

REPUBLIC OF KENYA



**PARLIAMENT OF KENYA
PARLIAMENTARY SERVICE COMMISSION (PSC)**

PARLIAMENT BUILDINGS, PARLIAMENT ROAD

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TENDER DOCUMENT

TENDER NO: PJS/009/2019-2020

FOR

**PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS TO
THE PROPOSED REFURBISHMENT AND ADDITIONAL ALTERATIONS
TO COUNTY HOUSE BUILDING FOR THE PARLIAMENTARY SERVICE
COMMISSION**

TENDER SUBMISSION DEADLINE

FRIDAY 22ND, MAY 2020, AT 11.00AM

TABLE OF CONTENTS

	<u>PAGE</u>
	INTRODUCTION 1
SECTION I:	INVITATION TO TENDER 3
SECTION II:	INSTRUCTIONS TO TENDERERS 4 - 17
SECTION III:	CONDITIONS OF CONTRACT 20 - 41
SECTION IV:	APPENDIX TO INSTRUCTION TO TENDERERS 42 - 49
SECTION V:	CONDITIONS OF CONTRACT 50 - 66
SECTION VI:	APPENDIX TO CONDITION OF CONTRACT..... 67 - 73
SECTION VII:	SPECIFICATIONS 74 - 96
SECTION VIII:	SUB CONTRACT PRELIMINARIES AND GENERAL CONDITION 96 - 120
SECTION IX:	GENERAL MECHANICAL SPECIFICATION 121 - 127
SECTION X:	PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS 128 - 139
SECTION XI:	PARTICULAR SPECIFICATIONS FOR PORTABLE FIRE EXTINGUISHERS 138 - 147
SECTION XII:	PARTICULAR SPECIFICATIONS FOR FIRE HYDRANTS AND FIRE SUPPRESSIO..... 148 - 164
SECTION XIII:	BILLS OF QUANTITIES AND SCHEDULE OF UNITS RATES 165 - 208
SECTION XI V:	TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED 209 - 213
SECTION XVIII:	STANDARD FORMS 215 - 229

SECTION I: INVITATION TO TENDER

M/S
P.O. Box
Nairobi
Tel.

RE: TENDER NO. PJS/009/2019-2020 PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS FOR THE PROPOSED REFURBISHMENT AND ADDITIONAL ALTERATIONS TO COUNTY HOUSE BUILDING FOR THE PARLIAMENTARY SERVICE COMMISSION

The Parliamentary Service Commission invites sealed tenders from eligible tenderers for the proposed refurbishment and additional alterations to County House Building. - Plumbing, Drainage and Fire Fighting Installations

Interested contractors must be registered in category **NCA 5 and above** and appear in the current Building Contractors register.

Tenderers may obtain further information from the **Procurement Office on 2nd Floor, Protection House, Nairobi** or email through procurementpjs@parliament.go.ke or dg@parliament.go.ke. A complete set of the tender document may be downloaded free of charge from the **Commission's Website; www.parliament.go.ke** or IFMIS Portal; www.supplier.treasury.go.ke. Candidates may also pick the documents in CD form at the Procurement Office.

There shall be a **pre-bid meeting** on **Friday, 8th May, 2020, at 11.00 am** in the 2nd Floor Boardroom, Protection House, along Parliament Road, Nairobi.

Duly completed, serialized and paginated tender documents (original and copy) and a softcopy of the same are to be enclosed in plain sealed envelopes, marked with the **tender number, name** and **as prescribed under this Tender document** and be dropped in the **Tender Box** at the **Reception on 2nd Floor, Protection House, Nairobi** or be addressed to:

**Director General, Parliamentary Joint Services,
Parliamentary Service Commission,
Parliament Buildings,
P.O. Box 41842 00100,
NAIROBI, KENYA.**

so as to be received on or before **Friday, 22nd May, 2020 at 11.00 a.m.**

Tenders will be opened immediately thereafter in the presence of the Candidates who choose to attend or their appointed representatives, at **Protection House, 2nd floor boardroom**, Nairobi.

Tenders must be accompanied by a tender Security of **Kshs. 100,000.00** in form of a bank guarantee from a reputable bank recognized by the Central Bank of Kenya valid for 150 days from the date of tender opening, payable to the Parliamentary Service Commission.

Prices quoted should be inclusive of all taxes and delivery costs, and must be in Kenya Shillings and shall remain valid for **120 days** from the closing date of the tender

**DIRECTOR GENERAL, JOINT SERVICES,
PARLIAMENTARY SERVICE COMMISSION**

SECTION II: INSTRUCTIONS TO TENDERERS

TABLE OF CONTENTS PAGE

CLAUSE		PAGE
1.	General	6
2.	Tender Documents	7 - 10
3.	Preparation of Tenders	11 - 13
4.	Submission of Tenders	14
5.	Tender Opening and Evaluation	15 - 17
6.	Award of Contract	18 - 19

INSTRUCTIONS TO TENDERERS.

1. General/Eligibility/Qualifications/Joint venture/Cost of tendering

- 1.1 The Employer as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The successful tenderer will be expected to complete the Works by the Intended Completion Date specified in the tender documents.
- 1.2 All tenderers shall provide the Qualification Information, a statement that the tenderer (including all members of a joint venture and subcontractors) is not associated, or has not been associated in the past, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the Works, and any of its affiliates, shall not be eligible to tender.
- 1.3 All tenderers shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
- 1.4 In the event that pre-qualification of potential tenderers has been undertaken, only tenders from pre-qualified tenderers will be considered for award of Contract. These qualified tenderers should submit with their tenders any information updating their original pre-qualification applications or, alternatively, confirm in their tenders that the originally submitted pre-qualification information remains essentially correct as of the date of tender submission.
- 1.5 Where no pre-qualification of potential tenderers has been done, all tenderers shall include the following information and documents with their tenders , unless otherwise stated:
 - (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the tender to commit the tenderer;
 - (b) total monetary value of construction work performed for each of the last five years;
 - (c) experience in works of a similar nature and size for each of the last five years, and details of work under way or contractually committed; and names and addresses of clients who may be contacted for further information on these contracts;

- (d) major items of construction equipment proposed to carry out the Contract and an undertaking that they will be available for the Contract.
- (e) qualifications and experience of key site management and technical personnel proposed for the Contract and an undertaking that they shall be available for the Contract.
- (f) reports on the financial standing of the tenderer, such as profit and loss statements and auditor's reports for the past five years;
- (g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);
- (h) authority to seek references from the tenderer's bankers;
- (i) information regarding any litigation, current or during the last five years, in which the tenderer is involved, the parties concerned and disputed amount; and
- (j) proposals for subcontracting components of the Works amounting to more than 10 percent of the Contract Price.

1.6 Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated:

- (a) the tender shall include all the information listed in clause 1.5 above for each joint venture partner;
- (b) the tender shall be signed so as to be legally binding on all partners;
- (c) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
- (d) one of the partners will be nominated as being in charge, authorised to incur liabilities, and receive instructions for and on behalf of all partners of the joint venture; and
- (e) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

1.7 To qualify for award of the Contract, tenderers shall meet the following minimum qualifying criteria;

- (a) annual volume of construction work of at least 2.5 times the estimated annual cashflow for the Contract;
- (b) experience as main contractor in the construction of at least
- (c) two works of a nature and complexity equivalent to the Works over the last 10 years (to comply with this requirement, works cited should be at least 70 percent complete);

- (d) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed as required for the Works;
 - (e) a Contract manager with at least five years' experience in works of an equivalent nature and volume, including no less than three years as Manager; and
 - (f) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than 4 months of the estimated payment flow under this Contract.
- 1.8 The figures for each of the partners of a joint venture shall be added together to determine the tenderer's compliance with the minimum qualifying criteria of clause 1.7 (a) and (e); however, for a joint venture to qualify, each of its partners must meet at least 25 percent of minimum criteria 1.7 (a), (b) and (e) for an individual tenderer, and the partner in charge at least 40 percent of those minimum criteria. Failure to comply with this requirement will result in rejection of the joint venture's tender. Subcontractors' experience and resources will not be taken into account in determining the tenderer's compliance with the qualifying criteria, unless otherwise stated.
- 1.9 Each tenderer shall submit only one tender, either individually or as a partner in a joint venture. A tenderer who submits or participates in more than one tender (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the tenderer's participation to be disqualified.
- 1.10 The tenderer shall bear all costs associated with the preparation and submission of his tender, and the Employer will in no case be responsible or liable for those costs.
- 1.11 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine the Site of the Works and its surroundings, and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the tenderer's own expense.
- 1.12 The procuring entity's employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender.
- 1.13 The price to be charged for the tender document shall not exceed Kshs.5,000/=
- 1.14 The procuring entity shall allow the tenderer to review the tender document free of charge before purchase.

2. Tender Documents

- 2.1 The complete set of tender documents comprises the documents listed below and any addenda issued in accordance with Clause 2.4.
- (a) These Instructions to Tenderers
 - (b) Form of Tender and Qualification Information
 - (c) Conditions of Contract
 - (d) Appendix to Conditions of Contract
 - (e) Specifications
 - (f) Drawings
 - (g) Bills of Quantities
 - (h) Forms of Securities
- 2.2 The tenderer shall examine all Instructions, Forms to be filled and Specifications in the tender documents. Failure to furnish all information required by the tender documents, or submission of a tender not substantially responsive to the tendering documents in every respect will be at the tenderer's risk and may result in rejection of his tender.
- 2.3 A prospective tenderer making an inquiry relating to the tender documents may notify the Employer in writing or by cable, telex or facsimile at the address indicated in the letter of invitation to tender. The Employer will only respond to requests for clarification received earlier than seven days prior to the deadline for submission of tenders. Copies of the Employer's response will be forwarded to all persons issued with tendering documents, including a description of the inquiry, but without identifying its source.
- 2.4 Before the deadline for submission of tenders, the Employer may modify the tendering documents by issuing addenda. Any addendum thus issued shall be part of the tendering documents and shall be communicated in writing or by cable, telex or facsimile to all tenderers. Prospective tenderers shall acknowledge receipt of each addendum in writing to the Employer.
- 2.5 To give prospective tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend, as necessary, the deadline for submission of tenders, in accordance with Clause 4.2 here below.

3. Preparation of Tenders

- 3.1 All documents relating to the tender and any correspondence shall be in English language.
- 3.2 The tender submitted by the tenderer shall comprise the following:

- (a) These Instructions to Tenderers, Form of Tender, Conditions of Contract, Appendix to Conditions of Contract and Specifications;
 - (b) Tender Security;
 - (c) Priced Bill of Quantities ;
 - (d) Qualification Information Form and Documents;
 - (e) Alternative offers where invited; and
 - (f) Any other materials required to be completed and submitted by the tenderers.
- 3.3 The tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by the tenderer will not be paid for when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause relevant to the Contract, as of 30 days prior to the deadline for submission of tenders, shall be included in the tender price submitted by the tenderer.
- 3.4 The rates and prices quoted by the tenderer shall only be subject to adjustment during the performance of the Contract if provided for in the Appendix to Conditions of Contract and provisions made in the Conditions of Contract.
- 3.5 The unit rates and prices shall be in Kenya Shillings.
- 3.6 Tenders shall remain valid for a period of sixty (60) days from the date of submission. However in exceptional circumstances, the Employer may request that the tenderers extend the period of validity for a specified additional period. The request and the tenderers' responses shall be made in writing. A tenderer may refuse the request without forfeiting the Tender Security. A tenderer agreeing to the request will not be required or permitted to otherwise modify the tender, but will be required to extend the validity of Tender Security for the period of the extension, and in compliance with Clause 3.7 - 3.11 in all respects.
- 3.7 The tenderer shall furnish, as part of the tender, a Tender Security in the amount and form specified in the appendix to invitation to tenderers. This shall be in the amount not exceeding 2 percent of the tender price
- 3.8 The format of the Tender Security should be in accordance with the form of Tender Security included in Section G - Standard forms or any other form acceptable to the Employer . Tender Security shall be valid for 30 days beyond the validity of the tender.

- 3.9 Any tender not accompanied by an acceptable Tender Security shall be rejected. The Tender Security of a joint venture must define as "Tenderer" all joint venture partners and list them in the following manner: a joint venture consisting of ".....", ".....", and ".....".
- 3.10 The Tender Securities of unsuccessful tenderers will be returned within 28 days of the end of the tender validity period specified in Clause 3.6.
- 3.11 The Tender Security of the successful tenderer will be discharged when the tenderer has signed the Contract Agreement and furnished the required Performance Security.
- 3.12 The Tender Security may be forfeited
- (a) if the tenderer withdraws the tender after tender opening during the period of tender validity;
 - (b) if the tenderer does not accept the correction of the tender price, pursuant to Clause 5.7;
 - (c) in the case of a successful tenderer, if the tenderer fails within the specified time limit to
 - (i) sign the Agreement, or
 - (ii) furnish the required Performance Security.
- 3.13 Tenderers shall submit offers that comply with the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications. Alternatives will not be considered, unless specifically allowed in the invitation to tender. If so allowed, tenderers wishing to offer technical alternatives to the requirements of the tendering documents must also submit a tender that complies with the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications. In addition to submitting the basic tender, the tenderer shall provide all information necessary for a complete evaluation of the alternative, including design calculations, technical specifications, breakdown of prices, proposed construction methods and other relevant details. Only the technical alternatives, if any, of the lowest evaluated tender conforming to the basic technical requirements shall be considered.
- 3.14 The tenderer shall prepare one original of the documents comprising the tender documents as described in Clause 3.2 of these Instructions to Tenderers, bound with the volume containing the Form of Tender, and clearly marked "ORIGINAL". In addition, the tenderer shall submit copies of the tender, in the number specified in the invitation to tender, and clearly marked as "COPIES". In the event of discrepancy between them, the original shall prevail.

- 3.15 The original and all copies of the tender shall be typed or written in indelible ink and shall be signed by a person or persons duly authorised to sign on behalf of the tenderer, pursuant to Clause 1.5 (a) or 1.6 (b), as the case may be. All pages of the tender where alterations or additions have been made shall be initialled by the person or persons signing the tender.
- 3.16 Clarification of tenders shall be requested by the tenderer to be received by the procuring entity not later than 7 days prior to the deadline for submission of tenders.
- 3.17 The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.
- 3.18 The tender security shall be in the amount of 0.5 – 2 per cent of the tender price.

4. Submission of Tenders

- 4.1 The tenderer shall seal the original and all copies of the tender in two inner envelopes and one outer envelope, duly marking the inner envelopes as "**ORIGINAL**" and "**COPIES**" as appropriate. The inner and outer envelopes shall:
- (a) be addressed to the Employer at the address provided in the invitation to tender;
 - (b) bear the name and identification number of the Contract as defined in the invitation to tender; and
 - (c) provide a warning not to open before the specified time and date for tender opening.
- 4.2 Tenders shall be delivered to the Employer at the address specified above not later than the time and date specified in the invitation to tender. However, the Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with Sub-Clause 2.5 in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline will then be subject to the new deadline.
- 4.3 Any tender received after the deadline prescribed in clause 4.2 will be returned to the tenderer un-opened.
- 4.4 Tenderers may modify or withdraw their tenders by giving notice in writing before the deadline prescribed in clause 4.2. Each tenderer's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with clause 3.13 and 4.1, with the outer and inner envelopes additionally marked "**MODIFICATION**" and "**WITHDRAWAL**", as appropriate. No tender may be modified after the deadline for submission of tenders.

- 4.5 Withdrawal of a tender between the deadline for submission of tenders and the expiration of the period of tender validity specified in the invitation to tender or as extended pursuant to Clause 3.6 may result in the forfeiture of the Tender Security pursuant to Clause 3.11.
- 4.6 Tenderers may only offer discounts to, or otherwise modify the prices of their tenders by submitting tender modifications in accordance with Clause 4.4 or be included in the original tender submission.

5. Tender Opening and Evaluation

- 5.1 The tenders will be opened by the Employer, including modifications made pursuant to Clause 4.4, in the presence of the tenderers' representatives who choose to attend at the time and in the place specified in the invitation to tender. Envelopes marked "**WITHDRAWAL**" shall be opened and read out first. Tenderers' and Employer's representatives who are present during the opening shall sign a register evidencing their attendance.
- 5.2 The tenderers' names, the tender prices, the total amount of each tender and of any alternative tender (if alternatives have been requested or permitted), any discounts, tender modifications and withdrawals, the presence or absence of Tender Security, and such other details as may be considered appropriate, will be announced by the Employer at the opening. Minutes of the tender opening, including the information disclosed to those present will be prepared by the Employer.
- 5.3 Information relating to the examination, clarification, evaluation, and comparison of tenders and recommendations for the award of Contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful tenderer has been announced. Any effort by a tenderer to influence the Employer's officials, processing of tenders or award decisions may result in the rejection of his tender.
- 5.4 To assist in the examination, evaluation, and comparison of tenders, the Employer at his discretion, may ask any tenderer for clarification of the tender, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, telex or facsimile but no change in the price or substance of the tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered in the evaluation of the tenders in accordance with Clause 5.7.
- 5.5 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender (a) meets the eligibility criteria defined in Clause 1.7;(b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the tendering documents. A substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tendering documents, without material deviation

or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the tendering documents, the Employer's rights or the tenderer's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other tenderers presenting substantially responsive tenders.

- 5.6 If a tender is not substantially responsive, it will be rejected, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.
- 5.7 Tenders determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows:
- (a) where there is a discrepancy between the amount in figures and the amount in words, the amount in words will prevail; and
 - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer, there is an obvious typographical error, in which case the adjustment will be made to the entry containing that error.
 - (c) In the event of a discrepancy between the tender amount as stated in the Form of Tender and the corrected tender figure in the main summary of the Bill of Quantities, the amount as stated in the Form of Tender shall prevail.
 - (d) The Error Correction Factor shall be computed by expressing the difference between the tender amount and the corrected tender sum as a percentage of the corrected Builder's Work (i.e. Corrected tender sum less P.C. and Provisional Sums)
 - (e) The Error Correction Factor shall be applied to all Builder's Work (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuation of variations.
 - (f) the amount stated in the tender will be adjusted in accordance with the above procedure for the correction of errors and, with concurrence of the tenderer, shall be considered as binding upon the tenderer. If the tenderer does not accept the corrected amount, the tender may be rejected and the Tender Security may be forfeited in accordance with clause 3.11.
- 5.8 The Employer will evaluate and compare only the tenders determined to be substantially responsive in accordance with Clause 5.5.
- 5.9 In evaluating the tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:

- (a) making any correction for errors pursuant to clause 5.7;
 - (b) excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities, but including Dayworks where priced competitively.
 - (c) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with clause 3.12; and
 - (d) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with clause 4.6
- 5.10 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in tender evaluation.
- 5.11 The tenderer shall not influence the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. Any effort by the Tenderer to influence the Employer or his employees in his decision on tender evaluation, tender comparison or Contract award may result in the rejection of the tender.
- 5.12 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a non-indigenous sub-contractor.

6. Award of Contract

- 6.1 Subject to Clause 6.2, the award of the Contract will be made to the tenderer whose tender has been determined to be substantially responsive to the tendering documents and who has offered the lowest evaluated tender price, provided that such tenderer has been determined to be (a) eligible in accordance with the provision of Clauses 1.2, and (b) qualified in accordance with the provisions of clause 1.7 and 1.8.
- 6.2 Notwithstanding clause 6.1 above, the Employer reserves the right to accept or reject any tender, and to cancel the tendering process and reject all tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the action.
- 6.3 The tenderer whose tender has been accepted will be notified of the award prior to expiration of the tender validity period in writing or by cable, telex or facsimile. This notification (hereinafter and in all

Contract documents called the "Letter of Acceptance") will state the sum (hereinafter and in all Contract documents called the "Contract Price") that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract. At the same time the other tenderers shall be informed that their tenders have not been successful.

The contract shall be formed on the parties signing the contract.

- 6.4 The Agreement will incorporate all agreements between the Employer and the successful tenderer. Within 14 days of receipt the successful tenderer will sign the Agreement and return it to the Employer.
- 6.5 Within 21 days after receipt of the Letter of Acceptance, the successful tenderer shall deliver to the Employer a Performance Security in the amount stipulated in the Appendix to Conditions of Contract and in the form stipulated in the Tender documents. The Performance Security shall be in the amount and specified form
- 6.6 Failure of the successful tenderer to comply with the requirements of clause 6.5 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Tender Security.
- 6.7 Upon the furnishing by the successful tenderer of the Performance Security, the Employer will promptly notify the other tenderers that their tenders have been unsuccessful.
- 6.8 Preference where allowed in the evaluation of tenders shall not be allowed for contracts not exceeding one year (12 months)
- 6.9 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.
- 6.10 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.
- 6.11 Contract price variations shall not be allowed for contracts not exceeding one year (12 months)
- 6.12 Where contract price variation is allowed, the valuation shall not exceed 15% of the original contract price.
- 6.13 Price variation request shall be processed by the procuring entity within 30 days of receiving the request.
- 6.14 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

- 6.15 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.
- 6.16 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

7. Corrupt and Fraudulent practices

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

APPENDIX TO INSTRUCTIONS TO TENDERERS

INSTRUCTIONS TO TENDERERS REFERENCE	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERERS
1.1	The employer is the Parliamentary Service Commission
1.7	Qualification criteria as set out in the tender evaluation criteria
1.8	N/A
1.9	Joint venture or individual tenderers only.
1.13	N/A
2.3	Or through email address; procurementpjs@parliament.go.ke and dg@parliament.go.ke
3.2.(e)	N/A
3.4	N/A
3.6	Validity period of 120 days
3.8	Tender surety shall be valid for 150 days from the date of tender opening.
3.12 (b)	N/A
3.14	One original and One copy
3.18	Bid security of Kshs. 100,000 from a reputable bank recognized by the Central Bank of Kenya
5.2	Alternative bids not allowed
5.7	N/A: PPAD 2015 Applies
5.9	N/A
5.12	N/A
6.5	Successful bidder to provide performance security of 5% of the contract sum prior to contract signing from reputable bank recognized by Central Bank of Kenya.
6.8	N/A
6.12	-The word "valuation" should read "variation" -Variation shall apply as prescribed by the Public Procurement and Asset Disposal Act, 2015
6.13	Shall be 60 days from the date of receipt of the request
8.0	Due diligence shall be conducted before award in accordance with the Public Procurement and Asset Disposal Act, 2015
9.0	Bidder shall be required to provide litigation history which may be subjected to due diligence to ascertain the possibility of negatively affecting performance.

