PROPOSED PLUMBING, DRAINAGE & FIRE FIGHTING INSTALLATIONS AT BRITAM TOWERS

FOR

THE BRITAM HOLDING PLC
P.O. BOX 30375 00100
NAIROBI

GENERAL CONDITIONS, SPECIFICATIONS AND

BILLS OF QUANTITIES

FOR

PLUMBING, DRAINAGE & FIRE FIGHTING INSTALLATIONS

RELEASE DATE: **25 February 2025**

CLOSING DATE: 6th March 2025

SERVICES ENGINEERS
NORKUN INTAKES LTD
P.O. Box 605 - 00100
NAIROBI

info@norkun.com

PROPOSED PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI

Contract Conditions, Specifications and Bills of Quantities

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1a. EXPRESSSION OF INTENT TO PARTICIPATE IN TENDER

EXPRESSSION OF INTENT TO PARTICIPATE IN TENDER

This form is to be completed on receipt of the tender document from Britam Holding Company (Kenya) Limited.

This page is to be completed immediately and scan copy in PDF format e-mailed to Procurement tenders@britam.com. The data contained in this form will be used to send out any addenda that may arise. Firms that do not register their interest by completing this form may not be sent addenda that may arise.

Name of the firm's representative completing this form:
_____

Firm's Name: _____

Address: _____

Tel No: _____

Email Address: _____

Signature: _____Date: _____

Signed by (Name): _____

Position in Firm: _____

1b. FORM OF TENDER

Dear Sirs,

PROPOSED PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI

I/We understand that the works, the subject of this tender include

PROPOSED PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS

……

I/We undertake in accordance with the particulars set out in the preliminaries and to the satisfaction of the Engineer, to execute and complete the Contract works within……..……weeks and as per the specifications and drawings for the sum of Kenya Shillings.
(KShs.) ……..

I/We confirm that this Tender is subject to adjustments by any variation ordered by the Engineer.

I/We undertake to commence the works within 7 days from the date of official confirmation of acceptance of the tender.

I/We understand that you are not bound to accept the lowest or any tender and that no expenses incurred by us in the preparation of this tender will be allowed.

I/We agree that this tender shall remain valid for, and shall not be withdrawn within ninety days from the final date of submission of tenders and in the event of your acceptance to execute formal contract agreement with the client.

For and on behalf of

Official stamp:

Signed by: ..... Date: .....

1c. FORM OF UNDERTAKING

We _____

Of _____

are willing to act as Surety and to be bound to the Client in the sum equal to Ten percent (10%) of the contract sum, for the due performance by

(Tenderer) _____

Of P.O. Box

_____

of a Contract which he/ they contemplate(s) entering into with the Client for the supply, installation, testing and commissioning of the Electrical Installations as described in this document and the accompanying relevant drawings for **PROPOSED PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI** to the terms of the Form of Bond, a copy of which has been inspected by us without addition of any limitations.

We agree to enter into a Bond under the above-mentioned terms when and if called upon to do so.

Signature:_____

Official Rubber Stamp & Date: _____

Witness: _____

To be completed by proposed surety
And returned with Tender Documents

1d. FORM OF BOND (TO BE SUBMITTED BY NOMINATED BIDDER)

(To be used with agreement and Schedule of Conditions of Building Contract.)

KNOW ALL MEN BY THESE PRESENTS that we _____

_____ (SURETY)

Of_____

ARE BOUND to_____ (MAIN CONTRACTOR / CLIENT)

Of _____

In the sum of KENYA SHILLINGS _____

_____

To be paid by us to the said _____ (MAIN CONTRACTOR / CLIENT)

WHEREAS by an agreement in writing dated _____

between _____

(CONTRACTOR) of _____

contracted with the said _____ (MAIN CONTRACTOR / CLIENT)

to (description of works)_____in the said agreement particularly described and conformable thereto. NOW THE condition of the above written bond is such that if the said _____(CONTRACTOR) is / their executors, administrators or assignees shall conform to the said agreement then the above written bond to be void otherwise to remain in full force. Provided always and it is hereby agreed and declared that the liability of us to the said

_____ (SURETY) under the above written bond shall not in any way be discharged or impaired by reason of or any breach or breaches (willful or otherwise) of the said agreement committed with or without the knowledge or consent to the said _____ (CONTRACTOR) by or on behalf of, with the knowledge or consent of the said _____ (MAIN CONTRACTOR / CLIENT)

In witness whereof we have hereunto set our hands this _____day of _____In the Year_____

_____ _____

Witness Surety, Authorized by power of Attorney

SECTION 02:

2a. PRELIMINARIES AND GENERAL CONDITIONS

NAMES OF PARTIES

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

Client:	M/S Britam Holding PLC
Services Engineers	M/S Norkun Intakes Ltd

INTRODUCTION

Purpose of the Tender

The Britam Holding Company Limited ("Britam") invites qualified firms to submit their RFQ for Proposed Plumbing, Drainage and Firefighting Installations at Britam Tower Upperhill, Nairobi.

This Request for QUOTATIONS (RFQ) is being made available to interested service providers on a restricted tender basis. This document is intended to provide vendors with sufficient understanding of the Britam's requirements to enable them to respond.

For the purposes of the RFQ, it is necessary to disclose information in this document, and its schedules, which is considered confidential and should therefore not be used (otherwise other than in furtherance of this tender) or disclosed to any third party without explicit prior written consent of Britam.

Britam on its part also acknowledges that it is requesting through this RFQ for information that is confidential and therefore commits in equal terms to reciprocal confidentiality.

Acknowledgement of Bidding Documents

Britam invites Bidders for **Proposed Plumbing, Drainage and Firefighting Installations at Britam Tower Upper hill, Nairobi.** in accordance with the requirements set out in this document. Within **three (3) working days** of receipt of the RFQ, the Bidder is required to acknowledge receipt of the RFQ and notify his intention to submit a bid by email to Britam at tenders@britam.com. The mail will include the signed registration template on Page 4 of this document.

Working days are defined as being any day of the week between Monday and Friday (0800 – 1700 Hrs) excluding weekends and gazetted public holidays in the Republic of Kenya).

Failure to do so shall be perceived as an intention not to submit a bid and the Bidder will be eliminated from the bid process and required to destroy the RFQ document in keeping with confidentiality requirements.

Point of Contact

All enquiries or correspondence concerning the details of this tender should be addressed, in the first instance by e-mail to: tenders@britam.com . The subject on the email should be **"PROPOSED PLUMBING, DRAINAGE AND FIREFIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI".**
All responses from Britam to the Bidder shall be channeled through the Procurement Officer.
It is the responsibility of the Bidder to obtain any further information required to complete this RFQ.
Any clarification request and their associated response will be circulated to all Bidders.
All clarifications must be sought at the latest 5 days prior to the close of the RFQ.

Mandatory site visit will be on Friday 28th February at 10 am – Britam Tower.

ABOUT BRITAM HOLDINGS PLC

Organization Profile

Britam Holdings PLC ("Britam") is a leading diversified financial services group, listed on the Nairobi Securities Exchange. The group has interests across the Eastern and Southern Africa region, with operations in Kenya, Uganda, Tanzania, Rwanda, South Sudan, Mozambique, and Malawi. The group offers a wide range of financial products and services in Insurance, Asset management, Banking and Property. For more information, please visit http://www.britam.com.

The Group offers a wide range of products and services to individuals, small businesses, corporations, and government entities. The range of products includes life insurance, pensions, health insurance, and general insurance through its insurance businesses in the region. The financial solutions which include, unit trusts, investment planning, wealth management, offshore investments, retirement planning and discretionary portfolio management which are offered through its asset management business. In addition, the company carries out property development, and has substantial investments in the banking sector. For More information, please visit http://www.britam.com

Britam Vision

To be LEADING diversified financial services company in our chosen markets across Africa.

Britam Mission

Providing you with financial security EVERY STEP OF THE WAY.

Bid Preparation and Submission

RFQ For "PROPOSED PLUMBING, DRAINAGE AND FIREFIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI".

All Tenders may also be posted/ delivered earlier than the deadline to the below email:

tenders@britam.com

with a clear subject line *"PROPOSED PLUMBING, DRAINAGE AND FIREFIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI".*

Offers must be submitted in two separate documents, 1(one) technical- and 1 (one) commercial bid, password protected and clearly identified as:

The file with the FRQ should be identified as follows:
NAME OF THE COMPANY, "PROPOSED PLUMBING, DRAINAGE AND FIREFIGHTING INSTALLATIONS AT BRITAM TOWER UPPERHILL, NAIROBI".

GENERAL CONDITIONS OF CONTRACT

Introduction

Specific terms of contract shall be discussed with the bidder whose proposal will be accepted by the Company. The resulting contract shall include but not be limited to the general terms of contract as stated below from 5.2 to 5.14.

Award of Contract

Following the opening and evaluation of proposals, the Company will award the Contract to the successful bidder whose bid has been determined to be substantially responsive and has been determined as the best-evaluated bid. Britam will communicate to the selected bidder its intention to finalize the draft conditions engagement in consultation with the bidder.

Application of General Conditions of Contract

These General Conditions (sections 5.2 to 5.14) shall apply to the extent that they are not superseded by provisions in other parts of the Contract that shall be signed.

Bid Validity Period
Bidders are requested to hold their proposals valid for ninety (90) days from the closing date for the submission.

Non-variation of Costs
The prices quoted for the service and subsequently agreed and into the contract shall be held fixed for the contract period.

Delays in the Bidder's Performance

Delivery and performance of the Transaction shall be made by the successful Bidder in accordance with the time schedule as per Agreement.

If at any time during the performance of the Contract, the Bidder should encounter conditions impeding timely delivery and performance of the Services, the Bidder shall promptly notify the Company in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Bidder's notice, the Company shall evaluate the situation and may at its discretion extend the Bidder's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.

Except in the case of "force majeure" as provided in Clause 5.14, a delay by the Bidder in the performance of its delivery obligations shall render the Bidder liable to the imposition of liquidated damages pursuant to Clause 5.7.

Liquidated damages for delay
The contract resulting out of this RFQ shall incorporate suitable provisions for the payment of liquidated damages by the bidders in case of delays in performance of contract.

Governing Language
The Contract shall be written in the English Language. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall also be in English language.

Applicable Law
This agreement arising out of this RFQ shall be governed by and construed in accordance with the laws of Kenya and the parties submit to the exclusive jurisdiction of the Kenyan Courts.

Successful Bidder's Obligations

The successful bidder:
Is obliged to work closely with Britam staff, act within its own authority, and abide by directives issued by the Company that are consistent with the terms of the Contract.

Will abide by the job safety measures and will indemnify the Company from all demands or responsibilities arising from accidents or loss of life, the cause of which is the Bidder's negligence. The Bidder will pay all indemnities arising from such incidents and will not hold the Company responsible or obligated.

Will be responsible for managing the activities of its personnel, or subcontracted personnel, and will hold itself responsible for any misdemeanors.

Will not disclose the Company`s information it has access to, during the course of the work, to any other third parties without the prior written authorization of the Company. This clause shall survive the expiry or earlier termination of the contract.

DESCRIPTION OF SITE

The site of the works is at Britam Towers Upperhill Nairobi. The works will be carried out adjacent to occupied premises. Due care will be required during construction so that the occupants and facilities in the adjacent premises and the premises themselves are not interfered with in any way.

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

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

DEFINITIONS & INTEPRATION OF TERMS

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

Engineer: Shall in the case of Electrical/Mechanical works mean 'Norkun Intakes Ltd' Nairobi and, or in the event of any of their deaths, or ceasing to be the Engineers for the purposes of this Contract, such other person as the client shall nominate for that purpose. For the purpose of Mechanical and Electrical engineering works the Engineer shall be deemed vested with the duties of, and be the representative of the Client, except on respect of variations which involve the Contract sum.

Client: Shall mean the client whose name is indicated in item 1 above and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives. For the purposes of this work, the terms "Client" and "Contract" shall have the same meaning.

Contractor: Shall mean the person or persons, partnership, firm or company, whose tender for the Contract for the works has been accepted, and who has or have, signed the Contract and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives.

Main Contractor: Shall mean the person or persons, partnership, firm or company, whose tender for the main building contract for the development will be accepted, and who has or have, signed the contract and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives.

Works: Shall mean all or part of the works, material and articles, wherever the same are being manufactured or prepared, which are to be used in the execution of this Contract and whether the same may be on the site or not.

Approved: Shall mean approved by the Engineer at his absolute discretion.

Directed: Shall mean directed by the Engineer at; his absolute discretion.

Selected: Shall mean selected by the Engineer at his absolute discretion.

M^3: Shall mean cubic meter

M^2: Shall mean square meter

M: Shall mean meter

LM: Shall mean Linear Meter

Kg: Shall mean Kilogram

No.: Shall mean Number

Item / Lot: Shall mean total sum of all items combined

Prs: Shall mean Pairs

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

K.S.: Shall mean the current Kenya standards specification published by the Kenya Bureau of standards

As before: Shall mean in all respects as earlier described in the same or previous bill

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

Fix Only: Shall mean take delivery on site (unless otherwise stated), unload where necessary, transport within site compound, store, unpack, check contents against orders and packing lists, assemble as necessary, distribute and hoist or install to position, test and commission.

Supply Only: Shall mean procure, deliver to site (unless otherwise advised), unload where necessary, transport within site compound, store, unpack, check contents against orders & parking lists, repack, assemble as necessary and store neatly in the storage space provided by others as directed.

Supply and Install: Shall mean undertaking both supply only and fix only.

Agreement: Shall means this Agreement, its Schedules, the Contract Drawings, the accepted Bills of Quantities, the specifications, the letter of acceptance, the Purchase Order, and such other documents as may be expressly incorporated in the letter of acceptance or contract agreement (save as may otherwise be varied by this Agreement)

Bills of Quantities, Contract Bills or BOQ: Shall mean the document drawn up by the Engineer and priced by the Contractor to arrive at a contract price.

