the sub-contractor's expense.

The sub-contractor shall provide at his own risk and cost all materials, scaffolding,tools, plant, transport and workmen required for the works except, insofar as may be stated otherwise herein.

The sub-contractor shall order all materials to be obtained from overseas immediately after the sub-contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are onsite when required for use in the works.

Any defects which may appear, either of materials or of workmanship, during the defects liability period provided by the sub-contract, shall be made good by the sub-contractor at his own expense, as and when directed.

If the sub-contractor shall fail to carry out such orders, as by the preceding paragraph provided within such reasonable time as may be specified in the order, the materials or works affected may be made good by others in such manner as the Engineer may direct, in which case the cost thereby incurred shall, upon the written certificate of the Engineer, be recovered from the sub-contractor as liquidated damages.

23. FOREMAN

The sub-contractor shall keep constantly on works a competent English-speaking foreman and any directions or explanations given by the Engineer to such a foreman shall be deemed to have been given to the sub-contractor.

24. INSURANCE

The sub-contractor shall during the execution of the works, insure himself and keep himself insured against all liability under the workmen's compensation act or any amendment thereto for accidents to workmen employed by him on the said works and shall hold the employer and all parties to the contract harmless in respect of any such liability.

The sub-contractor shall further insure himself and keep himself insured against all liabilities arising from all Third party claims arising from accidents and he shall hold the Employer, the Consultants and all parties to the contract harmless in respect of any such liabilities.

No payments on account of the work executed will be made to the sub-contractor until he has satisfied the Engineer either by the production of an Insurance Certificate that the foregoing provisions have been complied with in all respects.
Thereafter the Engineer may from time to time check that premiums are duly paid up by the sub-contractor who shall, if called upon to do so, produce receipts of premium renewals for the Engineer's inspection.

25. BOND

The sub-contractor shall find and submit for the approval by the Engineer one surety who shall be an established bank, Insurance company or fidelity guarantee corporation and who will be willing to be bound to the Employer in an amount equal to ten percent (10%) of the sub-contract amount for the due performance of the sub-contractor up to the date of completion as certified by the architect and who will then and if called upon, sign a bond to that effect, on the same day as the sub- contract agreement is signed. In the event of the surety named not being approved by the Engineer, the sub-contractor shall furnish within seven days another surety to the approval of the Engineer. This shall be complied with unless the **MAIN WORKS** deems the subcontract as **DOMESTIC** contract.

26. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The sub-contractor shall proceed with the works in such manner and in such order, as the Engineer shall direct so as to complete the works on the shortest possible time.

It is the responsibility of the sub-contractor to ensure that all material, fittings, equipment and items to be supplied are ordered and delivered to the site ready for installation at such times as to cause no hold up to the programme of work.

NOTE: 1.The sub-contract completion period is the same as that of main contract.

2. Liquidated damages and Ascertained damages will be calculated pro-rata on the rate provided in the main contract.

27. PAYMENT AND CERTIFICATES

Payments shall be made through certificates via the main contractor. All payments shall be less retention as specified in the sub-contract agreement. The sub-contractor shall be paid only for work done and /or materials on site.

The percentage of certified value retained should be 10%. Limit of Retention shall be a sum equivalent to 5% of the sub-contract sum.

Prices quoted shall include 16% VAT and 3% withholding tax and all taxes applicable at the time of tender.

No certificate so issued by the Engineer/Architect shall in itself be considered conclusive evidence as to the sufficiency of any work or materials to which the terms and conditions of this agreement or from his liability to make good all defects as provided thereby.

28. CONDITIONS OF SUB-CONTRACT, ETC

The sub-contract agreement shall be based on KABCEC conditions. FIDIC conditions for electrical and mechanical works shall form complementary reference where clear interpretation cannot be made.

29. BLASTING

Blasting will not be allowed unless with express authority of the Engineer.

30. HOISTING

The sub-contractor is referred to the Drawings and to the general description of the building. Throughout these specifications generally no mention is made of heights for hoisting.

All prices must include for hoisting and fixing at any level within the limits shown on the drawings or included in the general description of works. Where a particularlevel is specified the sub-contractor shall price accordingly.

31. CASING UP AND PROTECTING

The sub-contractor shall be responsible for casing up or otherwise protecting to thesatisfaction of the Engineer all parts of the sub-contract works liable to cause injuryand for removing such protection and making good on completion.

32. WORKS TO BE DELIVERED UP CLEAN

On completion of the works, the site and the works shall be cleared of all plant, scaffolding, rubbish and unused materials and shall be delivered up in a clean and perfect condition in every respect to the satisfaction of the Engineer.

33. DEFECTS LIABILITY PERIOD

The defects liability period shall be as provided in the main contract.

34. CLAIMS FOR EXTRAS

This is a fixed price contract and no claims whatsoever on extras will be entertained.

35. TRADE NAMES

Where trade names of manufacturer's catalogue numbers are mentioned in these specifications the reference is intended, as a guide to the type of the article or material required. The sub-contractor may use any article or material equal in typeor quality to those therein described subject to the prior approval of the Engineer, and at his (Engineer's) absolute discretion. The onus of proof as to equivalent quality will rest with the sub-contractor, whose tender will be deemed to include forthe makes described hereafter.

36. FLUCTUATIONS

This is a fixed price sub-contract and claims shall not be allowed on fluctuations.

TENDER EVALUATION CRITERIA

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

1. Preliminary evaluation
2. Technical Evaluation; and
3. Financial Evaluation.

STAGE 1: PRELIMINARY EXAMINATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to tender and any other conditions as stated in the bid document.

These conditions include the following:

i. Current **Category of Registration** and **Valid Practising Licenses** with National Construction Authority (NCA) for the category as listed below.
   - **"NCA 4"**and above in the **Electrical Class of works**

ii. Fully filled technical schedule for Compliance with Technical Specifications
iii. Proof of payment for tender document if required;
iv. The Bid has been submitted in the format required by the procuring entity forthe bidder (and all joint venture bids);
v. Provision of a tender Security that is in the required form, amount and thatthe tender security is valid for the period required;(1% of the quoted sum)
vi. Fully filled Form of Tender for the bidder (and all joint venture bids contractors);
vii. Valid Tax Compliance Certificate for the bidder (and all joint venture bids contractors);
viii. Fully filled Confidential Business Questionnaire (and all joint venture bids contractors);
ix. Fully signed Statement of Compliance (and all joint venture bids contractors);
x. One Number Bid Document for the bidder (and for joint venture one number bid having all the sub bids);
xi. Signed Pre-tender site visit form if pre-tender site visit is required;
xii. Proof of authorization shall be furnished in form of a written power of attorney which shall accompany the tender if the signatory to the tender is not a director of the company (provide name and attach proof of citizenship of the signatory to the tender). Provide also Form CR12 from the Registrar of Companies.
xiii. A copy of valid business permit for the bidder (and all joint venture bids);

xiv. A copy certificate of registration/Incorporation for the bidder (and all joint venture bids);

xv. A copy pin certificate for the bidder (and all joint venture bids);

xvi. A copy of company's list of directors, beneficial owners, name if proprietor or names of partners (copy of CR 12) for the bidder (and all joint venture bids);

xvii. Signed and signed statement of verification that no debarment in matters of public procurement proceedings for the bidder (and all joint venture bids);

xviii. Declaration that the firm has not been convicted of corrupt or fraudulent practices and will not engage in any corrupt or fraudulent practices for the bidder(and all joint venture bids);

