



EPZA
EXPORT PROCESSING
ZONES AUTHORITY | **KENYA**
Your Investment & Trade Partner

**PROPOSED INVESTOR SHEDS FOR ATHI
RIVER TEXTILE HUB ON L.R. 18474/67 IN
ATHI RIVER, MACHAKOS COUNTY.**

TENDER NO. 32/2023-2024

TENDER DOCUMENT

SPECIFICATIONS AND BILLS OF QUANTITIES

FOR

MECHANICAL INSTALLATION WORKS

CLIENT

EPZA KENYA
P.O. BOX 50563-00200
NAIROBI, KENYA.

ARCHITECTS

PRECISE ARCHITECTS
P.O. BOX 24694-00100
NAIROBI, KENYA.

QUANTITY SURVEYORS

QUANTSCONSULT LTD
P.O BOX 31728-00600,
NAIROBI, KENYA

CIVIL & STRUCTURAL ENGINEERS

CIVIL ONE CONSULTING
ENGINEERS,
P.O. BOX 103409 - 00101
NAIROBI, KENYA

**MECHANICAL/ELECTRICAL
ENGINEERS**

INFRAPLUS LTD,
P.O. BOX 28901- 00100
NAIROBI, KENYA

JUNE-2024.

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(i)

DEFINITIONS

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

Employer: EPZA KENYA
P.O Box 50563-00200
NAIROBI, KENYA

Architects: PRECISE ARCHITECT
P.O. BOX 24694-00100,
NAIROBI, KENYA.

Quantity Surveyor: QUANTSCONSULT LTD
PO BOX 31728-00600,
NAIROBI, KENYA.

Services Engineers: INFRAPLUS LTD,
P.O. BOX 28901-00100,
NAIROBI, KENYA

Civil/Structural Engineer: CIVIL ONE CONSULTING ENGINEERS,
P.O. BOX 103409-00101,
NAIROBI, KENYA

Contractor The firm appointed to carry out Builders Works.

Sub-contractor The firm appointed to carry out Electrical works.

(ii)

FORM OF TENDER SECURITY: BANK

To: EPZA Kenya
P. O. Box 50563– 00200
NAIROBI, KENYA

**ELECTRICAL INSTALLATION WORKS TO THE PROPOSED INVESTOR SHEDS
FOR ATHI RIVER TEXTILE HU ON L.R 18474/67 IN ATHI RIVER, MACHAKOS
COUNTY, KENYA.**

TENDER NUMBER:

WHEREAS..... (hereinafter called “the Tenderer”) has submitted his tender dated.....for the installation of.....
..... (Name of Contract)

KNOW ALL PEOPLE by these presents that WE.....having our registered office at(hereinafter called “the Bank”), are bound unto(hereinafter called “the Employer” in the sum of Kshs..... (2% Of Construct Sum) for which payment well and truly to be made to the said Employer, the Bank bind itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank thisDay of20.....

THE CONDITIONS of this obligation are:

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

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

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

[Date]

[Signature of the Bank]

[Witness]

[Seal]

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SECTION A

INSTRUCTIONS TO TENDERERS

INSTRUCTIONS TO TENDERERS

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INSTRUCTION TO TENDERERS

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

GENERAL

1. Definitions

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

2. Eligibility and Qualification Requirements

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

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

2.3 Joint Ventures

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

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

3. Cost of Tendering

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

4. Site Visit

- 4.1 The tenderer is advised to visit and examine the Site and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract. The costs of visiting the Site shall be the tenderer's own responsibility.
- 4.2 The tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon premises and lands for the purpose of such inspection, but only upon the express condition that the tenderer, his personnel or agents, will release and indemnify the Employer from and against all liability in respect of, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission, would not have arisen.
- 4.3 The Employer shall organize a site visit at a date to be notified. A representative of the Employer will be available to meet the intending tenderers at the Site.

Tenderers must provide their own transport. The representative will not be available at any other time for site inspection visits.

Each tenderer shall complete the Certificate of Tenderer's Visit to the Site, whether he in fact visits the Site at the time of the organized site visit or by himself at some other time.

TENDER DOCUMENTS

5. Tender Documents

- 5.1 The Tender documents comprise the documents listed herebelow and should be read together with any Addenda issued in accordance with Clause 7 of these instructions to tenderers.
- a. Form of Invitation for Tenders
 - b. Instructions to Tenderers

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

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

5.3 All recipients of the documents for the proposed Contract for the purpose of submitting a tender (whether they submit a tender or not) shall treat the details of the documents as "private and confidential".

6. Clarification of Tender Documents

6.1 A prospective tenderer requiring any clarification of the tender documents may notify the Employer in writing or by telex, cable or facsimile at the Employer's mailing address indicated in the Invitation to Tender. The Employer will respond in writing to any request for clarification which he receives earlier than 5 days prior to the expiry of 28 days deadline for the submission of tenders. Written copies of the Employer's response (including the query but without identifying the source of the inquiry) will be sent to all prospective tenderers who have purchased the tender documents.

7. Amendment of Tender Documents

7.1 At any time prior to the deadline for submission of tenders the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the tender documents by issuing Addenda

7.2 Any Addendum will be notified in writing or by cable, telex or facsimile to all prospective tenderers who have purchased the tender documents and will be binding upon them.

7.3 If during the period of tendering, any circular letters (tender notices) shall be issued to tenderers by, or on behalf of, the Employer setting forth the interpretation to be placed on a part of the tender documents or to make any change in them, such circular letters will form part of the tender documents and it will be assumed that the tenderer has taken account of them in preparing his tender. The tenderer must promptly acknowledge any circular letters he may receive.

- 7.4 In order to allow prospective tenderers reasonable time in which to take the Addendum into account in preparing their tenders, the Employer may, at his discretion, extend the deadline for the submission of tenders.

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PREPARATION OF TENDERS.

8. Language of Tender

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

9. Documents Comprising the Tender

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

10. Tender Prices

- 10.1 All the insertions made by the tenderer shall be made in INK and the tenderer shall clearly form the figures. The relevant space in the Form of Tender and Bills of Quantities shall be completed accordingly without interlineations or erasures except those necessary to correct errors made by the tenderer in which case the erasures and interlineations shall be initialed by the person or persons signing the tender.
- 10.2 A price or rate shall be inserted by the tenderer for every item in the Bills of Quantities whether the quantities are stated or not items against which no rate or price is entered by the tenderer will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bills of Quantities.

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

Each price or unit rate inserted in the Bills of Quantities should be a realistic estimate for completing the activity or activities described under that particular item and the

tenderer is advised against inserting a price or rate against any item contrary to this instruction.

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

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

11. Currencies of Tender and Payment

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

12. Tender Validity

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

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13. Tender Surety

- 13.1 The tenderer shall furnish as part of his tender, a Tender Surety in the amount stated in the Appendix to Instructions to Tenderers.
- 13.2 The unconditional Tender Surety shall be in Kenya Shillings and be in form of a certified cheque, a bank draft, an irrevocable letter of credit or a guarantee from a reputable Bank approved by the Employer located in the Republic of Kenya.

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

- 13.3 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.
- 13.4 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible but not later than twenty-eight (28) days after concluding the Contract execution and after a Performance Security has been furnished by the successful tenderer. The Tender Surety of the successful tenderer will be returned upon the tenderer executing the Contract and furnishing the required Performance Security.
- 13.5 The Tender Surety may be forfeited:
- (a) if a tenderer withdraws his tender during the period of tender validity: or
 - (b) in the case of a successful tenderer, if he fails
 - (i) to sign the Agreement, or
 - (ii) to furnish the necessary Performance Security
 - (c) if a tenderer does not accept the correction of his tender price pursuant to clause 23.

14. No Alternative Offers

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

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

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

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15. Pre-Tender Meeting

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

16. Format and Signing of Tenders

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

SUBMISSION OF TENDERS

17. Sealing and Marking of Tenders

- 17.1 The tenderer shall seal the original and copy of the tender in separated envelopes, duly marking the envelopes as “**ORIGINAL**” and “**COPY**”. The envelopes shall then be sealed in an outer envelope.
- 17.2 The inner and outer envelopes shall be addressed to the Employer at the address stated in the Appendix to Instructions to Tenderers and bear the name and identification of the Contract stated in the said Appendix with a warning not to open before the date and time for opening of tenders stated in the said Appendix.
- 17.3 The inner envelopes shall each indicated the name and address of the tenderer to enable the tender to be returned unopened in case it is declared “late”, while the outer envelope shall bear no mark indicating the identity of the tenderer.

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- 17.4 If the outer envelope is not sealed and marked as instructed above, the Employer will assume no responsibility for the misplacement or premature opening of the tender. A tender opened prematurely for this cause will be rejected by the Employer and returned to the tenderer.

18 Deadline for Submission of Tenders

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

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

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

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

19 Modification and Withdrawal of Tenders

- 19.1 The tenderer may modify or withdraw his tender after tender submission, provided that written notice of the modification or withdrawal is received by the Employer prior to prescribed deadline for submission of tenders.

The tenderer’s modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions for the submission of tenders, with the inner and outer envelopes additionally marked “MODIFICATION” or “WITHDRAWAL” as appropriate.

- 19.2 No tender may be modified subsequent to the deadline for submission of tenders.

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

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TENDER OPENING AND EVALUATION

20 Tender Opening

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

21 Process to be Confidential

- 21.1 After the public opening of tenders, information relating to the examination, clarification, evaluation and comparisons of tenders and recommendations concerning the award of Contract shall not be disclosed to tenderers or other persons not officially concerned with such process until the award of Contract is announced.

- 21.2 Any effort by a tenderer to influence the Employer in the process of examination, evaluation and comparison of tenders and decisions concerning award of Contract may result in the rejection of the tenderer's tender.

22 Clarification of Tenders

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

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23 Determination of Responsiveness

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

24 Correction of Errors

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

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

25 Conversion to Single Currency

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

26 Evaluation and Comparison of Tenders

- 26.1 The Employer will evaluate only tenders determined to be substantially responsive to the requirements of the tender documents in accordance with clause 23.

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- 26.2 In evaluating the tenders and thereafter, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:
 - (a) Making any correction for errors pursuant to clause 24.
 - (b) Excluding Provisional Sums, Prime cost sums, if any, reduction in the bill of quantity or Contingencies as the case maybe without any financial implication to the tenderer so long as reduced items had not been executed on site.
- 26.3 The Employer reserves the right to accept any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.
- 26.4 Price adjustment provisions in the Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in tender evaluation.
- 26.5 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in clause 29 be increased at the expense of the successful tenderer to a level sufficient to

protect the Employer against financial loss in the event of subsequent default of the successful tenderer under the Contract.

- 26.6 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a non-indigenous sub-contractor.

AWARD OF CONTRACT

27 Award

27.1 Subject to clause 27.2, the Employer will award the Contract to the tenderer whose tender is determined to be substantially responsive to the tender documents and who has offered the lowest evaluated tender price subject to possessing the capability and resources to effectively carry out the Contract Works.

27.2 The Employer reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders, at any time prior to award of Contract, without thereby incurring any liability to the affected tenderers or any obligation to inform the affected tenderers of the grounds for the Employer's action.

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28 Notification of Award

28.1 Prior to the expiration of the period of tender validity prescribed by the Employer, the Employer will notify the successful tenderer by cable, telefax or telex and confirmed in writing by registered letter that his tender has been accepted. This letter (hereinafter and in all Contract, documents called "Letter of Acceptance") shall name the sum (hereinafter and in all Contract, documents called "the Contract Price") which the Employer will pay to the Contractor in consideration of the execution and completion of the Works as prescribed by the Contract.

Notification of award will constitute the formation of the Contract.

28.2 Upon the furnishing of a Performance Security by the successful tenderer, the unsuccessful tenderers will promptly be notified that their tenders have been unsuccessful.

28.3 Within twenty-eight [28] days of receipt of the form of Contract Agreement from the Employer, the successful tenderer shall sign the form and return it to the Employer together with the required Performance Security.

29 Performance Guarantee

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

29.2 The Performance Security to be provided by the successful tenderer shall be an unconditional Bank Guarantee issued at the tenderer's option by an established and a reputable Bank approved by the Employer and located in the Republic of Kenya and shall be divided into two

elements namely, a performance security payable in foreign currencies (based upon the exchange rates determined in accordance with clause 35.4 of the Conditions of Contract) and a performance security payable in Kenya Shillings. The value of the two securities shall be in the same proportions of foreign and local currencies as requested in the form of foreign currency requirements.

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

30 Advance Payment

An advance payment, if approved by the Employer, shall be made under the Contract, if requested by the Contractor, in accordance with clause 23.7 of the Conditions of Contract. The Advance Payment Guarantee shall be denominated in the proportion and currencies named in the form of foreign currency requirements.

For each currency, a separate guarantee shall be issued. The guarantee shall be issued by a bank located in the Republic of Kenya, or a foreign bank through a correspondent bank located in the Republic of Kenya, in either case subject to the approval of the Employer.

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For each currency, a separate guarantee shall be issued. The guarantee shall be issued by a bank located in the Republic of Kenya, or a foreign bank through a correspondent bank located in the Republic of Kenya, in either case subject to the approval of the Employer

APPENDIX TO INSTRUCTIONS TO TENDERERS

1. CLAUSE 2.1

Change to read “This invitation to tender is open to all eligible tenderers as per the tender advertisement notice”.

2. OMIT

Clauses 4.3, 5.1 (a), (d), (f), (i), (j), 10.3, 10.4, 11.2, 11.4, 15, 25, 26.6, 30

3. MODIFY CLAUSE 5.1(h)

Form of agreement shall be as the Kenya Association of Building and Civil Engineering Contractors (KABCEC)

4. ADD TO CLAUSE 13.1

Amount of tender surety shall be **2% of the tender sum**

5. ADD TO CLAUSE 13.2

Tender surety shall be valid for a period of 150 days from the date of tender opening.

6. MODIFY CLAUSE 28.4

Replace “twenty-eight (28)” with “twenty-one (21)”.

7. MODIFY CLAUSE 29.1

Replace “twenty-eight (28)” with “twenty-one (21)”. Amount of performance security shall be five per cent (5%).

8. ADD TO CLAUSE 29.2

Performance security shall not be divided in two elements and shall be payable in Kenya Shillings Only.

9. ADD TO CLAUSE 24

- (i) In the event of a discrepancy between the tender amount as stated in the form of Tender and the corrected tender figure in the Main summary of the Bills of Quantities, the amount as stated in the Form of Tender shall prevail
- (ii) The Error correction factor shall be computed by expressing the difference between the amount and the corrected tender sum as a percentage of the corrected contract works (i.e. corrected tender sum less P.C; and Provisional Sums)
- (iii) The Error correction factor shall be applied to all contract works (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuation of variations.

10. MODIFY CLAUSE 10.5

Clause 47 is not part of the Conditions of Contract Part II.

11. ADD TO CLAUSE 26

TENDER EVALUATION CRITERIA

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

1. Determination of Responsiveness
2. Detailed Technical Examination
3. Financial Evaluation.
4. Combination of Technical, Tender Sums Comparison and Financial Score

STAGE 1- DETERMINATION OF RESPONSIVENESS

A) PRELIMINARY EXAMINATION

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

These conditions may include valid and certified copies of the following:

- (i) Certificate of incorporation
- (ii) VAT and PIN certificates
- (iii) Valid Tax compliance certificate from KRA
- (iv) National Construction Authority (NCA) Registration
- (v) Registration as Electrical Contractor by Energy Regulatory Commission (ERC)
- (vi) Class of Licenses with the relevant statutory bodies e.g. Energy Regulatory Commission, Local Authorities, Water Management Boards etc.
- (vii) Proof of payment for tender document
- (viii) Provision of Bid Security
- (ix) Dully filled Form of Tender
- (x) Physical location of the Company/Firm
- (xi) Any other conditions included in the advertisement notice/Invitation letter.

Only those firms who certify the above requirements shall be considered for the technical evaluation

Note:

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

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

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

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

B) COMPLETENESS OF TENDER DOCUMENT

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

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

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

<u>PARAMETER</u>	<u>MAXIMUM POINTS</u>
(i) Statement of Compliance -----	3
(ii) Tender Questionnaire - -----	5
(iii) Confidential Business Questionnaire -----	5
(iv) Key personnel - -----	15
(v) Contract Completed in the last Five (5) years - -----	15
(vi) Schedules of on-going projects -----	10
(vii) Schedules of contractor's equipment -----	10
(viii) Audited Financial Report for the last 3 years-----	10
(ix) Evidence of Financial Resources -----	10
(x) Name, Address and Telephone of Banks (Contractor to provide) -----	5
(xi) Litigation History-----	2
(xii) Sanctity of the tender document as in accordance with clause 5 of instruction to tenderer -----	10
TOTAL	<u>100</u>

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

TABLE 1

Item	Description	Point Scored	Max. Point
i	Statement of Compliance Signed and stamped ----- 3 Signed but not stamped or vice versa ----- 2 Not signed nor stamped -----0		3
ii	Tender Questionnaire Form Completely filled ----- 5 Partially filled ----- 3 Not filled -----0		5
iii	Confidential Business Questionnaire Form. Completely filled ----- 5 Partially filled ----- 3 Not filled ----- 0		5
iv	Key Personnel (Attach evidence)		15
	Director of the firm o Holder of degree or diploma in relevant Engineering field-----4 o Holder of certificate in relevant Engineering field-----3 o Holder of trade test certificate in relevant Engineering field----2 o No relevant certificate -----0	4	
	At least 1No. degree/diploma of key personnel in relevant Engineering field o With over 10 years relevant experience-----4 o With over 5 years relevant experience----- 3 o With under 5 years relevant experience ----- 1	4	
	At least 1No certificate holder of key personnel in relevant Engineering field o With over 10 years relevant experience----- 3 o With over 5 years relevant experience ----- 2 o With under 5 years relevant experience -----1	3	
	At least 2No artisan (trade test certificate in relevant Engineering field) o Artisan with over 10 years relevant experience----- 2 o Artisan with under 10 years relevant experience ----- 1 o Non skilled worker with over 10 years relevant experience	4	

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v	Contract completed in the last five (5) years (Max of 5 No. Projects) <ul style="list-style-type: none"> ○ Project of similar nature, complexity and magnitude –3 marks per project (max 15) ○ Project of similar nature but of lower value than the one in consideration----- 1 mark per project (max 5) ○ No completed project of similar nature ----- 0 		15	
vi	On-going projects (Max of 5 No. Projects) <ul style="list-style-type: none"> ○ Project of similar nature, complexity and magnitude - 2 marks per project (max 10) ○ Project of similar nature but of lower value than the one in consideration -----1 mark per project (max 5) ○ No ongoing project of similar nature - -----0 		10	
vii	Schedule of contractors' equipment and transport (proof or evidence of ownership) <ul style="list-style-type: none"> ○ Means of transport (Vehicle) ----- 4 ○ No means of transport ----- 0 	4	10	
	For each specific equipment required in the installation of the Work being tendered for. (Maximum No. of equipment to be considered – 6 No.---- 1 mark for each	6		
viii	Financial report Audited financial report (last three (3) years) <ul style="list-style-type: none"> ○ Turn over greater or equal to 5 times the cost of the project -- 10 ○ Turn over greater or equal to 3 times the cost of the project-6 ○ Turn over greater or equal to the cost of the project----4 ○ Turn over below the cost of the project ----- 2 		10	
ix	Evidence of Financial Resources (cash in hand, lines of credit, over draft facility etc) <ul style="list-style-type: none"> ○ Has financial resources equal or above the cost of the project-- 10 ○ Has financial resources below the cost of the project --5 ○ Has not indicated sources of financial resources -----0 		10	
x	Name, Address and Telephone of Banks (Contractor to provide) <ul style="list-style-type: none"> ○ Provided ----- 5 ○ Not provided ----- 0 		5	
xi	Litigation History <ul style="list-style-type: none"> ○ Filled -----2 ○ Not filled -----0 		2	
xii	Sanctity of the tender document <ul style="list-style-type: none"> ○ Having the document intact (not tempered with in any way) -----10 ○ Having mutilated or modified the tender document----0 		10	

	TOTAL		100
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Any bidder who scores 70 points and above shall be considered for further evaluation

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STAGE 2 - TECHNICAL EVALUATION

A) COMPLIANCE WITH TECHNICAL SPECIFICATIONS

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

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

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

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

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

B) TECHNICAL EXAMINATION

In this section, the information provided in the Technical Schedule or Brochures attached will be analyzed for bidders who have qualified from **STAGE 2A** above and points awarded as shown below to a maximum of 50 points

TABLE 2

Item	Description	Score	Max. score
	<p>Technical schedule/Brochures</p> <ul style="list-style-type: none"> <li data-bbox="244 763 1177 902">○ Relevant Manufacturer Brochures for items in the technical schedule with equipments to be supplied highlighted and meets specification (Where alternative is to supplied----- ----- 50 <p style="text-align: center; margin-left: 100px;">or</p> <li data-bbox="244 987 1177 1081">○ Completely filled Technical Schedule indicating Brand, Model/ Country of origin as per specification in the tender----- ----- 50 <p style="text-align: center; margin-left: 100px;">or</p> <li data-bbox="244 1133 1177 1339">○ Relevant Manufacturer Brochures for items in the technical schedule with equipments to be supplied not highlighted but within range of those specified and meets specifications ----- ----- 40 <p style="text-align: center; margin-left: 100px;">or</p> <li data-bbox="244 1391 1177 1529">○ Completely filled Technical Schedule indicating items as specified in the tender but with over 75% of items in the technical schedule provided---40 <p style="text-align: center; margin-left: 100px;">or</p> <li data-bbox="244 1581 1177 1753">○ Relevant Manufacturer Brochures for less than 75% of items in the technical schedule with equipment’s to be supplied highlighted and meets specifications----- ----- 30 <p style="text-align: center; margin-left: 100px;">or</p> <li data-bbox="244 1805 1177 1933">○ Less than 75% of Technical Schedule filled indicating Brand, Model/Country of origin for the items considered as specified in the tender ----- -----30 <p style="text-align: center; margin-left: 100px;">or</p> <li data-bbox="244 1984 1177 2074">○ No technical data provided, either in form of brochures or filling of Technical Schedule. ----- ----- 0 		<p>50</p>

	TOTAL	50
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The Technical score will be carried forward to **STAGE 4**

STAGE 3 - FINANCIAL EVALUATION

Financial evaluation shall be done to those firms who have passed Technical Evaluation.

The evaluation shall be in two sections

1. Preliminary examinations and
2. Tender sum Comparisons

A) PRELIMINARY EXAMINATIONS

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

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

- a) Arithmetic errors and comparison of rates

(1) Arithmetic Errors

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

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

Non compliance with the above shall lead to **automatic disqualification from further evaluation**.

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

(2) Comparison of rates

The evaluation committee will compare rates from different bidders and note consistency of rates and front loading. The evaluation committee will judge and make an appropriate decision giving evidence.

B) TENDER SUMS COMPARISONS

In this section, tender sums will be compared to the average of all sums for bidders who have qualified from **STAGE 3A** and score awarded to a maximum of 30 as shown below.

1 Preliminary Average

- i. The tender sums of various bidders, who qualify at **STAGE 3A** and the engineer's estimates, shall be reduced by omitting PC sums, provisional sums and contingency from the respectful amounts. The **average** of the adjusted tender sums so obtained shall be calculated.
- ii. Any tenderer whose tender percentage deviation is 20% higher or lower than the average obtained above, will be deemed to be unreasonably high or low and shall not be included in determining the mean in table 3, However their bids will still be evaluated further. The Engineer's estimate will also be subjected to the same treatment.

2. Working mean

The detailed scoring plan shall be as shown in table 3 below:

TABLE 3

Item	Description	Score	Max. score
I	<p>Tender Sums: (The tender sums of bidders, who qualify at STAGE 3A and the engineer's estimates, shall be reduced by omitting PC sums, provisional sums and contingency from the respectful amounts. The average of the adjusted tender sums so obtained shall be calculated. The deviation of the reduced amounts in respect of each bidder from the average shall then be worked out as a percentage of the average (Rounded off to one (1) decimal point) and scores allocated as follows :-)</p> <ul style="list-style-type: none"> ○ Deviation of between 0% and 1% ----- 30 ○ Deviation of between 1.1% and 2% ----- 28.5 ○ Deviation of between 2.1% and 3% -----27 ○ Deviation of between 3.1% and 4% ----- 25.5 ○ Deviation of between 4.1% and 5% ----- 24 ○ Deviation of between 5.1% and 6% ----- 22.5 ○ Deviation of between 6.1% and 7% ----- 21 ○ Deviation of between 7.1% and 8% ----- 19.5 ○ Deviation of between 8.1% and 9% ----- 18 ○ Deviation of between 9.1% and 10% ----- 16.5 ○ Deviation of between 10.1% and 11% ----- 15 ○ Deviation of between 11.1% and 12% ----- 13.5 ○ Deviation of between 12.1% and 13% ----- 12 ○ Deviation of between 13.1% and 14% ----- 10.5 ○ Deviation of between 14.1% and 15% ----- 9 ○ Deviation of between 15.1% and 16% ----- 7.5 ○ Deviation of between 16.1% and 17% ----- 6 ○ Deviation of between 17.1% and 18% ----- 4.5 ○ Deviation of between 18.1% and 19% ----- 3 ○ Deviation of between 19.1% and 20% ----- 1.5 ○ Deviation of 20.1% and above ----- 0 		30
	TOTAL		30

The Tender sum score will be carried forward to **STAGE 4**

C) FINANCIAL SCORE

The financial score (Fs) will be determined by comparing tender sums from all responsive bidders using the formulae below. The financial score will be allocated a maximum of 20%.

$$Fs = 20 \times Fm/F$$

Where Fs is the financial score, Fm is the lowest priced responsive financial bid and F is the price of the bid under consideration

STAGE 4 - FINAL SCORE

The total score will be combined sums of Technical, Tender Sums Comparison and Financial marks as below:

$$\text{Technical (Ts) + Tender Sums Comparison (TSC) + Financial (Fs)} \\ = Ts+TSC+Fs$$

RECOMMENDATION

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

SECTION B

**CONDITIONS OF CONTRACT
(MAIN CONTRACT)**

AND

SUB-CONTRACT AGREEMENT

PART I

CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

1.0 Definitions

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

“**Bills of quantities**” means the priced and completed bill of quantities forming part of the tender.

“**Compensation Events**” are those defined in clause 24 hereunder

“**Completion date**” means the date of completion of the works as certified by the Project Manager, in accordance with Clause 31.

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

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

“**The Contractor’s Tender**” is the completed tendering document submitted by the Contactor to the Employer.

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

“**Days**” are calendar days; “**months**” are calendar months.

“**Defects**” is any piece of work not completed in accordance with the Contract.

“**The Defects Liability Certificate**” is the certificate issued by project Manager upon correction of defects by the Contractor.

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

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

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

“**Employer**” or the “**procuring entity**” as defined in the Public Procurement Regulations (i.e. Central or Local Government administration, Universities, Public Institutions and Corporations, etc) is the party who employs the Contractor to carry out the Works.

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

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

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

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

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

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

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

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

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

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

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

“Employer’s Representative” is the person appointed by the Employer and notified to the Contractor for the purpose of supervision of the Works.

“A Variation” is an instruction given by the Employer’s Representative which varies the Works.

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

2. Interpretation

In interpreting the Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning in English Language unless specifically defined. The Project Manager will provide instructions clarifying queries about these Conditions of Contract.

If sectional completion is specified in the Appendix to Conditions of Contract, reference in the Conditions of Contract to the Works, the Completion Date and the Intended Completion Date apply to any section of the Works (other than references to the Intended Completion Date for the whole of the Works).

The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority;

- (1) Agreement,
- (2) Letter of acceptance,
- (3) Contractor's Tender,
- (4) Appendix to Conditions of Contract,
- (5) Conditions of Contract,
- (6) Specifications,
- (7) Drawings,
- (8) Bills of Quantities,
- (9) Any other documents listed in the Appendix to Conditions of Contract as forming part of the contract.

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

3. Language and Law

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

4. Project Manager's Decisions

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

5. Delegation

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

6. Communications

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

7. Subcontracting

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

8. Other Contractors

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

9. Personnel

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

10. Works

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

11. Safety and Temporary Works

The Contractor shall be responsible for the design of temporary works. However before erecting the same, he shall submit his designs including specifications and drawings to the Project Manager and to any other relevant third parties for their approval. No erection of temporary works shall be done until such approvals are obtained.

The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary works and all drawings prepared by the Contractor for the execution of the temporary or Permanent works shall be subject to prior approval by the Project Manager before they can be used.

The Contractor shall be responsible for the safety of all activities on the Site.

12. Discoveries

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

13. Work Program

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

The Contractor shall submit to the Project Manager for approval an updated program at intervals no longer than the period stated in the Appendix to Conditions of Contract. If the Contractor does not submit an updated program within this period, the Project Manager may withhold the amount stated in the said Appendix from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted. The Project Manager's approval of the program shall not alter the Contractor's obligations. The Contractor may revise the program and submit it to the Project Manager again at any time. A revised program shall show the effect of Variations and Compensation Events.

14. Possession of Site

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

15. Access to Site

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

16. Instructions

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

17. Extension of Acceleration of Completion Date

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

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

18. Management Meetings

A Contractor management meeting shall be held monthly and attended by the Project Manager and the Contractor. Its business shall be to review the plans for the remaining Work and to deal with matters raised in accordance with the early warning procedure. The Project manager shall record the minutes of management meetings and provide copies of the same to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

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19. Early Warning

The Contractor shall warn the Project at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the Work increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

The Contractor shall cooperate with the Project Manager in making and considering proposals on how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the Work and in carrying out any resulting instruction of the Project Manager.

20. Defects

The Project Manager shall inspect the Contractor's work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities.

The Project Manager may instruct the Contractor to search for a defect and to uncover and test any work that the Project manager considers may have defects. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However, if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.

The Project Manager shall give notice to the Contractor of any defects before the end of the Defect Liability Period, which begins at completion, and is defined in the Appendix to Conditions of contract. The Defects Liability Period shall be extended for as long as defects remain to be corrected.

Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Project Manager's notice. If the Contractor has not corrected a defect within the time specified in the Project Manager's notice, the Project Manager will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

21. Bills of Quantities

The Bills of Quantities shall contain items for the construction, installation, testing and commissioning of the work to be done by the Contractor. The Contractor will be paid for the quantity of the work done at the rate in the Bills of Quantities for each item.

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If the final quantity of the work done differs from the quantity in the Bills of Quantities for the particular item by more than 25 percent and provided the change exceeds 1 percent of the Initial Contractor price, the Project Manager shall adjust the rate to allow for the change.

If requested by the Project Manager, the Contractor shall provide the Project manager with a detailed cost breakdown of any rate in the Bills of Quantities.

22. Variations

All variations shall be included in updated programs produced by the Contractor.

The Contractor shall provide the Project Manager with a quotation for carrying out the variations when requested to do so. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period as may be stated by the Project Manager and before the Variation is ordered.

If the work in the variation corresponds with an item description in the Bills of Quantities and if in the opinion of the Project Manager, the quantity of work is not above the limit stated in Clause 21.2 or the timing of its execution does not cause the cost per unit of quantity to change, the rate in the Bills of Quantities shall be used to calculate the value of the variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the variation do not correspond with items in the Bills of Quantities, the quotation by the contractor shall be in the form of new rates for the relevant items of work.

If the Contractor's quotation is unreasonable, the Project manager may order the variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the variation on the Contractor's cost

If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the works, no quotation shall be given and the variation shall be treated as a Compensation Event.

The Contractor shall not be entitled to additional payment for cost that could have been avoided by giving early warning.