Certificate of Practical Completion: Shall mean a certificate issued by the Engineer / Architect to the Contractor to signify a state of completion where, in the opinion of the Engineer / Architect, the Works are substantially complete and can effectively and conveniently be used for the intended purposes

Code of Conduct: Shall mean the Contractor Code of Conduct as set out in Schedule 9 to this Agreement

Practical Completion: Shall mean that the Works have been substantially completed in all material respects such that the Site is capable of being taken over and used by the client for the purpose for which it was intended without prejudicing the safe and convenient use of the Site and there are no Defects other than those identified in the Defect List

Contract Drawings: Shall mean drawings showing and describing the Works to be done or to be prepared by the Contractor and includes any modifications to such drawings and where the context requires includes drawings prepared by the Contractor and approved by the client

Contract Period: Shall mean the period agreed for the construction of the Works and stated in the appendix to these conditions or extended in accordance therewith

Contract Price: Shall mean the price for the Works as stated the agreement or as adjusted in accordance with the contract.

Defect: Shall mean any aspect of the Works which is not in accordance with the contract or to the reasonable satisfaction of the Engineer / Architect

Final Acceptance: Shall mean that the Services have been carried out and completed within the terms of this Agreement and all the Defects List items completed

Final Certificate: Shall mean a certificate issued by the Engineer / Architect to the Contractor signifying that the Works have been carried out and completed in accordance with the terms of contract and that all adjustments to the contract price have been made in accordance herewith.

Final Account: Shall mean the document prepared by the Engineer containing all the adjustments to the contract price in accordance with the conditions of contract and which in his opinion is the total value of the Works at completion.

Interim Payment Certificate: Shall mean any certificate of payment issued periodically as the Works progress by the Engineer / Architect

Prime Cost Sum: Shall mean a sum included in the contract bills for works or services to be executed by a nominated sub-contractor, statutory or other authority or for materials or goods to be obtained from a nominated supplier.

Provisional Sum: Shall mean a sum included in the contract bills for the execution of work which cannot be entirely foreseen, defined or detailed at the time the tender documents are issued.

EXTENT OF INSTALLATIONS

The Tenderer shall include in his tender, prices, manufacture, inspection, testing, packing, shipment, insurance, shipping, customs duties, taxes, delivery to site, unloading and all other charges. The Tenderer shall also include for complete erection, tests on completion, setting to work, finishing and painting and maintenance of all items of plant and equipment described or implied within these Technical Specifications and shown on the relevant drawings to the satisfaction of the Engineer and the Architect.

The installed services within the buildings shall be complete in all respects as specified herein, and shall include all items of equipment, materials, accessories, fittings, supports, etc. necessary whether such items are specifically referred to in the Contract or not. The Tenderer shall be deemed to have included in his tender price all items necessary such that the installations are complete in all respects and left in good working order.

If awarded the Contract, the Contractor shall be expected to provide fully detailed drawings shop of the entire installation together with layouts of all proposed civil and building works etc. required to accommodate/house the plant and equipment, these layout drawings and details being related to the existing layouts as may be necessary. The drawings shall be submitted for approval within three (3) weeks of the award of the Contract such that the Engineer can be made aware of all requirements. It shall be deemed to be the responsibility of the Contractor to ensure all civil and builder's works required for this Contract are prepared and/or provided to suit the programme of this Contract. No claims will be entertained.

All proposed new layouts and structures shall be subject to the full approval of the Engineer

PROGRAMME OF WORKS.

The Tenderer shall provide within a stipulated period of acceptance of his tender and award of Contract, a complete programme for the proposed installations to be executed indicating the anticipated commencement and completion dates of the following activities:

Submission of working drawings for approval
Placing of orders with other specialists for plant and equipment to be incorporated in the works
Receipt by the Contractor from other specialists of plant to be incorporated in the works.
Manufacture by the Contractor of plant to be incorporated in the works
Inspection and testing by the Engineer
Shipment of the plant from country of manufacture
Delivery of the plant and equipment to site
Erection on site, details for all activities
Kenya Power & Lighting Company installations, ICT installations, National, County or any other statutory body installations as desired by contract
Tests on Completion.
Training to management team

Operations shall be commenced when instructed and shall be carried forward to completion with the greatest possible expediency, to the satisfaction of the Engineer, in accordance with the Programme. The Contractor's programme shall be agreed with the Engineer and shall adhere fully to the requirements and timing of the agreed Main Contractor's programme.

TENDER CONDITIONS

Any act of collusion that may distort normal competitive conditions may cause the rejection of the tenders concerned. By participating in the tendering, tenderers certify not to be involved in such acts of collusion.

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

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

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

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

All deletions, additions and corrections to figures inserted in the tender document are to be counter signed by the tenderer.
In the event of two or more tenders being in the same sum, tenderers may be given seven (7) days within which to revise their tender prices. Should there again be two or more tenders in the same sum, and in the absence of any qualities to give one tenderer preference over the other(s), then, the Contract may be awarded by drawing lots in the presence of the tenderers concerned.

TENDER TECHNICAL DATA

Where included in the Tender Documents, all Tenderers shall complete Schedules of technical data. Otherwise the Tender may not receive full consideration, and will be liable to rejection.

TENDER EVALUATION PROCEDURES

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

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

The resultant total, together with the priced preliminaries and any modified prime cost and provisional sums will be consolidated into a sum for which the Contract will be signed.

This procedure will be applied only to the selected tender. Neither the Client nor the Consultants will enter into discussion or any correspondence with the other tenderers after the selection process has been carried out and no reasons will be given for selection or non-selection.

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

ACCESS TO SITE AND SECURITY

Means of access to the site will be as directed by the Engineer. No other access will be permitted in any circumstances.

AREA TO BE OCCUPIED BY THE CONTRACTOR

Areas to be occupied by the Contractor for use as storage shall be as directed by the Project Engineer.

DRAWING(S)

Tender Drawings:

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

The Drawings indicate generally the arrangement of the installations and are for assistance in tendering only. The position of equipment and apparatus shown thereon are approximate only, the exact positions, together with the actual runs of ductwork, trunking and conduit etc., will be agreed upon with the Engineer and the Client prior to commencement of work. It shall be deemed that the prices entered by the Contractor include for the repositioning, of the various services, to meet the above requirements. No claims will be entertained.

The Engineer will furnish the Contractor within a reasonable time after the receipt by the Engineer of a written request for the same, any details of which, in the opinion of the Engineer are necessary for the execution of any part of the works. Such a request shall be made only within a reasonable time prior to the execution of such work in order to fulfill the Contract. One copy of the Drawings, details and Technical Specifications shall be kept on the site until the completion of the Contract and the Engineer shall at all reasonable times have access to the same. The Contractor shall return all copies of Drawings and other relevant details to the Engineer on the completion of the Contract.

Additional Drawings will be issued by the Contractor to the Engineer to suit the design requirements of the works. These Drawings being issued either during or after the tender period as may be required or necessary. These Drawings will supplement the details contained within the Technical Specifications and Bills of Quantities and the Tenderer shall be deemed to have taken these into account in his pricing. Where the Contractor can demonstrate that the Drawings relate to new approved or additional items these new or additional items shall be priced to approval in accordance with the Contract rates and prices.

Award / Contract Drawings:

Two (2) copies of all drawings and a copy (1) of the specifications will be furnished free of cost to the Contractor (whose tender has been accepted) for his own use. Any extra copies will be paid for.

The Contractor shall at his own risk and cost execute and perform the works described in the conditions of contract and bills of quantities and detailed in the drawings provided and supplied to the Contractor for the purpose of works and completely finish the said works in a good workmanship and with the utmost expedition.

The Contractor shall satisfy himself as to the correctness of all drawings and measurements as per site conditions. If the Contractor finds any discrepancy in the drawing or between the drawing and the specifications he shall immediately refer the same to the Engineer who will decide which shall be followed.

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

Shop / Working Drawings:

The Contractor shall prepare fully detailed Shop / Working Drawings for all items of plant, equipment and accessories required for installation under this section of the Contract. Two (2) copies of each Drawing shall be forwarded to the Engineer for approval and or comments and one (1) soft copy in PDF and CAD formats. One (1) copy will be returned stamped "Approved" or "Not-Approved". Where Drawings require further information and/or modifications to meet the comments made by the Engineer they shall be re-submitted, again as above, for approval.

When Drawings have been approved two (2) further copies as above shall be forwarded to the Engineer, together with copies to the Architect, Site and the Client.

Shop / Working drawings, and, where relevant, calculations in respect of the following shall be prepared by the Contractor and submitted to the Engineer for his approval commencing within ten (10) days from acceptance of the tender. These are (As Applicable to the specific service):

Cabling and external cable routes
Details of all conduit and trunking runs in respect of different services
Details of lighting and power circuits, routes etc.
Details of sub-main switchgear and distribution boards
Details of Lightning and surge protection

Details & Layouts of all ducts, chases, holes, trenches and all other services throughout the whole of the building and associated external works
Details & Layouts of Fire alarm system and all circuit diagrams
Details & Layouts of all Security Installations
Details & Layouts of all Structured cabling & ICT Installations
Details & Layouts of all Audio Visual & Voice Evacuation Installations
Details & Layouts of all BMS Installations
Details & Layouts of all Generator Installations
Details & Layouts of all Lift Installations
Details & Layouts of all UPS Installations
Details & Layouts of all Automatic Voltage Stabilizer Installations
Details & Layouts of all Rectifiers & Inverter Installations
Details & Layouts of all Plumbing & Drainage Installations
Details & Layouts of all Air Conditioning Installations
Details & Layouts of all Solar water heating Installations
Details & Layouts of all Fire Fighting Installations
Details & Layouts of all Water Heating Installations
Details & Layouts of all Specialized Kitchen Equipment Installations
Details & Layouts of all Sewage & Water Treatment Installations
Details of all equipment and panels
Technical literature for all the services

All Shop / working drawings shall be to scale and fully detailed with all the important dimensions shown and the construction of key components indicated.

During progress of the building works, the Contractor shall make all necessary checks on site to ascertain that the various services can be installed as specified and shown on the approved Drawings.

Where such works cannot be so installed, this must be immediately brought to the notice of the Engineer and Architect prior to the progress of such works.

The Engineer, in conjunction with the Architect and the Client, will check and return the Drawings submitted for approval within a reasonable period, but in any case not exceeding fourteen (14) days from receipt of the Drawings.

The layouts of plant and equipment are for general guidance only. The Contractor shall assess the requirements and prepare a plant layout Shop / Working drawing for approval within twenty one (21) days, the required liaison being maintained with other specialists, such that an agreed layout is submitted for approval.

Record (As-Built) Drawings:

As soon as the works are complete and all tests satisfactorily carried out, the Contractor shall hand to the Engineer two (2) sets of Record Drawings, together with one (1) set of soft copy of the same in PDF and CAD formats, showing the works as finally installed. These Drawings shall be prepared on approved transparent plastic material in black ink or as approved by the Engineer.

The certificate, of making good defects, will not be issued until this condition has been complied with.

Record Drawings are in addition to detailed Working Drawings and shall show all cable routes, circuits, trunking, conduits, plant, trenches, ductwork and ducts etc., together with the entire plumbing, drainage and firefighting installation, as finally installed.

The Engineer will provide the Contractor with a set of Contract Drawings (in addition to the two (2) sets provided for the Contractor's site and office use), which shall be maintained by the Contractor's

representative on site and which shall be used for recording of Contract variations as they occur. This set of Drawings shall be available for the Engineer's inspection on site, and shall be kept up to date.

The cost of the preparation and submission of the above Contract and Record Drawings shall be deemed to be included within the Contractor's prices.

CONTRACT AGREEMENT AND CONDITIONS

General:

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

FIDIC conditions for electrical and mechanical works shall form complementary reference where clear interpretation cannot be made.

Communications Authority (CA) conditions for structured cabling, ICT & Security works shall form complementary reference where clear interpretation cannot be made.

Water and Electricity Supply

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

Contractor's Materials

Purchase of materials by the Contractor and their storage on site for inclusion in payment certificates far in advance of reasonable requirements may be allowed at the sole discretion of the Engineer. This however is also subject to availability of such storage space.

Storage space may be provided on site.

INSURANCE

The Contractor shall during the execution of the works, insure himself and keep himself insured against all liability under the WIBA or any amendment thereto for accidents to workmen employed by him on the said works and shall hold the client and all parties to the contract harmless in respect of any such liability.

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

No payments on account of the work executed will be made to the Contractor until he has satisfied the Engineer either by the production of an Insurance Certificate that the foregoing provisions have been complied with in all respects.

Thereafter the Engineer may from time to time check that premiums are duly paid up by the Contractor who shall, if called upon to do so, produce receipts of premium renewals for the Engineer's inspection.

BOND

The Contractor shall find and submit for the approval by the Engineer one (1) surety who shall be an established bank, Insurance company or fidelity guarantee corporation and who will be willing to be bound to the client and/the Client in an amount equal to ten percent (10%) of the Contract amount for the due performance of the Contractor upto the date of completion as certified by the Engineer and who will then and if called upon, sign a bond to that effect, on the same day as the Contract agreement is signed.

In the event of the surety named not being approved by the Engineer, the Contractor shall furnish within seven (7) days another surety to the approval of the Engineer.

SAFETY, HEALTH AND WELFARE OF WORKPEOPLE

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

NATIONAL INSURANCE AND PENSIONS

The Contractor shall allow for making any National Social Security Fund and National Hospital Insurance Fund payments due in respect of workpeople.

HOLIDAY AND TRANSPORT OF WORKPEOPLE

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

TRAINING LEVY

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

EXISTING PROPERTY

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

FOREMAN

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

SUPERVISION AND WORKING HOURS

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

The working hours shall be those generally worked by good employers in the building and civil engineering trades taking note of gazetted holidays unless the Engineer shall so direct.
No work shall be covered up in the absence of the clerk of works without the prior approval of the Engineer in writing

SAMPLES

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

The Engineer shall instruct for the testing of such materials as he may at his discretion deem desirable and the testing shall be made at the Contractor's cost.

The Contractor shall allow in his tender for such samples and tests.

TRADE NAMES

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

MATERIALS, TOOLS, PLANT ETC.

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

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

All materials, fittings and accessories are to be new and in accordance with the requirements of the current legal and regulatory framework where such exist, and with the relevant international standards.

Uniformity of type and manufacture of fittings and accessories is to be as far as practicable preserved throughout the whole Works.

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

The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are on site when required for use in the works.