STAGE 2: TECHNICAL EVALUATION

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

'The tenderers will be required to provide evidence for eligibility of the award of the tender by satisfying the employer of their eligibility under Instruction to Tenderers and their capabilityand adequacy of resources to effectively carry out the subject contract. In order to comply withprovisions of Instruction to Tenderers, the tenderers shall be required;

a) To fill the Standard Forms provided in the bid document for the purposes of providing the required information. The tenderers may also attach the required information if they so desire;

PARAMETER	MAXIMUM POINTS
(i) Compliance with Technical Specifications	40
(ii) Key personnel	20
(iii) Contract Completed in the last Four (4) years	18
(iv) Audited Financial Report for the last 3 years	10
(v) Evidence of Financial Resources	12
TOTAL	**100**

The pass-mark under the Technical Evaluation is 70 percent. Any bidder who scores below the pass mark will be considered non responsive

STAGE 2 - TECHNICAL EVALUATION

Item	Description	Point Scored	Max. Point
	Director of the firm Holder of degree in Architectural, Quantity surveying or Engineering field (attach degree certificate) ----------5 Holder of diploma in any of the above fields (attach diploma certificate)---------- 4 Holder of certificate in in any of the above fields (attach craft certificate) ---------- 3 No relevant certificate----------0		**5**
	Project supervisor Holder of degree in Electrical Engineering field (attach degree certificate) ----------5 Holder of diploma in Electrical engineering field (attach diploma certificate)---------- 4 Holder of certificate in Electrical engineering field (attach craft certificate) ---------- 3 No relevant certificate----------0		**5**

	Project skilled staff(2no.officers) Holder of degree in Electrical Engineering field (attach degree certificate) ---------- 2 each Holder of diploma in Electrical engineering field (attach diploma certificate) ---------- 3 each Holder of certificate in Electrical engineering field (attach craft certificate) ---------- 5 each No relevant certificate----------0		10
	A Minimum of three (3) projects of similar nature, complexity and magnitude completed within the last five (5) years from the date of tender opening (Attach signed project completion certificates) projects of a value more than 70% and above of contract price quoted for this project @ 6 marks each projects of a value of a value between 50% - 69% of contract price quoted for this project @ 5 marks each projects of a value of a value between 20% - 49% of contract price quoted for this project @ 2 marks each projects of a value of a value between 1% - 19% of contract price quoted for this project @ 1 marks each no projects @ 0 marks		18

	Audited financial report **Attach Audited financial report for the last two (2) years (2019 and 2020) or (2020 and 2021) whichever is the latest. The Audited Financial Reports are valid only when be signed and stamped by a registered Accountant or Audit Firm registered and recognized in Kenya.** **indicate the current ratio for each year** Has current ratio over 2 @ 5 marks for each year Has current ratio of between 2 and 1.5 @ 4 marks for each year Has current ratio of between 1.5 and 1 @ 3 marks for each year Has current ratio of between 1 and 0.7 @ 2 marks for each year Has current ratio of less than 0.7 @ 1 marks Has not indicated current ratio @ 0 marks		**10**
	Financial Resources Attach record of cash in hand in form of certified bank statement or Current letter (dated 2021 or 2022) from the bidders' bankersand level of overdraft or credit limits allowed. Has financial resources of a value of 100% and above of contract price quoted for this project@ 12 marks Has financial resources of a value of a value between 99% - 90% of contract price quoted for this project @ 5 marks each		**12**

	Has financial resources of a value less than 90% of contract price quoted for this project @ 2 marks Has no financial resources @ 0 marks		
	Compliance with technical specifications - Has submitted relevant technical brochure/catalogues - Has highlighted the Catalogue Number f many options for the same item are on the attached catalogue - Fulfill the tender specifications in terms of Standards of manufacture; Performance ratings/characteristics; a) Has fully complied with the technical specifications @ 40 marks b) Has not complied with the technical specifications @ 0 marks		**40**

Current ratio = current assets/current liabilities

Any bidder who scores 70 points and above in this Technical Evaluation shall beconsidered for further evaluation

STAGE 3 - FINANCIAL EVALUATION

Upon completion of the technical evaluation a detailed financial evaluation for thebidder (and all their joint venture partners) shall follow.

The evaluation shall be in three stages

a) Determination of Arithmetic Errors for the bidder (and all their joint venture partners);
b) Comparison of Rates for the bidder (and all their joint venture partners); ; and
c) Consistency of the Rates for the bidder (and all their joint venture partners);

A) Determination of the Arithmetic Errors

Arithmetic Errors will be corrected by the Procuring Entity as follows:

i) In the event of a discrepancy between the amount as stated in the form of Tender and the corrected tender figure in the Main summary of the Bills of Quantities, the amount as stated in the Form of tender shall prevail. Pursuant to Section 82 of the Public Procurement and Asset Disposal Act 2015, the tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity;

ii) Error correction factor shall be computed by expressing the difference between the amount and the corrected tender sum as a percentage of the corrected contract works

iii) The Error correction factor shall be applied to all contract works (as a rebateor addition as the case may be) for the purposes of valuations for Interim Certificates and valuations of variations.

B) Comparison of rates for the bidder (and all their joint venture partners)-

Items that are underpriced or overpriced may indicate potential for non-delivery and front loading respectively. The committee shall promptly write to the tenderer asking for detailed breakdown of costs for any of the quoted items, relationship between thoseprices, proposed construction/installation methods and schedules.

The evaluation committee shall evaluate the responses and make an appropriate recommendation to the procuring entity's tender committee giving necessary evidence.Such recommendations may include but not limited to:

a) Recommend no adverse action to the tenderer after a convincing response;
b) Employer requiring that the amount of the performance bond be raised at the expense of the successful tenderer to a level sufficient to protect the employer against potential financial losses;
c) Recommend non-award based on the response provided and the available demonstrable evidence that the scope, quality, completion timing, administration of works to be undertaken by the tenderer, would adversely be affected or the rights of the employer or the tenderersobligations would be limited in a substantial way.

