REPUBLIC OF KENYA

MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING & URBAN DEVELOPMENT

(STATE DEPARTMENT OF PUBLIC WORKS)

PROPOSED CIVIL SERVANTS HOUSING IN MACHAKOS COUNTY

SPECIFICATIONS AND BILLS OF QUANTITIES

FOR

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING

OF

PLUMBING , DRAINAGE AND FIRE FIGHTING WORKS

W.P ITEM NO.D111/EN/MKS 1501 JOB NO.10056A
TENDER NO. MTIHUD/HUD/CSHS/06C/2016-2017

PROJECT MANAGER

WORKS SECRETARY
STATE DEPARTMENT OF PUBLIC WORKS
P.O. BOX 30473-00100
NAIROBI

CHIEF ARCHITECT
MINISTRY OF T, I, H & UD
P..O. BOX 30743-00100
NAIROBI

CHIEF QUANTITY SURVEYOR
MINISTRY OF T, I, H & UD
P.O. BOX 30743-00100
NAIROBI

CHIEF ENGINEER- MECHANICAL (BS)
MINISTRY OF T, I, H & UD
P.O. BOX 41191-00100
NAIROBI

CHIEF ENGINEER (STRUCTURAL)
MINISTRY OF T, I, H & UD
P.O. BOX 30743-00100
NAIROBI

CHIEF ENGINEER- ELECTRICAL (BS)
MINISTRY OF T, I, H & UD
P.O. BOX 41191-00100
NAIROBI

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TABLE OF CONTENTS

TITLE **PAGE**

Contents ..... (i)

Definitions .....(ii)

Special Notes..... (iii)

Form of Tender.....(iv)

Form of Tender Security from Bank…….…… (v)

Form of Tender Security from Insurance...…… (vi)

SECTION A: Instructions to Tenderers..... A/1-A/11

SECTION B: Conditions of Contract and Sub-contract Agreement

-**PART I:** Conditions of Contract (Main works)..... B/1-B/20

- **PART II:** Sub-Contract Agreement (Kabcec)..... 1-23

SECTION C: Sub-Contract Preliminaries and Conditions..... …… C/1-C/24

SECTION D: General Mechanical Specifications……..... D/1-D/5

SECTION E: Particular specifications for Plumbing and Drainage…… E/ 1 – E/ 9

SECTION F: Particular Specifications for Fire Protection Equipment……. F/1 - F/9

SECTION G: Bills of Quantities……..... G/1-G/43

SECTION H: Technical Schedule of Items to be Supplied..... H/1-H/3

SECTION I: Schedule of Drawings..... H-I

SECTION J: Standard Forms..... J/1-J/12

DEFINITIONS

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

The Employer	Government of the Republic of Kenya Represented by: THE PRINCIPAL SECRETARY STATE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING AND URBAN DEVELOPMENT P.O. Box 30450-00100 NAIROBI
Architect	Chief Architect Ministry of Transport, Infrastructure, Housing and Urban Development P.O. Box 30743-00100 NAIROBI
Engineer	Chief Engineer- Mechanical (BS) Ministry of Transport, Infrastructure, Housing and Urban Development P.O. Box 41191 NAIROBI
Electrical Engineer	Chief Engineer- Mechanical (BS) Ministry of Transport, Infrastructure, Housing and Urban Development P.O. Box 41191 NAIROBI
Quantity Surveyor	Chief Quantity Surveyor Ministry of Transport, Infrastructure, Housing and Urban Development P.O. Box 30743-00100 NAIROBI
Structural Engineer	Chief Engineer (Structural) Ministry of Transport, Infrastructure, Housing and Urban Development P.O. Box 30743-00100 NAIROBI
Project manager	This shall mean the Project Manager and shall be The Works Secretary Ministry of Transport, Infrastructure, Housing and Urban Development P.O. Box 30743-00100 NAIROBI
Main contractor	The firm appointed to carry out the builders works.
Sub contractor	The firm appointed to carry out the supply, delivery, installation, testing and commissioning of plumbing, drainage, fire protection and water reticulation services.
Site	MACHAKOS COUNTY

SPECIAL NOTES

1. These notes shall form part of the Instructions to Tenderers and Conditions of Contract.

2. The tenderer is required to check the number of pages in this document and should he find any missing, or in duplicate, or indistinct he should inform the Chief Engineer- Mechanical (BS), Ministry of Transport, Infrastructure, Housing and Urban Development.

3. Should the tenderer be in any doubt about the precise meaning of any item or figure, for any reason whatsoever, he must inform the Chief Engineer- Mechanical (BS), Ministry of Transport, Infrastructure, Housing and Urban Development, in order that the correct meaning may be decided before the date of submission of tender.

4. No liability will be admitted nor claim allowed, in respect of errors in the tender due to mistakes in the specification, which should have been rectified in the manner, described above.

5. All tenderers must make a declaration that they have not and will not make any payment to any person which can be perceived as an inducement to enable them to win this tender.

6. Any tenderer whose firm uses the titles “Engineer” and “Engineers” must produce evidence of registration of at least one of the directors by the Engineers Board of Kenya to avoid disqualification.

FORM OF TENDER

To: The Principal Secretary
State Department of Housing and Urban development
Ministry of Transport, Infrastructure, Housing and Urban Development
P.O. Box 30450-00100
NAIROBI

Dear Sir,

SUPPLY, DELIVERY, INSTALLATION,TESTING AND COMMISSIONING OF PLUMBING, DRAINAGE AND FIRE FIGHTING EQUIPMENT FOR THE PROPOSED CIVIL SERVANTS HOUSING IN MACHAKOS COUNTY.

1. In accordance with the Instructions to Tenderers, Conditions of Contract, Specifications and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of: Kshs…….. ***[Amount in figures]***

   Kenya Shillings……...
   ……..
   …… ***[Amount in words]***
2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Employer's Representative's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.

3. We agree to abide by this tender for **a period of 150 days from the date of tender opening** and shall remain binding upon us and may be accepted at any time before that date.

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

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

Dated this …….. day of ……20…..

Signature …….in the capacity of …….

duly authorized to sign tenders for and on behalf of:

…….. ***[Name of*** **Tenderer**]

of…….. [***Address of Tenderer]***

PIN No. ……..

VAT CERTIFICATE No. ……

Witness: Name …….

Address …….

Signature ……

FORM OF TENDER SECURITY FROM BANK

WHEREAS …… (hereinafter called "the Tenderer") has submitted his tender dated ……. For the supply, delivery, installation, testing and commissioning of Plumbing, Drainage and Fire Fighting Services for the Proposed Civil Servants Housing in Machakos County.

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 of …….20 ……

THE CONDITIONS of this obligation are:

1. If after tender opening the Tenderer withdraws his tender during the period of tender validity specified in the instructions to Tenderers

   Or

2. If the Tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:

   (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or

   (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

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

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

……..	……
(date)	*(Signature of the Bank)*
……	……..
(witness)	(seal)

FORM OF TENDER SECURITY FROM INSURANCE

WHEREAS ……(hereinafter called "the Tenderer") has submitted his tender dated ……. For the Supply, Delivery, Installation, Testing and Commissioning of Plumbing, Drainage and Fire Fighting Services for the Proposed Civil Servants Housing in Machakos County.

KNOW ALL PEOPLE by these presents that WE ……..

Having our registered office at …….
(hereinafter called "the Insurance'), are bound unto ……
(hereinafter called "the Employer") in the sum of Kshs……
for which payment well and truly to be made to the said Employer, the Insurance binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Insurance this ……Day of ……20 ……

THE CONDITIONS of this obligation are:

3. If after tender opening the Tenderer withdraws his tender during the period of tender validity specified in the instructions to Tenderers

   Or

4. If the Tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:

   (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or

   (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

   We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by his is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.
   This guarantee will remain in force for a period of 150 days from the date of tender opening, and any demand in respect thereof should reach the Insurance not later than the said date.

……..	……
(date)	*(Signature of the Insurance)*
……	……..
(witness)	(seal)

SECTION A:

INSTRUCTIONS TO TENDERERS.

INSTRUCTIONS TO TENDERERS

TABLE OF CONTENTS PAGE

CLAUSE		PAGE
1.	General …….....…….	A/1-A/3
2.	Tender Documents .....……	A/3-A/4
3.	Preparation of Tenders ……	A/4-A/6
4.	Submission of Tenders ……	A/6-A/7
5.	Tender Opening and Evaluation ……	A/7-A/9
6.	Award of Contract ……	A/9-A/11

INSTRUCTIONS TO TENDERERS.

1. 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, authorized 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 whose value is equal to the estimated annual cash flow for the Contract;

(b) experience as main contractor in the construction of at least one project whose nature and complexity is equivalent to the Works over the last 10 years (to comply with this requirement, works cited should be at least 70 percent complete);

(c) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed as required for the Works;

(d) 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

(e) 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 changed 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 circulated 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.

3.8 The format of the Tender Security should be in accordance with the form of Tender Security, 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 authorized 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 initialed 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.

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

4.3 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.

4.4 Any tender received after the deadline prescribed in clause 4.2 will be returned to the tenderer un-opened.

4.5 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.

4.6 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.

4.7 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 Builders' 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 variation 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.

TENDER EVALUATION CRITERIA

After tender opening, the tenders will be evaluated in **4 stages**, namely:

1. Preliminary examination;
2. Technical evaluation;
3. Financial Evaluation; and
4. Recommendation for Award.

STAGE 1: PRELIMINARY EXAMINATION

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

These conditions may include the following:

i) Current Category of Registration with National Construction Authority (NCA) in the relevant trade;
ii) Current Class of Licenses with the relevant statutory bodies e.g. Energy Regulatory Commission, County Governments, and Water Management Boards etc;
iii) Proof of payment for tender document;
iv) The tender has been submitted in the format required by the procuring entity;
v) Provision of a tender Security, that is in the required form, amount and that the tender is valid for the period required;
vi) Dully filled Form of Tender and that the tender has been signed by the person lawfully authorised to do so ;
vii) Tax Compliance and any other conditions included in the advertisement notice/Invitation letter;
viii) Dully filled Confidential Business Questionnaire;
ix) Statement of Compliance; and
x) The required number of copies of the tender has been submitted and all required documents, information and samples have been submitted if stipulated in the tender, advertisement/Invitation letter.

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

- ***Clause 13.1*** *of Instruction to Tenderers,"the tenderers shall furnish as part of his tenders a tender surety in the amount stated in the tender document in the Appendix to Instructions to Tenderers".*
- ***Clause 13.2*** *of Instruction to Tenderers, "the unconditional Tender surety shall be in Kenya shillings and be in form of a certified cheque, bank draft, an irrevocable letter of credit or a guarantee from a reputable Bank/ Insurance approved by PPOA located in the Republic of Kenya. The format of the surety shall be in accordance with the sample form included in the tender documents and the tender surety shall be valid for* ***150 days*** *from the date of tender opening".*
- ***Clause 23.2*** *of Instruction to Tenderers: "For the purposes of this clause, a substantially responsive tender is one which conforms to all terms and condition and specifications of the tender document without material deviation or reservation and has a valid Bank/Insurance guarantee".*

The employer may seek further clarification/confirmation if necessary to confirm authenticity/compliance of any condition of the tender. Further, in case of a discrepancy between the amounts stated in the appendix to instruction to tenderers and the one stated in the advertisement or invitation letter, the bid security shall be taken as the amount in the advertisement/ letter of invitation.

The tenderers who do not satisfy any of the above requirements shall be considered Non-Responsive and their tenders will not be evaluated further

STAGE 2 TECHNICAL EVALUATION

A) Assessment for eligibility

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

'In accordance with clause 2.2 of Instruction to Tenderers, the tenderers will be required to provide evidence for eligibility of the award of the tender by satisfying the employer of their eligibility under sub clause 2.1 of Instruction to Tenderers and adequacy of resources to effectively carry out the subject contract. The tenderers shall be required to fill the Standard Forms provided for the purposes of providing the required information. The tenderers may also attach the required information if they so desire.