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

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23. Payment Certificates, Currency of Payments and Advance Payments

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

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

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

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

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

The Contract Price shall be stated in Kenya Shillings. All payments to the contractor shall be made in Kenya Shillings and foreign currency in the proportion indicated in the tender, or agreed prior to the execution of the

Contract Agreement and indicated therein. The rate of exchange for the calculation of the amount of foreign currency payment shall be the rate of exchange indicated in the Appendix to Conditions of Contract. If the contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services. The Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services.

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

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

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

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

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

Where:

R = the amount to be reimbursed

A = the amount of the advance which has been granted

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

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

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

24. Compensation Events

The following issues shall constitute Compensation Events.

- a) The Employer does not give access to a part of the site by the Site Possession Date stated in the Appendix to Conditions of Contract.
- b) The Employer modifies the List of Other Contractors, etc., in a way that affects the Work of the Contractor under the Contract.
- c) The Project Manager orders a delay or does not issue drawings, specifications or instructions required for execution of the works on time.
- d) The Project Manager instructs the contractor to uncover or to carry out additional tests upon the work, which is then found to have no defects.
- e) The Project Manager unreasonably does not approve a subcontract to be let.

- f) Ground conditions are substantially more³ adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to tenderers (including the site investigation reports), from information available publicly and from a visual inspection of the site.
- g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer or additional works required for safety or other reasons.
- h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- i) The effects on the Contractor of any of the Employer's risks.
- j) The Project Manager unreasonably delays issuing a Certificate of Completion.

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- k) Other compensation events described in the Contract or determined by the Project manager shall apply

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

As soon as information demonstrating the effect of each compensation event upon the Contractor's forecast cost has been provided by the Contract, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly.

If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.

The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having co-operated with the Project Manager.

Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Appendix to Conditions of Contract.

The Contractor shall give written notice to the Project Manager of his intention to make a claim within thirty days after the event giving rise to the claim has first arisen. The claim shall be submitted within thirty days thereafter.

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

25. Price Adjustment

The Project Manager shall adjust the Contract Price if taxes, duties and other levies are changed between the date 30 days before the submission of tenders for the Contract and the date of Completion. The adjustment shall be the change in the amount of tax payable by the Contractor.

The Contract Price shall be deemed to be based on exchange rates current at the date of tender submission in calculating the cost to the Contractor of materials to be specifically imported (by express provision in the Contract Bills of Quantities or Specifications) for permanent incorporation in the Works.

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Unless otherwise stated in the Contract, if any time during the period of the Contract exchange rates shall be varied and this shall affect the cost to the Contractor of such materials, then the Project Manager shall assess the net difference in the cost of such materials. Any amount from time to time so assessed shall be added to or deducted from the Contract Price, as the case may be.

Unless otherwise stated in the Contract, the Contract Price shall be deemed to have been calculated in the manner set out below and in sub-clauses 25.4 and 25.5 and shall be subject to adjustment in the events specified thereunder;

- i) The price contained in the Contract Bills of Quantities shall be deemed to be based upon the rates of wages and other emoluments and expenses as determined by the Joint Building Council of Kenya (J.B.C.) and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Appendix to Conditions of Contract.
- ii) Upon J.B.C. determining that any of the said rates of wages or other emoluments and expenses are increased or decreased, then the Contract Price shall be increased or decreased by the amount assessed by the Project Manager based upon the difference, expressed as a percentage, between the rate set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of labour

incorporated within the amount of work remaining to be executed at the date of publication of such increase or decrease.

- iii) No adjustment shall be made in respect of changes in the rates of wages and other emoluments and expenses which occur after the date of Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.

The price contained in the Contract Bills of Quantities shall be deemed to be based upon the basic prices of materials to be permanently incorporated in the works as determined by the J.B.C. and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Appendix to Conditions of Contract.

Upon the J.B.C. determining that any of the said basic prices are increased or decreased then the Contract Price shall be increased or decreased by the amount to be assessed by the Project Manager based upon the difference between the price set out in the schedule of basic rates issued 30 days before the date for submission of tenders

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and the rate published by the J.B.C. and applied to the quantum of the relevant materials which have not been taken into account in arriving at the amount of any interim certificate under clause 23 of these Conditions issued before the date of publication of such increase or decrease.

No adjustment shall be made in respect of changes in basic prices of materials which occur after the date for Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.

The provisions of sub-clause 25.1 to 25.2 herein shall not apply in respect of any materials included in the schedule of basic rate.

26. Retention

The Employer shall retain from the payment due to the Contractor the proportion stated in the Appendix to Conditions of Contract until Completion of the whole of the works. On Completion of the whole of the works, half the total amount retained shall be repaid to the Contractor and the remaining half when the Defects Liability Period has passed and the Project manager has

certified that all defects notified to the Contractor before the end of this period have been corrected.

27. Liquidate Damages

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

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

28. Securities

The Performance Security shall be provided to the Employer not later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a reputable bank acceptable to the Employer, and denominated in Kenya shillings. The Performance Security shall be valid until a date 30 days beyond the date of issue of the Certificate of Completion.

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29. Dayworks

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

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

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

30. Liability and Insurance

From the Start Date until the Defects Correction Certificate has been issued, the following are the Employer's risks:

- a) The risk of personal injury, death or loss of or damage to property (excluding the works, plant, materials and equipment), which are due to;
 - i) use or occupation of the site by the works or for the purpose of the works, which is the unavoidable result of the works, or
 - ii) negligence, breach of statutory duty or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
- b) The risk of damage to the works, plant, materials, and equipment to the extent that it is due to a fault of the Employer or in Employer's design, or due to war or radioactive contamination directly affecting the place where the works are being executed.

From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the works, plant, and materials is the Employer's risk except loss or damage due to;

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

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From the Start Date until the Defects Correction Certificate has been issued, the risks of personal injury, death and loss of or damage to property (including, without limitation, the works, plant, materials, and equipment) which are not Employer's risk are contractor's risks.

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

- a) loss of or damage to the works, plant and materials;
- b) loss of or damage to Equipment;
- c) loss of or damage to property (except the works, plant materials, and equipment) in connection with the Contract, and
- d) Personal injury or death.

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

If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

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

31. Completion and Taking over

Upon deciding that the works are complete, the Contractor shall issue a written request to the Project Manager to issue a Certificate of Completion of the works. The Employer shall take over the site and the works within seven (7) days of the Project manager's issuing a Certificate of Completion.

32. Final Account

The Contractor shall issue the Project Manager with a detailed account of the total amount that the Contractor considers payable to him by the Employer under Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete.

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If it is not, the Project Manager shall issue within 30 days a schedule that states the scope of the corrections or additions that are necessary. If the final account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a Payment Certificate.

The Employer shall pay the Contractor the amount due in the Final certificate within 60 days.

33. Termination

The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These fundamental breaches of Contract shall include, but shall not be limited to, the following;

- a) The Contractor stops work for 30 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Project Manager.
- b) The Project Manager instructs the Contractor to delay the progress of the works, and the instruction is not withdrawn within 30 days.
- c) The Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation.
- d) A payment certified by the Project Manager is not paid by the Employer to the Contractor within 30 days (for Interim Certificate) or 60 days (for Final Certificate) of issue.
- e) the Project Manager gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager.
- f) the Contractor does not maintain a security, which is required.

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

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

If the Contractor is terminated, the contractor shall stop work immediately, make the site safe and secure, and leave the site as soon as reasonably possible.

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The Project Manager shall immediately thereafter arrange for a meeting for the purpose of taking record of the works executed and materials, goods, equipment and temporary buildings on site.

34. Payment Upon Termination

If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for

the value of the work done and materials ordered and delivered to site up to the issue of the certificate. Additional liquidated damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable by the contractor.

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

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

The contractor shall, during the execution or after the completion of the works under this clause remove from the site as and when required, within such reasonable time as the Project Manager may in writing specify, any temporary building, plant, machinery, appliances, goods or materials belonging to or hired by him, and in default the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, hold the proceeds less all costs incurred to the credit of the Contractor.

Until after completion of the works under this clause the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefore the Project Manager shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

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35. Release from Performance

If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the

Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it.

36. Corrupt gifts and Payment of Commission

The Contractor shall not;

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

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

37. Settlement of Disputes

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

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

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- (v) Institute of Engineers of Kenya

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

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

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

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

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

The appointment of a replacement Project Manager upon the said person ceasing to act.

Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.

Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.

Any dispute or difference arising in respect of war risks or war damage.

- 37.6. All other matter shall only be referred to arbitration after the completion or alleged completion of the works or termination or alleged termination of the Contract, unless the Employer and the Contractor agree otherwise in writing.
- 37.7. The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.
- 37.8. The award of such Arbitrator shall be final and binding upon the parties.

APPENDIX TO CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT CLAUSE 1

The Employer is EPZA Kenya,
Address: **P.O. Box 50563-00200, NAIROBI, KENYA.**

CONDITIONS OF CONTRACT CLAUSE 2

The name (and identification number) of the Contract is: **Proposed Investor Sheds for Athi River Textile Hub on LR 18474/67 in Athi River, Machakos County, Kenya**

CONDITIONS OF CONTRACT CLAUSE 3

The Contract Works consist of **Supply, installation, testing and commissioning of Plumbing & Drainage Installation works**

CONDITIONS OF CONTRACT CLAUSE 4

The start date shall be **as stated in the letter of acceptance**

CONDITIONS OF CONTRACT CLAUSE 5

The following documents also form part of the Contract:

1. Agreement- Agreement as per the Sub-Contract Agreement (KABCEC) signed between the Main Contractor and Sub-Contractor
2. Letter of Acceptance- Letter addressed to the Main Contractor by the Project Manager instructing the Main Contractor to enter into Sub-Contract Agreement with the nominated Sub-Contractor
3. Contractors Tender- The completed tendering document submitted by the Sub-Contractor to the employer
4. Conditions of Contract- Refers to the Conditions of Contract in the main works and conditions of Sub-Contract as described in the Sub-Contract Agreement (KABCEC)
5. Specifications- Specifications of Sub-Contract works as described in this document
6. Drawings- Drawings as described in this document
7. Bills of quantities/Schedule of Unit Rates- As described in this document

CONDITIONS OF CONTRACT CLAUSE 6

The Site is located **at Athi River, Machakos County.**

The Site Possession Date shall be **as notified**

CONDITIONS OF CONTRACT CLAUSE 7

Period of final measurement: **3 months after practical completion**

INSTRUCTION TO TENDERERS CLAUSE 8

The tender opening date and time is **as stated in the Tender Advertisement Notice.**

INSTRUCTION TO TENDERERS CLAUSE 9

The name and Address of the Employer's representative for the purposes of submission of Tenders is **as stated in the Tender Advertisement Notice.**

INSTRUCTION TO TENDERERS CLAUSE 10

Amount of Tender Security is **2% of tender sum**

INSTRUCTION TO TENDERERS CLAUSE 11

The amount of performance security is **5 percent** of the Contract Price from a reputable bank.

CONDITIONS OF CONTRACT CLAUSE 12

Liquidated and Ascertained damages: **At the rate of Kshs. 50, 000.00 per week or part thereof**

CONDITIONS OF CONTRACT CLAUSE 13

Period of honoring certificate	:	30 days
Percentage of certified value retained	:	10%
Limit of certified value retained	:	5%

MODIFY CLAUSE 23.7

No advance payment shall be granted

DEFECT LIABILITY PERIOD

1 Year

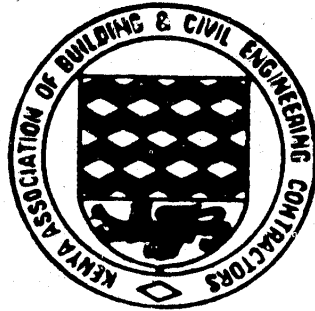
FLACTUATION CLAUSE

Allowed

PART II

SUB-CONTRACT AGREEMENT (KABCEC)

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



Published by:
**The Kenya Association of Building and
Civil Engineering Contractors**
with the sanction of:
The Joint Building Council, Kenya
and
The Architectural Association of Kenya

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COUNTERPART
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1.0 AGREEMENT

1.1 This agreement is made on
between
of (or whose registered office is situated at)
.....
(hereinafter called “the Contractor”) of the one part
and
of (or whole registered office is situated at)
.....
(hereinafter called “the Sub-Contractor”) of the other part:

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

made on

Between

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

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

.....
.....
.....

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

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

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

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

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

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

NOW IT IS HEREBY AGREED AS FOLLOWS:

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

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

.....

.....

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

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

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

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

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

1.12 AS WITNESS the hands of the said parties;

Signed by the said

..... (Contractor)

In the presence of

Name

Address

Signed by the said

..... (Sub-Contractor)

In the presence of

Name

Address

CONDITIONS OF SUB-CONTRACT

2.0 GENERAL OBLIGATIONS OF THE CONTRACTOR

The Contractor shall:

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

3.0 GENERAL OBLIGATIONS OF THE SUB-CONTRACTOR

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

4.0 SUB-CONTRACT DOCUMENTS

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

5.0 GENERAL LIABILITY OF THE SUB-CONTRACTOR

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

6.0 INSURANCE AGAINST INJURY TO PERSONS AND PROPERTY

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

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

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

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7.0 PERFORMANCE BOND

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

8.0 POSSESSION OF SITE AND COMMENCEMENT OF WORKS

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

8.2 On or before the date for commencement of works stated in the appendix to these conditions, the Sub-Contractor shall commence the carrying out of the sub-contract works and shall proceed regularly and diligently with the same in accordance with the sub-contract programme, the main contract programme and or with the progress of the main contract works and complete on or before the date stated in the appendix to these conditions as the date for practical completion or within any extended time granted under clause 25.0 of these conditions

9.0 ARCHITECT'S INSTRUCTIONS

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

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

10.0 VARIATIONS

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

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

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

11.0 LIABILITY FOR OWN EQUIPMENT

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

12.0 PROVISION OF FACILITIES BY THE CONTRACTOR

- 12.1 Where provided in the main contract, the Contractor shall supply at his own cost all necessary water, lighting, electric power, telephones and security required for the sub-contract works. Where not so provided, the Sub-Contractor shall provide the said services at his own cost.
- 12.2 Except as otherwise provided in the main contract, the Sub-Contractor shall construct at his own expense all necessary workshops, stores, offices, workers' accommodation and other temporary buildings required for the carrying out of the works at such places on site as the Contractor shall identify. The Contractor undertakes to give the sub-Contractor the required space and all reasonable facilities for such construction. Upon practical completion of the works, the Sub-contractor shall remove the said facilities and reinstate disturbed surface to the satisfaction of the Contractor.
- 12.3 The Contractor shall provide, without charge, general attendance to the Sub-Contractor to facilitate the carrying out of the works which attendance shall include facilities for access to and movement within the site and sections or parts of the building or buildings where the sub-contract works are being carried out, the use of temporary roads, paths and access ways, sanitary and welfare facilities.
- 12.4 The Contractor shall permit the Sub-Contractor to use, without charge, at all reasonable times, any scaffolding and hoisting equipment belonging to or provided by the Contractor while it remains so erected upon the site. The use by the Sub-Contractor of any other equipment, facilities or services provided by the Contractor for the works shall be subject to private arrangements between the parties hereto and shall not be regulated by these conditions.
- 12.5 Provided that such use of the scaffolding and hoisting equipment shall be on the express condition that no warranty or other liability on the part of the Contractor shall be created or implied in regard to fitness, condition or suitability for the intended purpose except that the Sub-Contractor shall be liable for any damage caused thereto or thereby.
- 12.6 Where required, the Contractor shall provide the facilities, equipment and the like and carry out any necessary builder' works within a reasonable time of the request by the Sub-Contractor to enable timely performance of the sub-contract.

13.0 LIABILITY FOR OWN WORK

- 13.1 The Contractor and the Sub-Contractor shall be liable for the due carrying out of their respective works in accordance with their respective contracts without causing damage or injury to the works of the other sub-contractors, and in particular:
- 13.2 Should the carrying out of the sub-contract works cause injury or damage to the main contract works, or to the work of the other sub-contractors, the Sub-contractor shall rectify the damage so caused at his own cost.
- 13.3 Should the carrying out of the main contract works cause damage or injury to the sub-contract works, the Contractor shall rectify the damage at his own cost.

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

14.0 CO-OPERATION IN USE OF FACILITIES

- 14.1 The Contractor and the Sub-Contractor undertake to co-operate with each other and co-ordinate work arrangements and procedures required in carrying preventing interference, disruption or disturbance to the progress of the works or to the activities of other sub-contractors.
- 14.2 The Contractor and the Sub-Contractor undertake not to wrongfully use or interfere with equipment, scaffolding, appliances, ways, temporary works, temporary buildings and other property belonging to or provided by the other part or by other sub-contractors.
- 14.3 Provided that nothing contained in this clause shall prejudice or limit the rights of the Contractor or of the sub-Contractor in carrying out their respective statutory and or contractual duties under this sub-contract or under the main contract.

15.0 ASSIGNMENT AND SUBLETTING

- 15.1 Neither the Contractor nor the Sub-Contractor shall, without the written consent of the other and the Employer, assign this sub-contract.
- 15.2 The Sub-Contractor shall not sub-let the whole of the works without the written consent of the Contractor and the Architect.
- 15.3 Provided that any assignment and any sub-contracts as well as this sub-contract shall terminate immediately upon (for whatever reason) of the main contract.

16.0 WORK PRIOR TO APPOINTMENT OF CONTRACTOR

- 16.1 Where the Sub-Contractor is appointed before the Contractor is appointed, any work done by the Sub-Contractor prior to the said appointment shall be treated as a separate contract between the Employer and the Sub-Contractor and shall be valued by the Quantity Surveyor and paid for directly by the Employer without the involvement of the Contractor.
- 16.2 Where the Sub-Contractor is appointed before the Contractor is appointed, the Sub-Contractor shall be permitted, when the identity of the Contractor is known and within 30 days thereof, to raise objections (on reasonable grounds) against entering into a sub-contract with the Contractor
- 16.3 Where work which is outside the sub-contract is ordered directly by Employer or the Architect, that work shall be treated as a separate contract between the Sub-Contractor and the Employer and shall be valued and paid for directly to the Sub-Contractor in accordance with sub-clause 16.1 herein without the involvement of the Contractor. The cost of equipment, facilities and the like provided by the Contractor to the Sub-contractor and any builder's work carried out by the Contractor with regard to such work shall be paid directly by the Sub-Contractor to the Contractor.

17.0 SUB-CONTRACTOR DESIGN

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

18.0 SPECIFICATION OF GOODS, MATERIALS AND WORKMANSHIP

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

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

19.0 COMPLIANCE WITH STATUTORY AND OTHER REGULATIONS

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

20.0 ROYALTIES AND PATENT RIGHTS

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

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

21.0 ANTIQUITIES AND OTHER OBJECTS OF VALUE

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

22.0 SUSPENSION OF WORKS

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

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

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

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

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

23.0 PAYMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

24.0 PRACTICAL COMPLETION AND DEFECTS LIABILITY

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

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

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- 24.3 The procedures for certifying practical completion and for dealing with defects in the sub-contract works as well as the main contract works are as prescribed at clause 41.0 of the main contract. Upon the issue of the certificate of practical completion of the whole of the works or of the sub-contract works, as applicable, the Sub-contractor shall be entitled to release of one half of the retention money attributable to the sub-contract works within 7 days after the Contractor has received payment.
- 24.4 The balance of the retention money shall be released to the Sub-Contractor after the defects appearing in the works have been rectified in accordance with sub-clause 41.6 and 41.7 of the main contract and after the Contractor has received the said payment as provided for in sub-clause 34.16.3 of the main contract.

25.0 EXTENSION OF TIME

- 25.1 Upon it becoming reasonably apparent that the progress of the sub-contract works is or will be delayed, the Sub-Contractor shall forthwith give written notice of the cause of the delay to the Contractor and to the Architect with supporting details showing the extent of delay caused or likely to be caused. Thereafter, the Architect shall evaluate the information supplied by the Sub-Contractor and if in his opinion the completion of the works is likely to be or has been delayed beyond the date for practical completion stated in the appendix to these conditions or beyond any extended time previously fixed under this clause, by any of the reasons entitling the Contractor to extension of time under sub-clause 36.1 of the main contract, then the Architect shall, so soon as he is able estimate the length of the delay beyond the date or time aforesaid, recommend to the Contractor a fair and reasonable extension of time to be granted for the completion of the sub-contract works.
- 25.2 Thereupon, the Contractor shall grant in writing to the Sub-Contractor the recommended time. Provided that the Contractor shall not grant any extension of time to the Sub-Contractor without the written recommendation of the Architect. And provided that the Sub-Contractor shall constantly use his best endeavors to prevent delay and shall do all that may be reasonably required to proceed with the works.
- 25.3 The procedures for dealing with requests for extension of time and the observance of time limits prescribed at clause 36.0 of the main contract shall apply to the sub-contract in the same manner as they apply to the main contract.

26.0 LOSS AND EXPENSE CAUSED BY DISTURBANCE OF REGULAR PROGRESS

- 26.1 If upon written application being made by the Sub-Contractor to the Contractor and to the Architect, the Architect is of the opinion that the Sub-Contractor has been involved in direct loss and or expense, for which he would not be reimbursed by a

payment made under any other provision in this sub-contract, by reasons of the regular progress of the sub-contract works or any part thereof having been materially affected by any of the reasons which would entitle the Contractor to reimbursement under clause 37.0 of the main contract, the Quantity Surveyor shall assess the amount of such loss and or expense.

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

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

27.0 DAMAGES FOR DELAY IN COMPLETION

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

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

28.0 FLUCTATIONS

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

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

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

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

29.0 TERMINATION OF MAIN CONTRACT

- 29.1 If, for any reason, the contractor's employment is terminated either under clause 38.0, 39.0 or 40.0 of the main contracts, this sub-contract shall thereupon also terminate.
- 29.2 Upon termination, the sub-contractor shall cease all work and vacate the site. He shall not remove any equipment or any materials brought onto the site for the carrying out of the works without the written approval of the contractor and the Architect
- 29.3 Where the termination of the main contract occurs without the default of the sub-contractor, the sub-contractor shall be paid by the contractor for work done in the like manner as the Contractor is paid at clause 39.5 of the main contract.

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

30.0 TERMINATION OF SUB-CONTRACT.

- 30.1 Without prejudice to any other rights and remedies which the contractor may possess, if the sub-contractor shall make default in any one or more of the respects which would entitle the employer to terminate the main contract under clause 38.0 therein, the contractor shall give the sub-contractor a notice, with a copy to the Architect and to the employer by registered post of recorded delivery specifying the default. Should the sub-contractor continue the default for 14 days after receipt of such notice or at any time thereafter repeat such default and should the Architect certify that the sub-contractor is in default, the contractor may terminate the Sub-contract forthwith after the expiry of the notice provided that the notice is not given unreasonably or vexatiously. The termination letter shall be copied to the Architect and to the Employer.
- 30.2 Where the sub-contract is terminated due to the default of the sub- contractor as in sub-clause 30.1 herein, the adjustment of sub-contract accounts shall be performed in the like manner as is provided at sub-clause 38.8 of the main contract regarding the main contract accounts.
- 30.3 Without prejudice to any other rights and remedies which the Sub-Contractor may possess, if the Contractor shall make default in one or more of the respects which, if committed by the Employer, would entitle the contractor to terminate the main contract under clause 39.0 therein, the Sub-Contractor shall give the Contractor a notice, with a copy to the Architect and to the Employer, by registered post or recorded delivery specifying the default. Should the contractor continue the default for 14 days after receipt of such notice or at any time thereafter repeat such default, and should the Architect certify that the contractor is in default, the Sub-Contractor may terminate the sub-contract forthwith after expiry of the notice, provided that the notice is not given unreasonably or vexatiously. The termination letter shall be copied to the Architect and to the Employer.
- 30.4 If the Sub-Contract is terminated due to the default of the Contractor as in sub- clause 30.3 herein, the Contractor shall pay the sub-contractor for work done in the like manner as the Contractor would be paid at sub-clause 39.5 of the main contract where the termination is done by the Contractor.

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

31.0 SETTLEMENT OF DISPUTES

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

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- 31.2 The dispute shall be referred to the arbitration and final decision of a person to be agreed by the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointment by the Chairman or Vice Chairman of the Architectural Association of Kenya or the Chairman or Vice Chairman of The Chartered Institute of Arbitrators, Kenya Branch, at the request of the applying party.
- 31.3 The arbitration may be on the construction of this sub-contract or on any matter or thing of whatsoever nature arising thereunder or in connection therewith including the rights and liabilities of the parties during the currency of the sub-contract and subsequent to the termination of the sub-contract.
- 31.4 Where the sub-contractor is aggrieved by the manner in which the Architect has exercised or failed to exercise his powers stipulated in the main contract, or in the sub-contact or by any action or inaction of the Employer, and in particular, if he is aggrieved by:
- 31.4.1 The failure or refusal of the Architect to recommend to the contractor an extension of sub-contract time, or
- 31.4.2 The extend of the recommended time, or
- 31.4.3. The amount certified to the sub-contractor either in an interim in a final certificate, or
- 31.4.4 The issue of an instruction which the sub-contractor contends is not authorized by the main contract or the sub-contract, or
- 31.4.5. Any other matter left to the discretion of the Architect in the main contract or in the sub-contract, then.
- 31.5 Subject to the Sub-Contractor giving the Contractor such indemnity and security as the Contractor may reasonably require, the Contractor shall allow the Sub-Contractor to use the contractor's name and, if necessary, shall join the Sub-Contractor in arbitration proceeding against the employer to decide the matters in dispute or in difference.
- 31.6 Provided that no arbitration proceedings shall be commenced on any dispute or difference where notice of a dispute or difference where notice of a dispute or

difference has not been given by the applying party within 90 days of the occurrence or discovery of the matter or issue giving rise to the dispute or difference.

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

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

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

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

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

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

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

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

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

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

SUB CONTRACTOR’S PERFORMANCE BOND

BY THIS AGREEMENT we(SURETY)
of
are bound to(CONTRACTOR)
in the sum of Kenya shillings
.....(Kshs.)
to be paid by us to the said(CONTRACTOR)
WHEREAS by an agreement in writing dated
.....(SUB-CONTRACTOR)
entered into a sub-contract with(CONTRACTOR)

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

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

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

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

.....

Surety

Witness

Authorized by Power of Attorney No

APPENDIX

Clause

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

Signed by the said:

.....

CONTRACTOR

.....

SUB-CONTRACTOR

APPENDIX TO SUB-CONTRACTOR AGREEMENT (KADCEC)

1 MODIFY CLAUSE 7.0

Performance bond shall be 5% of the sub-contract's tender sum

2 MODIFY CLAUSE 28.4

Compensation for change in prices of goods and materials incorporated in the works shall be as provided in the main contract.

SECTION C

SUB-CONTRACT PRELIMINARIES

AND

GENERAL CONDITIONS

CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

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SECTION C

SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

1.01 Examination of Tender Documents

1.02

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

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

- a) Work detailed in the Specification and in the Contract Drawings.
- b) The Republic of Kenya Document "General Conditions of Contract for Electrical and Mechanical Works".
- c) Other documents to which reference is made.

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

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

1.03 Discrepancies

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

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

1.04 Conditions of Sub-Contract Agreement

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

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

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

1.04 **Payment**

Payment will be made through certificates to the Main Contractor, unless he specifically agrees to forego this right, in which case direct payment can be made to the Sub-contractor. All payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site.

1.05 **Definition of Terms**

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

- i) **Employer:** The term “**Employer**” shall mean **EPZA Kenya, P.O. Box 50563 – 00200, NAIROBI.**
- ii) **Architect:** The Term “**Architect**” Shall Mean **Precise Architects**
- iii) **Quantity Surveyor:** The term “**Quantity Surveyor**” shall mean **Quantsconsult Ltd**
- iv) **Civil/Structural Engineers:** The term “**Civil/Structural Engineers**” shall mean **Civil One Consulting Engineers Ltd**
- v) **Electrical Engineer:** The term “**Electrical Engineer**” shall mean **Infraplus Ltd**
- vi) **Mechanical Engineer:** The term “**Mechanical Engineer**” shall mean **Infraplus Ltd**
- vi) **Main Contractor:** The term “**Main Contractor**” shall mean the firm or company appointed to carry out the Building Works and shall include his or their heir, executors, assigns, administrators, successors, and duly appointed representatives.
- vii) **Sub-contractor:** The term “**Sub-contractor**” shall mean the persons or person, firm or Company whose tender for this work has been accepted, and who has entered into a contract agreement with the Contractor for the execution of the Sub-contract Works, and shall include his or their heirs, executors, administrators, assigns, successors and duly appointed representatives.

- viii) **Sub-contract Works:** The term “**Sub-contract Works**” shall mean all or any portion of the work, materials and articles, whether the same are being manufactured or prepared, which are to be used in the execution of this Sub-contract and whether the same may be on site or not.
- ix) **Contract Drawings:** The term “**Contract Drawings**” shall mean those drawings required or referred to herein and forming part of the Bills of Quantities.
- x) **Working Drawings:** The term “**Working Drawings**” shall mean those drawings required to be prepared by the Sub-contractor as hereinafter described.
- xi) **Record Drawings:** The term “**Record Drawings**” shall mean those drawings required to be prepared by the Sub-contractor showing “as installed” and other records for the

Sub-contract Works.

xii) **Abbreviations:**

CM shall mean **Cubic Metre**

SM shall mean **Square Metre**

LM shall mean **Linear Metre**

M shall mean **Metre**

LS shall mean **Lump Sum**

mm shall mean **Millimetres**

No. shall mean **Number**

Kg. shall mean **Kilogramme**

KEBS shall mean **Kenya Bureau of Standards**

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

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

1.06 **Site Location**

The site of the Sub-contract Works is situated in Athi River, Machakos County.

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

1.07 **Duration of Sub-Contract**

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

1.08 **Scope of Sub-Contract Works**

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

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

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

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

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

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

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

1.10 **Execution of the Works**

The works shall be carried out strictly in accordance with:

- a) All relevant Kenya Bureau of Standards Specifications.

- b) All relevant British Standard Specifications and Codes of Practice (hereinafter referred to as B.S. and C.P. respectively).
- c) This Specification.
- d) The Contract Drawings.
- e) The Bye-laws of the Local Authority.
- f) The Architect's and/or Engineer's Instructions.

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

1.11 **Validity of Tender**

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

1.12 **Firm – Price Sub-contract**

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

1.13 **Variation**

No alteration to the Sub-contract Works shall be carried out until receipt by the Sub-contractor of written instructions from the Project Manager.

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

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

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

1.14 **Prime Cost and Provisional Sums**

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

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

The whole or any part of these sums utilized by the Sub-contractor shall be deducted from the value of the Sub-contract price when calculating the final account.

1.15 **Bond**

The tenderer must submit with his tender the name of one Surety who must be an established Bank only who will be willing to be bound to the Main Contractor for an amount equal to 7½ % of the Sub-contract amount as Clause 31 of the Main Contract.

1.16 **Government Legislation and Regulations**

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

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

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

1.17 **Import Duty and Value Added Tax**

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

1.18 **Insurance Company Fees**

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

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

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

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

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

1.20 **Suppliers**

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

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

1.21 **Samples and Materials Generally**

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

1.22 **Administrative Procedure and Contractual Responsibility**

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

1.23 **Bills of Quantities**

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

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

1.24 **Sub-contractor's Office in Kenya**

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

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

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

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

1.25 **Builder's Work**

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

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

Any purpose made fixing brackets shall not constitute builder's work and shall be provided and installed by the Sub-contractor unless stated hereinafter to the contrary.