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

If the Contractor shall fail to carry out such orders, as by the preceding paragraph provided within such reasonable time as may be specified in the order, the materials or works affected may be made good by others

in such manner as the Engineer may direct, in which case the cost thereby incurred shall, upon the written certificate of the Engineer, be recovered from the Contractor as liquidated damages.

ORDERS

Copies of all orders for major items of plant, equipment and materials places with suppliers shall be provided in triplicate to the Engineer together with a soft copy

INSPECTION AND TESTS AT MANUFACTURER'S WORKS

The Engineer, or his duly authorized representative, shall have at all reasonable times access to the Contractor's premises to inspect and examine the materials and workmanship of the mechanical and electrical plant and equipment during its manufacture.

If part of the plant and equipment is being manufactured on other premises, the Contractor shall obtain on behalf of the Engineer, or his duly authorized representative, permission to inspect as if the plant and equipment was manufactured on the Contractor's own premises. Such inspection, examination or testing, if made, shall not relieve the Contractor from any obligation under the Contract.

Where the plant and equipment is a composite unit of several individual pieces manufactured in different places, it shall be assembled and tested as one complete working unit, at the Maker's works, to specifications and the relevant International Standards where applicable.

TRANSPORT

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

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

Adequate measures shall be taken by the sub-contractor to ensure that plant and equipment do not suffer any detoriation during transit and transportation.

Prior to installation, all accessories, plant and equipment shall be thoroughly cleaned.

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

STORAGE

Space for storage will be provided by the Main Contractor but the Sub-contractor will be responsible for the provision of any lock-up sheds and stores required.

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 architect and structural engineer

SUNDRIES

The necessary holding down bolts, supporting brackets and templates, guards and screens, locks, piping, conduits, lamps and other requisite sundries whether specified in detail or not shall be provided, under the Contract and it shall be deemed that the Contractor's prices, rates and the like include for all such items.

BLASTING

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

HOISTING

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

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

CASING UP AND PROTECTING

The Contractor shall be responsible for casing up or otherwise protecting to the satisfaction of the Engineer all parts of the Contract works liable to cause injury and for removing such protection and making good on completion.

The Contractor shall also carefully protect from injury by weather all Work and materials which may be affected thereby and allow in his prices for all dams, pumping, shoring, temporary drains, sumps etc. necessary for the purpose. The Contractor shall clear away and make good at his own cost to the satisfaction of the Engineer all damage caused thereby.

BUILDERS WORK & CIVIL WORKS

Builder's Work and Civil Works that are incidental to this section of the Contract (Ordinarily referred to as Builders Works in Conjunction with Services or abbreviated BWICS) such as cutting of holes in walls and floors, provisions of foundations for the plant and machinery, shall be the responsibility of the Main Contractor. The Contractor shall be fully responsible for the preparation of all such details that relate to such works, the details being subject to approval by the Architect and Engineer prior to submission to the Main Contractor for action. Other items such as fixing of brackets, cables and ductwork and trenching, making good etc. shall be carried out by the Contractor to suit the installation of all the services.

It is the Contractor's sole responsibility to ensure that all holes and chases are in the required position and that any additional ducts, holes and chases necessary for erection of the installations in situ concrete walls, floor slabs etc., are included in the early stages of construction as appropriate.
The Contractor shall furnish the Engineer, Architect and Main Contractor with all the necessary information including position of foundations, brackets and fixings and shall ensure that such works are performed in accordance with available information.

The Contractor shall include in his tender all supports, fixings, plugging of holes in walls, ceilings and floors to facilitate the fixing of the pipework, accessories, and all other portions of the specified installations. Any purpose-made fixing brackets shall also be provided and installed by the Contractor, including escutcheon plates and the like.

The Contractor shall supply and install approved pipework, ductwork, trays, Ladders, Light fittings and Equipment support brackets and hangers. It shall be deemed that prices include for any special requirements and that the Contractor has visited the site during the tender period to ascertain all details.

The Contractor shall pay particular attention to the fixing and alignment of items. All items shall be installed square, true and perpendicular to floors in clear parallel lines i.e. as shown on Drawings and as may be required at site to the Engineers approval.

SETTING OUT OF WORK

The Contractor will be responsible for laying out his work and shall obtain all the necessary information as may be required to carry out the work. Such information shall be obtained sufficiently in advance to avoid any possibility of delay to the Works as a whole.

The Contractor shall be fully responsible, and shall seek, the details of all work being carried out by the various trades on Site, particularly where such trades may interfere with each other, or where co-ordination is necessary. No claims for extra costs will be entertained arising from omissions, oversight, or neglect in this regard.
In advance of the delivery of the plant and equipment, the Contractor shall arrange for the supply of all-necessary foundation bolts, templates, nuts, plates, sleeves, anchorages, etc., as required and as may be directed by the Engineer.

ERECTION AND CHECKING OF WORK

The Contractor shall provide, and be solely responsible for, all skilled and unskilled labour, tools, lifting tackle and other equipment required for handling of plant and equipment when transporting to Site, within the Site and during erection.

All erection works shall be subject to approval by the Engineer.

All parts shall pass such tests as required by the Engineer to prove compliance with the Contract irrespective of any tests which may already have been carried out at the Manufacturer's Works. In particular, all special tests made at the Manufacturer's Works shall be repeated at limits approved by the Engineer.

WORKS TO BE DELIVERED UP CLEAN

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

TESTING AND SITE PERFORMANCE

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

The Contractor shall give notice of the date of the specified tests to be performed on completion of installation. The notice shall be made in writing to the Engineer at least five (5) days to the date of the specified tests. Unless otherwise agreed the tests shall take place within seven (7) days of the stated date or on such day or days as the Engineer shall in writing notify the Contractor in writing. The tests shall be carried out under normal working conditions to the satisfaction of the Engineer and shall extend over such continuous periods as he may direct.

All skilled labour, supervision, apparatus, fuel and instruments required for carrying out the tests will be the responsibility and at the expense of the Contractor. The accuracy of the instruments shall be demonstrated if required. The Contractor shall ensure and avail proof that test instruments are in good working condition and have been calibrated by an authorized agent.

If any part of the plant or equipment fails to pass the specified tests, further tests of the said part shall, if required by the Engineer, be repeated. The Contractor shall, without delay, put in hand such modifications

as found necessary so as to meet the requirements of the Contract and any expense which the Client may have incurred by reason of such further tests shall be deducted from the Contractor's Contract price.
Each completed system within the installation shall be tested as a whole under operating conditions to ensure that each component functions correctly in conjunction with the rest of the system.

TIME FOR COMPLETION AND LIQUIDATED DAMAGES

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

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

NOTE:
The sub-contract completion period shall be the same as that of main contract.
Liquidated damages and Ascertained damages shall be calculated pro-rata on the rate provided in the main contract.

SPECIALIST MANUFACTURERS

Where specialists are not nominated by the Client, the Contractor shall appoint specialist manufacturers and suitable specialists for any sections of the Works described herein in which he is not himself an experienced, recognized and approved specialist.

The Tenderer shall, on submission of his tender, indicate the names of all proposed specialist manufacturers and specialists, together with the precise sections of the Works for which each will be responsible. The Contractor may be required to seek alternative manufacturers or Contractors or to accept specialists nominated by the Engineer. It shall be deemed that the prices entered in the tender include for this requirement.

For plant and equipment supplied by suppliers other than the Contractor, the Contractor will be required to furnish an agreement between himself and the supplier stating that he is authorized by the supplier to deal in the plant and equipment and that he is authorized to stock the necessary spare parts or that the Client will be authorized to revert to the supplier in the event of breakdown of the plant or equipment.

The Contractor shall allow in his prices for phasing his work to meet the requirements of the other specialists, and for varying his programme or otherwise, to comply with the erection programme of such specialist. No additional costs will be allowed to the Contractor for and disruptions to his programme, or otherwise, in his compliance with the above requirements.

PAYMENT AND CERTIFICATES

Payments shall be made through certificates direct to the Contractor. All payments shall be less retention as specified in the Contract agreement. The Contractor shall be paid only for work done and /or materials on site. Payments shall be subject to prevailing statutory deductions such as withholding tax, etc.

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

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

VALUATION OF LUMP SUMS AND PRELIMINARY COSTS

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

PAYMENT FOR MATERIALS ON SITE

All materials for incorporation in the works must be properly installed before payment is effected unless specifically exempted by the Engineer. This is to include the materials of the Contractor, and his nominated suppliers.

PAYMENT FOR MATERIALS OFF SITE

Payment for any material off site will be subject to the Contractor providing a bank guarantee of equivalent value and clearly indicating that the bank undertakes to pay the client the full sum of the guarantee amount immediately upon the client's first written demand declaring the tenderer to be default and without cavil or argument. This shall be from an **Approved Bank**.

The Bank Guarantee validity period to be no sooner than the end of the Defects Liability Period of the project except where a special waiver is granted by the client in writing.

Advance payments will also be treated as Material off site save for being secured by an Advance Payment bank bond.

CLAIMS FOR EXTRAS

This is a fixed price contract and no claims whatsoever on extras will be entertained save where a variation to the contract is expressly directed by the engineer in writing.

FLUCTUATIONS

This is a fixed price Contract and no claims will be allowed on fluctuations. The tenderer's prices will be deemed to have allowed for forecasts on price fluctuations, inflation or exchange rate.

COMMISSIONING & TRAINING

The Contractor shall train the Client's Maintenance management team or his representative on the operation and maintenance of the various components forming the mentioned installation and shall provide drawings, diagrams and manuals to ensure the Maintenance Management Team or his representative is completely conversant with such installations.

Proof of training will be required and must have the names and signatures of those trained and the dates and what they were trained on.

The Contractor shall ensure that the services installations are left in complete safe working order and operating to the satisfaction of the Engineer.

TEST RECORDS

The Contractor shall make the necessary records of all the tests carried out, and when the tests have been successfully completed he shall provide the Engineer with test records and reports in a format to be agreed.

DUST, INSECT AND VERMIN PROOFING

All equipment, likely to be affected by ingress of dust, shall be effectively dust proofed and vermin proofed where no protection is afforded in its normal manufactured form. All materials used shall be in general resistant to attack by insects, micro-organisms or other fauna or flora.

Materials used for such protection shall be to the approval of the Engineer.

PAINTING & FINISHING

All plant and equipment installed under this Contract shall be painted or otherwise finished to approval in accordance with appropriate international code for standard colours to be furnished by the Contractor prior to the shipment or manufacture of the plant or equipment including all pipework, ductwork, etc. Such finish shall be entirely compatible with the conditions of heat, humidity, exposure to the weather, and other relevant factors arising from the materials, location and condition of operation of the equipment.

The Engineer may request samples of paint finishes, the cost of which shall be deemed to have been included within the tendered prices for all works.

All final painting of equipment, fixtures, and accessories shall be carried out by the Contractor, except where it is the usual practice of the manufacturer of items of plant and equipment to apply a high standard of protective finishing paintwork in the shop before dispatch. This will be acceptable provided the Contractor at his own costs makes good any damage to paintwork, occurring in shipment, transportation and installation.

The interiors of electrical switchboards, control panels, and similar items, shall be finished in an approved enamel colour and shall comply with the appropriate international standards for enamel finish which shall be furnished by the Contractor prior to shipment or manufacture of the plant or equipment. The exteriors of such panels and enclosures shall be of international standards specification colour as specified by the Engineer.

LABELS

All items related to the installations shall be neatly and clearly labeled externally with identification marks corresponding with those on Drawings or in Technical Specifications. Final details shall be agreed upon by the Contractor and the Engineer.

Identification labels shall be of laminated plastic material engraved, black on white, with no less than 6mm "Lino" style letters and shall be fixed on or adjacent to all items by means of at least two brass screws or to the approval of the Engineer. Self-adhesive labels shall not be permitted.

All main switches, circuit breakers, isolators, valves, motors, switch-fuse, consumer service units, and distribution boards etc. shall be neatly and clearly labeled externally with identification marks corresponding with those on the Drawings or Technical Specifications using “Red Trafolyte Labels” of Minimum 10mm Height.

Final details shall be agreed upon by the Contractor and the Engineer.

All labels/plates shall be in English language

DEFECTS LIABILITY PERIOD

The defects liability period shall be 6 months from the date of Certificate of Practical Completion.

COMPLETION DOCUMENTS

The contractor shall supply the Engineer with the following sets of completion documents in three (3) sets hard copy on scale of 1:100 and a soft copy in both PDF and CAD formats.

Record (As-Built) Drawings: As stated above.

Maintenance manuals:

At the start of the defects liability period, the Contractor shall hand over to the Engineer, Three (3) sets of maintenance and operations manuals for each plant and equipment installed. These manuals shall be in English and shall be fully illustrated.

Test Records: As stated above.

WARRANTY AND PERFORMANCE STANDARDS

The Contractor must furnish the client through the Engineer with a general written warranty covering quality of workmanship, material and equipment and be compelled thereby for a period as shall be provided in the Contract Schedules.

Whereas in a case where the period is not mentioned, then the Warranty cover should be for a minimum of one year (12 Months) after practical completion of the Contract.

The Contractor must make good, at his own expense, such repairs and replacements as may be required as a consequence of negligent workmanship or defective materials.

The Contractor must also procure such warranties and guarantees as aforesaid from all manufacturers and/or suppliers of materials or equipment incorporated in the project under this contract.

The Contractor must comply in all respects with given standards of workmanship as defined and described in the specifications and Bills of Quantities and relevant codes of Practice.

The Contractor must also comply with all tests of materials as required and/or directed by the Engineer.

Total for preliminaries and general conditions C/F to price summary page

Kshs…….....

2b. PARTICULAR QUALIFICATION FOR BIDDERS

All bidders must provide details of the bidding subcontractors as below;
Name of the subcontractor:
Address:
Signature: Stamp:

PLUMBING, DRAINAGE & FIRE FIGHTING INSTALLATIONS

Subcontractor indicated above **must** fill and attach required documentary evidence as requested below:

CERTIFICATES

Item	Requirement	Instruction to bidders	Filling by Bidders	Remarks
A1.01	Incorporation Certificate	Attach copy of certificate and fill in Number		
A1.02	Trader License	Attach copy of Trade License and fill in Number		
A1.03	PIN Certificate	Attach copy of PIN Certificate and fill in Number		
A1.04	VAT Compliance Certificate	Attach copy of VAT Compliance Certificate and fill in Number		
A1.05	Valid NCA Certification	Attach copy of NCA Certificate and fill in Registration Number		
A1.06	County government Plumbing & Drain layer Certificate	Attach copy of Plumbing Certificate and fill in Registration Number		
A1.07	Energy Regulatory Authority Certificate (ERC In Kenya) On solar installation	Attach copy of Energy Regulatory Authority Certificate and fill in Number		
	Other Certifications	List here & Attach copies of any other certificates that the company might have achieved e.g. ISO, etc.		