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

	PARAMETER	**MAXIMUM POINTS**
(i)	Tender Questionnaire ----------	5
(ii)	Key personnel ----------	20
(iii)	Contract Completed in the last Five (5) years ----------	15
(iv)	Schedules of on-going projects ----------	8
(v)	Schedules of contractors equipment ----------	20
(vi)	Audited Financial Report for the last 3 years ----------	10
(vii)	Evidence of Financial Resources ----------	15
(viii)	Name, Address and Telephone of Banks **(**Contractor to provide**)**	5
(ix)	Litigation History ----------	2
	TOTAL	**100**

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

TABLE 1: Assessment for Eligibility

Item	Description	Point Scored	Max. Point	
i.	**Tender Questionnaire Form** • Completely filled ---------- 5 • Partially filled ---------- 3 • Not filled ---------- 0		**5**	
ii	**Key Personnel (Attach evidence)**			**20**
	Director of the firm • Holder of degree or diploma in relevant Engineering field ---------- 6 • Holder of certificate in relevant Engineering field ---------- 4 • Holder of trade test certificate in relevant Engineering field ----------2 • No relevant certificate ---------- 0		**6**	
	At least 1No. degree/diploma of key personnel in relevant Engineering field • With over 10 years relevant experience --- 6 • With over 5 years relevant experience------ 4 • With under 5 years relevant experience --- 2		**6**	
	At least 1No certificate holder of key personnel in relevant Engineering field • With over 10 years relevant experience----- 4 • With over 5 years relevant experience ------ 3 • With under 5 years relevant experience -----1		**4**	
	At least 2No artisan (trade test certificate in relevant Engineering field) • Artisan with over 10 years relevant experience ---------- 2 • Artisan with under 10 years relevant experience ---------- 1 • Non skilled worker with over 10 years relevant experience ---------- 1		**4**	
iii	**Contract completed in the last five (5) years (Max of 5 No. Projects)- <u>Provide Evidence</u>** • Project of similar nature, complexity and magnitude ---------- 3 • Project of similar nature but of lower value than the one in consideration ---------- 2 • No completed project of similar nature ------0		**15**	

iv	**On-going projects (Max of 4 No. Projects) – <u>Provide Evidence</u>** • Project of similar nature, complexity and magnitude ----------2 • Project of similar nature but of lower value than the one in consideration –----------1 • No ongoing project of similar nature - ---------0		**8**	
v	**Schedule of contractors equipment and transport (proof or evidence of ownership/Lease)** • Means of transport (Vehicle) ---------- 10 • No means of transport ---------- 0		10	**20**
	For each specific equipment required in the installation of the work being tendered for. (Maximum No. of equipment to be considered – 5No. ----------2		10	
vi	**Financial report** **Audited financial report (last three (3) years)** • Average Annual Turn-over greater or equal to 5 times the cost of the project ---------- 10 • Average Annual Turn-over greater or equal to 3 times the cost of the project ---------- 6 • Average Annual Turn-over greater or equal to the cost of the project ---------- 4 • Average Annual Turn-over below the cost of the project ----------2		**10**	
vii	**Evidence of Financial Resources (cash in hand, lines of credit, over draft facility etc)** • Has financial resources equal to or above the cost of the project ----------15 • Has financial resources below the cost of the project ----------10 • Has not indicated sources of financial resources ----------0		**15**	
viii	**Name, Address and Telephone of Banks (Contractor to provide)** • Provided ---------- 5 • Not provided ---------- 0		**5**	
ix	**Litigation History** • Filled ---------- 2 • Not filled ---------- 0		**2**	
	TOTAL		**100**	

Any bidder who scores 60 points and above shall be considered for further evaluation

B) Compliance with technical specifications

In this section, the bid will be analyzed to determine compliance with General and Particular technical specifications for the works as indicated in the tender document. The tenderer shall fill in the Technical Schedule as specified in the tender document for Equipment and Items indicating the Country of Origin, Model/Make/Manufacturer of the Item/Equipment they propose to supply.

The tenderer shall also submit relevant technical brochures/catalogues with the tender document, highlighting the catalogue Numbers of the proposed items. Such brochures/catalogues should indicate comprehensive relevant data of the proposed equipment/items which should include but not limited to the following:

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

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

C) Assessment of deviations

Pursuant to section 64 of the act, a tender is deemed responsive if it conforms to all the mandatory requirements and it **does not contain major** deviations. Section 23.2 of the instruction to tenderers, defines major deviations as

a) One that affects in a substantial way the scope, quality, completion timing, administration of works to be undertaken by the tenderer under the contract, inconsistent with the tender document; or
b) Which limits in any substantial way the rights of the employer or the tenderers obligations; or
c) Whose rectification would affect unfairly the competitive position of other tenderers presenting substantially responsive tenders.

Where the deviations are minor in the view of the tender committee, with the concurrence of the procuring entity representative, the evaluation committee shall quantify such deviations pursuant to section 64 (3) of the act which requires that a minor deviation shall: Be quantified to the extent possible; and be taken into account in the evaluation and comparison of tenders. Where the deviation in the view of the tender committee with the concurrence of the procuring entity representative is major, the tender shall be deemed **non-responsive and will not be evaluated further.**

TABLE 2: Assessment of Deviations

Item	Does the Deviation Substantively Affect the following:	YES	NO
1	Scope of the Works or Services to be delivered		
2	Quality of the Works or Services to be delivered		
3	Completion Timing		
4	Administration of the Works		
5	Consistency with the tender document		
6	Rights of the Employer in a negative manner		
7	Limit the Tenderer's Obligation		
8	Affect unfairly the competitive position of other tenderers		
	COMMENT		

Any bidder who OBTAINS A YES in the above table shall be considered NON RESPONSIVE and shall not be evaluated further.

STAGE 3 - FINANCIAL EVALUATION

Upon completion of the technical evaluation a detailed financial evaluation shall follow. The financial evaluation shall proceed in the manner described in the Public Procurement and Disposal Act (2005) of the laws of Kenya (Section 66) and the Public Procurement and Disposal Regulations, 2006 specifically section 50 (1), (2), and (3).

The evaluation shall be in **three stages**

a) Determination of the Corrected Tender Sums;
b) Comparison of Rates; and
c) Comparisons of the Corrected Tender Sums.

Determination of the corrected tender sums

The Corrected Tender Sum for each bid shall be determined by-

1. ***Taking the bid price, as read out at the bid opening*;**

2. ***Adjusting the tender sum by taking into account any corrections made relating to arithmetic errors*;**

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

i) If there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;

ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected;

iii) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and

iv) The committee shall promptly write to the tenderer and if the tenderer rejects the correction, the tender shall be rejected and the tender security shall be forfeited. If the tenderer accepts the correction, the error shall be considered in adjusting the tender sum.

3. ***Adjusting the tender sum by taking into account any quantified minor deviations (where applicable pursuant to Stage 2C of this evaluation criteria)***, which were documented, quantified and accepted by a procuring entity (as described in Stage 2 of the Technical evaluation of this criteria –Assessment of Deviations;

4. Where applicable, ***converting all tenders to the same currency***, using a uniform exchange rate prevailing at the date indicated in the tender documents;

5. ***Adjusting the tender sum by applying any discounts offered*** in the tender;

6. ***Adjusting the tender sum by applying any margin of preference*** indicated in the tender documents

A) Comparison of rates-

The evaluation committee will compare rates from the different bidders and the Engineer's estimate and note all inconsistencies of the rates. Items that are under priced or overpriced may indicate potential for non-delivery and front loading respectively. The committee shall promptly write to the tenderer asking for detailed breakdown of costs for any of the quoted items, relationship between those prices, proposed construction/installation methods and schedules.

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

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

B) **Comparison of the corrected tender sums**

The lowest bidder is obtained by comparing all the corrected tender sums.

STAGE 4 - RECOMMENDATION FOR AWARD

The successful bidder shall be the tenderer with the lowest evaluated corrected tender price.

SECTION B:

CONDITIONS OF CONTRACT (MAIN WORKS)

CONDITIONS OF CONTRACT

Table of Contents

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

31	Completion and taking over ……	B/14
32	Final Account ……	B/15
33	Termination ……	B/15
34	Payment upon termination ……	B/16
35	Release from performance ……	B/16
36	Corrupt gifts and payments of commission ……..	B/16-B/17
37	Settlement of Disputes ……	B/17-B/18

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 authorized by the Project Manager, access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

16. Instructions

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

17. Extension or Acceleration of Completion Date

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

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

18. Management Meetings

18.1 A Contract management meeting shall be held 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 an 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

X^1 = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.

X^{11} = 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 there under;

(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 insurance shall not be made without the approval of the Project Manager. Both parties shall comply with any conditions of insurance policies.

31. Completion and taking over

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

32. Final Account

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

33. Termination

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

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

(a) the Contractor stops work for 30 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Project Manager;

(b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;

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

(d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 30 days (for Interim Certificate) or 60 days (for Final Certificate)of issue.

(e) the Project Manager gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;

(f) The Contractor does not maintain a security, which is required.

33.2 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Clause 33.1 above, the Project Manager shall decide whether the breach is fundamental or not.

33.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

33.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible. The Project Manager shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

34. Payment Upon Termination

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

34.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the Work done, materials ordered, the reasonable cost of removal of equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works.

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

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

35. Release from Performance

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

36. Corrupt gifts and payments of commission

The Contractor shall not;

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

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

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

37. Settlement Of Disputes

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

(i) Architectural Association of Kenya

(ii) Institute of Quantity Surveyors of Kenya

(iii) Association of Consulting Engineers of Kenya

(iv) Chartered Institute of Arbitrators (Kenya Branch)

(v) Institution of Engineers of Kenya

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

37.2 The arbitration may be on the construction of this Contract or on any matter or thing of whatsoever nature arising there under 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.

APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS

Name: **MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING AND URBAN DEVELOPMENT, - STATE DEPARTMENT OF HOUSING**

Address: **P. O BOX 30450 - 00100 NAIROBI**

Name of Authorized Representative: **THE PRINCIPAL SECRETARY**

Telephone: **020 2718050**

The Project Manager is

Name: **WORKS SECRETARY, STATE DEPARTMENT OF PUBLIC WORKS.**

Address: **P. O BOX 30743 NAIROBI.**

Telephone: **020 2723101**

Facsimile: **2716737**

The name (and identification number) of the Contract is **PROPOSED CIVIL SERVANTS HOUSING IN MACHAKOS COUNTY**

W.P ITEM NO.D111/EN/MKS 1501 JOB NO.10056A

The Works consist of **SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF PLUMBING, DRAINAGE AND FIRE FIGHTING EQUIPMENT**

The Start Date shall be AGREED **WITH THE PROJECT MANAGER.**

The Intended Completion Date for the whole of the Works shall be
AGREED WITH THE PROJECT MANAGER.

The following documents also form part of the Contract:
AS LISTED IN CLAUSE 2.3 OF CONDITIONS OF CONTRACT.

The Contractor shall submit a revised program for the Works within ____**7**____ days of delivery of the Letter of Acceptance.

The Site Possession Date shall be **AGREED WITH THE PROJECT MANAGER.**

The Site is located in Machakos County.

The Defects Liability period is _____**180**_____ days.

Amount of Tender Security is 1% of Tender Sum

The following events shall be Compensation Events:

1. AS LISTED IN CLAUSE 24 OF THE CONDITIONS OF CONTRACT.

2. DELAYED PAYMENTS WILL BE COMPENSATED FOR INTEREST AND TIME

3. _____

4. _____

The period between Program updates is 7 days.

The amount to be withheld for late submission of an updated Program is WHOLE CERTIFICATE

The period of honouring certificate is 30 days.

The proportion of payments retained is 10**%** percent.

The Limit of Retention is **5%** percent.

The Price Adjustment Clause **SHALL NOT apply**

The liquidated damages for the Sub-contract Works is **Kshs. 50,000.00**_(per week or part thereof)

The Performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price------**5%**--------- percent (%)

The rate of exchange for calculation of foreign currency payments is **NOT APPLICABLE**

Advance Payment **SHALL NOT BE** granted.