1.26 **Structural Provision for the Works**

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

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

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

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

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

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

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

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

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

1.28 Checking of Work

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

1.29 Setting to Work and Regulating System

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

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

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

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

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

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

1.30 **Identification of Plant Components**

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

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

1.31 **Contract Drawings**

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

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

1.32 Working Drawings

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

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

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

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

Working Drawings to be prepared by the Sub-contractor shall include but not be restricted to the following:

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

- b) General Arrangement Drawings of all plant, control boards, fittings and apparatus or any part thereof and of installation layout arrangement of such plant and apparatus.
- c) Schematic Layout Drawings of services and of control equipment.

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

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- e) Complete circuit drawings of the equipment, together with associated circuit description.
- f) Such other drawings as are called for in the text of the Specification or Schedules or as the Engineer may reasonably require.

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

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

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

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

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

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

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

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

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

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

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- b) Fully dimensioned drawings of all plant and apparatus.
- c) General arrangement drawings of equipment, other areas containing plant forming part of the Sub-contract Works and the like, indicating the accurate size and location of the plant and apparatus suitability cross-referenced to the drawings mentioned in (b) above and hereinafter.
- d) Routes, types, sizes and arrangement of all pipework and ductwork including dates of installation of underground pipework.
- e) Relay adjustment charts and manuals.
- f) Routes, types, sizes and arrangement of all electric cables, conduits, ducts and wiring including the dates of installation of buried works.
- g) System schematic and trunking diagrams showing all salient information relating to control and instrumentation.
- h) Grading Charts.
- i) Valve schedules and locations suitability cross-referenced.
- j) Wiring and piping diagrams of plant and apparatus.
- k) Schematic diagrams of individual plant, apparatus and switch and control boards. These diagrams to include those peculiar to individual plant or apparatus and also those applicable to system operation as a whole.
- l) Operating Instruction

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

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

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

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

- a) The Marked-up Drawings during the execution of the Sub-contract Works or
- b) The Record Drawings, etc., within one month of the Section or Practical Completion

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

1.34 **Maintenance Manual**

Upon Practical Completion of the Sub-contract Works, the Sub-contractor shall furnish the Engineer four copies of a Maintenance Manual relating to the installation forming part of all of the Sub-contract Works.

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

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

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

- a) System Description.
- b) Plant
- c) Valve Operation

- d) Switch Operation
- e) Procedure of Fault Finding
- f) Emergency Procedures
- g) Lubrication Requirements
- h) Maintenance and Servicing Periods and Procedures
- i) Colour Coding Legend for all Services

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- j) Schematic and Wiring Diagrams of Plant and Apparatus
- k) Record Drawings, true to scale, folded to International A4 size
- l) Lists of Primary and Secondary Spares.

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

1.35 **Hand-over**

The Sub-contract Works shall be considered complete and the Maintenance and Defects Liability Period shall commence only when the Sub-contract Works and supporting services have been tested, commissioned and operated to the satisfaction of the Engineer and officially approved and accepted by the Employer, provided always that the handing over of the Sub-contract Works shall be coincident with the handing over of the Main Contract Works.

The procedure to be followed will be as follows:

- a) On the completion of the Sub-contract Works to the satisfaction of the Engineer and the Employer, the Sub-contractor shall request the Engineer, at site to arrange for handing over.

- b) The Engineer shall arrange a Hand-over Meeting or a series thereof, at site.
- c) The Sub-contractor shall arrange with the Engineer and Employer for a complete demonstration of each and every service to be carried out and for instruction to be given to the relevant operation staff and other representatives of the Employer.
- d) In the presence of the Employer and the Engineer, Hand-over will take place, subject to Agreement of the Hand-over Certificates and associated check lists.

1.36 **Painting**

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

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1.37 **Spares**

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

1.38 **Testing and Inspection – Manufactured Plant**

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

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

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

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

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

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

1.39 **Testing and Inspection -Installation**

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

1.40 **Labour Camps**

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

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

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

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1.41 **Storage of Materials**

Space for storage will be provided by the Main contractor but the sub-contractor will be responsible for provision of any lock-up sheds or 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 Project manager.

1.42 **Initial Maintenance**

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

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

The sub-contractor shall allow in the sub-contract Sum of the initial maintenance, inspection and break-down service and shall provide for all tools, instruments, plant and scaffolding and the transportation thereof, as required for the correct and full execution of these obligations and the provision, use or installation of all materials as oils, greases, sandpaper, etc., or parts which are periodically renewed such as brake linings etc., or parts which are faulty for any reason

whatsoever excepting always Acts of God such as storm, tempest, flood, earthquake and civil revolt, acts of war and vandalism.

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

The sub-contractor shall, if required, enter into a maintenance and service agreement with the employer for the installation for a period of up to five years from the day following the last day of the liability for Defects Period which offers the same facilities as specified in Clause 1.42 (Initial Maintenance).

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

The sub-contractor shall submit with his tender for the works, where called upon a firm quotation for the maintenance and service of the installation as specified herein, which shall be based upon the present-day costs and may be varied only to take into account increases in material and labour unit rate costs between the time of tendering and the signing of the formal maintenance

and service agreement and which shall remain valid and open for acceptance by the Employer to and including the last day of the fifth complete calendar month following the end of the liability for Defects Period.

1.44 **Trade Names**

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

1.45 **Water and Electricity for the Works**

These will be made available by the Main Contractor. The Sub-contractor shall be liable for the cost of any water or electric current used and for any installation provided especially for their own use by the Main Contractor.

1.46 **Protection**

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

1.47 **Defects After Completion**

The defects liability period will be 6 months from the date of completion of the Main Contract as certified by the Engineer.

1.48 **Damages for Delay**

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

1.49 **Clear Away on Completion**

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

1.50 **Final Account**

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

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- Statement A - detailing the tender amounts less the Prime Cost and Provisional Sums, included therein.
- Statement B - detailing all the variation orders issued on the contract.
- Statement C - Summarizing statement A and B giving the net grand total due to the Contractor for the execution of the Contract.

1.51 **Fair Wages**

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

- a) The sub-contractor shall pay rates of the wages and observe hours and conditions of labour not less favourable than those established for the trade or industry in the district where work is carried out.
- b) In the absence of any rates of wages, hours or conditions of labour so established the sub-contractor shall pay rates and observe hours and conditions of labour are not less favourable than the general level of wages, hours and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

1.52 **Supervision**

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

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

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

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

1.53 **Test Certificates**

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

1.54 **Labour**

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

1.55 **Discount to the Main Contractor**

No discount to the Main Contractor will be included in the tender for this installation.

1.56 **Guarantee**

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

1.57 Direct Contracts

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

1.58 Attendance Upon the Tradesmen etc

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

1.59 Trade Unions

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

1.60 Local and other Authorities notices and fees

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

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

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

1.61 Assignment or subletting

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

1.62 Partial Completion

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

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

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

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

1.63 Temporary Works

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

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

1.64 Patent Rights

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

1.65 Mobilization and Demobilization

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

1.66 Extended Preliminaries

Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the total Contractor

works. Where called upon in the Appendix to these Preliminaries the Contractor shall insert his percentage per month for extended preliminaries that shall form basis for compensation.

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

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1.67 Supervision by Engineer and Site Meetings

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

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

1.68 Amendment to Scope of Contract Works

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

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

1.69 Contractor Obligation and Employers Obligation

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

1.70 APPENDIX TO SUB-CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

1. OMIT CLAUSE 1.12

2. ADD TO CLAUSE 1.17

Prices quoted shall include **16% VAT**

3. ADD TO CLAUSE 1.40

There is no labour camp

4. CLAUSE 1.66

Extended Preliminaries shall be equal to or less than liquidated and ascertained damages and are subject to mutual agreement.

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SECTION D

GENERAL SPECIFICATION

OF

MATERIALS AND WORKS

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1.00 PART 1: GENERAL MECHANICAL SPECIFICATION

1.01 Introduction

This section covers the general requirement for plant, equipment and materials forming part of the mechanical works and shall apply except where specifically stated elsewhere in the Specification.

These works shall be as by regulations and standards.

1.02 Regulations and Standards

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

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

1.03 Quality of Materials

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

All products or materials shall be products of quality standards.

Materials and apparatus supplied by others for installation and connection shall be carefully examined on receipt. Any defects noted, should be brought to the attention of the Engineer.

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

1.04 Electrical Requirements

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

The supply power up to and including local isolators shall be provided and installed by the Electrical specialist. All other wiring and connections to equipment shall form part of mechanical works.

Three copies of all schematic, cabling and wiring Diagrams shall be supplied for the Engineer's approval.

The starting current of all electric motors and equipment shall not exceed the maximum permissible starting currents of the protective switch gear.

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

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

1.05 **Transport and Storage**

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

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

Adequate measures shall be taken to ensure that plant and equipment do not suffer any deterioration during storage.

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

If, in the opinion of the Engineer any equipment has deteriorated or been damaged to such an extent that it is not suitable for installation, the equipment shall be replaced at supplier own cost.

1.06 **Site Supervision**

There shall be an English-speaking supervisor on the site at all times during normal working hours.

1.07 **Installation**

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

1.08 **Testing**

1.08.1 **Introduction**

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

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

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

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

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

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

1.08.2 **Material Tests**

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

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

Specimens and performance tests and analyses to demonstrate conformance of the various materials with the applicable standards.

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

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

1.08.3 **Manufactured Plant and Equipment – Work Tests**

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

A two week's notice shall be given to the Engineer of the manufacturer's intention to carry out such tests and inspections.

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

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

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

1.08.4 **Pressure Testing**

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

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

A certificate shall be prepared for signature by the Engineer and shall keep a progressive and up-to-date record of the section of the work that has been tested.

1.09 **Colour Coding**

Unless stated otherwise, all pipework shall be colour coded in accordance with the latest edition of KSISO10526:1999 or B.S 1710 and to the approval of the Engineer.

1.10 **Welding galvanized pipes**

1.10.1 **Preparation**

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

1.10.2 **Method**

All welding shall be carried out by the electric arc processing using covered electrodes in accordance with KS06-206 :1981 (Confirmed 1999) or B.S. 639 .

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

1.10.3 **Welding Code and Construction**

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

Pipe Welding

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

General Welding

All welding of mild steel components other than pipework shall comply with the general requirements of KS06-1017-2: 1995 or B.S. 1856.

1.11 Welding PP-R pipes by means of electric coupling.

1.11.1 Preparation

The surfaces of the pipes and fittings must be clean and without blemish. Ends must be clean cut at right angles.

1.11.2 Method

Pipes and fittings are inserted to the edge of the matrix and held steady without rotating. Once the heating has been completed the parts are extracted from the heating element and rapidly joined axially

1.11.3 Welding by means of coupling

As the electric coupling can slide along the pipes, it is possible to carry out repairs and welds in any part of an existing plant. The parts to be joined must be clean free of grease and perfectly aligned. After inserting the parts to be welded in the coupling, the coupling has to be electrically connected to the welding machine

1.12.0 Welders' Qualifications

Any welder employed shall have passed the trade tests as laid down by the Government of Kenya.

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

2.00 PART2: GENERAL SPECIFICATIONS FOR PLUMBING AND DRAINAGE

2.01 Introduction

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

2.20 MATERIALS AND STANDARDS

2.2.1 Pipework and Fittings

Pipework materials are to be used shall be as follows:

a) Galvanized Steel Pipework

Galvanized steel pipe work up to 65mm nominal bore shall be manufactured in accordance with KS06.366:1982 or B.S. 1387 Medium Grade, with tapered pipe threads in accordance with B.S. 21. All fittings shall be malleable iron and manufactured in accordance with KS06-885:1995 or B.S. 143.

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

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

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

Polypropylene Pipes –Random (PP-R) Type 3

PP-R type3 pipe work shall be manufactured in accordance with B.S. 7291part 2001.Dimesnsions and quality of PP-R Pipes shall be in accordance with DIN 8077 and pipelines in plastics materials joints, Components parts, Installation to be in accordance DIN 16928.joints And fittings to be in accordance DIN16962.

Copper Tubing

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

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

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

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

d) Poly-vinyl Chloride (P.V.C). Pressure Pipes and Fittings

All P.V.C. pressure pipes and fittings shall be as manufactured in accordance with KS06-478-2:1993 (B.S. 3505: 1968).

Jointing

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

Testing

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

e) A.B.S. Waste System

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

The pipes, traps and fittings shall be in accordance with the relevant British Standards, including B.S. 3943 or KS06-7831-1:1990, and fixed generally in accordance with manufacturer's instructions and B.S. 5572: 1978.

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

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

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

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

f) Poly-vinyl Chloride (P.V.C) Pipes and fittings

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

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

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

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

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

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

2.2.2 Valves

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

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

b) Gate Valves

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

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

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

c) Globe Valves

All globe valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S.3061 or KS06-885:1995.

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

2.2.3 Waste Fitment Traps

a) Standard and Deep Seal P & S Traps

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

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

b) Anti-Syphon Traps

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

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

2.2.4 Pipe Supports

a) Introduction

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

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

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

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

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

b) Steel and Copper Pipes and Tubes

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

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

Size Nominal Bores	to B.S. 659	Copper Tube to B.S. 1387	Steel Tube
15mm	1.25m	2.0m	
20mm	2.0m	2.5m	
25mm	2.0m	2.5m	
32mm	2.5m	3.0m	
40mm	2.5m	3.0m	
50mm	2.5m	3.0m	

65mm	3.0m	3.5m
80mm	3.0m	3.5m
100mm	3.0m	4.0m
125mm	3.0m	4.5m
150mm	3.5m	4.5m

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

c) Expansion Joints and Anchors

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

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

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

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

2.2.5 Sanitary Appliances

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

2.2.6 Pipe Sleeves

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

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

2.3 INSTALLATION

2.3.1 Introduction

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

2.3.2 Above Ground Installation

a) Water Services

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

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

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

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

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

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

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

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

b) Sanitary Services

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

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

All necessary rodding and inspection facilities within the draining system in positions where easy accessibility is available.

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

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

The open end of each stack shall be fitted with a plastic coated or galvanised steel wire guard. Access for rodding and testing shall be provided at the foot of each stack.

c) **Sanitary Appliances**

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

2.4 0 TESTING AND INSPECTION

2.4.1 **Site Tests – Pipework Systems**

a) **Above Ground Internal Water Services Installation**

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

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

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

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

b) **Above Ground Soil Waste and Ventilation System**

All soil, waste and ventilating pipe system forming part of the above ground installation, shall be given appropriate test procedures as described in B.S. 5572, 1972.or KS02-254:1986

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

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

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

2.4.2 **Site Test – Performance**

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

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

All lagged pipes which run in a visible position after erection shall be given a canvas cover and prepared for painting as follows:

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

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

iii) Approved by the Engineer.

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

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

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

Pressure gauges should be recalibrated before the tests.

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

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

2.5 **STERILISATION OF COLD WATER SYSTEM**

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

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

3.00 PART 3: GENERAL SPECIFICATIONS FOR PORTABLE FIRE EXTINGUISHER.

3.01 INTRODUCTION

The general specification details the requirements for the supply and installation and commissioning of the Portable Fire Extinguishers.

The contractor shall include for all appurtenances and appliances not necessarily called for in this specification or shown on the designs but which are necessary for the completion and satisfactory functioning of the works.

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

3.02 WATER/CO₂ EXTINGUISHERS

These shall be 9-litre water filled CO₂ cartridge operated portable fire extinguishers and shall comply with B.S. 401 or B.S. 1288.or KSISO7165:1999 and to the requirements of B.S.1004. Unless manufactured with stainless steel, bodies shall have all internal surfaces completely coated with either a lead tin, lead alloy or zinc applied by hot dipping. There shall be no visibly uncoated areas.

The extinguishers shall be clearly marked with the following:

- a)Method of operation.
- b) The words 'WATER TYPE' (GAS PRESSURE) in prominent letters.
- c) Name and address of the manufacturer or responsible vendor.
- d) The nominal charge of the liquid in imperial gallons and litres.
- e) The liquid level to which the extinguisher is to be charged.
- f) The year of manufacture.
- g) A declaration to the effect that the extinguisher has been tested to a pressure of 24.1 bar (350 p.s.i.).
- h) The number of British Standard 'B.S' 1004 or B.S. 1449.

3.03 PORTABLE CARBON DIOXIDE FIRE EXTINGUISHERS

These shall be portable carbon dioxide fire extinguishers and shall comply with B.S. 1004.or KSISO7165:1999

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.(EN3:1996)

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.

- a) Method of operation.
- b) The words "Re-charge immediately after use".
- c) Instructions for periodic checking.
- d) The number of the British Standard B.S. 3326: 1960 or B.S. 5423.
- e) The manufacturers name or identification markings

3.04 DRY CHEMICAL POWDER PORTABLE FIRE EXTINGUISHER

The portable dry powder fire extinguishers shall comply with BS 1449 or KSISO7165:1999 and BS 1004. The body shall be constructed to steel not less than the requirements of BS 1449 or aluminium to BS 1470 : 1972(EN3: 1996) and shall be suitably protected against corrosion.

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

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

Provision shall be made for securing the nozzle when not in use.

The extinguisher shall be clearly marked with the following information

- a) The word "Dry Powder Fire Extinguisher"
- b) Method of operation in prominent letters.
- c) The working pressure and the weight of the powder charge in Kilogramme.
- d) Manufacturers name or identification mark
- e) The words "RECHARGE AFTER USE" if rechargeable type.
- f) Instructions to regularly check the weight of the pressure container (gas Cartridge) or inspect the pressure indicator on stored pressure types when fitted, and remedy any loss indicated by either.
- g) The year of manufacture.
- h) The Pressure to which the extinguisher was tested.

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

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

3.05 AIR FOAM FIRE EXTINGUISHER

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

Cylinder: to B.S. 1449 or KSISO7165:1999

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

Head cap: to be plastic moulding acetyl resin.

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

Internal Finish: to be polythene lining on phosphate coating.

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

4.07 FIRE BLANKET

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

4.08 SIGNAGE -FIRE EXIT SIGN

Proceed and procure and install as below;

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

1. Lettering IN RED COLOUR of not less than 50mm in height.

2. A pendant sign bearing words, FIRE EXIT and with a directional arrow.

The sign must be capable of being read from both approaches to exit and so is double sided.

4.09 SIGNAGE -FIRE INSTRUCTION NOTICE

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

FIRE INSTRUCTION NOTICE

In the event of fire;

- (1) Raise the alarm by actuating the nearest alarm system point, Sound Siren /gong or Shout Fire
- (2) Attack fire using the nearest available equipment
- (3) Call fire Brigade 222181 or Police 999 and inform your switchboard (PABX) Operator
- (4) Ensure that all personnel not involved in fire fighting evacuation to safety outside the building.
- (5) Close but DO NOT LOCK doors behind as you leave.
- (6) Evacuate the building using stairs or fire escapes do not use Lifts/escalators walk calmly. Avoid panic. Do not stop or return for personal belongings.
- (7) Assemble as per floor outside the building for roll call.

4.00 PART 4: GENERAL SPECIFICATIONS FOR THE SUPPLY, INSTALLATION AND COMMISSIONING OF THE HOSEREEL SYSTEM

4.01 Introduction

The general 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, AND BS 5274.

4.02 Climatic Conditions

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

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

- | | | |
|----|----------------------------|--------|
| c) | Maximum temperature | oC |
| d) | Minimum Temperature | oC |
| e) | Average Temperature | oC –oC |
| f) | Range of Relative Humidity | –% |
| g) | Altitude | M |
| h) | Latitude | o’S |
| i) | Longitude | o’E |

j) Rainfall extremely heavy at certain period of the year.

4.03 Fire Hosereel Pumps

The fire pumpset shall be a fully automatic package unit. The unit shall consist of pumps of appropriate duty at a given head

The complete specification of the package pump set to be as follows:-

b) PUMP MATERIALS

Suction and Discharge Casing to be made Grey Iron. Shafts, conveyors, diffusers, impellers and the external elements made from Stainless Steel.

c) MOTORS

d) MECHANICAL SEAL

e) **BASEFRAME**

Welded fabrication from Mild Steel sections. With facility for lifting unit.

f) **PIPEWOK**

Medium gauge Galvanized Pipework to B.S. 1387 and Galvanized fittings to B.S. 143/1256. All Pipework to terminate with B.S 4504 NP.16 Flanges. Flexible connections to be affixed to suction and discharge connections.

g) **VALVE**

Pump Isolating Valves, Butterfly valve to B.S. 5155 with Cast Iron nylon coated disc and black airtrile liner. Non-Return Valve vertical lift type to be manufactured from Cast Iron with nitrile seal.

h) **CONTROL PANEL**

Standard Panel cubicle to be manufactured to IP. 55 standards, containing Starters of appropriate ratings

Panel to include power On Light, Run and Trip Lights, Hand/Off/ Auto switches, duty pump selector switch, disconnect switch and line and control circuit fuses, Switches to conform to IP. 54.

Safety features to include 24 volts low voltage controls except for starter coils. Panel mounted on vibration isolators to minimize vibration to electrical equipment.

i) **PRESSURE SWITCH:**

Differential adjustment type switch manufactured to IP.14 standards.

Multi-pump sequencing control to be affected from a single pressure instrument, utilizing control circuitry specially for pressure boosting applications.

j) 4" Dial Bottom Connection to B.S. 1780 calibrated in Bars and KPa..

K) **MEMBRANE TANK**

Fabricated Steel construction housing a natural rubber diaphragm, ideally suited for drinking water applications. Precharged with Nitrogen to correct pressure at test stage.

The panel shall incorporate HRC main fuses and thermal overloads for the pump motors, timer control unit for minimum run period, start relay incorporating timing element for standby pump delay and one set of voltage free changeover contacts to give remote alarm/indication for the indicator lights motioned.

L) **Pipework**

The Pipework for the hose reel installation shall be galvanized wrought steel tubing "Medium" Grade Class "B" to BS 1387:1967 with pipe threads to BS 21.

M) Pipe Fittings

The pipe fittings shall be wrought steel pipe fittings welded or seamless fittings conforming to BS 1740 Part 1971 or malleable iron fittings to BS 143.

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

N) Flanges

The flanges shall comply with BS 4504 : 1969. All flanges shall comply to a nominal pressure rating of 16 bar (P.N. 16) and shall be of either cast iron or steel.

O) Gaskets

The gaskets for the use with flanges to BS 4304 : 1969 shall comply with BS 4865 part 1 : 1072 for pressure up to and not exceeding 64 bar.

P) Non-return Valves

The non-return valves up to and including 80mm diameter shall be to BS 5153 : 1974 with flanges to BS 4504 P.N. 16.

Q) Gate Valves

The gate valves upto and including 80mm shall be as Crane NO. D151 non-rising stem and wedge disc to BS 21 taper thread.

R) Sleeves

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

S) Floor and ceiling plates

Where pipe pass through floors, walls or ceilings, floor, wall and ceiling plates shall be secured around the pipe. The plates shall be of stainless steel construction and will serve no other purpose than to present a net finish, to the exposed installation.

T) Hosereels

The hosereels to the installation shall consist of recess and no-recess automatic hosereels.

All the above hosereels shall comply with BS 5274 : 1976 and BS 3169 : 1970 and is to requirements C.P. 5306 Part I : 1976.

The hosereels shall be supplied and installed complete with first-aid non-kinking hose 31 metres long, with nylon spray/jet/shut-off nozzle fitted. A screw down chrome plated globe valve to BS 1010 to the inlet to the reel .

The orifice to the nozzle is to be not less than 4.3 mm to maintain a minimum flow of 0.4L/s to the jet.

U) **Earthing**

The hose reel installation shall be electrically earthed by a direct earth connection.

V) **Finish Painting**

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

W) **Testing and Commissioning**

The hose reel system is to be flushed out before testing to ensure that no builders debris has entered the system. The system is to be then tested to one and half times the working pressure of the installation to the approval of the Engineer. Simulated fault condition of the pumping equipment, is to be carried out before acceptance of the system by the Engineer and Architect.

X) **Instruction Period**

The Sub-Contractor shall allow in his contract sum for instructing of use of the equipment to the clients 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 Clients staff shall be instructed in the operation and maintenance of the equipment.

CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

The Conditions of Contract comprise the “General Conditions”, which form part of the “Conditions of Contract for Construction” for Building and Engineering Works designed by the Employer”, First Edition 1999 published by the Fédération Internationale des Ingenieurs - Conseils (FIDIC) and the following “Particular Conditions”, which include amendments and additions to such General Conditions. The Contractor is deemed to be acquainted with and shall be in possession of the “General Conditions”.

AMENDMENTS TO FIDIC 1ST EDITION (1999 RED BOOK) CONDITIONS OF CONTRACT FOR CONSTRUCTION

The FIDIC “Conditions of Contract for Works of Building and Engineering Works designed by the Employer” (First Edition) 1999 as amended by this Appendix shall apply to this Contract. The Changes in the said FIDIC Contract that are not amended below shall be retained, apply and read in their original state in FIDIC conditions of Contract for Construction

The FIDIC Clauses are referred to by clause number only.

Where modifications or amendments as described are made, such modifications and/or amendments shall supersede any conflicting provision in the relevant clauses of the FIDIC "Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer" and the Contractor shall be deemed to have allowed for whatever costs and charges he may consider necessary for the carrying out and observance of the provisions of the clauses as modified and/or amended.

AMENDMENTS

Insert the following new definitions in section 1.1.1 (The Contract) Sub-Clause 1.1.1.11

“Contractor’s Design Documents” means all documents, calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature created by the Contractor for the purposes of carrying out his duties pursuant to this Contract and, in relation to his duties regarding the Contractor’s Design Portion.

Insert the following new definitions in section 1.1.2 (Parties and Persons) Sub-Clause 1.1.2.11

“Governmental Authority” means the Government of the Republic of Kenya, Parliament or any legislative organ (either national or of any part of the Republic of Kenya) any court, tribunal, any ministry (department or division thereof), parastatals, any authority or division thereof (including any regional and local authorities of Kenya) and any agency or entity or other body owned or controlled by the Government of the Republic of Kenya and having statutory competence to regulate or promulgate rules and regulations governing or touching and concerning matters, transactions and issues contained or relating to this Contract.

Sub-Clause 1.1.2.12

"Other Parties" means: (a) any contractor (other than the Contractor) employed by Employer (or any Affiliate of Employer); (b) any contractors or other parties not engaged by the Employer (or any Affiliate of the Employer) but performing work in connection with the Project; (c) the Employer’s (or Employer’s Affiliate’s) counterparty to any Related Project Agreement; (d) the personnel of any Governmental Authority who may be employed in the execution on or near the Site of any work relating to the Works or the Project and “Other Party” shall be construed accordingly.

Sub-Clause 1.1.2.13

“**Prime Commercial Bank**” means a reputable bank or financial institution approved by the Employer in writing.

Insert the following new definitions in section 1.1.4 (Money and Payments)

Sub-Clause 1.1.4.13

“**Direct Cost**” means all costs and expenses reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site which costs shall be priced on the basis of the preliminary items set out in the Bill of Quantities and shall not exceed the costs set out in the Bill of Quantities and in respect of which the Contractor provides the Employer with all the relevant receipts, documents and information confirming the incurring of such costs and expenses, but excluding, for the avoidance of doubt, any profit, Indirect Costs or other taxes.

Sub-Clause 1.1.4.14

“**Indirect Cost**” means the overhead costs, administrative expenses, travel costs and any other indirect costs incurred by the Contractor whether on or off the Site and which shall be determined by multiplying the Direct Cost by 10.00 %.

Insert the following new definitions in section 1.1.5 (Works and Goods) **Sub-Clause 1.1.5.9**

“**Best Industry Practice**” means the most stringent of the practices which are generally engaged in or observed by an experienced and prudent contractor in international construction industries with respect to the construction of facilities similar to the Works and which, with respect to any objective, may be expected, in the exercise of reasonable judgment, to accomplish that objective in a manner consistent with applicable Laws, Approvals, reliability, safety, environmental protection, economy and expediency.

Sub-Clause 1.1.5.10

“**Defect**” means any error, defect or damage in or to the Works and any failure of the Works or any part of the Works to comply with the Contract, together with any damage arising therefrom.

Sub-Clause 1.1.5.11

“**Latent Defect**” means a Defect that a reasonable inspection of the Works by the Employer’s Consultants would not have revealed before the end of the Defects Notification Period.

Sub-Clause 1.1.5.12

“**Project**” means the development, procurement, construction, testing and commissioning of the Works and all related equipment and facilities.

Sub-Clause 1.1.5.13

“**Related Work**” means all and any of the work being carried out by Other Parties in relation to the Project and so notified to the Contractor by the Employer and/or Engineer.

Sub-Clause 1.1.5.14

“Warranty” has the meaning set out in sub-clause 11.1 (Remedying Defects). **Insert the following new definitions in section 1.1.6 (Other Definitions) Sub-Clause 1.1.6.10**

“Approvals” means any approval, consent, license, permit or authorisation granted or to be granted by a Governmental Authority which is necessary for the validity or the exercise of rights or performance of obligations by a Party under this Contract.

Sub-Clause 1.1.6.11

“Control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise and the expressions “Controlling”, “Controlled by” and “under common Control with” shall be construed accordingly.

Sub-Clause 1.1.6.12

“Environmental and Social Impact Assessment” or “ESIA” means the environmental and social impact assessment study report undertaken by Employer with respect to the Project.

Sub-Clause 1.1.6.13

“Exceptionally Adverse Climatic Conditions” means weather in excess of the average recorded for the past 10 (ten) years by the Kenya Meteorological Department and could not reasonably be foreseeable by an experienced and competent Contractor exercising proper skill and care by the date of submission of the Tender, having made do and reasonable enquiries and acting in accordance with Best Industry Practice.

Sub-Clause 1.1.6.14

“Hazardous Substances” means any natural or artificial substance (whether in solid or liquid form or in the form of a gas or vapour and whether alone or in combination with any other substance) capable of causing harm to man or any other living organism supported by the environment, or damaging the environment or public health including but not limited to any controlled, hazardous, toxic or dangerous waste.

Sub-Clause 1.1.6.15

“Intellectual Property” means copyright, all rights conferred under Laws, common law or in equity in relation to inventions (including patents), registered and unregistered trademarks, registered and unregistered designs, confidential information, circuit layouts and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

Sub-Clause 1.1.6.16

“Prohibited Materials” means Materials which (a) affect or put at risk the health or safety of any person whomay come into contact with the Works (whether during construction or after their completion); or (b) are by themselves or as a result of their use in a particular situation or in combination with other materials, would or are likely to have the effect of reducing their normal life expectancy or performance of any other material or structure in which the Materials are incorporated or to which they are affixed;

Sub-Clause 1.1.6.14

“**Risk Register**” means a register of all the risks which might adversely affect the Contractor’s ability to perform the Contract and complete the Works (or any Section of them) by Time For Completion and for the Contract Price and the risks which the Contractor and the Engineer may notify as an early warning matter.

Existing definitions to be amended as follows:Sub-Clause 1.1.2.9

The definition of “DAB” is deleted in its entirety.

Sub-Clause 1.1.4.3

“**Cost**” means together the Direct Cost and the Indirect Cost. Where the Contractor is entitled under a Sub- clause of these Conditions to payment of Cost, it shall be added to the Contract Price. Cost should be excluding profit.

Sub-Clause 1.1.2.4

“**Engineer**” “Wherever the term “Engineer” is used in the standard FIDIC Conditions of Contract it shall bereplaced by “Project Manager”.

Sub-Clause 1.1.2.6

“**Employer’s Personnel**” are listed in the Appendix to Tender.

Sub-Clause 1.1.5.6

“**Section**” add after the words Appendix to Tender, “or any Instruction by the Engineer”.

Sub-Clause 1.1.6.8

“Unforeseeable” means not reasonably foreseeable by an experienced and competent Contractor exercising proper skill and care as at the date of receipt of the Tender, having made do and reasonable enquiries and acting in accordance with Best Industry Practice.