COMPANY ORGANIZATION

Item	Requirement	Instruction to bidders	Filling by Bidders	Remarks
B1.01	Company Organization Structure	Attach Organogram showing the different levels of the company structure complete		

		with names		
B1.02	Company Directors	Fill in Names of Directors indicating their citizenship, shareholding and their role in Project if Any		
B1.03	Staffing	Fill in Number of Staff in organization and attach **PROOF**		
		Administration		
		Finance		
		Technical		
		Project Managers		
		Site Agents		
		Engineers		
		Technicians		
		Artisans		
		Support Staff		
B1.01	Credentials for Staff Proposed for this Particular Project	Company CEO		
		Project Manager(s)		
		Project Site Agent(s)		
		Project Site Foremen		

FINANCES

Item	Requirement	Instruction to bidders	Filling by Bidders	Remarks
	Fill in the details below and attach **PROOF** of the same			
C1.01	Company Bankers	Attach copy		

C1.02	Turnover (Last 3 Years)	Year 2021		
		Year 2022		
		Year 2023		

PROJECTS

Item	Requirement	Project (Filling By Bidder)	Details Filling by Bidders	Remarks
	Bidder to list Similar projects done in the last 5 years listing client name, award sums, Final Account sums, Award letters and Completion certificates (if completed). Attach **PROOF.**			
D1.01	Completed Projects			
D1.02	Ongoing Projects			
D1.03	References – Names & Contacts			

Signatories:
Name: ……...…… Designation……. Date: ……
Sign:

Name: ……...…… Designation……... Date: …….
Sign:

Name: ……...…… Designation…… Date: ……...……...
.Sign:

2c. SPECIAL NOTES TO ALL TENDERERS

CONTRACT TYPE: This is a fixed price Contract and no claims shall be entertained on whatever ground. The Contractor is advised to include all such costs as he projects may arise in his unit rates. Any variations in the exchange rate will also be no excuse for any variations in the contract sum.

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

CURRENCY: The specifications must be priced in Kenya Currency i.e. Shillings and Cents unless Otherwise as may be expressly stated

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

BILLS OF QUANTITIES: The Bills shall be read in conjunction with the Preliminaries, General Conditions of Contract, Technical Specifications and Drawings

PAGES IN DOCUMENT: The tenderer is required to check the number of pages in this document and should any be found to be missing or the figures indistinct, he/she must inform the Engineers at once and have the same rectified. Should the tenderer be in doubt the precise meaning of any item, word or figures or for any reason whatsoever observe any apparent omission of words or figures, he must inform the Engineers in order that the correct meaning may be decided upon before the date for the submission of the tenders.

RATES & PRICES: The rates and prices tendered in the priced Bills of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Plant, equipment, labor, supervision, materials, erection, maintenance, insurance, profit, together with all general risks, liabilities and obligations set out or implied in the Contract, including taxes and duties (including V.A.T). The quantities given are provisional and are for guidance only. The whole works shall be re-measured upon practical completion.

FILLING OF RATES: A rate or price shall be entered against each item in the priced Bills of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bills of Quantities.

PRICE ALLOWANCES: The tenderer shall be deemed to have made allowances in his unit prices generally to cover items of preliminaries or additions to prime cost Sums or other items priced against the respective items.

TAXES: The tenderer's price shall include all government taxes including duties, VAT, etc. No claims whatsoever will be allowed if the tenderer does not price them as aforementioned. VAT must be calculated for all sums as filled in the document which includes contingencies, PC Sums etc.

COST: The whole cost of complying with the provision of the Contract shall be included in the Items provided in the Bills of Quantities, and where no items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.

TENDER EXPENSES: In no case will expense incurred by the tenderer in preparation of this tender be reimbursed.

REFERENCES: General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bills of Quantities. Reference to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bills of Quantities.

PC SUMMS & CONTINGENCIES: Provisional Sums and contingencies included and so designated in the Bills of Quantities shall be expended in whole or in part at the sole discretion of the Engineer.

Under no circumstances shall the contingencies in the BQ be used to cater for contractor's omissions or underquoting of items listed in the Bills.

Under no Circumstances shall the contractor claim any costs e.g. profits, attendance, etc. connected to the PC sums and contingencies if the client were to omit or relocate the same to others

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

Errors in pricing will be corrected by the Engineer for any arithmetic errors in computation or summation as follows: -

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

Where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Engineer, there is an obviously gross misplacement of the decimal point in the unit prices, in which event the total amount as quoted will govern and the unit rate will be corrected

MATERIALS ORDERING: The Contractors shall be solely responsible for the accurate ordering of materials in accordance with the drawings and these specifications.

CLIENT SUPPLY ITEMS: The client retains the right to decide if the contractor would supply specific fittings / items as specified and the fittings / items or whether the same shall be handled via direct procurement by the client

Under no Circumstances shall the contractor claim any costs e.g. profits, attendance, etc. connected to the "Client Supplied" items if the client were to Omit or relocate any items noted as "Client Supply" in the Bills to others.

Fix Only: Shall mean take delivery on site (unless otherwise stated), unload where necessary, transport within site compound, store, unpack, check contents against orders and packing lists, assemble as necessary, distribute and hoist or install to position, test and commission.

Supply Only: Shall mean procure, deliver to site (unless otherwise advised), unload where necessary, transport within site compound, store, unpack, check contents against orders & parking lists, repack, assemble as necessary and store neatly in the storage space provided by others as directed.

Supply and Install: Shall mean undertaking both supply only and fix only

Appendices 1and 2: must be filled and submitted with the RFQ

Signed (As in form of Tender)_____

Official Stamp & Date _____

PARTICULAR SPECIFICATIONS FOR PORTABLE, FIRE EXTINGUISHER AND HOSE REEL INSTALLATIONS

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 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 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.

SCOPE OF WORKS

The 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.

WATER/CO_2 EXTINGUISHERS

These shall be 9-litre water filled CO_2 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:

Method of operation.

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

Name and address of the manufacturer or responsible vendor.

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

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

The year of manufacture.

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

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

PORTABLE CARBON DIOXIDE FIRE EXTINGUSHERS

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:-

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

Method of operation.

The words “Re-charge immediately after use”.

Instructions for periodic checking.

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

The manufacturers name or identification markings

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

The word “Dry Powder Fire Extinguisher”

Method of operation in prominent letters.

The working pressure and the weight of the powder charge in Kilogramme.

Manufacturers name or identification mark

The words “RECHARGE AFTER USE” if rechargeable type.

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.

The year of manufacture.

The Pressure to which the extinguisher was tested.

The number of this British Standard BS 3465 or BS 5423: 1977.

When appropriate complete instructions for charging the extinguisher shall be clearly marked on the extinguisher or otherwise be supplied with the refill.

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.

Headcap: to be plastic moulding acetyl resin.

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

Internal Finish: to be polythene lining on phosphate coating.

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

BOOSTED HOSE REEL SYSTEM

General

The Particular Specification details the requirements for the supply, installation and commissioning of the hose reel installation. The hose reel installation shall comply in all respects to the requirements set out in C.O.P 5306 Part 1: 1976, B.S 5041 and B.S 5274. The System shall comprise of a pumped system.

Hose Reel Pumps

The fire hose reel pumps shall consist of a duplicate set of multi-line centrifugal pumps from approved manufacturers. The pumps shall be capable of delivering 138 litres/min at a running pressure of 2 bars at the level of top hose reel in the system

The pump casing shall be of cast iron construction with the impeller shaft of stainless steel with mechanical seal.

Control Panel

The control panel shall be constructed of mild steel 1.0mm thick sheet, be moisture, insect and rodent proof and shall be provided complete with circuit breakers and a wiring diagram enclosed in plastic laminate.

The pump shall be controlled by a flow switch therefore, the control panel shall include the following facilities:

'On' push button for setting the control panel to live.

Green indicator light for indicating control panel live.

Duty / Stand-by pump auto change over.

Duty pump run green indicator light.

Stand-by pump run green indicator light.

Duty pump fail red indicator light.

Stand-by pump fail red indicator light.

Low water condition pump cut-out with red indicator light.

The pumps are to be protected by a low level cut-out switch to prevent dry pump run when low level water conditions occur in the water storage tank.

Hose Reel

The hose reel to the installation shall consist of a recessed, swing-type hose reel as Naffco or from other approved manufacturers.

The hose reel shall comply with B.S. 5274 : 1975 and B.S 3161 : 1970 and is to be installed to the requirements of C.P. 5306 Part 1: 1976.

The hose reel shall be supplied and installed complete with a first-aid non-kinking hose 30 metres long with a nylon spray / jet / shut-off nozzle fitted. A screw down chrome - plated globe valve to B.S 1010 to the inlet to the reel is to be supplied.

The heavy duty hosereel shall be model no. NF/50A automatic mounted on ground or wall equipped with special hose guide. Size of hose to be 25mm diameter with 50m hose

The orifice to the nozzle is to be not less than 4.8mm to maintain a minimum flow of 0.4 lit / sec to jet.

The hose reels shall be installed at 1.5 metres centre above the finished floor level in locations shown in the contract drawings.

Pipe Work

The pipe work for the hose reel installation shall be galvanised wrought steel tubing heavy grade Class C to B.S 1387: 1967 with pipe threads to B.S 21.

Pipe Fittings

The pipe fittings shall be wrought steel pipe fittings, welded or seamless fittings conforming to B.S. 1740 or malleable iron fittings to B.S 143.

All changes in direction will be with standard bends or long radius fittings. No elbows will be provide

Non-return Valves

The non-return valves up to and including 80mm diameter shall be to B.S. 5153 : 1974.

The valves shall be of cast iron construction with gunmetal seat and bronze hinge pin.

Gate Valves

The gate valves up to and including 80mm diameter shall be non-rising stem and wedge disc to B.S 5154: 1974 with screwed threads to B.S. 21 tapes thread

Sleeves

Where pipe work passes through walls, floors or ceilings, a sleeve shall be provided one diameter larger than the diameter of the pipe, the space between them to be packed with mineral wool, to the Engineer's approval.

Earthing

The hose reel installation shall be electrically earthed by a direct earth connection. The installation of the earthing shall be carried out by the Electrical contractor.

Finish Painting

Upon completion of testing and commissioning the hose reel installation, the pipe work shall be primed and finish painted with 2 No. coats of paints to the Engineer's requirements.

Testing and Commissioning

The hose reel installation shall be flushed out before testing to ensure that no builder's debris has entered the system. The installation is to be then tested to one and half times the working pressure of the installation to the approval of the Engineer. Simulated fault conditions of the pumping equipment are to be carried out before acceptance of the System by the Engineer.

Instruction Period

The contractor shall allow in his contract sum for instructing of the use of the equipment to the Client's maintenance staff. The period of instruction may be within the contract period but may also be required after the contract period has expired.

The period of time required shall be stipulated by the Client but will not exceed two days in which time the Client's staff shall be instructed on the operation and maintenance of the equipment.

DRY-RISER INSTALLATION

Pipes shall be galvanised steel tubing to B.S. 1387:1967 Class B with pipe threads to B.S. 21. Pipe fittings shall be wrought steel seamless pipe fitting to B.S. 1740 Part 1: 1971.

Flanges

The flanges shall comply with B.S 4504:1969. All flanges shall comply to a nominal Pressure Rating of 16 bar and shall be of either grey cast iron or steel

Gaskets

The gaskets for use with flanges to B.S 4504: 1969 shall comply with B.S 4865 Part 1: 1972 for pressure up to 64 bars.

Brigade Breeching

Fire Brigade Breeching inlet shall consist of twin inlets; each inlet consisting of 65mm diameter male instantaneous coupling to B.S. 336 with a non-return valve and a blank cap secured with a short chain. The breeching inlet shall be enclosed in a sheet metal inlet box, finished in „fire red" backed enamel paint, with wired glass door to B.S. 3980. The door shall be secured with spring lock such that it can only be opened from the inside by breaking the glass and releasing the catch on the lock. The door glass front shall be clearly marked with 50mm high red lettering „DRY RISER BREECHING CONNECTOR". **Landing valves:** Landing valves shall be 65mm diameter gunmetal gate pattern dry riser outlets with flanged inlets and female instantaneous outlets fitted with plugs secured by short chain and conforming to B.S 5041: Part 2:1976.

Air Release Valve

Air Release Valve shall be fixed to the dry riser terminating at least one metre above the topmost landing valve. The above valve shall be automatic air release valve of iron Grade E conforming to B.S. 1452. Float Guide and Seat Ring shall be of A.B.S plastic with seal ring of molded rubber, Maximum working pressure of the valve is to be 16 bar.

Earthing

The dry riser shall be electrically earthed by a direct earth connection. The installation of the earthing to be carried out by the electrical Sub-Contractor

Non-return valve

The non-return valves up to and including 80mm diameter shall conform to B.S 5153:1974 with flanges to B.S 4504 PN 16. The valves shall be of cast iron construction with gunmetal seat and disc with spring of phosphor bronze.

Gate Valves

The gate valves up to and including 80mm shall be non rising stem and wedge disc to B.S. 1952:1964 (B.S 5154:1974) with screwed threads to B.S.21(KS ISO 7 – 1) taper thread. The valves shall be of high grade bronze construction.

Gate valves exceeding 80mm and up to 300mm shall be to B.S 5163 with flanges to B.S 4504 PN 16. The valve is to be double flanged cast iron wedge gate valve for water works purposes with cast iron body to B.S 1452 GRADE 14 with rubber covered cast iron gate. The stem is to be of Forged Stainless Steel to B.S 970 with cast iron hand wheel.

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.

Hose cradle

The hose cradle shall be a high quality fitting designed for use in public buildings. The cradle shall be made in aluminum throughout and shall be supplied with a wall bracket and the finish shall be polished or chrome plated.