SECTION B:

PART II:

SUB-CONTRACT AGREEMENT (KABCEC)

AGREEMENT AND CONDITIONS OF SUB-CONTRACT FOR BUILDING WORKS

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And
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CONTENTS

Clause			Page
1.0	-	Agreement	1-3
2.0	-	General obligations of the Contractor	4
3.0	-	General obligations of the Sub-Contractor	4
4.0	-	Sub-contract documents	5
5.0	-	General liability of the Sub-Contractor	5-6
6.0	-	Insurance against injury to persons and property	6-7
7.0	-	Performance bond	7
8.0	-	Possession of site and commencement of works	7-8
9.0	-	Architect's instructions	8
10.0	-	Variations	8
11.0	-	Liability for own equipment	8
12.0	-	Provision of facilities by the Contractor	8-9
13.0	-	Liability for own work	9-10
14.0	-	Co-operation in use of facilities	10
15.0	-	Assignment and subletting	10

Clause			**Page**
16.0	-	Work prior to appointment of Contractor	10-11
17.0	-	Sub-Contractor design	11
18.0	-	Specification of goods, materials and workmanship	11
19.0	-	Compliance with statutory and other regulations	11-12
20.0	-	Royalties and patent rights	12
21.0	-	Antiquities and other objects of value	12
22.0	-	Suspension of works	12
23.0	-	Payments	12-14
24.0	-	Practical completion and defects liability	14—15
25.0	-	Extension of time	15
26.0	-	Loss and expense caused by disturbance of regular progress of the works	16
27.0	-	Damages for delay in completion	16
28.0	-	Fluctuations	16-17
29.0	-	Termination of the main contract	17
30.0	-	Termination of the Sub-contract	17-18
31.0	-	Settlement of disputes	18-20
	-	Sub-Contractor's performance bond	21
	-	Appendix	22

ORIGINAL **COUNTERPART**

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1.0 AGREEMENT

1.1 This agreement is made on ……

between …….

of (or whose registered office is situated at) ……

……

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

and …….

of (or whole registered office is situated at) ……

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

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

made on …….

Between ……

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

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

……..

…….

……

hereinafter called “the sub-contractor works” at……...

on Land Reference No……...being part of the main contract works.

1.4 And whereas the Su-Contractor has supplied the Contractor with a priced

copy of the bills of quantities (hereinafter referred to as “the sub-contractor bills”), where applicable, which together with the drawings numbered……

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

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

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

NOW IT IS HEREBY AGREED AS FOLLOWS:

1.6 For the consideration herein stated, the Sub-Contractor shall upon and subject to the conditions annexed hereto carry out and complete the sub-contract works shown upon the sub-contract drawings and described by or referred to in the sub-contract bills, specifications and in the said conditions.

1.7 The Contractor shall pay the Sub-Contractor the sum of the Kshs (in words)……

……

……Kshs……..……)
(hereinafter referred to as “the sub-contractor price”) or such sum as shall become payable hereinafter at the times and in manner specified in the said conditions.

1.8 The term ‘Architect’, ‘Quantity Surveyor’ and ‘Engineer’, where applicable, shall refer to the persons appointed by the Employer to administer the sub-contract in accordance with the main contract agreement. Where applicable reference to the Architect shall be deemed to include reference to the Engineer.

1.9 In the even of the need to appoint a replacement Architect, Quantity Surveyor, Engineer or other specialist (whether named in this agreement or not) the Employer shall make such appointment as soon as practicable after the need for such appointment arises and shall communicate the appointment to the Sub-Contract through the Contractor.

1.10 Where the sub-contract does not incorporate bills of quantities, the term “sub-contract bills” and “bills of quantities” wherever appearing shall be deemed deleted and replaced with the term “schedule of rates” as applicable.

1.11 The terms defined in clause 1.0 of the main contract shall have the same meaning in this sub-contract as that assigned to them therein.

1.12 AS WITNESS the hands of the said parties;

Signed by the said

……..(Contractor)

In the presence of

Name ……..

Address ……..

Signed by the said

…….(Sub-Contractor)

In the presence of

Name ……

Address ……

CONDITIONS OF SUB-CONTRACT

2.0 GENERAL OBLIGATIONS OF THE CONTRACTOR

The Contractor shall:

2.1 Timeously obtain from the Architect on behalf of the Sub-Contractor all drawings, necessary details, instructions and other information required by the Sub-Contractor for the proper carrying out of the sub-contract works.

2.2 Provide all such facilities and attend upon the Sub-Contractor as required and as provided in the specifications, bills of quantities and these conditions to the extent compatible with the provisions of the main contract

2.3 Observe, perform and comply with all the provisions of the main contract and of this sub-contract on the part of the Contractor to be observed, performed and complied with to ensure satisfactory completion of the sub-contract works.

3.0 GENERAL OBLIGATIONS OF THE SUB-CONTRACTOR

3.1 The Sub-Contractor shall be deemed to have notice of all the provisions of the main contract except the detailed prices of the Contractor included in the bills of quantities or in the schedule of rates.

3.2 The Sub-Contractor shall carry out and complete the sub-contract works in accordance with this sub-contract and in all respects to the reasonable satisfaction of the Contractor and of the Architect and in conformity with all reasonable directions and requirements of the Contractor regulating the due carrying out of the contract works.

3.3 The Sub-Contractor shall observe, perform and comply with all the provisions of the main contact on the part of the Sub-Contractor to be observed, performed and complied with so far as they relate and apply to the sub-contract works or any portion thereof and are not inconsistent with the expressions of this sub-contract as if all the same were set out herein.

3.4 Without prejudice to the generality of the foregoing requirements, the Sub-Contractor shall especially observe perform and comply with the provisions of clauses 9.0, 18.0, 19.0 22.0, 30.0, 31.0, 34.0 and 36.0 of the main contract as they apply to the sub-contract works.

4.0 SUB-CONTRACT DOCUMENTS

4.1 The sub-contract documents for use in the carrying out of the sub-contract works shall be:-

4.1.1 The agreement and these conditions

4.1.2 The sub-contract drawings as listed in the agreement

4.1.3 The sub-contract bill of quantities or schedule of rates as applicable

4.1.4 The specifications as separately supplied or as contained in the sub-contract bills.

4.2 Upon the execution of the sub-contract, the Contractor shall register the agreement with the relevant statutory authority and pay all fees, charges, taxes, duties and all costs arising therefrom.

4.3 The manner of supplying contract documents, their custody, display on site and their interpretation in the event of discrepancies shall be as provided in the main contract in respect of the main contract documents with the necessary amendments made to refer to the sub-contract.

5.0 GENERAL LIABILITY OF THE SUB-CONTRACTOR

5.1 The Sub-Contractor shall be liable for and shall indemnify the Contractor against and from:

5.1.1 Any breach, non-observance or non-performance by the Sub-Contractor, his servants or agents of any of the said provisions of the main contract and of this sub-contract.

5.1.2 Any act or omission of the Sub-Contractor, his servants or agents which involve the Contractor in any liability to the Employer under the main contract

5.1.3 Any claim, damage, loss or expense due to or resulting from any negligence or breach of duty on the part of the Sub-Contractor, his servants or agents.

5.1.4 Any loss or damage resulting from any claim under any statute or common law by an employee of the Sub-Contractor in respect of personal injury or death arising out of or in the course of his employment.

5.2 Provided that nothing contained in this sub-contract shall impose any liability on the Sub-Contractor in respect of any negligence or breach of duty on the part of the Employer, the Contractor, other sub-contractors or their respective servants or agents nor create any privity of contract between the Sub-Contractor and the Employer or any other sub-contractor.

6.0 INSURANCE AGAINST INJURY TO PERSONS AND PROPERTY

6.1 Without prejudice to his liability to indemnify the Contractor under clause 5.0 above, the Sub-Contractor shall maintain:-

6.1.1 Such insurances as are necessary to cover the liability of the Sub-Contractor in respect of injury or damage to property including damage to the works arising out of or in the course of or by reason of the carrying out of the sub-contract works except for liability against the contingencies specified at clause 6.3 herein.

6.1.2 The insurances required under sub clause 6.1.1 and 6.1.2 above shall be placed with insurers approved by the Contractor and the Architect.

6.2 Notwithstanding the provisions of clause 23.0 of these conditions, the Contractor shall not be obliged to make payments to the Sub-Contractor before the said policies have been provided.

6.3 Where clause 13.0 of the main contract applies, the sub-contract works, including materials and goods of the sub-Contractor delivered to the works, shall as regards loss or damage by the contingencies stated at clause 13.0 therein, namely, fire, earthquake, fire following earthquake, lightning, explosion, storm, tempest, flood, bursting or overflowing of water tanks, apparatus or pipes, aircraft and other aerial devices or articles dropped therefrom, riot and civil commotion, be at the sole risk of the contractor. The Contractor shall cover his liability for the works by procuring insurances as required in the said clause.

6.4 Where clause 14.0 or 15.0 or the main contract applies, the sub-contract works, including materials and goods of the Sub-Contractor delivered to the works shall, as regards loss or damage by the contingencies stated therein be at the sole risk of the Employer. The Employer shall cover his liability for the works by procuring insurances as required in the said clause.

6.5 The Sub-Contractor shall observe and comply with the conditions contained in the policy or policies of insurance of the Contractor or of the Employer, as the case may be, as regards loss or damage which may be caused by the stated contingencies. For this purpose, the Contractor or the Employer as the case may be, shall avail the said policies to the Sub-Contractor for his perusal.

6.6 If any loss or damage affecting the sub-contract works or any part thereof or any unfixed goods or materials is occasioned by any one or more of the said contingencies, then,

6.6.1 The occurrence of such loss or damage shall be disregarded in computing any amounts payable to the Sub-Contractor under the sub-contract, and

6.6.2 The Sub-Contractor shall, with due diligence, restore the work damaged, replace or repair any unfixed materials or goods which have been destroyed or damaged, remove and dispose of any debris and proceed with the carrying out and completion of the sub-contract works.

6.6.3 The restoration of work damaged the replacement and repair of unfixed materials and goods and the removal of debris shall be deemed to be a variation required by the Architect. Such work shall be paid for in accordance with clause 30.0 of the main contract.

7.0 PERFORMANCE BOND

Before commencing the works, the Sub-Contractor shall provide one surety who must be an established bank or insurance company to the approval of the Contractor and who will be bound to the Contractor in the sum equivalent to ten per cent (10%) of the sub-contract price for the due performance of the sub-contract until the certified date of practical completion. Notwithstanding the provisions of clause 23.0 of these conditions, no payments shall made to the Sub-Contractor before the said bond is provided.

8.0 POSSESSION OF SITE AND COMMENCEMENT OF WORKS

8.1 Within the period stated in the appendix to these conditions, the Contractor shall give possession of the site works to the Sub-Contractor and such access as may be necessary to enable the Sub-Contractor to commence and proceed with the sub-contract works in accordance with the sub-contract.

8.2 On or before the date for commencement of works stated in the appendix to these conditions, the Sub-Contractor shall commence the carrying out of the sub-contract works and shall proceed regularly and diligently with the same in accordance with the sub-contract programme, the main contract programme and or with the progress of the main contract works and complete on or before the

date stated in the appendix to these conditions as the date for practical completion or within any extended time granted under clause 25.0 of these conditions.

9.0 ARCHITECT'S INSTRUCTIONS

9.1 The Sub-Contractor shall forthwith comply with all the instructions issued to him by the Architect, either directly or through the Contractor, in regard to any matter in respect of which the Architect is expressly empowered by the main contract conditions to issue instructions.

9.2 The manner of complying with or querying the validity of an Architect's instruction shall be as provided in clause 22.0 of the main contract. The Sub-Contractor shall not be obliged to carry our instructions not issued in the manner provided therein.