TENDER EVALUATION CRITERIA

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

- i. Preliminary evaluation,
- ii. Technical Evaluation; and
- iii. Financial Evaluation,

1.1. PRELIMINARY EVALUATION

S/No	MANDATORY REQUIREMENTS(MR)
MR1	Valid Copy of certificate of incorporation/ Registration.
MR2	Valid Current Tax Compliance Certificate and PIN certificate - If Consortium, from each member of the consortium.
MR3	Valid National Construction Authority (NCA 5 and above) registration Certificate (Plumbing and Drainage),
MR4	Duly filled, signed and stamped tender questionnaire
MR5	Duly filled and signed Confidential business questionnaire
MR6	Duly filled and signed Anticorruption declaration
MR7	Submission of original and (1) copy of tender document.
MR8	The original and (1) copy of tender documents should be properly Tape Bound and paginated in the correct sequence and all pages must be initialed/signed/stamped. NB: Spiral Binding and use of Spring or Box Files will not be allowed and will result in automatic disqualification.
MR9	Valid Copy of Single Business permit – for the year 2020
MR10	The Tender Security of Kshs. 100,000 (One Hundred Thousand) valid for 150 days in form of Bank Guarantee from a reputable bank recognized by the Central Bank of Kenya.
MR11	Submission of valid CR12 form showing the list directors /shareholding (issued within the last 1 year) or National Identity Card for Sole Proprietor
MR12	Current annual contractors practicing license from National Construction Authority (NCA)
MR13	Dully filled and signed form of tender.
MR14	Provide proof of Power of attorney (of Tender Signatory)
MR 15	Details of any current litigation or arbitration proceedings in which the bidder is involved as one of the parties
MR 16	Letter of authority to seek references from the Tenderer's bankers.
MR 17	Submit a copy of certified Audited accounts for the last three (3) years (2016, 2017 and 2018 and 2019 if available).
MR 18	Non debarment form duly filled and signed.
MR 19	Foreign and international bidders shall provide a declaration that they source at least 40% of their supplies and labour from citizen contractors.

Bid Document submitted without ANY of the above-mentioned Mandatory documents shall be rejected by the Parliamentary Service Commission's Evaluation Committee and will therefore not proceed to the technical and financial Evaluation.

N.B

The employer may seek further clarification/confirmation if necessary, to confirm authenticity/compliance of any condition of the tender.

1.2 TECHNICAL EVALUATION

Award of points for the **Technical Evaluation** shall be as shown in Table 1 below: -

Table 1: Scores for the Technical Evaluation

Item	Description	Points Scored	Max. Points
1	Key Personnel (Attach evidence)		
	Project Manager of the firm <ul style="list-style-type: none"> • Holder of degree or diploma in a relevant Construction/Engineering field ----- 5 marks • Holder of certificate in relevant Construction/Engineering field ----- 3 marks • Holder of trade test certificate in relevant Construction/Engineering field ----- 2 marks • No relevant certificate ----- 0 marks 		5
	Site Agent with degree/diploma of the key personnel in relevant Construction/Engineering field <ul style="list-style-type: none"> • With over 10 years' relevant experience----- 5 marks • With over 5 years' relevant experience ----- 3 marks • With under 5 years' relevant experience ----- 2 marks 		5
	2No. Foreman/Supervisor a certificate holder of key personnel in relevant Construction/Engineering field <ul style="list-style-type: none"> • With over 10 years' relevant experience ----- 5marks (@ 2.5marks) • With over 5 years' relevant experience ----- 3marks (@ 1.5marks) • With under 5 years' relevant experience ----- 2marks (@ 1 marks) 		5
			15
2	Contract completed in the last five (5) years; a max of 5 No. projects (Attach evidence in form of completion certificates or letters of reference from client/ consultants.) <ul style="list-style-type: none"> • Project of similar nature, complexity and magnitude of equal or higher value. ----- 5 marks each • Project of similar nature and complexity but of lower magnitude than the one in consideration ----- • --- 3 marks each • No completed project of similar nature ---- 0 marks 		
			25

3	On-going projects (A max of 2 No. projects) (Attach evidence; Letters of Award/ Interim certificates/ Contracts) <ul style="list-style-type: none"> • Project of similar nature, complexity and magnitude ---- ----- 5 marks each • Project of similar nature but of lower value than the one in consideration ----- 2.5 marks each No ongoing project of similar nature ----- 0 marks 			
				10
4	Schedules of contractor's equipment (Attach evidence of proof of ownership or lease agreement or Logbooks) For each specific equipment required in the construction work being tendered for. (Maximum No. of equipment to be considered – 5 No.) (Hoist/Concrete Mixer/Steel & Aluminium Fabrication Equipment/Transport, etc) --- - 2marks each			
				10
5.	Evidence of Offices and Workshops; (Lease agreement/ titles)			5
6.	Financial report Audited financial report (last three [3] years)- 2016-2018 <ul style="list-style-type: none"> • Average Annual Turnover greater or equal to Kshs 70 Million - ----- 15 Marks • Average Annual Turnover greater or equal to Kshs 35 Million - ----- 6 Marks • Average Annual Turnover below Kshs 35 Million --- 4 Marks 			
				15
	Evidence of financial resources (cash in hand, lines of credit, overdraft facility etc.) <ul style="list-style-type: none"> • Has financial resources equal or above the cost of the project ---- ----- 20marks • Has financial resources below the cost of the project, but over 50% of the cost of the project ----- 15marks • Has financial resources below 50% of the cost of the project ---- ----- 5marks • Failure to attach evidence 0 Marks 			
				20
	TOTAL			100

Any bidder who scores 80 points and above in this Technical Evaluation shall be considered for further evaluation.

STAGE 3 - FINANCIAL EVALUATION

Only tenderer's who score 80% and above of the overall marks on the technical evaluation shall qualify for financial evaluation.

This will be carried out only for those tenders that have passed BOTH mandatory requirements and Technical evaluation. The client will;

1. Undertake price comparison and ranking of prices.
2. The prices shall be compared and checked for completeness including all local taxes

STAGE 4 – DUE DILIGENCE & RECOMMENDATION FOR AWARD

Particulars of post – qualification if applicable. **The Client may inspect the premises due diligence** to seek further clarification/confirmation if necessary, to confirm authenticity /compliance of any condition of the tender /qualifications of the tenderer in line with **Section 83 of the Public Procurement and Asset Disposal Act, 2015.**

The bidder shall not be awarded the contract if they fail to pass the compliance test. The second lowest bidder shall be considered for due diligence.

Award Criteria: *The firm achieving the lowest evaluated price will be awarded the contract in line with Section 86 of the Public Procurement and Disposal Act, 2015*

Particulars of performance security; 5% of contract sum

Table of Contents

1	Definitions	22-23
2	Interpretation.....	24
3	Language and Law	25
4	Project Manager's Decisions.....	25
5	Delegation.....	25
6	Communications	25
7	Sub Contracting	25
8	Other Contractors	25
9	Personnel	25
10	Works.....	26
11	Safety and temporary works	26
12	Discoveries	26
13	Work Programme	26
14	Possession of site	27
15	Access to site	27
16	Instructions	27
17	Extension or Acceleration of completion date	27
18	Management Meetings	27
19	Early Warning	28
20	Defects	28
21	Bills of Quantities	29
22	Variations	29- 30
23	Payment certificates, currency of payments and Advance Payments	30-31
24	Compensation events	31 - 33
25	Price Adjustment	33 - 34
26	Retention	34
27	Liquidated Damages.....	34-35
28	Securities	35
29	Day Works	35
30	Liability and Insurance	35 - 36
31	Completion and taking over	36
32	Final Account	37

33	Termination	37 - 38
34	Payment upon termination	38
35	Release from performance	39
36	Corrupt gifts and payments of commission	39
37	Settlement of Disputes	39 - 41

CONDITIONS OF CONTRACT

1. Definitions

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

"Bill of Quantities" means the priced and completed Bill of Quantities forming part of the tender.

"Compensation Events" are those defined in Clause 24 hereunder.

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

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

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

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

"The Contract Price" is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

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

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

"The Defects Liability Certificate" is the certificate issued by Project Manager upon correction of defects by the Contractor.

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

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

"Dayworks" are Work inputs subject to payment on a time basis for labour and the associated materials and plant.

"Employer", or the **"Procuring entity"** as defined in the Public Procurement Regulations (i.e. Central or Local Government

administration, Universities, Public Institutions and Corporations, etc) is the party who employs the Contractor to carry out the Works.

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

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

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

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

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

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

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

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

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

“A Subcontractor” is a person or corporate body who has a Contract with the Contractor to carry out a part of the Work in the Contract, which includes Work on the Site.

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

“A Variation” is an instruction given by the Project Manager which varies the Works.

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

2. Interpretation

- 2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning in English Language unless specifically defined. The Project Manager will provide instructions clarifying queries about these Conditions of Contract.
- 2.2 If sectional completion is specified in the Appendix to Conditions of Contract, reference in the Conditions of Contract to the Works, the Completion Date and the Intended Completion Date apply to any section of the Works (other than references to the Intended Completion Date for the whole of the Works).
- 2.3 The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority;
 - (1) Agreement,
 - (2) Letter of Acceptance,
 - (3) Contractor’s Tender,
 - (4) Appendix to Conditions of Contract,
 - (5) Conditions of Contract,
 - (6) Specifications,
 - (7) Drawings,
 - (8) Bill of Quantities,
 - (9) Any other documents listed in the Appendix to Conditions of Contract as forming part of the Contract.

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

3. Language and Law

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

4 Project Manager's Decisions

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

5 Delegation

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

6 Communications

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

7 Subcontracting

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

8 Other Contractors

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

9 Personnel

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

10 Works

- 10.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings. The Works may commence on the Start Date and shall be carried out in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

11 Safety and Temporary Works

- 11.1 The Contractor shall be responsible for the design of temporary works. However before erecting the same, he shall submit his designs including specifications and drawings to the Project Manager and to any other relevant third parties for their approval. No erection of temporary works shall be done until such approvals are obtained.
- 11.2 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary works and all drawings prepared by the Contractor for the execution of the temporary or permanent Works, shall be subject to prior approval by the Project Manager before they can be used.
- 11.3 The Contractor shall be responsible for the safety of all activities on the Site.

12. Discoveries

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

13. Work Program

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

The Contractor shall submit to the Project Manager for approval an updated program at intervals no longer than the period stated in the Appendix to Conditions of Contract. If the Contractor does not submit an updated program within this period, the Project Manager may withhold the amount stated in the said Appendix from the next payment certificate and continue to withhold this amount until the

next payment after the date on which the overdue program has been submitted. The Project Manager's approval of the program shall not alter the Contractor's obligations. The Contractor may revise the program and submit it to the Project Manager again at any time. A revised program shall show the effect of Variations and Compensation Events.

14. Possession of Site

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

15. Access to Site

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

16. Instructions

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

17. Extension or Acceleration of Completion Date

17.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Work, which would cause the Contractor to incur additional cost. The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager in writing for a decision upon the effect of a Compensation Event or variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay caused by such failure shall not be considered in assessing the new (extended) Completion Date.

17.2 No bonus for early completion of the Works shall be paid to the Contractor by the Employer.

18. Management Meetings

18.1 A Contract management meeting shall be held monthly and attended by the Project Manager and the Contractor. Its business shall be to review the plans for the remaining Work and to deal with matters raised in accordance with the early warning procedure. The Project Manager shall record the minutes of management meetings and

provide copies of the same to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

19. Early Warning

- 19.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the Work, increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 19.2 The Contractor shall cooperate with the Project Manager in making and considering proposals on how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the Work and in carrying out any resulting instructions of the Project Manager.

20. Defects

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

21. Bills Of Quantities

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

22. Variations

- 22.1 All variations shall be included in updated programs produced by the Contractor.
- 22.2 The Contractor shall provide the Project Manager with a quotation for carrying out the variations when requested to do so. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period as may be stated by the Project Manager and before the Variation is ordered.
- 22.3 If the work in the variation corresponds with an item description in the Bills of Quantities and if in the opinion of the Project Manager, the quantity of work is not above the limit stated in Clause 21.2 or the timing of its execution does not cause the cost per unit of quantity to change, the rate in the Bills of Quantities shall be used to calculate the value of the variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the variation does not correspond with items in the Bills of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 22.4 If the Contractor's quotation is unreasonable, the Project Manager may order the variation and make a change to the Contract price, which shall be based on the Project Manager's own forecast of the effects of the variation on the Contractor's costs.
- 22.5 If the Project Manager decides that the urgency of varying the Work would prevent a quotation being given and considered without delaying the Work, no quotation shall be given and the variation shall be treated as a Compensation Event.
- 22.6 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

22.7 When the Program is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast.

23. Payment Certificates, Currency of Payments and Advance Payments

23.1 The Contractor shall submit to the Project Manager monthly applications for payment giving sufficient details of the Work done and materials on Site and the amounts which the Contractor considers himself to be entitled to. The Project Manager shall check the monthly application and certify the amount to be paid to the Contractor within 14 days. The value of Work executed and payable shall be determined by the Project Manager.

23.2 The value of Work executed shall comprise the value of the quantities of the items in the Bills of Quantities completed, materials delivered on Site, variations and compensation events. Such materials shall become the property of the Employer once the Employer has paid the Contractor for their value. Thereafter, they shall not be removed from Site without the Project Manager's instructions except for use upon the Works.

23.3 Payments shall be adjusted for deductions for retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of issue of each certificate. If the Employer makes a late payment, the Contractor shall be paid simple interest on the late payment in the next payment. Interest shall be calculated on the basis of number of days delayed at a rate three percentage points above the Central Bank of Kenya's average rate for base lending prevailing as of the first day the payment becomes overdue.

23.4 If an amount certified is increased in a later certificate or as a result of an award by an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

23.5 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

23.6 The Contract Price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya Shillings and foreign currency in the proportion indicated in the tender, or agreed prior to the execution of the Contract Agreement and indicated therein. The rate of exchange for the calculation of the amount of foreign currency payment shall be the rate of exchange indicated in the Appendix to Conditions of Contract. If the Contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services the Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services. The Employer and the Project Manager shall

be notified promptly by the Contractor of any changes in the expected foreign currency requirements of the Contractor during the execution of the Works as indicated in the Schedule of Foreign Currency Requirements and the foreign and local currency portions of the balance of the Contract Price shall then be amended by agreement between Employer and the Contractor in order to reflect appropriately such changes.

23.7 In the event that an advance payment is granted, the following shall apply:-

- a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of 10% (ten percent) of the original amount of the Contract. The advance shall not be subject to retention money.
- b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.
- c) Reimbursement of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

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

$$R = \frac{A(x^1 - x^{11})}{80 - 20}$$

Where:

R = the amount to be reimbursed

A = the amount of the advance which has been granted

X¹ = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.

X¹¹ = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

- d) with each reimbursement the counterpart of the directly liable guarantee may be reduced accordingly.

24. Compensation Events

24.1 The following issues shall constitute Compensation Events:

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

24.2 If a compensation event would cause additional cost or would prevent the Work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

- 24.3 As soon as information demonstrating the effect of each compensation event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.
- 24.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having co-operated with the Project Manager.
- 24.5 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Appendix to Conditions of Contract.
- 24.6 The Contractor shall give written notice to the Project Manager of his intention to make a claim within thirty days after the event giving rise to the claim has first arisen. The claim shall be submitted within thirty days thereafter.

Provided always that should the event giving rise to the claim of continuing effect, the Contractor shall submit an interim claim within the said thirty days and a final claim within thirty days of the end of the event giving rise to the claim.

25. Price Adjustment

- 25.1 The Project Manager shall adjust the Contract Price if taxes, duties and other levies are changed between the date 30 days before the submission of tenders for the Contract and the date of Completion. The adjustment shall be the change in the amount of tax payable by the Contractor.
- 25.2 The Contract Price shall be deemed to be based on exchange rates current at the date of tender submission in calculating the cost to the Contractor of materials to be specifically imported (by express provisions in the Contract Bills of Quantities or Specifications) for permanent incorporation in the Works. Unless otherwise stated in the Contract, if at any time during the period of the Contract exchange rates shall be varied and this shall affect the cost to the Contractor of such materials, then the Project Manager shall assess the net difference in the cost of such materials. Any amount from time to time so assessed shall be added to or deducted from the Contract Price, as the case may be.
- 25.3 Unless otherwise stated in the Contract, the Contract Price shall be deemed to have been calculated in the manner set out below and in sub-clauses 25.4 and 25.5 and shall be subject to adjustment in the events specified thereunder;

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

26. Retention

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

27. Liquidated Damages

27.1 The Contractor shall pay liquidated damages to the Employer at the rate stated in the Appendix to Conditions of Contract for each day that the actual Completion Date is later than the Intended Completion Date. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not alter the Contractor's liabilities.

27.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rate specified in Clause 23.30

28. Securities

28.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a reputable bank acceptable to the Employer, and denominated in Kenya Shillings. The Performance Security shall be valid until a date 30 days beyond the date of issue of the Certificate of Completion.

29. Dayworks

29.1 If applicable, the Dayworks rates in the Contractor's tender shall be used for small additional amounts of Work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

29.2 All work to be paid for as Dayworks shall be recorded by the Contractor on Forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the Work being done.

29.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

30. Liability and Insurance

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

30.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is the Employer's risk except loss or damage due to;

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

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

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

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

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

- 30.5 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 30.6 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager. Both parties shall comply with any conditions of insurance policies.

31. Completion and taking over

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

32. Final Account

- 32.1 The Contractor shall issue the Project Manager with a detailed account of the total amount that the Contractor considers payable to him by the Employer under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 30 days a schedule that states the scope of the corrections or additions that are necessary. If the final account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a Payment Certificate. The Employer shall pay the Contractor the amount due in the Final Certificate within 60 days.

33. Termination

- 33.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These

fundamental breaches of Contract shall include, but shall not be limited to, the following;

- (a) the Contractor stops work for 30 days when no stoppage of work is shown on the current program and the stoppage has not been authorised by the Project Manager;
- (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- (c) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

- (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 30 days (for Interim Certificate) or 60 days (for Final Certificate) of issue.
 - (e) the Project Manager gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
 - (f) the Contractor does not maintain a security, which is required.
- 33.2 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Clause 33.1 above, the Project Manager shall decide whether the breach is fundamental or not.
- 33.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 33.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible. The Project Manager shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

34. Payment Upon Termination

- 34.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the Work done and materials ordered and delivered to Site up to the date of the issue of the certificate. Additional liquidated damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable by the Contractor.
- 34.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the Work done, materials ordered, the reasonable cost of removal of equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works.
- 34.3 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on the Site, plant, equipment and temporary works.
- 34.4 The Contractor shall, during the execution or after the completion of the Works under this clause remove from the Site as and when required, within such reasonable time as the Project Manager may in

writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to or hired by him, and in default the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor. Until after completion of the Works under this clause the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefore the Project Manager shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

35. Release from Performance

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

36. Corrupt gifts and payments of commission

The Contractor shall not;

- (a) Offer or give or agree to give to any person in the service of the Employer any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract for the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract for the Employer.
- (b) Enter into this or any other contract with the Employer in connection with which commission has been paid or agreed to be paid by him or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Employer.

Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the provisions of the Public Procurement Regulations issued under The Exchequer and Audit Act Cap 412 of the Laws of Kenya.

37. Settlement Of Disputes

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

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

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

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

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

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

37.5 Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

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

38.0 Alternative Dispute Resolution

38.1 Pursuant to clause 37 of these Conditions of Contract, it shall be a condition that no dispute shall be referred to arbitration unless and until the matter has been dealt with through Alternative Dispute Resolution (ADR) mechanism.

38.2 The person or persons to conduct the Alternative Resolution shall be agreed upon between the parties.

38.3 The Alternative Dispute Resolution shall involve Reconciliation, Mediation or Adjudication.

SECTION VI – APPENDIX TO CONDITIONS OF CONTRACT

<p>THE PROJECT MANAGER IS</p> <p>Name:</p> <p>Address:</p> <p>Telephone:</p> <p>Facsimile:</p>	
<p>The name (and identification number) of the Contract PROPOSED REFURBISHMENTS, ADDITIONS & ALTERATIONS WORKS TO COUNTY HOUSE BUILDING FOR PARLIAMENTARY SERVICE COMMISSION</p> <p>The Works consist of: ELECTRICAL INSTALLATIONS WORKS TO THE PROPOSED REFURBISHMENTS, ADDITIONS & ALTERATIONS WORKS TO COUNTY HOUSE BUILDING FOR PARLIAMENTARY SERVICE COMMISSION TENDER No. <u>PJS/006/2019-2020</u></p>	
<p>Other contractors, utilities etc to be engaged by the Employer on the site include those for the execution of; NONE</p>	Clause 8.1
<p>The Start Date shall be AGREED WITH THE CLIENT</p> <p>The Intended Completion Date for the whole of the Works shall be AGREED WITH THE CLIENT</p> <p>The Contractor shall submit a program for the Works within 14 days of delivery of the Letter of Acceptance.</p>	Clause 10
<p>The period between Program updates is 14 days. The amount to be withheld for late submission of an updated Program is WHOLE CERTIFICATE</p>	Clause 13
<p>The Site Possession Date shall be AGREED WITH THE CLIENT</p> <p>The Site is located at COUNTY HOUSE BUILDING along Red Cross Road, Nairobi</p>	Clause 14
<p>The Defects Liability period is 6 months.</p>	Clause 20
<p>Variations shall be in accordance with the Public Procurement and Asset Disposal Act (2015)</p>	Clause 22
<p>The payments shall be settled within 45 days from the date of receipt of the interim certificates by the Client</p>	Clause 23.1
<p>There shall be no payment on delayed payments</p>	Clause 23.3
<p>All payments shall be made in Kenya Shillings</p>	Clause 23.6
<p>There shall be no payment in advance</p>	Clause 23.7
<p>Not Applicable</p>	Clause 25
<p>The proportion of payments retained is 10 percent.</p>	Clause 26
<p>The liquidated damages for the whole of the Works is Kshs. 200,000.00 per week or part thereof</p>	Clause 27.1

The Performance Security shall be five percent (5%) of the contract sum from a reputable bank recognised by the Central Bank of Kenya	Clause 28
<p>The minimum insurance covers shall be;</p> <ol style="list-style-type: none"> 1. The minimum cover for insurance of the Works and of Plant and Materials in respect of the Contractor's liability is Contractors All Risk policy 2. The minimum cover for loss or damage to Equipment is NIL 3. Insurance to cover third party risks 4. The minimum for insurance of other property is KShs <u>1,000,000.00</u> 5. The minimum cover for personal injury or death insurance <ul style="list-style-type: none"> • For the Contractor's employees is AS PER LAWS APPLICABLE • And for other people is AS PER LAWS APPLICABLE 	Clause 30
<p>The Completion Period for the Works is 12 MONTHS. The schedule of basic rates used in pricing by the Contractor is as attached [CONTRACTOR TO ATTACH].</p>	Clause 31
<p>Disputes to be settled as per the Arbitration Laws of Kenya</p> <p>Any dispute arising out of the contract that cannot be amicably resolved between the parties shall be referred by either party to the arbitration and a final decision by a panel of a person to be agreed between the parties. Failing agreement on the appointment of an Arbitrator, the Arbitrator shall be appointed by the chairperson of the Chartered Institute of Arbitrators – Kenya branch on the request of the applying party. The seat of arbitration shall be in Kenya.</p>	Clause 37.1

SECTION VI - DRAWINGS

Note 1. The drawing booklet including Site plans can be viewed at the Procurement Office, Protection House, 2nd Floor.

SECTION VI – STANDARD FORMS

- (i) Form of Invitation for Tenders
- (ii) Form of Tender
- (iii) Letter of Acceptance
- (iv) Form of Agreement
- (v) Form of Tender Security
- (vi) Performance Bank Guarantee
- (iv) Bank Guarantee for Advance Payment
- (v) Qualification Information
- (vi) Tender Questionnaire
- (xi) Confidential Business Questionnaire
- (vii) Statement of Foreign Currency Requirement
- (xi) Details of Sub-Contractors
- (viii) Request for Review Form
- Statement of Compliance Form

FORM OF INVITATION FOR TENDERS

_____ [date]

To: _____ [name of Contractor]

_____ [address]

Dear Sirs:

Reference: _____ [Contract Name]

You have been prequalified to tender for the above project.

We hereby invite you and other prequalified tenderers to submit a tender for the execution and completion of the above Contract.

A complete set of tender documents may be purchased by you from _____

_____ [mailing address, cable/telex/facsimile numbers].

Upon payment of a non-refundable fee of Kshs _____

All tenders must be accompanied by _____ number of copies of the same and a security in the form and amount specified in the tendering documents, and must be delivered to

_____ [address and location]

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

Please confirm receipt of this letter immediately in writing by cable/facsimile or telex.

Yours faithfully,

_____ Authorized Signature

_____ Name and Title

FORM OF TENDER

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

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above 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 Project Manager’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 until _____ [Insert date], and it shall remain binding upon us and may be accepted at any time before that date.

4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.

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

Dated this _____ day of _____ 20_____

Signature _____ in the capacity of _____

duly authorized to sign tenders for and on behalf of _____ [Name of Employer]
of _____ [Address] of
Employer]

Witness; Name _____

Address _____

Signature _____

Date _____

LETTER OF ACCEPTANCE[letterhead paper of the Employer]

_____ [date]

To: _____
[name of the Contractor]

[address of the Contractor]

Dear Sir,

This is to notify you that your Tender dated _____
_____ for the execution of

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

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

Authorized Signature

Name and Title of Signatory

Attachment: Agreement

FORM OF AGREEMENT

THIS AGREEMENT, made the _____ day of _____ 20 _____
between _____ of [or whose registered office is situated
at] _____ (hereinafter called “the Employer”) of
the one part AND

_____ of [or whose
registered office is situated at] _____
(hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes

(*name and identification number of Contract*)(hereinafter called “the Works”)
located at _____ [*Place/location of the Works*]and the
Employer has accepted the tender submitted by the Contractor for the execution and
completion of such
Works and the remedying of any defects therein for the Contract Price of
Kshs _____ [*Amount in figures*],Kenya
Shillings _____ [*Amount in words*].

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and shall be read and construed as part of this Agreement i.e.
 - (i) Letter of Acceptance
 - (ii) Form of Tender
 - (iii) Conditions of Contract Part I
 - (iv) Conditions of Contract Part II and Appendix to Conditions of Contract
 - (v) Specifications
 - (vi) Drawings
 - (vii) Priced Bills of Quantities
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with

the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

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

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The common Seal of _____

Was hereunto affixed in the presence of _____

Signed Sealed, and Delivered by the said _____

Binding Signature of Employer _____

Binding Signature of Contractor _____

In the presence of (i) Name _____

Address _____

Signature _____

[ii] Name _____

Address _____

Signature _____

FORM OF TENDER SECURITY

WHEREAS (hereinafter called “the Tenderer”) has submitted his tender dated for the construction of

.....
..... (*name of Contract*)

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 well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank this Day of20.....

THE CONDITIONS of this obligation are:

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

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him 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 up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the said date.

[date]

[signature of the Bank]

[witness]

[seal]

PERFORMANCE BANK GUARANTEE

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

Dear Sir,

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

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

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

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

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

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

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

SIGNATURE AND SEAL OF THE GUARANTOR _____

Name of Bank _____

Address _____

Date

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ [name of Employer] _____ (Date)
_____ [address of Employer]

Gentlemen,

Ref: _____ [name of Contract]

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, We, _____ [name and Address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Contract in an amount of Kshs. _____ [amount of Guarantee in figures] Kenya Shillings _____ [amount of Guarantee in words].

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

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

No drawing may be made by you under this guarantee until we have received notice in writing from you that an advance payment of the amount listed above has been paid to the Contractor pursuant to the Contract.

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

Yours faithfully,

Signature and Seal _____

Name of the Bank or financial institution _____

Address

Date

Witness: Name:

Address: _____

Signature: _____

Date: _____

QUALIFICATION INFORMATION

1. Individual Tenderers or Individual Members of Joint Ventures

1.1 Constitution or legal status of tenderer (attach copy or Incorporation Certificate);

Place of registration: _____

Principal place of business _____

Power of attorney of signatory of tender _____

1.2 Total annual volume of construction work performed in the last five years

Year	Volume	
	Currency	Value

1.3 Work performed as Main Contractor on works of a similar nature and volume over the last five years. Also list details of work under way or committed, including expected completion date.

Project name	Name of client and contact person	Type of work and year of completion	Value of performed and Contract
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

1.4 Major items of Contractor's Equipment proposed for carrying out the Works. List all information requested below.

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?)
_____ (etc.)	_____	_____	
	_____	_____	
	_____	_____	

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data.

Position	Name	Years of experience (general)	Years of experience in proposed position
Project Manager			

(etc.)			

1.6 Financial reports for the last five years: balance sheets, profit and loss statements, auditor's reports, etc. List below and attach copies.

1.7 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of supportive documents.

1.8 Name, address and telephone, telex and facsimile numbers of banks that may provide reference if contacted by the Employer.

1.9 Statement of compliance with the requirements of Clause 1.2 of the Instructions to Tenderers.

1.10 Proposed program (work method and schedule) for the whole of the Works.

2Joint Ventures

2.4The information listed in 1.1 – 1.10 above shall be provided for each partner of the joint venture.

- 2.5 The information required in 1.11 above shall be provided for the joint venture.
- 2.6 Attach the power of attorney of the signatory(ies) of the tender authorizing signature of the tender on behalf of the joint venture
- 2.7 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that:
- a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
 - b) one of the partners will be nominated as being in charge, authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture; and
 - c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full names of tenderer

.....

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

.....

3. Telephone number (s) of tenderer

.....

4. Telex address of tenderer

.....

5. Name of tenderer's representative to be contacted on matters of the tender during the tender period

.....

6. Details of tenderer's nominated agent (if any) to receive tender notices. This is essential if the tenderer does not have his registered address in Kenya (name, address, telephone, telex)

.....

.....

Signature of Tenderer

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

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 2 (d) whichever applies to your type of business.

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

Part 1 – General

Business Name

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

Plot No..... Street/Road

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

Nature of Business.....

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

Maximum value of business which you can handle at any time: K. pound.....

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

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

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

*Citizenship details

Part 2 (b) – Partnership

Give details of partners as follows:

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

Part 2(c) – Registered Company:

Private or public.....

State the nominal and issued capital of the Company-

Nominal Kshs.....

Issued Kshs.....

Give details of all directors as follows:

Name in full. Nationality. Citizenship Details*. Shares.

1.

2.....

3.....

4.....

Part 2(d) – Interest in the Firm:

Is there any person / persons in(Name of Employer) who has interest in this firm? Yes/No.....(Delete as necessary)

I certify that the information given above is correct.

.....
(Title)

.....
(Signature)

.....
(Date)

- Attach proof of citizenship

STATEMENT OF FOREIGN CURRENCY REQUIREMENTS(NOT APPLICABLE)

(See Clause 23] of the Conditions of Contract)

In the event of our Tender for the execution of _____
_____ (*name of Contract*) being accepted, we would
require in accordance with Clause 21 of the Conditions of Contract, which is
attached hereto, the following percentage:

(Figures)..... (Words).....

of the Contract Sum, (Less Fluctuations) to be paid in foreign currency.

Currency in which foreign exchange element is required:

.....

Date: The Day of 20.....

Enter 0% (zero percent) if no payment will be made in foreign currency.

Maximum foreign currency requirement shall be _____(percent) of the
Contract Sum, less Fluctuations.

(Signature of Tenderer)

DETAILS OF SUB-CONTRACTORS

If the Tenderer wishes to sublet any portions of the Works under any heading, he must give below details of the sub-contractors he intends to employ for each portion.

Failure to comply with this requirement may invalidate the tender.

(1) Portion of Works to be sublet:

[i] Full name of Sub-contractor
and address of head office:

.....

(ii) Sub-contractor's experience
of similar works carried out in
the last 3 years with
Contract value:

.....

.....

(2) Portion of Works to sublet:

[i] Full name of sub-contractor
and address of head office:

.....

.....

[ii] Sub-contractor's experience of similar works carried out in the
last 3 years with
contract value:

.....

[Signature of Tenderer)

Date

LETTER OF NOTIFICATION OF AWARD

Address of Procuring Entity

To: _____

RE: Tender No. _____

Tender Name _____

This is to notify that the contract/s stated below under the above mentioned tender have been awarded to you.

1. Please acknowledge receipt of this letter of notification signifying your acceptance.
2. The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.
3. You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS) _____

SIGNED FOR ACCOUNTING OFFICER

REPUBLIC OF KENYA PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO.....OF.....20.....

BETWEEN

..... APPLICANT

AND

.....RESPONDENT (*Procuring Entity*)

Request for review of the decision of the..... (*Name of the Procuring Entity*) of
.....dated the...day of20.....in the matter of Tender
No.....of20...

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical
address.....Fax No.....Tel. No.....Email, hereby request the Public
Procurement Administrative Review Board to review the whole/part of the above mentioned
decision on the following grounds , namely:-

- 1.
- 2.
- etc.

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

- 1.
- 2.
- etc

SIGNED(Applicant)

Dated on.....day of/...20...

FOR OFFICIAL USE ONLY

Lodged with the Secretary Public Procurement Administrative Review Board on
day of20.....

SIGNED
Board Secretary

ANTI-CORRUPTION DECLARATION COMMITMENT/ PLEDGE

(Sections 62, 65 and 66 of the PPAD Act, 2015)

I/We/Messrs.....

Of Street, Building, P O Box.....

.....

Contact/Phone/E mail.....

Declare that Public Procurement is based on a free and fair competitive Tendering process which should not be open to abuse.

I/We.....

declare that I/We will not offer or facilitate, directly or indirectly, any inducement or reward to any public officer, their relations or business associates, in connection with

Tender/Tender No for
or in the subsequent performance of the contract if I/We am/are successful.

Authorized Signature.....

Name and Title of Signatory.....

NON-DEBARMENT STATEMENT FORM

I/We/Messrs..... of
.....Street/avenue,Building, P. O. Box.....Code, of (Town),
..... (Nationality), Phone: E-mail declare that I/We /Messrs
.....are not debarred from participating in public
procurement by the Public Procurement Oversight Authority pursuant to section 115 of the
Public Procurement and Disposal Act, 2005.

Dated thisday of 20.....

Authorized Signature.....Official Stamp

Name _____ **and** _____ **Title** _____ **of**
Signatory.....

SECTION VIII
SUB-CONTRACT PRELIMINARIES
AND
GENERAL CONDITIONS

CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1.01	Examination of Tender Documents	100
1.02	Discrepancies	100
1.03	Conditions of Contract Agreement	100
1.04	Payments	101
1.05	Definition of Terms	101-102
1.06	Site Location	102
1.07	Duration of contract	102
1.08	Scope of contract Works	102
1.09	Extent of the Contractor's Duties	102-103
1.10	Execution of the Works	103
1.11	Validity of Tender	103
1.12	Firm – Price Contract	103-104
1.13	Variation	104
1.14	Prime Cost and Provisional Sums	104
1.15	Bond	104
1.16	Government Legislation and Regulations	104
1.17	Import Duty and Value Added Tax	104
1.18	Insurance Company Fees	105
1.19	Provision of Services by the Main Contractor	105
1.20	Suppliers	105
1.21	Samples and Materials Generally	105
1.22	Administrative Procedure and Contractual Responsibility	105
1.23	Bills of Quantities	106
1.24	Contractor's Office in Kenya	107

1.25	Builders Work	108
1.26	Structural Provision for the Works	108
1.27	Position of Services, Plant, Equipment, Fittings and Apparatus	108-109
1.28	Checking of Work	109
1.29	Setting to Work and Regulating System	109
1.30	Identification of Plant and Components	109
1.31	Contract Drawings	110
1.32	Working Drawings	110-111
1.33	Record Drawings (As Installed) and Instructions	111
1.34	Maintenance Manual	111-160
1.35	Hand – Over	160-112
1.36	Painting	113
1.37	Spares	113
1.38	Testing and Inspection – Manufactured Plant	113
1.39	Testing and Inspection – Installation	113
1.40	Labour Camps	114
1.41	Storage of Materials	114
1.42	Initial Maintenance	114-115
1.43	Maintenance and Servicing after Completion of the Initial Maintenance	115
1.44	Trade Names	115
1.45	Water and Electricity for the Works	115
1.46	Protection	115
1.47	Defects After Completion	115
1.48	Damages for Delay	115
1.49	Clear Away on Completion	116

1.50	Final Account	116
1.51	Fair Wages	116
1.52	Supervision	116
1.53	Test Certificates	117
1.54	Labour	117
1.55	Discount to the Main Contractor	117
1.56	Guarantee	117
1.57	Direct Contracts	117
1.58	Attendance Upon the Tradesmen	117
1.59	Trade Union	117
1.60	Local and other Authorities notices and fees	118
1.61	Assignment or Subletting	118
1.62	Partial Completion	118
1.63	Temporary Works	118
1.64	Patent Rights	119
1.65	Mobilization And Demobilization	119
1.66	Extended Preliminaries	119
1.67	Supervision by Engineer and Site Meetings	119
1.68	Amendment to Scope of Contract Works	119
1.69	Contractors Obligation and Employers Obligation	120
1.70	Appendix to Sub-Contract preliminaries and General conditions	169

SECTION VIII

SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

1.01 Examination of Tender Documents

The tenderer is required to check the number of pages of this document and should he find any missing or indistinct, he must inform the Engineer at once and have the same rectified.

All tenderers shall be deemed to have carefully examined the following:

Work detailed in the Specification and in the Contract Drawings.

The Republic of Kenya Document “General Conditions of Contract for Electrical and Mechanical Works”.

Other documents to which reference is made.

He shall also be deemed to have included for any expenditure which may be incurred in conforming with the above items (a), (b), (c) and observe this expense as being attached to the contract placed for the whole or any part of the work.

The tenderer shall ensure that all ambiguities, doubts or obscure points of detail, are clarified with the Engineer before submission of his tender, as no claims for alleged deficiencies in the information given shall be considered after this date.

1.02 Discrepancies

The Contractor shall include all work either shown on the Contract Drawings or detailed in the specification. No claim or extra cost shall be considered for works which has been shown on the drawings or in the specification alone.

Should the drawing and the specification appear to conflict, the Sub-contractor shall query the points at the time of tendering and satisfy himself that he has included for the work intended, as no claim for extra payment on this account shall be considered after the contract is awarded.

1.03 Conditions of Contract Agreement

The Contractor shall be required to enter into a Sub-contract with the Main Contractor.

The Conditions of the Contract between the Main Contractor and any Sub-contractor as hereinafter defined shall be the latest edition of the Agreement and Schedule of Conditions of Kenya Association of Building and Civil Engineering Contractors as particularly modified and amended hereinafter.

For the purpose of this contract the Agreement and Schedule of Conditions and any such modifications and amendments shall read and construed together. In any event of discrepancy the modifications and amendments shall prevail.

1.04 Payment

Payment will be made through certificates to the Main Contractor, All payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site.

1.05 Definition of Terms

Throughout these contract documents units of measurements, terms and expressions are abbreviated and wherever used hereinafter and in all other documents they shall be interpreted as follows:

- i) **Employer:** The term “**Employer**” shall mean **Parliamentary Service Commission
P.o Box 41842-00100
Nairobi**
- ii) **Architect:** The term “**Architect**” shall mean
**Scope Design Systems.
P.O.Box 10581-00100 Nairobi**
- iii) **Project Manager:** The term **Project Manager** shall Mean:
**Aaki Consultants
P.O. Box 66091-00800 NAIROBI**
- iv) **Quantity Surveyor:** The term “**Quantity Surveyor**” shall mean
**Amazon Consultants Ltd
P.O.Box 1756-00100 Nairobi**
- v) **Civil/Structural Engineers:** The term “**Civil/Structural Engineers**” shall mean **Horicon
Engineering Solution Ltd
P.O. Box 1756-00100 Nairobi**
- vi) **Engineer:** The term “**Engineer**” shall mean
**Rex Consultants Ltd
P.O.B ox 73878-00200.**
- vii) **Main Contractor:** The term “**Main Contractor**” shall mean the firm or company appointed to carry out the Building Works and shall include his or their heir, executors, assigns, administrators, successors, and duly appointed representatives.
- viii) **Sub-contractor:** The term “**Sub-contractor**” shall mean the persons or person, firm or Company whose tender for this work has been accepted, and who has entered into a contract agreement with the Contractor for the execution of the Sub-contract Works, and shall include his or their heirs, executors, administrators, assigns, successors and duly appointed representatives.
- ix) **Sub-contract Works:** The term “**Sub-contract Works**” shall mean all or any portion of the work, materials and articles, whether the same are being manufactured or prepared, which are to be used in the execution of this Sub-contract and whether the same may be on site or not.
- x) **Contract Drawings:** The term “**Contract Drawings**” shall mean those drawings required or referred to herein and forming part of the Bills of Quantities.
- xi) **Working Drawings:** The term “**Working Drawings**” shall mean those drawings required to be prepared by the Sub-contractor as hereinafter described.

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

xiii) **Abbreviations:**

CM shall mean **Cubic Metre**

SM shall mean **Square Metre**

LM shall mean **Linear Metre**

LS shall mean **Lump Sum**

mm shall mean **Millimetres**

No. Shall mean **Number**

Kg. shall mean **Kilogramme**

KEBS or **KS** shall mean **Kenya Bureau of Standards**

BS shall mean. **Current standard British Standard Specification published by the British Standard Institution, 2 Park Street, London W1, England**

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

1.06 **Site Location**

The site of the Contract Works is situated in **at the Parliament Square, Nairobi CBD.**

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

1.07 **Duration of Sub-Contract**

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

1.08 **Scope of Contract Works**

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

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

1.09 **Extent of the Sub-contractor’s Duties**

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

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

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

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

1.10 **Execution of the Works**

The works shall be carried out strictly in accordance with:

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

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

1.11 **Validity of Tender**

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

1.12 **Firm – Price Contract**

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

1.13 **Variation**

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

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

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

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

1.14 **Prime Cost and Provisional Sums**

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

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

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

1.15 **Bond**

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

1.16 **Government Legislation and Regulations**

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

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

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

1.17 **Import Duty and Value Added Tax**

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

1.18 **Insurance Company Fees**

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

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

1.19 **Provision of Services by the Main Contractor**

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

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

1.20 **Suppliers**

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

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

1.21 **Samples and Materials Generally**

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

1.22 **Administrative Procedure and Contractual Responsibility**

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

1.23 **Bills of Quantities**

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

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

1.24 **Contractor's Office in Kenya**

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

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

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

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

1.25 **Builder's Work**

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

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

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

1.26 **Structural Provision for the Works**

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

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

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

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

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

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

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

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

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

1.28 **Checking of Work**

The Contractor shall satisfy himself to the correctness of the connections he makes to all items of equipment supplied under the Contract agreement and equipment supplied under other contracts before it is put into operation. Details of operation, working pressures, temperatures, voltages, phases, power rating, etc., shall be confirmed to others and confirmation received before the system is first operated.

1.29 **Setting to Work and Regulating System**

The Contractor shall carry out such tests of the Contract Works as required by British Standard Specifications, or equal and approved codes as specified hereinafter and as customary.

No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer unless otherwise stated by him (Contractor's own preliminary and proving tests excepted).

It will be deemed that the Contractor has included in the Contract Sum for the costs of all fuel, power, water and the like, for testing and commissioning as required as part of the Contract Works. He shall submit for approval to the Engineer a suitable programme for testing and commissioning. The Engineer and Employer shall be given ample warning in writing, as to the date on which testing and commissioning will take place.

The Contractor shall commission the Contract Works and provide attendance during the commissioning of all services, plant and apparatus connected under the Contract Agreement or other Sub-contract Agreements, related to the project.

Each system shall be properly balanced, graded and regulated to ensure that correct distribution is achieved and where existing installations are affected, the Contractor shall also regulate these systems to ensure that their performance is maintained.

The proving of any system of plant or equipment as to compliance with the Specification shall not be approved by the Engineer, except at his discretion, until tests have been carried out under operating conditions pertaining to the most onerous conditions specified except where the time taken to obtain such conditions is unreasonable or exceeds 12 months after practical completion of the Contract Works.

1.30 **Identification of Plant Components**

The Contractor shall supply and fix identification labels to all plant, starters, switches and items of control equipment including valves, with white traffolyte or equal labels engraved in red lettering denoting its name, function and section controlled. The labels shall be mounted on equipment and in the most convenient positions. Care shall be taken to ensure the labels can be read without difficulty. This requirement shall apply also to major components of items of control equipment.

Details of the lettering of the labels and the method of mounting or supporting shall be forwarded to the Engineer for approval prior to manufacture.

1.31 **Contract Drawings**

The Contract Drawings when read in conjunction with the text of the Specification, have been completed in such detail as was considered necessary to enable competitive tenders to be obtained for the execution and completion of the Contract works.

The Contract Drawings are not intended to be Working Drawings and shall not be used unless exceptionally they are released for this purpose.

1.32 **Working Drawings**

The Contractor shall prepare such Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works.

If the Contractor requires any further instructions, details, Contract Drawings or information drawings to enable him to prepare his Working Drawings or proposals, the Contractor shall accept at his own cost, the risk that any work, commenced or which he intends to commence at site may be rejected.

The Engineer, in giving his approval to the Working Drawings, will presume that any necessary action has been, or shall be taken by the Contractor to ensure that the installations shown on the Working Drawings have been cleared with the Project Manager and any other Sub-contractors whose installations and works might be affected.

If the Contractor submits his Working Drawings to the Engineer without first liaising and obtaining clearance for his installations from the Project Manager and other Sub-contractors whose installations and works might be affected, then he shall be liable to pay for any alterations or modification to his own, or other Sub-contractor's installations and works, which are incurred, notwithstanding any technical or other approval received from the Engineer.

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

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

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

Schematic Layout Drawings of services and of control equipment.

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

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

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

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

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

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

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

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

1.33 **Record Drawings (As Installed) and Instructions**

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

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

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

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

Fully dimensioned drawings of all plant and apparatus.

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

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

Relay adjustment charts and manuals.

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

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

Grading Charts.

Valve schedules and locations suitability cross-referenced.
Wiring and piping diagrams of plant and apparatus.

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

Operating Instruction

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

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

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

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

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

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

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

1.34 **Maintenance Manual**

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

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

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

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

System Description.

Plant

Valve Operation

Switch Operation

Procedure of Fault Finding

Emergency Procedures

Lubrication Requirements

Maintenance and Servicing Periods and Procedures

Colour Coding Legend for all Services

Schematic and Writing Diagrams of Plant and Apparatus

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

Lists of Primary and Secondary Spares.

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

1.35 **Hand-over**

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

The procedure to be followed will be as follows:

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

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

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

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

1.36 **Painting**

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

1.37 **Spares**

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

1.38 **Testing and Inspection – Manufactured Plant**

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

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

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

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

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

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

1.39 **Testing and Inspection -Installation**

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

1.40 **Labour Camps**

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

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

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

1.41 **Storage of Materials**

The Contractor shall provide storerooms and workshop where required. He shall also provide space for storage to nominated sub-contractors who shall be responsible for these lock-up shades or stores provided.

Nominated Sub-contractors are to be made liable for the cost of any storage accommodation provided specially for their use. No materials shall be stored or stacked on suspended slabs without the prior approval of the Project manager.

1.42 **Initial Maintenance**

The Contractor shall make routine maintenance once a month during the liability for the Defects Period and shall carry out all necessary adjustments and repairs, cleaning and oiling of moving parts. A monthly report of the inspection and any works done upon the installation shall be supplied to the Engineer.

The Contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of inspection.

The Contractor shall allow in the contract Sum of the initial maintenance, inspection and break-down service and shall provide for all tools, instruments, plant and scaffolding and the transportation thereof, as required for the correct and full execution of these obligations and the provision, use or installation of all materials as oils, greases, sandpaper, etc., or parts which are periodically renewed such as brake linings etc., or parts which are faulty for any reason whatsoever excepting always Acts of God such as storm, tempest, flood, earthquake and civil revolt, acts of war and vandalism.

1.43 **Maintenance and Servicing After Completion of the Initial Maintenance**

The Contractor shall, if required, enter into a maintenance and service agreement with the employer for the installation for a period of up to five years from the day following the last day of the liability for Defects Period which offers the same facilities as specified in Clause 1.41 (Initial Maintenance).

The terms of any such agreement shall not be less beneficial to the employer than the terms of Agreements for either similar installation.

The Contractor shall submit with his tender for the works, where called upon a firm quotation for the maintenance and service of the installation as specified herein, which shall be based upon the present day costs and may be varied only to take into account increases in material and labour unit rate costs between the time of tendering and the signing of the formal maintenance and service agreement and which shall remain valid and open for acceptance by the Employer to and including the last day of the fifth complete calendar month following the end of the liability for Defects Period.

1.44 **Trade Names**

Where trade names of manufacturer's catalogue numbers are mentioned in the Specification or the Bills of Quantities, the reference is intended as a guide to the type of article or quality of material required. Alternate brands of equal and approved quality will be acceptable.

1.45 **Water and Electricity for the Works**

These will be made available by the Contractor who shall be liable for the cost of any water or electric current used and for any installation provided especially for his own use.

1.46 **Protection**

The Contractor shall adequately cover up and protect his own work to prevent injury and also to cover up and protect from damage all parts of the building or premises where work is performed by him under the Contract.

1.47 **Defects After Completion**

The defects liability period will be 6 months from the date of practical completion of the Works in the Contract and certified by the Engineer.

1.48 **Damages for Delay**

Liquidated and Ascertained damages as stated in the Contract Agreement will be claimed against the Contractor for any unauthorized delay in completion. The Contractor shall be held liable for the whole or a portion of these damages should he cause delay in completion.

1.49 **Clear Away on Completion**

The Contractor shall, upon completion of the works, at his own expense, remove and clear away all plant, equipment, rubbish and unused materials, and shall leave the whole of the works in a clean and tidy state, to the satisfaction of the Engineer. On completion, the whole of the works shall be delivered up clean, complete and perfect in every respect to the satisfaction of the Engineer.

1.50 **Final Account**

On completion of the works the Contractor shall agree with the Engineer the value of any variations outstanding and as soon as possible thereafter submit to the Engineer his final statement of account showing the total sum claimed sub-divided as follows:

Statement A - detailing the tender amounts less the Prime Cost and Provisional Sums, included therein.

Statement B - detailing all the variation orders issued on the contract.

Statement C - Summarizing statement A and B giving the net grand total due to the Contractor for the execution of the Contract.

1.51 **Fair Wages**

The Contractor shall in respect of all persons employed anywhere by him in the execution of the contract, in every factory, workshop or place occupied or used by him for execution of the Contract, observe and fulfil the following conditions:

The Contractor shall pay rates of the wages and observe hours and conditions of labour not less favourable than those established for the trade or industry in the district where work is carried out.

In the absence of any rates of wages, hours or conditions of labour so established the Contractor shall pay rates and observe hours and conditions of labour are not less favourable than the general level of wages, hours and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

1.52 **Supervision**

During the progress of the works, the Contractor shall provide and keep constantly available for consultation on site an experienced English - speaking Supervisor and shall provide reasonable office facilities, attendance, etc., for the Supervisor.

In addition, during the whole of the time the works are under construction, the Contractor shall maintain on site one experienced foreman or charge-hand and an adequate number of fitters, etc., for the work covered by the Specification. The number of this staff shall not be reduced without the prior written approval of the Project manager or Engineer.

Any instructions given to the Supervisor on site shall be deemed to have been given to the sub-contractor.

One copy of this Specification and one copy of each of the Contract Drawings (latest issue) must be retained on site at all times, and available for reference by the Engineer or sub-contractor.

1.53 **Test Certificates**

The Contractor shall provide the Engineer with three copies of all test reports or certificates that are or may be required by this Specification.

1.54 **Labour**

The Contractor shall provide skilled and unskilled labour as may be necessary for completion of the contract.

1.55 **Discount to the Main Contractor**

No discount to any Sub-Contractor will be included in the tender for this installation.

1.56 **Guarantee**

The whole of the work will be guaranteed for a period of six months from the date of the Engineer's certification of completion and under such guarantee the Sub-contractor shall remedy at his expense all defects in materials and apparatus due to faulty design, construction or workmanship which may develop in that period.

1.57 **Direct Contracts**

Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C Sum in the Bills of Quantities and to pay for the same direct. In any such instance, profit relative to the P.C Sum in the priced Bills of Quantities will be adjusted as deserved for P.C Sum allowed.

1.58 **Attendance Upon the Tradesmen etc**

The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this contract every facility for carrying out their work and also for the use of ordinary scaffolding. The contractor however, shall not be required to erect any special scaffolding for them.

1.59 **Trade Unions**

The contractor shall recognize the freedom of his work people to be members of trade unions.

1.60 Local and other Authorities notices and fees

The contractor shall comply with and give all notices required by any Regulations, Act or by Law of any Local Authority or of any Public Service, Company or Authority who have any jurisdiction with regard to the works or with those systems the same are or will be connected and he shall pay and indemnify the Government against any fees or charges legally demandable under any regulation or by-law in respect of the works; provided that the said fees and charges if not expressly included in the contract sum or stated by way of provisional sum shall be added to the contract sum.

The contractor before making any variation from the contract drawings or specification necessitated by such compliance shall give the Project Manager written notice specifying and giving the reason for such variation and applying for instructions in reference thereto.

If the contractor within seven days of having applied for the same does not receive such instructions, he shall proceed with the works in conforming to the provision regulation or by-law in question and any variation thereby necessitated shall be deemed to be a variation in accordance to the conditions of contract.

1.61 Assignment or subletting

The contractor shall not without the written consent of the Project Manager assign this contract or sublet any portion of the works, provided that such consent shall not be unreasonably withheld to the prejudice of the contractor.

1.62 Partial Completion

If the Government shall take over any part or parts works, apparatus, equipment etc. then within seven days from the date on which the Government shall have taken possession of the relevant part, the Project Manager shall issue a Certificate stating his estimate of the approximate total value of the works which shall be the total value of that part and practical completion of the relevant part shall be deemed to have occurred, and the Defects Liability Period in respect of the relevant part be deemed to have commenced on the date Government shall have taken possession thereof.

The contractor shall make good any defects or other faults in the relevant part that had been deemed complete.

The contractor shall reduce the value of insurance by the full value of the relevant part

The contractor shall be paid for the part of works taken possession by the Government

1.63 Temporary Works

Where temporal works shall be deemed necessary, such as Temporary lighting, the contractor shall take precaution to prevent damage to such works.

The contractor shall include for the cost of and make necessary arrangements with the Project Manager for such temporary works. For temporary lighting, electricity shall be metered and paid for by the contract

1.64 Patent Rights

The contractor shall fully indemnify the Government of Kenya; against any action, claim or proceeding relating to infringement of any patent or design rights, and pay any royalties which may be payable in respect of any article or any part thereof, which shall have been supplied by the contractor to the Project Manager. In like manner the Government of Kenya shall fully indemnify the contractor against any such action, claim or proceedings for infringement under the works, the design thereof of which shall have been supplied by the Project Manager to the contractor, but this indemnify shall apply to the works only, and any permission or request to manufacture to the order of the Project Manager shall not relieve the contractor from liability should he manufacture for supply to other buyers.

1.65 Mobilization and Demobilization

The contractor shall mobilize labour plant and equipment to site according to his programme and schedule of work. He shall ensure optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and equipment. Where necessary he shall demobilize and mobilize the labour, plant and equipment, as he deems fit to ensure optimum progress of the works and this shall be considered to be a continuous process as works progress. He shall make provision for this item in his tender. No claim will be entertained where the contractor has not made any provision for mobilization and demobilization of labour, plant and equipment in the preliminary bills of quantities or elsewhere in this tender.

1.66 Extended Preliminaries

Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the total Contractor works. Where called upon in the Appendix to these Preliminaries the Contractor shall insert his percentage per month for extended preliminaries that shall form basis for compensation.

Lack of inserting the percentage shall mean that the sub-contractor has provided for this requirement elsewhere in the Bills of Quantities.

1.67 Supervision by Engineer and Site Meetings

A competent Project Engineer appointed by the Engineer as his representative shall supervise the Contract works. The Project Engineer shall be responsible for issuing all the site instructions in any variations to the works and these shall be delivered through the Contractor with the authority of the Project Manager. Any instructions given verbal shall be confirmed in writing.

The project engineer and (or) the Engineer shall attend management meetings arranged by the Project Manager and for which the Contractor or his representative shall also attend. For the purpose of supervising the project, provisional sums are provided to cover for transport and allowances. The Contractor shall in his tender allow for the provision of management meetings and site inspections, as instructed by the Engineer, and also profit and attendance on these funds. The funds shall be expended according to Project Manager's instructions to the contractor.

1.68 Amendment to Scope of Contract Works

No amendment to scope of sub-contract works is expected and in case of amendment or modification to scope of work, these shall be communicated to all tenderers in sufficient time before the deadline of the tender submission. However during the contract period and as the works progress the Project Manager may vary the works as per conditions of contract by issuing site instructions.

No claims shall be entertained on account of variation to scope of works either to increase the works (pre-financing) or reduction of works (loss of profit-see clause 1.70)

1.69 Contractor Obligation and Employers Obligation

The sub-contractor will finance all activities as part of his obligation to this contract. The employer shall pay interim payment for materials and work completed on site as his obligation in this contract, as the works progresses. No claims will be entertained for pre-financing of the project by the sub-contractor, or for loss of profit (expectation loss) in case of premature termination, reduction or increase of works as the sub-contractor shall be deemed to have taken adequate measures in programming his works and expenditure and taken necessary financial precaution while executing the works. No interest shall be payable to the Contractor, except as relates to late payment as in the conditions of contract clause 23.3. The contractor shall where called upon, insert his price to compensate for any of the occurrence stated here (premature termination, reduction or increase of works), as a percentage of the contract sum in the Appendix to this section.

1.70 APPENDIX TO SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

1 ADD TO CLAUSE 1.40

There are no labour camps.

2 ADD TO CLAUSE 1.17

Prices quoted shall include 16% VAT. In accordance with Government policy, 3% Withholding Tax shall be deducted from all payments made to the sub-contractor, and the same shall subsequently be forwarded to the Kenya Revenue Authority (KRA).

3. ADD TO CLAUSE 1.66

The amount or percentage that may be inserted in the bills of quantities for this item should not exceed the anticipated Liquidated damages amount for the same period.

SECTION IX

GENERAL MECHANICAL SPECIFICATIONS

SECTION IX

GENERAL MECHANICAL SPECIFICATION

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
GENERAL		172
QUALITY OF MATERIALS		172
REGULATIONS AND STANDARDS		172-173
ELECTRICAL REQUIREMENTS		173
TRANSPORT AND STORAGE		173
SITE SUPERVISION		174
INSTALLATION		174
TESTING		174-175
COLOUR CODING		175
WELDING		175-176

SECTION IX

GENERAL MECHANICAL SPECIFICATION

2.01 General

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

2.02 Quality of Materials

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

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

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

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

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

2.03 Regulations and Standards

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

- a) The Kenya Government Regulations.
- b) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.

The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.

- a) British Standard and Codes of Practice as published by the British Standards Institution (BSI)

- e) The Local Council By-laws.
- f) The Electricity Supply Authority By-laws.
- g) Local Authority By-laws.
- h) The Kenya Building Code Regulations.
- i) The Kenya Bureau of Standards

2.04 **Electrical Requirements**

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

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

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

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

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

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

2.05 **Transport and Storage**

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

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

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

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

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

2.06 **Site Supervision**

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

2.07 **Installation**

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

2.08 **Testing**

2.08.1 **General**

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

2.08.2 **Material Tests**

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

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

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

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

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

2.08.3 Manufactured Plant and Equipment – Work Tests

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

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

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

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

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

2.08.4 Pressure Testing

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

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

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

2.09 Colour Coding

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

2.10 Welding

2.10.1 Preparation

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

2.10.2 Method

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

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

2.10.3 Welding Code and Construction

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

Pipe Welding

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

General Welding

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

Welders Qualifications

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

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

SECTION X

PARTICULAR PLUMBING AND DRAINAGE

SPECIFICATIONS

SECTION X

PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

<u>CLAUSE No.</u>	<u>DESCRIPTION</u>
3.1	General
3.2	Materials and standards
3.2.1	Pipework and Fittings
3.2.2	Valves
3.2.3	Waste Fitment Traps
3.2.4	Pipe Supports
3.2.5	Sanitary Appliances
3.2.6	Pipe Sleeves
3.3	Installation
3.3.1	General
3.3.2	Above Ground Installation
3.4	Testing Inspection
3.4.1	Site Tests – Pipework Systems
3.4.2	Site Test – Performance
3.5	Sterilisation of Hot and Cold Water System

SECTION X

PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

3.1 GENERAL

This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

3.2 MATERIALS AND STANDARDS

3.2.1 Pipework and Fittings

Pipework materials are to be used as follows:

a) Galvanized Steel Pipework

Galvanized steel pipe work up to 65mm nominal bore shall be manufactured in accordance with B.S. 1387 Medium Grade, with tapered pipe threads in accordance with B.S. 21. All fittings shall be malleable iron and manufactured in accordance with B.S. 143.

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

Galvanized steel pipe work, 80mm nominal bore up to 150mm nominal bore shall be manufactured to comply in all respects with the specification for 65mm pipe, except that screwed and bolted flanges shall replace unions and couplings for the jointing of pipes to valves and other items of plant. All flanges shall comply with the requirements of B.S. 10 to the relevant classifications contained hereinafter under Section 'C' of the Specification.

Galvanizing shall be carried out in accordance with the requirements of B.S. 1387 and B.S. 143 respectively.

b) Copper Tubing

All copper tubing shall be manufactured in accordance with B.S. 2871 from C.160 'Phosphorous De-oxidized Non-Arsenical Copper' in accordance with B.S. 1172.

Pipe joints shall be made with soldered capillary fittings and connections to equipment shall be with compression fittings manufactured in accordance with B.S. 864.

Short copper connection tubes between galvanized pipe work and sanitary fittings shall not be used because of the risk of galvanic action.

If, as may occur in certain circumstances, it is not possible to make the connection in any way than the use of copper tubing, then a brass straight connector shall be positioned between the galvanized pipe and the copper tube in order to prevent direct contact.

P.V.C. (Hard) Pressure Pipes and Fittings

All P.V.C. pipes and fittings shall be manufactured in accordance with B.S. 3505: 1968.

Jointing

The method of jointing to be employed shall be that of solvent welding, using the pipe and manufacturer's approved cement. Seal ring joint shall be introduced where it is necessary to accommodate thermal expansion.

Testing

Pipelines shall be tested in sections under an internal water pressure normally one and a half times the maximum allowable working pressure of the class of pipe used. Testing shall be carried out as soon as practical after laying and when the pipeline is adequately anchored. Precautions shall be taken to eliminate all air from the test section and to fill the pipe slowly to avoid risk of damage due to surge.

A.B.S. Waste System

Where indicated on the Drawings and Schedules, the Sub-contractor shall supply and fix A.B.S. waste pipes and fittings.

The pipes, traps and fittings shall be in accordance with the relevant British Standards, including B.S. 3943, and fixed generally in accordance with manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding, the manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding. The manufacturer's recommended method of joint preparation and fixing shall be followed.

Standard brackets, as supplied for use with this system, shall be used wherever possible.

Where the building structure renders this impracticable the Sub-contractor shall provide purpose made supports, centers of which shall not exceed one meter.

Expansion joints shall be provided as indicated. Supporting brackets and pipe clips shall be fixed on each side of these joints.

e) **PVC Soil System**

The Sub-contractor shall supply and fix PVC soil pipes and fittings as indicated on the Drawings and Schedules.

Pipes and fittings shall be in accordance with relevant British Standards, including B.S. 4514 and fixed to the manufacturer's instructions and B.S. 5572.

The soil system shall incorporate synthetic rubber gaskets as provided by the manufacturer whose fixing instructions shall be strictly adhere to.

Connections to WC pans shall be effected by the use of a WC connector, gasket and cover, fixed to suit pan outlet.

Suitable supporting brackets and pipe clips shall be provided at maximum of one metre centres.

The Sub-contractor shall be responsible for the joint into the Gully Trap on Drain as indicated on the Drawings.