Testing & Commissioning

The installation is to be tested to one and half times the working pressure of the installation, all to the approval of the Engineer. The pressure shall be maintained for about 1 hour ensuring that there is no change in pressure is observed

FIRE HYDRANTS

The fire-hydrant system shall comply to the requirements of B.S. 5306 Part 1. The fire hydrants shall be of the screwdown type to B.S. 750 type 2. These shall be of meehanite cast iron body with bronze spindle rings and nut and nickel-plated mild steel bearing plate. Units shall have discharge capacity of not less than 34 1/s (450 gal/min) at a constant running pressure of 1.7 bars. Units shall be installed underground in a concrete block chamber with surface box manufactured from meehanite cast iron (medium or heavy traffic design as specified) all to B.S. 750. The cover shall be inscribed F.H and chained to the box, all as manufacturer by Glenfield Ltd., or equal, approved. An indication plate to B.S. 3251 and of approved manufacture shall be installed at a nearby and conspicuous position

Installation
The fire hydrants are installed along the water mains with the first hydrant at a location which is not more than 60 m from the entry of any building and they should not be more than 120 m apart.

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

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

Body seating for the valves shall be of copper alloy complying with the requirements of BS 1400 (KS 06 – 744 – 1:1991) or high tensile brass complying with the requirements of BS 2872 or BS 2874.

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

Spindle & Spindle Cap
The spindle note shall be either of the same material as the spindle, or of copper alloy complying with the requirements of BS 1400 (KS 06 – 744 – 1:1991). It shall have a squared top formed to receive either a cast iron spindle cap.

The spindle shall be made of copper alloy complying with the requirements of BS 2874 (KS 06 – 744 – 1:1991), and it shall have a threaded machined of trapezoidal form. The spindle cap shall be of a cast iron secured to the spindle by on M12 hexagon socket set screw conforming to BS 4168.

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

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

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

The screwed outlet shall be made of Copper alloy to BS 1400 (KS 06 – 744 – 1:1991), or Copper alloy to BS 2872, or Suitable Spheroidal graphite iron to BS 2789 protected against corrosion accordance with CP 2008.

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

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

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

Surface Box.
The clear opening of hydrant surface boxes at ground level shall not be less than 250mm x 380mm.
The depth of frame shall normally be
a) for boxes located on footpaths: 100mm
b) For boxes located in roads: 125mm

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

Surface Box Covers & Frames.
The surface box frames and covers shall be graded in accordance with BS 497:1967 and shall meet the loading test requirement also given in BS 497

Stand Pipes
One end of these shall have internal threads to couple with the 80mm diameter external threads of the screw down type or above ground fire Hydrant (BS 750 type 2 hydrants) outlet. It shall have 65mm diameter internal threads to couple with the interconnect or hose of the pump set

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

Testing
Necessary test certificates from the manufacturer shall be needed. The test, to conform to BS 750: 1977:

PARTICULAR SPECIFICATIONS FOR SPRINKLER SYSTEMS

SECTION 1

General
Regulations and Standards

The Works shall comply with the current editions of the following:

a) The Kenya Government Regulations.
b) The Fire Protection Systems installations shall comply in all aspects to the requirements set out in the Loss Protection Council's Rules which incorporates BS 5306: Part 2 (1990)

c) National Fire Protection Association (NFPA) Standard 13 of USA

d) Factory Mutual International (FMI) Standard 2 – 8N

e) Verband der Sachvisicherer (VdS) rules

f) Comite Europeen des Assurances (CEA) Splinkler system planning and installation.

Plans

Shop design Plans and flow calculation shall be done by the manufacturer based on engineers drawing and specification and shall conform to NFPA

Approval of Installations

Equipment and devices in this project shall be either be listed or approved according to NFPA

Safety Requirement

Safety requirement for the entire installations shall conform to NFPA

Testing of the Installations

Testing and commissioning of the entire installation shall done according to NFPA

REFERENCES
National Fire Protection Association (NFPA):
NFPA 13 – Standard on water sprinkler system
NFPA 14 – Standard on water hydrant system
NFPA 14 – Standard on Carbon Dioxide Extinguishing Systems.
NFPA 70 – National Electrical Code.
NFPA 72 – Standard For Protective Signaling Systems.

SECTION 2
PART 1 – GENERAL
1.01 DESCRIPTION OF WORK:
A. Supply and installation of wet Sprinklers, wet hydrant, firefighting system
B. Drawings: The contract drawings indicate the general arrangements of the wet Sprinklers firefighting system

General

The particular specification details the requirements for the supply, installation and commissioning of the Automatic Sprinkler Installation. The sprinkler installation shall comply in all respects to the requirements set out in National Fire Protection Association (NFPA), BS-EN-12845 and the Fire Offices' Committee Rules for Automatic Sprinkler Installation, 29th Edition for Special Hazard Class I - IV Installation.

The 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.

No claims for extra payment shall be accepted from the Contractor because of his non-compliance with the above requirements.

If in the opinion of the Contractor there is a difference between the requirements of the specification and the Contract Drawings, he shall clarify this difference with the Engineer before tendering.

Climatic Conditions

(a) The following climatic conditions apply at the site of the Works and all plant, equipment, apparatus, materials and installations shall be suitable for these conditions.

(b) Where not otherwise stated, all ratings of plant, equipment and apparatus shall be interpreted at site rating and NOT sea level or other ratings.

(c)

Maximum temperature	32°C
Minimum temperature	4°C
Average temperature	13°C
Range of relative humidity	40 - 95%
Altitude	1800m above sea level
Latitude	01°19'S
Longitude	36°C 55'E

Rainfall Extremely heavy at certain "periods

The Contractor shall be deemed to have taken account of the above details in his prices and his planning of the execution of the Works.

Scope of Works

The Contractor shall supply, deliver, erect, test and commission all the automatic fire fighting sprinkler installation which is called for in this specification and shown on the Contract Drawings listed in the drawing schedule.

Automatic Sprinkler Pump Sets

The automatic sprinkler pumps shall consist of an automatic horizontally mounted centrifugal electrically driven pump; an automatic horizontal!}- mounted diesel engine-driven fire pump and jockey pumps. All the Pumps Shall be UL listed/FM approved

Pumps shall be connected to the normal incoming electrical grid main and to the standby generator and the other to be coupled to a diesel engine.

Pumps

Electric Fire Pump
1No. Electrically driven Pump to NFPA 20 and BS 2613/1970 and BS 5306 Part 2 Standards. The pump to be complete with isolating valves, non-return valves, strainers, pressure gauges and automatic Engine starting Mechanism to be connected to the control panel Electric Fire Pump Controllers shall be designed to control and monitor the fire pumps, fulfilling the requirements described by the fire-pump controller standards.

The fire-pump controllers monitor the operation status and in the case of fire, the controller will receive a signal from the pressure switch and start the fire-pump. Fire controllers shall be wired fail-safe, and in the event of any control, cable becoming loose will start the fire pumps. The controllers shall operate the pumps in an automatic on / manual off condition. Once the fire pump has started via the controller, shall not stop until it is manually shut down.

Provision shall be made for low level cut outs to the pumps to prevent dry pump run in the event of low level water conditions.

The pumps shall be provided with a plate giving the output pressure at the nominal flow specified. Where the performance characteristic is achieved with an orifice plate not integral with pump delivery, the pump nameplate shall carry a reference to the face that the performance given is that of the pump and orifice plate combination
and reference shall be made to the orifice K factor.

The electric supply shall be obtained from the main public supply. The electrical connections shall be such that a power supply is always available for the motor when the switches for the distribution of the other power throughout the premises are open. Any switches on the power feed to the motor must be clearly labeled "SPRINKLER PUMP MOTOR SUPPLY - NOT TO BE SWITCHED OFF IN THE EVENT OF FIRE".

A tell-tale indicator lamp or lamps shall be provided to show that; there is a power supply available for the motor. The failure of any one phase of the supply shall be indicated. The indicators shall be near the pump and so placed that the maintenance personnel can readily see it. All indicator lamps shall be in duplicate.

An automatic warning of power failure to the motor starting switch (of any one phase of the supply) shall be given visually and audibly at some suitable location. Power to this warning shall be taken from a separately switched sub circuit to that feeding the motor.

Jockey Fire Pumps

2No, Electrically driven Jockey pump to NFPA 20 Standards. The pump to be complete with isolating valves, non-return valves, strainers, pressure gauges and automatic Engine starting Mechanism to be connected to the control panel
Jocky Fire Pump Controllers shall be designed to control and monitor the fire pumps, fulfilling the requirements described by the fire-pump controller standards.

The fire-pump controllers monitor the operation status and in the case of fire, the controller will receive a signal from the pressure switch and start the fire-pump. Fire controllers shall be wired fail-safe, and in the event of any control, cable becoming loose will start the fire pumps. The controllers shall operate the pumps in an automatic on / manual off condition. Once the pressure drop the duty jockey pump shall stay and in event it is unable build up pressure the system shall start automatically shall not stop until it is manually shut down.

Diesel Fire Pump :
1No. Diesel driven Pump to NFPA 20 Standard. The pump to be complete with isolating valves, non-return valves, strainers, pressure gauges, engine, 200 liter Diesel storage tank full of diesel and automatic Engine starting Mechanism to be connected to the control panel

Diesel Fire Pump Controllers shall be designed to control and monitor the fire pumps, fulfilling the requirements described by the fire-pump controller standards. The fire-pump controllers monitor the operation status and in the case of fire, the controller will receive a signal from the pressure switch and start the fire-pump. Fire controllers shall be wired fail-safe, and in the event of any control, cable becoming loose will start the fire pumps. The controllers shall operate the pumps in an automatic on / manual off condition. Once the fire pump has started via the controller, shall not stop until it is manually shut down.

The Engine Room shall be provided with adequate ventilation for the air required for aspiration and to limit the temperature rise in the room, to 10°C above the ambient temperature when the engine is on full load.

Type and Design

Vertical type multi-cylinder four-stroke engine, complete with all \ necessary ancillary equipment and drives, constructed to comply with BS 649 and suitable for running continuously on oil engine fuel to BS 2869, Class A.

The engine must be: -

Of the compression ignition mechanical direct injection type, capable of being started without the use of wicks, cartridges, heater plugs or either, at an engine room temperature of 7°C and must accept full load within 15 seconds from the receipt of the signal to start.

Naturally aspirated. Super-charged or turbo-charged and water/ cooled.

Capable of operating continuously on full load at the site elevation for a period of six hours.

Provided with a governor to control the engine within 4.5% of its rated speed under any condition of load up to the full load rating.

Any manual device fitted to the engine, which could prevent the engine starting, must return automatically to the normal position.

The coupling between the engine and the pump must allow each unit to be removed without disturbing the other.

Rating

The rating shall be continuous as defined in NFPA and B.S. 649

Speed and Governing

The normal speed of the engine shall be 1500 revolutions per minute.
Speed governing shall be BS 649, Class A, and over speed, protection shall be provided.

Cooling

Engine cooling shall be by water jacket, with water circulating pump and heavy-duty radiator with mechanically or electrically driven fan. The radiator shall be fitted with flanges or other suitable arrangement to enable ventilation ductwork to be attached with airtight joints. The fan rating shall be adequate allowing for the additional resistance to airflow of any ductwork and louvers fitted.

The cooling equipment shall be composite with the engine.

A thermostatically controlled valve shall be provided in the cooling system to assist rapid heating up of the water in the engine jacket when starting from cold and to control its temperature rise a water-cooled lubricating oil stabilizer complying with BS 3274, shall be

incorporated in the engine cooling system. Sufficient inhibitor shall be added to the cooling water to protect the cooling system from internal corrosion

Engine Starting

Engine starting shall be by a battery powered electric starter motor;, complete with automatic starting and sequencing control equipment and starter cut-out switch. The engine starting control equipment shall be arranged to disconnect the mains operated batten" charger to prevent it from being overloaded during starting. The starter motor shall be of adequate power for its duty* and of the "non-hold-on" type in which the pinion is moved axially to engage within a gear-ring on the engine fly wheel before the starter motor is fully energized. The pinion shall positively disengage when the engine starts or when the motor is de-energized.

Fail-to-Start Protection

The starting equipment shall incorporate a suitable automatic process timer, so arranged that, if the engine fails to start within a reasonable time (e.g. 8 seconds). The starter motor shall be disconnected. The starting attempt shall be repeated after an interval of 3 seconds and, if necessary, repeated a third time. If the engine fails to start at the third attempt, the starter motor shall be automatically isolated from the battery.

Disconnection of the starter by the fail-to-start device shall operate the visual warning indicator(s) and audible alarm(s) specified, hereafter.

Engine safeguards

Safeguards shall be provided and arranged to stop the engine automatically by de-energizing a solenoid coupled to the stop lever on the fuel injection pump rack. The operation of this safeguard shall at the same time give individual warning of the failure by illuminating an appropriate visual indicator and sounding audible alarm(s) as specified hereafter.

The safeguards shall operate when any of the following conditions occur, irrespective of whether the set is on automatic or manual control: -

Engine Over speed.
High Cooling Water Temperature
Low Lubricating Oil Pressure
Low Cooling Waiter Level

A key operated switch shall be fitted on the control panel and so connected as to override the engine safeguards and. in an emergency, allow the engine to be restarted under manual control, but with the visual warnings remaining operative.

Oil Dipstick

A lubricating oil level dipstick suitable graduated shall be provided and located in accessible-position. The engine shall be totally enclosed and the engine components shall be lubricated via pressure oil system from an integrated oil pump driven by the engine.

Starting Handle or Barring Gear

Suitable means shall be provided for turning by hand the engine main shaft and the associated pump to facilitate inspection and overhaul and to allow hand starting if necessary.

Starter Battery

The starter battery shall be 24 volts heavy duty high performance quality lead-acid type of adequate size, suitable for trickle charging and rapid re-charging after use and shall be supplied complete with corrosion resisting outer container or box of an approved type standing direct on the floor.

The type, voltage and ampere-hours capacity' of the batter}' shall be stated in the appropriate schedule. The battery shall be supplied in a fully charged state ready for use and shall be complete with hydrometer for testing and electrolyte.

The tender price shall be based on the provisions of a lead-acid type battery, but an alkaline battery may be offered as an alternative and, together with its charging equipment, shall then be separately described and priced in the appropriate schedule.

Dynamo, Cut-out etc.

An engine driven battery-charging dynamo (or alternator with static-rectification) of adequate capacity shall be provided complete with cut out, automatic voltage regulator, ammeter, wiring and engine mounted control board.

Engine Instruments

The following dial type engine instruments shall be provided: -
Engine shaft speed indicating tachometer reading revolutions per minute.
Service hours counter.
Lubricating Oil Pressure Gauge.
Lubricating Oil Thermometer.
Cooling Water Thermometer.

The instruments may be mounted on a suitable panel fixed to the engine or may be incorporated in the main control panel.

Exhaust System and Silencing

The exhaust system shall be manufactured in heavy quality steel tubing to BS 1387, fitted with suitable robust flexible gas tight sections close to the engine to allow engine movement and to reduce the transmission of engine vibration to the remainder of the exhaust system and the surroundings. Bends shall have a minimum radius of three times the diameter of the tube. As far as possible, flexible sections shall be vertical, free from bends and have sufficient length or slack to allow free movement without damage.

Silencers shall be of heavy-duty baffle and absorption type, so designed and installed as to reduce noise to the minimum practicable level without appreciably impairing the working efficiency of the engine.

The silencers and exhaust pipework shall be property and adequately supported clear of fuel tank and feed pipes, and shall be provided with suitable insulation to protect personnel, plant and buildings from excessive heat.

The pipework shall drain away from the exhaust manifold and drain cocks shall be fitted in the lower parts of the system to enable condensate readily to be removed.

The system shall be so constructed as to enable it to be readily dismantled for maintenance. Bolts, washers and nuts shall be greased with graphite grease or other suitable heat resisting lubricant during assembly.

The finish of all exhaust pipework and silencers exposed to the open air shall be sprayed metallic aluminum by a process complying theBS 2569, Part 2, Process A.

The exhaust system shall terminate at a safe point outside of the building to be approved by the Engineer.

Intake Air Cleaner

A suitable arid efficient air cleaner/silencer of an approved type complying with BS 1701 Grade 'A' or 'B' for use in a medium atmosphere shall be fitted on the air intake manifold.

Drain Plugs and Cocks

Drain plugs and cocks, as appropriated shall be fitted adequately to drain the engine of lubricating oil, water and fuel. They shall be designed and constructed as to be free from leaks and so positioned as to be readily accessible and allow draining to be undertaken without need for special receptacles.

Fuel and Lubricating Oil Filters

Suitable and efficient oil filters of an approved type and construction, having replaceable filter elements, shall be provided in the fuel oil and engine lubrication systems. The oil filters shall be readily accessible and allow the elements to be changed without difficulty. The fuel oil filter shall be located as close as possible to the fuel pumps manifold.

Wiring and Engine Unit

The electrical wiring on the engine unit shall be carried out with MECC cable having a conductor minimum cross-section of 1.5mm^2 for single core cables and for multi-core cables.

All wiring shall be adequate!}- supported and protected from accidental damage and properly installed and terminated in suitable boxes with flexible connections, all in accordance with the manufacturers recommendations. Special arrangements shall be made where wiring is subject to movement and vibration. Mains voltage circuits and extra-low voltage circuits shall be segregated as practicable.

Fuel Tank and Connections

A fuel oil service tank shall be provided having a capacity sufficient to give ten hours full load running of the engine and manufactured and installed generally in accordance with BS 799, Part I. The tank complete with all necessary pipework, valves and connections, shall be arranged as an integral part of the set or shall be installed at high level on adequate and approved supports adjacent to the set.

The service tank shall be clearly lettered to indicate the type of oil to b e used and the capacity of the tank in litres and gallons, and shall be provided with the following: -

(i) Filling orifice, oil strainer, filling pipe extension and filler cap. .
(ii) Vent pipe to atmosphere.
Dial type contents level indicator, with adequate size scale clearly marked in proportional part content, i.e.empty, quarter, half, three-quarters and full.
(iv) Connections for the engine leak-off return pipe (where necessary).
Drain valve and drain hose connection.

Fuel Tank Filling Pump

A cast iron wall mounted hand operated semi-rotary fuel transfer pump shall be proved of a size capable (with normal operation) of transferring .fuel from the delivery drum or other vessel to the service tank at a rate of at least twenty' times the maximum consumption of the engine when at full output.

Coupling to Pump

The engine shall be coupled to the pump in an approved manner in a monobloc arrangement or by a suitable shaft coupling and satisfactorily guarded to comply with BS 1649.
The Contractor shall state the method of coupling proposed.

Installation Control Valves

The Contractor shall supply and install approved installation control valves called for on the Contract Drawings and in this specification. The installation control valves set shall comprise of a main stop valve, wet pipe alarm valve, a water motor alarm and gong and installation pressure gauges.

Spare Parts

The following spare parts shall be supplied with the engine and kept on hand: -
Two sets of filters, elements and seals.
Two sets of lubricating oil filter elements and seals.
Two sets of belts.
One complete set of engine - joints, gaskets and the hoses.
Two injector nozzles

Control Panel

The Control panel is to be of Powder coated mild steel construction or other approved material, moisture-proof and insect and rodent-proof and shall be provided complete with a wiring diagram that is moisture-proof and may be mounted on the common pump base frame and to conform to NFPA .

Pressure switches shall control the pump operation, the control panel is therefore to include the following: -

Manual Stop/Reset push button to No. 1 duty pump connected to Electrical Mains.
Manual Stop/Reset push button to No. 2 standby pumps connected to diesel pump.
Test push button with green indicator light to No. 2 stand by pump.
Electric Alarm bell provided for remote warning of systems operation during pump run.
Red warning for indication no water in storage tank.

Sprinkler Heads

The sprinkler heads shall be of conventional pattern, designed with a universal deflector and similar to "GRINNELL" type E., quartzoid bulb sprinkler heads as manufactured by Womald Ltd. or equal and approved.

All sprinkler heads shall comply with the following requirements: -

- Nominal Size 20mm.
- 'K' Factor 80%.
- Temperature Rating 68°C (Red Colour).
- Temperature Rating 141°C (Blue Colour).

Pipework

Materials for piping and the standards covering these installations shall be as described in NFPA 13. Black or galvanized steel pipe shall be either ASTM A 53 seamless grooved for pipe bigger than 65mm while 50mm and below to be electric welded, Grade A or B. The Pipe shall be Schedule 40 and above.

Pipe Supports ;

The variety and type of pipe supports shall be kept to a minimum and their design shall be such as to facilitate quick and secure fixing to both metals, concrete and would.

Piping shall be secured in the normal manner with pipe clips. 'If bolts shall not "be used as substitute for pipe clips.

Where the design of the structure is in reinforced concrete pipe hangers and brackets shall be secured to the structure by means of redheads, raw bolts or other approved means.

Where the structure is constructed to hollow clay pot and concrete fill the Contractor shall arrange for his pipe hangers and brackets to be supported from the concrete columns and beams. No raw bolts and redheads shall be inserted in any clay pot construction unless specifically and exceptionally approved by the Engineer.

An approximate guide to maximum permissible support spacings in millimeters for different classes of pipe and tube is given for horizontal runs in the following table: -

Vertical pipe runs shall be supported at intervals not greater than one and a half times the distance shown in the table below: -

Size N//Bore (mm)	Copper to BS 659 (mm)	Steel Tube to BS 1387 Heavy Grade (mm)
15	1200	1800
20	1200	2000
25	1500 .	2500
32	1500	2500
40	1800	2700
50	1800	3000
65	1800	3400
80	200	3400
100	2500	3700
125	2700	4000
150	2700	4300

The Contractor shall submit all pipe support design proposals for the Engineer's approval. Positions and type of supports shall be shown on the working drawings and submitted to the Engineer's approval.

Pipe hangers to be as Hira walraven,Ul Listed,BIS Heavy Duty Industrial Clamps, 5" Locking Bolts, HD1501 (M8/10, M10/12 (cat No. BUP 1000),BIS Rubber Lined Split Clamp, All hangers to be sound insulating as DN 4109, and 800mm raw bolt. All the hangers to be equal spaced at a distance of 600mm.for the entire length of the pipeline

Pipe Fittings

The pipe fittings for sprinkler systems shall comply with high quality steel pipe fittings to B.S 1740 Part 1 with B.S 21 (KS ISO 7 – 1) tapered points threads and NFPA 13.

Flanges

The flanges shall comply with BS 4504:1969. All flanges shall comply with a nominal pressure rating of 16 bar (PN 16) and shall be either grey cast iron or steel with raised faces.

Gaskets

The gaskets for use with flanges to BS 4504: 1969 shall comply with BS 4865 Part I 1972 for pressure up to 64 bars.

Foot Valves

The foot valves shall be as Glenfield check valve No. 5803 to BS 5153: 1974 incorporating strainer, with flanges to BS 4504 PN 16.
The strainer shall be Mechanic Cast Iron with strainer area not less than twice the suction pipe area.

Non-Return Valves

The non-return valves shall be as Glenfield No. 5003 conforming to BS 5153: 1974 with flanges to BS 4504 PN 16,
The body, door and cover are to be of Mechanite Cast Iron construction with gunmetal seat to BS 1400.

Gate Valves

The gate valves up to and including 150mm diameter shall be as Glenfield RS Gate Valve 3500 series to BS 5163 with flanges to BS 4504 PN 16 with raised faces. The valve is a double flanged cast iron wedge gate valve for water work purposes with Methanide Cast Iron body to BS 1452 Grade 14 rubber covered Methanide Cast-iron gate. The stem is to be of forged stainless steel to BS 970 with Methanide cast iron hand wheel.

Finish. Painting

Upon completion of testing and commissioning the sprinkler installation shall be painted with INo. coat red oxide and 2No, coats of paint to the Engineer's requirements.

Approval of Automatic Sprinkler System

After the tender contract has been let, the Contractor shall prepare complete detailed working drawings of the protection with plans of the floor, details of water supplies up to the installation control valve and any pressure reducing valves, water meters, water locks and any orifice plates. The drawings shall be on an indicated scale not less than 1:100. A key of any symbol used is to be included. A summary schedule should be included stating: -

Total number of sprinkler heads on each installation.
Height of highest sprinkler head in each installation.
Type of installation, in this case to be wet pipe S3rstem and the size of main control valves to be indicated.

The Contractor to the City Commission, Chief Fire Officer, shall submit the above data for final approval before erection of the equipment is commenced.

Instruction Period

The Contractor shall allow in his contract sum for instructing of the use of the equipment to the Client's maintenance staff. The period of instruction may be within the contract period but may also be required after the contract period has expired.
The period of time required shall be stipulated by the Client but will not exceed seven days in which time the Client's staff shall be instructed in the operation and maintenance of the equipment.

Maintenance and Servicing Contract

The Contractor shall, if required, enter into a maintenance and service agreement, with the employer, for this installation.

BID EVALUATION CRITERIA

MANDATORY EVALUATION

ITEM	MANDATORY REQUIREMENT	SUBMITTED (YES / NO)
1	Tender securities of **Kes. 3,000,000** from a local commercial bank valid for 120 days from the date of tender opening **(Mandatory).**	
2	Certificate of incorporation/registration	
3	Valid tax compliance certificate	
4	Valid registration with National Construction Authority (NCA1) in *Mechanical Works, Firefighting, Plumbing and Drainage.*	
5	Valid county Government Plumbers Licenses.	
6	Catalogues for equipment (**All the material specified in the BoQ)** to be supplied.	
7	Certified trainer by the Director of Occupational Safety and Health Services in Occupation Health and Safety	
8	Certified trainer by the Director of Occupational Safety and Health Services in First Aid Providers	
9	Work Plan and Methodology	
10	Signed and stamped **Britam Supplies code of Conduct (appendix 1)**	
11	Signed and stamped **Business Probity and Litigation History (appendix 2)**	
12	Certificate of mandatory Site visited signed and Stamped by the client	

Full Compliance by the tenderers shall be required. Hence, the tenderer shall not proceed to Technical evaluation.

TECHNICAL EVALUATION

ITEM	DESCRIPTION	Marks Total 100
1	**Compliance With Technical Specifications:** **(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)** *The Bidder for Evaluation shall attach evidence of the requested items.*	**65**
1a	*Manufacturers Compliance and Certificate attached:* *UL Listed* *FM Certified* *Any other internationally recognized certification e.g. EN,* ***(100% yes - 10 otherwise- 0 mark)***	*10*
1b	*Technical Compliance as per* ***Technical Compliance Schedule*** *Below* ***(100% yes 25 otherwise 0 mark)***	*25*
1c	*Work Plan and methodology as per* ***methodology Compliance Schedule*** *Below* ***(as per the marks below)***	*35*
2	**Qualification And Experience of KEY Personnel** Academic Qualifications and Experience (Evidence to be provided)	
2a	Director of the firm: - 1No. Holder of at least a Diploma with 10yrs experience in relevant Engineering field	1
2b	Project Managers: - 1No. Holder of at least a Diploma with 5yrs experience in relevant Engineering field	1
2c	Artisans with Trade Test Certificate in Relevant Field: - 5No. Holder of at least a Certificate with 5yrs experience in relevant Engineering field	5
2d	Occupational Health & Safety – Trainer (Bidder to provide CVs supported by academic /professional certificates) One (1No.) Occupation Health and Safety trainer registered under the Company or collaborating companies	1
2e	Occupational Health & Safety – First Aider (Bidder to provide CVs supported by academic /professional certificates) One (1No.) First Aid Providers trainer registered under the Company or collaborating companies	1
3	**Experience of the firm in similar services** Provide One (1No.) projects of similar nature, complexity or magnitude in the last 5 years (Evidence to be Provided in form of completion letters or equivalent)	5
4	**Financial Reports**	

4a	Audited Financial report (Certified on each page) – Last 3 Years Average Annual Turn-over equal to or greater than the cost of the project	2
4b	Evidence of Financial Resources (Cash in Hand, Lines of Credit, Overdraft Facilities, etc.: Financial Resources should finance the projected monthly cash flow for three months.	3
5	**Adequacy of Tools and Equipment** Bidder must give proof of ownership or leasing of equipment	
5a	Transport: 2No. Trucks 2No. Pickups'	 1 1
5b	Equipment: 2No. Welding Machine 2No. Steel Grooving Machines 2No. Powered Threading Machines 2No. 30 Bar Pressure Testing Unit Drills tools Cutting Tools PPE Equipment HDPE Pipes joining tools HDPE pipes cutting tools	 1 1 1 1 1 1 1 1 1 1
Total		

Technical Compliance Schedule

Item	Description	Specifications	Certification	Document Required
A1.01	Sprinkler heads	Closed head conventional pattern pendant sprinkler head with universal deflector and quartzite bulb. K factor 8.0.	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.02	Valves	Grooved Monitored butterfly valve as GLENFIELD	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.04	Piped, Tubing and pipes fitting	Factory prefabricated ASTM A 53 seamless grooved Schedule 40 Tubing installed in Storage Racking complete with couplings. All pipes shall be factory fabricated & powder coated externally & internally with red color coding for fire systems **(Kindly note no site fabrication shall be permitted)**	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.05		Tubing in walling and ceiling complete with couplings drops	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.06	Piped, Tubing and pipes fitting Fabricator	Specialized Fabricator NFPA approved	• NFPA Approved or UL listed/FM approved	• NFPA Approval or UL listed/FM approval Certificate for Fitting / Equipment to be attached
A1.07	Pressure Relief valve	pressure relief valves	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.08	Pipe Hangers	As Hira walraven, Ul Listed,BIS Heavy Duty Industrial Clamps, 5" Locking Bolts, HD1501 (M8/10, M10/12 (cat No. BUP 1000),BIS Rubber Lined Split Clamp, All hangers to be sound insulating as DN 4109, and 800mm raw bolt. All the hangers to be equally spaced the entire length of the pipeline or equivalent in performance and certifications	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.10	Sprinkler pipe Bellows	expansion Bellows of series EBF521 or equal and approved,	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.11	Pressure	Sprinkler pressure BMS	• UL listed/FM approved	• Catalogue for

	gauge	compatible Gauges		Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.12	Water Flow meter	Sprinkler Water flow meter BMS compatible	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
A1.13		Allow for testing the heads of the Sprinkler installation system during progress of the works and again at the completion to the satisfaction of the Engineer and the Local Authority	• UL listed/FM approved	• Catalogue for Fitting/Equipment to be attached • UL listed/FM approved Certificate for Fitting / Equipment to be attached
	HDPE pipes PN 16	Pressure rating 16bars	ISO 4427, ISO 4437, EN 12201, EN 1555, ASTM F714, ASTM D3035, ASTM D3350, AWWA C906, AWWA C901	Catalogue for Fitting/Equipment to be attached • approved Certificate for Fitting / Piping to be attached

METHODOLOGY

1	Explain clearly your understanding of the scope of the works as per the mandatory pre-tender site visit	5
2	Explain your plan to execute the work with understanding the facility is in operation with minimal disruption	5
3	Explain clearly material and debris handling within the facility Supply Storage Material movement within the building Removal of debris and excess material	5
4	Provide clear work program, work plan and material procurement schedule	5
5.	Explain clearly testing & commissioning method for the complete systems including the existing and giving complete data and report using certified personnel	5
6	Explain clearly risk management strategy and mitigation measures. Risk associated with the works Health and safety of the contractor staff Health and safety of the residents and visitors Installation risks	5
7	Describe clearly type of warranties of the new installations and the existing after commissioning	5

N/B: Full Compliance by the tenderers shall be required to score 70% of the technical. Hence, the tenderer shall not proceed to financial evaluation.

FINANCIAL EVALUATION

Bidders who qualify at the technical evaluation shall be evaluated at this stage as per the Client

Appendix 1

BRITAM SUPPLIERS CODE OF CONDUCT

Effective date: 1 September 2018

1.0 GENERAL

This Code applies to all Britam suppliers (hereinafter "Supplier" or "Suppliers") and their employees (be they temporary, casual or permanent), agents and sub-contractors throughout the world.

Britam requires all Suppliers to conduct their business dealings with Britam in compliance with this Code and in compliance with all laws applicable to the Supplier's' business, wherever conducted.

By entering into business transactions with Britam, the Supplier agrees to abide by the terms of this Code and acknowledges that compliance with this Code is required to maintain the Supplier's status as a Britam Supplier.

Britam shall have the right to terminate any Supplier's contract for failure to comply with the provisions of this Code. Britam recognizes that local laws may in some instances be less restrictive than the provisions of this Code. In such instances Suppliers are expected to comply with this Code. If local laws are more restrictive than the Code, then Suppliers are expected to comply with applicable local laws.

2.0 PROVISIONS

In particular, Suppliers must comply with the following:

2.1 Relations with competitors

Suppliers will be required to comply with applicable antitrust or competition laws and will not engage in any restrictive trade practices. Suppliers will at all-times act in a manner that will uphold and encourage healthy competition.

The applicable anti-trust legislation with regard to Kenya operations is the Restrictive Trade Practices, Monopolies and Price Control Act (Cap 504 Laws of Kenya).

2.2 Bribes, Gifts and other Courtesies

2.2.1 Bribes

Suppliers shall not make or offer bribes or payments of money or anything of value to any Britam employee or any other person including officials, employees, or representatives of any government or public or international organization, or to any other third party for the purpose of obtaining or retaining business with Britam.

For the avoidance of doubt Britam considers an act of bribery to include the giving of money , anything of value or advantage to anyone where It is known or believed that it will be passed on to a government official or Britam employee for this purpose.

Suppliers are required to comply with all applicable local anti-bribery legislation. Suppliers are expected to put in place organizational procedures appropriate to their size and scale and to the nature of their operation to ensure the prevention of bribery and corruption.

Every person holding a position of authority in a Supplier company shall report to the Ethics and Anti -Corruption Commission within a period of twenty four (24) hours any knowledge or suspicion of instances of bribery.

2.2.2 Gifts and other business courtesies

Suppliers shall ensure that any expenditure incurred in relation to any particular Britam employee or government official is in the ordinary and proper course of business and cannot reasonably be construed as a bribe or so as to secure unfair preferential treatment.

A general guideline for evaluating whether a business courtesy is appropriate is whether public disclosure would be embarrassing to the Supplier or Britam. Britam employees may accept unsolicited gifts from Suppliers provided:

a) They are items of nominal value – KES 1500 or less, or
b) They are advertising or promotional materials having wide distribution e.g. calendars, stationary etc.; and
c) Acceptance of the gift does not violate any applicable law.

2.3 Employment Relations

The Supplier will comply with all local laws relating to labour, employee health and safety and wages.

2.3.1 Child Labour

Britam suppliers and their subcontractors will not hire children, a child being any person below the age of 16 years unless in the case of Kenya operations under apprenticeship and, in a technical institution, unless authorized under the Industrial Training Act (Cap 237 Laws of Kenya) and supervised by a public authority.

2.3.2 Forced Labour and Disciplinary Practices

Suppliers will:

- Not use forced labour nor require any worker whether local or foreign to remain in employment for any period of time against his or her will.
- Treat workers with respect and dignity and ensure workers are not subjected to any form of physical, sexual, psychological or other form of harassment or abuse.
- Ensure that workers are free to express their views about their workplace conditions without fear of retribution or losing their jobs.

2.3.3 Freedom of Association

Suppliers will allow and respect their employees' right to form or join trade unions of their own choice and to bargain collectively.

2.3.4 Wages and benefits

Suppliers will meet minimum wage requirements and will ensure that all statutory deductions as required under any local laws from time to time are complied with. Suppliers will ensure that working hours as provided for in any employment legislations or regulations in force from time to time to time or in any collective bargaining agreement entered into with the employee's trade union are observed. Suppliers will furthermore ensure that workers are provided with at least one day off during any seven day working period.

2.3.5 Health and Safety

Suppliers will provide their workers with safe and healthy work environments, clothing and other protective gear which as a minimum standard are in compliance with any local health and safety laws and regulations.

2.4 Environmental Matters and the Community

Suppliers will comply with all local environmental laws in force from time to time. Britam encourages its Suppliers to play a role in improving the environment and in so doing Britam shall implement programs that promote a clean environment and reduce waste and seek ways to use and produce products that are environmentally friendly.

Suppliers are required to establish effective communication systems on environmental matters through training and improved Environment Management System awareness. In addition Suppliers shall engage with communities and invest in society in a way that makes effective use of resources including the support for charitable organizations.

2.5 Compliance and implementation

2.5.1 Licenses and Returns

The Supplier will be required to obtain and renew, in accordance with any law or regulations all permits, licenses and authorizations required for it to carry out its business. In addition The Supplier will be required to prepare and file any returns that it may be required to file under its incorporation statute, the Companies Act (Cap 486 Laws of Kenya) or applicable local or Kenyan revenue legislation.

2.5.2 Taxation, Financial Integrity and Retention of Records

- The Supplier will comply with all revenue laws and will not evade tax.
- Suppliers will be required to maintain accurate and reliable financial and business records and shall not have any false or inaccurate accounting books or records related to Britam for any reason. Suppliers shall maintain all business records at the minimum in compliance with the provisions outlined by the Kenya Revenue Authority or local revenue authorities from time to time.
- When any government investigation or audit is pending or ongoing then Suppliers will not destroy any relevant records until the matter has been investigated and closed.

2.6 Business Continuity Management

Britam is committed to delivering sustained, consistent and exceptional services to its customers and meeting the expectations of all stakeholders even in the event of any disruptions.

In view of this; Britam has implemented a Business Continuity Management System (BCMS) according to the requirements of ISO 22301:2012. Britam recognizes the fact that our suppliers play critical roles in the success of our business continuity program.

Britam therefore requires its suppliers to develop and establish a robust framework for documenting, maintaining and testing business continuity and recovery procedures.

Specifically the Supplier shall:

- Have its own business continuity management system, based on an accepted standard (e.g. ISO22301).
- Establish and maintain business continuity strategies and plans which ensure that the Supplier can continue to deliver its services to Britam in the event of any major incident or crisis, and which are compliant with the agreed business continuity requirements and objectives of Britam.
- Provide Britam with a copy of Supplier's top level business continuity policy
- Review business continuity strategies and plans in the event Britam identifies a weakness or noncompliance and implements the agreed improvements within a reasonable timeframe.
- Directly support Britam’s Crisis Management Team upon request by Britam.
- Promptly and accurately complete and return any Britam business continuity questionnaire whenever requested by Britam.
- Participate in Britam's managed business continuity exercises or audits as requested by Britam.
- Notify Britam in case of any incident that could disrupt provision of goods or services to Britam. If the Supplier breaches the obligations in this policy or Britam identifies a weakness in the Supplier's business continuity management system, Britam has the right to audit the Supplier.

2.7 Information security

Despite the value delivered by suppliers in delivering crucial skills, services, products and resources, assets that are accessible by suppliers need to be protected.

In this regard Britam has implemented an information security management system that mandates Britam to comply with ISO 27001:2013 information security requirements.

This entails maintaining an agreed level of information security and service delivery in line with supplier agreements. Information security incidents such as inappropriate access to or disclosure of sensitive information, Loss of intellectual property or inability of the supplier to maintain the agreed level of information security and service delivery in line with the supplier agreement would potentially diminish the benefits obtained and negatively impact on the Information security position of the company.

In this regard, all Britam suppliers shall:

- Promptly and accurately complete and return any Britam Information Security Questionnaire whenever requested by Britam.
- Safeguard the security of all Britam Confidential Information using appropriate security systems and processes reasonably acceptable to Britam;
- Perform regular and full testing procedures on such security systems and processes;
- Permit Britam, upon reasonable notice to Supplier, to conduct security audits against such security systems and processes (including the right to test the security of any hardware and software used by the supplier in the performance of its obligations under the contract)
- Notify Britam immediately after becoming aware of an incident where any Britam Confidential Information is at risk of unauthorized or unlawful disclosure, loss or damage.

3.0 CODE OF ETHICS FOR BUSINESS IN KENYA

Britam requires all its suppliers to sign up to the Code of Ethics for Business in Kenya at contract award.

4.0 WHISTLE BLOWING

If a supplier becomes aware of unethical acts either by Britam, its staff or other suppliers they should report all pertinent details via one of the following channels which allow for anonymous reporting;

a) Toll Free Numbers

Country	Toll Free Numbers
Kenya	0800724966
Uganda	0800105060
Tanzania	0800780072
Mozambique	843203364
Malawi	24247
Rwanda	4252

b) Electronic Mail

The following email addresses can be used:
Britam@whistleblowing.co.za
reportfraud@britam.com

c) Texting

A WhatsApp message can be send to +27 795 129 361
These options have been provided for in our Website: www.britam.com

5.0 CONFLICTS OF INTEREST

No supplier shall enter into a financial or any other relationship with a Britam employee that creates a conflict of interest for Britam. A conflict of interest arises when the material personal interests of the Britam employee are inconsistent with the responsibilities of his/her position with the company. All such conflicts must be disclosed and approval to the transaction given.
In particular, we would like to also receive information with regard to any conflict of interest matters that may be in existence. Please choose one of the below options and complete the information requested:-

☐ I am not aware of any conflict of interest with Britam Holdings Plc and any of its subsidiaries.

☐ I am aware of any conflict of interest with Britam Holdings Plc and any of its subsidiaries. These have been disclosed as below:-

Name of Britam Staff / Director .....

Nature of Relationship with supplier .....

Position held at the supplier's entity .....

Note: You are obligated to keep updating this information should the situation change after the initial communication. Conflicts of interests should be disclosed via email to suppliersKYC@britam.com.

6.0 VIOLATIONS

Britam reserves the right at its discretion to terminate the contract where there is breach of the provisions of the code of conduct. In other instances Britam may require that corrective action is carried out before it continues partnership with the supplier.

7.0 VARIATION

Britam reserves the right to vary this Code at any time.

8.0 ACKNOWLEDGMENT AND ACCEPTANCE

Once it has been agreed, this code will remain effective throughout the period of engagement until an updated version replaces it. We shall be obliged if you will confirm in writing your agreement to the acceptance of the contents herein by signing one copy in the space provided and returning it to us.

The terms of this code of conduct is accepted by _____
who represents that they are authorised to accept these terms on behalf of the supplier entity.

Signature ……

Position ……

For and on behalf of ……
(Name of company)

We shall be obliged if you will send a copy of this code to the senior executive director or official of each countries where we are in operation and where we have been dealing with yourselves or where you are prequalified as suppliers.

Appendix 2

BUSINESS PROBITY AND LITIGATION HISTORY

Please confirm whether any of the following criteria applies to your organization: Note that failure to disclose information relevant to this section may result in your exclusion as a potential supplier for Britam:

No.	PARTICULARS	RESPONSE (YES or NO)
1.	Is the organization bankrupt or being wound up, having its affairs administered by the court, or have entered into an arrangement with creditors, suspended business activities or any analogous situation arising from similar proceedings in Kenya or the country in which it is established?	
2.	Is the firm is currently involved in any legal process which may result in financial or legal liability and therefore hinder successful and timely implementation of any work awarded?	
3.	Has any partner, director or shareholder been the subject of corruption or fraud investigations by the police, Ethics and Anti-Corruption Commission or similar authority in the country in which your organization is established?	
4.	Has the organization fulfilled obligations relating to the payment of any statutory deductions or contributions including income tax as required under Kenyan law?	
5.	Is there any Director / Partner and / or Company Secretary of your organization who has a close relative employed by Britam and is in a position to influence the award of any supply/service?	
6.	Has your firm or any of your directors/ partners ever been debarred/ deregistered by the Public Procurement Regulatory Authority (formerly PPOA)?	
7.	Has your company had any contracts terminated for poor performance in the last 5 years?	
8.	Has the company experienced any Labour or Industrial Unrest in the last 5 years?	
9.	Would you object to the members of staff of Britam authenticating the information you have provided?	
10.	Has your organization met all its obligations to pay its creditors and staff during the past year?	

Name: _____ Designation: _____

Company Name: _____Stamp or Seal: _____

Signature: _____

Date: _____

SECTION 03:

Bills of Quantities

A TOILET MECHANICAL VENTILATION INSTALLATION

Supply and Install to every detail as described below and in the related specifications and / on the drawings to the satisfaction of the Consulting Engineers.

Item	Description	Unit	Qty	Rates (Kshs.)	Costs (Kshs.)
a1.1	Preliminaries & General conditions	Item	1		
a1.2	**Borehole pump:** Inspect the pump and give price for restoration/maintenance/repair to required working condition. **Note:** A warranty of 1 year on performance of the system without failure is required and in event of misperformance, you shall be required to repair at your own cost and the warranty pushed forward until the system performs for one year without any problem.	Item	1		
a1.3	**Hydro pneumatic pressure booster pumpsets:** Inspect the pumps and give price for restoration/maintenance/repair to required working condition. **Note:** A warranty of 1 year on performance of the system without failure is required and in event of misperformance, you shall be required to repair at your own cost and the warranty pushed forward until the system performs for one year without any problem.	Set	3		
a1.4	**Urinal bowl:** Duravit D-Code urinal bowl (white in colour), rimless, with concealed inlet, for 1/2" connection, includes jet nozzle, inlet-set, with all fixing included, 40mm Chrome plated hinged domed outlet grating, 40mm chrome plated urinal P-trap	No.	1		
a1.5	**Urinal sensor flush valve:** Urinal electronic sensor flush valve IR,230V, cover chrome-plated as Geberit or equal and approved.	RO	1		
a1.6	**Wash hand basin:** **Vanity/countertop basin 545mm**, with overflow, with tap platform (white in colour) with fixing as Duravit D-Code.	RO	1		
a1.7	**Wash hand basin sensor tap:** **Electronic basin mixer** as hansgrohe	RO	1		

Item	Description	Unit	Qty	Rates (Kshs.)	Costs (Kshs.)
a1.8	**1/2"*1/2" ANGLE VALVE**	RO	1		
a1.9	**Bib tap**: 1/2 bib tap exposed inlet & wall plate 190mm projection	RO	1		
a1.10	**Toilet seat cover**	RO	1		
a1.11	**Geberit HDPE Sovent fittings, 100mm dia**	No.	96		
a1.12	Section of the pipe to be added to facilitate installation of sovent fittings	Lm	144		
a1.13	**200mm bore HDPE pipes**	Lm	80		
a1.14	150mm Ditto	Lm	280		
a1.15	100mm Ditto	Lm	125		
a1.16	**200mm HDPE 90^{o} bend**	No.	24		
a1.17	150mm Ditto	No.	25		
a1.18	100mm Ditto	No.	12		
a1.19	**200mm HDPE 45^{o} bend**	No.	22		
a1.20	150mm Ditto	No.	34		
a1.21	100mm Ditto	No.	12		

Item	Description	Unit	Qty	Rates (Kshs.)	Costs (Kshs.)
a1.21	**Rainwater downpipe support system:** Inspect the existing vertical HDPE rainwater pipes within ducts and price for removing of the existing pipe support and installing new supports as described below: • Size Range: (B3373) 4" (100mm) thru 8" (200mm) pipe • Material: Steel • Function: Used for supporting vertical piping. • Approvals: Underwriters Laboratories Listed in the USA (UL), Canada (cUL) • 4" (100mm) - 8" (200mm). • Factory Mutual Engineering Approved (FM) for plain and electro-Galvanized zinc, • 4" (100mm) thru 8" (200mm). Conforms to Federal Specification WW-H-171E & A-A-1192A, • Maximum Temperature: 650°F (343°C)	Item	1		
a1.23	**PC SUM:** Replacement of all the PVC pipework serving basement submersible pumps with HDPE pipes	Item	1		**600,000**
a1.24	PC Sum for Builders on need basis	Item	1		**2,000,000**
a1.25	**BMS INTERGRATION:** Allow for the sum of intergrating the pumps to BMS sytem with control and monitoring capability. All cabling, sensors, modules etc to be included for proper functioning of the sytem to the satisfaction of Engineer.	Item	1		
a1.26	**LABELLING:** Allow sum for putting Up Permanent Labels as **Traffolyte** on all required items such as pumps, control panels, Pipework, Ducts, etc as International standards **(The cost MUST include new and existing installations)**	Item	1		
a1.27	**TESTING & COMMISSIONING:** Sum for Testing and commissioning of the entire installations complete with all accessories, interconnections, controls, BMS link & activation and the necessary programing.	Item	1		
a1.28	**TRAINING:** Sum for Training of client personel / users (At least 5No Staff for 1Week)	Item	1		

Item	Description	Unit	Qty	Rates (Kshs.)	Costs (Kshs.)
a1.29	**DOCUMENTATION:** Sum for Completion documents: Comprising Workshop drawings, manufacturer's technical product catalogues, users manuals, maintenance manuals, as installed drawings, test certificates, etc. **{NOTE: Penultimate Valuation will not be paid until these are fully availed & signed off by the engineer}**	Item	1		
a1.30	**DLP SUM:** Sum for 6 months comprehensive maintenance from date of practical completion i.e. for maintainance and replacement of consumables such as blown out devices, filters e.t.c.	Item	1		
a1.31	Contigency	Item	1		**4,500,000**
a1.32	**Total Exclusive VAT**				
a1.33	Add 16% VAT				
a1.34	**Total Inclusive VAT**				

B SPRINKLER INSTALLATIONS

*Supply, deliver, install test and commisstion and paint the appropriate colour code (signal red) the following fire fighting pipe work. Materials for piping and the standards covering these installations shall be as described in NFPA 13. Black or galvanized steel pipe shall be either ASTM A 53 seamless grooved for pipe bigger than 65mm while 50mm and below to be electric welded, Grade A or B. T**he Pipe shall be Schedule 40 and above.The pump, All valves, pressure gauges, pressure switches, meters and any othe accessories must be ULlisted and/or FM approved.***

Item	Description	Units	Qty	Rates (Kshs.)	Costs (Kshs)
b1.01	UL listed/FM approved Sprinkler system installation control valve of wet system type, complete with stop valve, alarm valve, combine drain and test valve , pressure guages, alarm motor stop valve, strainers, alarm motor and gong, or equal approved.	Set	1		
b1.03	UL listed/Fm Approved 150mm diameter Monitored butterfly valve as GLENFIELD incorporating strainer and flanges	No	1		
b1.04	UL listed/Fm Approved 100mm diameter Monitored butterfly valve as GLENFIELD incorporating strainer and flanges	No	64		
b1.05	**Illusion or Concealed sprinkler head** with Signal white cover plate & Recessed escutcheons, universal deflector and quartzoid bulb operating temperature of 68ºc at 250PSI • Certificate: UL Listed/ FM Approved • Standard: ANSI/ UL 199 • Response: quick • K factor: K 8.0 • Thread: NPT • W. pressure: 200 psi • Finish: Rough brass/ chrome plated/ white • Model: LFII Pendant	No	64		
b1.06	**Window sprinkler head** Quick response Upright Sprinkler Heads with universal deflector and quartzoid bulb operating temperature of 74ºc at 250PSI • Certificate: UL Listed/ FM Approved • Standard: ANSI/ UL 199 • Response: quick • K factor: K 8.0 • Thread: NPT • W. pressure: 200 psi • Finish: Rough brass/ chrome plated/ white • Model: TY-L	No	60		
b1.07	Hose crandle; 30m long x64mm bore collapsible flat hose pipe with swinging angle of 180º complete with nozzle	No	35		

Item	Description	Units	Qty	Rates (Kshs.)	Costs (Kshs)
b1.08	**150mm Diameter tubing in wall and ceiling Complete with Coupling**	LM	150		
b1.09	100mm Ditto	LM	200		
b1.10	**150mm Equal Tee**	No	20		
b1.11	100mm Equal Tee	No	40		
b1.12	50mm Ditto	No	192		
b1.13	40mm Ditto	No	192		
b1.14	32mm Ditto	No	128		
b1.15	25mm Ditto	No	256		
b1.16	150 x100mm reducer	No	20		
b1.17	100x 50mm Ditto	No	40		
b1.18	100x40mm Ditto	No	192		
b1.19	100x 32mm Ditto	No	192		
b1.20	100x25mm Ditto	No	128		
b1.21	50x40mm Ditto	No	192		
b1.22	50x 32mm Ditto	No	128		
b1.23	25x 20mm Ditto	No	128		
b1.24	**150mm Bend**	No	20		
b1.25	100mm Ditto	No	40		
b1.26	25mm Ditto	No	300		

Item	Description	Units	Qty	Rates (Kshs.)	Costs (Kshs)
b1.27	25mm Ul listed flexible fire hoses (500mm long)	No	75		
b1.28	25mm plugs with 15mm threaded screws for sprinkler heads	No	75		
b1.29	**150mm diameter check valve as GLENFIELD incorporating strainer and flanges**	No	4		
b1.30	100mm Ditto	No	4		
b1.31	150mm flanges	No	8		
b1.32	100mm Ditto	No	64		
b1.33	Air Relieve Valve	No	2		
A3.16	Sprinkler Water flow meter BMS compatible for 150mm diameter pipe and shall be UL listed	No	3		
A3.17	0-25bars Sprinkler pressure BMS compatible Gauges on a 150mm pipe	No	3		
A3.18	0-25bars Sprinkler pressure BMS compatible Gauges on a100mm pipe	No	66		
b1.34	Pipe Hangers As Hira walraven,Ul Listed,BIS Heavy Duty Industrial Clamps, 5" Locking Bolts, HD1501 (M8/10, M10/12 (cat No. BUP 1000),BIS Rubber Lined Split Clamp,All hangers to be sound insulating as DN 4109, and 800mm raw bolt. All the hangers to be equaly spaced at a distance of 600mm.for the entire length of the pipeline	Item	1		
b1.35	Allow for painting to Engineers requirement and colour coding to BS 1710: 1984 (1991).	item	1		
b1.36	Allow for testing the heads of the Sprinkler installation system during progress of the works and again at the completion to the satisfaction of the Engineer and the Local Authority	Item	1		
b1.37	Allow for other items not listed above but necessary for the correct and satisfactory functioning of the sprinkler system (please Specify here Below)	Item	1		

Item	Description	Units	Qty	Rates (Kshs.)	Costs (Kshs)
i					
ii					
iii					
iv					
b1.38	**Intergrations:** Allow for the sum of intergrating Fire devices to Fire Alarm system and BMS sytem with control and monitoring capability. All cabling, sensors, modules etc to be included for proper functioning of the sytem to the satisfaction of Engineer.	Item	1		
b1.39	**LABELLING:** Allow sum for putting Up Permanent Labels as **Traffolyte** on all required items such as Fire Suppression Devices, control panels, Pipework, Ducts, etc as International standards **(The cost MUST include new and existing installations)**	Item	1		
b1.40	**TESTING:** Testing in totality of the existing and New Public Health and Fire fighting System to ensure optimum operations. Test Reports to be Availed.	Item	1		
b1.41	**TESTING & COMMISSIONING:** Sum for Testing and commissioning of the entire installations(Fire Systems) complete with all accessories, interconnections, controls, BMS link & activation and the necessary programing.	Item	1		
b1.42	**TRAINING:** Sum for Training of client personel / users (At least 5No Staff for 1Week)	Item	1		
b1.43	**DOCUMENTATION:** Sum for Completion documents: Comprising Workshop drawings, manufacturer's technical product catalogues, users manuals, maintenance manuals, as installed drawings, test certificates, etc. **{NOTE: Penultimate Valuation will not be paid until these are fully availed & signed off by the engineer}**	Item	1		
b1.44	**DLP SUM:** Sum for 6 months comprehensive maintenance from date of practical completion i.e. for maintainance and replacement of consumables such as blown out devices, filters e.t.c.	Item	1		
b1.45	P.C Sum for Fuel Bulk Tank Works	Item	1		4,200,000
b1.45	Contigency	Item	1		2,700,000
b1.46	**Total Exclusive VAT**		1		
b1.47	Add 16% VAT		1		
b1.48	**Total Inclusive VAT c/f to Summary Page**		1		

PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS

Price Summary Page

Item	Description	Costs (Kshs)
c1	Plumbing & Drainage Installations	
c2	Fire Fighting Installations	
c3	**Total Inclusive of VAT**	

Total amount in words: KES_____

Name of firm / company _____

Official rubber-stamp _____

P.I.N. No.: _____V.A.T. Reg. No. : _____

Signed by: _____ Date _____