10.0 VARIATIONS

10.1 The term "variation" shall have the meaning assigned to it at clause 30.0 of the main contract.

10.2 The valuation of variations shall be made by the Quantity Surveyor in accordance with sub-clause 30.6 of the main contract.

10.3 Effect shall be given to the measurement and valuation of variations in interim certificates and by the adjustment of the sub-contract price.

11.0 LIABILITY FOR OWN EQUIPMENT

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

12.0 PROVISION OF FACILITIES BY THE CONTRACTOR

12.1 Where provided in the main contract, the Contractor shall supply at his own cost all necessary water, lighting, electric power, telephones and security required for the sub-contract works. Where not so provided, the Sub-Contractor shall provide the said services at his own cost.

12.2 Except as otherwise provided in the main contract, the Sub-Contractor shall construct at his own expense all necessary workshops, stores, offices, workers' accommodation and other temporary buildings required for the carrying out of the works at such places on site as the Contractor shall identify. The Contractor undertakes to give the sub-Contractor the required space and all reasonable facilities for such construction. Upon practical completion of the works, the Sub-contractor shall remove the said facilities and reinstate disturbed surface to the satisfaction of the Contractor.

12.3 The Contractor shall provide, without charge, general attendance to the Sub-Contractor to facilitate the carrying out of the works which attendance shall include facilities for access to and movement within the site and sections or parts of the building or buildings where the sub-contract works are being carried out, the use of temporary roads, paths and access ways, sanitary and welfare facilities.

12.4 The Contractor shall permit the Sub-Contractor to use, without charge, at all reasonable times, any scaffolding and hoisting equipment belonging to or provided by the Contractor while it remains so erected upon the site. The use by the Sub-Contractor of any other equipment, facilities or services provided by the Contractor for the works shall be subject to private arrangements between the parties hereto and shall not be regulated by these conditions.

12.5 Provided that such use of the scaffolding and hoisting equipment shall be on the express condition that no warranty or other liability on the part of the Contractor shall be created or implied in regard to fitness, condition or suitability for the intended purpose except that the Sub-Contractor shall be liable for any damage caused thereto or thereby.

12.6 Where required, the Contractor shall provide the facilities, equipment and the like and carry out any necessary builder' works within a reasonable time of the request by the Sub-Contractor to enable timely performance of the sub-contract.

13.0 LIABILITY FOR OWN WORK

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

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

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

13.4 If in the course of carrying out the sub-contract works, the Sub-Contractor is required to carry out work not included in his sub-contract by reason of any materials of workmanship not being in accordance with the main contract or with other sub-contracts, the Contractor shall reimburse the Sub-Contractor the expenses incurred therein.

14.0 CO-OPERATION IN USE OF FACILITIES

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

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

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

15.0 ASSIGNMENT AND SUBLETTING

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

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

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

16.0 WORK PRIOR TO APPOINTMENT OF CONTRACTOR

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

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

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

17.0 SUB-CONTRACTOR DESIGN

Where the sub-contract includes a design component by the Sub-Contractor, the design shall be to the approval of the Architect and the Employer. Not withstanding and approvals, the Sub-Contractor shall be liable directly to the Employer for any consequences of failure of the design to comply with the requirements of the Employer or to be fit or suitable for the purposes for which the sub-contract works or the relevant part thereof were intended.

18.0 SPECIFICATION OF GOODS, MATERIALS AND WORKMANSHIP

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

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

19.0 COMPLIANCE WITH STATUTORY AND OTHER REGULATIONS

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

20.0 ROYALTIES AND PATENT RIGHTS

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

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

21.0 ANTIQUITIES AND OTHER OBJECTS OF VALUE

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

22.0 SUSPENSION OF WORKS

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

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

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

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

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

23.0 PAYMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

24.0 PRACTICAL COMPLETION AND DEFECTS LIABILITY

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

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

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

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

25.0 EXTENSION OF TIME

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

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

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

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

26.0 LOSS AND EXPENSE CAUSED BY DISTURBANCE OF REGULAR PROGRESS

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

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

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

27.0 DAMAGES FOR DELAY IN COMPLETION

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

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

28.0 FLUCTATIONS

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

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

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

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

29.0 TERMINATION OF MAIN CONTRACT

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

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

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

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

30.0 TRMINATION OF SUB-CONTRACT.

30.1 Without prejudice to any other rights and remedies which the contractor may possess, if the sub-contractor shall make default in any one or more of the respects which would entitle the employer to terminate the main contract under clause 38.0 therein, the contractor shall give the sub-contractor a notice, with a copy to the Architect and to the employer by registered post of recorded delivery specifying the default. Should the sub-contractor continue the default for 14 days after receipt of such notice or at any time thereafter repeat such default and should the Architect certify that the sub-contractor is in default, the contractor

may terminate the Sub-contract forthwith after the expiry of the notice provided that the notice is not given unreasonably or vexatiously. The termination letter shall be copied to the Architect and to the Employer.

30.2 Where the sub-contract is terminated due to the default of the sub- contractor as in sub-clause 30.1 herein, the adjustment of sub-contract accounts shall be performed in the like manner as is provided at sub-clause 38.8 of the main contract regarding the main contract accounts.

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

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

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

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

31.0 SETTLEMENT OF DISPUTES

31.1 In case any dispute or difference shall arise between the Contractor and Sub-Contractor, either during the progress or after the completion or abandonment of the sub-contract works, such dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within 30 days of the notice.

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

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

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

31.4.1 The failure or refusal of the Architect to recommend to the contractor an extension of sub-contract time, or

31.4.2 The extend of the recommended time, or

31.4.3. The amount certified to the sub-contractor either in an interim in a final certificate, or

31.4.4 The issue of an instruction which the sub-contractor contends is not authorised by the main contract or the sub-contract, or

31.4.5. Any other matter left to the discretion of the Architect in the main contract or in the sub-contract, then.

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

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

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

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

31.9 Notwithstanding anything stated herein, the following matters may be referred to arbitration before the practical completion of the works or abandonment of the works or termination of the sub-contract without having to comply with sub clause 31.8 herein.

31.9.1 Whether or not the issue of an instruction by the Architect is authorized by the main contract or these conditions, and

31.9.2 Whether or not a payment certificate has been improperly withheld or is not in accordance with the main contract or these conditions or though issued, it has not been honoured.

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

31.11 The Arbitrator shall, without prejudice to the generality of his powers, have power to direct such measurements, computations, tests, or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject or included in any payment certificate.

31.12 The Arbitrator shall, without prejudice to the generality of his powers, have power to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion decision, requirement or notice had been given.

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

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

SUB CONTRACTOR'S PERFORMANCE BOND

BY THIS AGREEMENT we .....(SURETY)

Of .....

are bound to .....(CONTRACTOR)

in the sum of Kenya shillings .....

..... (Kshs. .....)

to be paid by us to the said .....(CONTRACTOR)

WHEREAS by an agreement in writing dated .....

..... (SUB-CONTRACTOR)

entered into a sub-contract with .....(CONTRACTOR)

to carry out and complete the works therein stated in the manner and by the time therein specified all in accordance with he provisions of the said sub-contract, namely:
(description of works)
.....

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

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

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

....

Surety Witness

Authrorised by Power of Attorney No .....

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

Signed by the said:

....

CONTRACTOR **SUB-CONTRACTOR**

SECTION C

SUB-CONTRACT PRELIMINARIES

AND

GENERAL CONDITIONS

CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

CLAUSE	DESCRIPTION	PAGE
1.01	Examination of Tender Documents	C-1
1.02	Discrepancies	C-1
1.03	Conditions of Contract Agreement	C-1
1.04	Payments	C-2
1.05	Definition of Terms	C-2
1.06	Site Location	C-3
1.07	Duration of contract	C-4
1.08	Scope of contract Works	C-4
1.09	Extent of the Contractor's Duties	C-4
1.10	Execution of the Works	C-4
1.11	Validity of Tender	C-5
1.12	Firm – Price Contract	C-5
1.13	Variation	C-5
1.14	Prime Cost and Provisional Sums	C-6
1.15	Bond	C-6
1.16	Government Legislation and Regulations	C-6
1.17	Import Duty and Value Added Tax	C-6
1.18	Insurance Company Fees	C-7
1.19	Provision of Services by the Main Contractor	C-7
1.20	Suppliers	C-8
1.21	Samples and Materials Generally	C-8
1.22	Administrative Procedure and Contractual Responsibility	C-8
1.23	Bills of Quantities	C-8
1.24	Contractor's Office in Kenya	C-9

1.25	Builders Work	C-9
1.26	Structural Provision for the Works	C-9
1.27	Position of Services, Plant, Equipment, Fittings and Apparatus	C-10
1.28	Checking of Work	C-10
1.29	Setting to Work and Regulating System	C-10
1.30	Identification of Plant and Components	C-11
1.31	Contract Drawings	C-11
1.32	Working Drawings	C-11
1.33	Record Drawings (As Installed) and Instructions	C-13
1.34	Maintenance Manual	C-14
1.35	Hand – Over	C-15
1.36	Painting	C-15
1.37	Spares	C-16
1.38	Testing and Inspection – Manufactured Plant	C-16
1.39	Testing and Inspection – Installation	C-16
1.40	Labour Camps	C-17
1.41	Storage of Materials	C-17
1.42	Initial Maintenance	C-17
1.43	Maintenance and Servicing after Completion of the Initial Maintenance	C-17
1.44	Trade Names	C-18
1.45	Water and Electricity for the Works	C-18
1.46	Protection	C-18
1.47	Defects After Completion	C-18
1.48	Damages for Delay	C-18
1.49	Clear Away on Completion	C-18

1.50	Final Account	C-19
1.51	Fair Wages	C-19
1.52	Supervision	C-19
1.53	Test Certificates	C-20
1.54	Labour	C-20
1.55	Discount to the Main Contractor	C-20
1.56	Guarantee	C-20
1.57	Direct Contracts	C-20
1.58	Attendance Upon the Tradesmen	C-20
1.59	Trade Union	C-20
1.60	Local and other Authorities notices and fees	C-21
1.61	Assignment or Subletting	C-21
1.62	Partial Completion	C-21
1.63	Temporary Works	C-22
1.64	Patent Rights	C-21
1.65	Mobilization and Demobilization	C-22
1.66	Extended Preliminaries	C-22
1.67	Supervision by Engineer and Site Meetings	C-23
1.68	Amendment to Scope of Contract Works	C-23
1.69	Contractors Obligation and Employers Obligation	C-23
1.70	Appendix to Sub-Contract preliminaries and General conditions	C-24

SECTION C

SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

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.

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.

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 **The Director Civil Servants Housing Scheme, Ministry of Transport, Infrastructure, Housing and Urban Development.**

ii) **Architect:** The term **"Architect"** shall mean **The Chief Architect, Ministry of Transport, Infrastructure, Housing and Urban Development.**

iii) **Quantity Surveyor**: The term **"Quantity Surveyor"** shall mean **The Chief Quantity Surveyor, Ministry of Transport, Infrastructure, Housing and Urban Development.**

iv) **Civil/Structural Engineers**: The term **"Civil/Structural Engineers"** shall mean **The Chief Engineer (Structural), Ministry of Transport, Infrastructure, Housing and Urban Development.**

v) **Engineer**: The term **"Engineer"** shall mean **Chief Engineer(Mechanical -BS), Ministry of Transport, Infrastructure, Housing and Urban Development.**

vi) **Main Contractor:** The term **"Main Contractor"** shall mean the firm or company appointed to carry out the Building Works and shall include his or their heir, executors, assigns, administrators, successors, and duly appointed representatives.

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

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

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

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

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

xii) **Abbreviations:**

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

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

1.06 **<u>Site Location</u>**

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

1.07 **Duration of Sub-Contract**

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

1.08 **Scope of Contract Works**

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

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

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

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

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

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

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

1.10 **Execution of the Works**

The works shall be carried out strictly in accordance with:

a) All relevant Kenya Bureau of Standards Specifications.

b) All relevant British Standard Specifications and Codes of Practice (hereinafter referred to B.S. and C.P. respectively).

c) General specifications of materials and works Section D of this document

d) The Contract Drawings.

e) The Bye-laws of the Local Authority.

f) The Architect's and/or Engineer's Instructions.