Sub-Clause 1.2 (Interpretation)

Delete Sub-Clause 1.2 and replace it with the following:

In the Contract, except where the context requires otherwise:

words indicating one gender include all genders;

words indicating the singular also include the plural and words indicating the plural also include the singular;

reference to any statutory provision (including any secondary legislation) shall include such provision as modified,

E6.

Re-enacted or consolidated from time to time;
provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;
references to 'including', 'included', or "include" will be read as if followed by the words "without limitation";
any reference to a document is to that document as amended, varied or novated from time to time otherwise than in
breach of this Contract or that document; and
references to a week is to a period of 7 consecutive calendar days.

The ejusdem generis rule does not apply to this Contract. Accordingly, specific words indicating a type, class or category of thing do not restrict the meaning of general words following such specific words, such as general words introduced by the word other or a similar expression. Similarly, general words followed by specific words shall not be restricted in meaning to the type, class or category of thing indicated by such specific words.

A reference in this Contract to any English legal term for any action, remedy, method or form of judicial proceeding, legal document, court or any other legal concept or matter will be deemed to include a reference to the corresponding or most similar legal term in any jurisdiction other than England, to the extent that such jurisdiction is relevant to the transactions contemplated by this Contract or the terms of this Contract.

Sub-Clause 1.5 (Priority of Documents)

Amend the order after sub clause (g) as follows:

Bills of Quantities,
the Schedules and any other documents forming part of the Contract

Sub-Clause 1.7 (Assignment)

Delete the entire sub-clause and substitute with the following:

Neither Party shall assign or transfer the whole or any part of the Contract or any benefit, interest, obligation or liability in or under the Contract, except that either Party:

may assign or transfer the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and

may, as security in favour of a bank, financial institution or other party providing financing, pledge, charge or assign its right to any moneys due, or to become due, under the Contract, and provided further that Employer may, and Contractor hereby consents to Employer's right, freely assign, pledge, charge or transfer its benefits, interests, obligations or liabilities under this Contract or any part thereof to the Finance Parties (including any security or facility agent on behalf of the Finance Parties) or any party acquiring any interest (whether freehold or leasehold) in the Site or any part of it.

Sub-Clause 2.4 (Employer's Financial Arrangements)

Delete Sub-Clause 2.4 in its entirety.

Sub-Clause 3.1 (Engineer's Duties and Authority)

The following words shall be added at the end of this sub-clause:

“The Engineer shall obtain the specific approval of the Employer before taking action under the following sub-clauses of these

Conditions:

sub-clause 10.1: Specific approval of the Employer is required before issuing any Taking Over Certificate;

sub-clause 11.9: Specific approval of the Employer is required before issuing the Performance Certificate;

Sub-Clause 3.2 (Delegation by the Engineer)

The following shall be added at the end of this sub-clause:

“The following duties of the Engineer have been delegated to the parties below:

In respect of all Architectural design, functional design and assessment of quality compliance as far as the Contractor is concerned in these functions, by the Architect.

In respect of all measurements, valuations, financial assessments and all other quantity surveying and cost control functions as far as the Contractor is concerned in these functions, by the Quantity Surveyor.

In respect of the civil engineering design, technical engineering co-ordination and assessment of engineering quality compliance as far as the Contractor is concerned in these functions, by the Civil Engineer.

In respect of the structural engineering design, technical engineering co-ordination and assessment of engineering quality compliance as far as the Contractor is concerned in these functions, by the Structural Engineer.

In respect of the mechanical and electrical engineering design and related co-ordination and assessment of engineering quality compliance as far as the Contractor is concerned in these functions, by the Mechanical and Electrical Engineer”.

Sub-Clause 3.3 (Instructions of the Engineer)

The second part of this sub-clause beginning with the words “Whenever practical...” is deleted and replaced by the following:

“All instructions given by the Engineer are to be given in writing”.

Sub-Clause 3.4 (Replacement of the Engineer)

Delete the sub-clause in its entirety and replace with the following:

“If the Employer intends to replace any of the Employers Consultants, the Employer shall, not less than 28 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended replacement Employers Consultant. If the Contractor does not respond within 7 days after receiving this notice, by giving a notice stating an objection to such replacement with reasons, the Contractor shall be deemed to have accepted the replacement.

The Employer shall not replace any of the Employers Consultants with a person against whom the Contractor raises reasonable objection by notice to the Employer, with supporting particulars.”
If the Employers Consultants is unable to act as a result of death, illness, disability or resignation (or, in the case of an entity, the Employers Consultant becomes unable or unwilling to carry out any of the duties, other than for a cause attributable to the Employer, the Employer shall be entitled to immediately appoint a replacement by giving a notice to the Contractor with reasons and the name, address and relevant experience of the replacement. This appointment shall be treated as a temporary appointment until this replacement is accepted by the contractor, or another replacement is appointed, under this Sub-Clause.

Sub-Clause 4.1 (Contractor’s General Obligations)

Insert the following paragraphs at the end of the sub clause:

“The execution of the Works by the Contractor shall include any work which is specified in or necessary to satisfy the obligations contained in any of the Contract Documents or under the Contract, or is implied by the Contract, and all works which (although not mentioned in the Contract) can be reasonably inferred in accordance with Best Industry Practice as being necessary for the completion, or safe and proper use, of the Works. The Contractor shall execute the Works in accordance with Best Industry Practice and in accordance with the Contract Documents including without limitation the Specification, the Bills of Quantities and the Drawings.”

“The Contractor shall, when requested and at no additional cost to Employer, provide all information and execute all documentation required under applicable Laws or by any Governmental Authority in relation to the performance, testing or approval of the Works.”

"The Contractor undertakes to the Employer that:

it shall not specify for use, permit to be used or approve any materials to be used in connection with the Works any materials which at the time the Works are being carried out are generally accepted or reasonably suspected of being Prohibited Materials, and the Contractor shall notify the Employer immediately if it becomes aware that any such materials have been or are intended to be used in connection with the Works;

the execution and completion of the Works will be carried out in such a way as per specifications and to ensure the contractually agreed and safe commercial operation of the Works after completion with the minimum interruption for maintenance or repair."

E9

Sub-Clause 4.2 (Performance Security)

Insert the following new sentence:

The Performance Security shall be issued by an approved **Prime Commercial Bank** in the form set out in Schedule of the tender document or in another form approved by Employer

Sub-Clause 4.6 (Co-operation)

Shall be deleted in its entirety and substituted with:

"In execution of the Works the Contractor shall in addition to complying with the Specification: permit and facilitate the execution of Related Work on Site by other parties; fully and actively co-operate with all parties undertaking Related Work and jointly with them prepare co-ordination drawings taking account of such Related Work where necessary or where directed by the Engineer arrange and/or attend meetings with parties undertaking Related Work and use his best endeavours to ensure that no interruption or interference is caused by or to any such parties; satisfy itself in adequate time before commencing any part of the Works as to the position, dimensions and suitability of any previous Related Work forming part of the Project which might in any way affect the Works and advise the Engineer in writing if such previous Related Work is out of position, wrongly dimensioned or in any other way unsuitable, so as to minimize any resultant interruption or interference In relation to the above matters, the Contractor shall comply with the Engineer's reasonable instructions and any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

In the event that the Engineer instructs the Contractor to undertake additional work in order to comply with the above, then The Contractor shall be entitled subject to Sub-Clause 20.1 (Contractor's Claims)."

Sub-Clause 4.12 (Unforeseeable Physical Conditions)

Add the following paragraph at the end of the Sub-clause as the last paragraph:

"The Contractor shall continue executing the Works as far as is practicable and shall use its best endeavours to mitigate delay and Cost."

Sub-Clause 4.14 (Avoidance of Interference)

add the following before the final paragraph

“Without in any way derogating from the generality of the Contractor’s obligations pursuant to this Contract, the Contractor shall before commencement of works on Site, inspect adjoining properties and, (in consultation with the Engineer), arrange with the owners of adjacent buildings and properties and representatives of local authorities to inspect, the adjacent buildings, structures, paving, kerbing, channels and fences. The Contractor should pay particular attention to cracks, defects and existing levels related to structures, paving, channels and fences, which could later be claimed to have been caused or disturbed by the construction operations under this Contract. Contractor shall provide photographic evidence to the Employer of all inspections carried out pursuant to this Sub-clause. Such photographic evidence shall be in digital still format and shall be dated.”

Sub-Clause 4.15 (Access Route)

Add the following after (e):

(f) the contractor shall be required to keep the common access road clean.

Sub-Clause 4.17 (Contractor’s Equipment)

Insert the following at the end of the sub-clause:

"The Contractor shall ensure that all subcontracts it enters into with Subcontractors contain provisions which restrict the Subcontractor's ability to remove items of Contractor's Equipment from the Site to an extent consistent with this sub-clause."

Sub-Clause 4.18 (Protection of the Environment)

Add the following at the end of this Sub-clause:

“The Contractor shall develop a waste management plan prior to the start of construction (the Waste Management Plan), and is to be implemented for the entire construction duration. The Waste Management Plan must detail how all generated waste is monitored and disposed in accordance with the Environmental Regulations and Rules.

The Contractor shall at all times comply with all environmental laws in the Country and with all provisions of the Environmental Management and Coordination Act (EMCA) and with all rules, regulations and directives of the National Environmental and Management Authority (NEMA) from time to time and in the event that the Contractor is in breach of or in contravention of any environmental laws, the provisions of the EMCA or any rules, regulations and/or directives of NEMA the Contractor shall indemnify on a full, unqualified, unconditional and irrevocable basis, the Employer against all losses, actions, claims, demands, proceedings (whether criminal or civil), costs, charges, legal expenses, insurance premiums and calls, liabilities, taxes, judgments, damages, or other sanctions whatsoever arising (directly or indirectly and whether past, present or future) which may be brought or preferred against the Employer or which the Employer may suffer or incur arising out of or in connection with such breach or contravention by the Contractor.”

Sub-Clause 5.3 Payment to Nominated Sub-Contractors

Add the following:

However, the Contractor may in writing authorize the Employer to pay directly amount certified and payable to the Nominated Subcontractors. This shall not relieve the Contractor of any obligations under this Contract.

“Any payments made by the Employer directly to any nominated Subcontractor in accordance with the provisions of this Sub-clause and/or any domestic subcontractor shall be deemed to be made by the Employer on behalf of the Contractor.

“The Employer, the Engineer and the Other Consultants, shall have the right at all times to access the workshops and other places of the nominated Subcontractor where work is being prepared and the Contractor shall ensure that the nominated Subcontractors shall at all times give access to the workshops and other places of the nominated Subcontractor where work is being prepared.”

Sub-Clause 6.6 Facilities for Staff and Labour

Include the following:

“The Contractor shall not permit any of the Contractor's personnel to be housed within the area of the site.”

Sub-Clause 6.12 (Observance by Sub-Contractors)

add new sub-clause:

“The Contractor shall be responsible for observance by all Sub-Contractors of the requirements of this sub-clause 6 and all other provisions of the Contract relevant to his work.”

Sub-Clause 7.1 (Manner of Execution)

Delete and replace with the following:

in the manner specified in the Contract;
in a proper workmanlike and careful manner, in accordance with Best Industry Practice;
with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract; and
in accordance with all applicable Laws, codes and standards.

Materials and goods shall be new and appropriate for their use, and materials, goods and workmanship shall be of a satisfactory quality and to the satisfaction of the Employer's Personnel.

Save as required under or pursuant to any other provision of this Contract the Contractor shall not use or permit to be used in the Works any materials which by their nature or application contravene any applicable Law or where there is no such Standard or guidance, the relevant detailed specifications as prepared by the Engineer Structural and Civil Engineers and the mechanical and electrical and engineers and which are contained in these Contract Documents.

Sub-Clause 8.1 (Commence of Works)

Delete sub-clause 8.1 and replace with:

“The Employer shall be under no obligations to make any payments to the Contractor under this Agreement until the following conditions have been satisfied:

delivery by the Contractor of the Performance Security to the Employer
the Contractor providing satisfactory evidence to the Employer that the insurances for which the Contractor is responsible under this Contract have been affected.

The Contractor shall proceed with the Works with due expedition and without delay from the Commencement Date. The Employer shall be entitled to amend the Commencement Date upon giving 7 days’ notice to the Contractor and the Contractor shall not be entitled to claim any Cost or Profit associated with this instruction but, if the Employer stipulates a later Commencement Date, the Time for Completion shall be extended by the same period.

Sub-Clause 8.3 (Programme)

Add the following paragraphs at the end of this sub-clause:

The Programme shall be compiled based on the Critical Path Method of programming and the critical activities are to be clearly highlighted. It shall be compiled in such a way that logic is not constrained by resource limitations, unless specifically agreed otherwise by the Engineer. The Programme will be processed in MS Project or such other software approved by the Engineer and the Contractor shall provide all the co-operation necessary to achieve this.

For the purposes of this sub-clause “Critical Path Method” means a sequence of activities in a Project program which must be completed on time for the Project to complete in the time for Completion. An activity on the critical path cannot be started until its predecessor activity is complete; if it is delayed, the Project will be delayed unless the activity following the delayed activity is completed earlier than programmed.

For the avoidance of doubt, the Contractor’s obligation to complete the Works is as stated in this Contract. Any revision to the Programme (including to the critical path) that may be required in accordance with the provisions of this Contract shall not give rise to a right to an extension of Time for Completion or Cost.”

Sub-Clause 8.4 (Extension of Time)

To be deleted and replaced with the following:

“The Contractor shall be entitled subject to sub-clause 20.1 (Contractor’s claims) and 8.14 (Early Warning) to an extension of the Time for completion if and to the extent that completion for the purposes of sub-clause

10.1 (taking over the Works and sections) is or will be delayed by any of the following causes:

a Variation (unless an adjustment to the Time for Completion has been agreed under sub-clause 13.3 (Variation Procedure) or 13.10 (Quotations);
Exceptionally Adverse Climatic Conditions;
Unforeseeable physical conditions (sub-clause 4.12);
access (sub-clause 2.1);
delayed drawings (amended 1.9).;
tests (amended sub-clause 7.4);
suspension under sub-clause 8.9 (if and to the extent that the cause of the suspension is not the responsibility of the Contractor);
fossils (sub-clause 4.24);
Adjustments for Changes in Legislation (sub-clause 13.7)
suspension (sub-clause 16.1);
Employer's Risks (sub-clause 17.4);
tests (sub-clause 10.3);
Consequences of Force Majeure (sub-clause 19.4); and
setting out (sub-clause 4.7).

Notwithstanding any other provision of this Contract, the Contractor shall not become entitled to any extension of the Time for the Completion of the Works or any part of the Works on account of any circumstance arising by reason of any error, omission, negligence or default of the Contractor or of any subcontractor or supplier, or of any of his or their employees or agents.

Where, concurrent with a delay described in this sub-clause, ("Employer's Delay Event") the Works are being delayed for other reasons, the Contractor shall only be entitled to an extension of the Time for Completion. For the avoidance of doubt, the Contractor shall not be entitled to Costs for the delay caused by a concurrent delay.

If, having regard to the Contractor's continuing duty to reprogram, to adjust the critical path shown on the Programme and to constantly use best endeavours to mitigate delay, the Contractor considers himself entitled to an extension of the Time for Completion, he shall give notice to the Engineer in accordance with sub-clause 20.1 (Contractor's claims). When determining each request for an extension of time under sub-clause 20.1, the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time."

Sub-Clause 8.7 (Delay Damages)

Delete and replace with the following:

Contractor shall, subject to sub-clause 2.5 (Employer's Claims) and when requested by Employer, pay delay damages to Employer for each day which elapses between the Time for Completion and the date of issuance of the Taking Over Certificate in relation to the Works at the rates set out in the Appendix to Tender.

The Parties agree that the delay damages are a genuine and reasonable pre-estimate of the damages likely to be sustained by Employer as a result of Contractor's breach of its obligations set out in sub-clause 8.2 (Time for Completion). If the obligation to pay delay damages pursuant to this sub-clause 8.7 is found for any reason to be void, invalid or otherwise inoperative so as to disentitle Employer from claiming delay damages, Employer shall be entitled to claim against Contractor for damages at law resulting from Contractor's breach of its obligations set out in sub-clause 8.2 (Time for Completion) up to the percentage specified in the Appendix to Tender.

Save in the case of fraud, deliberate default or reckless misconduct, the delay damages described above (whether payable under this Contract or at law) shall be one of the Employer's remedy for Contractor's breach of its obligations under sub-clause 8.2 (Time for Completion), other than in the event of termination under sub-clause 15.2 prior to the Time of Completion. These damages shall not relieve Contractor from its obligation to complete the whole of the Works by the time stipulated under sub-clause 8.2 (Time for Completion), or from any other duties, obligations or responsibilities which it may have under the Contract.

Sub-Clause 8.10 (Payment for Plant and Materials in Event of Suspension)

Insert in sub paragraph

(c) “the Contractor and his supplier/subcontractor has completed and provided vesting certificates in the form approved by the Engineer”

Sub-Clause 8.13 (Acceleration)

Add new sub-Clause as follows:

“8.13.1 Without prejudice to any other provision of this Contract (including Sub- sub-clause 8.6) the Engineers shall be entitled to instruct the Contractor to accelerate the progress of the Works as a whole or any section.

Upon receipt of such instruction, the Contractor shall revise the Programme and take such steps to ensure that the Works are completed in accordance with the instruction including the provision by him of additional resources, Contractor’s Equipment, manpower etc., and the working of overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The Contractor shall prove that such steps are being taken if called upon to do so.

An instruction under this sub-clause 8.13 may be issued:

in substitution for the award of an extension of time under sub-clause 8.4 above. In such circumstances only, the Contractor shall be entitled to claim the Cost that would have been recoverable for the Employer’s Delay Event (but for the instruction under this sub-clause 8.13) or the Cost of compliance with the instruction (whichever is the lesser sum); or

where the Contractor has no entitlement to an award of an extension of time under sub-clause 8.4. In these circumstances the Contractor shall comply with the Instruction at his own expense.”

Sub-Clause 8.14 (Early Warning)

Add new sub-Clause as follows:

The Contractor and the Engineer shall give an early warning (in writing) notifying each other as soon as either becomes aware of any matter which could:

Increase the cost of the Works.

Delay completion of the Works; or

Impair performance of the Works in use.

The Engineer shall procure that all early warning matters are entered in the Risk Register.

(c) The Contractor and the Engineer may require each other to attend a risk reduction meeting. They may also agree to require other representatives of sub-contractors or the Employer's Personnel to attend such meetings.

(d) At a risk reduction meeting, those attending shall cooperate in:

Making and considering proposals for how the effect of the registered risk can be avoided or reduced; and

Seeking solutions that will bring advantage to all those who will be affected; and

Deciding on actions which will be taken and who, in accordance with the Contract, shall take them; and

Deciding which risks have been avoided or have passed and may be removed from the Risk Register.

(e)The Engineer shall review and if necessary, revise the Risk Register to record the status of early warning matters and following any risk reduction meeting.

(f) If the Contractor fails to comply with his obligation to give early warning in accordance with this sub-clause, the Contractor shall not be entitled to bring any claim for extension of the Time for Completion and/or additional payment unless he can demonstrate that there was no likelihood that the Employer, with the benefit of the required early warning, would not have been able, in cooperation with the Contractor, to mitigate the delay or Cost.

Sub-Clause 10.1 (Taking Over of the Works and Sections)

The contractor shall in addition provide the following information before taking over certificate is issued:

the Contractor has provided all documents and other information required under this Contract as a condition of taking over the Works.

the Works are capable of being used safely under all anticipated or likely conditions;

the Works are in a condition which allows the Employer to comply with all Applicable Laws relating to its use and all Approvals.

all Approvals to be obtained by Contractor under this Contract and which are necessary for the use of the Works have been transferred (to the extent necessary and/or permitted at Law) to the Employer; and

any other matters stated in the Contract Documents as being required for the Works to be considered complete have been complied with by the Contractor.

Add the following paragraph at the end of this Sub-clause:

“Following the issue of the Taking-Over Certificate in relation to the Works or any part of them, the Employer shall be entitled to possession of the Works (or the part of them by reference to which a Taking-Over Certificate has been issued) and the Contractor shall not have any lien or right of continuing possession of the Works (or the part of them by reference to which the a Taking- Over Certificate has been issued)”.

Sub-Clause 11.11 Clearance of Site

In the first sentence replace the words “Performance Certificate” with “Taking Over Certificate”

In the second paragraph replace the words “Performance Certificate” with “Taking Over Certificate”

Sub-Clause 11.12 Latent Defects

Insert the following new sub-clause after 11.11

The Latent Defects Liability Period for the Works shall commence at the end of the Defects Notification Period and end after six years. The Employer shall have the same rights and the Contractor shall have the same duties in respect of Latent Defects notified during the Latent Defects Liability Period as they have in respect of Defects during the Defects Notification Period. The Engineer shall be entitled to issue instructions in respect of Latent Defects during the Latent Defects Liability Period in the manner described in sub-clause 11 and if the Contractor fails to comply with such requirements, then the Employer may carry out the work himself or employ others to do it and the Contractor shall pay to the Employer all cost incurred by the Employer in remedy of such latent Defect(s). Where this Agreement is cancelled or terminated the Latent Defects Liability Period shall commence on the date of such termination or cancellation and end after six years.

Sub-Clause 12.3 (Evaluation)

Delete Sub-clause 12.3 (a) items (i), (ii), (iii) and (iv) in their entirety

Sub-Clause 13.2 (Value Engineering)

Add the following words at the end of this sub-clause:

“For the avoidance of doubt, when calculating the reduction in the contract value under this sub-clause 13.2 there shall be added any and all Cost arising from Programme changes and or delay to the Time for Completion.”

Sub-Clause 13.8 (Adjustments for Changes in Cost)

Deleted and replaced with the following:

“The Contract unit prices shall not be subject to any adjustment of whatsoever nature in respect of rise and fall in the cost of labour, materials or any other matters affecting the cost of execution of the Contract save as provided by sub-clause 13.7 (adjustments for legislation)”

Sub-Clause 13.9 (Non-Compliance with Instructions)

Add the following new sub-Clause:

“Without prejudice to the Employer’s rights under sub-clause 11.4, if within 7 days of receipt of a written notice requiring compliance with any Instruction given in accordance with this Contract the Contractor does not comply, the Employer may employ and pay other persons to execute any work whatsoever which may be necessary to give effect to such instruction. The Contractor shall pay to the Employer all costs incurred in connection with such employment and such costs shall either be deducted from any payments due under this Contract or payable by the Contractor to the Employer as a debt”.

Sub-Clause 13.10 (Direct Purchase by Employer)

Add the following new sub-clause:

“The Employer may elect to purchase Materials upon notice to the Contractor. In the event of such an election by the Employer:

The Contractor shall provide the quantity and a full description of the materials to be purchased and inform the Employer as and when such Materials should be purchased to ensure that the timing of the purchasing of the Materials is in line with the Programme;

The Employer shall procure that payment for the Materials is made directly to the suppliers of such Materials;

The Materials shall be under the custody care and control of the Contractor from the point of purchase and he shall have a duty to inspect such Materials and promptly notify the Engineer of any shortage, defect or default in the Materials which is not in compliance with the requirements of this Contract; The Contractor shall be responsible for packing, loading, receiving, unloading, storing and protecting and transporting all the Materials from the supplier to the Site;

The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the handling and transportation of the Materials to the Site, and he shall negotiate and pay all claims arising therefrom; and

The Contractor shall be entitled to payment for his installation, overheads and profit, collection and transportation to site and safe custody in respect of such Materials as determined by the Engineer in accordance with sub-clause 3.5 [Determinations] and included in the Contract Price.”

Sub-Clause 13.11 (Quotations)

Add new sub-clause as follows:

The Contractor shall submit quotations for any proposed instruction or changed decision issued by the Engineer under this Contract unless that instruction or changed decision results from a default of the Contractor.

The Contractor’s quotation shall include:

full details of any effect on the Programme (referred to in sub-clause 8.3);

all Cost details; and

any reasonable profit to which the Contractor is entitled under this Contract, associated with the proposed instruction or changed decision.

(c) All quotations issued in accordance with this sub-clause shall be provided to the Engineer with a copy to the Quantity Surveyor. The Engineer may accept this quotation within a period of no more than 28 days.

(d) Any acceptance by the Engineer of a Contractor’s quotation issued under this sub-clause shall be a full and final settlement of all the Contractor’s claims for payment or extension of time in respect of that Instruction. (e) If the Engineer decides that the effects of the Instruction are too uncertain to be

forecast, he shall state the assumptions about the Instruction in his Instruction. The Contractor shall base his assessment/quotation on the assumptions. The Engineer and Contractor shall review and confirm the quotation/assessment once the details are ascertained and there are no assumptions.”

Sub-Clause 14.1 (The Contract Price)

Delete sub-clause 14.1(a) and substitute:

“The Contract Price shall be the Accepted Contract Amount, subject to adjustments in accordance with the Contract.”

Sub-Clause 14.9 (Payment of Retention Money)

Delete the first paragraph of this sub-clause and substitute:

“When the Taking Over Certificate has been issued for the whole of the Works and the Contractor has completed the works identified in the Employer’s Personnel list as required by sub-clause 10.1 (as amended) the first half of the Retention Money shall be certified by the Quantity Surveyor and Engineer for payment to the Contractor.”

Sub-Clause 14.13 (Issue of Final Payment Certificate)

delete the full stop at the end of this sub-clause and add:

“and the amount determined by the Engineer shall be deemed to be accepted by the Contractor in full and final settlement of all moneys due under or in connection with the Contract and shall be final and binding for all the purposes of this Contract.”

Sub-Clause 16.1 (Contractor’s Entitlement to Suspend Work)

Delete the words “or the Employer fails to comply with sub-clause 2.4 “in the first paragraph and delete the words “plus reasonable profit” in paragraph (b).

Sub-Clause 16.2 (Termination by Contractor)

Amend first sentence to read “the Contractor shall be entitled to give 14 days’ notice to the Employer with a copy to the Engineer of any one or more of the following defaults” and the sub-clause shall be read and construed to require a further 14 days’ notice after the Employer has not rectified the default, before termination is effective.

16.4 (Payment on Termination)

Delete sub-paragraph (c) of sub-clause 16.4. Insert at the end of sub-clause 16.4:

"For the avoidance of any doubt, the Contractor shall not be entitled to any loss of profits, loss of contracts or other costs, losses or expenses in connection with such termination."

Sub-Clause 19.1 (Definition of Force Majeure)

Delete this sub-clause and replace with the following:

In the Contract, Force Majeure means any exceptional event or circumstance which affects either Party and is not within the reasonable control of the Party affected, is not substantially attributable to the unaffected Party and such event or circumstance or its effects cannot be prevented, avoided overcome or removed by such Party acting in accordance with Best Industry Practice.

Force Majeure shall include each of the following events and circumstances to the extent that they satisfy the foregoing requirements:

any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, act of terrorism or piracy, or sabotage; or

an act of God including but not limited to lightning, fire, earthquakes, volcanic activity, floods, storms, cyclones, typhoons, or tornadoes; or

epidemics or plagues; or explosions or chemical contamination (other than resulting from an act of war or caused by the Works); or

strikes, lock out or local combination of workmen affecting any trades employed on the Works or of any trades engaged in the preparation, manufacture or transportation of any goods or materials for the Works ("labour disputes") where such labour disputes also extend beyond and effect projects other than the Works or are widespread or nationwide affecting parties other than the Employer and the Contractor;

PROVIDED THAT the following events or circumstances shall not constitute Force Majeure:

late delivery of Plant, Materials, Contractor's Equipment, spare parts or consumables (except where such late delivery or delay is itself attributable to an event of Force Majeure or is due to the action or inaction of any Governmental Authority);

where the Party invoking Force Majeure is the Contractor, a delay or default in the performance of any Subcontractor of any tier (except where such late delivery or delay is itself attributable to an event of Force Majeure as defined by this clause);

normal wear and tear of, or random flaws in, Goods or equipment in respect of the Works;

weather conditions which might reasonably have been foreseen by the Party claiming Force Majeure and which were not unusually adverse; strikes or other employee disturbances affecting only Contractor's or any Subcontractor's employees;

economic hardship;

shortages or price fluctuations (including as a result of currency fluctuations) with respect to materials, supplies or components of equipment or other works.

shortages of manpower.

any fire within the Works.

matters in relation to which the Contractor has accepted responsibility and risk pursuant to the terms of this contract and/or which the Contractor has provided for in his Programme.

any matter (other than Force Majeure) referred to in the amended clause 8.4 of these conditions; or

explosions or chemical contamination caused by the Works

Sub-Clause 19.6 (Optional Termination Payment and Release)

Insert “at least” before “84 days” in the first paragraph.

Clause 20 (Claims, Disputes and Arbitration)

Sub-clauses 20.2, 20.3, 20.4, 20.5, 20.6, 20.7 and 20.8 are deleted and replaced by the following:

Notwithstanding any dispute arising between the parties the Contractor shall, in every case, continue to proceed with the Works with all due diligence and shall not wholly or partly suspend or delay for any reason the execution for the Works.

Amicable Settlement

If at any time any question, dispute or difference shall arise between the Parties as to any matter or thing of whatever nature arising under or in connection with this Agreement (a “Dispute”), then either Party may give to the other notice in writing as to such Dispute (a “Dispute Notice”).

Upon receipt of such notice the appropriate representatives of the Parties shall use their reasonable endeavours to resolve such Dispute in good faith. Representatives from each Party shall meet as soon as possible. In the event that the Dispute is not resolved by such representatives within 10 Business Days of the date of delivery of the Dispute Notice the Dispute shall be referred to the persons with directorial responsibility and with full authority to settle the Dispute who should meet within a further 10 Business Days or such other period as the Parties may agree to attempt to resolve the Dispute. If the unresolved Dispute is having an effect on the progress of the Works, the Parties shall use their reasonable endeavours to reduce the time limits set out herein.

If the Dispute has not been resolved by negotiation within 60 days of delivery of the Dispute Notice, the Parties may seek to resolve the Dispute pursuant to sub-clause 20.4.

Mediation

If any Dispute cannot be resolved in the manner provided in sub-clause 20.3, the parties may refer the Dispute to mediation before resorting to litigation/arbitration. The mediation process will be commenced by service by one party on the other of a written notice that the Dispute is to be referred to mediation (the “Commencement Notice”). The parties shall appoint either a mediation body or an independent mediator to conduct the mediation and the Parties shall agree a procedure by which the mediation will be conducted. The parties will participate in good faith in the mediation. In the event that the parties are unable to agree on a choice of mediation body or mediator within 28 days of the date of service of the Commencement Notice, either party may refer the Dispute to the Centre for Effective Dispute Resolution to be mediated in accordance with the Centre for Effective Dispute Resolution (“CEDR”) procedures then in force and the parties shall accept a mediator nominated by CEDR Solve.

Arbitration

Any Dispute which is not solved in the manner provided in sub-clause 20.3 and sub-clause 20.4, shall be finally settled by arbitration in accordance with the Arbitration Act, 1995 Laws of Kenya (as amended). The arbitral tribunal shall comprise three arbitrators appointed in accordance with those Rules or failing such agreement being achieved within fourteen (14) days of the Parties first meeting to agree the arbitrator, by an arbitrator appointed by the Chairman for the time being of the Chartered Institute of Arbitrators, Kenya Branch. The arbitration shall be conducted in English, and the seat of the arbitration will be Nairobi, Kenya.

The Parties agree to treat any award made by the arbitral tribunal as final and binding upon them and immediately enforceable against them, and both Parties undertake not to exercise or seek to exercise any right of appeal or other challenge against such final award before any court or jurisdiction. This sub-clause shall not prevent a Party from seeking urgent relief (such as an injunction, conservatory measure, specific performance or similar order) from a court of competent jurisdiction. The provisions of this sub-clause constitute an irrevocable consent by the Parties to any proceedings in the terms hereof and no Party shall be entitled to withdraw there from or claim at any such proceedings that it is not bound by those provisions and are severable from the rest of this Agreement and shall remain in effect despite the termination of or invalidity of this Agreement for any reason. The arbitrator shall have full power to open up, review and revise any opinion, instruction, determination, certificate or valuation of the Engineer relevant to the dispute. Nothing shall disqualify the Engineer from being called as a witness and giving evidence before the Arbitrators on any matter whatsoever relevant to the Dispute.