C) Consistency of the Rates

The evaluation committee will compare the consistency of rates for similar items and note all inconsistencies of the rates for similar items.

STAGE 4 - RECOMMENDATION FOR AWARD

SECTION NAME:

PART B: GENERAL & PARTICULAR SPECIFICATIONS OF STANDBY GENERATOR

PARTICULAR SPECIFICATIONS FOR THE STANDBY GENERATING SYSTEM

CONTENTS

PARTICULAR SPECIFICATION FOR THE STANDBY GENERATING SYSTEM.

1 Location of site

The site for the proposed Contract Works is as described elsewhere in this document

2 Climatic Condition

The following climatic conditions apply at the site of the contract work and the equipment, materials and the installations shall be suitable for these conditions.

Mean Maximum Temperatures 32°c
Mean Minimum Temperature 17.4°c
Range of Relative humidity 39% - 97%
Salt in the atmosphere 0.02%
Altitude 1095M above sea level
Latitude /Longitude 00°21' N/37°35' E
Solar Radiation, February Mean Max 630 Langleys

Extremely heavy rainfall is experienced at certain periods of the year and the contractor shall be deemed to have taken account of this factor both in his prices and his planning of the execution of the contract works.

3 Operating Conditions

The equipment and all components shall be suitable for the operation in ambient conditions of 24°C to 36°C and up to 100% relative humidity

i) in an unheated ventilated building
ii) In the open air as specified

Unless otherwise stated all ratings of equipment and components shall be interpreted as site rating and NOT sea level or other ratings.

4. Functional Objectives

The set shall be capable of operating continuously and satisfactorily in a medium dust laden atmosphere as defined in BS 1701 and in accordance with BS 649.

The generating set is required for standby duty and will be connected to the switchboard through a circuit. It shall have an automatic mains failure control, appropriately interlocked with the other incoming supply. Provisions shall be made in the control circuit of the generator for automatic and remote push button control, including the terminals and cable glands for all external cables, which will be supplied by others, where specified. It shall also be possible to start, operate and stop the set manually, independent of any automatic features.

Within the operating conditions specified in part 3 above the set shall be capable of starting and accepting full load within the shortest possible time, and in any case, in not more than 10 seconds. Any special features included to achieve this shall be stated in Section F.

5. Scope of the Contract Works

The work covered by this Specification includes the design, manufacture, supply, delivery, installation, commissioning and testing to the satisfaction of the Engineer and maintenance for a period of twelve months of a new generating set complete with all necessary ancillary equipment.

The equipment to comprise **630KVA**, 415 volts/3 phase /50Hz continuously rated diesel generator set with all integral accessories, and all necessary equipment for the safe and efficient working of the set. The diesel generator set will be site rated at level of 1660 metres, Kenya Datum.

Diesel generator set to include:

a) Push button starting, starting battery and mains power supply trickle charger to be included.
b) 72 hour operational running capacity auxiliary fuel oil storage tank, loose transfer pump and duplex oil strainer.
c) An integral belly/ base fuel tank for daily service with an operational running capacity of 8 hours
d) All interconnecting pipe work, valves and fittings between the storage tank, base tank and the diesel engine.
e) An automatic generator control unit
f) A diesel generator control cubicle
g) Acoustic enclosure/ sound attenuated canopy
h) All local wiring
i) Maintenance tools and spare parts as specified.

6 Performance Objective

The output rating of the set in KVA, the voltage, the number of phases and the frequency shall be as specified in Bill No.2 Schedule 1 of the Bills of Quantities.
Within the operating conditions specified the set, equipped with its standard air intake filters, shall be capable of delivering its rated output continuously at rated voltage and 0.8 lagging power factor and of delivering 10% in excess of the continuous maximum rating for a period of one hour in any 12 hour period.
The steady state voltage shall be maintained within 2 ½ % of the rated voltage under control of the voltage regulator between the cold start ambient conditions and the maximum working temperature, from no load to 10% overload and from unity to 0.8 lagging power factor. After any change of load the voltage shall not vary by more than + 15% of the rated voltage and shall return to within +/- 3% within 3 seconds and to within 2 ½ % of rated voltage within 1 seconds. On starting the voltage overshoot shall not exceed 15% and shall return to within 3% in not more than 3 seconds.
The governing of the set shall be such that the steady load speed band shall not exceed 1% of rated speed. Sudden removal of the full load at rated frequency shall not cause the frequency to rise above 110% of the rated frequency and it shall return to within 105% of the rated frequency within 3 seconds. The resultant steady state frequency shall return to 104% within 15 seconds. If full load is then reimposed the frequency shall not fall below 94% of rated frequency and shall return to 99% within 3 seconds and to the rated frequency within 15 seconds. The cyclic irregularity of the set at full load shall not be worse than 1/150.
The deviated interference shall be suppressed to the limit specified in BS 800 and BS 833.

7. Generating Set Arrangement

Unless otherwise indicated the set and its auxiliaries shall be mounted on sufficiently substantial under-base. All items which must be held in correct relative alignment shall be located by means of dowels.
The set shall be designed and supplied for operation bolted to the floor on robust anti-vibration and shock absorbing devices. They shall have adjusting screws for optimum setting and levelling and be so designed and installed that no appreciable engine vibration shall be transmitted to the floor or to any surrounding.
Bearings shall be suitable for operation over long periods without the need for replacement of the lubricant. Oil lubricated bearings shall be fitted with a visible oil level gauge.

8. Diesel Engine

8.1 General

The engine shall comply in design and performance with BS.649 "Diesel Engines for General purposes" or its approved equivalent. The engine shall be designed for satisfactory operation on fuel oil and lubricating oils complying with BS. 2869.

The engine shall be totally enclosed, with forced lubrication from an integral pump having on the suction side a course strainer and on the delivery side a dual' full flow' fine filter with a changeover cock incorporating pressure by-pass, so that the oil flow to the engine is maintained if the filter should choke. Alternatively a single filter of the self-cleaning type fitted with a by-pass relief valve and having the same filtration performance may be provided. Manual lubrication of any part of the engine will not be accepted. The capacity of the lubricating oil system shall be sufficient to enable the engine to run continuously for 12 hours at any load without replacement.

A filter with a by-pass relief valve shall be inserted in the fuel line immediately before the pump(s). The fuel filter element shall be incapable of passing particles larger than micrometers. The fuel system shall be so arranged that fuel resulting from filter, pump or pipe spillage shall be incapable of entering the engine sump.
Air filters complying with KS 06-294: 1986, Grade 'A' and Grade 'B' suitable for use in a dusty atmosphere shall be fitted on the engine air intake(s)

No significant critical speed of the complete shaft system, including the generator, shall be within 15% of the rated speed.
A manually reset overspeed trip shall be fitted to stop the engine if its speed exceeds the rated speed by 15%. A mechanical trip is preferred but an electrical overspeed trip may be offered. Both types shall be equipped with a pair of contacts which close on operation of the trip. If the device is belt driven, at least two belts shall be provided and the drive shall be capable of carrying full load with one belt removed.

The set shall be arranged such that on shut-down the cooling water temperature shall not rise with residual heat so that the high water temperature lock-out operates. The engine may be naturally aspirated as pressure charged, or as indicated.

The starting shall be by means of electricity supplied from a starter battery. The starter motor shall be of axial type, de-energizing by a device operated from the engine. A means of manual starting shall also be provided.
Suitable means shall be provided for running by hand the engine main shaft and the associated generator to facilitate inspection and overhaul.

If weekly test runs are insufficient to prevent the drying out of the bearings, means shall be provided to ensure that the bearing surfaces are adequately and automatically wetted with lubricating oil either periodically or immediately prior to every start.

The engine shall be capable of being started from any crank position.
A thermostatically controlled 240-volt immersion heater may be fitted in the engine lubricating oil sump to facilitate starting. The heating surface loading of any lubricating oil heater(s) shall not exceed 0.015 watt per square millimeter to avoid carbonization of oil.

An efficient exhaust silencer with adequate draining facilities shall be supplied, and shall either be mounted on the set or installed in a generator room constructed as shown on the drawing indicated. The exhaust silencer system shall be so arranged that it may be readily relocated if required. Where any additional piping bends and fittings are specified, the manufacturer shall advise on any problems involved.

8.2 Fuel Oil System

An auxiliary fuel storage tank whose minimum capacity shall be sufficient to run the engine continuously on full load for 72 hours shall be installed in the position indicated in the contract drawing. It shall be supplied complete with supports.
The tank shall be fitted with a hand operated fuel with a flexible suction hose to permit filling from a drum on the floor.
A three way cock shall be fitted in the line from tank to the engine to enable the fuel to be supplied from a source other than the storage tank.

The position of the cock shall be clearly marked 'MANUAL, AUTOMATIC, OFF' as applicable.

A duplex oil filter shall be supplied between the storage tank and the diesel engine. The duplex filter shall be capable of being cleaned without dismantling, or in interruption of the fuel flow, and shall be easily maintainable. The tank shall be equipped with a graduated dipstick, a clearly visible contents' gauge (not of the site glass type) and with drain, vent, overflow and inlet and outlet connection.
The set shall also have an integral belly/base fuel tank for daily services with an operational running capacity of 8 hours.

8.3 Lubricating Oil System

An engine driven integral gear type lubricating oil pump shall be provided. The lubricating oil system shall include an oil cooler and fine mesh filters, together with devices to indicate lubricating oil pressure and to initiate a 240 volt A.C. Lubricating oil Low pressure Alarm, Lubricating Oil High Temperature Alarm and Cooling Water High Temperature Alarm.

As separate 240 volt A.C. Motor driven automatic lubricating oil priming pump shall be provided for intermittent operation when the diesel is lying idle.

8.4 Starting of Engine

The diesel generator set shall have facilities for local and remote push button starting, with a Local/ Remote/ Automatic selector switch at the local panel.
On mains failure the engine shall be capable of being automatically started from battery located near the generator set.

The battery shall be complete with drip tray and trickle charger.
All necessary relays, contacts, switches and miscellaneous items for the starting sequence shall be supplied and installed in the local control panel.

The system shall be designed to give maximum reliability in starting.
The Contractor shall state in detail his proposals to ensure reliable starting and prevention of deterioration of the diesel engine, generator and exciter during idle periods.

All manually operated valves and controls on whose setting the correct operation of the automatic starting equipment depends shall be provided with locking devices.

8.5 Cooling System

The engine may be air or water cooled unless a preference is indicated.

8.5.1 Air Cooling of Engine

Cooling air for the engine and lubricating oil shall be provided by fan(s) mechanically driven from the engine. The cooling system shall be adequate for the total requirements of the engine when running on continuous full load and on 10% overload for one hour in accordance with BS 649 and under the conditions of Section 3.

The engine shall be so designed that the cooling air discharges into or is drawn through a reasonably airtight ducted assembly enclosing the lubricating oil cooler, the cylinder barrels and the cylinder heads of the engine.
This assembly shall terminate in a flanged outlet to which trunking may be readily attached when necessary, to enable hot air from the cooling system to be discharged outside the building.

Belt driven fans shall have at least two belts and the drive shall be capable of transmitting the full load with one belt removed. The cooling air temperature shall be controlled so as to maintain a safe working temperature of the cylinder hand(s) and the engine shall shut down if the maximum is exceeded.

8.5.2 Water Cooling of Engine

A radiator of the air blast type shall be provided. It shall either have separate sections for water and for lubricating oil or be arranged for jacket water cooling only.

The radiator shall be mounted on the set and the fan(s) shall be mechanically driven from the engine. Where indicated the radiators shall be suitable for remote wall or floor mounting, in which case the fan shall be electric motor driven from a supply similar in voltage, phase and frequency to the alternator output and shall be started on line.

Where remotely mounted, the fan shall only operate when generating set is running and shall be controlled by a thermostat mounted in the radiator such that the fan motor will start on rising temperature $50^{0}C$ and stop on falling temperature.

Belt driven fans shall be provided with at least two belts and the drive shall be capable of transmitting the full load with one belt removed. Circulation of the jacket water and lubricating oil through the respective radiator sections and /or heat exchanger shall be by means of pumps mechanically driven by the engine. Belt driven pumps shall be provided with at least two belts and drive shall be capable of transmitting the full load with one belt removed.

Circulation by thermo-syphon will be accepted provided the engine will operate under the conditions of section 6 and in accordance with BS 649.
An easily visible flow indicator provided with contacts shall be fitted in the water outlet from the engine; the contacts shall close in the 'no flow' condition and shut down the set.

Alternatively in thermo syphon systems and sealed or pressurized radiator systems the flow indicator may be dispensed with providing the engine shuts down by the operation of the high temperature or low oil pressure safety devices in accordance with section 8.3.

A thermostatically controlled diverter valve shall be inserted in the engine water discharge pipe with a return to the circulating pipe section, to maintain the circulating water at the optimum temperature irrespective of the load. Alternatively a thermostatic bypass will be accepted.

A radiator make-up/expansion tank, fitted with float control inlet, shall be provided. If a sealed or pressurized unit is offered the tank may be dispensed with.
Where indicated provision shall be made on the radiator framework to permit the attachment of ducting for the discharge air.

A thermometer shall be mounted near the cylinder head(s) to indicate water temperature. Where a lubricating oil cooler is fitted, thermometers shall be mounted at the oil inlet too and outlet from the engine. Alternatively, thermocouple may be provided at all thermometer positions and taken to an instrument panel.