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

1.11 **Validity of Tender**

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

1.12 **Firm – Price Contract**

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

1.13 **Variation**

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

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

Where the Architect requires additional work to be performed, the Sub-contractor, if he considers it necessary, will give notice within seven (7) days to the Main Contractor of the length of time he (the Sub-contractor) requires over and above that allotted for completion of the Contract. If the Sub-contractor fails to give such notice he will be deemed responsible for the claims arising from the delay occasioned by reason of such extension of time.

1.14 **Prime Cost and Provisional Sums**

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

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

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

1.15 **Bond**

The tenderer must submit with his tender the name of one Surety who must be an established Bank only who will be willing to be bound to the 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 pipe work and ductwork including dates of installation of underground pipe work.
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 trunkings 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 pipe work 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 Contract 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 OMIT CLAUSE 1.12

This is not a firm price contract

2 MODIFY CLAUSE 1.15

Amount of performance security will be Five per cent (5%)

3 ADD TO CLAUSE 1.17

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

4 ADD TO CLAUSE 1.40

There are no labour camps.

5. ADD TO CLAUSE 1.66

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

SECTION D

GENERAL MECHANICAL SPECIFICATIONS

SECTION D

GENERAL MECHANICAL SPECIFICATION

CLAUSE	DESCRIPTION	PAGE
2.01	GENERAL	D-1
2.02	QUALITY OF MATERIALS	D-1
2.03	REGULATIONS AND STANDARDS	D-1
2.04	ELECTRICAL REQUIREMENTS	D-2
2.05	TRANSPORT AND STORAGE	D-2
2.06	SITE SUPERVISION	D-3
2.07	INSTALLATION	D-3
2.08	TESTING	D-3
2.09	COLOUR CODING	D-4
2.10	WELDING	D-5

SECTION D
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.

1. 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.

a) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.
b) The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.

c) 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:

a) Pipe Welding

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

b) General Welding

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

2.10.4 Welders Qualifications

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

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

SECTION E

PARTICULAR SPECIFICATIONS
FOR
PLUMBING, DRAINAGE AND FIRE FIGHTING EQUIPMENT

SECTION E

PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

CLAUSE No.	DESCRIPTION	PAGE
3.1	General	E-1
3.2	Materials and standards	E-1
3.2.1	Pipework and Fittings	E-1
3.2.2	Valves	E-3
3.2.3	Waste Fitment Traps	E-4
3.2.4	Pipe Supports	E-4
3.2.5	Sanitary Appliances	E-6
3.2.6	Pipe Sleeves	E-6
3.3	Installation	E-6
3.3.1	General	E-6
3.3.2	Above Ground Installation	E-6
3.4	Testing Inspection	E-8
3.4.1	Site Tests – Pipework Systems	E-8
3.4.2	Site Test – Performance	E-8
3.5	Sterilisation of Hot and Cold Water System	E-9

SECTION E

PARTICULAR SPECIFICATIONS FOR PLUMBING, DRAINAGE AND FIRE FIGHTING EQUIPMENT

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:

ALL PIPEWORK ARE TO BE TO KENYA BUREAU OF STANDARDS SPECIFICATIONS WHERE APPLICABLE

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 fitments 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.

c) **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 and Kenya Bureau of Standards

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.

d) **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 Kenya Bureau of Standards 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 Littleshampton, Sussex, England.

The trade name 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 pipe angers, 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 be 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 kilometres 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.

c) 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.

1.1. **TESTING AND INSPECTION**

3.4.1 **Site Tests – Pipe work 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:

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

ii) Apply two coats of an approved paint and finish in suitable gloss enamel to colors 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 sterilised 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.

3.6 PARTICULAR SPECIFICATIONS FOR PORTABLE FIRE EXTINGUISHER AND HOSE REEL INSTALLATIONS

3.6.1 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.

3.6.2 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.

3.6.3 WATER/CO2 EXTINGUISHERS

These shall be 9-litre water filled CO2 cartridge operated portable fire extinguishers and shall comply with B.S. 1382: 1948 and to the requirements of B.S.4523: 1977. 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:

a) Method of operation.

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

c) Name and address of the manufacturer or responsible vendor.

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

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

f) The year of manufacture.

g) A declaration to the effect that the extinguisher has been tested to a pressure of 24.1 bar (350 psi.).

h) The number of British Standard 'B.S' 1382 or B.S. 5423: 1977.

3.6.4 PORTABLE CARBON DIOXIDE FIRE EXTINGUISHERS

These shall be portable carbon dioxide fire extinguishers and shall comply with B.S. 3326: 1960 and B.S. 5423: 1977.

The body of extinguisher shall be a seamless 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:-

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

b) Method of operation.

c) The words “Re-charge immediately after use”.

d) Instructions for periodic checking.

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

f) The manufacturers name or identification markings

3.6.5 DRY CHEMICAL POWDER PORTABLE FIRE EXTINGUISHER

The portable dry powder fire extinguishers shall comply with BS3465: 1962 and BS 5423. 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 it s 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.

3.6.6 AIR FOAM FIRE EXTINGUISHER

These shall be of 9 litres capacity complete with refills cartridges and wall fixing brackets and complying with B.S. 5423 with the following specifications:-

Cylinder: to B.S. 1449

Necking: to be 76mm outside diameter steel EN 3A $2^3/_4$ X 8TPI female thread**.**

Head cap: to be plastic moulding acetyl resin.

CO_2 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.

3.6.7 <u>FIRE BLANKET</u>

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.

3.6.8 Canvas Hose

The canvas hose shall be 65mm diameter 3000mm long designed for a bursting pressure of 34 bars. The canvas hose shall have attached instantaneous hose coupling, branch pipes and nozzle to B.S 336: 1965.

SECTION F

PARTICULAR SPECIFICATION

FOR

LOW AND HIGH LEVEL

WATER TANKS

PARTICULAR SPECIFICATION FOR THE DESIGN, SUPPLY AND ERECTION OF WATER STORAGE TANKS

DESCRIPTION OF SITE

The Sub-contractor is deemed to have visited the site and if unable to locate it or its details apply to the Permanent Secretary for Public Works, Ngong Road, Nairobi.

No claims will be allowed for the traveling or other expenses, which may be incurred by the sub-contractor's works. However, the sub-contractor may allow that he may have to, during contract time, do part of the works and therefore three visits may be catered for.

SCOPE OF CONTRACT

The work to be carried out under, this sub-contract comprises the designs, manufacture, supply, delivery, erection, together with testing and commissioning of steel tanks as here-in specified and shown on the contract drawings.

All work shall be performed in straightforward manner by competent workmen under skilled supervision to the entire satisfaction of the project manager.

COMPLIANCE WITH REGULATIONS.

The sub-contractor shall comply in all respects to the provisional and regulations of the By-laws of the Local Authority, Kenya Building Code, as 449 Part B5 1964. BS 4211, CP2 chapters V part 1 and 2 MOPW Structural steel work specification (1973) code of practice for design and construction of buildings and structures in Relation to Earthquake (1972) wherever applicable to the sub-contract works.

The Ministry of Public Works are responsible for the design of the foundation subject to giving approval of the sub-contractor's design of the tower and due allowance should be given for this work to be carried out in sub-contractors programme of works. The main contractor is responsible for the construction of the foundation in accordance with approved designs.

STRUCTURAL DRAWINGS AND CALCULATIONS

2No copies of general arrangement and fabrication drawings properly dimensioned and detailed showing the whole tower and its accessories together with 2No copies of the structural calculations complying with all the relevant BS and CP are to be submitted for approval prior to the commencement of the work.

The calculations are to indicate the maximum downward and upward loads on the foundations for the State Department of Public Works Structural Department to design the foundation

STEEL WATER TANKS

The tanks shall be galvanized pressed steel sectional tanks complying in all respects to BS 1564 Types 1 or 2. The jointing materials shall be non-toxic and non-insoluble to water and the tank cover shall be joined throughout the tank top ensuring that the joint is both water proof and dust proof.

Cover framing and members shall be designed to withstand supper imposed loading complying with the requirement complying with the requirements of CP2 Chapter V part 1 and BS 149 Part 2.

All internal stays are to be provided as required by the tank manufacture and the Sub-contractor shall be responsible for ensuring the stays are adequate in number and position and properly tightened.

Access manhole with hinged cover together with a filtered vent outlet shall be installed.

The Sub-contractor is to notify the Project Manager of the type of panel he is proposing to use and the manufacturer who is to be approved.

The inflow and outflow connection shall be as shown on the drawing.
The outflow supply pipe shall be at least 50mm above the tank bottom while the inflow pipe shall be 200mm below the tank rim. The overflow pipe shall be about 1000mm long away from the tank. The drain pipe shall be at the lowest part of the tank.

(1) **LOW LEVEL TANK**

Tank Capacity AS INDICATED ON THE BILLS

PREFERRED DIMENSIONS:

AS INDICATED ON THE BILLS

PLATE THICKNESS 6mm

Tank to be supplied completed with:-

1. 65mm diameter inflow connection
2. 2 No. 65mm diameter outflow connections
3. 75mm diameter washout pipe with gate valve as pegler or approved equivalent
4. 75mm diameter overflow pipe
5. Electrode pair fully wired.
6. 2No. Water level indicator
7. 1No. Cover and manhole
8. 1No. Internal ladder
9. 1No. External ladder

The Structural Engineer shall give details of foundations and R.C walls for the low level tank.

The base is to be cast by the Main Contractor unless otherwise instructed by the Project Manager.

(ii) **HIGH LEVEL TANK**

Tank Capacity- AS INDICATED ON THE BILLS

Preferred Dimensions

AS INDICATED ON THE BILLS

Plate thickness: 6mm

Height from ground level to the underside of the tank shall be 20 metres
Tank to be supplied with:

1. 65mm diameter inflow connection
2. 100mm diameter outflow connection
3. 75mm diameter washout pipe
4. 75mm diameter overflow pipe
5. 1No. Level regulator
6. 2No. Water level indicator
7. 1No. Steel cover and manhole
8. 1No. Internal ladder
9. 1No. External ladder to ground level with cage
10. 1No. Perimeter walkway and handrail

PIPEWORK

The sub-contractor shall supply and fix all pipe work and fitting up to ground level as detailed on the drawing or in this specification. All pipe work shall be adequately supported and secured to the tank structure. The washout pipe shall have a bend leading to a reasonable place where the drainage will not interfere with the structure, preferably at about 300mm above ground.

The inflow, outflow and washout pipes shall be fixed against the tower structure so as to facilitate fixing and good support.

All pipe work shall be medium grade galvanized steel and must conform to BS 1987
1967 class 'B'

The sub-contractor shall provide high pressure ball valve capable of coping with the maximum area's local water supply pressure.

Access Ladder

Internal ladders shall be supplied for the tanks and shall be fixed adjacent at the manholes but easily removable for cleaning the inside of the tank (i.e hooked connection).

The tanks shall be provided with an external ladder leading to the manhole and complying with BS 4211. The stringers shall be parallel, minimum width 15 inches apart and of flat bar of minimum dimensions 1½" by 2/8 inches. The rugs shall be of round bars not less than ¾ inches diameter and the distance between centers shall be 9 – 10 inches. The external ladder shall be fitted with safety hoofs made to conform to BS 4211.

Platform

The tower is to have a periphery walkway at tank level having minimum width of 600mm clear between the edge of the tank and the inside of the protective safety handrail. The platform is to be provided with a steel chequered plate floor of similar approved and to be completely sealed so as not to allow anybody or items such as bolts and spanners to fall on persons on the ground.

All loading for the design of such platform are to be provided in the structural calculations.

Painting

The tank shall be painted inside with one coat of bituminous non-toxic paint (or any other equivalent and approved) and on the outside with coat of primer before erection.

After erection, the tank inside shall be painted with two coats of aluminium paint. The other structures shall be cleaned and painted one coat lead oxide or red lead before erection and two coats of aluminium paints after erection.

All the painting shall be approved by the Engineer.

Erection

The sub-contractor shall erect the tank complete, on foundation prepared and designed by others and with all necessary pipes, ladders, tower etc. as listed herein and shown on the drawing.

The main contractor shall prepare the foundation to the sub-contractor's and MOPW&H Structural Department's details. The main contractor shall also concrete or grount in the HD bolts to the sub-contractor's requirements.

Testing

Testing shall be done by filling the tank with water after erection. The water will be from the local supply and the main contractor shall apply from the Authority for connection. Testing shall be witnessed by the Project Manager or his representative.

Guarantee

The sub-contractor shall guarantee the tanks against leaks, and the tower for a period of (12) months form the testing date. Any damage incurred due to bad workmanship shall be made good by the contractor.

<u>SECTION G:</u>

BILLS OF QUANTITIES

AND

SCHEDULE OF UNIT RATES

BILLS OF QUANTITIES AND SCHEDULE OF UNIT RATES

CONTENTS

CLAUSE No.		PAGE
1.	GENERAL NOTES TO TENDERERS……	G-1
2.	STATEMENT OF COMPLIANCE……	G-2
3.	BILLS OF QUANTITIES ……..……..	G-3 to G-42
4.	SUMMARY PAGE……	G-43

SPECIAL NOTES

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

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

   In accordance with Government policy, the 16% VAT and 3% Withholding Tax **shall be deducted** from all payments made to the Tenderer, and the same shall be forwarded to the **Kenya Revenue Authority (KRA).**

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

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

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

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

1. Statement of Compliance

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

b) I confirm 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: ……

BILLS No. 1

A) PRICING OF PRELIMINARIES ITEMS.

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

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

a. Preliminaries – Bill 1

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

b. Installation Items – Other Bills

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

c. Summary

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

BILL No. 1 PRELIMINARIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS	CTS
1	Discrepancies clause 1.02					
2	Conditions of sub-contract Agreement clause 1.03					
3	Payments clause1.04					
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 G -6					

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS	CTS
16	Supplies clause 1.20					
17	Bills of Quantities clause 1.23					
18	Contractor's Office in Kenya clause 1.24					
19	Builder's Work clause 1.25					
20	Setting to work and Regulating system clause 1.29					
21	Identification of plant components clause 1.30					
22	Working Drawings clause 1.32					
23	Record Drawings (As Installed) and Instructions clause 1.33					
24	Maintenance Manual clause 1.34					
25	Hand over clause 1.35					
26	Painting clause 1.36					
27	Testing and Inspection – manufactured plant clause 1.38					
28	Testing and Inspection – Installation clause 1.39					
29	Storage of Materials clause 1.41					
30	Initial Maintenance clause 1.42					
31	Attendance Upon Tradesmen, etc. (Insert percentage only) clause 1.58					
	SUB-TOTAL CARRIED TO PAGEG -6					

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS	CTS
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	1	Item	350,000	350,000	00
38	Allow for profit and Attendance for the above					
39	Amendment to Scope of Sub-contract Works					
40	Clause 1.68					
41	Contractor Obligation and Employers Obligation clause 1.69(see appendix page C- 24)					
	Any other preliminaries;					
	Subtotal above					
	Subtotal brought forward from pageG-4					
	Subtotal brought forward from page G-5					
	TOTAL FOR BILL NO. 1- PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY					

BILL NO.1:SANITARY APPLIANCES					
3 BEDROOMED APARTMENTS					
Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	SANITARY APPLIANCES Supply, deliver, 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. (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 Close-coupled WC suite with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with 7.5 litre valveless low level ceramic cistern and fittings including siphon, 15mm diameter side inlet ball valve, 20mm diameter side overflow, plastic flush bend, dual flush system, inlet connection, chrome-plated flush button and heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as Nova water closet or equal and approved.	2	No.		
B	Wash hand basin (WHB)-Pedestal Pedestal wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Nova or equal and approved.	2	No.		
C	Wash hand basin (WHB) tap Wash hand basin tap as Tapis model or equal and approved.	2	No		
D	Toilet Roll Holder Semi recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as Twyfords or equal and approved.	2	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Toilet Brush and Holder Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	2	No.		
B	Mirror 6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	2	No.		
C	Shower Fittings Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed shower stopcork as of Cobra Model or approved equivalent and 100mm diameter swivel/ adjustable shower rose as Cobra or approved equivalent, shower arm and other necessary fittings and accessories. All to be as Cobra or equal and approved.	2	No.		
D	Curtain Rail with Shower Curtains High quality chrome plated 1500mm long curtain rail complete with 2No. wall plate, hooks and rollers and approved medium quality 1800 x 1000mm shower curtains.	2	No		
E	Shower Soap Dish Semi recessed built in soap tray in Vitreous China of size: 165 x 150mm in approved colour as Ideal Standard or equal and approved.	2	No.		
F	Bathroom Shelf Chrome plated bathroom shelf as Ideal Standard or approved equivalent.	2	No		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Robe Hook Robe hook in Satin Aluminium to be mounted by concealed screws to wall wedges. To be as Twyfords Spectrum 2000 accessories or equal and approved.	2	No.		
B	Dhobi Sink Heavy duty stainless steel sink of size 675 x 485 x 300mm deep in 16 SWG as manufactured by ASL 131or approved equivalent suitable for mounting on counter, complete with 1 No. 15mm diameter chrome plated back inlet bib tap Cobra ref 107EC CP, 40mm diameter chrome plated bottle trap and chain waste fitting and plug.	1	No.		
C	Kitchen Sink (DBDD) Double bowl, double drainer stainless steel kitchen sink of size 1800 x 500mm as manufactured by ASL 159 or equal and approved. The bowl size to be 370 x 340 x 200mm deep complete with chrome plated 40mm waste fittings, plugs, chain stays, overflow, 1No. 15mm diameter chrome plated sink mixer with over-arm swivel spout as Cobra model 166/04 with carina handles, chrome plated bottle trap with 75mm deep seal and chain waste fitting.	1	No.		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-7 ……	
2	Total carried forward from page G-8 ……	
3	Total carried forward from page G-9 ……	
	Total cost for Sanitary Fittings per suite	
		X4
	Total cost for Sanitary Fittings for 4no.Suites per floor	
		X5
	Total cost for Sanitary Fittings for 5no.floors	
		X5
	Total cost for Sanitary Fittings for 5no.Blocks	

2 BEDROOMED APARTMENTS

SANITARY APPLIANCES					
Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	SANITARY APPLIANCES Supply, deliver, 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. (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 Close-coupled WC suite with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with 7.5 litre valveless low level ceramic cistern and fittings including siphon, 15mm diameter side inlet ball valve, 20mm diameter side overflow, plastic flush bend, dual flush system, inlet connection, chrome-plated flush button and heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as Nova water closet or equal and approved.	1	No.		
B	Wash hand basin (WHB)-Pedestal Pedestal wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal, chrome plated non-conculsive time delay press action pillar tap and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Nova or equal and approved.	1	No.		
C	Wash hand basin (WHB) tap Wash hand basin tap as Tapis model or equal and approved.	1	No		
D	Toilet Roll Holder Semi recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as Twyfords or equal and approved.	1	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Toilet Brush and Holder Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	1	No.		
B	Mirror 6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	1	No.		
C	Shower Fittings Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed three way diverter single lever shower stopcork as of Cobra Model "Trini TR 856" or approved equivalent and 100mm diameter swivel/ adjustable shower rose as Cobra model P-0681 CAT No. 101.001.78 or approved equivalent, shower arm and other necessary fittings and accessories. All to be as Cobra or equal and approved.	1	No.		
D	Curtain Rail with Shower Curtains High quality chrome plated 1500mm long curtain rail complete with 2No. wall plate, hooks and rollers and approved medium quality 1800 x 1000mm shower curtains.	1	No		
E	Shower Soap Dish Semi recessed built in soap tray in Vitreous China of size: 165 x 150mm in approved colour as Ideal Standard or equal and approved.	1	No.		
F	Bathroom Shelf Chrome plated bathroom shelf as Ideal Standard or approved equivalent.	1	No		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Robe Hook Robe hook in Satin Aluminium to be mounted by concealed screws to wall wedges. To be as Twyfords Spectrum 2000 accessories or equal and approved.	1	No.		
B	Dhobi Sink Heavy duty stainless steel sink of size 675 x 485 x 300mm deep in 16 SWG as manufactured by ASL 131or approved equivalent suitable for mounting on counter, complete with 1 No. 15mm diameter chrome plated back inlet bib tap Cobra ref 107EC CP, 40mm diameter chrome plated bottle trap and chain waste fitting and plug.	1	No.		
C	Kitchen Sink (DBDD) Double bowl, double drainer stainless steel kitchen sink of size 1800 x 500mm as manufactured by ASL 159 or equal and approved. The bowl size to be 370 x 340 x 200mm deep complete with chrome plated 40mm waste fittings, plugs, chain stays, overflow, 1No. 15mm diameter chrome plated sink mixer with over-arm swivel spout as Cobra model 166/04 with carina handles, chrome plated bottle trap with 75mm deep seal and chain waste fitting.	1	No.		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-11 ……	
2	Total carried forward from page G-12 ……	
3	Total carried forward from page G-13 ……	
	Total cost for Sanitary Fittings per suite	
		X4
	Total cost for Sanitary Fittings for 4no.Suites per floor	
		X5
	Total cost for Sanitary Fittings for 5no.floors	
		X5
	Total cost for Sanitary Fittings for 5no.Blocks	

COLLECTION PAGE		
Item	Description	Amount (Kshs)
1	Total carried forward for 3 bedroomed apartments ……	
2	Total carried forward for 2 bedroomed apartments ……	
Total cost for Sanitary Fittings for the project		

BILL NO.2:INTERNAL PLUMBING

3 BEDROOMED APARTMENTS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	INTERNAL PLUMBING				
	PPR Pipes Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all 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, 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				
	Pipe work-PPR PIPES				
A	20mm diameter pipework	10	Lm		
B	25mm diameter pipework	16	Lm		
C	32mm diameter pipework	10	Lm		
	Bends				
D	20mm diameter bend	9	No.		
E	25mm diameter bend	12	No.		
F	32mm diameter bend	16	No.		
	Tees				
G	25mm equal tee	10	No.		
H	32mm equal tee	10	No.		
I	65mm equal tee	2	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Reducers				
A	25 x 20mm diameter reducer	10	No.		
B	32 x 20mm diameter reducer	10	No.		
C	32 x 25mm diameter reducer	6	No.		
D	65 x 32mm diameter reducer	2	No.		
	Male/Female Adapters (Brass threaded)				
E	20mm brass threaded adapter	12	No.		
F	25mm brass threaded adapter	12	No.		
G	32mm brass threaded adapter	12	No.		
	Male/Female Bend (Brass threaded)				
H	20mm brass threaded bend	6	No.		
I	25mm brass threaded bend	6	No.		
	Flexible Tubing				
J	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	12	No.		
	Threaded Brass Coupling				
K	25mm threaded brass coupling	12	No.		
L	32mm threaded brass coupling	12	No.		
M	65mm threaded brass coupling	2	No.		
	Valves				
N	32mm gate valve as pegler	2	No.		
O	65mm gate valve as pegler	2	No.		
	Unions				
P	32mm diameter pipe union	2	No.		
Q	32mm diameter pipe union	2	No.		
	Pipe Sleeves				
R	50mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	3	Lm		
S	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	3	Lm		

	Total Carried Forward	

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-16 ……	
2	Total carried forward from page G-17 ……	
	Total cost for Plumbing Pipework for 1no.Suite	
		X4
	Total cost for Plumbing Pipework for 4no.Suites per floor	
		X5
	Total cost for Plumbing Pipework for 5no.floors	
		X5
	Total cost for Plumbing Pipework for 5no.Blocks	

2 BEDROOMED APARTMENTS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	INTERNAL PLUMBING				
	PPR Pipes Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all 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, 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				
	Pipe work-PPR PIPES				
A	20mm diameter pipework	8	Lm		
B	25mm diameter pipework	14	Lm		
C	32mm diameter pipework	8	Lm		
	Bends				
D	20mm diameter bend	6	No.		
E	25mm diameter bend	10	No.		
F	32mm diameter bend	10	No.		
	Tees				
G	25mm equal tee	10	No.		
H	32mm equal tee	10	No.		
I	65mm equal tee	2	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Reducers				
A	25 x 20mm diameter reducer	10	No.		
B	32 x 20mm diameter reducer	10	No.		
C	32 x 25mm diameter reducer	6	No.		
D	65 x 32mm diameter reducer	2	No.		
	Male/Female Adapters (Brass threaded)				
E	20mm brass threaded adapter	9	No.		
F	25mm brass threaded adapter	9	No.		
G	32mm brass threaded adapter	9	No.		
	Male/Female Bend (Brass threaded)				
H	20mm brass threaded bend	6	No.		
I	25mm brass threaded bend	6	No.		
	Flexible Tubing				
J	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	10	No.		
	Threaded Brass Coupling				
K	25mm threaded brass coupling	10	No.		
L	32mm threaded brass coupling	10	No.		
M	65mm threaded brass coupling	2	No.		
	Valves				
N	32mm gate valve as pegler	2	No.		
O	65mm gate valve as pegler	1	No.		
	Unions				
P	32mm diameter pipe union	2	No.		
Q	32mm diameter pipe union	1	No.		
	Pipe Sleeves				
R	50mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	3	Lm		
S	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	3	Lm		

Total Carried Forward

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-19 ……	
2	Total carried forward from page G-20 ……	
	Total cost for Plumbing Pipework for 1no.Suite	
		X4
	Total cost for Plumbing Pipework for 4no.Suites per floor	
		X5
	Total cost for Plumbing Pipework for 5no.floors	
		X5
	Total cost for Plumbing Pipework for 5no.Blocks	

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward for 3 bedroomed apartments ……	
2	Total carried forward for 2 bedroomed apartments ……	
	Total cost for Plumbing Pipework	

BILL NO.3:INTERNAL FOUL DRAINAGE

2 BEDROOMED APARTMENTS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	FOUL WATER INTERNAL DRAINAGE				
	Supply ,deliver and install the following UPVC, MUPVC, soil and waste systems respectively to B.S 5255 with fittings fixed to Manufactures Printed instructions and manufactured by reputable manufacturers. 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	100mm diameter heavy gauge golden brown UPVC pipe	8	Lm		
B	50mm diameter waste pipe	10	Lm		
C	40mm diameter waste pipe	6	Lm		
D	32mm diameter waste pipe	8	Lm		
	Bends				
E	100mm diameter short radius bend	2	No.		
F	100mm diameter bend with access	2	No.		
G	100mm diameter sweep bend	2	No.		
H	50mm diameter sweep bend	6	No.		
I	40mm diameter sweep bend	4	No.		
J	32mm diameter sweep bend	4	No.		
	Tees				
K	100mm diameter sweep tee	2	No.		
L	50mm diameter sweep tee	6	No.		
M	40mm diameter sweep tee	6	No.		
N	32mm diameter sweep tee	4	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Access Caps				
A	100mm diameter access cap	2	No.		
B	50mm diameter access cap	2	No.		
C	40mm diameter access cap	1	No.		
D	32mm diameter access cap	2	No.		
	Boss Connectors				
E	100 x 50mm diameter boss connector	4	No.		
F	100 x 40mm diameter boss connector	4	No.		
	Single Branches				
G	100mm diameter single branch	1	No.		
	Corner Branch				
H	100mm diameter corner branch	1	No.		
	Double Branches				
I	100mm diameter double branch	1	No.		
	WC Connectors				
J	100mm diameter WC connector	1	No.		
	Traps				
K	100 x 50mm diameter floor trap and grating	4	No.		
	Testing and Commissioning				
L	Allow for testing and commissioning of the plumbing and drainage installations to the satisfaction of the Engineer.	1	Item		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-23 ……	
2	Total carried forward from page G-24 ……	
	Total cost for drainage Pipework for 1no.Suite	
		X4
	Total cost for drainage Pipework for 4no.Suites per floor	
		X5
	Total cost for Drainage Pipework for 5no.floors	
		X5
	Total cost for Drainage Pipework for 5no.Blocks	

3 BEDROOMED APARTMENTS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	FOUL WATER INTERNAL DRAINAGE				
	Supply ,deliver and install the following UPVC, MUPVC, soil and waste systems respectively to B.S 5255 with fittings fixed to Manufactures Printed instructions and manufactured by reputable manufacturers. 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	100mm diameter heavy gauge golden brown UPVC pipe	8	Lm		
C	50mm diameter waste pipe	12	Lm		
D	40mm diameter waste pipe	8	Lm		
E	32mm diameter waste pipe	8	Lm		
	Bends				
F	100mm diameter short radius bend	2	No.		
G	100mm diameter bend with access	2	No.		
H	100mm diameter sweep bend	2	No.		
I	50mm diameter sweep bend	6	No.		
J	40mm diameter sweep bend	4	No.		
K	32mm diameter sweep bend	4	No.		
	Tees				
L	100mm diameter sweep tee	2	No.		
M	50mm diameter sweep tee	6	No.		
N	40mm diameter sweep tee	6	No.		
O	32mm diameter sweep tee	4	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Access Caps				
A	100mm diameter access cap	2	No.		
B	50mm diameter access cap	2	No.		
C	40mm diameter access cap	3	No.		
D	32mm diameter access cap	2	No.		
	Boss Connectors				
E	100 x 50mm diameter boss connector	4	No.		
F	100 x 40mm diameter boss connector	4	No.		
	Single Branches				
G	100mm diameter single branch	1	No.		
	Corner Branch				
H	100mm diameter corner branch	1	No.		
	Double Branches				
I	100mm diameter double branch	1	No.		
	WC Connectors				
J	100mm diameter WC connector	2	No.		
	Traps				
K	100 x 50mm diameter floor trap and grating	6	No.		
	Testing and Commissioning				
L	Allow for testing and commissioning of the plumbing and drainage installations to the satisfaction of the Engineer.	1	Item		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-26 ……	
2	Total carried forward from page G-27 ……	
	Total cost for Drainage Pipework for 1no.Suite	
		X4
	Total cost for PDrainage Pipework for 4no.Suites per floor	
		X5
	Total cost for Drainage Pipework for 5no.floors	
		X5
	Total cost for Drainage Pipework for 5no.Blocks	

GENERAL DRAINAGE

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	FOUL WATER INTERNAL DRAINAGE				
	MuPVC and uPVC Waste and Soil pipework				
A	100mm diameter heavy gauge golden brown UPVC pipe	30	Lm	600.00	18,000.00
B	100mm diameter heavy gauge grey mUPVC pipe	550	Lm		
C	100mm diameter bend with access	12	No.		
D	100mm diameter sweep tee	12	No.		
E	100mm diameter access cap	12	No.		
F	100mm diameter corner branch	12	No.		
G	Allow for a standard 300 x 300 x 450mm masonry gully trap complete with concrete cover.	1	No.		
H	100mm diameter weathering slate and apron.	12	No.		
I	100mm diameter vent cowl	12	No.		
	Supporting Brackets				
J	Allow for suitable supporting steel brackets for anchoring and supporting drainage pipes bends on the lower floor. To be painted to match the walling colour.	24	No.		
	RAIN WATER DRAINAGE				
K	100mm diameter heavy gauge grey mUPVC down pipes	600	Lm		
L	50mm diameter heavy gauge grey mUPVC down pipes	120	Lm		
M	100mm diameter 45^0 bend	24	No.		
N	100mm diameter sweep bend	24	No.		
O	50mm diameter bend	24	No.		
P	100mm diameter tee	24	No.		
Q	100mm diameter single branch with 50mm boss adaptor	120	No.		
R	100mm diameter cast iron fulbora	24	No.		
S	100 x 50mm diameter floor drain with grating for balcony	40	No.		
Total cost for Drainage Pipework Per Block					
					X5

Total cost for Drainage Pipework for 5no.Blocks	

COLLECTION PAGE

Item	Description		Amount (Kshs)
1	Total carried forward for 2 bedroomed houses drainage	……	
2	Total carried forward for 3 bedroomed houses drainage	……	
3	Total carried forward for general areas drainage	……	
Totals for Carried Forward			

BILL NO.4:FIRE PROTECTION

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	FIRE FIGHTING				
	Supply, deliver and install the following fire fighting 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.	5	No.		
	GMS Pipes Class B				
B	25mm diameter pipework	8	Lm		
C	50mm diameter pipework	25	Lm		
	Extra Over Pipework				
	Bends				
D	25mm diameter bend	10	No.		
E	50mm diameter bend	10	No.		
	Tees				
F	65mm diameter equal tee	2	No.		
G	50mm diameter equal tee	20	No.		
	Reducers				
I	65 x 50 mm diameter reducer	6	No.		
	Valves				
J	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.	5	No.		
K	50mm diameter gate valve	2	No.		
	Unions				
L	25mm diameter pipe union	18	No.		
M	50mm diameter pipe union	3	No.		

	Total Carried Forward	

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Hosereel Pumpset 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 30m 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		
B	Control Panel 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	1	Item		
C	Painting Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Portable Fire Extinguishers				
	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				
A	9 litres water/carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	5	No		
	Carbon Dioxide Gas Fire Extinguisher				
B	5 Kg carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	5	No		
	Dry Chemical Powder Fire Extinguisher				
C	6kg dry chemical podwer portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	5	No		
	Manual Alarm Bell				
D	9" (225mm) manual operated alarm bell (Gong)	5	No		
	Fire Blanket				
E	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.	40	No		
	Fire Notices				
F	Allow for fire signage for the hose reel system, fire exits and fire instructions as directed by the Project Engineer.	5	No		
	Total Carried Forward				

COLLECTION PAGE FOR HOSTEL BLOCK

Item	Description	Amount (Kshs)
1	Total carried forward from page G-31 ……	
2	Total carried forward from page G-32 ……	
3	Total carried forward from page G-33 ……	
	Total cost for Plumbing Pipework Per Block	
		X5
	Total cost for Plumbing Pipework for 5no.Blocks	

BILL NO.5:COMMON PLUMBING SERVICES & WATER RETICULATION

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	65mm PPR diameter pipework for drop pipes	400	Lm		
B	65mm PPR diameter bend	100	No.		
C	65mm PPR equal tee	50	No.		
D	32mm PPR diameter pipework for drop pipes	600	Lm		
E	32mm PPR diameter bend	400	No.		
F	32mm PPR equal tee	200	No.		
G	65 x 32mm PPR diameter reducer	50	No.		
H	65mm threaded brass coupling	50	No.		
I	65mm gate valve	30	No.		
J	65mm diameter pipe union	30	No.		
K	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	30	Lm		
L	15mm diameter bib tap suitable for connecting hose pipe complete with threaded adaptors. The tap to be complete with 5meter long 20mm diameter pipe, bends etc. The chrome plated bib tap to be as Cobra ref.107EC taps or equal and approved.	30	Lm		
	Water Storage Tank -Roof Tanks				
M	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 1000mm x 1000mm capacity of tank to be 42,000 litres and of preferred dimensions 3000mm x 2000mm x 7000mm. The tank to come complete with tank cover, internal and external laders, 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.	4	No		
N	ditto but roof water tank of capacity of tank to be 24,000 litres and of preferred dimensions 3000mm x 2000mm x 4000mm. The tank to come complete with tank cover, internal and external laders, 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.	2	No		
	Underground Water Tank Fittings Provide the following connections to concrete water tank done by others. Connections to be in paddle flanges:				
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	2NO. 50mm diameter inlet pipes (Council and borehole)	6	Item		
B	65mm diameter outlet pipe for domestic booster pumpset	6	Item		
C	100mm diameter for vent/overflow pipe	6	Item		
D	20mm diameter for level indicator on the side of the tank with well calibrated scale.	6	Item		
E	50mm diameter medium pressure ball valve for fitting for the underground tank.	6	No		
F	50mm diameter high pressure ball valve for fitting for the roof tank.	6	No		
G	Water Booster Pumpset Set of automatic electrically driven twin booster pump. One duty and the other one standby with automatic changeover, capable of delivering 5.5m^3 per hour against a head of 30 meters with a three phase power source. The pumpset shall be complete with 100 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 CR10-3 or approved equivalent. Pump to be installed on mild steel frame with approved paint.	6	set		
H	Control and Control Panel 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.	6	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Allow for electrical works wiring and fitting to all pumps, control panel and float switches, from isolator provided by others with 3 metres distance.	6	Item		
B	75mm diameter heavy duty PVC Class 41 pipe sleeves for crossing over pathways and driveways. The sleeves will be encased in 150mm concrete sorround.	30	Lm		
C	50mm bulk water meter as 'Kent' or equal and approved equivalent	1	No.		
D	65mm GMS pipe from high level tank to underground tanks	400	Lm		
E	65mm GMS diameter bend/elbows	20	No		
F	65mm GMS diameter tee	20	No		
G	Allow for connection to the water main supply to site and include local council charges.	1	No.		
H	32mm check water meter as 'Kent' or equal and approved equivalent.	200	No.		
I	Check Meter cabinet to host 40No.check meters.The cabinet to have lockable hinges with a transparent glass cover for meter reading.Allow for builders works as well as apiant coat to match the wall.	6	No.		
	Water Meter Chamber				
J	Meter chamber size 450x450x600mm deep with 100mm concrete (1: 3: 6) base 50mm block sides rendered all round in cement and sand (1:4) and with approved hinged and flanged cast iron cover and frame including all necessary excavation, disposal and formwork.	1	No.		
	Sterilization				
K	Allow for flushing out and sterilizing the whole system with chlorine to the satisfaction of the engineer	1	Sum		
	Testing and commisioning				
L	Allow for testing and commissioning for all installations to the satisfaction of the engineer.	1	Item		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-35	
2	Total carried forward from page G-36	
3	Total carried forward from page G-37	
Total cost for Common Services		

Bill No 6:HIGH AND LOW LEVEL WATER TANKS					
Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	High Level Water Tank for the site Supply, deliver and assemble a high level water tanks, made of pressed steel sectional tank plates 6mm thick plates (type 1 and 4) and of size 1000mm x 1000mm capacity of tank to be 32,000 litres and of preferred dimensions 4000mm x 4000mm x 2000mm. The tank to come complete with tank cover, 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. The tank shall be complete with the following pipe connections:-- -100mm diameter overflow -100mm diameter outlets -100mm diameter inlet -100mm diameter washout with gate valve	1	No.		
B	Water steel tower of 30m high	1	No.		
C	Ground Level Water Tank for the site Supply, deliver and assemble a high level water tanks, made of pressed steel sectional tank plates 6mm thick plates (type 1 and 4) and of size 1000mm x 1000mm capacity of tank to be 75,000 litres and of preferred dimensions 5000mm x 5000mm x 3000mm. The tank to come complete with tank cover, 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. The tank shall be complete with the following pipe connections:- -100mm diameter overflow -100mm diameter outlets -100mm diameter inlet -100mm diameter washout with gate valve	1	No.		
Total Carried Forward					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Booster Pumps Set of automatic electrically driven twin hosereel pumps. One duty and the other one standby with automatic changeover, capable of delivering 5 metres per hour against a head of 40 meters. The pumpset shall be complete with 100 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 and non-return valves. The pump to be as GRUNDFOS or approved equivalent. Pump to be installed on mild steel platform.	1	Set		
B	Control Panel Control panel for above pumps with contactors, over voltage and under voltage protection relays, MCBs, timer, start/stop push buttons, internal buttons with automatic changeover, 'running' and 'trip' neon lights control system and button for for change from automatic to manual operation. 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, cables, low level cut-out switch in low level tank and regulator. Each pump should run for twelve hours per day.	1	Item		
	ASSOCIATED PIPEWORK Supply, deliver and install galvanized mild steel pipes to BS 1387 class 'B' with screwed and socketed joints to BS 134 and 1256 and of approved manufacturer with galvanizing to BS 729. Tenderers must allow in their pipe work prices for all the couplings, unions, connectors joints, holder bats, reducers etc. as required in the running length of the pipework and also where necessary for pipe fixing clips, plugged and screwed.				
C	100mm GMS pipe drop pipe to pumps	70	Lm		
D	100mm GMS pipe drop pipe for overflow	70	Lm		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Sluice Valve				
A	100mm diameter Sluice Valve	8	No		
	Non Return Valve				
B	100mm diameter approved high pressure non-return valve to BS 1952. The non-return valve to be as "Pegler" or approved equivalent.	8	No		
	Tees				
C	100mm diameter equal tee	8	No		
	Bends/Elbows				
D	100mm diameter bend/elbows	8	No		
	Valve Chamber				
E	Valve chamber size 750 x 750 x 600mm deep with 100mm concrete (1: 3: 6) base 100mm block sides rendered all round in cement and sand (1:4) and with approved hinged and flanged cast iron cover and frame including all necessary excavation, disposal and form work.	4	No		
F	Allow for flushing out and sterilizing the whole system with chlorine to the satisfaction of the engineer	1	Sum		
Total Carried Forward					

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-39	
2	Total carried forward from page G-40	
3	Total carried forward from page G-41	
	Total cost for High and Low Level Tanks	

SUMMARY PAGE

Item	Description		Amount (Kshs)
1	Total carried forward for sanitary fittings installation works	……	
2	Total carried forward for Internal Plumbing installation works	……	
3	Total carried forward for Internal Foul Drainage installation works	……	
4	Total carried forward for Fire Protection installation works	……	
5	Total carried forward for Common Services installation works	……	
6	Total carried forward for High and Low Level Tanks installation works	……	
7	Prepare and submit three sets of working drawings and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows; i) general arrangement drawings of all equipment, plant etc. ii) routes - types and sizes and arrangement of all pipework iii) wiring (electrical & control) details iv) any other details as per specifications Drawings are to be submitted in soft copy (AutoCAD 2007 format) and hard copy to the client, the Architect and the Engineer. The soft copies to be stored in CD and 4GB flash disk.	……	
8	Prepare and submit three sets of record (as-installed) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows; i) general arrangement drawings of all equipment, plant etc. ii) routes - types and sizes and arrangement of all pipework iii) wiring (electrical & control) details iv) any other details as per specifications Drawings are to be submitted in soft copy (AutoCAD 2007 format) and hard copy to the client, the Architect and the Engineer. The soft copies to be stored in CD and 4GB flash disk. Allow for preparation and submitting draft and three final copies of operation, instruction and maintenance manuals to Engineer's approval.	……	
Total for all mechanical works collected to the final summary page			

FINAL SUMMARY PAGE

Item	Description	Amount (Ksh)
A	Preliminaries	
B	Total brought forward from summary page for mechanical works	
C	Allow for contigency to be used at the discretion of the engineer with client knowledge	6,000,000.00
Total Cost of Mechanical Works Carried to Form of Tender		

Amount in words…….....

……..……

Tenderer's Name and Stamp

……..……..

Address

……..……..……..……

Period To Execute The Works ……..……

Telephone No ……

Mobile Phone No. ……..……

Tenderer's V.A.T No ……..……

Tenderer's P.I.N No ……

Tenderer's Signature …… Date……..……

Witness Signature …….. Date……..……..

SECTION H:

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

CONTENTS

CLAUSE No.		PAGE
1.	GENERAL NOTES TO THE TENDERER…….	H-1
2.	TECHNICAL SCHEDULE…….	H-2
3.	TECHNICAL DATA …….	H-3 to H-4

TECHNICAL SCHEDULE

1. General Notes to the Tenderer

1.1 The tenderer shall submit technical schedules for all materials and equipment upon which he has based his tender sum.

1.2 The tenderer shall also submit separate comprehensive descriptive and performance details for all plant apparatus and fittings described in the technical schedules. Manufacturer's literature shall be accepted. Failure to comply with this may have his tender disqualified.

1.3 Completion of the technical schedule shall not relieve the Contractor from complying with the requirements of the specifications except as may be approved by the Engineer.

TECHNICAL SCHEDULE

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

ITEM	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
1.	Water Closets			
2.	Kitchen sink			
3.	Gate Valves			
4.	Flush Valves			
5.	Wash Hand Basins			
6.	PPR Pipes and fittings			
7.	GMS Pipes and fittings			
8.	Roof tanks			

SECTION I:

DRAWING SCHEDULE

CONTENTS

CLAUSE No.		PAGE
1.	DRAWING SCHEDULE…….	I-1

DRAWING SCHEDULE:

As shall be provided during project implementation.

SECTION J:

STANDARD FORMS

NOTE:

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

STANDARD FORMS

CONTENTS

FORM		PAGE
1.	PERFORMANCE BANK GUARANTEE……..	J-1
2.	TENDER QUESTIONNAIRE……	J-2
3.	CONFIDENTIAL BUSINESS QUESTIONNAIRE…….	J-3 toJ-4
4.	KEY PERSONNEL……	J-5
5.	CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS..	J-6
6	SCHEDULE OF ON-GOING PROJECTS……..	J-7
7	FINANCIAL REPORTS FOR THE LAST FIVE YEARS ….	J-8
8	EVIDENCE OF FINANCIAL RESOURCES……..	J-9
9	NAME OF THE BANKERS……..	J-10
10	DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS ……	J-11
12	SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS..…….	J-12

PERFORMANCE BANK GUARANTEE

To: The Principal Secretary
State department of Housing and Urban Development
Ministry of Transport, Infrastructure, Housing and Urban Development
P.O. Box 30450-00100
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 recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

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

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

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

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

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

SIGNATURE AND SEAL OF THE GUARANTOR …….

Name of Bank …….

Address ……

Date ……

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full names of Tenderer:

   ……

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

   ……

3. Telephone number (s) of Tenderer:

   ……

4. Telex/Fax Address of Tenderer:
   ……

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

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

   ……

   ……

_____
Signature of Tenderer

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2(c) and (2d) whichever applies to your type of business.
You are advised that it is a serious offence to give false information on this Form.

Part 1 – General
Business Name ……

Location of business premises: Country/Town…….

Plot No…… Street/Road ……

Postal Address…… Tel No……..

Nature of Business……..

Current Trade Licence No…… Expiring date……

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

Name of your bankers……

Branch……

Part 2 (a) – Sole Proprietor

Your name in full…… Age……

Nationality…… Country of Origin……

Citizenship details ……

Part 2 (b) – Partnership
Give details of partners as follows:

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

	Name in full	*Nationality*	*Citizenship Details**	*Shares*
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 FIVE (5) YEARS

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

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

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

…….	…….	…….
Title	Signature	Date

SCHEDULE OF ON-GOING PROJECTS

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

PROJECT **NAME**	NAME OF CLIENT	**CONTRACT SUM**	**% COMPLETE**	**COMPLETION DATE**

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

……. …….…… …….

Title Signature Date

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

1. ._____.

2. ._____.

3. ._____.

4. ._____.

5. ._____.

6. ._____.

7. ._____.

8. ._____.

9. ._____.

10 ._____.

EVIDENCE OF FINANCIAL RESOURCES TO MEET QUALIFICATION REQUIREMENTS

(Cash in Hand, Lines of credit, e.t.c. List below and attach copies of supportive documents.)

1. ._____.

2. ._____.

3. ._____.

4. ._____.

5. ._____.

6. ._____.

7. ._____.

8. ._____.

9. ._____.

10 ._____.

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

NAME	ADDRESS	TELEPHONE	TELEX	FACSIMILE

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

1. ._____.

2. ._____

3. ._____.

4. ._____.

5. ._____.

6. ._____.

7. ._____.

8. ._____.

9. ._____.

10 ._____.

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

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