ABBREVIATIONS

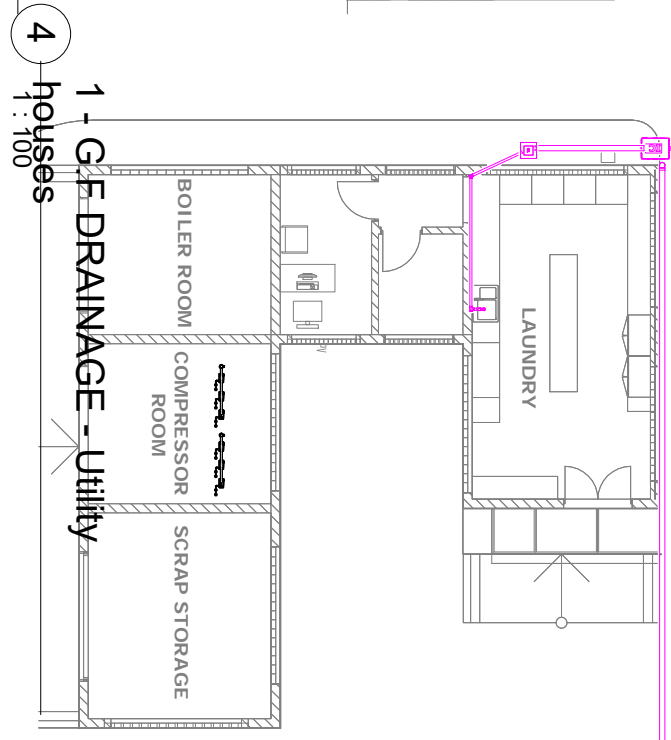
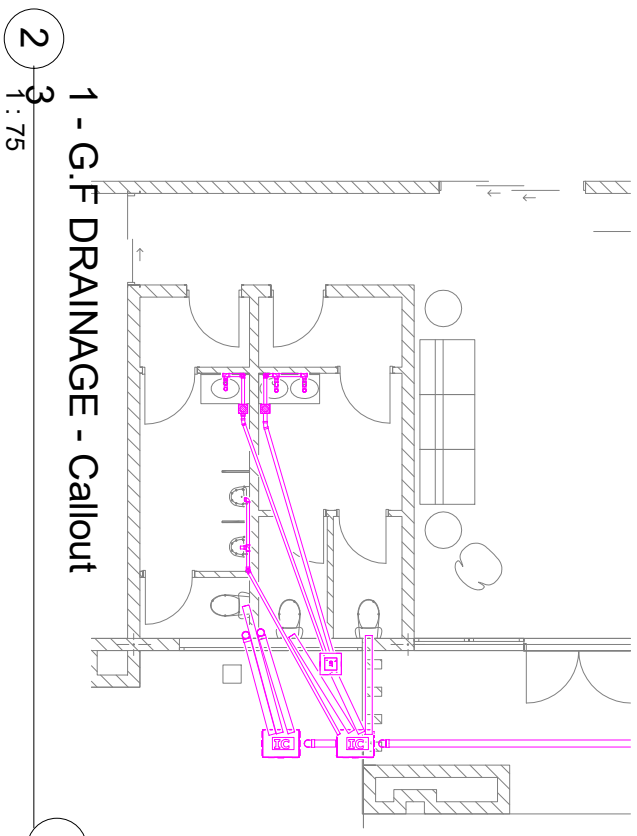
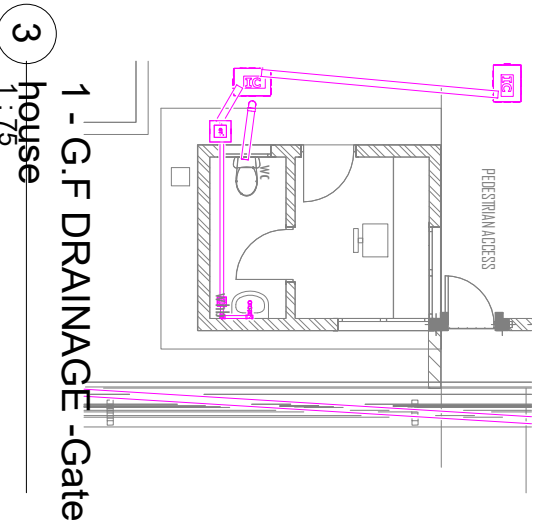
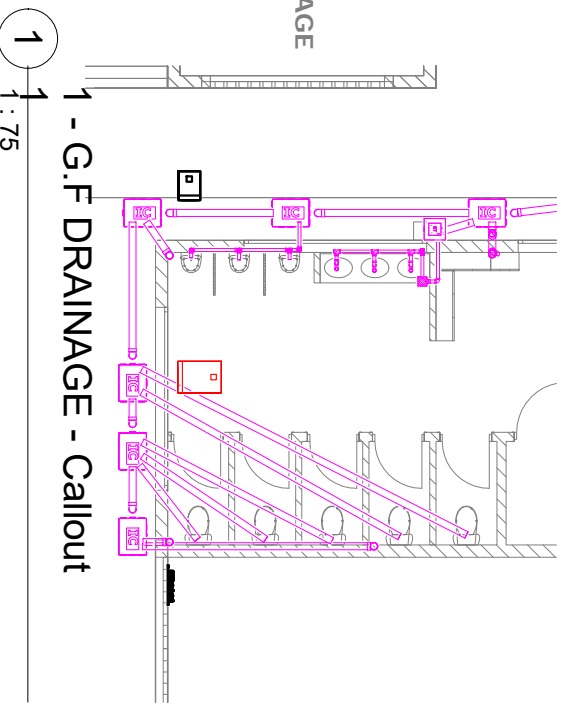
NO	-	shall mean number
m	-	shall mean metre
L.M	-	shall mean linear metre
mm	-	shall mean millimetre
kg	-	shall mean kilogramme
Ltr.	-	shall mean litre
S.S	-	shall mean stainless steel
G.M.S	-	shall mean galvanised mild steel
M.O.P.W-		shall mean ministry of public works
B.S	-	shall mean the Current British standards specification published by The British standard Institution
C.P	-	shall mean the current British standard code of practice published together with the B.S
I.E.E	-	shall mean the Institute of Electrical Engineers, Savoy Place , NAIROBI.
I.S.O	-	shall mean the International organization for standardization
K.B.S	-	shall mean the Kenya Bureau of Standards.
Ditto	-	shall mean the whole of the preceding description except as qualified in the description in which it occurs.

SCHEDULE OF CONTRACT DRAWINGS.

ELECTRICAL SERVICES DRAWING

1. Ground floor Mechanical installation
2. First floor Mechanical installation
3. Site Plan Mechanical Layout
4. Legend and Symbols

RAP STORAGE



GENERAL NOTES

1. This drawing shall be read with other project documents and drawings.
 2. The contractor shall be responsible for coordinating all work with the relevant authorities and obtaining all necessary permits.
 3. All work shall be done in accordance with the relevant codes and standards.
 4. The contractor shall be responsible for providing all necessary materials and labor.
 5. The contractor shall be responsible for the safety of all workers and the public.
 6. The contractor shall be responsible for the protection of all existing structures and utilities.
 7. The contractor shall be responsible for the disposal of all waste materials.
 8. The contractor shall be responsible for the maintenance of all records and drawings.

Infraplus
 Exceptional Engineering

Services Engineers
INFRAPLUS LIMITED
 P.O. BOX 28901 - 00100
 NAIROBI KENYA
 Email: info@infraplus.co.ke/
 infraplus.consult@ gmail.com

CLIENT
EPZA
 ATHI RIVER

Client's Signature: _____

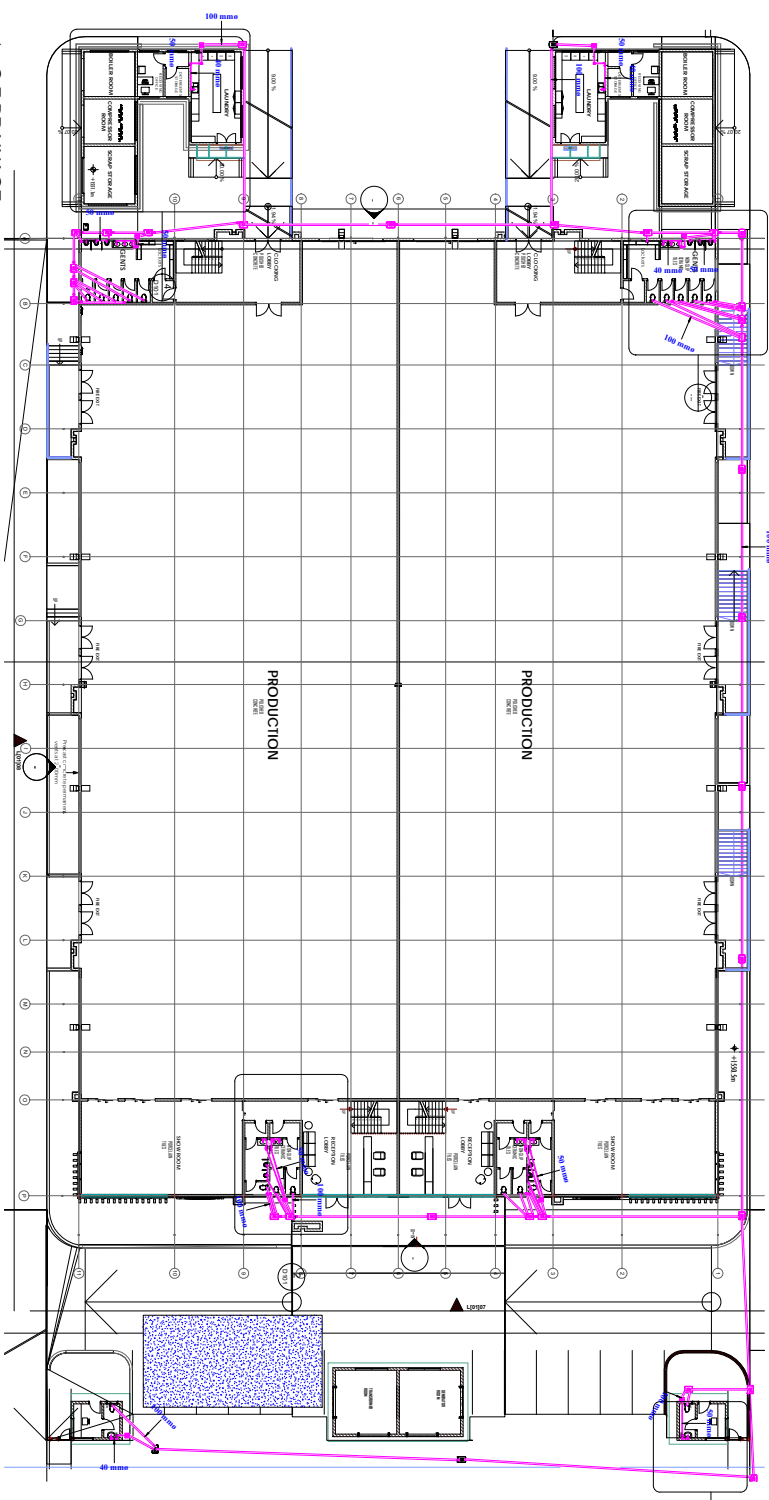
PROJECT
 Project Name _____

SHEET TITLE
 GROUND FLOOR
 DRAINAGE
 -CALLOUT-
 STAGE _____

Project Number _____
 Project Status _____

SCALE As indicated
 ISSUE DATE _____
 PRINT DATE 17/10/2023 6:33:09 AM
 DRAWN HK
 CHECKED ENG VMO
 APPROVED ENG VMO
 SHEET NO D001 **A3**

FILE DRAWING



1 - G.F. DRAINAGE
1 : 175

SERVICES ENGINEERS

Infraplus

Exceptional Engineering

SERVICES ENGINEERS
INFRAPLUS LIMITED,
 P.O. BOX 28901 - 00100
 NAIROBI KENYA
 Email: info@infraplus.co.ke/
infraplus_consulting@gmail.com

GENERAL NOTES

1. This drawing is issued for your information and does not constitute a contract. The client is responsible for the accuracy of the data provided. The contractor shall be responsible for the accuracy of the data provided. The contractor shall be responsible for the accuracy of the data provided.

2. The contractor shall be responsible for the accuracy of the data provided. The contractor shall be responsible for the accuracy of the data provided. The contractor shall be responsible for the accuracy of the data provided.

ARCHITECTS/INTERIOR DESIGNERS

PRECISE ARCHITECTS
 P.O. Box 24994 - 00100
 Nairobi

EPZA

CLIENT

PROJECT

Project Name

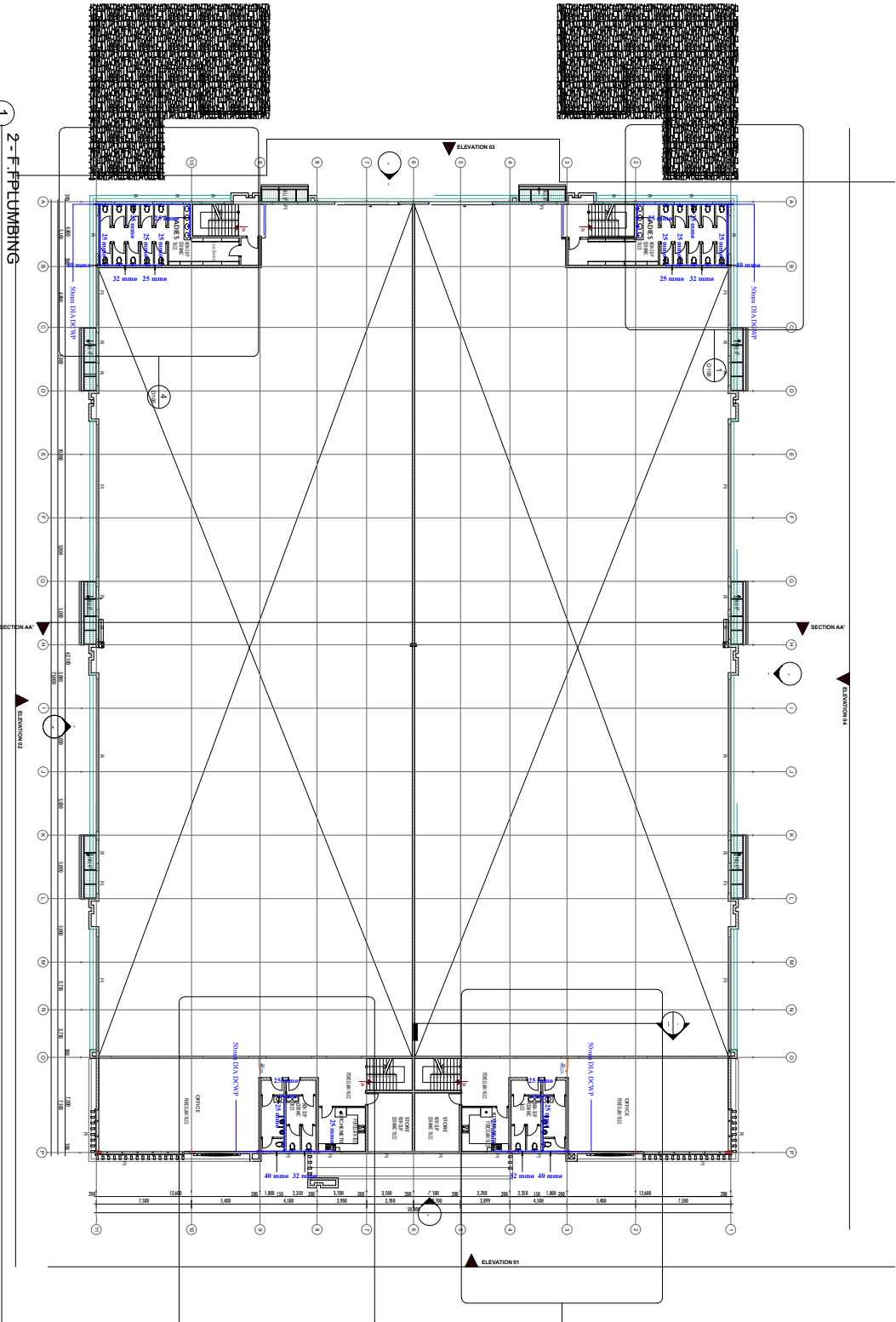
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 GROUND FLOOR
 DRAINAGE

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CHECKED	JK
APPROVED	JK
SHEET NO.	A1

2-F-FPLUMBING
1
1 : 150



<p>GENERAL NOTES</p> <p>1. All work shall be done in accordance with the approved drawings and specifications.</p> <p>2. The contractor shall be responsible for obtaining all necessary permits and approvals.</p> <p>3. The contractor shall ensure that all work is completed in accordance with the approved drawings and specifications.</p> <p>4. The contractor shall ensure that all work is completed in accordance with the approved drawings and specifications.</p>		<p>SHEET TITLE</p> <p>F.F. PLUMBING</p>													
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Services Engineers

Infraplus

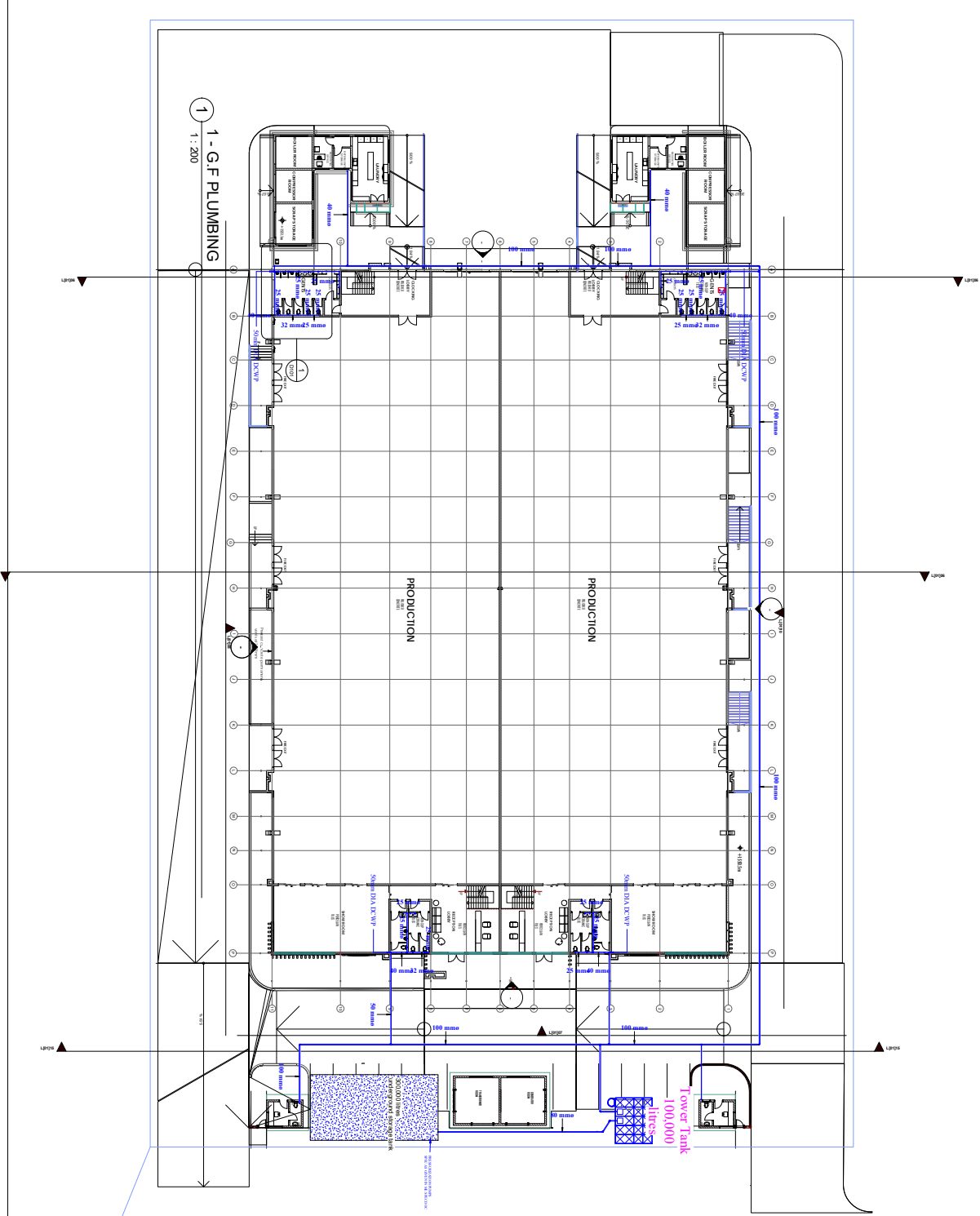
Exceptional Engineering

SERVICES ENGINEERS

INFRAPLUS LIMITED,
P.O. BOX 28901 - 00100
NAIROBI KENYA
Email: info@infraplus.co.ke/
infraplus_consult@.gmail.com

PRECISE ARCHITECTS

P.O. BOX 24994 - 00100
Nairobi



1 - G.F. PLUMBING
1 : 200

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Services Engineers
INFRAPLUS LIMITED,
 P.O. BOX 28901 - 00100
 NAIROBI KENYA.
 Email: info@infraplus.co.ke/
infraplus_consult@gmail.com

GENERAL NOTES

1. All work shall be done in accordance with the specifications of the relevant authorities and standards.
2. The contractor shall be responsible for obtaining all necessary permits and approvals from the relevant authorities.
3. The contractor shall be responsible for obtaining all necessary permits and approvals from the relevant authorities.

ARCHITECTS/INTERIOR DESIGNERS

EPZA

P PRECISE ARCHITECTS
 P.O. Box 24994 - 00100
 Nairobi

CLIENT

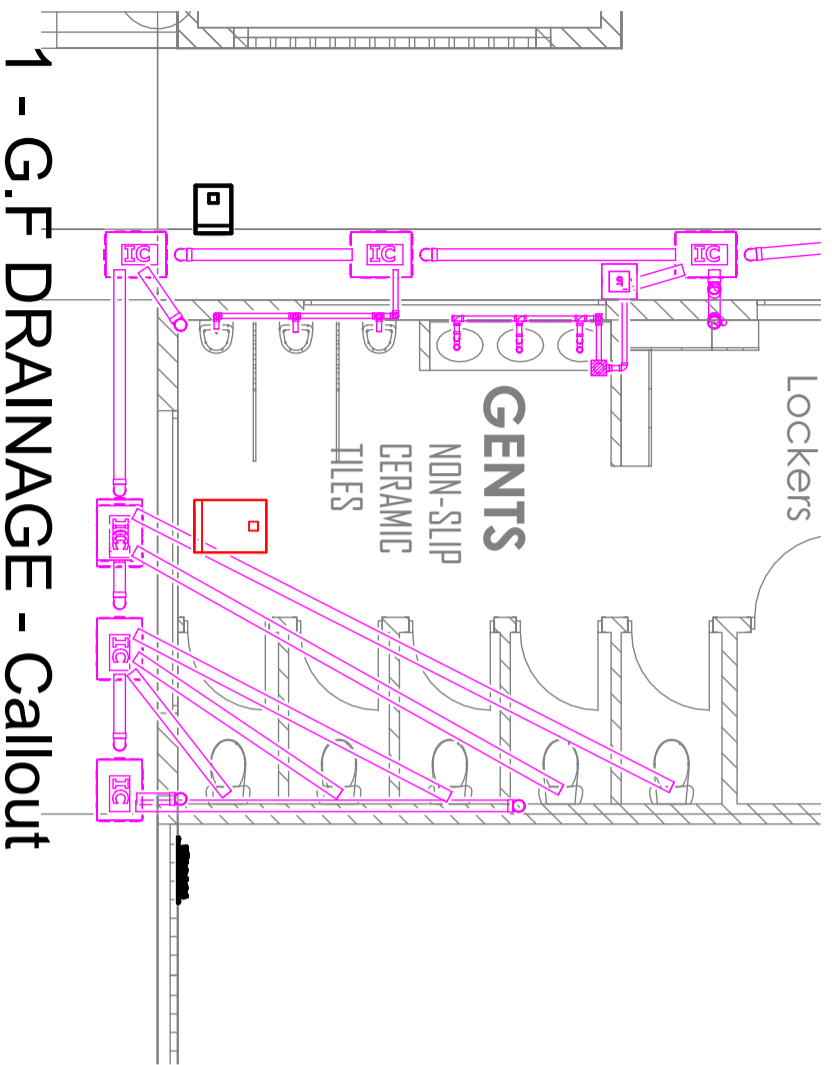
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Project Name
PROJECT

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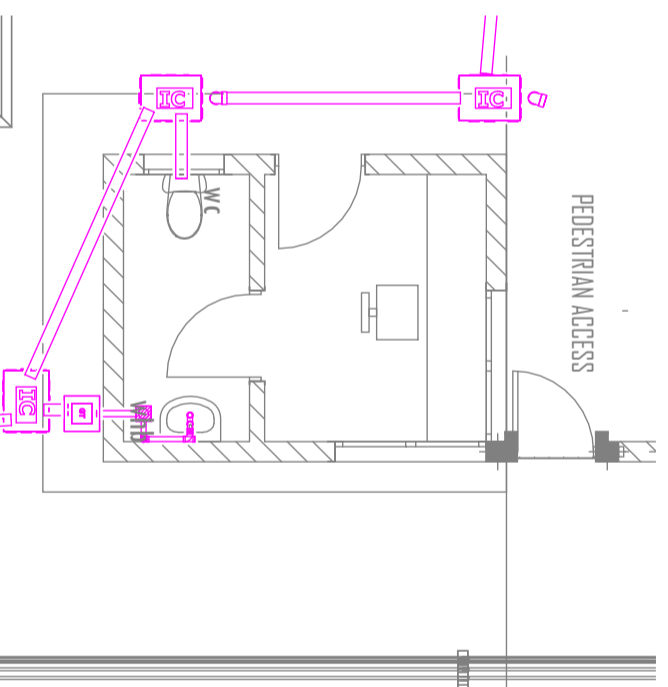
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 PLUMBING

SCALE	1 : 200
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APPROVED	E.K.
SHEET NO.	001



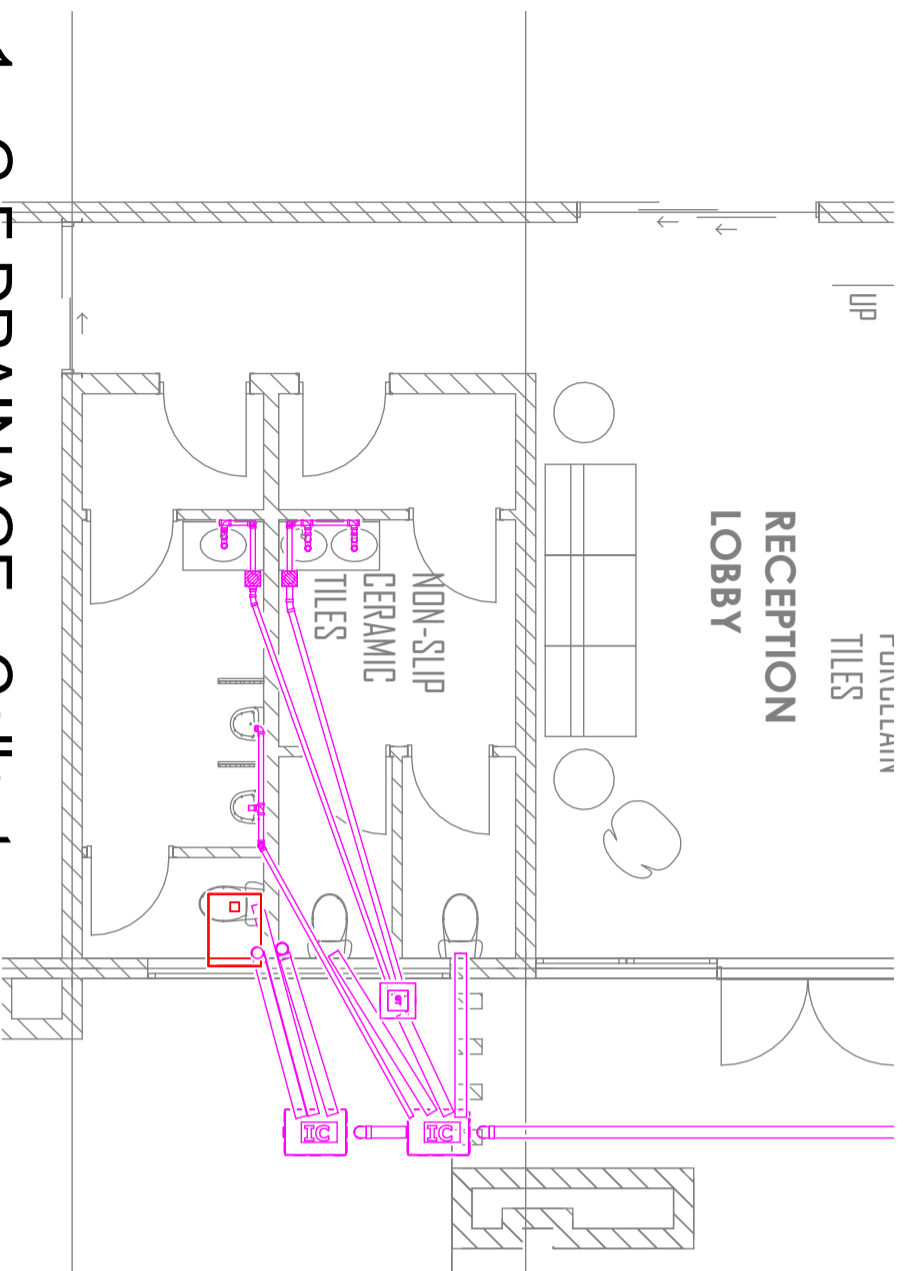
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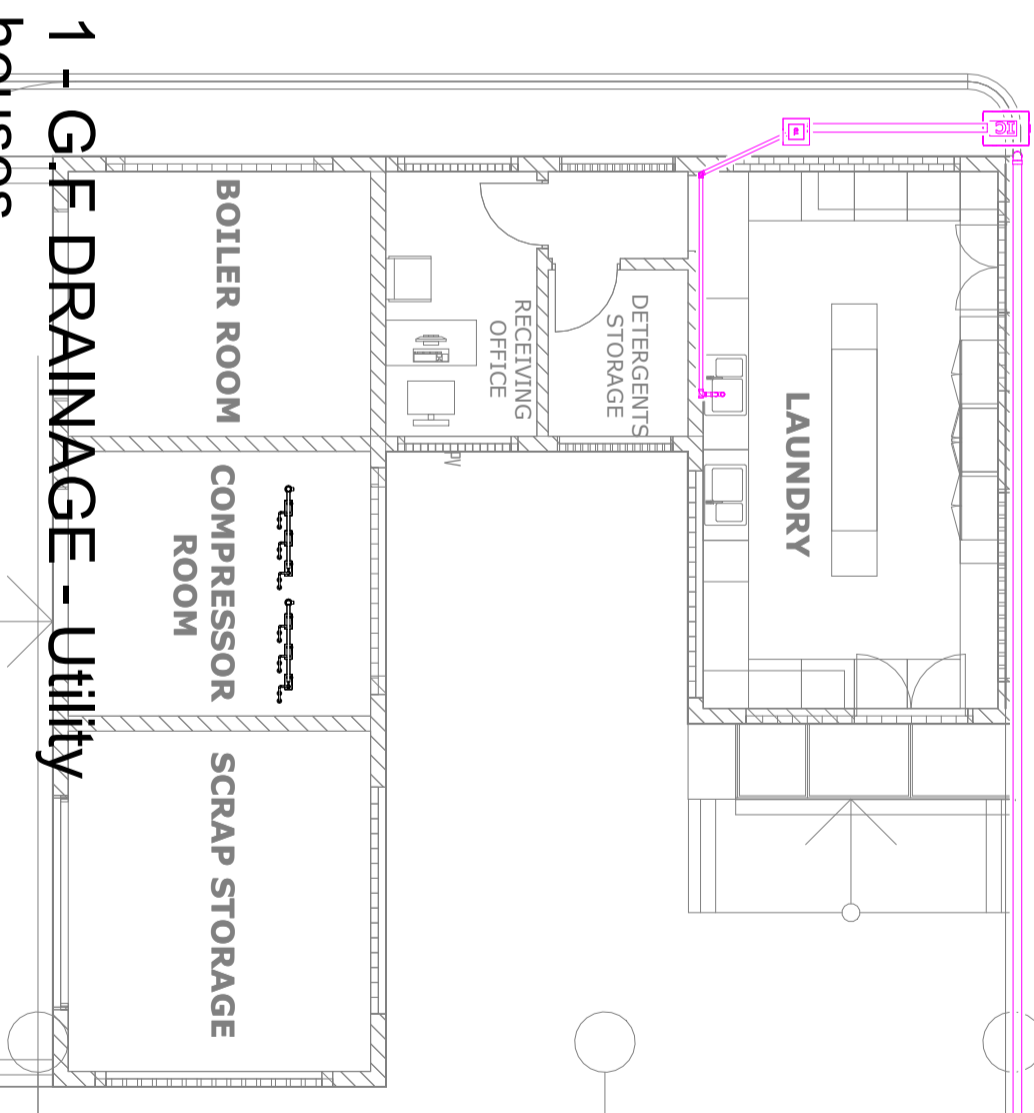
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3
house
1 : 75



1 - G.F DRAINAGE - Callout

2
3
1 : 75



1 - G.F DRAINAGE - Utility

4
houses
1 : 100

GENERAL NOTES

1. This drawing must be read with other project documents and drawings.
2. The mechanical contractor is responsible for coordinating all work under this contract with all other building trades. Notify the Engineer of all discrepancies or questions pertaining to extent of work prior.
3. The information indicated within these drawings is diagrammatic in nature, containing information to a degree of detail consistent with their scale, adequate to convey the design intent and therefore does not include materials and methods not shown or specified but required to provide a complete and coordinated installation.