Adequate drains shall be provided at low points in the water and lubricating oil systems of the radiator and, where applicable, of the heat exchanger.

8.6 Governing System

Governing shall conform to B.S. 640 Class A. The governor shall control the frequency within the limits stated in Section 6 Part. Manual speed adjustment shall be provided over a range of +/-15% of the rated speed at any load. The governor system shall be of the mechanical or hydraulic type. In addition the engine shall be fitted with an approved over speed trip device which shall operate independently of the normal speed governor and shall act directly upon the fuel supply to the engine.

The over speed shall act at a speed of 12% to 15% in excess of normal operating speed.

8.7 Exhaust System

The diesel engine shall be provided with a suitable exhaust system for horizontal discharge outside the diesel generator room.
The silencer shall be of spark arresting type and shall be equipped with cleaning and draining arrangements.

If an exhaust driven turbo-charger is supplied it shall include air intake filters, mani-folds and outlet manifolds.

All necessary ducting, piping, supports and lagging required for the system shall be included.

Weatherproof wall boxes permitting expansion shall be fitted where the exhaust piping passes through the building wall or roof. Pipe work shall be connected at site by butt weld connections or use of flanged joints. The use of screwed connectors shall be avoided.

Flanges shall conform to the appropriate Table of B.S.10: 1962. Welding of flanges at site shall be carried out in accordance with B.S.806. The faces of flanges shall be machined and the backs shall be machined or spot faced to receive the bolt heads.

Valves and fittings shall be of approved design and manufacture and shall be subject to the same tests as the highest pressure piping or vessel to which they are connected.

8.8 Engine Instruments

Unless otherwise indicated the following instruments shall be provided:

(a) a lubricating oil pressure gauge
(b) a running hours meter
(c) a tachometer
(d) a water thermometer
(e) an exhaust gas pyrometer or thermometer mounted near the mani-fold
(f) lubricating oil thermometers on the inlet to and outlet from the engine, when a lubricating oil cooler if fitted
(g) Exhaust turbo-blower pressure gauge(s) as applicable

8.9 Pipe work, Valves and Fittings

All piping shall comply with requirements of KS-259:11989 for mild steel pipes.
Provision shall be made for ready handing of all parts of the plant during assembly or disassembly of the unit.

Adequate provision shall be made for attaching lifting devices, slings and eyebolts.

9. The Generator (Alternator and Exciter)

9.1 General

The generator shall comply with B.S.2613:197, for service in tropical conditions, and shall withstand being idle for considerable periods without any harmful drop in the insulation resistance.

The generator shall have a prime rated net output of **630KVA** as specified in the schedules of the Bills of Quantities, at 0.8 lagging power factor, 415 volts, 3 phase, 4 wire, 50 Hertz with brushless rotating rectifier excitation system and voltage regulator. It shall be directly coupled to the engine and be sized such that it will accept the maximum output of the engine including overload. The output voltage shall be maintained within plus or minus 2 ½ % from no load to full load conditions. The alternator shall be capable of operating within the range of plus or minus 15% of the nominal voltage according to the automatic voltage regulator.

Three phase machines shall be star connected, and a diagram showing the terminal marking and phase rotation shall be provided in the terminal box. Cables connecting the machine winding and machine terminals shall not have a higher de-rating factor for temperature than the windings.

The insulation shall comply with BS 2757 excluding Classes Y and A. The insulation shall have an oil, moisture and fungus proof finish, with a surface which will not retain dust or condensation. It shall be possible to put the set in service after long periods in unheated storage without necessarily drying out the insulation.

The alternator shall be capable of withstanding a short circuit for three seconds when under the control of the automatic voltage regulator.

9.2 Excitation

Excitation shall be by means of brushless direct coupled exciter armature.

The alternators shall be designed for an excitation voltage at full load of not less than 50 Volts unless prior approval is given.

9.3 ELECTRICAL CONTROL PANEL

The Automatic Mains Failure control panel shall be provided and fitted with the following:-

a) Two four pole contactors and two TP & N incoming MCCB's each of suitable rating for controlling the supply from the mains transformer and standby generator.
b) An automatic voltage regulator for the set.
c) Control equipments as necessary including phase failure protection relay for both the mains supply and the generator supply (with both under and over voltage protection) and phase sequence protection relay for the mains supply all to fulfill the functional requirements and automatic changeover as detailed in Part 9.3.2
d) One ammeter and a selector switch to measure each phase current and neutral current
e) One voltmeter and a selector switch to read line to line and line to neutral voltage
f) A frequency meter
   The meters shall comply with BS 89, table 7.

9.3.1 General

The set is to be used for mains failure duty and an automatic starting panel shall be provided which shall contain all necessary equipment for controlling the automatic starting and stopping of the set, lubricating oil priming (if necessary), all auxiliaries, fault warnings and shut downs. All faults, warning and shut-downs shall be separately indicated. There shall be test facilities for indication lamps, etc, preferably by means of a single test button.

Means shall be provided for isolating all supplies to the starting panel either by an isolating switch or by withdrawable fuses.

When the set is stopped other than under lock-out conditions, it shall be self-resetting ready for the next start.

The set shall be suitable for starting by manual means. e.g. by cranking or direct operation of the starter solenoid.
All switches and push buttons shall be clearly marked to indicate their function.
It shall be possible to operate the 'Start' and 'Stop' buttons and to see the 'Set Failure' indications without opening the panel doors.

9.3.2 Automatic Changeover Controls

The controls shall be installed and wired in the machine control panel.
The control shall be provided such that on failure of the normal electricity supply, it will automatically initiate the starting of and effect the transfer of load to the standby generator. The schematic for the controls shall be approved by the Electrical Engineer before manufacture commences.

Where failure of the normal supply is referred to, it shall be defined as follows:

a) Complete loss of voltage in one line 0r in all the three lines
b) Falling of voltage below 85% of the normal voltage between two lines or line and neutral
c) Voltage overshoot to 110% of the normal voltage between two lines or line and neutral
d) Incorrect phase sequence

On failure of the normal supply, the unit shall operate in the following manner:

(a) After a delay, adjustable from 0 to 15 seconds (to avoid operation by a transient dip in voltage) a signal shall be given to start the standby generating set.

(b) On receipt of a signal from the standby generating set that it is ready to take load, and providing that the failure of the normal supply still persists, the normal supply contactor in the control panel shall open and the standby contactor shall close. If the normal supply has been restored before the changeover has taken place, the contactor shall not operate and the starting relay contacts shall open to initiate the shutting down of the standby generating set.

When the standby supply is in operation and the normal supply is restored and remains within 10% of rated voltage on all phases for a pre-set time (adjustable up to 120 second) the standby contactor shall open and the normal supply contactor shall close; the starting relay contacts shall then open to shut down the generating set.

Provision shall be made so that automatic return to normal supply can be prevented if required.

Once a start signal has been sent to standby generating set, the engine starting sequence shall be allowed to continue until the set is ready to take the load before a stopping signal is sent.

A push button labelled 'Test' shall be provided to enable a failure of normal supply to be simulated. If the button is pressed and released the equipment shall complete the starting sequence, and when the set is ready to take load it shall be shut down. If the button is held depressed the equipment shall change over to the standby supply when the set is ready to take load.

Indicating lamps or illuminated panels shall be provided on the front of the panel. They shall be appropriately labelled, easily visible and shall give the following information:

'Main Supply Available'
'Generator Supply Available'
'Mains Supply on load'
'Generator Supply on load'

9.4 Lock out

9.4.1 General

The set shall stop and lock out to prevent further starting when:

a) It fails to start when the electric starter motor has been in operation for 20 seconds under automatic start condition.

b) The lubricating oil pressure falls to a value at which it would be unsafe to continue running the engine.

c) The cooling water does not flow, when the engine is fitted with a visible flow indicator on the cooling water system.

d) (i) In water cooled engines the cooling water temperature exceeds a predetermined limit.

(ii) In air cooled engines the cylinder head temperature exceeds a safe maximum.

e) The overspeed trip has operated.

9.4.2 Failure of the circuits concerned in sub-section 9.4.1 (b) to 9.4.1(e) shall cause a set to shut down. Reset of lock out shall be by hand.

9.5 Fault indication

Each lock-out detailed in section 9.4.1 shall be indicated by a lamp on the panel together with an indication of the fault causing the shut-down. The fault warning lights shall be set to operate before the lock-out.

9.6 Starting Battery and Charger

The battery shall be 24 volts and capable of with-standing the loads imposed upon it by its specified duties. It may be of lead-acid or alkaline type and shall be of sufficient capacity for four starts in succession once in an eight-hour period. Auxiliary circuits connected to the battery shall be protected by fuses.

The battery shall be used to supply an automatic starting and control equipment, and relay operation shall not be impaired when the battery is supplying current to the starter motor.

A single phase supply for battery charging shall be available from the main M.V SWITCHBOARD.

A charger shall be provided which will recharge the battery after engine starting and maintain it in a charged condition when the set is standing or is in service. It may also supply the load of any automatic starting and control equipments, and an additional load up to 24 watts when the set is running and in service.

An alternative quick charge rate shall be provided. The charger shall be fitted with an ammeter to measure the charger and discharge current excluding the starter motor current.

9.7.1 Wiring and Earthing

Power cables and small wiring cables interconnecting major components shall be of the heat and oil resistant type and shall be metal sheathed or run in metal ducts or metal

conduit, which shall be coded and terminated with lugs or eyes or to be soldered, the terminations shall be clearly marked with the numbers and letters of the terminals to which they are connected. Terminals shall be numbered or lettered, easily accessible and fitted with individual insulating barriers or adequately spaced. Barriers shall be fitted to separate control terminals from power wiring terminals.

All metal work housing electrical equipment shall be bonded to a brass earthing terminal and connected to station Earth and as detailed in the schedule.

9.8 Contactors

Contactors shall have magnetic circuits designed for a.c or d.c operation and shall be rated in accordance with ks 04-182:1982.Four pole- contactors shall be fitted for three phase-equipment and two-pole contactors for single phase equipments. Main and auxiliary contacts shall be silver faced or better.

9.9 Relays

Relays shall preferably be of sealed type mounted in approved plug-in bias with spring loaded retainers but if this is not practicable they shall be mounted on individual sub-bases and wired so that easy access is obtained to soldered connections. Unsealed relays shall be enclosed in individual or common dust protecting cases.

Time delays, if of the pneumatic type, shall operate on filtered air. The thermal type of time delay relay will not be accepted.

9.10 Fuses

Fuses shall comply with KS-183:1978. A spare fuse cartridge for each pole shall be mounted inside each equipment.

9.11 Rectifiers, Capacitors and solid State components

Rectifiers, capacitors and solid state components shall be suitable for any transient voltage and high currents likely to be uncounted during the operation of the equipment and for the internal operating temperature of the enclosures at the specified maximum external ambient temperature.

9.12 Enclosures for Equipment

Enclosures for electrical and control equipment shall be drip proof and dust protecting, with adequate front and rear access as necessary for maintenance and repair. Special attention shall be given to the method of construction and to the mounting of the components to minimize the effect of vibration. Diagrams of connections in durable form shall be mounted inside the enclosures.

10 Lifting Gear and Handling.

Provision shall be made for ready handling of all parts of the plant during assembly or disassembly of the unit. Adequate provision shall be made for attaching lifting devices, slings and eyebolts.

11 Commissioning

The Contractor shall include for fully commissioning the set and its control equipment and for the purpose of the required tests, shall provide all necessary instrument s, tools, fuel and lubricating oil.
The following tests and checks as applicable shall be carried out by the contractor in the presence of the electrical engineer or his representative.

a) Check that the main frame is level in all directions, engine and generator 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 radiation eaters (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 hours 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 clearance, fuel pumps settings, governor settings, pipeline connections, water hose, exhaust couplings, flexible pipe work etc, and where a separate cooling water tank is fitted, that the water levels is satisfactory and the ball valve and overflow work.

h) Check all outgoing connections on the generator and the control panel. All lugs for principal connections shall have clean and bright contact surfaces. A suitable abrasive 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 to normal speed. Check that the main battery charger 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 main battery charger is disconnected by the operation of the auxiliary contact 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 engine tachometer, where both are fitted

i) Stop engine by turning selector switch to off position and verify that the generator contactor opens at between 95% and 85% of normal voltage. Re-check water and oil levels.

m) Turn selector switch to 'Auto' position. Disconnect the sensing circuit supply and check that the set starts, the mains contactor opens, and the generator contactor closes in correct order. Reconnect the sensing circuit to verify that the engine stops on restoration of the mains supply and the contactors operate correctly. Check voltage sensing and time delays on each phase in turn and also the push buttons for mains failure simulation and engine stopping operate correctly.

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

n) Operate the necessary isolators and switches to put the set on standby for essential services network with the 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 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 on the dynamo ammeter with the

engine running (if a dynamo is fitted), and the rate of charge on the battery charging ammeter with the engine stopped. Check against manufacturers recommendations and adjust charging rates if necessary.

p) Check that the various engine safeguards operate satisfactorily.

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 set left in normal operating order.

s) An initial supply of all lubricating oils and greases shall be provided by the 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 serving of the set during the 12 months maintenance period referred to in Part 14 of Section D.

INFORMATION TO BE SUPPLIED BY THE TENDERER

DESCRIPTION

1. General

2. Information on the set to be supplied

3. Deviations from the specification

1. GENERAL

a). The tenderer shall complete Part 2 of Section F in full with details of the set he is offering.

b). Any equipment which he wishes to offer but which does not comply with the specification shall be fully detailed in Part 3 of section F together with details of any other deviation or omissions which he may wish to make.

Any tender which is submitted without filling these sections will be deemed non-responsive.

c). The tenderers shall be required to submit, together with their tenders, brochures detailing technical specifications of the generator set they intend to supply. Any tender which is submitted without the brochures will be deemed non-responsive

2 – INFORMATION OF THE SET TO BE SUPPLIED

ITEM	EQUIPMENT	DETAILS
1.	**Diesel Engine**	
	Make	
	Type	
	Net continuous rating (B.S.649)	
	(a) at sea level	KVA
	(b) at site	KVA
	Speed	Rev/min
	Supercharger	
	Make	
	Type	
	Air cooling	Not Applicable
	Quantity of air required	
	Details of ducting	
	Water cooling	To be Applicable
	Details of water cooling circuits	
	Radiator:	
	Make	
	Type	
	Length	mm
	Breadth	mm
	Height	mm

ITEM	EQUIPMENT	DETAILS
	Aspiration Method	
	Quantity of air required	
2.	**Auxiliaries**	
	Filters	
	Coolers	
	Primary pumps	
	Tachometer and drive	
	Governor	
	Special cold start devices	
	Running hours meter	
	Safety devices	
	High temperature	
	Low pressure (lubricating oil)	
	Cooling water flow trip over speed trip	
	Speed sensing devices	
	Lubricating oil thermometers:	
	Number	
	Position (s)	
	Water thermometer	
	Position Exhaust thermometer	
	Position	
	Starting Battery	
	Battery charger	
	Immersion Heater	
3.	**Lubrication**	
	Recommended oil (s)	
	Sump	Grade quantity (litres)
	Elsewhere (state where)	
4.	**Alternator and Exciter**	
	Make and type	
	Bearings	
	Insulation class (BS.2757)	

ITEM	EQUIPMENT	DETAILS	
5.	**Electrical Control Panel**		
	Main circuit breaker		Amps
	Bypass switches		Amps
	Automatic changeover contactor		Amps
	Automatic voltage regulator		Volts
	Ammeter selector switch		
	Voltmeter selector switch		
	Frequency meter		Hertz
	Ammeters –------ No.		Amps
	Voltmeters – .....No.		Volts
	Power factor meter		KVAR
	Other equipment – give details		
6.	**Performance data**	Rated output	Consumption
	Fuel consumption	%	Litres/hour
		110	
		100	
		75	
		50	
	Maximum output	Ambient temp.	Out-put KVA
		^{0}C	
		40	
		30	
		20	
		10	

ITEM	EQUIPMENT	DETAILS
6.	Performance Data (cont'd)	
	Voltage regulation	%
	Frequency regulation	%
	Time to accept 75% full load from 5^0C	Seconds
	Time to accept 100% full load from 5^0C	Seconds
	Time to accept 100% full load from 40^0C	Seconds
7.	<u>Physical Details</u>	
	Auxiliary fuel storage tank for 72 hour operational running capacity	Litres
	Size of set	mm long mm wide mm high
	Total weight of set	Kg.
	Overall dimensions of set	mm long mm wide mm high
	Weight of heaviest component	Kg.
	Weather proofing	
	Integral belly/base fuel tank for daily service for 8 hour operation capacity	Litres
8.	<u>Operational Details</u>	
	Description of Operation Sequence of the automatic control	
	Details of drawings, literature, etc., included with tender.	

3. DEVIATIONS FROM THE SPECIFICATION

The tenderer shall give 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

SECTION NAME:

PART C: BILLS OF QUANTITIES

BILLS OF QUANTITIES AND SCHEDULE OF UNIT RATES

CONTENTS

GENERAL NOTES TO TENDERERS

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

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 3% Withholding Tax **shall bededucted** from all payments made to the Tenderer, and the same shall beforwarded 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 there of.

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 beforereceiving **written approva**l from the Project Manager, the sub-contractor shall remove the material in question and, **at his own cost**, install the proper material.

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

Statement of Compliance

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

b) I confirm compliance to the items specified in technical catalogues and brochures I have attached as required in the technical schedule.

Name: ……..

Capacity…… *(Person with power of attorney)*

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

Date: ……..

Official Rubber Stamp: ……

PRICING OF ITEMS.

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

Preliminaries – Bill 1

Prices will be inserted against item of preliminaries in the sub-contractor's Bills ofQuantities 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

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 beenlimited 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.

Generator installation Items – Bill 2

The brief description of the items in these Bills of Quantities should in no way modifyor supersede the detailed descriptions in the contract Drawings, conditions of contractand specifications.

Summary – Bill 3

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-contract shall insert his totals and enter his grand total tender sumin the space provided below the summary.
This grand total tender sum shall be entered in the Form of Tender providedelsewhere in this document

BILL NO. 2: GENERATOR INSTALLATION WORKS

SCHEDULE 1 - GENERATOR SET

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Supply, deliver to site, install, test and commission a prime rated 630KVA, 3 phase, 415V, 50Hz diesel generating set with a continuous power factor of 0.8 lagging and as fully described in the particular specifications. The generator set is to be complete with a sound attenuated canopy and an integral base/belly daily service fuel tank with an operational running capacity of 8 hours.	1	No.		
B	Supply, deliver to site and install a steel exhaust pipe of not less than 14 SWG and of adequate diameter running from the generating set to the outside of the generator house	20	M		
C	Connect the exhaust pipe above in item B using steel pipes of adequate diameter, and flexible piping off engine exhaust manifold complete with heavy duty silencer	1	Item		
D	Supply and install, for the set, 1 No. steel cored copper earth rods, 1200mm X 12mm threaded for extension, connected by brass clamps to 10 metres of 10mm sq. copper cable laid in the trench of minimum depth 300mm and fixed to the outside wall of the generator room with brass spacer bar saddles at 1 metre of intervals, connected to the earth bar via a Brass Test Clamp and to the Electrical Engineer's approval.	1	Item		
E	Provide for ductwork for removing radiator hot air and channeling it outside the generator house as per the generator manufacturer's guide	1	Lot		
	Generator Set Total C/F to Price Summary Page				

SCHEDULE 2 - AMF CONTROL PANEL

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Supply, deliver to site, install, test and commission the following:				
A	An electrical control panel complete with suitable rated incoming MCCBs and contactors for automatic change over operation and complete with all other control accessories as fully described in the particular specifications	1	No.		
B	Suitably rated manual by-pass switch with clearly labeled **NORMAL-OFF-BYPASS** positions, **and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start**	1	No.		
C	240V AC/12V DC mains power supply trickle battery charger as specified in clause 9.6 of specifications. The trickle charger shall charge the battery when the set is on **IDLE mode**, otherwise when the set is **RUNNING**, the battery shall be charged by the **generator charger**. Wiring shall be done such that the two chargers shall not operate at the same time.	1	No.		
D	12 Volts battery as specified in the particular specifications	2	No.		
E	Armoured cables complete with glands and pvc sleeves:				
	a) 4x300mm sq. single core PVC/SWA/PVC Copper Cable complete with appropriate all installation accessories.	20	M		
	(b) $2.5mm^2$, 4 core, PVC/SWA/PVC copper cable	40	M		
F	Inter-wire the control panel with the existing Mains L.V board	1	Item		
	AMF Control Panel Total C/F to Price Summary Page				

SCHEDULE 3 - RECOMMENDED SPARE PARTS AND LUBRICATORS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	For the supply to the site of the following spare parts and lubricators:				
A	Oil Filters	3	No.		
B	Air Filters	3	No.		
C	Fuel Filter	3	No.		
D	Set of Fan belts to suit the set	1	No.		
E	Set of Injectors and Injector Nozzles	1	No.		
F	10 litres container of sump oil of grade.....*	1	No.		
G	2 kilogram grease in a tin of grade .....*	1	No.		
H	10 litre plastic container of distilled water	1	No.		
I	20 litre of engine oil in a tin of grade.....*	1	No.		
J	Any other spare parts recommended by Tenderer ** *The tenderer to fill in the Grade quality to be supplied **The tenderer to fill in the details and price of items but the price not to be included in total carried forward to summary page				
	Spare Parts & Lubricators Total C/F to Price Summary Page				

SCHEDULE 4 -TOOLS TO BE SUPPLIED WITH THE SET

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	For the supply to site of the following tools:				
A	Metal tool box with lock and two keys.	1	No.		
B	Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set.	1	No.		
C	Set of 8 No. Chrome vanadium open ended spanners in sizes to suit the set.	1	No.		
D	Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type.	1	No.		
E	Ditto - but open ended spanners.	1	No.		
F	Set of feeler gauges.	1	No.		
G	Grease gun to suit greasing points.	1	No.		
H	Oil can, trigger type.	1	No.		
I	Any other special tools which the tenderer recommends should be purchased as an optional:*				
	NOTE* Tenderer should give detail and prices of item 9 but the price not to be included in total carried forward.				
	Tools Total C/F to Price Summary Page				

SCHEDULE 5 – AUXILIARY FUEL TANK

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Supply, deliver to site and install, to the approval of the project Electrical Engineer, and connect to the daily service base/belly fuel tank, an auxiliary fuel tank with level indicator and with an operational running capacity of 72 hours. The tank is to be of mild steel plates of minimum thickness of 3mm complete with stand and all interconnecting G.I pipe work.	1	No.		
B	Supply, install, test and commission an electric 240V AC 50Hz fuel pump complete with DOL starter and Isolator and including all interconnecting accessories and G.I piping. This is to pump fuel from the supply tank to the auxiliary fuel tank.	1	Item		
C	Supply, install, test and commission a manually operated fuel pump complete with all interconnecting accessories and G.I piping.	1	Item		
	Auxilliary Fuel Tank Total C/F to Price Summary Page				

SCHEDULE 6: PROVISIONAL SUMS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
B	Allow for Testing and Commissioning with the Generator Set at full tank. Also allow for supply of 1,000 Litres of Generator Diesel.		Kshs.		
C	Allow for Bench Testing of Generator with Load Bank at the Supplier's Workshop.		Kshs.		
D	Allow for Training of Client's staff on the operation and maintenance of the Generating Set.		Kshs.		
E	Allow for a Provisional Sum of Kshs 2,000,000.00 for an overseas factory inspection as described the specifications		Kshs.		
F	Allow for profit, attendance and VAT on Item E above ……..%		Kshs.		
G	Allow for preparation and production of 3No. Sets of "As Installed Drawings" (Hard & Soft Copies in AutoCAD 2018).		Kshs.		
H	Allow for a Provisional Sum of Kshs 1,000,000.00 for an Contingency		Kshs.		
	Provisional Sums Total C/F to Price Summary Page				

PRICE SUMMARY PAGE

Item	Description	Amount (Kshs)
1.00	Sub-Total for Schedule 1 - Generator Set	
2.00	Sub-Total for Schedule 2 - AMF Panel	
3.00	Sub-Total for Schedule 3 - Recommended Spare Parts and Lubricators	
4.00	Sub-Total for Schedule 4 - Tools to be Supplied with the Set	
5.00	Sub-Total for Schedule 5 - Auxiliary Fuel Tank	
6.00	Sub-total for Schedule 6 - Provisional Sums	
	Total for Generator Installation Works C/F to Main Summary	

MAIN SUMMARY PAGE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.00	PRELIMINARIES	
2.00	Total for Bill No. 1: Generator Set Installation Works	
3.00	Allow for a Provisional Sum for training of staff on the operation and working of the installations	**100,000.00**
	TOTAL CARRIED FORWARD TO THE FORM OF TENDER	

Total Amount in Words (Kenya Shillings)

……

Total Amount in Words (Kenya Shillings)

……

Bidder's Name & Official Stamp

……

P.O. Box……

Signature…… **Date**……

PIN NO…… **V.A.T Certificate NO** ……

Witness…… **Address**……

Signature of Witness …… **Date**……

SECTION NAME:

PART D: SCHEDULE OF UNIT RATES

SCHEDULE OF UNIT RATES

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

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

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

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

SECTION NAME:

PART E: TECHNICAL SCHEDULE

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED CONTENTS

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. Failureto 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 asmay be approved by the Engineer.

1.4 The tenderer **MUST** complete in full the technical schedule.

1.5 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 (fillforms attached).

SECTION J:

STANDARD FORMS

STANDARD FORMS

CONTENTS

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

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. Name of Tenderer's representative to be contacted on matters of the tender during the tender period:

   .....

_____

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……

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……

Part 2 (b) – Partnership

Give details of partners as follows:

	Name in full	*Nationality*	*Citizenship Details*	*Shares*
1.	……	……	……..	……..
2.	……	……	……..	……

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:

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

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 FIVE (5) YEARS

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

PROJECT NAME	NAME OF CLIENT	TYPE OF WORK AND YEAR OF COMPLETION	VALUE OF CONTRACT (Kshs.)

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

EVIDENCE OF FINANCIAL RESOURCES TO MEET QUALIFICATIONREQUIREMENTS

(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,
(This should be for banks that may provide reference if contacted by the employer)

NAME	ADDRESS	TELEPHONE	EMAIL	ACCOUNT STATION

DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS IN WHICH THETENDERER 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?)