3.2.2 **Valves**

a) **Draw-off Taps and Stop Valves (Up to 50mm Nominal Bore)**

Draw-off taps and valves up to 50mm nominal bore, unless otherwise stated or specified for attachment or connection to sanitary fitment shall be manufactured in accordance with the requirements of B.S.1010.

b) **Gate Valves**

All gate valves 80mm nominal bore and above, other than those required for fitting to buried water mains shall be of cast iron construction, in accordance with the requirements of B.S. 3464. All gate valves required for fitting to buried water mains shall be of cast iron construction in accordance with the requirements of B.S.1218.

All gate valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S. 1952.

The pressure classification of all valves shall depend upon the pressure conditions pertaining to the site of works.

c) Globe Valves

All globe valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S.3061.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the site of works.

3.2.3 **Waste Fitment Traps**

a) Standard and Deep Seal P & S Traps

Where standard or deep seal traps are specified they shall be manufactured in suitable non-ferrous materials in accordance with the full requirements of B.S. 1184.

In certain circumstances, cast iron traps may be required for cast iron baths and in these instances bath traps shall be provided which are manufactured in accordance with the full requirements of B.S.1291.

b) Anti-Syphon Traps

Where anti-syphon traps are specified, these shall be similar or equal to the range of traps manufactured by Greenwood and Hughes Limited, Deacon Works Littlehampton, Sussex, England.

The tradename for traps manufactured by this company is 'Grevak'.

3.2.4 **Pipe Supports**

a) General

This sub-clause deals with pipe supports securing pipes to the structure of buildings for above ground application.

The variety and type of support shall be kept to a minimum and their design shall be such as to facilitate quick and secure fixings to metal, concrete, masonry or wood.

Consideration shall be given, when designing supports, to the maintenance of desired pipe falls and the restraining of pipe movements to a longitudinal axial direction only.

The Sub-contractor shall supply and install all steelwork forming part of the pipe support assemblies and shall be responsible for making good damage to builders work associated with the pipe support installation.

The Sub-contractor shall submit all his proposals for pipe supports to the Engineer for approval before any erection works commence.

b)Steel and Copper Pipes and Tubes

Pipe runs shall be secured by clips connected to pipeangers, wall brackets, or trapeze type supports. ‘U’ bolts shall not be used as a substitute for pipe clips without the prior approval of the Engineer.

An approximate guide to the maximum permissible supports spacing in metres for steel and copper pipe and tube is given in the following table for horizontal runs.

Size Nominal Bores	Copper Tube to B.S. 659	Steel Tube to B.S. 1387
15mm	1.25m	2.0m
20mm	2.0m	2.5m
25mm	2.0m	2.5m
32mm	2.5m	3.0m
40mm	2.5m	3.0m
50mm	2.5m	3.0m
65mm	3.0m	3.5m
80mm	3.0m	3.5m
100mm	3.0m	4.0m
125mm	3.0m	4.5m
150mm	3.5m	4.5m

The support spacing for vertical runs shall not exceed one and a half times the distances given for horizontal runs.

c) Expansion Joints and Anchors

Where practicable, cold pipework systems shall be arranged with sufficient bends and changes of direction to absorb pipe expansion providing that the pipe stresses are contained within the working limits prescribed in the relevant B.S. specification.

Where piping anchors are supplied, they shall be fixed to the main structure only. Details of all anchor design proposals shall be submitted to the Engineer for approval before erection commences.

The Sub-contractor when arranging his piping shall ensure that no expansion movements are transmitted directly to connections and flanges on pumps or other items of plant.

The Sub-contractor shall supply flexible joints to prevent vibrations and other movements being transmitted from pumps to piping systems or vice versa.

3.2.5 **Sanitary Appliances**

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

3.2.6 **Pipe Sleeves**

Main runs of pipework are to be fitted with sleeves where they pass through walls and floors. Generally the sleeves shall be of P.V.C. except where they pass through the structure, where they shall be mild steel. The sleeves shall have 6mm – 12mm

clearance all around the pipe or for insulated pipework all around the installation.

The sleeve will then be packed with slag wool or similar.

3.3 **INSTALLATION**

3.3.1 **General**

Installation of all pipework, valves, fittings and equipment shall be carried out under adequate supervision from skilled staff to the relevant codes and standards as specified herein. The Sub-contractor shall be responsible to the Main Contractor for ensuring that all builders work associated with his piping installation is carried out in a satisfactory manner to the approval of the Engineer.

3.3.2 **Above Ground Installation**

a) Water Services

Before any joint is made, the pipes shall be hung in their supports and adjusted to ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe.

Where falls are not shown on the Contract Drawings or stated elsewhere in the Specification, pipework shall be installed parallel to the lines of the buildings and as close to the walls, ceilings, columns, etc., as is practicable.

All water systems shall be provided with sufficient drain points and automatic air vents to enable them to function correctly.

Valves and other user equipment shall be installed with adequate access for operation and maintenance. Where valves and other operational equipment are unavoidably installed beyond normal reach or in such position as to be difficult to reach from a small step ladder, extension spindles with floor or wall pedestals shall be provided.

Screwed piping shall be installed with sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations of pipework to be carried out without the need to cut the pipe.

Full allowances shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any force produced by the pipe movements are not transmitted to valves, equipment or plant.

All screwed joints to piping and fittings shall be made with P.T.F.E. tape.

The test pressure shall be maintained by the pump for about one hour and if there is any leakage, it shall be measured by the quantity of water pumped into the main in that time. A general leakage of 4.5 litres per 25mm of diameter, per 1.6 kilometers per 24 hours per 30 metres head, may be considered reasonable but any visible individual leak shall be repaired.

b) Sanitary Services

Soil, waste and vent pipe system shall be installed in accordance with the best standard of modern practice as described in B.S. 5572 to the approval of the Engineer.

The Sub-contractor shall be responsible for ensuring that all ground waste fittings are discharged to a gully trap before passing to the sewer via a manhole.

The Sub-contractor shall provide all necessary rodding and inspection facilities within the draining system in positions where easy accessibility is available.

Where a branch requires rodding facilities in a position to which normal access is unobtainable, then that branch shall be extended so as to provide a suitable purpose made rodding eye in the nearest adjacent wall or floor to which easy access is available.

The vent stacks shall terminate above roof level and where stack passes through roof, a weather skirt shall be provided. The Sub-contractor shall be responsible for sealing the roof after installation of the stacks.

The open end of each stack shall be fitted with a plastic coated or galvanised steel wire guard.

Access for rodding and testing shall be provided at the foot of each stack.

Sanitary Appliances

All sanitary appliances associated with the Sub-contract works shall be installed in accordance with the best standard of modern practice as described in C.P. 305 to the approval of the Engineer.

TESTING AND INSPECTION

3.4.1 Site Tests – Pipework Systems

a) Above Ground Internal Water Services Installation

All water service pipe system installed above ground shall be tested hydraulically for a period of one hour to not less than one and half times to design working pressure.

If preferred, the Sub-contractor may test the pipelines in sections. Any such section found to be satisfactory need not be the subject of a further test when system has been completed, unless specifically requested by the Engineer.

During the test, each branch and joint shall be examined carefully for leaks and any defects revealed shall be made good by the Sub-contractor and the section re-tested.

The Sub-contractor shall take all necessary precautions to prevent damage occurring to special valves and fittings during the tests. Any item damaged shall be repaired or replaced at the Sub-contractor's expenses.

b) Above Ground Soil Waste and Ventilation System

All soil, waste and ventilating pipe system forming part of the above ground installation, shall be given appropriate test procedures as described in B.S. 5572, 1972.

Smoke tests on above ground soil, waste and ventilating pipe system shall not be permitted.

Pressure tests shall be carried out before any work which is to be concealed is finally enclosed.

In all respects, tests shall comply with the requirements of B.S. 5572.

3.4.2 Site Test – Performance

Following satisfactory pressure test on the pipework system operational tests shall be carried out in accordance with the relevant B. S. Code of practice on the systems as a whole to establish that special valves, gauges, control, fittings, equipment and plant are functioning correctly to the satisfaction of the Engineer.

All hot water pipework shall be installed with pre-formed fibre glass lagging to a thickness of 25mm where the pipe runs above a false ceiling or in areas where the ambient temperature is higher than normal with the result that pipe "sweating", due to condensation will cause nuisance.

All lagged pipes which run in a visible position after erection shall be given a canvas cover

and prepared for painting as follows:

Apply a coating of suitable filler until the canvas weave disappears and allow to dry.

- i) Apply two coats of an approved paint and finish in suitable gloss enamel to colors
- ii) approved by the Engineer.

All lagging for cold and hot water pipes erected in crawlways, ducts and above false ceiling which after erection are not visible from the corridors of rooms, shall be covered with a reinforced aluminium foil finish banded in colours to be approved by the Engineer.

In all respects, unless otherwise stated, the hot and cold water installation shall be carried out in accordance with the best standard of modern practice and described in C.P.342 and C.P.310 respectively to the approval of the Engineer.

The test pressure shall be applied by means of a manually operated test pump or, in the case of long main or mains of large diameter, by a power driven test pump which shall not be left unattended. In either case precautions shall be taken to ensure that the required pressure is not exceeded.

Pressure gauges should be recalibrated before the tests.

The Sub-contractor shall be deemed to have included in his price for all test pumps, and other equipment required under this specification.

The test pressure shall be one and a half times the maximum working pressure except where a pipe is manufactured from a material for which the relevant B.S. specification designates a maximum test pressure.

3.5 **STERILISATION OF COLD WATER SYSTEM**

All water distribution system shall be thoroughly sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilisation procedures shall be carried out by the Sub-contractor in accordance with the requirements of B.S. Code of Practice 301, Clause 409 and to the approval of the Engineer.

PART XI

**PARTICULAR SPECIFICATION
FOR
PORTABLE FIRE EXTINGUISHERS**

PARTICULAR SPECIFICATION
FOR
PORTABLE FIRE EXTINGUISHERS

<u>CLAUSE NO.</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
4.1	General	142
4.2	Scope of Works	142
4.3	Water/CO ₂ Extinguishers	142
4.4	Portable Carbon Dioxide Extinguishers	143
4.5	Dry Chemical Portable Fire Extinguisher	143-144
4.6	Air Foam Fire Extinguisher	144
4.7	Fire Blanket	144
4.8	Fire Exit Sign	145
4.9	Fire Instruction Notice	146

PART XI

PARTICULAR SPECIFICATIONS FOR

PORTABLE FIRE EXTINGUISHER AND HOSE REEL INSTALLATIONS

4.1 GENERAL

The particular specification details the requirements for the supply and installation and commissioning of the Portable Fire Extinguishers and Boosted Hose Reel System. The Sub-contractor shall include for all appurtenances and appliances not necessarily called for in this specification or shown on the contract drawings but which are necessary for the completion and satisfactory functioning of the works.

If in the opinion of the Sub-contractor there is a difference between the requirements of the Specifications and the Contract Drawings, he shall clarify these differences with the Engineer before tendering.

4.2 SCOPE OF WORKS

The Sub-contractor shall supply, deliver, erect, test and commission all the portable fire extinguishers and Hose Reel which are called for in these Specifications and as shown on the Contract Drawings.

4.3 WATER/CO₂ EXTINGUISHERS

These shall be 9-litre water filled CO₂ cartridge operated portable fire extinguishers and shall comply with B.S. EN 3/BS 1449 and to the requirements of B.S.1004. Unless manufactured with stainless steel, bodies shall have all internal surfaces completely coated with either a lead tin, lead alloy or zinc applied by hot dipping. There shall be no visibly uncoated areas.

The extinguishers shall be clearly marked with the following:

Method of operation.

The words 'WATER TYPE' (GAS PRESSURE) in prominent letters.

Name and address of the manufacturer or responsible vendor.

The nominal charge of the liquid in imperial gallons and litres.

The liquid level to which the extinguisher is to be charged.

The year of manufacture.

A declaration to the effect that the extinguisher has been tested to a pressure of 24.1 bar (350 p.s.i.).

h) The number of British Standard 'B.S' 1004 or B.S. 1449.

4.4 PORTABLE CARBON DIOXIDE FIRE EXTINGUISHERS

These shall be portable carbon dioxide fire extinguishers and shall comply with B.S. EN 3/BS 1449 and B.S. 1004.

The body of extinguisher shall be a stainless steel cylinder manufactured to one of the following British Standards; B.S. 401 or B.S. 1288.

The filling ratio shall comply with B.S. 5355 with valves fittings for compressed gas cylinders to B.S.341. Where a hose is fitted it shall be flexible and have a minimum working pressure of 206.85 bar (3000 p.s.i.). The hose is not to be under internal pressure until the extinguisher is operated.

The nozzle shall be manufactured of brass gunmetal, aluminium or stainless steel and may be fitted with a suitable valve for temporarily stopping the discharge if such means are not incorporated in the operating head.

The discharge horn shall be designed and constructed so as to direct the discharge and limit the entrainment of air. It shall be constructed of electrically non-conductive material.

The following markings shall be applied to the extinguishers:-

The words "Carbon Dioxide Fire Extinguisher" and to include the appropriate nominal gas content.

Method of operation.

The words "Re-charge immediately after use".

Instructions for periodic checking.

The number of the British Standard B.S. 3326: 1960 or B.S. 5423.

The manufacturers name or identification markings

4.5 DRY CHEMICAL POWDER PORTABLE FIRE EXTINGUISHER

The portable dry powder fire extinguishers shall comply with BS EN 3/BS 1449 and BS 1004. The body shall be constructed to steel not less than the requirements of BS 1449 or aluminium to BS 1470 : 1972 and shall be suitably protected against corrosion.

The dry powder charge shall be not-toxic and retain its free flowing properties under normal storage conditions. Any pressurizing agent used as an expellant shall be in dry state; in particular compressed air.

The discharge tube and gas tube if either is fitted shall be made of steel, brass, copper or other not less suitable material. Where a hose is provided it shall not exceed 1,060mm and shall be acid and alkali resistant. Provision shall be made for securing the nozzle when not in use.

The extinguisher shall be clearly marked with the following information

- a) The word "Dry Powder Fire Extinguisher"
- b) Method of operation in prominent letters.
- c) The working pressure and the weight of the powder charge in Kilogramme.
- d) Manufacturers name or identification mark
- e) The words "RECHARGE AFTER USE" if rechargeable type.
- f) Instructions to regularly check the weight of the pressure container (gas Cartridge) or inspect the pressure indicator on stored pressure types when fitted, and remedy any loss indicated by either.
- g) The year of manufacture.
- h) The Pressure to which the extinguisher was tested.
- i) The number of this British Standard BS 3465 or BS 5423: 1977.
- j) When appropriate complete instructions for charging the extinguisher shall be clearly marked on the extinguisher or otherwise be supplied with the refill.

4.6 AIR FOAM FIRE EXTINGUISHER

These shall be of 9 litres capacity complete with refills cartridges and wall fixing brackets and complying with B.S. EN 3/BS 1449 and BS 1004 with the following specifications:-

Cylinder: to B.S. 1449

Necking: to be 76mm outside diameter steel EN 3A 2³/₄ X 8TPI female thread.

Head cap: to be plastic moulding acetyl resin.

CO2 Cylinder: to be 75gm P.V.C coated.

Internal Finish: to be polythene lining on phosphate coating.

External finish: to be phosphated - One coat primer paint and one coat stove enamel B.S. 381 C.

4.7 FIRE BLANKET

The fire blanket shall be made from cloth woven with pre-asbestos yarn or any other fire proof material and to measure 1800 x 1210 mm and shall be fitted with special tapes folded so as to offer instantaneous single action to release blanket from storing jacket to BS 1721.

4.8 SIGNAGE -FIRE EXIT SIGN

Proceed and procure and install as below;

Print **Fire Exit** signs on the Perspex plate, 5mm thick, with white colour background as follows:-

1. Lettering **IN RED COLOUR** of not less than 50mm in height.
2. A pendant sign bearing words, **FIRE EXIT** and with a **directional arrow**.
3. The sign must be capable of being read from both approaches to exit and so is double sided.

4.9 SIGNAGE -FIRE INSTRUCTION NOTICE

Print fire instruction on the Perspex plate, 5mm thick with White Colour Background measuring 510mm lengthx380mm width as follows;

FIRE INSTRUCTION NOTICE

In the event of fire;

- (1) Raise the alarm by actuating the nearest alarm system point, Sound Siren /gong or Shout Fire
- (2) Attack fire using the nearest available equipment
- (3) Call fire Brigade 2222181/2 or Police 999 and inform your switchboard (PABX) Operator
- (4) Ensure that all personnel not involved in fire fighting are evacuated to safety outside the building.
- (5) Close but **DO NOT LOCK** doors behind as you leave.
- (6) Evacuate the building using the nearest emergency exit Suitable. do not use Lifts/escalators walk calmly. Avoid panic. Do not stop or return for personal belongings.
- (7) Assemble as per floor outside the building for roll call.

PART XII
PARTICULAR SPECIFICATIONS
FOR
FIRE HYDRANTS
AND
FIRE SUPPRESSION SYSTEMS

PART XII

**PARTICULAR SPECIFICATIONS FOR FIRE HYDRANT, FIRE HYDRANTS PUMP
AND INERT GAS AUTOMATIC FIRE SUPPRESSION SYSTEM**

<u>CLAUSE.</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
7.1	General	150
7.2	Scope of Works	150
7.3	Fire Hydrant Details	150-152
7.4	Stand Pipes	152
7.5	Hose Pipe	152
7.6	Fire Suppression	152-164

1 GENERAL

This particular specification details the requirement for the supply, installation and commissioning of the Fire Hydrants and Fire Hydrant Pump. The hydrants installation shall comply in all respects to the requirements of BS. 750: 1977 or the latest version of it.

2 Scope of Works

The Sub-Contractor shall supply, deliver, erect, test and commission underground screw-down type fire hydrants and portable fire hydrant pumps.

3 FIRE HYDRANT DETAILS

(a) **Hydrant body**

The body of the hydrant shall be made of grey cast iron complying with the requirements of BS 1452 having a tensile strength not less than that given for grade 14.

(b) Hydrant Valve

The valve shall be faced with suitable resilient material. The threaded part of the valve, which engages with the spindle, shall be of bronze.

Body seating for the valves shall be of copper alloy complying with the requirements of BS 1400, or high tensile brass complying with the requirements of BS 2872 or BS 2874.

Turning the spindle cap in a clockwise direction when viewed from above shall close valves and the direction of opening shall be permanently marked on the gland.

(c) Spindle & Spindle Cap

The spindle shall be either of the same material as the spindle, or of copper alloy complying with the requirements of BS/1400 either type LG 2 or type LG 4. It shall have a squared top formed to receive either a cast iron spindle cap.

The spindle shall be made of copper alloy complying with the requirements of BS 2874, either type CZ114 or type CZ115, and it shall have a threaded machined of trapezoidal form.

The spindle cap shall be of a cast iron secured to the spindle by on M12 hexagon socket set screw conforming to BS 4168.

(d) **Hydrant outlet**

The outlet flange of the hydrant shall have above nominal diameter 65mm, and shall be fitted with a screwed outlet – Both flanges shall be 50 mm conforming to BS 4504: Part 1: 1969

The screwed outlet shall be provided with a cap of cast iron or other suitable material. The cap shall cover the outlet thread completely and shall be attached to the hydrant by a chain

The distance between the axis of the outlet and the nearest point on the spindle fitting shall be not less than 100 mm.

The screwed outlet shall be made of

Copper alloy to BS 1400, type LG2G or DC BIC or
Copper alloy to BS 2872, type CZ114 or CZ115, or
Suitable spheroidal graphite iron to BS 2789 protected against corrosion
accordance with CP 2008.

(e) **Drain Boss**

Each shall be provided with a suitable drain boss on the outlet side. This shall be located at the lowest practical point which will permit the filling of self-operating a drilled drip plug.

(f) **Jointing**

The hydrants shall have machined joint faces throughout and the fitting of adjoining parts shall be such as to make sound joints, corresponding parts of hydrants of the same design and manufacture shall be interchangeable.

(g) **Hydrant coating**

The hydrant shall be coated in accordance to BS. 4164.

(h) **Surface Box.**

The clear opening of hydrant surface boxes at ground level shall not be less than 250mm x 380mm

The depth of frame shall normally be

- a) for boxes located on footpaths: 100mm
- b) For boxes located in roads: 125mm

(i) **Markings**

Surface box covers shall be clearly marked by having the words 'FIRE HYDRANT' in letter not less than 30mm high, or the initials 'F.H.' in letters not less than 75mm high cost into the cover.

(j) **Surface Box Covers & Frames.**

The surface box frames and covers shall be graded in accordance with

2.1. of BS 497:1967 and shall meet the loading test requirement also given in BS 497

(k) **Testing**

The hydrants shall be deemed to have undergone the necessary hydrostatic and flow test at time of manufacture Necessary test certificates from the manufacturer shall be needed. The test, to conform to BS 750: 1977: Appendix a.1

7.4 **STAND PIPES**

One end of these shall have internal threads to couple with the 80mm diameter external threads of the screw down type fire Hydrant (BS750 type 2 hydrants) outlet. The other shall have 65mm diameter internal threads to couple with the interconnect or hose of the pump set

7.5 **HOSE PIPE**

Each cotton synthetic fibre rubberised fire hosepipe to be 25mm metres long with 65mm diameter female instantaneous type connector.

6 PARTICULAR SPECIFICATIONS FOR FIRE SUPPRESSION SYSTEMS

PROINERT SYSTEM

- **Zero Ozone Depletion Potential (ODP)** Proinert consists of Argon Nitrogen from nature. When released, they automatically return to their natural place in the environment.

- **Zero Global Warming Potential (GWP)** Argon and Nitrogen have no atmospheric lifetime, so they pose no risk to the environment.

- **Similar To Air Density** At discharge, the **PROINERT** gas mixture possesses a density similar to air. You can count on:

- Exceptional Extinguisher Hold Time
- Minimal Room Sealing required
- Improved Penetration from Top to Bottom of the Protected Room

- **Easy Economical Refill and Real-Life Testing** Because Argon and Nitrogen occur naturally in the environment, our extinguishant is readily available and affordable. With **PROINERT**, a real-life Discharge Testing is feasible.

- **No Secondary Combustion Products** Argon and Nitrogen do not decompose into toxic or corrosive elements in a fire, making it a safe choice for people and assets.

- **No Fogging PROINERT** is ideal for occupied spaces because escape routes remain visible.

- **No Residue** That means no damage to your equipment and no clean up required.

- Produced oxygen levels will not sustain a combustion reaction but are acceptable for human exposure over a short period of time.

PROINERT extinguishes a fire by reducing the oxygen concentration.

Globally Approved and Recognized

- UL
- FM
- LPCB
- Included in ISO 14520
- Included in EN 14520
- Included in NFPA 2001
- US EPA SNAP listed
- HAG listed
- TPED compliant
- DOT compliant

FROM ART TO INDUSTRY PROINERT has a wide variety of industries and applications.

- Art Galleries
- Museums
- Archive Storage
- Computer / Operation Rooms
- Control Rooms
- Financial Centers and Banks
- Electronics and data Processing
- Insurance Industries
- Military Installations
- Pharmaceutical / Medical
- Process Industry Control Rooms
- Rare Book Libraries
- Record Storage facilities
- Substation Control Rooms
- Switch Rooms
- Telecom Centers
- Universities and Colleges

Inergen™ Fire Suppression System

Environmental – Impact

INERGEN agent is a mixture of three naturally occurring gases; nitrogen, argon, and carbon dioxide. As INERGEN agent is derived from gases present in the earth's atmosphere, it exhibits no ozone depleting potential, does not contribute to global warming, nor does it contribute unique chemical species with extended atmosphere lifetimes. Because INERGEN agent is composed of atmospheric gases, it does not pose the problems of toxicity associated with the chemically derived Halon alternative agents.

Product Description

The INERGEN Fire Suppression System, manufactured by Ansul, is an engineered system utilizing a fixed nozzle agent distribution network. The system is designed and installed in accordance with the National Fire Protection Association (NFPA) Standard 2001, "Clean Agent Fire Extinguishing System." When properly designed, the INERGEN system will extinguish surface burning fire in Class A, B and C hazards by lowering the oxygen content below the level that supports combustion.

INERGEN agent has also been tested by FMRCAs for inerting capabilities. Those tests have shown that INERGEN agent, at design concentration between 40% and 50% has successfully inerted mixtures of propane/air, and methane/air.

The system can be actuated by detection and control equipment for automatic system operation along with providing local and remote manual operation as needed.

Accessories are used to provide alarms, ventilation control, door closures, or other auxiliary shutdown or functions.

When INERGEN agent is discharged into a room, it introduces the proper mixture of gases that will allow a person to breathe in a reduced oxygen atmosphere.

A system installation and maintenance manual is available containing information on system components and procedures concerning design, operation, inspection, maintenance, and recharge. The system is installed and serviced by authorized distributors that are trained by the manufacturer.

Basic Use – The INERGEN system is particularly useful for suppressing fires in hazards where an electrically nonconductive medium is essential or desirable, where clean-up of other agents presents a problem; or where the hazard is normally occupied and requires a non-toxic agent.

The following are typical hazards protected by INERGEN systems:

- Computer rooms
- Subfloors
- Tap storage
- Telecommunication/Switchgear
- Vaults
- Process equipment
- All normally occupied or unoccupied electronic areas where equipment is either sensitive or irreplaceable.

Composition and Materials – The basic system consists of extinguishing agent stored in high strength alloy steel cylinders. Various types of actuators, either manual or automatic, are available for release of the agent into the hazard area. The agent is distributed and discharged into the hazard area through a network of piping and nozzles. Each nozzle is drilled with a fixed orifice designed to deliver a uniform discharge to the protected area. On large hazards, where three or more cylinders are required, a screwed or welded pipe manifold assembly is employed. The cylinder(s) is connected to the distribution piping or the manifolds by means of a flexible discharge bend and check valve assembly. Different size cylinders may be connected to the same manifold.

Additional equipment Includes – Control panels, releasing devices, remote manual pull stations, corner pulleys, door closures, pressure trips, bells and alarms, and pneumatic switches. All or some are required when designing a total system.

INERGEN Agent

INERGEN agent is a mixture of three inerting (oxygen diluting) gases: 52% nitrogen, 40% argon, and 8% carbon dioxide. INERGEN gas extinguishes fire by lowering the oxygen content below the level that supports combustion. When INERGEN agent is discharged into a room, it introduces the proper mixture of gases that still allow a person to breath in a reduced oxygen atmosphere. It actually enhances the body's ability to assimilate oxygen. The normal atmosphere in a room contains 21% oxygen and less than 1% carbon dioxide. If the oxygen content is reduced below 15%, most ordinary combustibles will cease to burn. INERGEN agent will reduce the oxygen content to approximately 12.5% while increasing the carbon dioxide content to about 4%. The increase in the carbon dioxide content increased a person's respiration rate and the body's ability to absorb oxygen. Simply state, the human body is stimulated by the carbon dioxide to breathe more deeply and rapidly to compensate for the lower oxygen content of the atmosphere.

Cylinders – The cylinders are constructed, tested, and marked in accordance with applicable Dept. of Transportation (DOT) and the U.S. Bureau of Explosives specifications. As a minimum, the cylinders must meet the requirements of DOT 3AA2300 or 3AA2015+.

Cylinder Assembly – the cylinder assembly is of steel construction with a red standard finish. Four sizes are available to meet specific needs. Each is equipped with at pressure seat-type valve equipped with gauge. The valve is constructed of forged brass and is attached to the cylinder providing a leak tight seal. The valve also includes a safety pressure relief device which provides relief at 2900-3300 psi (20685-23167 kPA) pre CGA test method. Cylinder charging pressure is 2175 psi at 70°F (14997 kPA at 21° C). The cylinder are shipped with a maintenance record card and shipping cap attached. The cap attached to the threaded collar on the neck of each cylinder to protect the valve while in transit. The cylinder serial number and date of manufacture are stamped near the neck of each cylinder.

Electric Solenoid Actuator – Electric actuation of an agent is accomplished by an electric solenoid actuator interfaced through an AUTOPULSE ® Control system. This actuator can be used in hazardous environments where the ambient temperature range is between 32°F (0 °C and 54 °C). in auxiliary or override applications, a manual lever actuator can be installed on top of the cylinder valve.

Manual or Pneumatic Actuators – Two types of manual/pneumatic actuators are available for lever actuation of the cylinder valve. Manual actuation is accomplished by pulling the hand lever on the actuator. The lever design contains a forged mechanical detent which secures the lever in the open position when actuated. A pneumatic actuator is available to provide a pneumatic means for a remote pressure release from a remote pressure device.

Detection System – The AUTOPULSE Control System is used where an automatic electronic system is required to actuate the INERGEN system. This control system is used to control a single fixed fire suppression or alarm system based on inputs received from fire detection devices. The detection circuits can be configured using cross, counting, independent or priority-zone (counting) concepts. The control system has been tested to the applicable FCC Rules and Regulations for Class A Computing devices.

Nozzles – Nozzles are designed to direct the discharge of INERGEN agent using the stored pressure from the cylinders. Five sizes of nozzles are available. The system design specifies the nozzle and orifice

size to be used for proper flow rate and distribution pattern. The nozzle selection depends on the hazard and location to be protected.

Orifice Union – The orifice union is required in the distribution piping to restrict the flow of INERGEN agent, thus reducing the agent pressure down stream of the union. The union contains a stainless steel orifice plate which is drilled to the specific size hole required based on the hydraulic calculation. The orifice plate provided readily visible orifice identification. The orifice is available in eight sizes ½ in, ¾ in, 1 in, 1¼ in, 1½ in, 2 in, 2½ in, and 3 in, NPT>

Pipe and Fittings – The system manifold must be constructed of Schedule 80 piping and class 2000 or 300lb. steel fitting, threaded or welded. The distribution piping down stream from the orifice union must be constructed of a minimum of Schedule 40 piping with class 300 malleable iron threaded fittings. All the following type must be black or galvanized. All piping must be black or galvanized steel of the following type and grade. ASTM A-53 seamless or electric resistance welded, grade A or B, or ASTM A-106 grade A, B, or C. **Do not use ASTM A-120, ASTM A-53 type F or ordinary cast iron pipe or fittings.**

Limitations – The INERGEN system must be designed and installed within the guidelines of the manufacturer's design, installation, operation, inspection, recharge, and maintenance manual. The ambient temperature limitations are 32 °C to 130 °F (0 °C to 54 °C). All AUTOPULSE. Control Systems are designed for indoor application and for temperature ranges 32 °F and 120 °F

(0 ° and 49 ° C)

Technical Data

Applicable Standards: The INERGEN system complies with NEPA Standard 2001, Standard for Clean Agent Fire Extinguisher Systems, and EPA Program SNAP, Significant New Alternate Policy.

Agent is listed and approved by Underwriters Laboratories, Inc. (UL) and factory Mutual Research Corporation (FMRC).

Installations

All system components and accessories must be installed by personnel trained by the manufacturer. All installations must be performed according to the guidelines stated in the manufacturer's design, installation, operation, inspection, recharge and maintenance manual.

Availability and Cost

Availability – INERGEN Systems are sold and serviced through an international network of independent distributors located in most states and many foreign countries.

Cost – Cost varies with type of system specified, size, and design.

Product Warranty

Warranty – The components of the fire suppression system supplied by Ansul Fire Protection (“Ansul”) are warranted to you as the original purchaser for one year from the date of delivery against the defects in workmanship and material. Ansul will replace or repair and Ansul supplied components, which, in its opinion, are defective and have not been tampered with or subjected to misuse, abuse or exposed to highly corrosive conditions provided that written notice of the alleged defect shall have been given to Ansul within 30 days after discovery thereof and prior to the expiration of one year after delivery, and further provided that if Ansul so instructs, such article or part thereof is promptly returned to Ansul with shipping charges prepaid.**Disclaimer of Warranty and Limitation of Damage** – the warranty described above is the only one given

by Ansul concerning this system. ANSUL MAKES NO OTHER WARRANTIES OF ANY KIND WHETHER EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. ANSUL’S MAXIMUM RESPONSIBILITY FOR ANY CLAIMS WHETHER IN CONTRACT, TORT, NEGLIGENCE, BREACH OF WARRANTY, OR

STRICT LIABILITY SHALL BE LIMITED TO THE PURCHASE PRICE OF THE SYSTEM. UNDER NO CIRCUMSTANCES SHALL ANSUL BE RESPONSIBLE FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES OF ANY KIND. Ansul does not assume or authorize any other person to assume for it any additional liability in connection with the sale of this system.

For repairs, parts, and service or the Ansul fire suppression system, contact a local Ansul representative, or Ansul Fire protection, Marinette, WI 54143-2542, 800-TO ANSUL (862-6785)

False Discharge Warranty

Subject to the conditions set forth below, Ansul will, as purchaser’s sole remedy, replace INERGEN gas and pay reasonable costs to recharge the INERGEN/ Detection and Control System where, in Ansul’s opinion, the discharge has occurred due to a defect in the material or workmanship of the products provided by

Ansul. This warranty is extended only to the original purchaser of the INTERGEN/Detection and Control System.

Ansul will only replace INERGEN gas and pay reasonable costs to recharge the INERGEN / Detection and Control System where, in Ansul’s opinion, the discharge has occurred due to a defect in the material or Workmanship of the products provided by Ansul. For example, Ansul will not be responsible for discharges due to faulty maintenance or installation or service, intentional acts by the owner or their parties, or circumstances over which Ansul has no control. Ansul will not be responsible for discharges of the

INERGEN /Detection and Control System which occur if the INERGEN/Detection and Control System, as initially installed, has been altered or modified.

This warranty shall be effective only if the original purchaser maintains a semi-annual service agreement for the INERGEN/Detection and Control System with an Authorized Ansul Distributors from the date of installation. This warranty covers only the INERGEN/Detection and Control Systems purchased from

Ansul or its Authorized Distributors and only those INERGEN/Detection and Control System which incorporate and use only hardware and components, including detection and control devices manufactured, sold, or approved by Ansul. This warranty may not be.

ANSUL

Features

- Low pH Agent
- Proven design
- Reliable Cartridge Operated
- Aesthetically Appealing
- UL Listed – Meets Requirements of UL 300

Application

The Ansul R-102 Restaurant Fire Suppression System is an automatic, pre-engineered, fire suppression system designed to protect the following areas associated with cooking equipment; ventilating equipment including hoods, ducts, plenums, and filters; fryers; griddles and range tops; upright, natural charcoal, or chain-type broilers; electric, lava rock, mesquite or gas-radiant char-broilers and woks.

The system is ideally suitable for use in restaurants, hospitals, nursing homes, hotels, schools, airports, and other similar facilities.

Use of the R-102 system is limited to interior applications only. The regulated release and tank assemblies must be mounted in an area where the air temperature will not fall below 32 °F (0 °C) or exceed 130 °F

(54 °C). The system must be designed and installed within the guidelines of the UL Listed design, installation, Recharge, and Maintenance Manual.

System Description

The restaurant fire suppression system is a pre-engineered, wet chemical, cartridge-operated, regulated pressure type with a fixed nozzle agent distribution network. It is listed with Underwriters Laboratories, Inc (UL).

The system is capable of automatic detection and actuation and / or remote manual actuation. Additional equipment is available for mechanical or electrical gas line shut-off applications.

The detection portion of the fire suppression system allows for automatic detection by means of specific alloy rated fusible links, which, when the temperature exceeds the rating of the link, the link separates, allowing the regulated releaser to actuate.

A system owner's guide is available containing basic information pertaining to system operation and maintenance. A detailed technical manual is also available including system description, design, installation, recharge, and maintenance procedures, plus additional equipment installation and resetting instructions.

The system is installed and serviced by authorized distributors that are trained by the manufacturer.

The basic system consists of an ANSUL AUTOMATION regulated release assembly which includes a regulated release mechanism and a wet chemical storage tank housed within a single enclosure. Nozzle blow-offs caps, detectors, cartridges, agent fusible links, and pulley elbows are supplied in separate packages in the quantities needed for fire suppression system arrangements.

Additional equipment includes remote manual pull station, mechanical and electrical gas valves, pressure switches, and electrical gas line shut-off. Accessories can be added such as alarms, warning lights etc, to installation where required.

Tanks can be used in multiple arrangements to allow for larger hazard coverage. Each tank is limited to a listed maximum amount c flow numbers.

Component Description

Wet Chemical Agent – The extinguishing agent is a mixture of organic and inorganic salts designed for rapid flame knockdown and foam securement of grease related fires. It is available in plastic containers with instructions for wet chemical handling and usage.

Agent Tank – The agent tank is installed in a stainless steel enclosure or wall bracket. The tank is deep drawn carbon steel finished in red enamel.

Tanks are available in two sizes: 1.5 gallon (5.7L) and 3.0 gallon (11.4L). The tanks have a working pressure of 100psi (6.9 bar), a test pressure of 300 psi (20.7 bar), and a minimum burst pressure of 600 psi. (41.4 bar).

The tank included an adaptor /tube assembly. The adaptor is chrome-plated steel with a ¼ in. NPT female gas inlet and 3/8 in. NPT female agent outlet. The adaptor also contains a bursting disc seal which prevents the siphoning of agent up the pipe during extreme temperature variations.

Regulated Release Mechanism – The regulated release mechanism is a spring-loaded mechanical/pneumatic type capable of providing the expellant gas supply to one or two agents tanks, depending on the capacity of the gas cartridge uses. It contains a factory installed regulator deadest at 100 psi (6.9 bar) with an internal relief of approximately 145 psi (10.0 bar). It has automatic actuation capabilities by a fusible link detection system and remote manual actuation by a mechanical pull station.

The regulated release mechanism contains a release assembly, regulator, expellant gas hose, and agent storage tank housed in a stainless steel enclosure with cover. The enclosure contains knock-outs for ½ in. conduit. The cover contains an opening for a visual status indicator.

It is compatible with mechanical gas shut-off devices; or when equipped with a field or factory-installed switch , it is compatible with electric gas line or appliance shut-off devices.

Regulated Actuator Assembly – When more than two agents tanks are required, the regulated actuator is available to provide expellant gas for additional tanks. It is connected to the cartridge receiver outlet of the regulated actuator deadest at 100 psi (6.9 bar) with an internal relief of approximately 145 psi (10.0 bar). The regulated actuator assembly contains a regulated actuator, regulator, expellant gas hose, and agent tank housed in a stainless steel enclosure with cover. The enclosure contains knockouts to permit installations of the expellant gas line.

Discharge Nozzles – each discharge nozzle is tested and listed with the R-102 system for a specific application. Nozzle tips are stamped with the flow number designation (1/2, 1, 2, and 3). Each nozzle must have a metal or rubber blow-off cap to keep the nozzle tip orifice free of cooking grease build-up.

Approval

Applicable Standards: ULI listed under EX3470; ULC listed under CEX-747; meets requirements of NFPA 96 (Standard for the installation of Equipment for the Removal of Smoke and grease-Laden Vapors from Commercial Cooking Equipment); NFPA 17A (Standard on Wet Chemical Extinguishing Systems)

Ordering Information

Order all systems components through your local authorized Ansul Distributor.

Specifications

An Ansul R102 Fire Suppression System shall be furnished. The system shall be capable of protecting all hazard areas associated with cooking equipment.

1.0 General

1.1 References

- 1.1.1 Underwent Laboratories, Inc. (UL)
 - 1.1.1 UL Standard 1254
 - 1.1.1.2 UL Standard 300
- 1.1.2 National Fire Protection Association (NFPA)
 - 1.1.2.1 NFPA 96
 - 1.1.2.1 NFPA 17A

1.2 Submittals

- 1.2.1 Submit two sets of manufacturer's data sheets
- 1.2.1 Submit two sets of piping design drawings

1.3 System Description

- 1.3.1 The system shall be an automatic fire suppression system using a wet chemical agent for grease related fires
- 1.3.2 The system shall be capable of suppressing fires in the following area associated with cooking equipment: ventilating equipment including hoods, ducts, plenums, and filter fryers; griddles and range tops; upright, natural charcoal, or chain-typebroilers; electric, lava rock, mesquite or gas-radiant char-broilers.
 - 1.3.3 The system shall be the pre-engineered type having minimum and maximum guidelines established by the manufacturer and listed by underwriters Laboratories, Inc, (UL)
 - 1.3.4 The system shall be installed and serviced by personnel trained by the manufacturer.

1.4 Quality Control

- 1.4.1 Manufacturer: The R-102 Restaurant Fire Suppression System shall be manufactured by a company with at least thirty years experience in the design and manufacture of
Pre-engineered fire suppression systems. The manufacturer shall be ISO 9002 registered
- 1.4.2 Certificates: The wet agent shall be a specially formulated, aqueous solution of organic salts with a pH range between 7, 8 -8.2, designed for flame knockdown and foam securement of grease-related fires.

1.5 Warranty, disclaimer, and Limitations

- 1.5.1 The pre-engineered restaurant fire suppression system components shall be warranted for five years from date of delivery against defects in workmanship and material.
- 1.6 Delivery
- 1.6.1 Packaging: All system components shall be securely packaged to provide protection during shipment.
- 1.7 Environmental Conditions
- 1.7.1 The R-102 system shall be capable of operating in a temperature range of 32° F to 130 ° F (0 °C to 54 °C).

2.0 Product 2.1.1 Ansul fire Protection, One Stanton Street, Marinette, Wisconsin 54143-2542,
Telephone (715) 735-7411.

2.2 Components

- 2.2.1 The basic system shall consist of ANSUL AUTOMAN regulated release assembly which includes a regulated release mechanism and a wet chemical storage tank housed within a single enclosure. Nozzle, blow-off caps, detectors, cartridges, agent, fusible links, and pulley elbows shall be supplied in separate packages in the quantities needed for fire suppression system arrangements. Additional equipment shall include remote manual pull station, mechanical and electrical gas valves, pressure switches, and electrical switches for automatic equipment and gas line shut-off.
- 2.2.2 Wet Chemical Agent: The extinguishing agent shall be a specially formulated, aqueous solution of organic salts with a pH range between 7,8 – 8.2, designed for flame knockdown and foam securement of grease related fire.
- 2.2.3 Agent Tank: The agent tank shall be installed in a stainless steel enclosure or wall bracket. The tank shall be deep drawn carbon steel finished in red enamel. Tanks shall be available in two sizes: 1.5 gallon (5.7L) and 3.0 gallon (11.4L). The tanks shall have a working pressure of 100 psi (6.9 bar), a test pressure of 300 psi (20.7 bar), and a minimum burst pressure of 600 psi. (41.4 bar). The tank shall include adaptor/tube assembly containing a burst disc union.
- 2.2.4 Regulated Release Mechanism: The regulated release mechanism shall be a spring-loaded mechanical/pneumatic type capable of providing the expellant gas supply to one or two agents tanks, depending on the capacity of the gas cartridge used. It shall contains factory installed regulator deadest at 100 psi (6.9 bar) with an internal relief of approximately 145 psi (10.0 bar).

It shall have the following actuation capabilities: automation actuation by a fusible link detection system and remote manual actuation by a mechanical pull station.

The regulated release mechanism shall contain a release assembly, regulator, expellant gas hose, and agent storage tank housed in a stainless steel enclosure with cover. The enclosure shall contain knock-outs for ½ in. conduit. The cover shall contain an opening for a visual status indicator.

It shall be compatible with mechanical gas shut-off devices; or when equipped with a field or factory-installed switch, it shall be compatible with electric gas line or appliance shut-off devices.

- 2.2.5 Regulated Actuator Assembly: When more than two agents tanks are required, the regulated actuator shall be available to provide expellant gas for additional tanks. It shall be connected to the cartridge receiver outlet of the regulated release mechanism providing simultaneous agent discharge. The regulator shall be deadest to 100 psi (6.9 bar) with an internal relief of approximately 145 psi (10.0 bar). The regulated actuator assembly shall contain a regulated actuator, regulator, expellant gas hose, and agent tank housed in a stainless steel enclosure with cover. The enclosure shall contain knockouts to permit installations of the expellant gas line.
- 2.2.6 Discharge Nozzles: Each discharge nozzle shall be tested and listed with the R-102 system for a specific application. Nozzle tips shall be stamped with the flow number designation (1/2, 1, 2, and 3). Each nozzle shall have a metal or rubber blow-off cap to keep the nozzle tip orifice free of cooking grease build-up.
- 2.2.7 Distribution Piping: Distribution piping shall be schedule 40 black iron, chrome-plated, or stainless steel pipe conforming to ASTM A120, A53, or A106.
- 2.2.8 Detectors: The detectors shall be the fusible link style designed to separate at a specific temperature.
- 2.2.9 Cartridges: The cartridge shall be a sealed steel pressure vessel containing either carbon dioxide or nitrogen gas. The cartridge seal shall be designed to be punctured by the releasing device supplying the required pressure to expel wet chemical agent from the storage tank.

3.0 Implementation

3.1 Installation

- 3.1.1 The R-102 fire suppression system shall be designed, installed, inspected, maintained, and recharged in accordance with the manufacturer's listed instruction manual.
- 3.2 Training
- 3.3.1 Training shall be conducted by representative of the manufacturer.

(b) **Halon 1301**

For many years Halon has received extensive application as a fire suppression system for electrical and electronic equipment.

However due to its ozone depletion effects, production of Halon has been discontinued through the Montreal protocol which was signed on 16 September, 1987 and put in force on 7th February, 1989.

c) **Inergen**

Inergen is a mixture of Nitrogen, Argon and Carbon Dioxide in a 52, 40 and 8% ratio respectively. Oxygen being the main ingredient in combustion, inergen suppresses fire by reducing the oxygen content below the critical level required for combustion to take place.

However, reducing the level of oxygen substantially in any enclosure inhibits breathing making it difficult for the building occupants to operate. To overcome this the small percentage of carbon dioxide contained in inergen results in a higher breathing rate enabling people to function normally (see attached extract from an Inergen System Manual).

d) **Hi-Fog**

the main component of Hi-fog fire suppression system is distilled water. The water droplets turn into steam at high speed thus absorbing energy from the fires. The average droplets in Hi-fog yield a total surface area of atleast 100 times greater than Conventional Sprinkler drops for the same water volume, and therefore much smaller amounts of water are required. Due to the light weight of the droplets it would be difficult to penetrate the flue gases produced by the combustion source, however to overcome this, the fog discharge at high pressure through specially developed nozzles.

The Hi-fog system has high pressure water fog for extinguishing and low pressure fog for cooling the source of fire thus reducing the risk of re-ignition.

In operation hi-fog acts like a gas and fills every part of a room even where the fog spray is not directed. The low water volume implies that Hi-fog has little or no damage on paper or computer equipment. Hi-fog fire suppression system is readily available in the market and therefore easy to replenish.

e) **FM 200**

FM 200 is the closest and most suitable replacement for Halon 1301. "Preussag" FM 200 is environmental friendly being safe for use in both occupied and unoccupied spaces.

FM200 system is operated by an automatic fire detection system specifically designed for extinguishant release.

Like the Hi-fog system described above FM200 operates by absorbing chemical energy from the combustion process so that the temperature falls below the critical points as flame propagation cannot exist below 1300°C.

FM200 total flooding fire suppression system has the following advantages:

- (i) FM200 does not remove significant quantities of oxygen due to the low concentration required to extinguish a fire, and hence does not impede human breathing.
- (ii) The toxicity of FM200 is low and within acceptable limits.
- (iii) FM200 does not obstruct vision
- (iv) FM200 is quickly cleared by natural ventilation and has zero ozone depletion potential.

General Comments

The above fire suppression agents are stored in re-usable mild steel cylinders size: 200mm dia by 820mm high for 20kg cylinder and size: 230mm dia by 1530mm high for a 50Kg cylinder. Every cylinder is fitted with a discharge valve and integral pressure gauge.

Large cylinder sizes have a level indicator which allows the facilities annual check without having to disconnect the container from the pipework.

From the cylinder the suppressant is plumbed into various stations via suitably sized steel pipes (seamless) properly clipped along the building walls at high level and terminating at the roof level discharge nozzles.

Central location of the storage cylinders is preferred as this has an advantage in both security and maintenance. These cylinders require a storage area on ground floor measuring;

2m by 2m and located either within the building or externally.

SECTION XIII:

BILLS OF QUANTITIES

AND

SCHEDULE OF UNIT RATES

BILLS OF QUANTITIES AND SCHEDULE OF UNIT RATES

CONTENTS

<u>CLAUSE No.</u>	<u>PAGE</u>
1. GENERAL NOTES TO TENDERERS.....	167 to 168
2. STATEMENT OF COMPLIANCE.....	169
3. BILLS OF QUANTITIES Bill No.1 Plumbing, Drainage and Fire Fighting ...	124 to 193
4. BILLS OF QUANTITIES Bill No. 2 Solar Hot Water System Installation.....	195 to 199
5. BILLS OF QUANTITIES Bill No. 3 Fire Suppression Installation.....	201 to 203
6. SUMMARY PAGE.....	204 to 205
7. SCHEDULE OF UNIT RATES.....	206 to 207

BILLS OF QUANTITIES

A) PRICING OF PRELIMINARIES ITEMS.

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

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

Preliminaries

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 have been limited to tangible items such as site office, temporary works and others. However the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

Installation Items – Other Bills

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

(c) Summary

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

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

SPECIAL NOTES

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

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

In accordance with Government policy, 3% Withholding Tax **shall be deducted** from all payments made to the Tenderer, and the same shall be forwarded to the **Kenya Revenue Authority (KRA)**.

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

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

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

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

6. Tenderers must enclose, together with their submitted tenders, detailed manufacturer's Brochures detailing Technical Literature and specifications on all the equipment they intend to offer.

Statement of Compliance

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

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

Signed:*for and on behalf of the Tenderer*

Date:

Official Rubber Stamp:

SCHEDULE 1 – SUB-CONTRACT

PRELIMINARIES

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

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

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

SECTION H:

BILLS OF QUANTITIES

BILL No. 1

PLUMBING, DRAINAGE AND FIRE FIGHTING.

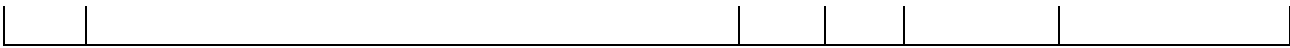
PROPOSED COUNTY HOUSE

MECHANICAL ENGINEERING SERVICES BQ

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	<u>SANITARY APPLIANCES</u>				
	Supply, Install, test and commission the following sanitary appliances complete with all the accessories including all connections to the services, waste, jointing to water supply overflows, supports and all plugging and screwing to walls and floors. Note:				
	(i) All sanitary fittings shall be in approved colour.				
	(ii)The Model and Ref No. indicated is only a guide to the type and quality of fittings.				
	(iii)Equivalent and Approved models may be acceptable.				
A	Water Closet (WC) Suite White floor Mounted WC with horizontal outlet dual flush wall plate concealed cistern, seat & cover SS Hinges. Unit to have internal overflow and wide mouth WC P-trap waste outlet. As “ Duravit ” or approved equivalent.	42	No.		
B	Wash Hand Basin (WHB) Countertop wash hand basin size 635 x 500mm with one tap hole, 32mm diameter chrome plated chain waste, chain stay hole, chrome plated non- conclusive time delay press action pillar tap and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. All to be as “ Duravit ” or equal and approved.	36	No.		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission Total Carried to Collection Page				

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Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	Disabled Persons Water Closet and Wash Hand Basin Facility				
A	Wheel chair accessible W.C facility Comprising of the following:- i) White floor Mounted Disabled water closet complete with 2No.Low level concealed cistern dual flush wall plate unit and backside Lift handle. There shall also be a heavy duty seat(25mmhigh) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook. As “ Duravit ” or equal and approved.	8	Set	85,000.00	680,000.00
	ii) Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps. It shall have one L/H tap hole with 1/2" chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts. As “ Duravit ” or equal and approved.				
	iii) Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate size 230x100 mm, 4No 600mm grab rails with covered wall plates. The set shall be as “ Duravit ” wheelchair accessible W.C. facility or approved equivalent.				
	Urinals bowls				
B	Ceramic urinal bowl complete with 40mm heavy duty plastic bottle trap and 40mm diameter chrome plated outlet with grating firmly fixed on the wall with chrome plated screws. The fittings shall be as “ Duravit ” or equal and approved.	19	No		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				



Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	Urinal Bowl Divisions				
A	Ceramic urinal bowl divisions separating the above described urinal bowl fixed firmly on the wall. The fittings shall be as “ Duravit ” or equal and approved.	19	No		
	Urinal Bowl Flush Valves				
B	25mm urinal bowl flush valve for the above urinal bowls complete with, back entry with integral vacuum breaker, non-hold-open features and non-return valve, inlet control stop and wall plate comprising flush valve, bent chrome plated flush pipe and rubber pipe connector. The flush valve to be push button type. The fittings shall be as “ Duravit ” or equal and approved.	19	No		
C	Robe Hook Robe hook in Satin Aluminium to be mounted by concealed screws to wall wedges. To be as “ Duravit ” accessories or equal and approved.	50	No.		
D	Soap Dispenser Wall mounted soap dispenser with a capacity of about one litre sensor operating soap release action complete with fixing screws. Allow for initial soap supply. To be as “ Duravit ” or approved equivalent.	27	No.		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	Hand Driers				
A	Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m ³ /min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as “Duravit” or approved equivalent.	27	No.		
B	“Duravit” Tissue Dispenser	27	No		
C	Toilet Roll Holder Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as “Duravit” or equal and approved.	50	No.		
D	Towel Rail Chrome plated towel rail 1000mm long with the rail and brackets as one piece, all as “Duravit” or equal and approved.	2	No.		
E	Toilet Brush Holder Toilet brush holder as “Duravit” or approved equivalent.	50	No.		
F	Mirror 6mm thick polished plate glass silver backed mirror with beveled edges, size 600 x 1500 mm, Plugged and screwed to wall with 6No. Chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	1	No.		
G	Ditto But Size 600x1200mm	16	No		
H	Ditto But Size 600x900mm	10	No		
I	Shower Fitting and Tray 900mmx900mm free standing heavy duty shower tray complete with anti-slip resistance base, stainless steel grid waste fitting, 50mm waste and trap. As “Duravit” MY-4012 or approved equivalent complete with Concealed shower fitting in Chrome plating bearing Hot and Cold Control Valves. The unit to incorporate changing valves. Shower fitting to be as “Duravit” concealed shower fitting.	2	No		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	Bill No. 2: Internal Plumbing				
	Supply and install tubing and fittings as described and shown on the drawings. Tenderers must allow for jointings, couplings etc necessary for the proper and satisfactory functioning of the system when pricing the following in PN 20 PPRC conforming to the current European standards for PPR installations and to the Engineer's approval, pipe jointing shall be by polyfusion or use of electric coupling Rates must allow for all the Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers etc				
	PPR Pipes				
A	20mm dia pipe chased in walls/floors	250	Lm		
B	25mm -ditto-	300	Lm		
C	32mm -ditto-	500	Lm		
D	40mm -ditto-	250	Lm		
E	50mm -ditto-	200	Lm		
F	65mm -ditto-	90	Lm		
	Extra-over PPR pipework for the following:-				
	Bends/elbows				
H	20mm dia bend	60	No		
I	25mm bend	70	No		
J	32mm bend	110	No		
K	40mm bend	60	No		
L	50mm bend	25	No		
M	65mm bend	15	No		
N	20x1/2" dia male threaded 90° bend	20	No		
O	20x1/2" dia female threaded 90° bend	20	No		
	Tees				
P	25mm diameter equal tee	60	No		
Q	25x1/2" female threaded tee	70	No		
R	25x1/2" male threaded tee	70	No		
S	32mm diameter equal tee	110	No		
R	40mm diameter equal tee	60	No		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	<u>Bill No. 3: FOUL WATER INTERNAL DRAINAGE</u>				
	Supply and fix uPVC soil system to BS 4660 and BS 4515 and MuPVC waste systems to BS 5255 with screwed and socketed joints to BS 21. Solvent welded joints shall be as per the system's manufacturer's written instructions. Tenderers must allow in their pipework prices for all the couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	MuPVC and uPVC Waste and Soil pipework				
A	150mm diameter heavy gauge grey mUPVC pipe	150	Lm		
B	100mm diameter heavy gauge grey mUPVC pipe	450	Lm		
C	100mm diameter heavy gauge golden brown UPVC pipe	60	Lm		
D	50mm diameter waste pipe	450	Lm		
E	40mm diameter waste pipe	250	Lm		
F	32mm diameter waste pipe	150	Lm		
	Bends				
G	150mm diameter access bend	20	No.		
H	100mm diameter access bend	120	No.		
I	150mm diameter sweep bend	40	No.		
J	100mm diameter sweep bend	60	No.		
K	50mm diameter sweep bend	350	No.		
L	40mm diameter sweep bend	130	No.		
M	32mm diameter sweep bend	130	No.		
	Tees				
N	50mm diameter sweep tee	150	No.		
O	40mm diameter sweep tee	120	No.		
P	32mm diameter sweep tee	120	No.		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

10.5	Description	Qty	Unit	Rate Kshs	Amount (Kshs)
	FIRE FIGHTING				
	Supply, deliver and install the following firefighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.				
	Hose Reel System				
	Hose Reel				
A	Swinging type hosereel fitted with 30 metres long, 20mm diameter reinforced non-kink rubber hose with 5/6 mm lever operated shut-off nozzle, mild steel feed pipe, isolation valve, guide and all other accessories as 'Angus Fire Armour' or equal and approved.	10	No.		
	GMS Pipes Class B				
B	20mm diameter pipework	150	Lm		
C	25mm diameter pipework	50	Lm		
D	50mm diameter pipework	65	Lm		
	Extra Over Pipework				
	Bends				
E	20mm diameter bend	20	No.		
F	25mm diameter bend	10	No.		
G	50mm diameter bend	10	No.		
	Tees				
H	25mm diameter equal tee	20	No.		
I	50mm diameter equal tee	5	No.		
	Reducers				
J	25 x 20 mm diameter reducer	20	No.		
K	50 x 25 mm diameter reducer	10	No.		
	Valves				
L	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as PEGLER or approved equivalent.	10	No.		
M	50mm diameter gate valve	8	No.		
N	65mm diameter gate valve	6	No.		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Amount (Kshs)
	Unions				
A	25mm diameter pipe union	20	No.		
B	50mm diameter pipe union	10	No.		
C	65mm diameter pipe union	10	No.		
	Hosereel Pumpset				
D	Hose reel pumpset, one duty, the other standby mounted on a frame with a mild steel base plate. Each pump shall have a duty 5m ³ /hr against 65m head as Grundfos model CHV 4 - 100 or approved equivalent. In addition, there shall be a 100 litres diaphragm pressure vessel (as Varem or approved equivalent), pressure switches, a switch to protect dry run, 65mm foot valve and strainer, tank connections, gate valves and non-return valves. The pressure set to be as Dayliff or equal and approved. Control shall be effected via a pressure switch through a pre-wired control panel which shall give automatic change-over from duty to standby pump within 5 seconds should the duty pump fail to deliver for any reason. The pumpset shall include all non-returns valves, timer, isolating valves and pipe connections.	1	Set		
	Control Panel				
E	Control panel for above pumps with contactors, over voltage and under voltage protection relays, MCBs, phase failure protection, timer, 120 meters long float switch control 4-core cable to the roof tanks, start/stop push buttons and indicator lights. All these shall be housed in a lockable cabinet (with integral isolator) made from SWG 18 mild steel sheet that is oven powder coated. There shall also be an adjustable time delay switch to ensure pumping cycles are controlled to not more than 6 per hour. It should include a change-over switch to enable the pumps to work alternately.	1	Item		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
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	Painting				
A	Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Portable Fire Extinguishers				
B	Supply, deliver, install, test and commission the following portable fire extinguishers and conforming to BS EN 3 / BS 1449.				
	Water/Carbon Dioxide Gas Fire Extinguisher				
C	9 litres water/carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	10	No		
	Carbon Dioxide Gas Fire Extinguisher				
D	5 Kg carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	10	No		
	Dry Chemical Powder Fire Extinguisher				
E	6kg dry chemical powder portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	10	No		
	Manual Alarm Bell				
F	9" (225mm) manual operated alarm bell (Gong)	10	No		
	Automatic Dry Chemical Powder Fire Extinguisher				
G	10kg automatic dry chemical powder fire extinguisher complete with pressure gauge, initial charge, glass bulb, sprinkler head and mounting base. The operating temperature of the bulb shall be 79°C. The unit shall be mounted on the concrete slab ceiling using purpose made screws and to be as Germania, model GD 25 or equal and approved.	4	No		
H	Fire blanket made of cloth woven with pre-asbestos yarn or any other fire proof material and to measure 1800 x 1210 mm. It shall be fitted with special tapes folded so as to offer instantaneous single action to release blanket from storing jacket to BS 1721.	4	No		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission Total Carried to Collection Page				
Item	Description	Qty	Unit	Rate Kshs	Cost Kshs

	Fire Notices				
A	Allow for fire signage for the hose reel system, fire exits and fire instructions as directed by the Project Engineer.	10	No.		
	Water Storage and Rising Mains				
	Water Storage Tank -Roof Tank				
B	Supply, deliver and assemble a roof water tank, made of pressed steel sectional tank plates 6mm thick plates (type 1 and 4) and of size 1220mm x 1220mm capacity of tank to be 50,000 litres and of preferred dimensions 4500mm x 4000mm x 3000mm. The tank to come complete with tank cover, internal and external ladders, mosquito proof inspection vent, internal stays, jointing material, bolts and nuts including applying two coats of non-toxic bituminous paint on the inside and two coats of aluminum paint on the outside.	1	No		
C	50mm diameter high pressure ball valve for fitting for the Roof Tank	1	No.		
D	2No 50mm diameter inlet pipes	1	Item		
	CPVC Pipe work				
E	32mm diameter CPVC pipe	100	Lm		
F	50mm diameter CPVC pipe	200	Lm		
G	65mm diameter CPVC pipe	50	Lm		
	Bends				
H	50mm diameter bend	20	No		
I	65mm diameter bend	20	No		
	Tees				
J	50mm diameter tee	20	No		
K	65mm diameter tee	20	No		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
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	Reducers				
A	50 x 32mm diameter reducer	1	No		
B	50 x 40mm diameter reducer	1	No		
C	65 x 50mm diameter reducer	2	No		
	Valves				
D	32mm diameter gate valve	1	No		
E	40mm diameter gate valve	1	No		
F	50mm diameter gate valve	4	No		
G	65mm diameter gate valve	1	No		
	Unions				
I	32mm diameter pipe union	1	No		
J	40mm diameter pipe union	1	No		
I	50mm diameter pipe union	8	No		
J	65mm diameter pipe union	1	No		
	Flanged Coupling				
K	50mm diameter flanged coupling	2	No		
L	65mm diameter flanged coupling	2	No		
	Petrol Interceptor				
M	2700 x 900 x 600mm deep concrete three chamber petrol interceptor trap complete with all the fittings including the 50mm diameter vent pipe, interconnecting pipes, gulley traps and 3No. heavy duty manhole covers. It shall be constructed with 125mm thick reinforced concrete and water proofed.	2	No		
	Pipe Sleeves				
N	100mm diameter heavy duty PVC (class 41, 2.5mm thick) pipe sleeves for crossing over column and beams.	50	Lm		
	Sump Drainage				
O	50mm diameter CPVC pipework from the basement sumps to storm water drain.	50	No		
P	50mm diameter CPVC bend	10	No		
Q	50mm diameter gate valve	10	No		
R	50mm diameter non-return valve	10	No		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

Item	Description	Qty	Unit	Rate Kshs	Amount (Kshs)
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Underground Water Tank Fittings					
A	Provide the following connections to a 100,000 litres concrete water tank done by others. Connections to be in 4mm thick ,400x400mm gms paddle flanges:	Item	1		
B	2No. 50mm diameter inlet pipes (Council and borehole)	Item	2		
C	50mm diameter outlet pipe for domestic booster pumpset	Item	1		
D	150mm diameter outlet pipe for hosereel & sprinkler pump	Item	1		
Lift Sump Pump					
E	A submersible pump capable of delivering 2m ³ /hr against 5M head, power rating 1Kw, single phase, 50Hz as “Grundfos” or equal and approved complete with control panel, associated electrical works, protection against dry run, on/off neon lights, control/pump status display panel, audio alarm with manual silencer to indicate when the pump is faulty, float switch and all necessary controls.	No.	2		
Water Booster Pumpset					
E	Set of automatic electrically driven twin booster pump. One duty and the other one standby with automatic changeover, capable of delivering 12.5m ³ per hour against a head of 25 meters with a three phase 2.2kWpower source. The pumpset shall be complete with 70 litres pressure vessel (as Dayliff pressure set or equal and approved) and all accessories required for proper and satisfactory operation. It includes pressure switches, time delay switch, a switch to protect against dry run, timer, gate valves, non-return valves, water level indicator, float level regulator, 65mm diameter foot valve and strainer. The pump to be as Grundfos model CR15-2Aor approved equivalent. Pump to be installed on mild steel frame with approved paint.	1	set		
Control and Control Panel					
F	Control panel for above pumps with contactors, over voltage and under voltage protection relays, MCBs, phase failure protection, timer, 180 meters long float switch control cable to the roof tanks, start/stop push buttons and indicator lights. All these shall be housed in a lockable cabinet (with integral isolator) made from SWG 18 mild steel sheet that is oven powder coated. There shall also be an adjustable time delay switch to ensure pumping cycles are controlled to not more than 6 per hour. It should include a change-over switch to enable the pumps to work alternately.	1	Item		
ELECTRICAL WORKS					
G	Allow for electrical works wiring and fitting to all pumps, control panel and float switches, from isolator provided by others with 3 metres distance.	1	Item		
Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission					
Total Carried to Collection Page					
Item	Description	Qty	Unit	Rate Kshs	Amount (Kshs)

RAIN WATER DOWN PIPE					
A	Supply and fix uPVC pipes to BS 4660 and BS 4515 and MuPVC pipes to BS 5255 with screwed and socketed joints to BS 21. Solvent welded joints shall be as per the system's manufacturer's written instructions. Tenderers must allow in their pipework prices for all the couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	Pipes				
B	150mm diameter heavy gauge grey mUPVC down pipes	180	Lm		
C	100mm diameter heavy gauge grey mUPVC down pipes	120	Lm		
D	50mm diameter heavy gauge grey mUPVC down pipes	90	No.		
	Bends				
E	150mm diameter bend	8	No.		
F	100mm diameter 45 ^o bend	15	No.		
G	100mm diameter bend	20	No.		
H	50mm diameter bend	10	No.		
	Tees				
I	150mm diameter tee	10	No.		
J	100mm diameter tee	10	No.		
	Others				
K	100mm diameter single branch with 50mm boss adaptor	10	No.		
L	150 x 100mm diameter reducing socket	10	No.		
M	100mm diameter cast iron fulbora	10	No.		
N	150mm diameter cast iron fulbora	4	No.		
O	100 x 100mm diameter floor drain with grating for balcony	12	No.		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				
Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Associated Pipework				
A	Supply and installation of Galvanized mild steel piping and fittings with screwed & socketed joint to medium grade class "B" to BS. 1387.	10	No.		
	GMS Pipework				
B	100mm diameter pipe	50	Lm		
C	65mm diameter ditto	80	Lm		
D	50mm diameter ditto	60	Lm		
	Bends/Elbows				
E	100mm diameter bends/elbows	20	No.		
F	65mm diameter bends/elbows	20	No.		
	Tees				
G	100 x 100 x 100mm tee	10	No.		
H	100 x 100 x 65mm tee	10	No.		
	100 x 100 x 50mm tee	10	No.		
	Reducers				
I	100 x 65mm reducer	20	No.		
J	100 x 50mm reducer	10	No.		
	Valves				
K	65mm isolating valve with its associated unions	20	No.		
L	65mm diameter flange	20	No.		
M	50mm automatic air release valve	1	No.		
	Testing and Commissioning				
O	Allow for testing and commissioning of the dry riser, Hosereel and portable fire extinguishers installations to	1	Item		
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission				
	Total Carried to Collection Page				

	DESCRIPTION			
	<u>Bill No. 1 Collection Page</u>			
	Brought forward from Page 174			
	Brought forward from Page 175			
	Brought forward from Page 176			
	Brought forward from Page 177			
	Brought forward from Page 178			
	Brought forward from Page 179			
	Brought forward from Page 180			
	Brought forward from Page 181			
	Brought forward from Page 182			
	Brought forward from Page 183			
	Brought forward from Page 184			
	Brought forward from Page 185			
	Brought forward from Page 186			
	Brought forward from Page 187			
	Brought forward from Page 188			
	Brought forward from Page 189			
	Brought forward from Page 190			
	Brought forward from Page 191			
	Brought forward from Page 192			
	PC SUM			
	Allow for Removal and Demolitions Works			100,000.00
	Allow a sum for shop Drawing & As built drawings (2No. A3 Format & 1No. Soft Copy in CD)			
	Proposed Refurbishment , Additions & Alterations to the county house building for Parliamentary Service Commission Total Carried to Summary Page			

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SECTION XIII:

BILLS OF QUANTITIES

BILL No. 2

SOLAR HOT WATER SYSTEM INSTALLATION.

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<u>Solar Hot Water System</u>					
	Allow for supply and installation of solar hot water system in accordance with the following specifications. All Roof Pipework to be firmly clipped onto Roof Trusses with brackets spaced at 1000mm apart.					
	<u>Solar Hot water storage cylinder</u>					
A	The storage cylinder shall be fabricated from 6mm thick stainless steel plate, suitable for horizontal mounting.					
	The insulation shall be polyurethane foam 50mm thick injected in the void between outer wall the storage tank and the casing					
	The outer enamel painted casing shall be galvanized mild steel sheet gauge 24. The cylinder to be internally coated with 4 coats of heat resistant and anti- corrosion (marine) paint. The cylinder capacity size and connection shall be as follows :-					
	Capacity – 2000 litres Size – 1200mm dia x 2000mm long with the following connections 40mm dia cold water supply 40mm dia hot water supply 40mm dia cold water supply to Solar panel 40 dia drain					
	The cylinder described above shall have 4 No. each 3kW heating elements mounted.	No.	1			
B	Ditto but 1000 litres Capacity. Size-	No	1			
	The cylinder described above shall have 3 No. each 3kW heating elements mounted					
C	Allow for power supply/wiring from Distribution board at the highest floor level to solar cylinders DP switches.	Item	2			
D	Allow for solar elements 4No DP switches in Roof Space.	Item	2			
E	Allow for electronic temperature regulator timer with display and key pad. (Solar Controller Unit).	Set	2			
F	Primary circuit Hot water circulation pump set as Grundfos 3speed Ups, 25-50, 1 phase (2No. Duty & Standby)	Set	2			
	Proposed refurbishment, Additions & Alterations to County House Building for Parliamentary Service Commission. Carried to Collection Page.					

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<u>To supply and Install</u>					
A	<u>Solar Panel (2x1m Wide)</u> Solar panel shall have panel area of 2 square meters per panel and approved with all interconnectors and clips in stainless steel	No.	14			
B	<u>Support Structure</u> Allow supports of 40 x 40 x 6mm angle iron fixed on roof for the above solar panels.	Set	14			
C	Allow for Hot Water Cylinder 50x50x6mm angle frame Gms bearers size 1500x2200x1700mm high to Structural Engineers approval.	Item	2			
D	Allow for 1.2mm thick galvanized mild steel spillage trough size 1500 x 2200mm x 150mm depth with 32mm dia PPR (20Lm) outlet drain pipe complete with PPR fittings.	Item	2			
	<u>Blacksteel Schedule 40 Hot Water Pipe work & Fittings (Between Solar Panels & Hot Water Cylinder and Interconnecting Supply Pipe in Roof Space)</u>					
	Tenderers must allow in their pipe work prices for all coupling, joints, supports, etc screw joints to BS 1740 with approved jointing compound.					
E	40mm schedule 40 tubing to withstand boiling water heat expansion shear.	Lm.	300			
F	40mm diameter threaded male bend	No.	200			
G	40mm diameter threaded male Tee	No.	100			
H	40mm dia Brass interconnector	Set	10			
I	40mm dia Non return “ Peglars” Valves, P/T valve etc and all other items to complete installation.	Item	2			
J	40mm Automatic Air vents installed above roof tiles.	No.	2			
K	40 x 32mm reducing bush	No.	45			
L	40mm Adaptor sockets	No.	45			
M	Allow for Automatic Thermostatic Hot/cold water mixing valves complete with Installation fittings.	Set	2			
	Proposed refurbishment, Additions & Alterations to County House Building for Parliamentary Service Commission. Carried to Collection Page.					

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<p><u>To Supply and Install</u></p> <p><u>Insulated Hot Water Supply Pipework in Roof Space/ Ducts</u></p> <p>Tenderers must allow in their pipe work prices for all coupling, joints, supports, etc Dizayn PP-R (PN25) stable pipe with inbuilt Aluminium insulation, screw joints to BS 1740 with approved jointing compound.</p>					
A	40mm dia insulated PPR Pipe	Lm.	200			
B	40mm diameter Threaded Male bend	No.	200			
C	40mm diameter Threaded Male tee	No.	120			
D	40mm dia Peglars gate valve	No.	4			
E	40 x 32mm dia reducing bush	No.	50			
F	40mm dia Adapter socket	No.	35			
	<p><u>Secondary Solar Recirculation Pumps</u></p>					
G	Grundfos UPS 25-50,1 Phase.	Set	2			
H	<p><u>Pumps Control Panel</u></p> <p>Pressed steel enamel painted body automatic control panel for the above pumps. Control panel to be wired for automatic duty and standby changeover combined with a manual selector including wiring between pumps and controls in the elevated tank and ground tank for full and no water controls including connecting to an isolator provided by others. The control panel incorporate among others the following features:-</p> <ul style="list-style-type: none"> - Neon indicator lights for pumps status. - Starters, selector and change over switches. - Volt free contacts for signal connection to the annunciator panel. - No voltage/over voltage and phase failure relay. <p>All housed in rodent/insects dust proof housing lockable with an Allen key.</p>	No.	2			
	<p>Proposed refurbishment, Additions & Alterations to County House Building for Parliamentary Service Commission.</p> <p>Carried to Collection Page.</p>					

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<u>To Supply and Install</u>					
	<u>Blacksteel Schedule 40 Hot Water Supply Pipework in Roof Space</u>					
	Tenderers must allow in their Blacksteel pipe work prices for all coupling, joints, supports, screw joints to BS 1740 with approved jointing compound.					
A	32mm diameter Blacksteel Schedule 40	LM	210			
B	32mm diameter Blacksteel Schedule 40 Threaded Male bend	No.	50			
C	32mm diameter Blacksteel Schedule 40 Threaded Male tee	No.	30			
D	32mm dia Peglars gate valve	No.	30			
E	32x25mm dia Blacksteel Schedule 40 reducing bush	No.	30			
F	32mm dia Blacksteel Schedule 40 adapter socket	No.	28			
G	<u>As built Drawings</u> Allow a sum for shop Drawing & As built drawings (2No. A3 Format & 1No. Soft Copy in CD)	Sum				
	Proposed refurbishment, Additions & Alterations to County House Building for Parliamentary Service Commission. Carried to Collection Page.					

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<p><u>Bill No. 2 SOLAR HOT WATER SYSTEM INSTALLATION</u> <u>Collection Page</u></p> <p>Brought forward from Page 195</p> <p>Brought forward from Page 196</p> <p>Brought forward from Page 197</p> <p>Brought forward from Page 198</p>					
	<p>Proposed refurbishment, Additions & Alterations to County House Building for Parliamentary Service Commission. Total Carried to Summary Page</p>					

SECTION XIII:

BILLS OF QUANTITIES

BILL No. 3

FIRE SUPPRESSION INSTALLATION

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<u>To supply & Install the following:</u> <u>Ground Floor Kitchen</u> Tenderers to list down their equivalent priced Schedule for the described scope of work, in terms of equal product type and quantities to cover item / space described above.					
A	PIRANHA Mechanical AUTOMAN Regulated Release Assy	No.	1			
B	PIRANHA-7 Tank Assembly	No.	1			
C	PIRANHA-10 Tank Assembly	No.	1			
D	Actuator Regulated PIRANHA	No.	1			
E	Conduit Offest Assy	No.	2			
F	5 Gal PRX Liquid fire suppressant Assy	No.	2			
G	Nitrogen Cartridge LT-20-R	No.	1			
H	Nitrogen Cartridge LT-30-R	No.	1			
I	AP Appliance/Plenum Nozzle Assy(50pcs)	No.	28			
J	DL Duct/Low proximity nozzle Assy	No.	2			
K	Swivel Adaptor Assy (25pcs)	No.	30			
L	Blow off caps Assy (50pcs)	No.	30			
M	Compression seal Assy (1/2")	No.	2			
N	Compression seal Assy (3/8")	No.	24			
O	Terminal detector - scissor type	No.	1			
P	Series detector - scissor type	No.	15			
Q	Fusible Link 360 deg	No.	17			
R	Pulley elbows assy (50pcs)	No.	30			
T	Bursting Disc, PIRANHA	No.	2			
U	Wire rope (50ft)	No.	1			
V	Remote pull station	No.	1			
W	Oval sleeves	No.	2			
X	Stop sleeves	No.	2			
Y	Split bolt connectors	No.	2			
Z	3/4" Gas shut off valve (Mechanical)	No.	1			
Z1	Water Supply Valve, 1 in.	No.	1			
Z2	Electric Shut off Valve	No.	1			
A1	<u>Fire Suppression Pipework</u> 15mm dia seamless black Steel pipe as Sch. 40	LM	20			
B1	10mm ditto seamless black Steel pipe as Sch. 40	LM	36			
C1	8mm ditto seamless black Steel pipe as Sch. 40	LM	12			
D1	40mm dia water supply pipe	LM	40			
E1	15mm dia Detection line & gas shut off	LM	48			
F1	Fitting & Accessories	Lot	1			
	County House Nairobi Main Kitchen - Ground Floor Carried Forward To Collection Page.					

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	To Supply & Install the following: <u>Mezzanine Floor Kitchen</u> Tenderers to list down their equivalent priced Schedule for the described scope of work, in terms of equal product type and quantities to cover item / space described above.					
A	PIRANHA Mechanical AUTOMAN Regulated Release Assy	No.	1			
B	PIRANHA-7 Tank Assembly	No.	1			
C	PIRANHA-10 Tank Assembly	No.	2			
D	Actuator Regulated PIRANHA	No.	1			
E	Conduit Offset Assy	No.	2			
F	5 Gal PRX Liquid fire suppressant Assy	No.	2			
G	Nitrogen Cartridge LT-20-R	No.	1			
H	Nitrogen Cartridge LT-30-R	No.	1			
I	AP Appliance/Plenum Nozzle Assy(50pcs)	No.	30			
J	DL Duct/Low proximity nozzle Assy	No.	2			
K	Swivel Adaptor Assy (25pcs)	No.	26			
L	Blow off caps Assy (50pcs)	No.	26			
M	Compression seal Assy (1/2")	No.	2			
N	Compression seal Assy (3/8")	No.	20			
O	Terminal detector - scissor type	No.	1			
P	Series detector - scissor type	No.	16			
Q	Fusible Link 360 deg	No.	18			
R	Pulley elbows Assy (50pcs)	No.	26			
T	Bursting Disc, PIRANHA	No.	2			
U	Wire rope (50ft)	No.	1			
V	Remote pull station	No.	1			
W	Oval sleeves	No.	2			
X	Stop sleeves	No.	2			
Y	Split bolt connectors	No.	2			
Z	3/4" Gas shut off valve (Mechanical)	No.	1			
Z1	Water Supply Valve, 1 in.	No.	1			
Z2	Electric Shut off Valve	No.	1			
	<u>Fire Suppression Pipework</u>					
A1	15mm dia seamless black Steel pipe as Sch. 40	LM	16			
B1	10mm ditto seamless black Steel pipe as Sch. 40	LM	35			
C1	8mm ditto seamless black Steel pipe as Sch. 40	LM	10			
D1	40mm dia water supply pipe	LM	16			
E1	15mm dia Detection line & gas shut off	LM	40			
F1	Fitting & Accessories	Lot	1			
G1	Allow a sum for shop Drawing & As built drawings (2No. A3 Format & 1No. Soft Copy in CD)	Sum				
	County House Nairobi Ground floor Kitchen Fire suppression Carried Forward To Collection Page.	H/33				

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS.	CTS
	<p><u>Bill No. 3 FIRE SUPPRESSION INSTALLATION</u></p> <p><u>Collection Page</u></p> <p>Brought forward from Page – 201</p> <p>Brought forward from Page – 202</p>					
	<p>County House, Nairobi Fire Suppression System Installation Total Carried to Summary Page</p>					

SCHEDULE OF UNIT RATES

ITEM	DESCRIPTION	UNIT	RATE (KShs)
1.	Sluice valve 100mm	No.	
2.	Fire blanket	LM	
3.	Allow for the construction of a standard pump house	No.	
4.	65mm Fire Hydrant (above Ground)	No.	
5.	Ceramic Slab urinal and cistern with dividers of length 3m	No.	
6.	30 gallons Hot Water Cylinder with 3 kw element	No.	
7.	32mm flush valve	No.	
8.	40mm flush valve	No.	
9.	WC suite complete with cistern	No.	
10	Multistage Submersible Centrifugal pump o flow rate of 5m ³ /hr at a head of 35m as GRUNDFOS SP 5A – 8	No.	
11	Drainage sump pump as ‘ Linz ’ with a flow rate of 4.5m ³ /h at a head of 15m. Power 0.75 Kw single phase	No.	
12	1800mm stainless steel slab urinal complete with a 9 litre cistern and necessary pipework.	No.	

SCHEDULE OF UNIT RATES

Item	Description	Kshs.
1.	Mixer tap	
2.	Sensor tap	
3.	Push tap	
4.	Flush valves	
5.	Coloured WC suite complete with cistern	
6.	Coloured washhand basin on pedestal	
7.	Ditto but counter top	

SECTION XIV:

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

CONTENTS

<u>CLAUSE No.</u>		<u>PAGE</u>
1.	GENERAL NOTES TO THE TENDERER.....	211
2.	TECHNICAL SCHEDULE.....	213-213

TECHNICAL SCHEDULE

General Notes to the Tenderer

The tenderer shall submit technical schedules for all materials and equipment upon which he has based his tender sum.

The tenderer shall also submit separate comprehensive descriptive and performance details for all plant apparatus and fittings described in the technical schedules. Manufacturer's literature shall be accepted. Failure to comply with this may have his tender disqualified.

Completion of the technical schedule shall not relieve the Contractor from complying with the requirements of the specifications except as may be approved by the Engineer.

TECHNICAL SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No.etc.)
1	Water closets			
2	Wash hand basin			
3	Soap dispenser			
4	Electronic relays			
5	Toilet roll holder			
6	Back up batteries			
7	Soap Dish			
8	Kitchen Sink			
9	Hand drier			
10	Urinals			
11	Under sink Water Heater			
12	Disabled persons WC and WHB			
13	UPVC pipes			
14	GMS Pipes			
14	Gate valves			
16	Non-return valves			
17	PPRC pipes			
18	Fire Signage			
19	Fire Extinguishers			
20	Hose reel			
21	Fire Hydrants			
22	Landing valves and Breeching valves			
23	Water Booster pumps			

24	Hosereel Pumps			
25	Sump pumps			
26	Sprinkler pumps			
27	Solar Panel			
28	Solar cylinders			
29	Fire suppression control panel			
30	Smoke detectors			
31	Heat detectors			

SECTION XVIII:

STANDARD FORMS

NOTE:

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

CONTENTS OF SECTION XVII

TITLE	PAGE
1. Performance Bank Guarantee.....	217
2. Tender Questionnaire.....	218
3. Confidential Business Questionnaire.....	219 – 220
4. Key Personnel.....	221
5. Schedule of Contracts completed in the last eight (8) years.....	222
6. Schedule of on-going projects.....	223
7. Schedule of major items of contractor’s equipment.	224
8. Financial reports for the last five (5) years	225
9. Evidence of Financial Resources.	226
10. Name, Address and Telephone, Telex and Facsimile of Banks.	227
11. Draft Program of Works	228
12. Details of Litigation or Arbitrations	229

NOTE:

- 1.0** Tenderers must duly fill these Standard Forms as a mandatory requirement.
- 2.0** Any tender returned with **unfilled Standard Forms** shall be considered **non-responsive and shall automatically be disqualified.**

PERFORMANCE BANK GUARANTEE

To: The Clerk to the National Assembly
P.O. Box 41842.

NAIROBI

Dear Sir,

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

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

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

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

Kshs. (*amount of Guarantee in figures*)

Kenya Shillings (*amount of Guarantee in words*),

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

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

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

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

SIGNATURE AND SEAL OF THE GUARANTOR

Name of Bank

Address

Date

TENDER QUESTIONNAIRE

Please fill in block letters.

Full names of Tenderer:

.....

Full address of Tenderer to which tender correspondence is to be sent (unless an agent has been appointed below):

.....

Telephone number (s) of Tenderer:

.....

Telex/Fax Address of Tenderer:

.....

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

.....

Details of Tenderer's nominated agent (if any) to receive tender notices. This is essential if the Tenderer does not have his registered address in Kenya (name, address, telephone, telex):

.....

.....

Signature of Tenderer

CONFIDENTIAL BUSINESS QUESTIONNAIRE

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

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

Part 1 – General

Business Name

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

Plot No..... Street/Road

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

Nature of Business.....

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

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

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

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

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

Citizenship details

Part 2 (b) – Partnership

Give details of partners as follows:

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

Part 2(c) – Registered Company

Private or Public

State the nominal and issued capita of the company:

Nominal KShs.

Issued KShs.

Give details of all directors as follows:

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

Part 2(d) Interest in the Firm:

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

I certify that the above information is correct.

.....
.....
Title

.....
Signature

Date

* Attach proof of citizenship

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 EIGHT (8) YEARS

Work performed on works of a similar nature, complexity and volume over the last 8 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

SCHEDULE OF ON-GOING PROJECTS

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

PROJECT NAME	NAME OF CLIENT	CONTRAC T SUM	% COMPLET E	COMPLETIO N DATE

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

.....
.....
Title

.....
Signature

Date

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?)

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 QUALIFICATION REQUIREMENTS
(Cash in Hand, Lines of credit, e.t.c. List below and attach copies of supportive documents.)

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

NAME, ADDRESS AND TELEPHONE, TELEX AND FACSIMILE OF BANKS

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

NAME	ADDRESS	TELEPHONE	TELEX	FACSIMILE

DRAFT PROGRAM OF WORKS IN THE FORM OF A BAR CHART

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

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