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Exceptional Engineering

Services Engineers
INFRAPLUS LIMITED,
P.O BOX 28901 - 00100
NAIROBI KENYA.
Email: info@infraplus.co.ke/
Infraplus.consult@gmail.com

ARCHITECTS

EPZA
ATHI RIVER

CLIENT

Clients Signature :

PROJECT
Proposed textile hub-EPZA

SHEET TITLE
GROUND FLOOR
DRAINAGE
CALLOUT

Project Number	Project Status

SCALE As indicated

ISSUE DATE

PRINT DATE 5/9/2023 9:04:09 AM

DRAWN H.K.H

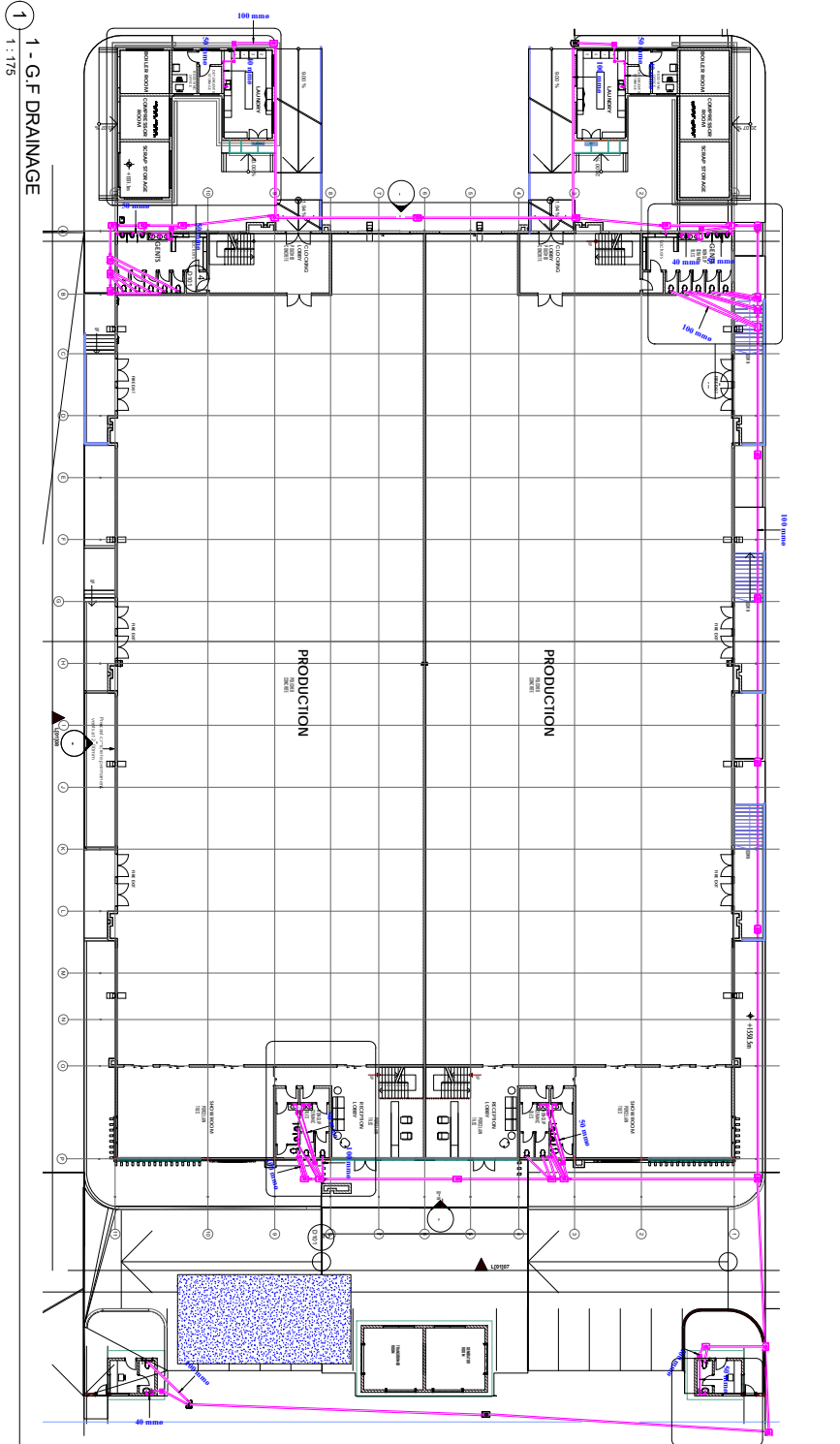
CHECKED ENG.V.M.O

APPROVED ENG.V.M.O

SHEET NO D101 **A3**

DRAWING

FILE



1 - G.F. DRAINAGE
 1 : 175

SERVICES ENGINEERS

Infraplus
 Exceptional Engineering

SERVICES ENGINEERS
 INFRAPLUS LIMITED,
 P.O. BOX 28901 - 00100
 NAIROBI KENYA.
 Email: info@infraplus.co.ke/
 infraplusconsult@gmail.com

GENERAL NOTES

1. This drawing is issued under the prior approval and
2. The client is responsible for ensuring that the drawing is used for the intended purpose and is not misused.
3. The client is responsible for ensuring that the drawing is used for the intended purpose and is not misused.

ARCHITECTS/INTERIOR DESIGNERS

PRECISE ARCHITECTS
 P.O. Box 24994 - 00100
 Nairobi

EPZA

CLIENT

PROJECT

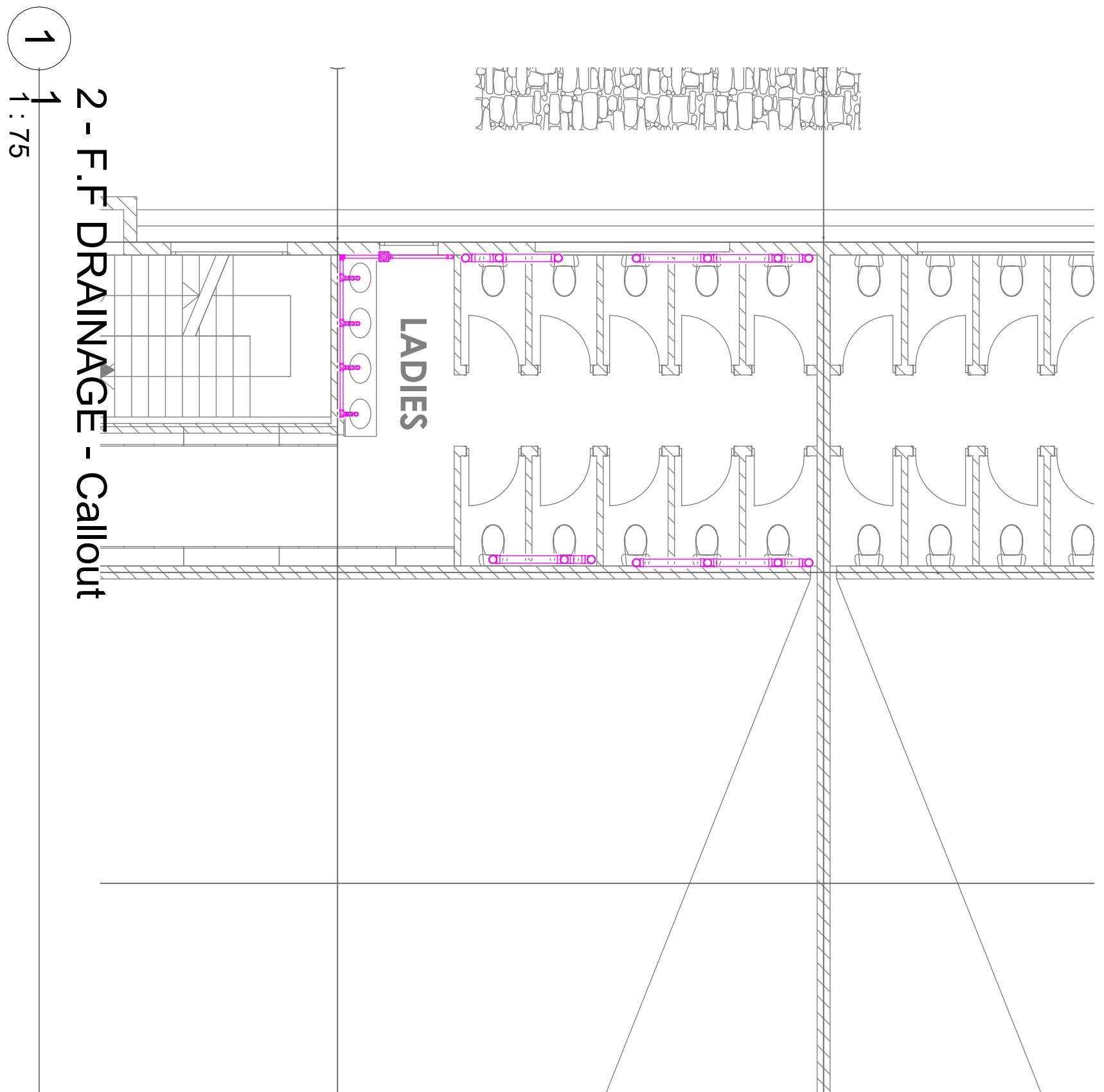
REVISION REGISTER

No	Description	Date

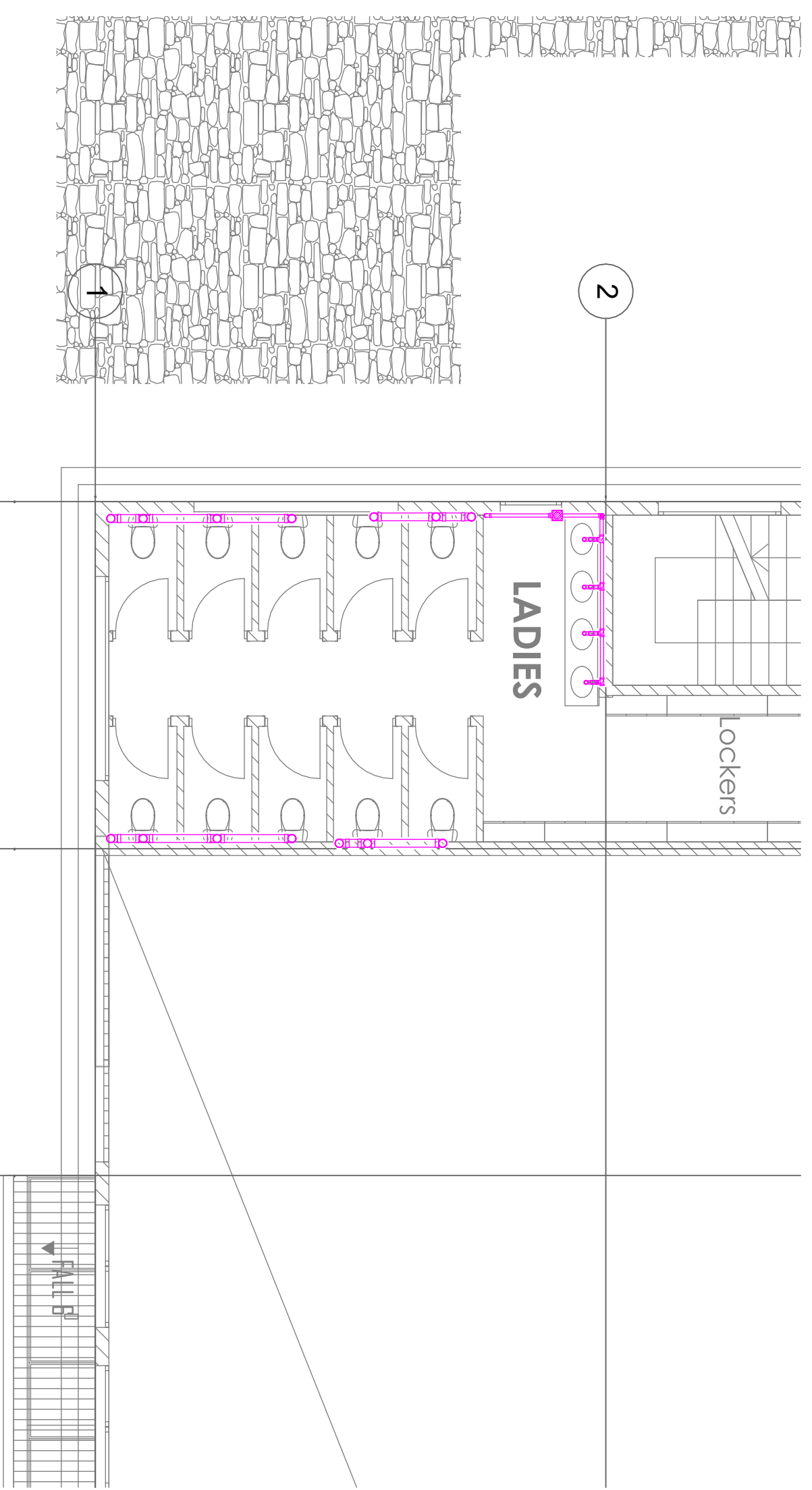
SHEET TITLE

**GROUND FLOOR
 DRAINAGE**

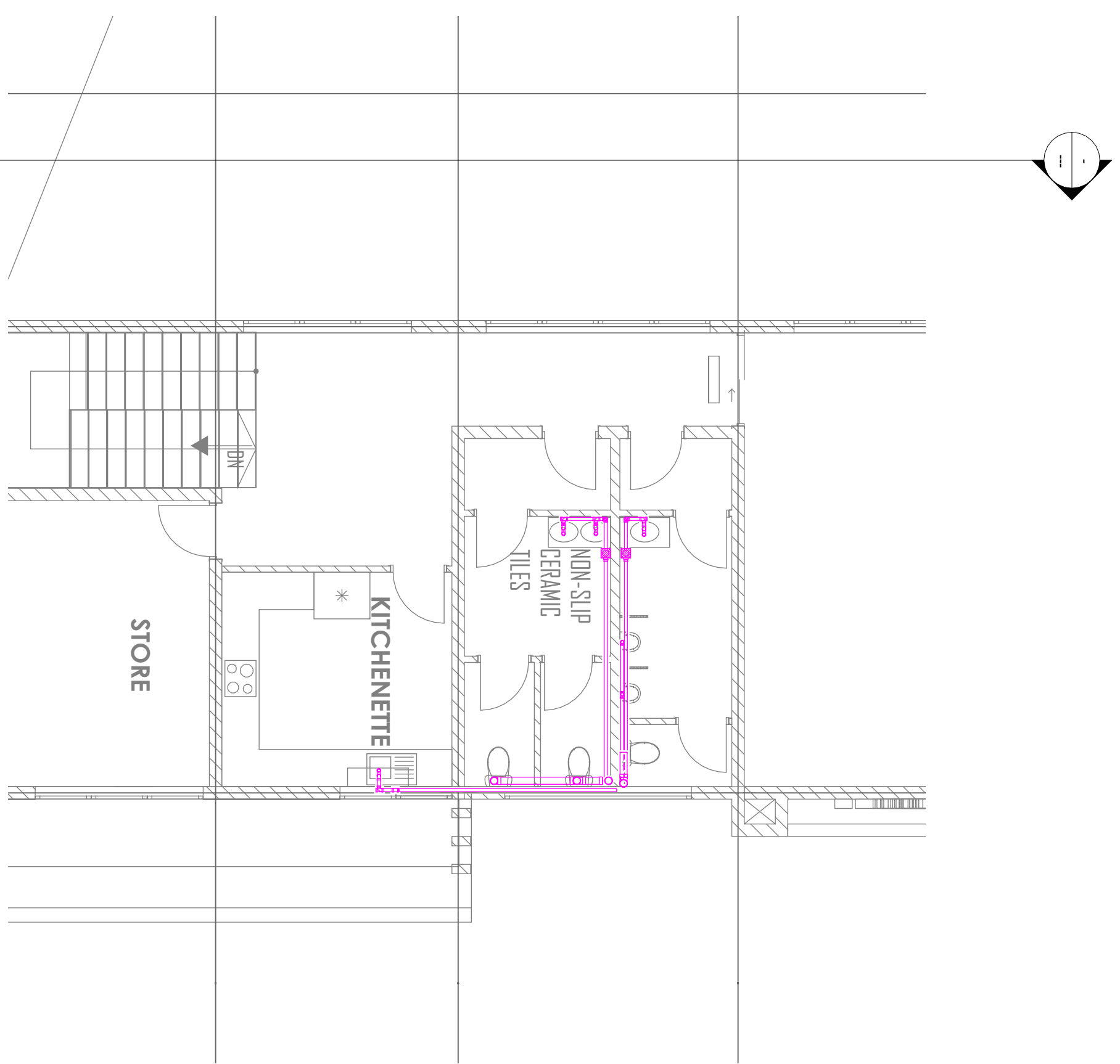
SCALE	1:175
ISSUE DATE	17/10/2023 8:01:09 AM
DRAWN	JK
CHECKED	JK
APPROVED	JK
SHEET NO.	001
SHEET NO.	A1



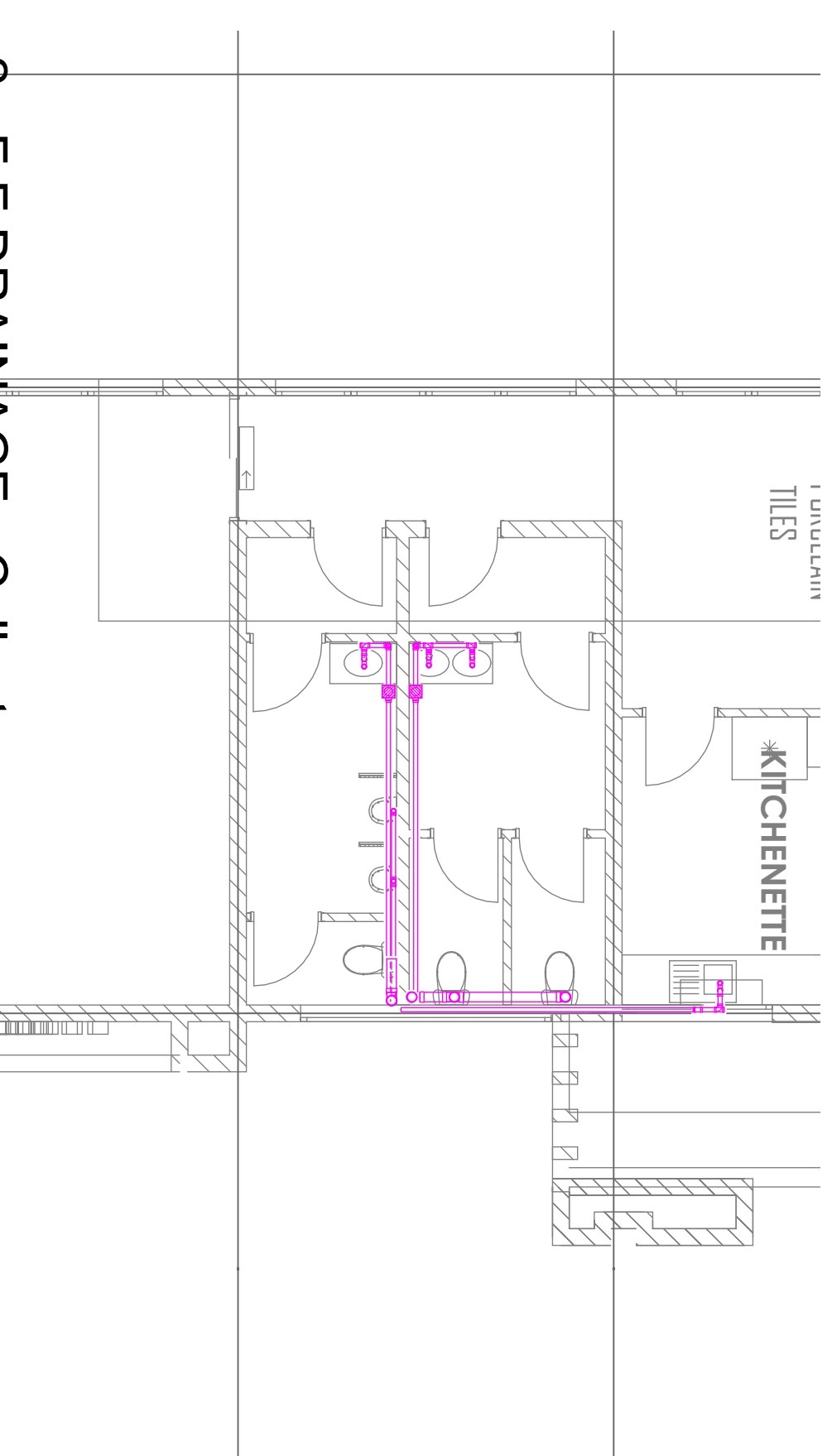
1
1 : 75



2
1 : 75



3
1 : 75



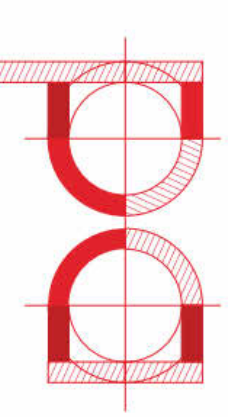
4
1 : 75

Services Engineers
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Services Engineers
INFRAPLUS LIMITED,
P.O BOX 28901 - 00100
NAIROBI KENYA.
Email: info@infraplus.co.ke/
Infraplus_consult@gmail.com

GENERAL NOTES

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- 2 The mechanical contractor is responsible for coordinating all work under this contract with all other building trades. Notify the Engineer of all discrepancies or questions pertaining to extent of work prior.
- 3 The information indicated within these drawings is diagrammatic in nature, containing information to a degree of detail consistent with their scale, adequate to convey the design intent and therefore does not constitute a contract document. The contractor shall verify all materials and methods not shown or specified but required to provide a complete and coordinated installation.



PRECISE ARCHITECTS |
P.O Box 24694 - 00100
Nairobi

EPZA

CLIENT
ATHRIVER
Client Signature: _____

PROJECT
Proposed textile hub-EPZA

REVISION REGISTER

No	Description	Date

SHEET TITLE
FIRST FLOOR
DRAINAGE CALLOUT

Project Number: _____
Project Status: _____

SCALE	1 : 75
ISSUE DATE	5/9/2023 9:04:15 AM
PRINT DATE	5/9/2023 9:04:15 AM
DRAWN	H.K.H
CHECKED	ENG.YM.O
APPROVED	ENG.V.M.O
SHEET NO	D103
	A1

FILE	DRAWING

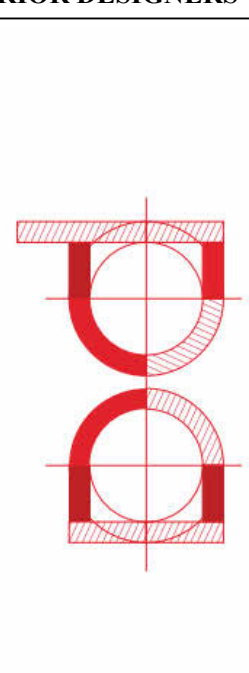
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Exceptional Engineering

Services Engineers
INFRAPLUS LIMITED,
 P.O BOX 28901 - 00100
 NAIROBI KENYA.
 Email: info@infraplus.co.ke/
Infraplus_consult@gmail.com

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PRECISE ARCHITECTS |
 P.O Box 24694 - 00100
 Nairobi

EPZA

CLIENT
 APPROVER

Client Signature : _____
PROJECT
 Proposed textile hub-EPZA

REVISION REGISTER

No	Description	Date

SHEET TITLE

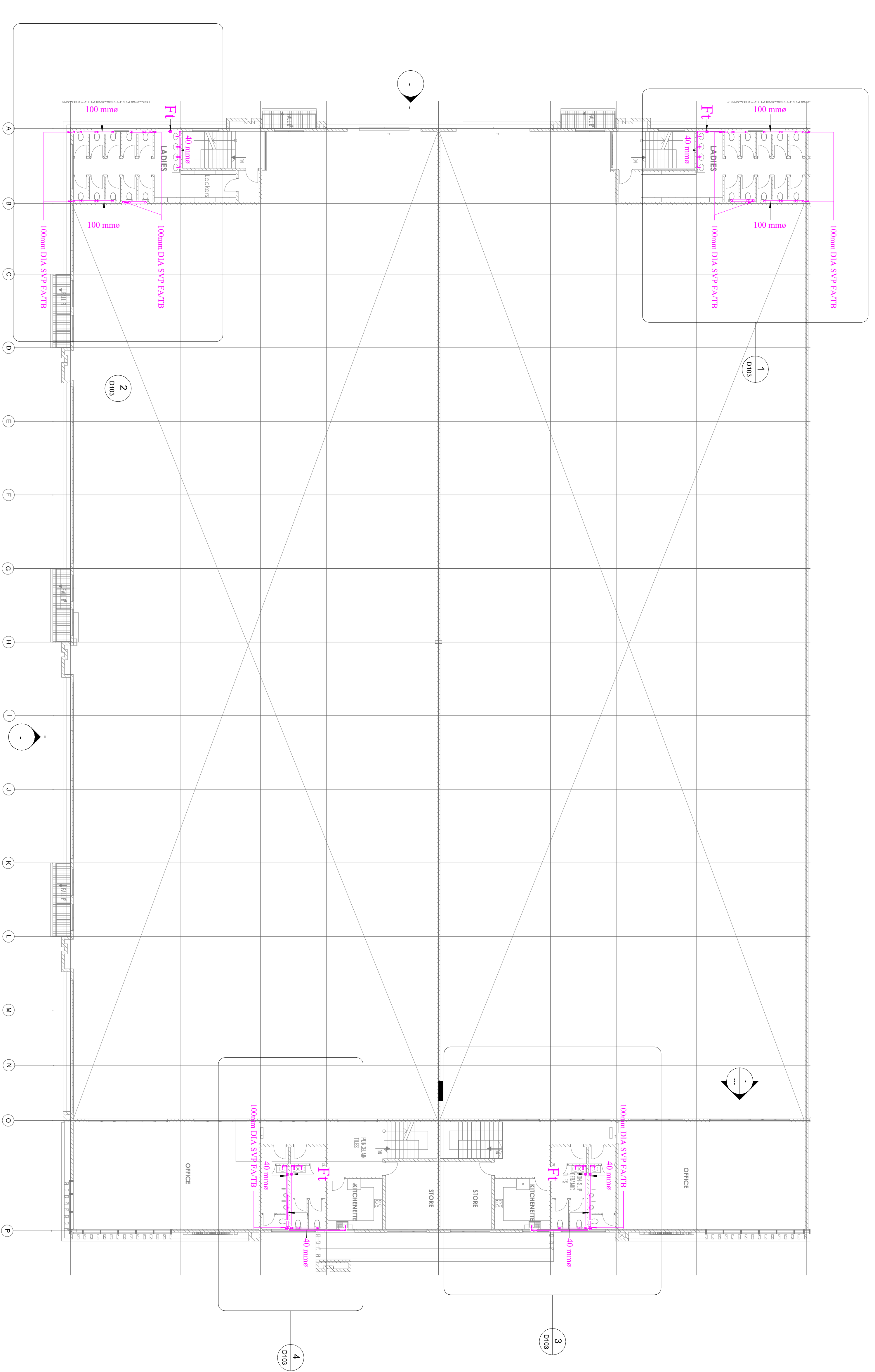
FIRST FLOOR DRAINAGE- CALLOUT

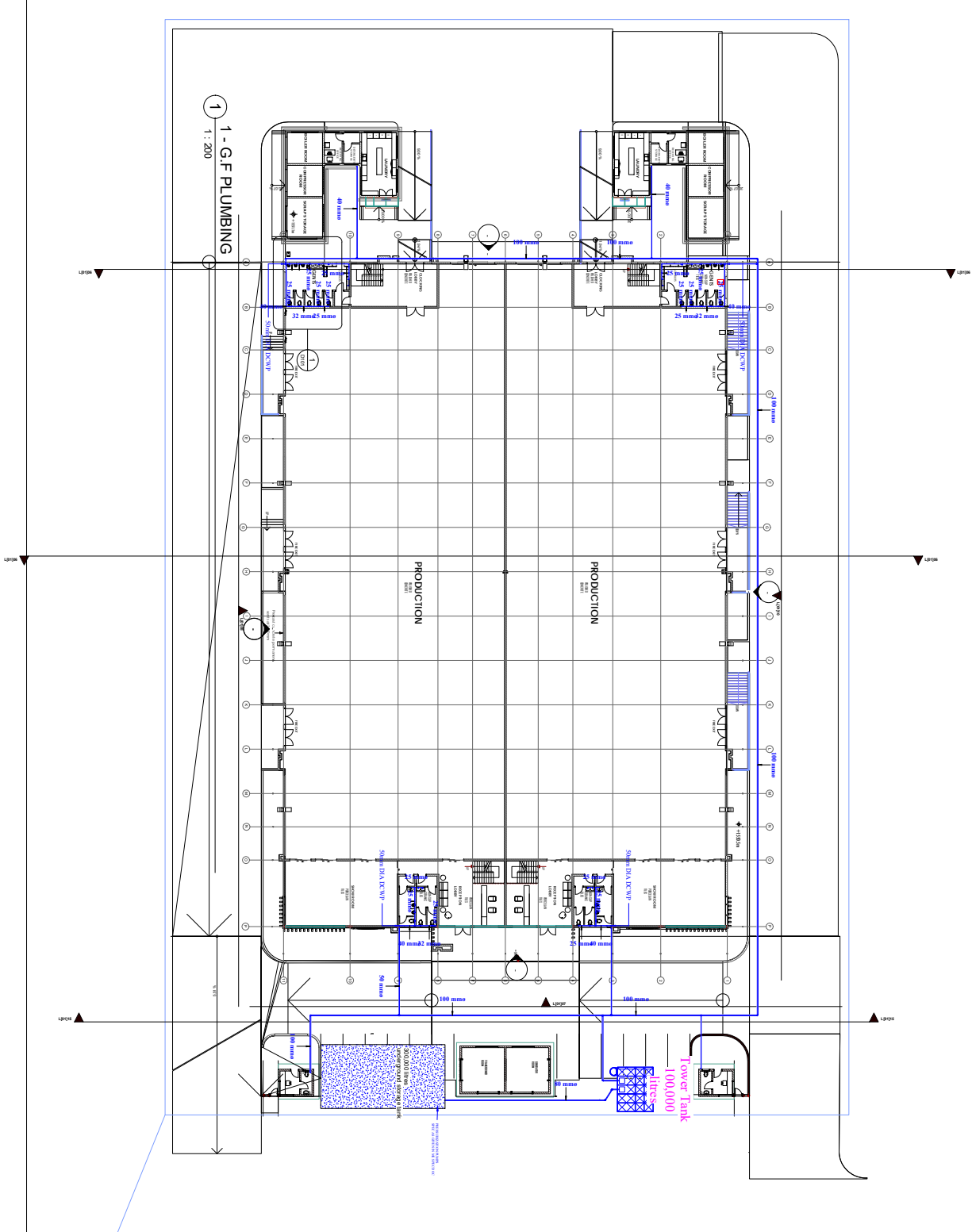
Project Number	Project Name

SCALE	1 : 150
ISSUE DATE	
PRINT DATE	5/9/2023 9:04:16 AM
DRAWN	H.K.H
CHECKED	ENG.V.M.O
APPROVED	ENG.V.M.O
SHEET NO	D104 A1

2 - F.F DRAINAGE

1 : 150





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Services Engineers
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 P.O. BOX 28901 - 00100
 NAIROBI KENYA
 Email: info@infraplus.co.ke
infraplus_consult@infraplus.co.ke

GENERAL NOTES

1. All work shall be carried out in accordance with the specifications of the relevant standards and codes of practice.
2. The contractor shall be responsible for obtaining all necessary permits and approvals from the relevant authorities.
3. The contractor shall be responsible for providing all necessary labor and materials for the completion of the project.
4. The contractor shall be responsible for maintaining the safety of the project site at all times.
5. The contractor shall be responsible for providing all necessary documentation for the project.

ARCHITECTS/INTERIOR DESIGNERS
EPZA
 PRECISE ARCHITECTS
 P.O. BOX 24994 - 00100
 NAIROBI

CLIENT
EPZA

PROJECT
 PROJECT Name

Revision Register

No	Description	Date

FILE DRAWING

SCALE	DATE
1 : 200	17/10/2023 8:45:05 AM

SHEET TITLE
 GROUND FLOOR
 PLUMBING

APPROVED	DATE

SHEET NO. **A1**

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SERVICES ENGINEERS

Services Engineers
INFRAPLUS LIMITED,
 P.O BOX 28901 - 00100
 NAIROBI KENYA.
 Email: info@infraplus.co.ke/
infraplus.consult@gmail.com

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ARCHITECTS/INTERIOR DESIGNERS



PRECISE ARCHITECTS
 P.O Box 24694 - 00100
 Nairobi

EPZA

CLIENT

APPROVER

Client's Signature : _____

PROJECT

Proposed textile hub-EPZA

REVISION REGISTER

No	Description	Date

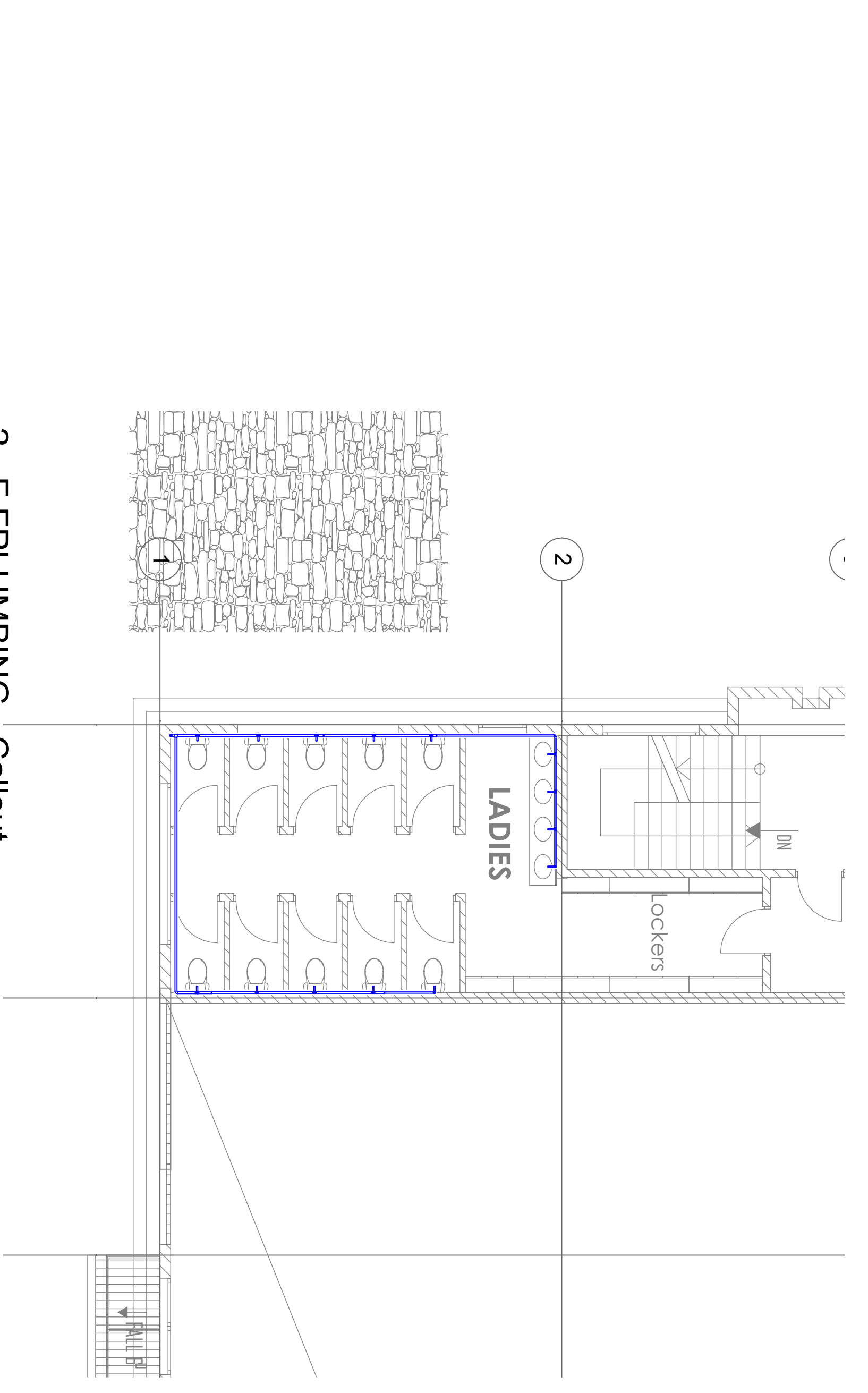
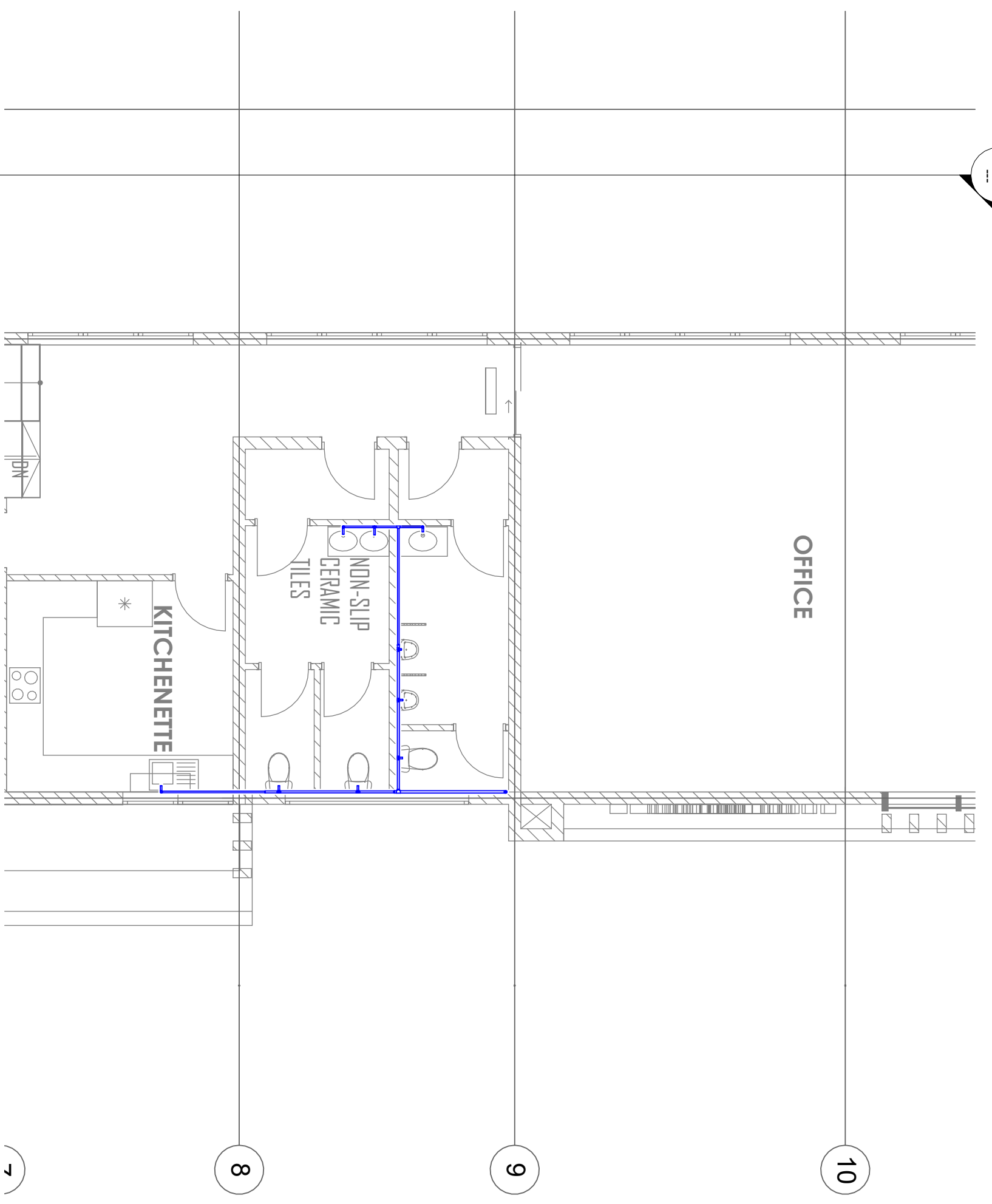
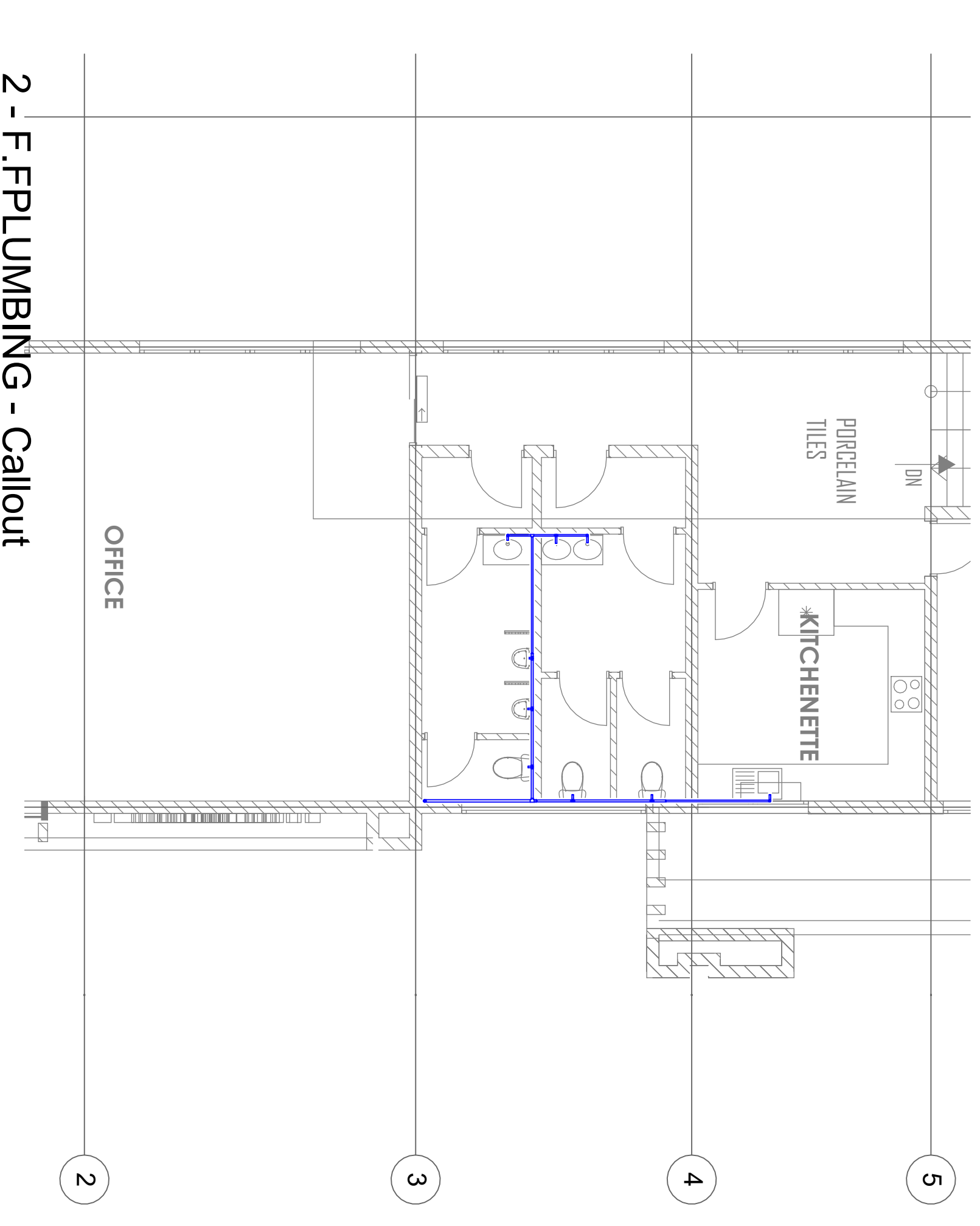
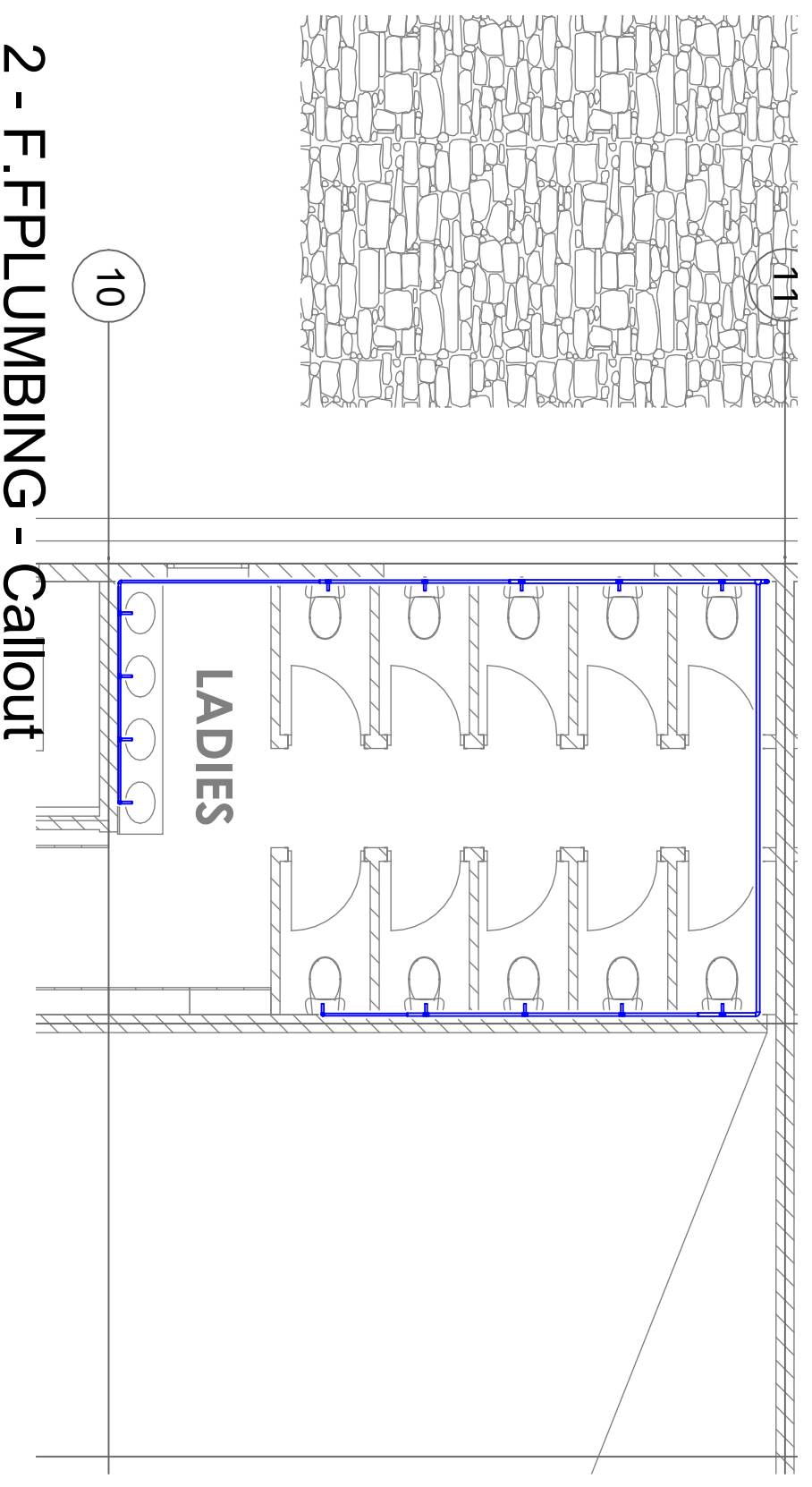
SHEET TITLE

**F.FLOOR PLUMBING
 CALLOUTS**

Project Number : _____ Project Status : _____
 STAGE

SCALE 1 : 75

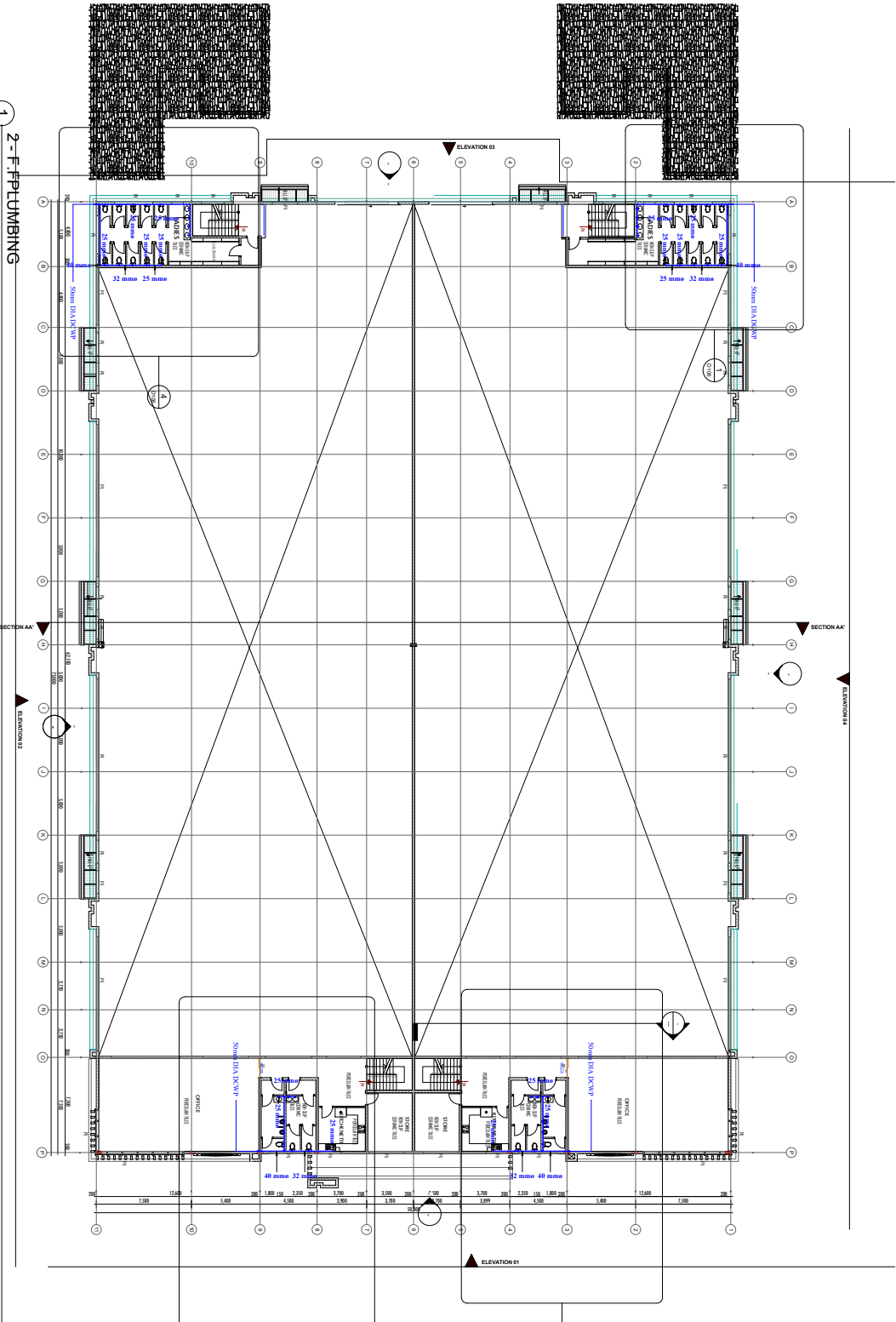
FILE	DRAWING
ISSUE DATE	5/9/2023 9:04:20 AM
PRINT DATE	5/9/2023 9:04:20 AM
DRAWN	H.K.H
CHECKED	ENG.YAO
APPROVED	ENG.V.M.O
SHEET NO	DI06 A1



2 - F.FPLUMBING - Callout

2
1 : 75

2-F-FPLUMBING
 1
 1 : 150



PRECISE ARCHITECTS P.O. BOX 24894 - 00100 Nairobi		EPZA		CLIENT	
ARCHITECTS/INTERIOR DESIGNERS		SERVICES ENGINEERS		GENERAL NOTES	
PROJECT		REVISION REGISTER		SHEET TITLE	
Project Name		No		F.F. PLUMBING	
Description		Date		SCALE	
Date		Description		1 : 150	
No		Date		DRAWING DATE	
Description		Date		17/10/2023 8:12:21 AM	
Date		Description		DRAWING	
No		Date		T.K.	
Description		Date		CHECKED	
Date		Description		A.K.A.	
No		Date		APPROVED	
Description		Date		A1	
Date		Description		SHEET NO.	
No		Date		007	

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SERVICES ENGINEERS
INFRAPLUS LIMITED,
 P.O. BOX 28901 - 00100
 NAIROBI KENYA
 Email: [info@infraplus.co.ke/](mailto:info@infraplus.co.ke)
infraplus_consult@ gmail.com

GENERAL NOTES

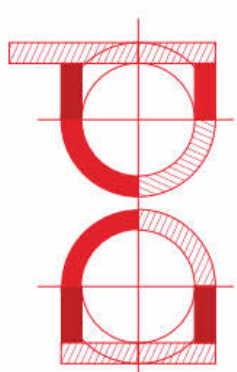
1. All work shall be done in accordance with the approved drawings and specifications.
2. The contractor shall be responsible for the coordination of all work with the relevant authorities and other contractors.
3. The contractor shall be responsible for the procurement of all materials and labor.
4. The contractor shall be responsible for the safety of all workers and the public.
5. The contractor shall be responsible for the completion of all work within the specified time frame.

SERVICES ENGINEERS

GENERAL NOTES

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ARCHITECTS/INTERIOR DESIGNERS



P R E C I S E A R C H I T E C T S I
P.O Box 24694 - 00100
Nairobi

EPZA

CLIENT
ATHEVERER

Client Signature: _____

PROJECT

Proposed textile hub-EPZA

REVISION REGISTER

No	Description	Date

SHEET TITLE

Compressed Gas

STAGE

Project Number	Project Status

SCALE	1 : 150

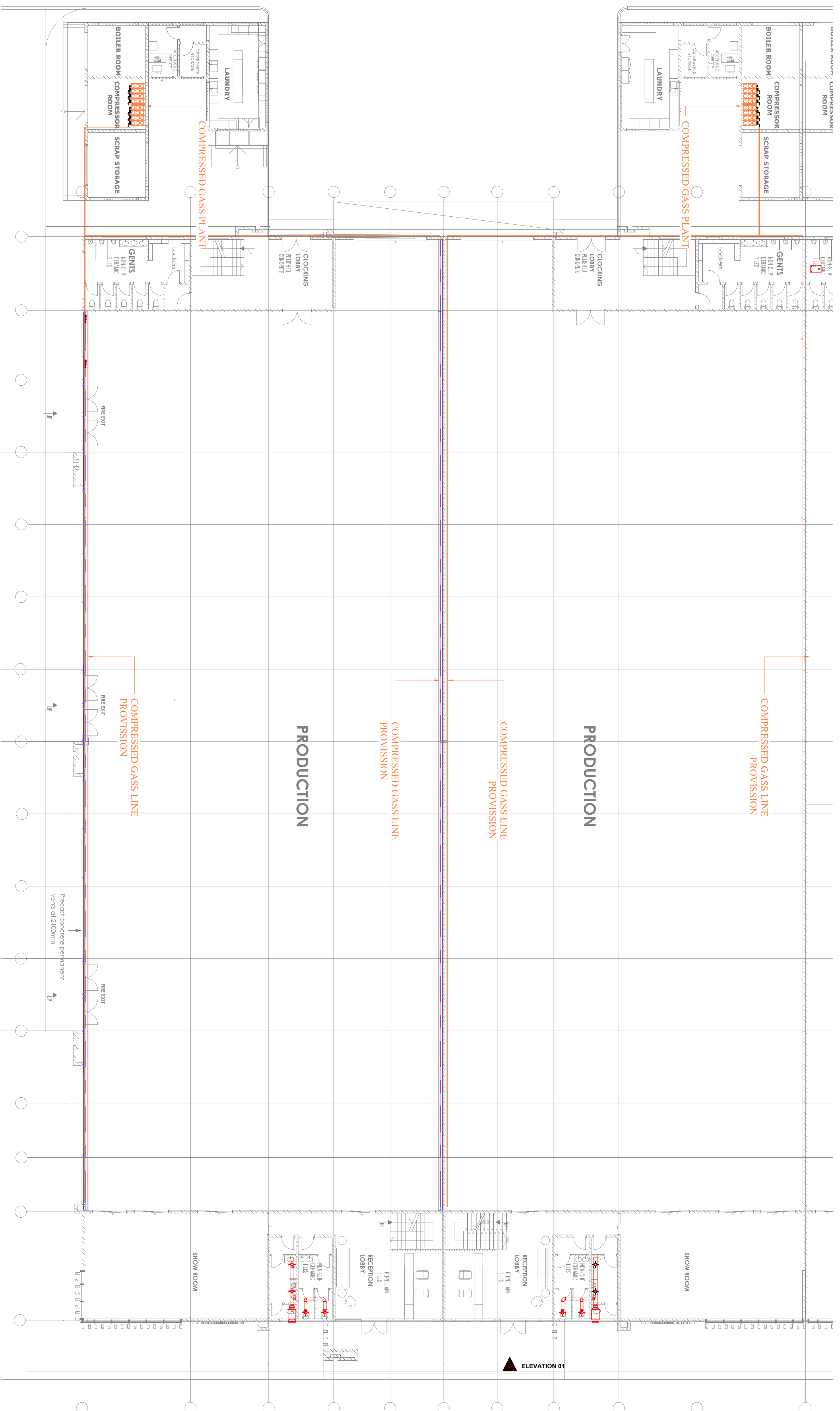
ISSUE DATE	5/9/2023 9:04:21 AM

DRAWN	H.K.H

CHECKED	ENG.Y.M.O

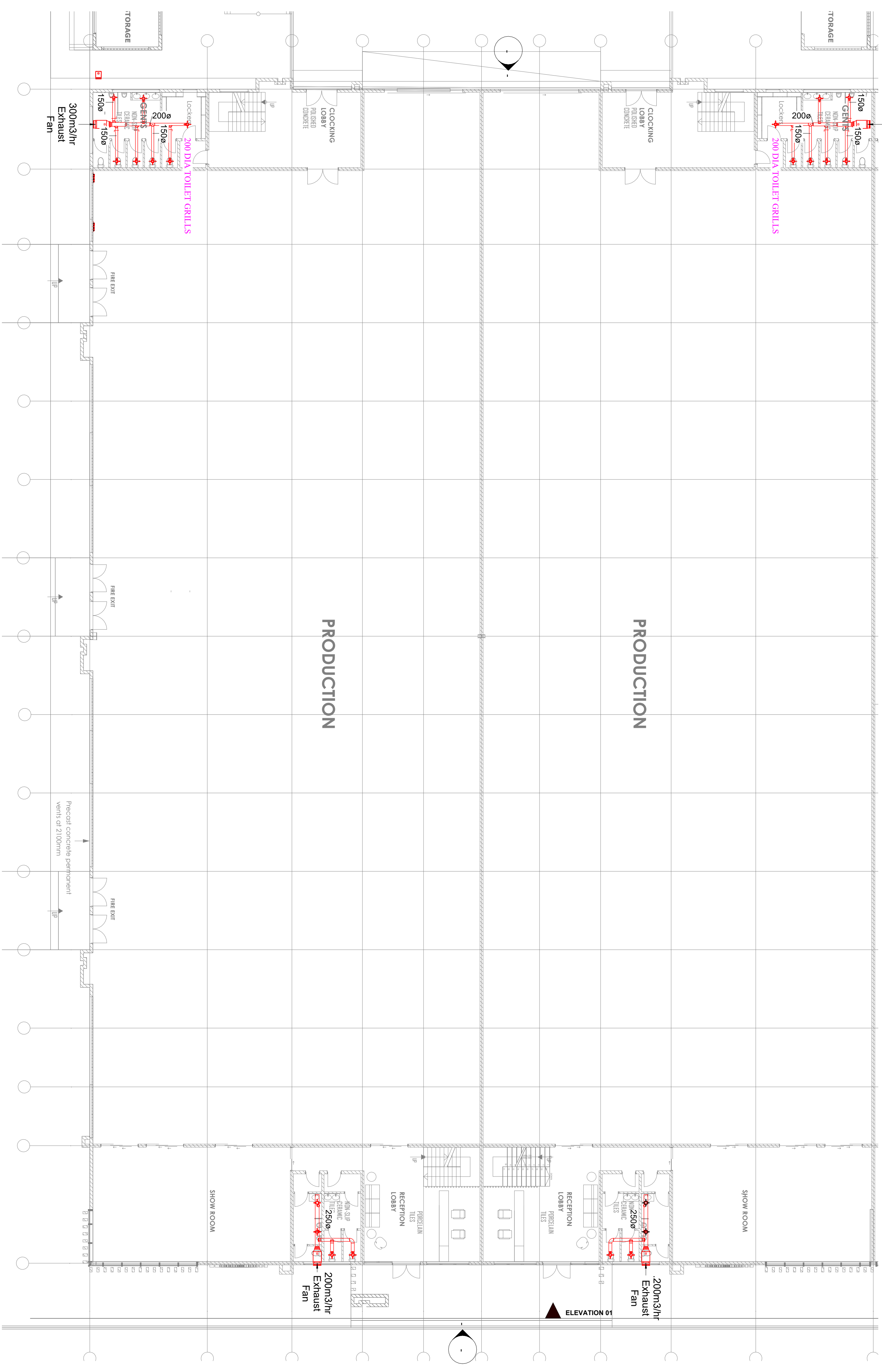
APPROVED	ENG.V.M.O

SHEET NO	G109	A1



1 COMPRESSED GAS

1 : 150



1
VENTILATION
1 : 150

Services Engineers
INFRAPLUS LIMITED.
P.O BOX 28901 - 00100
NAIROBI KENYA.
Email: info@infraplus.co.ke/
Infraplus_consult@gmail.com

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ARCHITECTS/INTERIOR DESIGNERS

EPZA

PRECISE ARCHITECTS |
P.O Box 24694 - 00100
Nairobi

CLIENT

ATHRIVER

Client Signature: _____

PROJECT
Proposed textile hub-EPZA

REVISION REGISTER	
No	Description Date

SHEET TITLE
VENTILATION

STAGE	Project Status

FILE DRAWING	
SCALE	Project Status
1 : 150	
ISSUE DATE	
PRINT DATE	5/9/2023 9:04:22 AM
DRAWN	H.K.H
CHECKED	ENG.Y.M.O
APPROVED	ENG.V.M.O
SHEET NO	VI08

SECTION G
TECHNICAL SCHEDULE
OF
ITEMS TO BE SUPPLIED

TECHNICAL SCHEDULE

The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager.

Any tender without this shall be disqualified.

SCHEDULE OF UNIT RATES

NO	DESCRIPTION	QTY	UNIT	UNIT RATE	
				KSHS	CTS
	1)Fire extinguishers:				
	a) 4.5kg CO2 Gas	1	No		
	b) 9kg Water CO2	1	No		
	c) 9kg Dry powder	1	No		
	2)Gate valves				
	a) 40mm dia	1	No		
	b) 32mm dia	1	No		
	c) 25mm dia	1	No		
	3)Manholes				
	a) 900x600mm	1	No		
	b) 750x600mm	1	No		
	c) 600x600mm	1	No		
	d) 600x450mm	1	No		
	4)PPR Pipes				
	a) 50mm dia	1	No		
	b) 40mm dia	1	No		
	c) 32mm dia	1	No		
	d) 25mm dia	1	No		
	4)uPVC Pipes				
	a) 100mm dia				
	b) 50mm dia	1	No		
	c) 40mm dia	1	No		
	d) 32mm dia	1	No		
	e) 25mm dia	1	No		
	4)GI Pipes				
	a) 100mm dia	1	No		
	b) 50mm dia	1	No		
	c) 40mm dia	1	No		
	d) 32mm dia	1	No		
	e) 25mm dia	1	No		

SECTION H

STANDARD FORMS

CONTENTS OF SECTION J

TITLE	PAGE
1. Performance Bank Guarantee.....	H/1
2. Tender Questionnaire.....	H/2
3. Confidential Business Questionnaire.....	H/3 -H/4
4. Key Personnel.....	H/5
5. Schedule of Contracts completed in the last five (5) years.....	H/6
6. Schedule of on-going projects.....	H/7
7. Contractor's Equipment.....	H/8
8. Financial Reports for the last five (3) years.....	H/9
9. Evidence of Financial Resources to Meet Qualification Requirements.....	H/10
10. Bidder's Bank Information.....	H/11
11. Details of Litigation or Arbitration Proceedings.....	H/12

NOTE:

Tenderers must duly fill these Standard Forms as a mandatory requirement as they will form part of the evaluation criteria.

PERFORMANCE GUARANTEE

**To: EPZA, Kenya
P. O. Box 50563-00200
NAIROBI, KENYA**

Dear Sir,

WHEREAS (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. dated 20 to execute Plumbing & Drainage Installation (hereinafter called "the Works");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Performance Guarantee by a recognised bank or approved insurance company for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

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

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

Kshs. (*amount of Guarantee in figures*)

Kenya Shillings (*amount of Guarantee in words*),

and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings

..... (*amount of Guarantee in words*) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

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

SIGNATURE AND SEAL OF THE GUARANTOR

Name of Bank or Insurer

Address

Date

TENDER QUESTIONNAIRE

Please fill in block letters.

Full names of Tenderer:

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

P.O BOX

Telephone number (s) of Tenderer:

Telex/Fax Address of Tenderer:

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

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

Signature of Tenderer

Make copy and deliver to:

**The Clerk
County Assembly of Machakos
P.O. Box 50563
Nairobi, Kenya**

CONFIDENTIAL BUSINESS QUESTIONNAIRE

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

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

Part 1 – General

Business Name

Location of business premises:

.

Country/Town.....

Plot No..... Street/Road

.....

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

Nature of Business.....

Current Trade License No..... Expiring date.....

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

Kenya Shillings.....

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

Your name in full...N/A..... Age...N/A

Nationality.....N/A..... Country of Origin...N/A

Citizenship detailsN/A

Part 2 (b) – Partnership

Give details of partners as follows:

Name in full Nationality Citizenship Details Shares

1. ...N/A.....N/A.....N/A

2.N/A.....N/A.....N/A

3. ...N/A.....N/A.....N/A

4. ...N/A.....N/A.....N/A

Part 2(c) – Registered Company

Private or Public

State the nominal and issued capita of the company:

Nominal

Issued KShs.N/A

Give details of all directors as follows:

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

Part 2(d) Interest in the Firm:

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

I certify that the above information is correct.

MANAGING DIRECTOR

Title

Signature

Date

* *Attach proof of citizenship ID'S ATTACHED*

KEY PERSONNEL

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

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

I certify that the above information is correct.

MANAGING DIRECTOR

Title

Signature

Date

CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS

Work performed on works of a similar nature, complexity and volume over the last 5 years.

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

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

MANAGING DIRECTOR
Title

Signature

.....
Date

SCHEDULE OF ON-GOING PROJECTS

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

<i>PROJECT NAME</i>	<i>NAME OF CLIENT</i>	CONTRACT SUM	% COMPLETE	COMPLETION DATE

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

MANAGING DIRECTOR
Title

Signature

Date

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

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

FINANCIAL REPORTS FOR THE LAST FIVE YEARS

(Balance sheets, Profits and Loss Statements, Auditor's reports, etc.

List below and attach copies)

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

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

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

BIDDER'S BANK INFORMATION

(This information is mandatory and should be for banks to provide reference if contacted by employer)

NAME OF BANK	BANK BRANCH	ACCOUNT NAME	ADDRESS	TELEPHONE

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

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

**FINANCIAL TENDER
AND BILLS OF QUANTITIES**

CONTENTS	(i)
FORM OF TENDER	(ii)
SECTION J: Schedule of Unit Rates	J/1--J/2
SECTION K: Bills of Quantities	K
➤ Pricing of Preliminaries Items	K/1
➤ Notes for Bills Of Quantities	K/2
➤ Statement Of Compliance	K/3
➤ Mechanical Installation	K/1 - 17
➤ Summary page	K/18 - 18

FORM OF TENDER

To: EPZA, Kenya
P. O. Box 50563-00200
NAIROBI, KENYA

**MECHANICAL INSTALLATION WORKS TO THE PROPOSED INVSTOR SHEDS
FOR ATHI RIVER TEXTILE HUB ON L.R 18474/67 IN ATHI RIVER, MACHAKOS
COUNTY, KENYA.**

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

Kshs..... *[Amount in figures]*

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

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Employer’s Representative’s notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.
3. We agree to abide by this tender **for a period of 150 days from the date of tender opening**, and shall remain binding upon us and may be accepted at any time before the expiry of that period.
4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this day of20...
Signaturein the capacity of

duly authorized to sign tenders for and on behalf of:

. *[Name of Tenderer [*

of...P. O BOX... *[Address of Tenderer]*

PIN No. ...

VAT CERTIFICATE No.

Witness: Name

 Address .

 Signature ...

SECTION J

SCHEDULE OF UNIT RATES

SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted.
5. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes (including **16% V.A.T and 3% Withholding tax**).

SCHEDULE OF UNIT RATES

NO	DESCRIPTION	QTY	UNIT	UNIT RATE	
				KSHS	CTS
	1)Fire extinguishers:				
	d) 4.5kg CO2 Gas	1	No		
	e) 9kg Water CO2	1	No		
	f) 9kg Dry powder	1	No		
	2)Gate valves				
	d) 40mm dia	1	No		
	e) 32mm dia	1	No		
	f) 25mm dia	1	No		
	3)Manholes				
	e) 900x600mm	1	No		
	f) 750x600mm	1	No		
	g) 600x600mm	1	No		
	h) 600x450mm	1	No		
	4)PPR Pipes				
	e) 50mm dia	1	No		
	f) 40mm dia	1	No		
	g) 32mm dia	1	No		
	h) 25mm dia	1	No		
	4)uPVC Pipes				
	f) 100mm dia				
	g) 50mm dia	1	No		
	h) 40mm dia	1	No		
	i) 32mm dia	1	No		
	j) 25mm dia	1	No		
	4)GI Pipes				
	f) 100mm dia	1	No		
	g) 50mm dia	1	No		
	h) 40mm dia	1	No		
	i) 32mm dia	1	No		
	j) 25mm dia	1	No		

SECTION K
BILLS OF QUANTITIES

**PROPOSED ATHI RIVER TEXTILE HUB
MECHANICAL SERVICES COLLECTION PAGE**

ITEM No.	DESCRIPTION	AMOUNT (KShs Cts)
1	Total Brought Forward from Common Services Total	-
2	Total Brought Forward from Warehouses Total	-
3	Contingency Sum (10% Total of Sum Item 1-2 Above)	-
Total for Mechanical Services carried Forward to Main Works Collection Page		-

**PROPOSED ATHI RIVER TEXTILE HUB
BILLS OF QUANTITIES FOR PLUMBING AND DRAINAGE INSTALLATIONS
COMMON SERVICES (BILL NO 6- 9)
BILL NO. 6: WATER RETICULATION**

ITEM No.		QTY	UNIT	RATE	TOTAL AMOUNT
	Tenderers must allow in their pipework prices for all the coupling, unions, connector joints, reducers etc as required in the running lengths of pipe, fixing clip, holder bats, flanges for tees, plugged and screwed. In their rates, tenderers must also allow for all excavations and backfilling for running lengths of pipes and application of 4mm thick Bituminous paint on all external pipework.				
	Class 'C' GMS pipework				
6.01	a) 75 mm GMS pipework	320	LM		-
6.02	b) 100mm PPR pipework	180	LM		-
	Bends/Elbows				
6.03	a) 75 mm elbow/bend	20	No.		-
6.04	b) 100mm PPR elbow/bend	12	No.		-
6.05	Allow for application, payment for connection, payment for water meter and liason fee for a county water meter in a well constructed manhole and cover		Item		-
6.06	15mm diameter lockable lever type heavy duty threaded tap for stand pipe with hose union connection as 'Bricon' or equal and approved.	6	No.		-
	Gate Valves (Pegler)				
6.07	100mm diameter approved pattern brass rising stem full-way gate valve with wheel or equal and approved.	2	No.		-
6.08	Ditto but 75mm gate valves	4	No.		-
6.09	5m ³ /hr flow rate at a pressure head of 30lm complete with dry run protection, power cabling connection flooded entry	1	No.		-
6.1	Tanks as Roto/kentainer 24,000 litres capacity complete with overflow provision, ball valve	2	No.		-
	NOTE: Excavations to be allowed for in builders works				
	Total For Sanitary Fittings And accessories C/F To Collection Page				
Total C/F to Summary page					-

BILLS OF QUANTITIES FOR MECHANICAL INSTALLATIONS**BILL NO. 7 - FIRE FIGHTING INSTALLATIONS**

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (KShs Cts)	AMOUNT (KShs Cts)
	FIRE HYDRANT INSTALLATION				
7.01	100mm diameter HDPE pipe	320	LM		-
7.02	100mm diameter HDPE bend	24	No.		-
7.03	100mm diameter HDPE tee	6	No.		-
7.04	100x65 diameter HDPE reducer	6	No.		-
7.05	65mm diameter drain complete with valve	1	No.		-
7.06	65mm diameter fire brigade twin breaching valve	2	No.		-
7.07	65mm diameter wet riser landing valve complete with cap on chain to be installed 1.0 metre above floor level.	6	No.		-
7.08	50mm diameter automatic air release valve as "Greenfield" to be connected to the top of dry riser pipe.	1	No.		-
7.09	Allow for painting of the entire pipework in red oxide to the approval of the Engineer		Item		-
7.1	65mm diameter x 25m long rubber lined delivery hose pipe complete with quick fitting coupling to fit into a 65mm diameter dry riser outlet.	6	No.		-
Total C/F to Summary Page					-

**PROPOSED ATHI RIVER TEXTILE HUB
BILLS OF QUANTITIES FOR PLUMBING AND DRAINAGE INSTALLATIONS**

BILL NO. 8: FIRE FIGHTING PUMPSET

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (KSh Cts.)	AMOUNT (Ksh Cts.)
8.01	<p>Supply and install packaged UL/FM Certified fire fighting pumping set manufactured to NFPA standards, comprising of duty & standby electric pump. . Electric pump to be duty and the other pump standby. Pumps shall be as DAYLIFF Listed pumps complete with delivery check valves, delivery stop valves, non-return valves, pressure & Flow switch arrangements, etc. and all other accessories.</p> <p>ii) Electric Pumps Electric motor driven pump capable of delivering 30L/s (1800L/min) against a pressure of 7 bar. Speed shall be 2900rpm. Pump shall be close coupled complete with the panel (Star-delta starter). The pump shall be as NAFFCO pumps or approved equivalent.</p> <p>The pumps and connections to equipment to be mounted on a common pumps baseframe all welded on a common base plate. It should include all necessary sluice valves and non-return valves. The installation to be with alignment facilities and mounting. The pumps should have a flooded suction or to be self-priming. The entire installation to conform to NFPA 13 & 20 .</p> <p>Allow for electrical wiring & control connections between pumps, control panel and local isolator in steel conduit.</p> <p>Dual control panel for the above three sprinkler pumps complete with appropriate overload protection, phase failure protection, automatic change over switch, star-delta starter for electric pumps, neon indicators for tripping and resetting plus any other necessary control accessories to operate all the three pumps including fault indication volt-free contact. Control panel to be as DAYLIFF or equal and approved.</p> <p>Pressure vessels of suitable combination for pumps operation with butyl rubber membranes pre-charged before installation. The vessels shall be complete with pressure gauges, pressure switches for jockey pump and main fire pumps. The pressure vessels to be complete with an array of switches for automation of the pumps and any other necessary accessories.</p>	2	Set		-
8.02	<p>supply 250 mm diameter manifold with 150mm inlet and outlet manifolds complete with the necessary tees for connection to the pumps and distribution pipe work.</p> <p>Electrical connection from isolators to control panel and from control panel to pumps including electric cabling and conduits</p>	2	Set		
8.03	50mm diameter high pressure ball valve for the concrete tank	1	No		
8.03	Fuel for the pump system	300	Litres		
8.04	Allow for a sum of painting the whole pump room installation to the approval of the Engineer as per F.O.C. rules	1	Item		
Total C/F to Summary Page					-

**PROPOSED ATHI RIVER TEXTILE HUB
BILLS OF QUANTITIES FOR MECHANICAL INSTALLATIONS**

BILL NO. 9: GENERAL ITEMS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE (KSh Cts.)	AMOUNT (Ksh Cts.)
9.01	Allow for liaising and obtaining necessary licenses/permission and/or certificates from local authorities to complete works		Item		-
9.02	Acquire and submit a Bank Guarantee for 10% of the sub-contract sum, as a Performance Guarantee.		Item		-
9.03	Acquire and submit Insurance for the sub-contract work.		Item		-
9.04	Allow for presentation of all the required samples as per specifications, Bills of Quantities and Drawings.		Item		-
9.05	Allow for testing and commissioning of all mechanical services installations as per Bills of quantities, specifications and drawings to the satisfaction of the Engineer.		Item		-
9.06	Prepare and submit Working Drawings comprising the following to the satisfaction of the Engineer both in hard and soft copy. All drawings to be in Autocad® 2000 format or an approved higher version: - i) Fully dimensioned drawings of all plants and apparatus. ii) General arrangement drawings of equipment, plant etc. iii) Routes – types and sizes and arrangement of all pipe work. iv) Wiring and piping diagrams of plant and apparatus. v) Schematic diagram of individual plants and switch and control boards. vi) All the required operating instructions for all panels, boards, control panels etc. (Note: Full set of drawings to be presented as per drawing list).		Item		-
9.07	As item no 5.06, but for Record (As-Installed)		Item		-
9.08	Prepare and submit Maintenance Manuals for all items installed.		Item		-
9.09	Provide a year's (12 months') initial maintenance upon expiry of the Defects Liability Period. The maintenance to be carried out every quarter (3 months) for a period of 12 months.		Item		-
9.1	All other items of general preliminary to cover, but not limited to:- i. Attendance on all other sub-contractors, such as for Communication Services, Electrical Installations, Security Installations, Sound Equipment/ Wiring Installations, Generator Installations, Lift Services, Solar Water Heating, V-Sat services etc. ii. Hiring and keeping a Supervisor/Foreman on site iii. Constant supervision of the works. iv. Provision of all the required spares. v. Testing and Inspection of materials/works. vi. Provision of labour camps. vii. Storage of materials. viii. Initial maintenance (During Defects Liability) ix. Providing water/electricity for the works. x. Protection of the works/materials xi. Clearing away on completion. xii. Preparing Final Account. x. Protection of the works/materials xi. Clearing away on completion. xii. Preparing Final Account.		Item		-
	65mm diameter x 25m long rubber lined delivery hose pipe complete with quick fitting coupling to fit into a 65mm diameter dry riser outlet.	6	No.		-
Total C/F to Summary Page					-

**PROPOSED ATHI RIVER TEXTILE HUB
BILLS OF QUANTITIES FOR MECHANICAL INSTALLATIONS
MAIN SUMMARY PAGE**

ITEM No.	DESCRIPTION	AMOUNT (KShs Cts)
1	Preliminaries	
2	Total for Bill No. 6 B/F from page 2	-
3	Total for Bill No. 7 B/F from page 3	-
4	Total for Bill No. 8 B/F from page 4	-
5	Total for Bill No. 9 B/F from page 5	-
6	Sewer treatment Plant according to specification to treat soil and waste for a total daily inflow of 30kL/day.To include, supply, install and commissioning of sewer treatment plant. Tenderer to provided breakdown according to equipment offered.	
7	Sub-Total	-
Total for Common Services C/F to Mechanical Collection Page		-

Total Amount in words _____

Name of Company _____

Official Rubber Stamp _____

PROPOSED ATHI RIVER TEXTILE HUB (WAREHOUSES)
BILLS OF QUANTITIES FOR MECHANICAL INSTALLATIONS
WAREHOUSES (BILL NO.1-5)
BILL NO. 1 – SANITARYWARE AND ACCESSORIES

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (KShs Cts)	AMOUNT (KShs Cts)
1.01	'IDEAL STANDARD' 'Vitreous China' floor standing, back inlet water closet pan in white, Horizontal outlet with soft closing heavy-duty seat and cover complete with metal hinges or an approved equivalent.	42	No.		
1.01	IDEAL STANDARD For WC suite Wall hung WC Pan in white Consisting of Wall hung Barrier Free WC Pan, H/Duty soft close WC Seat & Cover with S/Steel Hinges, Geberit Kombifix concealed cistern for wall hung WC (article no. 110.350.00.1), height 1140mm, actuated with hytouch pneumatic cover plate. Complete with wash hand basin and a mirror described as item 1.10 but with hansgrohe single lever basin mixer or an approved equivalent. To be supplied with Hinge Down Grab Rails with Toilet Roll Holder and Straight Grab Rails.	2	No.		
1.02	WC "S" or "P" connector to drain pipe for horizontal outlet WC Pan	44	No.		
	Toilet Roll Holder				
1.03	Recessed into wall toilet roll holder in approved colour in vitreous china	44	No.		
	Wash Hand Basin				
1.04	'IDEAL STANDARD' Wall Under Counter Wash Hand Basin with single tap-hole mixer taphole, basin white complete with 1No. Cobra tap Code 293 CARINA (101.000.03), 32mm Macdee p.v.c bottle trap and all associated fittings	28	No.		
	Mirrors				
1.05	Plain size bevelled glass plate mirror size 1800 x 500mm complete with dome headed chrome plated fixing screws.	10	No.		
	Urinals				
1.06	"Ideal Standards" urinal bowl, push type flushing system, drainage system including bottle trap and waste complete with all other necessary accessories for proper functioning of the urinal.	14	No.		
1.07	White urinal wall mounted division complete with wall hangers to be mounted between 2 No. Urinal bowls.	8	No.		
	Angle valves				
1.08	Cobra angle valves No. 101.002.65 or equal and approved	86	No.		
	Flexible Connector				
1.09	Copper connector to Engineers approval.	86	No.		
1.1	Press action Soap Dispenser as Kimfay. The dispenser is to be complete with wall mounting brackets, key and initial discharge.	12	No.		
1.11	Fast hot air hand & face drier with automatic operation by touch-free infra-red control with sensor range of 150mm vertically under air inlet, white enamel colour as Dolphy or an approved equivalent by the Engineer.	12	No.		
1.12	Single Sheet pull hand drying Tissue Dispenser as Kimfay Or Equal and Approved.	12	No.		
	Kitchen Sink				
1.13	800 x 500mm single bowl single drainer stainless steel sink made out of 18 SWG stainless steel sheet and complete with :: - Tapis goose neck chrome plated finish mixer tap - 40mm (1 ½ ") waste and stopper with chrome plated chain - 40mm (1 ½") chrome plated bottle trap.	2	No.		
Total For Sanitary Fittings And accessories C/F To Collection Page					-

**PROPOSED ATHI RIVER TEXTILE HUB (WAREHOUSES)
BILLS OF QUANTITIES FOR MECHANICAL INSTALLATIONS**

BILL NO. 2 - COLD WATER SUPPLY PIPEWORK

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (KShs Cts)	AMOUNT (KShs Cts)
2.01	a) 25mm diameter PP-R elbow/bend	84	No		
2.02	b) 32mm ditto	126	No		
2.03	c) 40mm ditto	188	No.		
2.04	a) 40x32mm ditto	64	No.		
	b) 32x25mm ditto	76	No.		
Tees					
2.05	a) 25mm diameter PP-R equal tee	74	No		
2.06	b) 32mm ditto	88	No		
2.07	c) 40mm ditto	120	No.		
Female threaded joints					
2.08	a) 25mm diameter PP-R Female threaded join	74	No.		
2.09	b) 32mm ditto	88	No.		
2.1	c) 40mm ditto	120	No.		
Male threaded joints					
2.11	a) 25mm diameter PP-R Male threaded joints	74	No.		
2.12	b) 32mm ditto	88	No.		
2.13	c) 40mm ditto	120	No.		
Isolation Valves					
2.14	a) 25mm diameter isolation valves	36	No.		
2.15	b) 32mm ditto	44	No.		
2.16	c) 63mm ditto	18	No.		
2.17	Water check meters as Kent 40mm diameter to Engineer's approval	12	NO		-
2.18	Water tanks as Roto/kentainer 5,000 litres complete with ball valve, mounting and rate to include hoisting.	12	NO		-
2.19	Automatic Water pressurization pumpset capable 3m ³ /hr at a pressure head of 25 meters complete with a pressure vessel and protection against dry run	4	NO		-
Showers Fittings					
2.2	Tapis set for 3 way cancelled Shower Mixer complete with shower body & arm 260mm Croma 160 overhead shower rose as Tapis to Engineer's approval	4	NO		-
Total for Clean cold/hotwater C/F to Collection Page					-

**PROPOSED ATHI RIVER TEXTILE HUB (WAREHOUSES)
BILLS OF QUANTITIES FOR MECHANICAL INSTALLATIONS**

BILL NO. 3 - DRAINAGE PIPEWORK

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (KShs Cts)	AMOUNT (KShs Cts)
	All pipes to be as "Key Terrain" or "Metro" and prices to include connectors, adaptors, socket reducers, etc.				
	Pipes				
3.01	a) 100mm diameter UPVC grey pipe	284	LM		
3.02	b) 50mm ditto	210	LM		
3.03	c) 40mm ditto	112	LM		
3.04	d) 32mm ditto	0	LM		
	Bends				
3.05	a) 100mm diameter UPVC access bend	66	No.		
3.06	b) 100mm diameter UPVC sweep bend	56	No.		
3.07	c) 50mm ditto	48	No.		
3.08	d) 40mm ditto	54	No.		
3.09	e) 32mm ditto	0	No.		
	Tees				
3.1	a) 100mm diameter single branch	36	No.		
3.11	b) 50mm diameter tee	24	No.		
3.12	c) 32mm ditto	0	No.		
	Inspection Plugs (Rodding eyes)				
3.13	a) 100mm diameter inspection plugs	24	No.		
3.14	b) 50mm ditto	20	No.		
3.15	b) 40mm ditto	18	No.		
3.16	c) 32mm ditto	0	No.		
3.17	Four-way 100 x 50mm floor trap.	24	No.		
3.18	100mm diameter gully trap complete with chamber and weather tight heavt duty cover.	15	No.		
3.19	100mm diameter WC connectors(Arabic Showers)	20	No.		
Total C/F to Collection Page					-

PROPOSED ATHI RIVER TEXTILE HUB (WAREHOUSES)
BILLS OF QUANTITIES FOR FIRE FIGHTING INSTALLATIONS
BILL NO. 4: HOSEREEL SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (Ksh Cts.)
	Supply, fix, test and commission the following equipment and fitting as described:- Tenderers must allow in pipework prices for all couplings, unions, nipples, sockets connectors, joints e.t.c in running lengths of pipes and also where necessary for fixing clips, holderbats plugged and screwed.				
	Hosereel System Pipework				
4.01	a) 25mm diameter pipe GMS Class B to BS 1387	122	LM.		-
4.02	b) 50mm ditto	240	LM.		-
4.03	c) 100mm ditto	120	LM.		-
	Elbows				
4.04	a) 25mm elbows malleable iron galvanized	44	No.		-
4.05	b) 50mm ditto.	54	No.		-
	Tees				
4.06	a) 32 mm diameter malleable iron equal tee	34	No		-
4.07	b) 50 x 32mm diameter unequal tee	30	No		-
	Reducers				
4.08	a) 32 x 25mm malleable galvanized iron reducing bush	24	No.		-
	Valves				
4.09	a) 25mm bronze gate valve to BS 5154	24	No.		-
4.1	b) 50mm air relief valve screwed as CRANE.	18	No.		-
	Hose reels				
4.11	Swinging type hose reel complete with 30m long hose of 20mm diameter, 25mm internal diameter rubber fire hose with nylon spray/jet and shut off nozzle, and mounting brackets conforming to BS 5274	12	No.		-
Total C/F to page 11					-

BILLS OF QUANTITIES FOR FIRE FIGHTING INSTALLATIONS

BILL NO. 4: HOSEREEL SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (Ksh Cts.)
	Total B/F from Page 10				-
	Hosereel Pipework Painting				
4.12	Wire brush, clean and paint complete installation with one coat of red oxide primer, under coat and gloss coat to Architects colour including banding and colour coding to British standards.	1	Item		-
	PORTABLE FIRE EXTINGUISHERS				
4.13	4.5 Kg carbon dioxide gas fire extinguisher complete with pressure gauge, initial charge and mounting brackets. Total from Collection No. 6 B/F from page 1	15	No.		-
4.14	9 Kg Dry Powder fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	15	No.		-
4.15	Fire blanket 1200mm wall mounted including mounting kit Total for Bill No. 8 B/F from page 6 Total for Bill No. 9 B/F from page 6	4	No.		-
Total C/F to Collection Page					-

PROPOSED ATHI RIVER TEXTILE HUB (WAREHOUSES)
BILLS OF QUANTITIES FOR FIRE FIGHTING INSTALLATIONS
BILL NO. 5: MECHANICAL VENTILATION INSTALLATIONS

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSH CTS.
	DUCTWORK Supply and install the following ductwork in galvanized mild steel sheets with 1.2mm thickness. Rates to allow for duct support hanger jointing and all other necessary accessories.				
	STRAIGHT LENGTHS				
5.01	250x200mm straight length	LM	72		
5.02	200x150mm ditto	LM	54		
	BENDS				
5.03	250x200mm bend	No.	34		
5.04	200x150mm ditto	No.	28		
	TEE BRANCH				
5.05	250x200mm tee branch	No.	24		
5.06	200x150mm ditto	No.	22		
	TRANSITION PIECES				
5.07	250x200mm to 200x150mm	No.	22		
5.08	6" Circular diffuser grill Ceiling mounted supply and extract to engineer's approval.	No.	42		
5.09	300 x600 mm door louvres for booths to Engineer's approval	No.	14		
5.1	Systemair ventilation extract fans discharge 1200m ³ /hr with silencer, external louvre, electrical connection, 5 speed regulator, surge protector and all mounting accessories all other fixing accessories and jointings to Engineer's approval.	No.	8		
Total carried forward to Collection Page					-

COLLECTION PAGE

ITEM No.	DESCRIPTION	AMOUNT (KShs Cts)
1	Total for Bill No. 1 B/F from page 7	-
2	Total for Bill No. 2 B/F from page 8	-
3	Total for Bill No. 3 B/F from page 9	-
4	Total for Bill No. 4 B/F from page 10	-
5	Total for Bill No. 5 B/F from page 12	-
6	Sub-total	-
Total for Warehouses HVAC, Plumbing Drainage & Fire Fighting Bills Carried Forward to Mechanical Works Collection page		-

A) PRICING OF PRELIMINARIES ITEMS.

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

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

a) Preliminaries

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

b) Installation Items and Other Bills

The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications. The unit of measurements and observations are as per those described in clause 1.05 of the section C.

c) Summary

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

B) NOTES FOR BILLS OF QUANTITIES

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings and general specifications of materials and works.
2. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes (including **16% V.A.T and 3 % Withholding tax**).
3. All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part.
4. The brief description of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the sub-contractor shall adhere to. Otherwise alternative brands of **equal** and **approved** quality will be accepted.

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

5. The grand total of prices in the price summary page must be carried forward to the **Form of Tender**.
6. Tenderers must enclose, together with their submitted tenders, **detailed manufacturer's Brochures** detailing Technical Literature and specifications the fittings they intend to offer.

This shall be used in the tender evaluation to determine the first line aesthetics and quality of fittings offered.

1. Statement of Compliance

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
- b) I confirm I have not made and will not make any payment to any person, who can be perceived as an inducement to win this tender.

Signed:*for and on behalf of the Tenderer*

Date: .

Official Rubber Stamp: