THE MERU NATIONAL POLYTECHNIC

Technology for Innovation & Development

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT

TENDER FOR CONSTRUCTION OF THE BUILDING TECHNOLOGY FLAGSHIP CENTRE (PHASE 2)

REQUEST FOR BIDS
Two - envelope bidding Process

RFB NO.: KE-MERUPOLY-422966-CW-RFB

Project No.: P163399

THE WORLD BANK
IBRD • IDA

November 2024

Standard Procurement Document

Summary

Specific Procurement Notice

Specific Procurement Notice - Request for Bids (RFB)

The template attached is the Specific Procurement Notice for Request for Bids method, two-envelope bidding process. This is the template to be used by the Borrower.

Bidding Document: Request for Bids – Small Works (Two-Envelope Bidding Process)

PART 1 – BIDDING PROCEDURES

Section I - Instructions to Bidders (ITB)

This Section provides relevant information to help Bidders prepare their Bids. It is based on two (2) envelope Bidding process. Information is also provided on the submission, opening, and evaluation of Bids and on the award of Contracts. **Section I contains provisions that are to be used without modification.**

Section II - Bid Data Sheet (BDS)

This Section includes provisions that are specific to each procurement and that supplement Section I, Instructions to Bidders.

Section III - Evaluation and Qualification Criteria

This Section specifies the criteria to determine the Most Advantageous Bid.

Section IV - Bidding Forms

This Section includes the forms for the Bid submission, Bill of Quantities or Activity Schedules to be completed by the Bidder and submitted as part of its Bid.

Section V - Eligible Countries

This Section contains information regarding eligible countries.

Section VI - Fraud and Corruption

This section includes the Fraud and Corruption provisions which apply to this Bidding process.

PART 2 – WORKS' REQUIREMENTS

Section VII - Works' Requirements

This Section contains the Specification, the Drawings, and supplementary information that describe the Works to be procured. The Works' Requirements also include the environmental and social (ES) requirements.

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VIII - General Conditions of Contract

This Section contains the general clauses to be applied in all contracts. **The text of the clauses in this Section shall not be modified.**

Section IX - Particular Conditions of Contract

This Section consists of the Particular Conditions of Contract which contains provisions specific to each contract. The contents of this Section modify or supplement the General Conditions of Contract and shall be prepared by the Employer.

Section X - Contract Forms

This Section contains the Letter of Acceptance, Contract Agreement and other relevant forms.

Specific Procurement Notice
Request for Bids
Small Works
(Two-Envelope Bidding Process)

Employer: The Meru National Polytechnic

Project: East Africa Skills for Transformation & Regional Integration Project (EASTRIP)

Contract title: Tender for Construction of the Building Technology Flagship Center (Phase 2)

Country: Kenya

Loan No. /Credit No. / Grant No.: P163399

RFB No: KE-MERUPOLY-422966-CW-RFB

Issued on: 12th November 2024

1. The **Meru National Polytechnic** *has received* financing from the World Bank toward the cost of the **East Africa Skills for Transformation & Regional Integration Project (EASTRIP)** and intends to apply part of the proceeds toward payments under the contract for **Construction of the Building Technology Flagship Centre (Phase 2)**
2. The Meru National Polytechnic now invites sealed Bids from eligible Bidders for **Construction of the Building Technology Flagship Centre (Phase 2)** for a period of **8 months** at Meru National Polytechnic, Meru, Kenya.
3. Bidding will be conducted through international competitive procurement using Request for Bids (RFB) as specified in the World Bank's "Procurement Regulations for IPF Borrowers for projects after July 1, 2016 ("Procurement Regulations"), and is open to all eligible Bidders as defined in the Procurement Regulations.
4. Interested eligible Bidders may obtain further information from the Procurement Office, The Meru National Polytechnic, through info@merunationalpolytechnic.ac.ke or po@merunationalpolytechnic.ac.ke and inspect the bidding document during office hours *i.e., 0800 to 1700 hours* at the address given below.
5. The bidding document in English may be purchased by interested eligible Bidders upon the submission of a written application to the address below and upon payment of a nonrefundable fee of Kes. 5,000.00 or downloaded for free from the Polytechnic website www.mnp.ac.ke/tenders The method of payment will be cash, deposited to the Polytechnic Equity Bank Account, Makutano Branch, A/C No.: 0140299473819 and receipted at the cash office. The document will be picked from the Procurement Office.
6. Bids must be delivered to the address below on or before **9th January 2025** at **10:00am**. Electronic bidding will not be permitted. Late Bids will be rejected. The outer Bid envelopes marked "ORIGINAL BID", and the inner envelopes marked "TECHNICAL PART" will be publicly opened in the presence of the Bidders' designated representatives and anyone who chooses to attend, at the address below on **9th January 2025** at **10:00am**.

All envelopes marked "FINANCIAL PART" shall remain unopened and will be held in safe custody of the Employer until the second public Bid opening.

7. All Bids must be accompanied by a *Bid Security* of Kenya Shillings six million (**Kes 6,000,000.00**)
8. Attention is drawn to the Procurement Regulations requiring the Borrower to disclose information on the successful bidder's beneficial ownership, as part of the Contract Award Notice, using the Beneficial Ownership Disclosure Form as included in the bidding document.
9. The address(es) referred to above is (are):

The Meru National Polytechnic,
Postal Address: P.O. Box 111 - 60200, Meru, Kenya
Tel: +254 769369690
Website: www.merunationalpolytechnic.ac.ke
Email: info@merunationalpolytechnic.ac.ke / po@merunationalpolytechnic.ac.ke

Procurement Officer,
For: The Chief Principal,

Request for Bids
Small Works
(Two-Envelope Bidding Process)

Procurement of:
CONSTRUCTION OF THE BUILDING TECHNOLOGY FLAGSHIP CENTER (PHASE 2)

Employer: The Meru National Polytechnic

Project: East Africa Skills for Transformation & Regional Integration Project (EASTRIP)

Contract title: Tender for Construction of the Building Technology Flagship Center (Phase 2)

Country: Kenya

Loan No. /Credit No. / Grant No.: P163399

RFB No: KE-MERUPOLY-422966-CW-RFB

Issued on: 12th November 2024

Standard Procurement Document

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PART 1 – Bidding Procedures

Section I - Instructions to Bidders

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Section I - Instructions to Bidders

A. General

1. Scope of Bid

1.1 In connection with the Specific Procurement Notice – Request for Bids (RFB), specified in the **Bid Data Sheet (BDS)**, the Employer, as **specified in the BDS**, issues this bidding document for the provision of Works as specified in Section VII, Works' Requirements. The name, identification, and number of lots (contracts) of this RFB are **specified in the BDS.**

1.2 Throughout this bidding document:

(a) the term **"in writing"** means communicated in written form (e.g., by mail, e-mail, fax, including if **specified in the BDS**, distributed or received through electronic-procurement system used by the Employer) with proof of receipt;

(b) if the context so requires, **"singular"** means **"plural'** and vice versa;

(c) **"Day"** means calendar day, unless otherwise specified as a **"Business Day."** A Business Day is any day that is a working day of the Borrower. It excludes the Borrower's official public holi

(d)

(e) ;

(f) **"ES"** means environmental and social (including Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH));

(g) **"Sexual Exploitation and Abuse" "(SEA)"** means the following:

"Sexual Exploitation" is defined as any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;

"Sexual Abuse" is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;

(h) **"Sexual Harassment" "(SH)"** is defined as unwelcome sexual advances, requests for sexual favors, and other

verbal or physical conduct of a sexual nature by the Contractor's Personnel with other Contractor's or Employer's Personnel;

(i) **"Contractor's Personnel"** is as defined in Sub- Clause 1 (ii) of the General Conditions of Contract; and

(j) **"Employer's personnel"** is as defined in GCC Sub-Clause 1 (nn) of the General Conditions of Contract.

A non-exhaustive list of (i) behaviors which constitute SEA and (ii) behaviors which constitute SH is attached to the Code of Conduct form in Section IV.

2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called "Borrower") **specified in the BDS** has received or has applied for financing (hereinafter called "funds") from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called "the Bank") in an amount **specified in the BDS**, toward the project **named in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this bidding document are issued.

2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan account for the purpose of any payment to persons or entities, or for any import of goods, equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

3.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Section VI.

3.2 In further pursuance of this policy, Bidders shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit the Bank to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, bid submission, proposal submission,

and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

4.1 A Bidder may be a firm that is a private entity, or a state-owned enterprise or institution —subject to ITB 4.6—or any combination of them in the form of a joint venture (JV), under an existing agreement, or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded the Contract, during contract execution. Unless **specified in the BDS**, there is no limit on the number of members in a JV.

4.2 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this Bidding process, if the Bidder:

(a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or

(b) receives or has received any direct or indirect subsidy from another Bidder; or

(c) has the same legal representative as another Bidder; or

(d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Employer regarding this Bidding process; or

(e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or

(f) or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Project Manager for the Contract implementation;

(g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project **specified in the BDS** 2.1 that it provided or were provided by any affiliate that directly or indirectly

controls, is controlled by, or is under common control with that firm; or

(h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding document or specifications of the contract, and/or the Bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the procurement process and execution of the contract.

4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.

4.4 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including related Services.

4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework as described in Section VI paragraph 2.2 d. shall be ineligible to be prequalified for, initially selected for, bid for, propose for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified in the BDS.

4.6 Bidders that are state-owned enterprises or institutions in the Employer's Country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Employer.

4.7 A Bidder shall not be under suspension from Bidding by the Employer as the result of the operation of a Bid–Securing or Proposal-Securing Declaration.

4.8 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country. When the Works are implemented across jurisdictional boundaries (and more than one country is a Borrower, and is involved in the procurement), then exclusion of a firm or individual on the basis of ITB 4.8 (a) above by any country may be applied to that procurement across other countries involved, if the Bank and the Borrowers involved in the procurement agree.

4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.

4.10 A firm that is under a sanction of debarment by the Borrower from being awarded a contract is eligible to participate in this procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment;

(a) relates to fraud or corruption; and

(b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

5. Eligible Materials, Equipment and Services

5.1 The materials, equipment and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to the restrictions specified in Section V, Eligible Countries, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.

B. Contents of Bidding Document

6. Sections of Bidding Document

6.1 The bidding document consist of Parts 1, 2, and 3, which include all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures

- Section I - Instructions to Bidders (ITB)
- Section II - Bid Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Eligible Countries
- Section VI - Fraud and Corruption

PART 2 Works' Requirements

- Section VII – Works' Requirements

PART 3 Conditions of Contract and Contract Forms

- Section VIII - General Conditions of Contract
- Section IX - Particular Conditions of Contract
- Section X - Contract Forms

6.2 The Specific Procurement Notice - Request for Bids (RFB) issued by the Employer is not part of this bidding document.

6.3 Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the bidding document, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Employer shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding document and to furnish with its Bid all information and documentation as is required by the bidding document.

7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

7.1 A Bidder requiring any clarification of the bidding document shall contact the Employer in writing at the Employer's address **specified in the BDS** or raise its inquiries during the pre-Bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of Bids within a period **specified in the BDS**. The Employer shall forward copies of its response to all Bidders who have acquired the bidding document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so **specified in the BDS**, the Employer shall also promptly publish its response at the web page **identified in the BDS**. Should the clarification result in changes to the essential elements of the bidding document, the Employer shall amend the bidding document following the procedure under ITB 8 and ITB 22.2.

7.2 The Bidder is advised to visit and examine the Site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

7.4 If so **specified in the BDS**, the Bidder's designated representative is invited to attend a pre-Bid meeting and/or a Site of works visit. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

7.5 The Bidder is requested, to submit any questions in writing, to reach the Employer not later than one week before the meeting.

7.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the bidding document in accordance with ITB 6.3. If so **specified in the BDS,** the Employer shall also promptly publish the Minutes of the pre-Bid meeting at the web page **identified in the BDS**. Any modification to the bidding document that may become necessary as a result of the pre-Bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-Bid meeting. Nonattendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

8.1 At any time prior to the deadline for submission of Bids, the Employer may amend the bidding document by issuing addenda.

8.2 Any addendum issued shall be part of the bidding document and shall be communicated in writing to all who have obtained the bidding document from the Employer in accordance with ITB 6.3. The Employer shall also promptly publish the addendum on the Employer's web page in accordance with ITB 7.1.

8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 22.2.

C. Preparation of Bids

9. Cost of Bidding

9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

10. Language of Bid

10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Employer, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language

specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents Comprising the Bid

11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously in two separate sealed envelopes (two-envelope Bidding process). One envelope shall contain only information relating to the Technical Part and the other, only information relating to the Financial Part. These two envelopes shall be enclosed in a separate sealed outer envelope marked "ORIGINAL BID".

11.2 The **Technical Part** shall contain the following:

(a) **Letter of Bid – Technical Part,** prepared in accordance with ITB 12;

(b) **Bid Security** or **Bid-Securing Declaration**, in accordance with ITB 19.1;

(c) **Alternative Bid - Technical Part**: if permissible in accordance with ITB 13, the Technical Part of any Alternative Bid;

(d) **Authorization**: written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3;

(e) **Bidder's Eligibility:** documentary evidence in accordance with ITB 17.1 establishing the Bidder's eligibility to Bid;

(f) **Qualifications:** documentary evidence in accordance with ITB 17.2 establishing the Bidder's qualifications to perform the Contract if its Bid is accepted;

(g) **Conformity**: a technical proposal in accordance with ITB 16; and

(h) any other document **required in the BDS**.

11.3 The **Financial Part** shall contain the following:

(a) **Letter of Bid – Financial Part:** prepared in accordance with ITB 12 and ITB 14;

(b) **Bill of Quantities or Activity Schedule** completed in accordance with ITB 12 and ITB 14 as specified **in the BDS;**

(c) **Alternative Bid - Financial Part:** if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and

(d) any other document required **in the BDS.**

11.4 The Technical Part shall not include any information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part the Bid shall be declared non-responsive.

11.5 In addition to the requirements under ITB 11.2, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.

11.6 The Bidder shall furnish in the Letter of Bid – Financial Part information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Letters of Bid and Schedules

12.1 The Letter of Bid – Technical Part, Letter of Bid – Financial Part and Priced Activity Schedules or Bill of Quantities shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

13.1 Unless otherwise **specified in the BDS**, alternative Bids shall not be considered.

13.2 When alternative times for completion are explicitly invited, a statement to that effect will be **included in the BDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the bidding document must first price the Employer's design as described in the bidding document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Bidder with the Most Advantageous Bid conforming to the basic technical requirements shall be considered by the Employer.

13.4 When **specified in the BDS**, Bidders are permitted to submit alternative technical solutions for specified parts of the Works.

Such parts will be **identified in the BDS** and described in Section VII, Works' Requirements. The method for their evaluation will be stipulated in Section III, Evaluation and Qualification Criteria.

14. Bid Prices and Discounts

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid – Financial Part and in the Priced Activity Schedule or Bill of Quantities shall conform to the requirements specified below.

14.2 The Bidder shall submit a Bid for the whole of the Works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section IV, Bidding Forms. In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder 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 Bill of Quantities.

14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered.

14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid - Financial Part, in accordance with ITB 12.1.

14.5 Unless otherwise **provided in the BDS,** and the Conditions of Contract, th**e** prices quoted by the Bidder shall be fixed. If the prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data in Section IV-Bidding Forms and the Employer may require the Bidder to justify its proposed indices and weightings.

14.6 If so specified in ITB 1.1, Bids are invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4, provided the Bids for all lots (contracts) are opened at the same time. **However, discounts on condition of award of more than one contract will not be used for Bid evaluation purpose.**

14.7 All duties, 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 submission of Bids, shall be included in the rates and prices[1] and the total Bid price submitted by the Bidder.

15. Currencies of Bid and Payment

15.1 The currency(ies) of the Bid and the currency(ies) of payments shall be the same and shall be as **specified in the BDS.**

15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data are reasonable[2], in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.

16. Documents Comprising the Technical Proposal

16.1 The Bidder shall furnish a technical proposal in the Technical Part of the Bid including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work's requirements and the completion time.

17. Documents Establishing the Eligibility and Qualifications of the Bidder

17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, – Technical Part, included in Section IV, Bidding Forms.

17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms.

17.3 If a margin of preference applies as specified in accordance with ITB 38.1, domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITB 38.1.

18. Period of Validity of Bids

18.1 Bids shall remain valid until the date specified **in the BDS** or any extended date if amended by the Employer in accordance with ITB 8. A Bid that is not valid until the date specified **in the BDS,** or any extended date if amended by the Employer in

[1] In lump-sum contracts, delete "rates and prices and the."

[2] For lump-sum contracts, delete "unit rates and prices and shown in the Schedule of Adjustment Data are reasonable" and replace with "Lump-sum."

accordance with ITB 8, shall be rejected by the Employer as nonresponsive.

18.2 In exceptional circumstances, prior to the date of expiry of the Bid validity, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the extended date for Bid validity. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid, except as provided in ITB 18.3.

18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the date of expiry of the Bid validity specified in accordance with ITB 18.1, the Contract price shall be determined as follows:

(a) in **the** case of fixed price contracts, the Contract price shall be the Bid price adjusted by the factor **specified in the BDS;**

(b) in the case of adjustable price contracts, no adjustment shall be made; or

(c) in any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

19.1 The Bidder shall furnish as part of its Technical Part of its Bid, either a Bid-Securing Declaration or a Bid Security as **specified in the BDS**, in original form and, in the case of a Bid security, in the amount and currency **specified in the BDS**.

19.2 A Bid-Securing Declaration shall use the form included in Section IV, Bidding Forms.

19.3 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee, and in any of the following forms at the Bidder's option:

(a) an unconditional guarantee issued by a bank or non-bank financial institution (such as an insurance, bonding or surety company);

(b) an irrevocable letter of credit;

(c) a cashier's or certified check; or

(d) another security **specified in the BDS,**

from a reputable source, and an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Employer's Country, the issuing non-bank financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable unless the Employer has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Bid Security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Employer prior to Bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original date of expiry of the Bid validity, or beyond any extended date if requested under ITB 18.2.

19.4 If a Bid Security or Bid-Securing Declaration is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security or Bid-Securing Declaration shall be rejected by the Employer as non-responsive.

19.5 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the Contract and furnishing the Performance Security and if required in the BDS, the Environmental and Social (ES) Performance Security pursuant to ITB 50.

19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security and if required in the BDS, the Environmental and Social (ES) Performance Security.

19.7 The Bid Security may be forfeited:

(a) if a Bidder withdraws its Bid prior to the expiry date of the Bid validity specified by the Bidder on the Letter of Bid – Technical Part and repeated in the Letter of Bid – Financial Part or any extension thereto provided by the Bidder; or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB 49; or

(ii) furnish a Performance Security and if required in the BDS, the Environmental and Social (ES) Performance Security in accordance with ITB 50.

19.8 The Bid Security or the Bid-Securing Declaration of a JV shall be in the name of the JV that submits the Bid. If the JV has not been constituted into a legally enforceable JV, at the time of Bidding, the Bid Security or the Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent mentioned in ITB 4.1 and ITB 11.5.

19.9 If a Bid Security is not required in the BDS, pursuant to ITB 19.1, and:

(a) if a Bidder withdraws its Bid prior to the expiry date of the Bid validity specified by the Bidder on the Letters of Bid or any extended date provided by the Bidder; or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB 49; or

(ii) furnish a Performance Security and if required in the BDS, the Environmental, and Social (ES) Performance Security in accordance with ITB 50;

the Borrower may, if provided for **in the BDS**, declare the Bidder ineligible to be awarded a contract by the Employer for a period of time as **stated in the BDS**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare the Bid, in accordance with this Instruction, ITB 11 and ITB 21.

20.2 Bidders shall mark as "CONFIDENTIAL" information in their Bids which is confidential to their business. This may include proprietary information, trade secrets or commercial or financially sensitive information.

20.3 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as **specified in the BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.

20.4 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

20.5 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission of Bids

21. Sealing and Marking of Bids

21.1 The Bidder shall deliver the Bid in two separate, sealed envelopes (the Technical Part and the Financial Part.) These two envelopes shall be enclosed in a separate sealed outer envelope marked "ORIGINAL BID".

21.2 In addition, the Bidder shall submit copies of the Bid in the number **specified in the BDS**. Copies of the Technical Part shall be placed in a separate sealed envelope marked "COPIES: TECHNICAL PART". Copies of the Financial Part shall be placed in a separate sealed envelope marked "COPIES: FINANCIAL PART". The Bidder shall place both of these envelopes in a separate, sealed outer envelope marked "BID COPIES". In the event of any discrepancy between the original and the copies, the original shall prevail. If alternative Bids are permitted in accordance with ITB 13, the alternative Bids shall be submitted as follows: the original of the alternative Bid Technical Part shall be placed in a sealed envelope marked "ALTERNATIVE BID – TECHNICAL PART" and the Financial Part shall be placed in a sealed envelope marked "ALTERNATIVE BID – FINANCIAL PART" and these two separate sealed envelopes then enclosed within a sealed outer envelope marked "ALTERNATIVE BID – ORIGINAL", the copies of the alternative Bid will be placed in separate sealed envelopes marked "ALTERNATIVE BID – COPIES OF TECHNICAL PART", and "ALTERNATIVE BID – COPIES OF FINANCIAL PART" and enclosed in a separate sealed outer envelope marked "ALTERNATIVE BID - COPIES"

21.3 The envelopes marked "ORIGINAL BID" and "BID COPIES" (and, if appropriate, a third envelope marked "ALTERNATIVE BID") shall be enclosed in a separate sealed outer envelope for submission to the Employer.

21.4 All inner and outer envelopes, shall:

(a) bear the name and address of the Bidder;

(b) be addressed to the Employer in accordance with ITB 22.1;

(c) bear the specific identification of this Bidding process indicated in ITB 1.1; and

(d) bear a warning not to open before the time and date for Bid opening.

21.5 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

22.1 Bids must be received by the Employer at the address and no later than the date and time **specified in the BDS**. When so **specified in the BDS**, Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the electronic Bid submission procedures **specified in the BDS.**

22.2 The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the bidding document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1 The Employer shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 22. Any Bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:

(a) prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and

(b) received by the Employer prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

24.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the date of expiry of the Bid validity specified by the Bidder on the Letter of Bid or any extended date thereof.

E. Public Opening of Technical Parts of Bids

25. Public Opening of Technical Parts of Bids

25.1 Except in the cases specified in ITB 23 and ITB 24.2, the Employer shall publicly open and read out all Bids received by the deadline, at the date, time and place **specified in the BDS**, in the presence of Bidders` designated representatives and anyone who chooses to attend. All Bidders, or their representatives and any interested party may attend a public opening. Any specific electronic Bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be as **specified in the BDS**.

25.2 First, the written notice of withdrawal in the envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened but returned to the Bidder. No Bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Bid opening.

25.3 Next, envelopes marked "Substitution" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Bid opening.

25.4 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening.

25.5 Next, all other envelopes marked "TECHNICAL PART" shall be opened one at a time. All envelopes marked "SECOND ENVELOPE: FINANCIAL PART" shall remain sealed and kept by the Employer in safe custody until they are opened at a later public opening, following the evaluation of the Technical Part parts of the Bids. On opening the envelopes marked "TECHNICAL PART" the Employer shall read out: the name of the Bidder, the presence or the absence of a Bid Security, or Bid-Securing Declaration, if required, and whether there is a modification; and Alternative Bid - Technical Part; and any other details as the Employer may consider appropriate.

25.6 Only Technical Parts of Bids and Alternative Bid - Technical Parts that are read out at Bid opening shall be considered further for evaluation. The Letter of Bid- Technical Part and

the separate sealed envelope marked "SECOND ENVELOPE: FINANCIAL PART" are to be initialed by representatives of the Employer attending Bid opening in the manner **specified in the BDS**.

25.7 At the Bid opening the Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).

25.8 The Employer shall prepare a record of the Technical Parts of Bid opening that shall include, as a minimum:

(a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;

(b) the receipt of envelopes marked "SECOND ENVELOPE: FINANCIAL PART";

(c) the presence or absence of a Bid Security or Bid-Securing Declaration if one was required; and

(d) if applicable, any Alternative Bid – Technical Part.

25.9 The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

F. Evaluation of Bids – General Provisions

26. Confidentiality

26.1 Information relating to the evaluation of the Technical Part shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until the notification of evaluation of the Technical Part in accordance with ITB 34. Information relating to the evaluation of Financial Part, the evaluation of combined Technical Part and Financial Part, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with the RFB process until the Notification of Intention to Award the Contract is transmitted to all Bidders in accordance with ITB 45.

26.2 Any effort by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.

26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract award, if a Bidder wishes to contact the

Employer on any matter related to the Bidding process, it shall do so in writing.

27. Clarification of Bids

27.1 To assist in the examination, evaluation, and comparison of the Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid given a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 36.

27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected.

28. Deviations, Reservations, and Omissions

28.1 During the evaluation of Bids, the following definitions apply:

(a) "Deviation" is a departure from the requirements specified in the bidding document;

(b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the bidding document; and

(c) "Omission" is the failure to submit part, or all of the information or documentation required in the bidding document.

29. Nonmaterial Nonconformities

29.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid.

29.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

G. Evaluation of Technical Parts of Bids

30. Determination of Responsiveness of Technical Part

30.1 The Employer's determination of the Technical Part's responsiveness shall be based on the contents of the Bid, as specified in ITB 11.

30.2 Preliminary examination of the Technical Part shall be carried out to identify bids that are incomplete, invalid or substantially nonresponsive to the requirements of the Bidding documents. A substantially responsive Bid is one that meets the requirements of the bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

(a) if accepted, would:

(i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or

(ii) limit in any substantial way, inconsistent with the bidding document, the Employer's rights or the Bidder's obligations under the proposed Contract; or

(b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

30.3 If the Technical Partis not substantially responsive to the requirements of the bidding document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

31. Eligibility and Qualifications of the Bidder

31.1 The Employer shall determine to its satisfaction whether the eligible Bidders that have submitted substantially responsive Bid - Technical Parts meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

31.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the bidding document), or any other firm different from the Bidder.

31.3 Prior to Contract award, the Employer will verify that the successful Bidder (including each member of a JV) is not

disqualified by the Bank due to noncompliance with contractual SEA/SH prevention and response obligations. The Employer will conduct the same verification for each subcontractor proposed by the successful Bidder. If any proposed subcontractor does not meet the requirement, the Employer will require the Bidder to propose a replacement subcontractor.

31.4 Only substantially responsive bids submitted by eligible and qualified bidders shall proceed to the detailed technical evaluation specified in ITB 32.

32. Detailed Evaluation of Technical Part

32.1 The Employer's evaluation of Technical Part will be carried out as specified in Section III, Evaluation and Qualification Criteria.

32.2 The scores to be given to technical factors and sub factors are specified **in the BDS**.

33. Subcontractors

33.1 Unless otherwise stated **in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer.

33.2 The subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works were previously designated by the Employer **in the BDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Bidder may be added to the qualifications.

33.3 Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as **specified in the BDS.** Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.

H. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts of Bids

34. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts

34.1 Following the completion of the evaluation of the Technical Parts of the Bids, the Employer shall notify in writing those Bidders whose Bids were considered non-responsive to the bidding document or failed to meet the Qualification requirements, advising them of the following information:

(a) the grounds on which their Technical Part of Bid failed to meet the requirements of the bidding document;

(b) their envelopes marked "SECOND ENVELOPE: FINANCIAL PART" will be returned to them unopened after the completion of the selection process and the signing of the Contract; and

(c) notify them of the date, time and location of the public opening of the envelopes marked "SECOND ENVELOPE: FINANCIAL PART".

34.2 The Employer shall, simultaneously, notify in writing those Bidders whose Technical Part have been evaluated as substantially responsive to the bidding document and met all Qualifying Criteria, advising them of the following information:

(a) their Bid has been evaluated as substantially responsive to the bidding document and met the qualification requirements;

(b) their envelope marked "SECOND ENVELOPE: FINANCIAL PART" will be opened at the public opening of the Financial Parts; and

(c) notify them of the date, time and location of the second public opening of the envelopes marked "SECOND ENVELOPE: FINANCIAL PART".

34.3 The opening date shall be not less than ten (10) Business Days from the date of notification of the results of the technical evaluation, specified in ITB 34.1 and 34.2. However, if the Employer receives a complaint on the results of the technical evaluation within the ten (10) Business Days, the opening date shall be subject to ITB 52.1. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend.

34.4 At this public opening the Financial Parts will be opened by the Employer in the presence of Bidders, or their designated representatives and anyone else who chooses to attend. Bidders who met the Qualification Criteria and whose bids were evaluated as substantially responsive will have their envelopes marked "SECOND ENVELOPE: FINANCIAL PART" opened at the second public opening. Each of these envelopes marked "SECOND ENVELOPE: FINANCIAL PART" shall be inspected to confirm that they have remained sealed and unopened. These envelopes shall then be opened by the Employer. The Employer shall read out the names of each Bidder, the technical scores and the total Bid prices, per lot (contract) if applicable, including any discounts and Alternative Bid - Financial Part,

and any other details as the Employer may consider appropriate.

34.5 Only envelopes of Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation. The Letter of Bid – Financial Part and the Priced Activity Schedules are to be initialed by a representative of the Employer attending the Bid opening in the manner **specified in the BDS**.

34.6 The Employer shall neither discuss the merits of any Bid nor reject any envelopes marked "SECOND ENVELOPE: FINANCIAL PART".

34.7 The Employer shall prepare a record of the Financial Part of the Bid opening that shall include, as a minimum:

(a) the name of the Bidder whose Financial Part was opened;

(b) the Bid price, per lot (contract) if applicable, including any discounts; and

(c) if applicable, any Alternative Bid – Financial Part.

34.8 The Bidders whose envelopes marked "SECOND ENVELOPE: FINANCIAL PART" have been opened or their representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

I. Evaluation of Financial Parts of Bids

35. Evaluation of Financial Parts

35.1 To evaluate the Financial Part, the Employer shall consider the following:

(a) the Bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities[3] for admeasurement contracts, but including Daywork[4] items, where priced competitively;

[3] In lump-sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

[4] Daywork is work carried out following instructions of the Project Manager and paid for on the basis of time spent by workers, and the use of materials and the Contractor's equipment, at the rates quoted in the Bid. For Daywork to be priced competitively for Bid evaluation purposes, the Employer must list tentative quantities for individual items to be costed against Daywork (e.g., a specific number of tractor driver staff-days, or a specific tonnage of Portland cement), to be multiplied by the Bidders' quoted rates and included in the total Bid price.

(b) price adjustment for correction of arithmetic errors in accordance with ITB 36.1;

(c) price adjustment due to discounts offered in accordance with ITB 14.4;

(d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 37;

(e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 35.4; and

(f) the additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria.

35.2 If price adjustment is allowed in accordance with ITB 14.5, the estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.

35.3 If this bidding document allows Bidders to quote separate prices for different lots (contracts), each lot will be evaluated separately to determine the Most Advantageous Bid using the methodology specified in in Section III, Evaluation and Qualification Criteria. **Discounts that are conditional on the award of more than one lotor slice shall not be considered for Bid evaluation.**

35.4 Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component by adding the average price of the item or component quoted by substantially responsive Bidders. If the price of the item or component cannot be derived from the price of other substantially responsive Bidders, the Employer shall use its best estimate.

36. Correction of Arithmetic Errors

36.1 In evaluating the Financial Part of each Bid, the Employer shall correct arithmetical errors on the following basis:

(a) only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit

price, in which case the total price as quoted shall govern and the unit price shall be corrected;

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

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

36.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 36.1, shall result in the rejection of the Bid.

37. Conversion to Single Currency

37.1 For evaluation and comparison purposes, the currency(ies) of the Bids shall be converted in a single currency as **specified in the BDS.**

38. Margin of Preference

38.1 Unless otherwise **specified in the BDS,** a margin of preference for domestic Bidders[5] shall not apply.

39. Comparison of Financial Parts

39.1 The Employer shall compare the evaluated costs of all responsive and qualified Bids to determine the Bid that has the lowest evaluated cost.

40. Abnormally Low Bids

40.1 An Abnormally Low Bid is one where the Bid price, in combination with other constituent elements of the Bid, appears unreasonably low to the extent that the Bid price raises material concerns as to the capability of the Bidder to perform the Contract for the offered Bid price.

40.2 In the event of identification of a potentially Abnormally Low Bid, the Employer shall seek written clarifications from the Bidder, including detailed price analyses of its Bid price in correlation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and

[5] An individual firm is considered a domestic bidder for purposes of the margin of preference if it is registered in the country of the Employer, has more than 50 percent ownership by nationals of the country of the Employer, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as domestic bidders and eligible for domestic preference only if the individual member firms are registered in the country of the Employer or have more than 50 percent ownership by nationals of the country of the Employer, and the JV shall be registered in the country of the Borrower. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms. JVs between foreign and national firms will not be eligible for domestic preference.

responsibilities and any other requirements of the bidding document.

40.3 After evaluation of the price analyses, in the event that the Employer determines that the Bidder has failed to demonstrate its capability to deliver the contract for the offered tender price, the Employer shall reject the Bid.

41. Unbalanced or Front Loaded Bids

41.1 If the Bid for an admeasurement contract, which results in the lowest evaluated cost, in the Employer's opinion, seriously unbalanced or front loaded the Employer may require the Bidder to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the Bid prices with the scope of works, proposed methodology, schedule and any other requirements of the bidding document.

41.2 After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may as appropriate:

(a) accept the Bid; or

(b) require that the amount of the performance security be increased at the expense of the Bidder to a level not exceeding 20% of the Contract price; or

(c) reject the Bid.

J. Evaluation of Combined Technical and Financial Parts, Most Advantageous Bid and Notification of Intention to Award

42. Evaluation of combined Technical and Financial Parts, Most Advantageous Bid

42.1 The Employer's evaluation of responsive Bids will take into account technical factors, in addition to cost factors in accordance with Section III Evaluation and Qualification Criteria. The weight to be assigned for the Technical factors and cost is specified **in the BDS**. The Employer will rank the Bids based on the evaluated Bid score (B).

42.2 Having compared the evaluated costs of Bids, the Employer shall determine the Most Advantageous Bid. The Most Advantageous Bid is the Bid of the Bidder that meets the Qualification Criteria and whose Bid has been determined to be substantially responsive to the Bidding document and is the Bid with the highest combined technical and financial score.

43. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

43.1 The Employer reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids at any time prior to Contract Award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, Bid Securities, shall be promptly returned to the Bidders.

44. Standstill Period

44.1 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 48. The Standstill Period commences the day after the date the Employer has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

45. Notification of Intention to Award

45.1 The Employer shall send to each Bidder (that has not already been notified that it has been unsuccessful) the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

(a) the name and address of the Bidder submitting the successful Bid;

(b) the Contract price of the successful Bid;

(c) the total combined score of the successful bid;

(d) the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated and technical scores;

(e) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful;

(f) the expiry date of the Standstill Period; and

(g) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

K. Award of Contract

46. Award Criteria

46.1 Subject to ITB 43, the Employer shall award the Contract to the successful Bidder. This is the Bidder whose Bid has been determined to be the Most Advantageous Bid as specified in ITB 42.

47. Notification of Award

47.1 Prior to the expiration of the Bid validity and upon expiry of the Standstill Period, specified in ITB 44.1 or any extension thereof, and, upon satisfactorily addressing any complaint that has been filed within the Standstill Period, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Conditions of Contract and Contract Forms called the “Letter

of Acceptance") shall specify the sum that the Employer will pay the Contractor in consideration of the execution of the contract (hereinafter, and in the Conditions of Contract and Contract Forms, called "the Contract Price").

47.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Employer shall publish the Contract Award Notice which shall contain, at a minimum, the following information:

(a) name and address of the Employer;

(b) name and reference number of the contract being awarded, and the selection method used;

(c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;

(d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor;

(e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope; and

(f) successful Bidder's Beneficial Ownership Disclosure Form.

47.3 The Contract Award Notice shall be published on the Employer's website with free access if available, or in at least one newspaper of national circulation in the Employer's country, or in the official gazette. The Employer shall also publish the contract award notice in UNDB online.

47.4 Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

48. Debriefing by the Employer

48.1 On receipt of the Employer's Notification of Intention to Award referred to in ITB 45.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Employer for a debriefing. The Employer shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.

48.2 Where a request for debriefing is received within the deadline, the Employer shall provide a debriefing within five (5) Business Days, unless the Employer decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period

shall not end earlier than five (5) Business Days after the last debriefing takes place. The Employer shall promptly inform, by the quickest means available, all Bidders of the extended standstill period

48.3 Where a request for debriefing is received by the Employer later than the three (3)-Business Day deadline, the Employer should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3)-day deadline shall not lead to extension of the standstill period.

48.4 Debriefings of unsuccessful Bidders may be done in writing or verbally. The Bidder shall bear their own costs of attending such a debriefing meeting.

49. Signing of Contract

49.1 The Employer shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, and a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form shall be submitted within eight (8) Business Days of receiving this request.

49.2 The successful Bidder shall sign, date and return to the Employer, the Contract Agreement within twenty-eight (28) days of its receipt.

50. Performance Security

50.1 Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security and, if required in the BDS, the Environmental and Social (ES) Performance Security in accordance with the General Conditions of Contract, subject to ITB 41.2 (b), using for that purpose the Performance Security and ES Performance Security Forms included in Section X, Contract Forms, or another form acceptable to the Employer. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer's Country, unless the Employer has agreed in writing that a correspondent financial institution is not required.

50.2 Failure of the successful Bidder to submit the above-mentioned Performance Security and, if required in the BDS, the

Environmental and Social (ES) Performance Security, or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Employer may award the Contract to the Bidder offering the next Most Advantageous Bid.

51. Adjudicator

51.1 The Employer proposes the person named **in the BDS** to be appointed as Adjudicator under the Contract, at the hourly fee **specified in the BDS**, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in his Bid. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the Particular Conditions of Contract (PCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

52. Procurement Related Complaint

52.1 The procedures for making a Procurement-related Complaint are as specified in the BDS.

Section II - Bid Data Sheet (BDS)

The following specific data for the Works to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

A. General	
ITB 1.1	The reference number of the Request for Bids (RFB) is: **KE-MERUPOLY-422966-CW-RFB** The Employer is**: The Meru National Polytechnic** The name of the RFB is: **Tender for Construction of the Building Technology Flagship Centre (Phase 2)** The number and identification of lots (contracts) comprising this RFB is: **One**
ITB 2.1	The Borrower is: **The Government of Kenya (The Meru National Polytechnic is a state corporation under the State Department for TVET, Ministry of Education(** Loan or Financing Agreement amount: **US$ 10.8 million** The name of the Project is: **East Africa Skills for Transformation & Regional Integration Project**
ITB 4.1	Maximum number of members in the JV shall be: **Three**
ITB 4.5	A list of debarred firms and individuals is available on the Bank's external website: http://www.worldbank.org/debarr.
B. Contents of Bidding Document	
ITB 7.1	For **Clarification of Bid purposes** only, the Employer's address is: **Attention:** The Procurement Officer, The Meru National Polytechnic, Postal Address: P.O. Box 111 - 60200, Meru, Kenya Tel: +254 769 369 680 Location: Meru National Polytechnic, Gitoro, Along Meru – Nanyuki Road Website: www.merunationalpolytechnic.ac.ke Email: po@merunationalpolytechnic.ac.ke

ITB 7.1	Requests for clarification should be received by the Employer no later than: **10 days before the bid closing date** Email address: po@merunationalpolytechnic.ac.ke / info@merunationalpolytechnic.ac.ke Web page: www.mnp.ac.ke/tenders
ITB 7.4	A Pre-Bid meeting ***shall*** take place at the following date, time and place: Date: **3rd December 2024** Time: **10:00am** Place: **EASTRIP site, The Meru National Polytechnic, Meru Kenya** A site visit conducted by the Employer ***shall be*** organized
ITB 7.6	Web page: ***www.mnp.ac.ke/tenders***
C. Preparation of Bids	
ITB 10.1	The language of the Bid is: ***English*** All correspondence exchange shall be in **English** language. Language for translation of supporting documents and printed literature is: **N/A**
ITB 11.2 (h)	The Bidder shall submit the following additional documents in the Technical Part of its Bid: **a)Must be registered by National Construction Authority (NCA) for category NCA 1 (One) and above.** **b) A valid Tax Compliance Certificate (TCC) issued by Kenya Revenue Authority** **c) A valid and relevant business permit (For local firms only)** **d) Code of Conduct for Contractor's Personnel (ES)** The Bidder shall submit its Code of Conduct that will apply to Contractor's Personnel (as defined in Sub- Clause 1 (ii) of the General Conditions of Contract), to ensure compliance with the Contractor's Environmental and Social (ES) obligations under the Contract. The Bidder shall use for this purpose the Code of Conduct form provided in Section IV. No substantial modifications shall be made to this form, except that the Bidder may introduce additional requirements, including as necessary to take into account specific Contract issues/risks.

	Management Strategies and Implementation Plans (MSIP) to manage the (ES) risks The Bidder shall submit Management Strategies and Implementation Plans (MSIPs) to manage the following key Environmental and Social (ES) risks: • Dust and Noise Management strategy to prevent pollution and disturbances. • Noxious gases control strategy from construction equipment and trucks to reduce air pollution • Waste Management plan to reduce waste accumulation. • Safety and Health risks plan to ensure safety within the working • place. • Population Management Plan to provide awareness to local community on the impacts of HIV/AIDS that may be associated with population flux. • Sexual Exploitation, and Abuse (SEA) prevention and response action plan
ITB 11.3 (b)	The following schedules shall be submitted with the Bid: 1. Priced Bill of Quantities 2. Program of works (Gantt Chart)
ITB 11.3 (d)	The Bidder shall submit the following additional documents in its Bid: ***[list any additional document not already listed in ITB 11.3 that must be submitted with the Bid]*** 1. Certificate of Incorporation 2. Valid Tax Compliance Certificate (TCC) issued by Kenya Revenue Authority 3. Valid Business Permit 4. Code of Conduct for Contractor's personnel (ES)
ITB 13.1	Alternative Bids **shall not be** considered.
ITB 13.2	Alternative times for completion **shall not be** permitted.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: **N/A**
ITB 14.5	The prices quoted by the Bidder **shall not be** subject to adjustment during the performance of the Contract.
ITB 15.1	The price shall be quoted by the Bidder in: ***Kenya Shillings***

	A Bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country (referred to as the "foreign currency requirements") and wishing to be paid accordingly, shall indicate up to three foreign currencies of their choice expressed as a percentage of the Bid price, together with the exchange rates used in the calculations in the appropriate form(s) included in Section IV, Bidding Forms.
ITB 18.1	The Bid shall be valid until*:* **11th April 2025 (150 days)**
ITB 18.3 (a)	The Bid price shall be adjusted by the following factor(s): **N/A – Bid price is not subject to adjustment**
ITB 19.1	A Bid security ***shall be*** required. If a Bid Security shall be required, the amount and currency of the Bid Security shall be **Kenya Shillings six million (Kes. 6,000,000.00)**
ITB 19.3 (d)	Other types of acceptable securities: **The bidder can submit any equivalent amount in freely convertible currency in form of an unconditional bank guarantee using the format provided in the Bidding Forms**
ITB 20.3	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: **Notarized Power of Attorney issued specific to this bid**.
D. Submission of Bids	
ITB 21.2	In addition to the original of the Bid, the number of copies is: ***4 copies***

ITB 22.1	For **Bid submission purposes** only, the Employer's address is: Attention: **The Procurement Officer, The Meru National Polytechnic,** Postal Address: **P.O. Box 111 - 60200, Meru, Kenya** Tel: **+254 769 369 680** Location: **Meru National Polytechnic, Gitoro, Along Meru – Nanyuki Road** Website: www.merunationalpolytechnic.ac.ke Email: po@merunationalpolytechnic.ac.ke / info@merunationalpolytechnic.ac.ke The deadline for Bid submission is: Date: **9th January 2025**

	Time: **10:00 a.m.** Bidders **shall not** have the option of submitting their Bids electronically.
E. Public Opening of Technical Parts of Bids	
ITB 25.1	The Bid opening shall take place at: Location: **Meru National Polytechnic, Gitoro, Along Meru – Nanyuki Road** Website: www.merunationalpolytechnic.ac.ke Email: po@merunationalpolytechnic.ac.ke / info@merunationalpolytechnic.ac.ke The deadline for Bid submission is: Date: **9th January 2025** Time: **10:00 a.m.** Bidders **shall not** have the option of submitting their Bids electronically.
ITB 25.6	The Letter of Bid – Technical Part and the sealed envelope marked "SECOND ENVELOPE: FINANCIAL PART" shall be initialed by representatives of the Employer conducting Bid opening. **Each Bid shall be initialed by all representatives and shall be numbered**
G. Evaluation of Technical Parts of Bids	
ITB 32.1	The technical factors (sub-factors) and the corresponding weight out of 100% are:

Technical Factor	weight in percentage (insert weight in %)
1. Extent the technical proposal exceeds the requirements of the Specification	40%
2. Method Statement for construction activities (and design, if any)	15%
3. Site Organization, team composition, qualifications and experience of Contractor's Personnel	10%
4. Work Program	10%
5. Management strategies and implementation plans (MSIPs) for ES	10%
6. Quality of Sustainable Procurement Proposal	5%
7. Key equipment strategy	10%
TOTAL	100%

ITB 33.1	At this time the Employer ***intends*** to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 33.2	The parts of the Works for which the Employer permits Bidders to propose Specialized Subcontractors are designated as follows: **a. Plate loading tests** **b. Signage** For the above-designated parts of the Works that may require Specialized Subcontractors, the relevant qualifications of the proposed Specialized Subcontractors will be added to the qualifications of the Bidder for the purpose of evaluation.
ITB 33.3	Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is: **30%** of the total contract amount Bidders planning to subcontract shall specify, in the Letter of Bid, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualifications.
H. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts	
ITB 34.5	The Letter of Bid – Financial Part and Schedules shall be initialed by **all** representatives of the Employer conducting Bid opening. **Each Financial Part of Bid shall be initialed by all representatives and shall be numbered, any modification to the unit or total price shall be initialed by the Representative of the Employer.**
I. Evaluation of Financial Parts of Bids	
ITB 37.1	The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: **Kenya Shillings** The source of exchange rate shall be: **The Central Bank of Kenya** The date for the exchange rate shall be: **9th January 2025**
J. Evaluation of Combined Technical and Financial Parts and Most Advantageous Bid	
ITB 42.1	The weight to be given for cost is: **20/100**

K. Award of Contract	
ITB 50.1 and 50.2	The successful Bidder shall be required to submit an Environmental and Social (ES) Performance Security.
ITB 51 **Adjudicator**	The Adjudicator proposed by the Employer is***:*** **Nkatha Muriuki** The hourly fee for this proposed Adjudicator shall be: **as prescribed by CIARB Kenya rates** The biographical data of the proposed Adjudicator is as follows: **To be provided**
ITB 52.1	The procedures for making a Procurement-related Complaint are detailed in the "Procurement Regulations for IPF Borrowers (Annex III)." If a Bidder wishes to make a Procurement-related Complaint, the Bidder shall submit its complaint following these procedures, In Writing (by the quickest means available, such as by email or fax), to: **For the Attention:** Mutembei A. Kigige **Title/ position:** The Chief Principal **Employer:** The Meru National Polytechnic, **Postal Address:** P.O. Box 111 - 60200, Meru, Kenya **Email:** info@merunationalpolytechnic.ac.ke In summary, a Procurement-related Complaint may challenge any of the following: **1.** the terms of the Bidding Documents; **2.** the Employer's decision to exclude a Bidder from the procurement process prior to the award of contract; and **3.** the Employer's decision to award the contract.

Section III - Evaluation and Qualification Criteria

This section contains all the criteria that the Employer shall use to evaluate Bids and qualify Bidders. No other factors, methods or criteria shall be used other than those specified in this bidding document. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

Wherever a Bidder is required to state a monetary amount, Bidders should indicate the USD equivalent using the rate of exchange determined as follows:

- For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amount for that year is to be converted) was originally established.
- Value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 37.1. Any error in determining the exchange rates in the Bid may be corrected by the Employer.

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Section III - Evaluation and Qualification Criteria

1. Technical Part

1.1 Evaluation of Technical Proposal

Assessment of adequacy of Technical Proposal with Requirements in accordance with **ITB 32.1.**

Technical Proposal Scoring Methodology

Score (of the total score for the factor/subfactor as applicable	*Description*	*Remarks*
1.	Extent the technical proposal exceeds the requirements of the Specification	40%
2.	Method Statement for construction activities (and design, if any)	15%
3.	Site Organization, team composition, qualifications and experience of Contractor's Personnel	10%
4.	Work Program	10%
5.	Management strategies and implementation plans (MSIPs) for ES	10%
6.	Quality of Sustainable Procurement Proposal	5%
7.	Key equipment strategy	10%
TOTAL		**100%**

The score for each sub- factor (i) within a factor (j) will be combined with the scores of sub- factors in the same factor as a weighted sum to form the Factor Technical Score using the following formula:

$$S_j \equiv \sum_{i=1}^{k} t_{ji} * w_{ji}$$

where:

t_{ji} = the technical score for sub- factor "i" in factor "j"

w_{ji} = the weight of sub- factor "i" in factor "j",

k = the number of scored sub-factors in factor "j", and

$$\sum_{i=1}^{k} w_{ji} = 1$$

The Factor Technical Scores will be combined in a weighted sum to form the total Technical Proposal Score using the following formula:

$$T \equiv \sum_{j=1}^{n} S_j * W_j$$

where:

S_j = the Factor Technical Score of factor "j"

W_j = the weight of factor "j" as specified **in the BDS, and**

n = the number of Factors

and $\sum_{j=1}^{n} W_j = 1$

1.2 Alternative Technical Solutions for specified parts of Works

The acceptability of technical alternatives for parts of the Works, if permitted under ITB 13.4, will be determined as follows: **N/A**

1.3 Specialized Subcontractors

If permitted under ITB 33, only the specific experience of Subcontractors for specialized works permitted by the Employer will be considered. The general experience and financial resources of the Specialized Subcontractors shall not be added to those of the Bidder for purposes of qualification of the Bidder.

1.4 Qualification Criteria

Pursuant to ITB 31.1, the Employer shall assess each Bid against the following Qualification Criteria. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
				Joint Venture (existing or intended)			
No.	**Subject**	**Requirement**	**Single Entity**	**All members Combined**	**Each member**	**At least one member**	**Submission Requirements**
1. Eligibility							
1.1	Nationality	Nationality in accordance with ITB 4.4	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	Conflict of Interest	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3	Bank Eligibility	Not having been declared ineligible by the Bank, as described in ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.4	State-owned enterprise or institution of the Borrower country	Meets conditions of ITB 4.6	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.5	United Nations resolution or Borrower's country law	Not having been excluded as a result of prohibition in the Borrower's country laws or official regulations against commercial relations with the Bidder's country, or by an act of compliance with UN Security Council resolution, both in accordance with ITB 4.8 and Section V.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each member	At least one member	
2. Historical Contract Non-Performance							
2.1	History of Non-Performing Contracts	Non-performance of a contract[1] did not occur as a result of contractor default since 1st January [Insert year].	Must meet requirement[1 and 2]	Must meet requirements	Must meet requirement[2]	N/A	Form CON-2
2.2	Suspension Based on Execution of Bid/Proposal Securing Declaration by the Employer	Not under suspension based on execution of a Bid/Proposal Securing Declaration pursuant to ITB 4.7 and ITB 19.9.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
2.3	Pending Litigation	Bidder's financial position and prospective long term profitability sound according to criteria established in 3.1 below and assuming that all pending litigation will be resolved against the Bidder	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2
2.4	Litigation History	No consistent history of court/arbitral award decisions against the Bidder[3] since 1st January [insert year]	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON – 2

[1] Nonperformance, as decided by the Employer, shall include all contracts where (a) nonperformance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Nonperformance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Nonperformance must be based on all information on fully settled disputes or litigation, i.e., dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

[2] This requirement also applies to contracts executed by the Bidder as JV member.

[3] The Bidder shall provide accurate information on the letter of Bid about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the Bidder or any member of a joint venture may result in disqualifying the Bidder.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
				Joint Venture (existing or intended)			
No.	**Subject**	**Requirement**	**Single Entity**	**All members Combined**	**Each member**	**At least one member**	**Submission Requirements**
2.5	**Declaration: Environmental and Social (ES) past performance**	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons of breach of environmental or social (including Sexual Exploitation and Abuse)) contractual obligations in the past five years.[4]	Must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	N/A	Form CON-3 ES Performance Declaration
2.6	**Bank's SEA and/or SH Disqualification**	At the time of Contract Award, not subject to disqualification by the Bank for non-compliance with SEA/ SH obligations	Must meet requirement(including each subcontractor proposed by the Bidder)	N/A	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Letter of Bid, Form CON-4
		If the Bidder had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations, the Bidder shall either (i) provide evidence of an arbitral award on the disqualification made in its favour; or (ii) demonstrate that it has adequate capacity and commitment to comply with SEA/SH prevention and response obligations; or (iii) provide evidence that it has	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Letter of Bid, Form CON-4

[4] The Employer may use this information to seek further information or clarifications in carrying out its due diligence.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each member	At least one member	
		already demonstrated such capacity and commitment on another Bank financed works contract.					
3. Financial Situation and Performance							
3.1	Financial Capabilities	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as **USD $ 1,000,000.00** for the subject contract(s) net of the Bidder's other commitments	Must meet requirement	Must meet Requirement	N/A	N/A	Form FIN – 3.1, with attachments
		(ii) The Bidders shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.	Must meet requirement	Must meet requirement	N/A	N/A	
		(iii) The audited balance sheets or, if not required by the laws of the Bidder's Country, other financial statements acceptable	Must meet requirement	N/A	Must meet requirement	N/A	

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each member	At least one member	
		to the Employer, for the last **five (5)** years shall be submitted and must demonstrate the current soundness of the Bidder's financial position and indicate its prospective long-term profitability.					
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of **US $ 5,000,000.00 (Five million Only**), calculated as total certified payments received for contracts in progress and/or completed within the last **five (5) years**, divided by **five (5)** years	Must meet requirement	Must meet requirement	Must meet 80% of the requirement	Must meet 100% of the requirement	Form FIN – 3.2
4. Experience							
4.1 (a)	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last **15 (fifteen)** years, starting **1st January 2009.**	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP – 4.1
4.2 (a)	Specific Construction & Contract	(i) A minimum number of ***five (5)]*** similar contracts specified below that have been	Must meet requirements	Must meet requirement[7]	N/A	Must meet the following requirements for	Form EXP 4.2(a)

[7] In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each member	At least one member	
	Management Experience	satisfactorily and substantially[5] completed as a prime contractor, joint venture member[6], management contractor or sub-contractor[6] between **1st January 2019** and bid submission deadline: (i) **Five (5)** contracts, each of minimum value **USD 5,000,000.00 (Five million)** The similarity of the contracts shall be based on the following: [*Based on Section VII, Scope of Works, specify the minimum key requirements in terms of physical size, complexity, construction method, technology and/or other characteristics including part of the requirements that may be met by specialized subcontractors, if permitted in accordance with ITB 33.2]* **(Note: Provide client contact details, copies of the signed contract/ award letter and practical completion certificates)**				the key activities listed below [list key activities and the corresponding minimum requirements to be met by one member otherwise state: ”N/A”]	**(Note: Provide client contact details, copies of the signed contract/ award letter and practical completion certificates)**

[5] Substantial completion shall be based on 80% or more works completed under the contract.
[6] For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder’s share, by value, shall be considered to meet this requirement.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
				Joint Venture (existing or intended)			
No.	**Subject**	**Requirement**	**Single Entity**	**All members Combined**	**Each member**	**At least one member**	**Submission Requirements**
4.2 (b)		For the above and any other contracts [substantially completed and under implementation] as prime contractor, joint venture member, or sub-contractor between **1st January *2019*** and Application submission deadline, a minimum construction experience in the following key activities successfully completed: • Building Construction (10,000sqm) • Civil works (5,000 sqm)	Must meet requirements	Must meet requirements	Must meet requirements	Must meet the following requirements for the key activities listed below • Building Construction (10,000sqm) • Civil works (5,000 sqm)	Form EXP – 4.2 (b)
4.2 (c)	Specific Experience in managing ES aspects *and* any additional sustainable procurement aspects	For contracts [substantially completed and under implementation] as prime contractor, joint venture member, or Subcontractor between **1st January 2022** and Application submission deadline, experience in managing ES risks and impacts in the following aspects:	Must meet requirements	Must meet requirements	Must meet the following requirements: **N/A**	Must meet the following requirements: N/A	Form EXP – 4.2 (c)

5. Key Personnel

The Bidder must demonstrate that it will have suitably qualified (and in adequate numbers) Key Personnel, as described in the Specification.

The Bidder shall provide details of the Key Personnel and such other Key Personnel that the Bidder considers appropriate to perform the Contract, together with their academic qualifications and work experience. The Bidder shall complete the relevant Forms in Section IV, Bidding Forms.

	Key Personnel	**Relevant minimum academic qualifications**	**Experience**
1.	Site Manager (Civil/ structural Engineer, registered as Engineer by the Engineers Board of Kenya)	Bsc. Structural/ Civil Engineering	10
2.	Site Engineer (Professional Civil/ Structural Engineer registered by the Engineers Board of Kenya)	Bsc. Structural/Civil Engineering	8
3.	Electrical Engineer (registered as Engineer by the Engineers Board of Kenya)	Bsc. Electrical Engineering	5
4.	Mechanical Engineer (registered as Engineer by the Engineers Board of Kenya)	Bsc. Mechanical Engineering	5
5.	Environmental Engineeer	Bsc. Environmental Engineering	5
6.	ICT/Telecommunication Engineer (Registered by Engineers Board of Kenya)	Bsc. ICT/ Telecommunication	5
7.	Quantity Surveyor (Registered by Engineers Board of Kenya/ the Institution of Surveyors of Kenya)	Bsc. Building Economics/ Quantity Surveying	10
8.	Land Surveyor (Registered by the Institution of Surveyors of Kenya)	Bsc. Land Surveying/ Geomatics	5

9.	General Foreman	Full Technician Certificate; Grade A	10
10.	Safety Officer (Attend OSHA training course)	Certificate in safety or any other equivalent qualification	5
11.	Health/ Medical Officer	Certificate in Public Health or any other equivalent qualification	5
12.	Environmental Specialist	Bsc. Environmental Science	5

6. Equipment

The Bidder must demonstrate that it has access to the key equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum Number required
1.	Tipper	4
2.	Concrete Mixer (0.5M3)	2
3.	Pickup	1
4.	Poker vibrator	4
5.	Tile cutting machine	4
6.	Steel cutting machine	2
7.	Steel bending machine	1
8.	scaffolding	1000m^2
9.	Water bowsers (10,000 litres capacity)	1
10.	Portable Electrical welding set (3 phase)	2
11.	Tower Crane	1
12.	Excavator	2
13.	Roller	1

The Bidder shall provide further details of proposed items of equipment using Form EQU in Section IV, Bidding Forms.

2. Financial Part

2.1 Margin of Preference

If BDS so specifies, the Employer will grant a margin of preference of 7.5% (seven and one-half percent) to domestic contractors, in accordance with, and subject to, the following provisions:

(a) Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Borrower and accepted by the Bank, a particular contractor or group of contractors qualifies for a domestic preference. The bidding document shall clearly indicate the preference and the method that will be followed in the evaluation and comparison of Bids to give effect to such preference.

(b) After Bids have been received and reviewed by the Employer, responsive Bids shall be classified into the following groups:

(i) Group A: Bids offered by domestic contractors eligible for the preference.

(ii) Group B: Bids offered by other contractors.

All evaluated Bids in each group shall, as a first evaluation step, be compared to determine the Most Advantageous Bid, and the Most Advantageous Bid in each group shall be further compared with each other. If a result of this comparison, a Bid from Group A is the Most Advantageous Bid, it shall be selected for the award, if the Bidder is qualified. If a Bid from Group B is the Most Advantageous Bid, as a second evaluation step, all Bids from Group B shall then be further compared with the Most Advantageous Bid from Group A. For the purpose of this further comparison only, an amount equal to 7.5% (seven and one-half percent) of the respective Bid price corrected for arithmetical errors, including unconditional discounts but excluding provisional sums and the cost of day works, if any, shall be added to the evaluated cost offered in each Bid from Group B. If the Bid from Group A is the Most Advantageous Bid, it shall be selected for award. If not, the Most Advantageous Bid from Group B based on the first evaluation step shall be selected.

In addition to the criteria listed in ITB 35.1 (a) – (e) the following criteria shall apply : **Time Schedule**

Time to complete the Works from the from the Commencment Date shall be between **8 months** minimum and **10 months** maximum. The adjustment rate in the event of completion beyond the minimum period shall be **1%** for each week of delay from that minimum period. No credit will be given for completion earlier than the minimum designated period. Bids offering a completion date beyond the maximum designated period **shall be rejected**.

2.2 Alternative Completion Time

An alternative Completion Time, if permitted under ITB 13.2, will be evaluated as follows: **NOT APPLICABLE**

2.3 Alternative Technical Solutions for specified parts of the Works

If the alternative technical solutions of parts of the Works, if permitted under ITB 13,4, were accepted in the evaluation of the Technical Part, the Financial Part of the Bid shall be evaluated as follows: **N/A**

3. Combined Evaluation

The Employer will evaluate and compare the Bids that have been determined to be substantially responsive.

An Evaluated Bid Score (B) will be calculated for each responsive Bid using the following formula, which permits a comprehensive assessment of the evaluated cost and the technical merits of each Bid:

$$B \equiv \frac{Clow}{C} * X * 100 + \frac{T}{Thigh} * (1 - X) * 100$$

where

C	=	Evaluated Bid Cost
C_{low}	=	the lowest of all Evaluated Bid Costs among responsive Bids
T	=	the total Technical Score awarded to the Bid
T_{high}	=	the Technical Score achieved by the Bid that was scored best among all responsive Bids
X	=	weight for Cost as **specified in the BDS**

The Bid with the best evaluated Bid Score (B) among responsive Bids shall be the Most Advantageous Bid provided the Bidder is qualified to perform the Contract.

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Letter of Bid - Technical Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: [*insert date (as day, month and year) of Bid submission*]
Request for Bid No.: [*insert identification*]
Alternative No.: [*insert identification No if this is a Bid for an alternative*]

To: **[*insert complete name of Employer*]**

We, the undersigned, hereby submit our Bid, in two parts, namely:

(a) the Technical Part, and

(b) the Financial Part

In submitting our Bid, we make the following declarations:

(a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance with Instructions to Bidders (ITB 8);

(b) **Eligibility**: We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;

(c) **Bid-Securing Declaration:** We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration or Proposal-Securing Declaration in the Employer's country in accordance with ITB 4.7;

(d) **Exploitation and Abuse (SEA) and/or Sexual Harassment (SH):** [*select the appropriate option from (i) to (v) below and delete the others*].

We *[where JV, insert:* "including any of our JV members"*]*, and any of our subcontractors:

i. [have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]

ii. [are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]

iii. [had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. An arbitral award on the disqualification case has been made in our favor.]

iv. [had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have subsequently provided and demonstrated that we have adequate capacity and commitment to comply with SEA and SH prevention and response obligations.]

v. [had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have attached documents demonstrating that we have adequate capacity and commitment to comply with SEA and SH prevention and response obligations.]

(e) **Conformity**: We offer to execute in conformity with the bidding document the following Works: [*insert a brief description of the Works*]_____

_____;

(f) **Bid Validity**: Our Bid shall be valid until *[insert day, month and year in accordance with ITB 18.1]*, and it shall remain binding upon us and may be accepted at any time on or before this date;

(g) **Performance Security:** If our Bid is accepted, we commit to obtain a Performance Security [*and an Environmental and Social (ES) Performance Security*, ***Delete if not applicable***] in accordance with the bidding document;

(h) **One Bid Per Bidder:** We are not submitting any other Bid(s) as an individual Bidder or as a subcontractor, and we are not participating in any other Bid(s) as a Joint Venture member, and meet the requirements of ITB 4.3, other than alternative Bids submitted in accordance with ITB 13;

(i) **Suspension and Debarment**: We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer's country laws or official regulations or pursuant to a decision of the United Nations Security Council;

(j) **State-owned enterprise or institution:** [*select the appropriate option and delete the other*] [*We are not a state-owned enterprise or institution*] / [*We are a state-owned enterprise or institution but meet the requirements of ITB 4.6*];

(k) **Binding Contract**: We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(l) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid or any other Bid that you may receive;

(m) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;

(n) **Adjudicator:** We accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator.

[or]

We do not accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator and propose instead that *[insert name]* be appointed as Adjudicator, whose daily fees and biographical data are attached.

Name of the Bidder: *[*insert complete name of the Bidder*]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** [*insert complete name of person duly authorized to sign the Bid*]

Title of the person signing the Bid: [*insert complete title of the person signing the Bid*]

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*]

Date signed [*insert date of signing*] **day of** [*insert month*], [*insert year*]

Date signed _____ day of _____, _____

*****: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder
**: Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

Appendix A to Technical Part: Technical Proposal

Site Organization

[insert Site Organization information]

Method Statement

[insert Method Statement]

[If the contract has been assessed to present potential or actual cyber security risks, the method statement must also include method statement, management strategies, implementation plans and innovations to manage cyber security risks. Further, if there is assessed supply chain risk, the method statement must include method statement to manage supply chain risks.]

Mobilization Schedule

[insert Mobilization Schedule]

Construction Schedule

[insert Construction Schedule]

Environmental and Social, Health Management Strategies and Implementation Plans (ES-MSIP)

The Bidder shall submit comprehensive and concise Environmental and Social Management Strategies and Implementation Plans (ES-MSIP) as required by ITB 11.2 (h) of the Bid Data Sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the ES provisions of the contract including those as may be more fully described in the Works' Requirements in Section VII.

Sustainable Procurement Proposal

[**Note to Bidder**: In addition to submitting the **required** ES Management Strategies and Implementation Plans, the Bidder shall provide its proposal to demonstrate how additional sustainable procurement requirements, if any, specified in Section VII- Works' Requirements would be addressed. The Bidder shall also provide its proposal, if any, for exceeding the sustainable procurement requirements.]

Code of Conduct for Contractor's Personnel (ES) Form

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

Note to the Bidder:

The minimum content of the Code of Conduct form as set out by the Employer shall not be substantially modified. However, the Bidder may add requirements as appropriate, including to take into account Contract-specific issues/risks.

The Bidder shall initial and submit the Code of Conduct form as part of its bid.

We are the Contractor, [*enter name of Contractor*]. We have signed a contract with [*enter name of Employer*] for [*enter description of the Works*]. These Works will be carried out at [*enter the Site and other locations where the Works will be carried out*]. Our contract requires us to implement measures to address environmental and social risks related to the Works, including the risks of sexual exploitation, sexual abuse and sexual harassment.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the Works. It applies to all our staff, laborers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as "**Contractor's Personnel"** and are subject to this Code of Conduct.

This Code of Conduct identifies the behavior that we require from all Contractor's Personnel.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

REQUIRED CONDUCT

Contractor's Personnel shall:

1. carry out his/her duties competently and diligently;
2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
3. maintain a safe working environment including by:
    a. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
    b. wearing required personal protective equipment;
    c. using appropriate measures relating to chemical, physical and biological substances and agents; and
    d. following applicable emergency operating procedures.
4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. not engage in Sexual Harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
7. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;
8. not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
10. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation, and Abuse (SEA) and Sexual Harassment (SH);
11. report violations of this Code of Conduct; and
12. not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel or the project's Grievance Redress Mechanism.

RAISING CONCERNS

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

1. Contact [*enter name of the Contractor's Social Expert with relevant experience in handling gender-based violence, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters*] in writing at this address [ ] or by telephone at [ ] or in person at [ ]; or
2. Call [ ] to reach the Contractor's hotline *(if any)* and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.
There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [*enter name of Contractor's contact person with relevant experience*] requesting an explanation.

Name of Contractor's Personnel: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: (day month year): _____

ATTACHMENT 1: Behaviors constituting Sexual Exploitation and Abuse (SEA) and behaviors constituting Sexual Harassment (SH)

ATTACHMENT 1 TO THE CODE OF CONDUCT FORM

BEHAVIORS CONSTITUTING SEXUAL EXPLOITATION AND ABUSE (SEA) AND BEHAVIORS CONSTITUTING SEXUAL HARASSMENT (SH)

The following non-exhaustive list is intended to illustrate types of prohibited behaviors:

(1) **Examples of sexual exploitation and abuse** include, but are not limited to:

- A Contractor's Personnel tells a member of the community that he/she can get them jobs related to the work site (e.g., cooking and cleaning) in exchange for sex.
- A Contractor's Personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
- A Contractor's Personnel rapes, or otherwise sexually assaults a member of the community.
- A Contractor's Personnel denies a person access to the Site unless he/she performs a sexual favor.
- A Contractor's Personnel tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.

(2) **Examples of sexual harassment in a work context**

- Contractor's Personnel comment on the appearance of another Contractor's Personnel (either positive or negative) and sexual desirability.
- When a Contractor's Personnel complains about comments made by another Contractor's Personnel on his/her appearance, the other Contractor's Personnel comment that he/she is "asking for it" because of how he/she dresses.
- Unwelcome touching of a Contractor's or Employer's Personnel by another Contractor's Personnel.
- A Contractor's Personnel tells another Contractor's Personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

Others

Appendix B to Technical Part: Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment (a) ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

Appendix C to Technical Part: Key Personnel

Form PER -1: Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Key Personnel

1.	**Title of position:**	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g., attach high level Gantt chart*]
2.	**Title of position:** *[Environmental Specialist]*	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g., attach high level Gantt chart*]
3.	**Title of position:** *[Health and Safety Specialist]*	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g., attach high level Gantt chart*]
4.	**Title of position:** *[Social Specialist]*	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]

	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g., attach high level Gantt chart*]
5.	**Title of position: Sexual Exploitation, Abuse and Harassment Expert** *[Where a Project SEA risks are assessed to be substantial or high, Key Personnel shall include an expert with relevant experience in addressing sexual exploitation, sexual abuse and sexual harassment cases]*	
	Name of candidate	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g., attach high level Gantt chart*]
6.	**Title of position: Cyber security Expert/s** ***[Include as required]***	
	Name of candidate	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g., attach high level Gantt chart*]

Form PER-2: Resume and Declaration
Key Personnel

Name of Bidder

Position [#*1*]: [*title of position from Form PER-1*]		
Personnel information	**Name:**	**Date of birth:**
	Address:	**E-mail:**
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency:*[language and levels of speaking, reading and writing skills]*	
details		
	Address of employer:	
	Telephone:	**Contact (manager / personnel officer):**
	Fax:	
	Job title:	**Years with present employer:**

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	**Role**	**Duration of involvement**	**Relevant experience**
[main project details]	*[role and responsibilities on the project]*	*[time in role]*	*[describe the experience relevant to this position]*

Declaration

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	**Details**
Commitment to duration of contract:	*[insert period (start and end dates) for which this Key Personnel is available to work on this contract]*
Time commitment:	*[insert the number of days/week/months/ that this Key Personnel will be engaged]*

I understand that any misrepresentation or omission in this Form may:

(a) be taken into consideration during Bid evaluation;

(b) result in my disqualification from participating in the Bid;

(c) result in my dismissal from the contract.

Name of Key Personnel: [*insert name*]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Bidder:

Signature: _____

Date: (day month year): _____

Appendix D to Technical Part: Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Form ELI -1.1
Bidder Information Form

Date: _____
RFB No. and title: _____
Page _____of _____pages

Bidder's name

In case of Joint Venture (JV), name of each member:

Bidder's actual or intended country of registration:

[indicate country of Constitution]

Bidder's actual or intended year of incorporation:

Bidder's legal address [in country of registration]:

Bidder's authorized representative information

Name: _____

Address: _____

Telephone/Fax numbers: _____

E-mail address: _____

1. Attached are copies of original documents of

☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4.

☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.

☐ In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing:

- Legal and financial autonomy
- Operation under commercial law
- Establishing that the Bidder is not under the supervision of the Employer

2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.

Form ELI -1.2
Bidder's JV Information Form

(to be completed for each member of Bidder's JV)

Date: _____
RFB No. and title: _____
Page _____ of _____ pages

Bidder's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Employer, in accordance with ITB 4.6. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder shall provide additional information on beneficial ownership for each JV member using the Beneficial Ownership Disclosure Form.

Form CON – 2
Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder's Name: _____
Date: _____
JV Member's Name_____
RFB No. and title: _____
Page _____of _____pages

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
☐ Contract non-performance did not occur since 1st January *[insert year]* ☐ Contract(s) not performed since 1st January *[insert year]*			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and US$ equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Employer: *[insert full name]* Address of Employer: *[insert street/city/country]* Reason(s) for nonperformance: *[indicate main reason(s)]*	*[insert amount]*
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
☐ No pending litigation ☐ Pending litigation.			

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
		Contract Identification: _____ Name of Employer: _____ Address of Employer: _____ Matter in dispute: _____ Party who initiated the dispute: ____ Status of dispute: _____	
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	

Litigation History in accordance with Section III, Evaluation and Qualification Criteria

☐ No Litigation History
☐ Litigation History

Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
[insert year]	*[insert percentage]*	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: *[insert full name]* Address of Employer: *[insert street/city/country]* Matter in dispute: *[indicate main issues in dispute]* Party who initiated the dispute: *[indicate "Employer" or "Contractor"]* Reason(s) for Litigation and award decision *[indicate main reason(s)]*	*[insert amount]*

Form CON – 3:
Environmental and Social (ES) Performance Declaration

[The following table shall be filled in for the Bidder, each member of a Joint Venture and each Specialized Subcontractor]

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member's or Specialized Subcontractor's Name: *[insert full name]*
RFB No. and title: *[insert RFB number and title]*
Page *[insert page number]* of *[insert total number]* pages

Environmental and Social, Performance Declaration in accordance with Section III, Evaluation and Qualification Criteria			
☐ **No suspension or termination of contract**: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental, or Social (ES) performance since the date specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.5. ☐ **Declaration of suspension or termination of contract**: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an employer(s) for reasons related to Environmental or Social (ES) performance since the date specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.5. Details are described below:			
Year	**Suspended or terminated portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and US$ equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Employer: *[insert full name]* Address of Employer: *[insert street/city/country]* Reason(s) for suspension or termination: *[indicate main reason(s) e.g., for gender-based violence; sexual exploitation or sexual abuse breaches]*	*[insert amount]*
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Employer: *[insert full name]* Address of Employer: *[insert street/city/country]*	*[insert amount]*

		Reason(s) for suspension or termination: *[indicate main reason(s)]*	
…	…	*[list all applicable contracts]*	…
Performance Security called by an employer(s) for reasons related to ES performance			
Year	Contract Identification		Total Contract Amount (current value, currency, exchange rate and US$ equivalent)
[insert year]	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Employer: *[insert full name]* Address of Employer: *[insert street/city/country]* Reason(s) for calling of performance security: *[indicate main reason(s) e.g., for gender-based violence; sexual exploitation, or sexual abuse breaches]*		*[insert amount]*

Form CON – 4
Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration

[The following table shall be filled in by the Bidder, each member of a Joint Venture and each subcontractor proposed by the Bidder]

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member's or Subcontractor's Name: *[insert full name]*
RFB No. and title: *[insert RFB number and title]*
Page *[insert page number]* of *[insert total number]* pages

SEA and/or SH Declaration **in accordance with Section III, Evaluation and Qualification Criteria**
We: ☐ (a) have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations ☐ (b) are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations ☐ (c) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. An arbitral award on the disqualification case has been made in our favor. ☐ (d) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have subsequently demonstrated that we have adequate capacity and commitment to comply with SEA/ SH obligations. ☐ (e) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have attached evidence demonstrating that we have adequate capacity and commitment to comply with SEA/ SH obligations.
[*If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]*
[If (d) or (e) above are applicable, provide the following information:]
Period of disqualification: From: _____ To: _____
If previously provided on another Bank financed works contract, details of evidence that demonstrated adequate capacity and commitment to comply with SEA/ SH obligations (**as per (d) above)** Name of Employer: _____ Name of Project: _____ Contract description: _____ Brief summary of evidence provided: _____ _____ Contact Information: (Tel, email, name of contact person): _____

_____
As an alternative to the evidence under (d), other evidence demonstrating adequate capacity and commitment to comply with SEA/ SH obligations (**as per (e) above)** *[attach details as appropriate]*.

Form FIN – 3.1
Financial Situation and Performance

Bidder's Name: _____
Date: _____
JV Member's Name_____
RFB No. and title: _____
Page _____of _____pages

1. Financial data

Type of Financial information in (currency)	**Historic information for previous _____*years*, _____ (amount in currency, currency, exchange rate*, USD equivalent)**				
	Year 1	Year 2	Year 3	Year4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

*Refer to ITB 37.1 for the exchange rate

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US$ equivalent)
1		
2		
3		

2. Financial documents

The Bidder and its parties shall provide copies of financial statements for _____years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

(a) reflect the financial situation of the Bidder or in case of JV member, and not an affiliated entity (such as parent company or group member).

(b) be independently audited or certified in accordance with local legislation.

(c) be complete, including all notes to the financial statements.

(d) correspond to accounting periods already completed and audited.

☐ Attached are copies of financial statements[1] for the _____years required above; and complying with the requirements

[1] If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

Form FIN – 3.2
Average Annual Construction Turnover

Bidder's Name: _____
Date: _____
JV Member's Name_____
RFB No. and title: _____
Page _____of _____pages

	Annual turnover data (construction only)		
Year	**Amount** **Currency**	**Exchange rate**	**USD equivalent**
[indicate year]	*[insert amount and indicate currency]*		
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

Form FIN – 3.3
Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III (Evaluation and Qualification Criteria)

Financial Resources		
No.	**Source of financing**	**Amount (US$ equivalent)**
1		
2		
3		

Form FIN – 3.4
Current Contract Commitments / Works in Progress

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	**Name of Contract**	**Employer's Contact Address, Tel, Fax**	**Value of Outstanding Work [Current US$ Equivalent]**	**Estimated Completion Date**	**Average Monthly Invoicing Over Last Six Months [US$/month)]**
1					
2					
3					
4					
5					

Form EXP - 4.1
General Construction Experience

Bidder's Name: _____
Date: _____
JV Member's Name_____
RFB No. and title: _____
Page _____of _____pages

Starting Year	Ending Year	Contract Identification	Role of Bidder
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	

Form EXP - 4.2(a)
Specific Construction and Contract Management Experience

Bidder's Name: _____
Date: _____
JV Member's Name_____
RFB No. and title: _____
Page _____of _____pages

Similar Contract No.	**Information**			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			US$	
If member in a JV or sub-contractor, specify participation in total Contract amount				
Employer's Name:				
Address: Telephone/fax number E-mail:				

Form EXP - 4.2(a) (cont.)
Specific Construction and Contract Management Experience (cont.)

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Form EXP - 4.2(b)
Construction Experience in Key Activities

Bidder's Name: _____
Date: _____
Bidder's JV Member Name: _____
Sub-contractor's Name[2] (as per ITB 34.2 and 34.3): _____
RFB No. and title: _____

Page _____of _____pages

All Sub-contractors for key activities must complete the information in this form as per ITB 33.2 and 33.3 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

1. Key Activity No One: _____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			US$	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				
Employer's Name:				

[2] If applicable

	Information
Address: Telephone/fax number E-mail:	

2. Activity No. Two

3. ……

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

Form EXP - 4.2(c)
Specific Experience in Managing ES aspects and any additional sustainable procurement aspects

[The following table shall be filled in for contracts performed by the Bidder, and each member of a Joint Venture]

Bidder's Name: _____
Date: _____
Bidder's JV Member Name: _____
RFB No. and title: _____
Page _____of _____pages

1. Key Requirement no 1 in accordance with 4.2 (c): _____

Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Subcontractor ☐
Total Contract Amount			US$	
Details of relevant experience				

2. Key Requirement no 2 in accordance with 4.2 (c): _____
3. Key Requirement no 3 in accordance with 4.2 (c): _____

Appendix E to Technical Part: Bid Security

Form of Demand Guarantee

Beneficiary: _____

Request for Bids No: _____

Date: _____

BID GUARANTEE No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Bid (hereinafter called "the Bid") for the execution of _____ under Request for Bids No. _____ ("the RFB").

Furthermore, we understand that, according to the Beneficiary's conditions, bids must be supported by a bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

(a) has withdrawn its Bid prior to the Bid validity expiry date set forth in the Applicant's Letter of Bid, or any extended date provided by the Applicant; or

(b) having been notified of the acceptance of its Bid by the Beneficiary prior to the expiry date of the Bid validity or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the performance security, and, if required, the Environmental and Social (ES) Performance Security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful Bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, if required, the Environmental and Social (ES) Performance Security, issued to the Beneficiary in relation to such contract agreement; or (b) if the Applicant is not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Bidding process; or (ii) twenty-eight days after the expiry date of the Bid validity.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

_____

[Signature]

Form of Bid Security – Bid Bond

[The Surety shall fill in this Bid Bond Form in accordance with the instructions indicated.]

BOND NO. _____

BY THIS BOND *[name of Bidder]* as Principal (hereinafter called "the Principal"), and *[name, legal title, and address of surety]*, authorized to transact business in *[name of country of Employer]*, as Surety (hereinafter called "the Surety"), are held and firmly bound unto *[name of Employer]* as Obligee (hereinafter called "the Employer") in the sum of *[amount of Bond]*[3] *[amount in words]*, for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted a written Bid to the Employer dated the ___ day of _____, 20__, for the execution of *[name of Contract]* (hereinafter called the "Bid").

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

(a) has withdrawn its Bid prior to the Bid validity expiry date set forth in the Principal's Letter of Bid, or any extension thereto provided by the Principal; or

(b) having been notified of the acceptance of its Bid by the Employer prior to the expiry date of the Bid validity or any extension thereto provided by the Principal: (i) failed to execute the contract agreement; or (ii) has failed to furnish the Performance Security, and, if required, the Environmental and Social (ES) Performance Security, if required, in accordance with the Instructions to Bidders ("ITB") of the Employer's bidding document.

then the Surety undertakes to immediately pay to the Employer up to the above amount upon receipt of the Employer's first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration of the Bid validity set forth in the Principal's Letter of Bid or any extension thereto provided by the Principal.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ____ day of _____ 20__.

---

[3] The amount of the Bond shall be denominated in the currency of the Employer's country or the equivalent amount in a freely convertible currency.

Principal: _____ Surety: _____

Corporate Seal (where appropriate)

_____ _____

(Signature) *(Signature)*

(Printed name and title) *(Printed name and title)*

Form of Bid-Securing Declaration

Date: _____
RFB No.: _____
Alternative No.: _____

To:

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for Bidding or submitting proposals in any contract with the Employer for the period of time specified in Section II – Bid Data Sheet if we are in breach of our obligation(s) under the Bid conditions, because we:

(a) have withdrawn our Bid prior to the expiry date of the Bid validity specified in the Letter of Bid or any extended date provided by us; or

(b) having been notified of the acceptance of our Bid by the Employer prior to the expiry date of the Bid validity in the Letter of Bid or any extended date provided by us, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, and, if required, the Environmental and Social (ES) Performance Security, in accordance with the ITB.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiry date of the Bid validity.

Name of the Bidder*****_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder******_____

Title of the person signing the Bid_____

Signature of the person named above_____

Date signed _____ day of _____, _____

*****: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

Letter of Bid - Financial Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text in black font is to help Bidders in preparing this form.

Date of this Bid submission: [*insert date (as day, month and year) of Bid submission*]
Request for Bid No.: [*insert identification*]
Alternative No.: [*insert identification No if this is a Bid for an alternative*]

To: **[*insert complete name of Employer*]**

We, the undersigned, hereby submit the second part of our Bid, the Bid Price and Bill of Quantities. This accompanies the Letter of Technical Part.

In submitting our Bid, we make the following additional declarations:

(a) **Bid Validity**: Our Bid shall be valid until *[insert day, month and year in accordance with ITB 18.1]*, and it shall remain binding upon us and may be accepted at any time on or before this date;

(b) **Total Price**: The total price of our Bid, excluding any discounts offered in item (f) below is: [Insert one of the options below as appropriate]

[Option 1, in case of one lot:] Total price is: [*insert the total price of the Bid in words and figures, indicating the various amounts and the respective currencies*];

Or

[Option 2, in case of multiple lots:] (a) Total price of each lot [*insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies*]; and (b) Total price of all lots (sum of all lots) [*insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies*];

(c) **Discounts:** The discounts offered and the methodology for their application are:

(i) The discounts offered are: [*Specify in detail each discount offered*]

(ii) The exact method of calculations to determine the net price after application of discounts is shown below: [*Specify in detail the method that shall be used to apply the discounts*];

(d) **Commissions,** gratuities **and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: [*insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity*].

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

Name of the Bidder:*[*insert complete name of the Bidder*]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** [*insert complete name of person duly authorized to sign the Bid*]

Title of the person signing the Bid: [*insert complete title of the person signing the Bid*]

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*]

Date signed [*insert date of signing*] **day of** [*insert month*], [*insert year*]

*****: In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder.

**: Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules

Appendix A to Financial Part: Schedules
Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

(a) to provide sufficient information on the quantities of Works to be performed to enable bids to be prepared efficiently and accurately; and

(b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and contents of the Bill of Quantities should be as simple and brief as possible.

Daywork Schedule

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Employer of the realism of rates quoted by the bidders, the Daywork Schedule should normally comprise the following:

(a) A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor shall be paid for work executed on a daywork basis.

(b) Nominal quantities for each item of daywork, to be priced by each Bidder at daywork rates as Bid. The rate to be entered by the Bidder against each basic daywork item should include the Contractor's profit, overheads, supervision, and other charges.

Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary priced Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the Special Conditions of Contract should state the manner in which they shall be used, and under whose authority (usually the Project Manager's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement

procedure is normally carried out by the Employer to select such specialized contractors. To provide an element of competition among the bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

These Notes for Preparing a Bill of Quantities are intended only as information for the Employer or the person drafting the bidding document. They should not be included in the final documents.

1. Sample Bill of Quantities[4]

(Local Currency and Foreign Currency)

Item no.	*Description*	*Unit*	*Quantity*	*Rate*	*Amount*
	[*To be entered by the Employer; Delete if not applicable:]* Provisional sums for additional ES outcomes.				
				Total	_____

[4] In case of Lump-sum Contract, use Sample Activity Schedule.

Activity Schedule

Item no.	*Description*	*Unit*	*Amount*
	[*To be entered by the Employer; Delete if not applicable:]* Provisional sums for additional ES outcomes.		

Schedule of Payment Currencies

For .....*insert name of Section of the Works*

Separate tables may be required if the various sections of the Works (or of the Bill of Quantities) will have substantially different foreign and local currency requirements. The Employer should insert the names of each Section of the Works.

	A	**B**	**C**	**D**
Name of Payment Currency	**Amount of Currency**	**Rate of Exchange to Local Currency**	**Local Currency Equivalent C = A x B**	**Percentage of Total Bid Price (TBP)** $\frac{100xC}{TBP}$
Local currency _____		**1.00**		
Foreign Currency #1 _____				
Foreign Currency #2 _____				
Foreign Currency #3 _____				
Total Bid Price				**100.00**
Provisional Sums Expressed in Local Currency		**1.00**		
TOTAL BID PRICE (Including provisional sum)				

Schedule(s) of Adjustment Data

Table A - Local Currency

Index Code	Index Description	Source of Index	Base Value and Date	Bidder's Local Currency Amount	Bidder's Proposed Weighting
	Nonadjustable	—	—	—	A: ____* B: ____* C: ____* D: ____* E: ____*
			Total		**1.00**

[* To be entered by the Employer. Whereas "A" should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Table B - Foreign Currency
Name of Currency: _____

If the Bidder wishes to quote in more than one foreign currency, this table should be repeated for each foreign currency.

Index Code	Index Description	Source of Index	Base Value and Date	Bidder's Currency in Type/Amount	Equivalent in FC1	Bidder's Proposed Weighting
	Nonadjustable	—	—	—		A: ____* B: ____* C: ____* D: ____* E: ____*
				Total		**1.00**

[* To be entered by the Employer. Whereas "A" should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Non-consulting Services in Bank-Financed Procurement

In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8 (a) and ITB 5.1: **None**

Under ITB 4.8 (b) and ITB 5.1: **None**

Section VI - Fraud and Corruption

(Section VI shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders, (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

v. "obstructive practice" is:

(a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.

b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-

contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;[1] (ii) to be a nominated2 sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;

e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect[3] all accounts, records and other documents relating to the procurement process, selection and/or contract execution,, and to have them audited by auditors appointed by the Bank.

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1 For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

2 A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

3 Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

PART 2 – Works' Requirements

Section VII - Works' Requirements

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Specifications

(Attached)

Environmental and Social (ES) Requirements

(Attached)

Drawings

(Attached)

Supplementary Information

PART 3 – Conditions of Contract and Contract Forms

Section VIII - General Conditions of Contract

These General Conditions of Contract (GCC), read in conjunction with the Particular Conditions of Contract (PCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

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General Conditions of Contract

A. General

1. Definitions

1.1 Boldface type is used to identify defined terms.

(a) The **Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

(b) The **Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump-sum contract. It includes a lump-sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.

(c) The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.

(d) **Bank** means the financing institution **named in the PCC**.

(e) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.

(f) **Compensation Events** are those defined in GCC Clause 42 hereunder.

(g) The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 57.1.

(h) The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.

(i) The **Contractor** is the party whose Bid to carry out the Works has been accepted by the Employer.

(j) The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.

(k) The **Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.

(l) **Days** are calendar days; months are calendar months.

(m) **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and

Equipment, in addition to payments for associated Materials and Plant.

(n) A **Defect** is any part of the Works not completed in accordance with the Contract.

(o) The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.

(p) The **Defects Liability Period** is the period **named in the PCC** pursuant to GCC Sub-Clause 38.1 and calculated from the Completion Date.

(q) **Drawings** means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

(r) The **Employer** is the party who employs the Contractor to carry out the Works, **as specified in the PCC**.

(s) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

(t) "**In writing"** or "**written"** means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

(u) The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

(v) The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The **Intended Completion Date** is specified in the PCC. The **Intended Completion Date** may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

(w) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.

(x) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

(y) The **Project Manager** is the person named in the PCC (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.

(z) **PCC** means Particular Conditions of Contract.

(aa) The **Site** is the area defined as such in the PCC.

(bb) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

(cc) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

(dd) The **Start Date** is **given in the PCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

(ee) A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.

(ff) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

(gg) A **Variation** is an instruction given by the Project Manager which varies the Works.

(hh) The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the PCC.

(ii) "**Contractor's Personnel**" refers to all personnel whom the Contractor utilizes on the Site or other places where the Works are carried out, including the staff, labor and other employees of each Subcontractor.

(jj) **"Key Personnel"** means the positions (if any) of the Contractor's personnel that are stated in the Specification.

(kk) **"ES"** means Environmental and Social (including Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)).

(ll) **"Sexual Exploitation and Abuse" "(SEA)"** means the following:

Sexual Exploitation is defined as any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to,

profiting monetarily, socially or politically from the sexual exploitation of another;

Sexual Abuse is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.

(mm) **"Sexual Harassment" "(SH)"** is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature by the Contractor's Personnel with other Contractor's or Employer's Personnel; and

(nn) "**Employer's Personnel"** refers to the Project Manager and all other staff, labor and other employees (if any) of the Project Manager and of the Employer engaged in fulfilling the Employer's obligations under the Contract; and any other personnel identified as Employer's Personnel, by a notice from the Employer or the Project Manager to the Contractor.

2. Interpretation

2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.

2.2 If sectional completion is **specified in the PCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority:

(a) Agreement,

(b) Letter of Acceptance,

(c) Contractor's Bid,

(d) Particular Conditions of Contract,

(e) General Conditions of Contract, including Appendices,

(f) Specification,

(g) Drawings,

(h) Bill of Quantities,[1] and

(i) any other document **listed in the PCC** as forming part of the Contract.

3. Language and Law

3.1 The language of the Contract and the law governing the Contract are **stated in the PCC**.

3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Employer's country when

(a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country; or

(b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

4. Project Manager's Decisions

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

5. Delegation

5.1 Unless otherwise **specified in the PCC,** the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Project Manager but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations. The Contractor shall require that its Subcontractors execute the Works in accordance with the Contract, including complying with the relevant ES requirements and the obligations set out in Sub-Clause 28.1.

7.2 Submision by the Contractor for approval of the Project Manager, addition of any Subcontractor not named in the Contract, shall also include the Subcontractor's declaration in accordance with Appendix C- Sexual exploitation and Abuse (SEA) and/or Sexual Harassment (SH) Performance Declaration.

[1] In lump-sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as **referred to in the PCC.** The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors and shall notify the Contractor of any such modification.

8.2 The Contractor shall also, as stated in the Specification or as instructed by the Project Manager, cooperate with and allow appropriate opportunities for the Employer's or any other personnel, notified to the Contractor by the Employer or Project Manager, to conduct any environmental and social assessment.

9. Personnel and Equipment

9.1 The Contractor shall employ the Key Personnel and use the Equipment identified in its Bid, to carry out the Works or other personnel and Equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and Equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

9.2 The Project Manager may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Key Personnel (if any), who:

(a) persists in any misconduct or lack of care;

(b) carries out duties incompetently or negligently;

(c) fails to comply with any provision of the Contract;

(d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment;

(e) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works;

(f) has been recruited from the Employer's Personnel;

(g) undertakes behavior which breaches the Code of Conduct for Contractor's Personnel (ES).

If appropriate, the Contractor shall then promptly appoint (or cause to be appointed) a suitable replacement with equivalent skills and experience.

Notwithstanding any requirement from the Project Manager to remove or cause to remove any person, the Contractor shall take immediate action as appropriate in response to any violation of (a) through (g) above. Such immediate action shall include removing (or causing to be removed) from the Site or other places where the Works are being carried out, any Contractor's Personnel who engages in (a), (b), (c), (d), (e) or (g) above or has been recruited as stated in (f) above.

9.3 The Contractor shall take all necessary safety measures to avoid the occurrence of incidents and injuries to any third party associated with the use of, if any, Equipment on public roads or other public infrastructure. The Contractor shall monitor road safety incidents and accidents to identify negative safety issues and establish and implement necessary measures to resolve them.

9.4 Labor

9.4.1 *Engagement of Staff and Labor*. The Contractor shall provide and employ on the Site for the execution of the Works such skilled, semi-skilled and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within the Country.

Unless otherwise provided in the Contract, the Contractor shall be responsible for the recruitment, transportation, accommodation and welfare facilities in accordance with GCC Sub-Clause 9.4.6, of the Contractor's Personnel, and for all payments in connection therewith.

The Contractor shall provide the Contractor's Personnel information and documentation that are clear and understandable regarding their terms and conditions of employment. The information and documentation shall set out their rights under relevant labor laws applicable to the Contractor's Personnel (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from any requirements in the Specification. The Contractor's Personnel shall be informed when any material changes to their terms or conditions of employment occur.

9.4.2 *Conditions of Labor*. The Contractor shall inform the Contractor's Personnel about:

(a) any deduction to their payment and the conditions of such deductions in accordance with the applicable laws or as stated in the Specification; and

(b) their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the laws of the Country for the time being in force.

The Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws.

Where required by applicable laws or as stated in the Specification, the Contractor shall provide the Contractor's Personnel written notice of termination of employment and details of severance payments in a timely manner. The Contractor shall have paid the Contractor's Personnel (either directly or where appropriate for their benefit) all due wages and entitlements including, as applicable, social security benefits and pension contributions, on or before the end of their engagement/ employment.

9.4.3 The Contractor may bring into the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if requested by the Contractor, use its best endeavors in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

9.4.4 The Contractor shall at its own expense provide the means of repatriation to and the Contractor's Personnel employed on the Contract at the Site to their various home countries. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and recover the cost of doing so from the Contractor.

9.4.5 *Disorderly conduct.* The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous or disorderly conduct or behavior by or amongst the Contractor's Personnel.

9.4.6 *Facilities for Staff and Labor*. Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. If stated in the Specification, the Contractor shall give access to or provide services that accommodate the physical, social and cultural needs of the Contractor's Personnel. The Contractor shall also provide similar facilities for the Employer's Personnel if stated in the Specification.

9.4.7 The Contractor shall, in all dealings with the Contractor's Personnel, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor. The Contractor shall provide the Contractor's Personnel annual holiday and sick, maternity and family leave, as required by applicable laws or as stated in the Specification.

9.4.8 *Supply of Foodstuff*s. The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

9.4.9 *Supply of Water*. The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

9.4.10 *Measures against Insect and Pest Nuisance*. The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

9.4.11 *Alcoholic Liquor or Drugs*. The Contractor shall not, otherwise than in accordance with the laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereto by Contractor's Personnel.

9.4.12 *Arms and Ammunition*. The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

9.4.13 *Funeral Arrangements.* The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of its local employees who may die while engaged upon the Works.

9.4.14 *Forced Labor*. The Contractor, including its Subcontractors, shall not employ or engage forced labor. Forced labor consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.

9.4.15 *Child Labor*. The Contractor, including its Subcontractors, shall not employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age).

The Contractor, including its Subcontractors, shall not employ or engage a child between the minimum age and the age of 18 in a manner that is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

The Contractor including its Subcontractors, shall only employ or engage children between the minimum age and the age of 18 after an appropriate risk assessment has been conducted by the Contractor with the Project Manager's approval. The Contractor shall be subject to regular monitoring by the Project Manager that includes monitoring of health, working conditions and hours of work.

Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work:

(a) with exposure to physical, psychological or sexual abuse;

(b) underground, underwater, working at heights or in confined spaces;

(c) with dangerous machinery, equipment or tools, or involving handling or

(d) transport of heavy loads;

(e) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or

(f) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer.

9.4.16 *Employment Records of Workers*. The Contractor shall keep complete and accurate records of the employment of labor at the Site. The records shall include the names, ages, genders, hours worked, and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the project Manager.

9.4.17 *Workers' Organizations*. In countries where the relevant labor laws recognize workers' rights to form and to join workers' organizations of their choosing and to bargain collectively without interference, the Contractor shall comply with such laws. In such circumstances, the role of legally established workers' organizations and legitimate workers' representatives will be respected, and they will be provided with information needed for meaningful negotiation in a timely manner. Where the relevant labor laws substantially restrict workers' organizations, the Contractor shall enable alternative means for the Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. The Contractor shall not seek to influence or control these alternative means. The Contractor shall not

discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organizations and collective bargaining or alternative mechanisms. Workers' organizations are expected to fairly represent the workers in the workforce.

9.4.18 *Non-Discrimination and Equal Opportunity.* The Contractor shall not make decisions relating to the employment or treatment of Contractor's Personnel on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment of Contractor's Personnel on the principle of equal opportunity and fair treatment and shall not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.

Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Contractor shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, people with disabilities, migrant workers and children (of working age in accordance with GCC Sub-Clause 9.4.15).

9.4.19 *Contractor's Personnel Grievance Mechanism.* The Contractor shall have a grievance mechanism for Contractor's Personnel, and where relevant the workers' organizations stated in GCC Sub-Clause 9.4.17, to raise workplace concerns. The grievance mechanism shall be proportionate to the nature, scale, risks and impacts of the Contract. The mechanism shall address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned in a language they understand, without any retribution, and shall operate in an independent and objective manner.

The Contractor's Personnel shall be informed of the grievance mechanism at the time of engagement for the Contract, and the measures put in place to protect them against any reprisal for its use. Measures will be put in place to make the grievance mechanism easily accessible to all Contractor's Personnel.

The grievance mechanism shall not impede access to other judicial or administrative remedies that might be available, or substitute for grievance mechanisms provided through collective agreements.

The grievance mechanism may utilize existing grievance mechanisms, providing that they are properly designed and implemented, address concerns promptly, and are readily accessible to Contractor's Personnel. Existing grievance mechanisms may be supplemented as needed with Contract-specific arrangements.

9.4.20 *Training of Contractor's Personnel.* The Contractor shall provide appropriate training to relevant Contractor's Personnel on ES aspects of the Contract, including appropriate sensitization on prohibition of SEA and SH, and health and safety training referred to in GCC Sub-Clause 18.2.

As stated in the Specification or as instructed by the Project Manager, the Contractor shall also allow appropriate opportunities for the relevant Contractor's Personnel to be trained on ES aspects of the Contract by the Employer's Personnel.

The Contractor shall provide training on SEA and SH, including its prevention, to any of its personnel who has a role to supervise other Contractor's Personnel.

10. Employer's and Contractor's Risks

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's Risks

11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are 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 the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

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

(a) a Defect which existed on the Completion Date,

(b) an event occurring before the Completion Date, which was not itself an Employer's risk, or

(c) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability 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 risks are Contractor's risks.

13. Insurance

13.1 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 and deductibles **stated in the PCC** for the following events which are due to the Contractor's risks:

(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 to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

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

13.3 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

13.4 Both parties shall comply with any conditions of the insurance policies.

14. Site Data

14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the PCC**, supplemented by any information available to the Contractor.

15. Contractor to Construct the Works

15.1 The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

15.2 If the Contract specifies that the Contractor shall design any part of the permanent Works, the Contractor shall take into account the Employer's requirements which may include, if stated in the Specification:

(a) designing structural elements of the Works taking into account climate change considerations;

(b) applying the concept of universal access (the concept of universal access means unimpeded access for people of all ages and abilities in different situations and under various circumstances; and

(c) considering the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events.

16. The Works to Be Completed by the Intended Completion Date

16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works 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.

16.2 The Contractor shall not carry out mobilization to the Site unless the Project Manager gives approval, an approval that shall not be unreasonably delayed, to the measures the Contractor proposes to address environmental and social risks and impacts, which at a minimum shall include applying the Management Strategies and Implementation Plans (MSIPs) and Code of Conduct for Contractor's Personnel submitted as part of the Bid and agreed as part of the Contract.

The Contractor shall submit to the Project Manager for its approval any additional MSIPs as are necessary to manage the ES risks and impacts of ongoing Works. These MSIPs collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). The Contractor shall review the C-ESMP, periodically (but not less than every six (6) months), and update it as required to ensure that it contains measures appropriate to the Works. The updated C-ESMP shall be submitted to the Project Manager for its approval.

17. Approval by the Project Manager

17.1 The Contractor shall submit Specification and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

17.2 The Contractor shall be responsible for design of Temporary Works.

17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Health, Safety and Protection of the Environment

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

18.2 The Contractor shall:

(a) comply with all applicable health and safety regulations and Laws;

(b) comply with all applicable health and safety obligations specified in the Contract;

(c) take care for the health and safety of all persons entitled to be on the Site and other places, if any, where the Works are being executed;

(d) keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons;

(e) provide fencing, lighting, safe access, guarding and watching of the Works until the issue of the Contract Completion Certificate;

(f) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land;

(g) provide health and safety training of Contractor's Personnel as appropriate and maintain training records;

(h) actively engage the Contractor's Personnel in promoting understanding, and methods for, implementation of health and safety requirements, as well as in providing information to Contractor's Personnel, training on occupational safety and health, and provision of personal

protective equipment without expense to the Contractor's Personnel;

(i) put in place workplace processes for Contractor's Personnel to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health.

(j) Contractor's Personnel who remove themselves from such work situations shall not be required to return to work until necessary remedial action to correct the situation has been taken. Contractor's Personnel shall not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal;

(k) where the Employer's Personnel, any other contractors employed by the Employer, and/or personnel of any legally constituted public authorities and private utility companies are employed in carrying out, on or near the site, of any work not included in the Contract, collaborate in applying the health and safety requirements, without prejudice to the responsibility of the relevant entities for the health and safety of their own personnel; and

(l) establish and implement a system for regular (not less than six-monthly) review of health and safety performance and the working environment.

Subject to GCC Sub-Clause 16.2, the Contractor shall submit to the Project Manager for its approval a health and safety manual which has been specifically prepared for the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

The health and safety manual shall be in addition to any other similar document required under applicable health and safety regulations and laws.

The health and safety manual shall set out all the health and safety requirements under the Contract,

(a) which shall include at a minimum:

(i) the procedures to establish and maintain a safe working environment without risk to health at all workplaces, machinery, equipment and processes under the control of the Contractor, including control measures for chemical, physical and biological substances and agents;

(ii) details of the training to be provided, records to be kept;

(iii) the procedures for prevention, preparedness and response activities to be implemented in the case of an emergency event (i.e., an unanticipated incident, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning);

(iv) remedies for adverse impacts such as occupational injuries, deaths, disability and disease;

(v) the measures to be taken to avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases,

(vi) the measures to be implemented to avoid or minimize the spread of communicable diseases (including transfer of Sexually Transmitted Diseases or Infections (STDs), such as HIV virus) and non-communicable diseases associated with the execution of the Works, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. This includes taking measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or permanent Contract-related labor;

(vii) the policies and procedures on the management and quality of accommodation and welfare facilities if such accommodation and welfare facilities are provided by the Contractor in accordance with GCC Sub-Clause 9.4.6; and

(b) any other requirements stated in the Specification.

18.3 Protection of the environment

The Contractor shall take all necessary measures to:

(a) protect the environment (both on and off the Site); and

(b) limit damage and nuisance to people and property resulting from pollution, noise and other results of the Contractor's operations and/ or activities.

The Contractor shall ensure that emissions, surface discharges, effluent and any other pollutants from the Contractor's

activities shall exceed neither the values indicated in the Specification, nor those prescribed by applicable laws.

In the event of damage to the environment, property and/or nuisance to people, on or off Site as a result of the Contractor's operations, the Contractor shall agree with the Project Manager the appropriate actions and time scale to remedy, as practicable, the damaged environment to its former condition. The Contractor shall implement such remedies at its cost to the satisfaction of the Project Manager.

19. Archaeological and Geological Findings

19.1 All fossils, coins, articles of value or antiquity, structures, groups of structures, and other remains or items of geological, archaeological, paleontological, historical, architectural or religious interest found on the Site shall be placed under the care and custody of the Employer. The Contractor shall:

(a) take all reasonable precautions, including fencing-off the area or site of the finding, to avoid further disturbance and prevent Contractor's Personnel or other persons from removing or damaging any of these findings;

(b) train relevant Contractor's Personnel on appropriate actions to be taken in the event of such findings; and

(c) implement any other action consistent with the requirements of the Specification and relevant laws.

The Contractor shall, as soon as practicable after discovery of any such finding, notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

20. Possession of the Site

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

21. Access to the Site

21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager (including the Bank staff or consultants acting on the Bank's behalf, stakeholders and third parties, such as independent experts, local communities, or non-governmental organizations), including to carry out environmental and social audit, as appropriate, 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.

22. Instructions, Inspections and Audits

22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

22.2 The Contractor shall keep and shall make all reasonable efforts to cause its Subcontractors and subconsultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.

22.3 Inspections &Audit by the Bank

Pursuant to paragraph 2.2 e. of Appendix A to the GCC- Fraud and Corruption, the Contractor shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have such accounts, records and other documents audited by auditors appointed by the Bank. The Contractor's and its Subcontractors' and subconsultants' attention is drawn to GCC Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

23. Appointment of the Adjudicator

23.1 The Adjudicator shall be appointed jointly by the Employer and the Contractor, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority **designated in the PCC**, to appoint the Adjudicator within 14 days of receipt of such request.

23.2 Should the Adjudicator resign or die or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority **designated in the PCC** at the request of either party, within 14 days of receipt of such request.

24. Procedure for Disputes

24.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Project Manager's decision.

24.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.

24.3 The Adjudicator shall be paid by the hour at the **rate specified in the PCC,** together with reimbursable expenses of the types **specified in the PCC**, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision shall be final and binding.

24.4 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and in the place **specified in the PCC.**

25. Fraud and Corruption

25.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Appendix A to the GCC.

25.2 The Employer requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

26. Stakeholder Engagement

26.1 The Contractor shall provide relevant contract- related information, as the Employer and/or Project Manager may reasonably request to conduct Stakeholder engagements. "Stakeholder" refers to individuals or groups who:

(i) are affected or likely to be affected by the Contract; and

(ii) may have an interest in the Contract.

The Contractor may also directly participate in Stakeholder engagements, as the Employer and/or Project Manager may reasonably request

27. Suppliers (other than Subcontractors)

27.1 *Forced Labor:* The Contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage forced labor including trafficked persons as described in GCC Sub-Clause 9.4.14. If forced labor/trafficking cases are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

27.2 *Child Labor:* The Contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage child labor as described in GCC Sub-Clause 9.4.15. If child labor cases are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

27.3 *Serious Safety Issues:* The Contractor, including its Subcontractors, shall comply with all applicable safety obligations, including as stated in GCC Sub-Clause 18.2. The Contractor shall also take measures to require its suppliers (other than Subcontractors) to adopt procedures and mitigation measures adequate to address safety issues related to their personnel. If serious safety issues are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

27.4 *Obtaining natural resource materials in relation to supplier:* The Contractor shall obtain natural resource *materials* from suppliers that can demonstrate, through compliance with the applicable verification and/ or certification requirements, that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats such as unsustainably harvested wood products, gravel or sand extraction from riverbeds or beaches.

If a supplier cannot continue to demonstrate that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to demonstrate that they are not significantly adversely impacting the habitats.

28. Code of Conduct

28.1 The Contractor shall have a Code of Conduct for the Contractor's Personnel.

The Contractor shall take all necessary measures to ensure that each Contractor's Personnel is made aware of the Code of Conduct including specific behaviors that are prohibited and understands the consequences of engaging in such prohibited behaviors.

These measures include providing instructions and documentation that can be understood by the Contractor's Personnel and seeking to obtain that person's signature acknowledging receipt of such instructions and/or documentation, as appropriate.

The Contractor shall also ensure that the Code of Conduct is visibly displayed in multiple locations on the Site and any other place where the Works will be carried out, as well as in areas outside the Site accessible to the local community and project affected people. The posted Code of Conduct shall be provided in languages comprehensible to Contractor's Personnel, Employer's Personnel and the local community.

The Contractor's Management Strategy and Implementation Plans shall include appropriate processes for the Contractor to verify compliance with these obligations.

29. Security of the Site

29.1 The Contractor shall be responsible for the security of the Site, and:

(a) for keeping unauthorized persons off the Site;

(b) authorized persons shall be limited to the Contractor's Personnel, the Employer's Personnel, and to any other personnel identified as authorized personnel (including the Employer's other contractors on the Site), by a notice from the Employer or the Project Manager to the Contractor.

Subject to GCC Sub-Clause 16.2, the Contractor shall submit for the Project Manager's No-objection a security management plan that sets out the security arrangements for the Site

The Contractor shall (i) conduct appropriate background checks on any personnel retained to provide security; (ii) train the security personnel adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct towards Contractor's Personnel, Employer's Personnel and affected communities; and (iii) require the security personnel to act within the applicable Laws and any requirements set out in the Specification.

The Contractor shall not permit any use of force by security personnel in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

In making security arrangements, the Contractor shall also comply with any additional requirements stated in the Specification.

B. Time Control

30. Program and Progress Reports

30.1 Within the time **stated in the PCC**, after the date of the Letter of Acceptance, 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. In the case of a lump-sum contract, the activities in the Program shall be consistent with those in the Activity Schedule. 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.

30.2 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.

30.3 The Contractor shall monitor progress of the Works and submit to the Project manager progress report and any updated Program showing the actual progress achieved and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities, at intervals no longer than the period **stated in the PCC.** If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount **stated in the PCC** 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. In the case of lump-sum Contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

30.4 Unless otherwise stated in the Specification, each progress report shall include the Environmental and Social (ES) metrics set out in Appendix B. If **stated in the PCC**, progress report shall include status of compliance to cyber security risks management, and any foreseeable cyber security risk and mitigation.

30.5 In addition to the progress reports, the Contractor shall inform the Project Manager immediately of any allegation, incident or accident in the Site, which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Employer's Personnel, Project Manager's personnel or Contractor's Personnel. This includes, but is not limited to, any incident or accident causing fatality or serious injury; significant adverse effects or damage to private property; any cyber security incidents **as specified in the PCC**; or any allegation of SEA and/or SH. In case of SEA and/or SH, while maintaining confidentiality as appropriate, the type of allegation (sexual exploitation, sexual abuse or sexual harassment), gender and age of the person who experienced the alleged incident should be included in the information.

The Contractor, upon becoming aware of the allegation, incident or accident, shall also immediately inform the Project Manager of any such incident or accident on the Subcontractors' or suppliers' premises relating to the Works which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Employer's Personnel, or Contractor's, its Subcontractors' and suppliers' personnel. The notification shall provide sufficient detail regarding such incidents or accidents. The Contractor shall provide full details of such incidents or accidents to the Project Manager within the timeframe agreed with the Project Manager.

The Contractor shall require its Subcontractors and suppliers (other than Subcontractors) to immediately notify the Contractor of any incidents or accidents referred to in this Subclause.

31. Extension of the Intended Completion Date

31.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

31.2 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 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 by this failure shall not be considered in assessing the new Intended Completion Date.

32. Acceleration

32.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.

32.2 If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

33. Delays Ordered by the Project Manager

33.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

34. Management Meetings

34.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

34.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to 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.

35. Early Warning

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

35.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for 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.

C. Quality Control

36. Identifying Defects

36.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such

checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

37. Tests

37.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

38. Correction of Defects

38.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is **defined in the PCC.** The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

38.2 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.

39. Uncorrected Defects

39.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

40. Contract Price[2]

40.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

41. Changes in the Contract Price[3]

41.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial

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[2] In lump-sum contracts, replace GCC Sub-Clauses 40.1 as follows:

40.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

[3] In lump-sum contracts, replace entire GCC Clause 41 with new GCC Sub-Clause 41.1, as follows:

41.1 The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.

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

42. Variations

42.1 All Variations shall be included in updated Programs[4] produced by the Contractor.

42.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Contractor shall also provide information of any ES risks and impacts of the Variation, and any additional documents **specified in the PCC**. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

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

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

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

42.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in GCC Sub-Clause 41.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work. [5]

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[4] In lump-sum contracts, add "and Activity Schedules" after "Programs."

[5] In lump-sum contracts, delete this paragraph.

42.7 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

(a) the proposed change(s), and a description of the difference to the existing contract requirements;

(b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle cost) the Employer may incur in implementing the value engineering proposal;

(c) a description of any effect(s) of the change on performance/functionality; and

(d) a description of the proposed work to be performed, a program for its execution and sufficient ES information to enable an evaluation of ES risks and impacts.

The Employer may accept the value engineering proposal if the proposal demonstrates benefits that:

(a) accelerates the contract completion period; or

(b) reduces the Contract Price or the life cycle costs to the Employer; or

(c) improves the quality, efficiency, safety or sustainability of the Facilities; or

(d) yields any other benefits to the Employer,

without compromising the functionality of the Works.

If the value engineering proposal is approved by the Employer and results in:

(a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the PCC** of the reduction in the Contract Price; or

(b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

43. Cash Flow Forecasts

43.1 When the Program,[6] is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

[6] In lump-sum contracts, add "or Activity Schedule" after "Program."

44. Payment Certificates

44.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

44.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

44.3 The value of work executed shall be determined by the Project Manager.

44.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed.[7]

44.5 The value of work executed shall include the valuation of Variations and Compensation Events.

44.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

44.7 If the Contractor was, or is, failing to perform any ES obligations or work under the Contract, the value of this work or obligation, as determined by the Project Manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Project Manager, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:

(a) failure to comply with any ES obligations or work described in the Works' Requirements which may include working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g., from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;

(b) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ES issues, or anticipated risks or impacts;

(c) failure to implement the C-ESMP e.g., failure to provide required training or sensitization;

[7] In lump-sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."

(d) failing to have appropriate consents/permits prior to undertaking Works or related activities;

(e) failure to submit ES report/s (as described in Appendix B), or failure to submit such reports in a timely manner;

(f) failure to implement remediation as instructed by the Project Manager within the specified timeframe (e.g., remediation addressing non-compliance/s).

44.8 **As specified in the PCC**, if the Contractor fails to perform its cyber security obligations under the Contract, an assessed amount, as determined by the Project Manager, may be withheld until the obligation has been performed.

45. Payments

45.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

45.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or 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.

45.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.

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

46. Compensation Events

46.1 The following shall be Compensation Events:

(a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.

(b) The Employer modifies the Schedule of Other Contractors 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, Specification, 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 work, which is then found to have no Defects.

(e) The Project Manager unreasonably does not approve a subcontract to be let.

(f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.

(g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.

(h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

(i) The advance payment is delayed.

(j) The effects on the Contractor of any of the Employer's Risks.

(k) The Project Manager unreasonably delays issuing a Certificate of Completion.

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

46.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

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

47. Tax

47.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 49.

48. Currencies

48.1 Where payments are made in currencies other than the currency of the Employer's country **specified in the PCC,** the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Bid.

49. Price Adjustment

49.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the PCC.** If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies to each Contract currency:

$$\mathbf{P_c = A_c + B_c \ Imc/Ioc}$$

where:

P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency "c."

A_c and B_c are coefficients[8] **specified in the PCC,** representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency "c;" and

Imc is the index prevailing at the end of the month being invoiced and Ioc is the index prevailing 28 days before Bid opening for inputs payable; both in the specific currency "c."

49.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be

[8] The sum of the two coefficients A_c and B_c should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency are added to the Contract Price.

deemed to take account of all changes in cost due to fluctuations in costs.

50. Retention

50.1 The Employer shall retain from each payment due to the Contractor the proportion **stated in the PCC** until Completion of the whole of the Works.

50.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC Sub-Clause 57.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

51. Liquidated Damages

51.1 The Contractor shall pay liquidated damages to the Employer at the rate per day **stated in the PCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the PCC.** The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

51.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 45.1.

52. Bonus

52.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the PCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

53. Advance Payment

53.1 The Employer shall make advance payment to the Contractor of the amounts **stated in the PCC** by the date **stated in the PCC,** against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

53.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

53.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

54. Securities

54.1 The Performance Security, and if so **specified in the PCC** an environmental and social (ES) performance security, shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the PCC,** by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Certificate of Completion in the case of a Performance Bond.

55. Dayworks

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

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

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

56. Cost of Repairs

56.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

57. Completion

57.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

58. Taking Over

58.1 The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

59. Final Account

59.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 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.

60. Operating and Maintenance Manuals

60.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates **stated in the PCC.**

60.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the PCC** pursuant to GCC Sub-Clause 60.1**,** or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the PCC** from payments due to the Contractor.

61. Termination

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

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

(a) the Contractor stops work for 28 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 28 days;

(c) the Employer or the Contractor is made 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 84 days of the date of the Project Manager's certificate;

(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;

(g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the PCC**; or

(h) if the Contractor, in the judgment of the Employer has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Employer may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

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

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

61.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 61.2 above, the Project Manager shall decide whether the breach is fundamental or not.

62. Payment upon Termination

62.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the PCC. 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 to the Employer.

62.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed

solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

63. Property

63.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

64. Release from Performance

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

65. Suspension of Bank Loan or Credit

65.1 In the event that the Bank suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made:

(a) The Employer is obligated to notify the Contractor of such suspension within 7 days of having received the Bank's suspension notice.

(b) If the Contractor has not received sums due to it within the 28 days for payment provided for in GCC Sub-Clause 45.1, the Contractor may immediately issue a 14-day termination notice.

66. Cyber Security

66.1 Pursuant to the PCC, the Contractor, including its Subcontractors/ suppliers/ manufacturers shall take all technical and organizational measures necessary to protect the information technology systems and data used in connection with the Contract. Without limiting the foregoing, the Contractor, including its Subcontractors/ suppliers/ manufacturers, shall use all reasonable efforts to establish, maintain, implement and comply with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or data used in connection with the Contract.

APPENDIX A
TO GENERAL CONDITIONS

Fraud and Corruption

(Text in this Appendix shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers),consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

v. "obstructive practice" is:

(a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.

b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;[1] (ii) to be a nominated[2] sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;

e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders(applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect[3] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

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[1] For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

[2] A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

[3] Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

APPENDIX B

Environmental and Social (ES) Metrics for Progress Reports

[Note to Employer: the following metrics may be amended to reflect the specifics of the Contract. The Employer shall ensure that the metrics provided are appropriate for the Works and impacts/key issues identified in the environmental and social assessment]

Metrics for regular reporting:

a. *environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;*

b. *health and safety incidents, accidents, injuries that require treatment and all fatalities;*

c. *interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);*

d. *status of all permits and agreements:*

   i. work permits: number required, number received, actions taken for those not received;

   ii. status of permits and consents:

   - list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);
   - list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);
   - identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);
   - for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).

e. health and safety supervision:

i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;

ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);

f. worker accommodations:

i. number of expats housed in accommodations, number of locals;

ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;

iii. actions taken to recommend/require improved conditions, or to improve conditions.

g. Health services: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);

h. gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);

i. training:

i. number of new workers, number receiving induction training, dates of induction training;

ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;

iii. number and dates of communicable diseases (including STDs) sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.

iv. number and date of SEA and SH prevention sensitization and/or training events, including number of workers receiving training on Code of Conduct for Contractor's Personnel (in the reporting period and in the past), etc.

j. environmental and social supervision:

i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including

violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;

ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and

iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.

k. *Grievances*: list new grievances (e.g., number of allegations of SEA and SH) received in the reporting period and number of unresolved past grievances by date received, complainant's age and sex, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):

i. Worker grievances;

ii. Community grievances

l. *Traffic, road safety and vehicles/equipment:*

i. traffic and road safety incidents and accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;

ii. traffic and road safety incidents and accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;

iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).

m. *Environmental mitigations and issues (what has been done):*

i. dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/ spoil lorries with covers, actions taken for uncovered vehicles;

ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;

iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;

iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);

v. spill clean-ups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination;

vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;

vii. details of tree plantings and other mitigations required undertaken in the reporting period;

viii. details of water and swamp protection mitigations required undertaken in the reporting period.

n. compliance:

i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;

ii. compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;

iii. compliance status of SEA and SH prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;

iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;

v. other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

APPENDIX C
Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment (SH) Performance Declaration for Subcontractors

[The following table shall be filled in by each subcontractor proposed by the Contractor, that was not named in the Contract]

Subcontractor's Name: *[insert full name]*
Date: *[insert day, month, year]*
Contract reference *[insert contract reference]*
Page *[insert page number]* of *[insert total number]* pages

SEA and/or SH Declaration
We: ☐ (a) have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. ☐ (b) are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. ☐ (c) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. An arbitral award on the disqualification case has been made in our favor. ☐ (d) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have subsequently demonstrated that we have adequate capacity and commitment to comply with SEA /SH obligations. ☐ (e) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have attached specific evidence demonstrating that we have adequate capacity and commitment to comply with SEA and SH obligations.
[*If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]*
[If (d) or (e) above are applicable, provide the following information:]
Period of disqualification: From: _____ To: _____
If previously provided on another Bank financed works contract, details of evidence that demonstrated adequate capacity and commitment to comply with SEA/SH obligations (**as per (d) above)** Name of Employer: _____ Name of Project: _____

Contract description: _____ Brief summary of evidence provided: _____ _____ Contact Information: (Tel, email, name of contact person): _____ _____
As an alternative to the evidence under (d), other evidence demonstrating adequate capacity and commitment to comply with SEA/SH obligations (**as per (e) above))** *[attach details as appropriate]*. _____ _____

Name of the Subcontractor_____

Name of the person duly authorized to sign on behalf of the Subcontractor_____

Title of the person signing on behalf of the Subcontractor_____

Signature of the person named above_____

Date signed _____ day of _____, _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Section IX - Particular Conditions of Contract

Except where otherwise specified, all Particular Conditions of Contract should be filled in by the Employer prior to issuance of the bidding document. Schedules and reports to be provided by the Employer should be annexed.

A. General	
GCC 1.1 (d)	The financing institution is: **The World Bank**
GCC 1.1 (r)	The Employer is **The Meru National Polytechnic** Name of authorized representative**: Mr. Mutembei A. Kigige**
GCC 1.1 (v)	The Intended Completion Date for the whole of the Works shall be **eight (8) months after possession of site**
GCC 1.1 (y)	The Project Manager is: **Symbion Kenya Limited** **P.O Box 24002-00502** **Nairobi, Kenya**
GCC 1.1 (aa)	The Site is located at ***Meru National Polytechnic, Meru Kenya*** and is defined in attached drawings.
GCC 1.1 (dd)	The Start Date shall be **March 2024**
GCC 1.1 (hh)	The Works consist of completion works to the construction of the Main block comprising of the following: An administration block, commercial lab, workshops, laboratories, lecture rooms, technical drawing rooms, computer rooms and a library. Complete with associated services and external works including gates and guard house, generator and switch room, driveways and parking, boundary wall and underground water tank, all as set out in the Bills of Quantities.
GCC 2.2	Sectional Completions are: **N/A**
GCC 2.3(i)	The following documents also form part of the Contract: i. Contract Agreement ii. The Letter of Acceptance iii. Contractor's Bid iv. Particular Conditions of Contract v. General Conditions of Contract, including Appendices vi. Specifications vii. Drawings

	viii. Bills of Quantities, and ix. Any other document listed in the PCC as forming part of the contract
GCC 3.1	The language of the contract is **English** The law that applies to the Contract is the law of **Kenya**
GCC 5.1	The Project manager **may** delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: **N/A**
GCC 13.1	The minimum insurance amounts and deductibles shall be: (a) for loss or damage to the Works, Plant and Materials**: Kes. 10,000,000.00** (b) For loss or damage to Equipment: **Kes. 30,000,000.00** (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract . **Kes. 5,000,000.00.** (d) for personal injury or death: (i) of the Contractor's employees: **Kes. 5,000,000.00** (ii) of other people: **Kes. 5,000,000.00**
GCC 14.1	Site Data are: **Attached Environmental Assessment Report**
GCC 20.1	The Site Possession Date(s) shall be: **within fourteen (14) days after contract signing**
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: **The Chartered Institute of Arbitrators - CIARB (Kenya Chapter)**
GCC 24.3	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: **As guided by CIARB Kenya chapter rates**
GCC 24.4	Institution whose arbitration procedures shall be used: **The Chartered Institute of Arbitrators - CIARB (Kenya Chapter)** The place of arbitration shall be: **Nairobi, Kenya**
B. Time Control	
GCC 30.1	The Contractor shall submit for approval a Program for the Works within **fourteen (14)** days from the date of the Letter of Acceptance.
GCC 30.3	The period between Program updates is **Twenty One (21)** days. The amount to be withheld for late submission of an updated Program is **Kes. 100,000.00**

	The period for submission of progress reports is **Twenty eight (28)** days
C. Quality Control	
GCC 38.1	The Defects Liability Period is: **12 months**
D. Cost Control	
GCC 42.7	If the value engineering proposal is approved by the Employer the amount to be paid to the Contractor shall be **N/A**
GCC 48.1	The currency of the Employer's Country is: **Kenya Shillings**
GCC 49.1	The Contract **is not** subject to price adjustment in accordance with GCC Clause 49, and the following information regarding coefficients **does not** apply.
GCC 50.1	The proportion of payments retained is: **10% of each interim payment and 5% limit of the contract amount**
GCC 51.1	The liquidated damages for the whole of the Works are **0.1%** per day. The maximum amount of liquidated damages for the whole of the Works is **10%** of the final Contract Price.
GCC 52.1	The Bonus for the whole of the Works is **Not Applicable** per day. The maximum amount of Bonus for the whole of the Works is **0%** of the final Contract Price.
GCC 53.1	The Advance Payments shall be **15% contract price** and shall be paid to the Contractor no later than **28 days after signing of the contract and upon submission of an acceptable Bank Guarantee**
GCC 54.1	The Performance Security will be in the form of a **demand guarantee** in the amount(s) of **8%** percent of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount. The ES Performance Security will be in the form of a "demand guarantee" in the amount(s) of **2%** of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount.
E. Finishing the Contract	
GCC 60.1	The date by which operating and maintenance manuals are required is *the* **date of issuance of Certificate of Completion.** The date by which "as built" drawings are required is **Fourteen (14) days after issuance of Certificate of Completion**

GCC 60.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC Sub-Clause 60.1 is **Kes. 1,000,000.00**
GCC 61.2 (g)	The maximum number of days is: **100 days**
GCC 62.1	The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is **15%**

Section X - Contract Forms

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Notification of Intention to Award

[*This Notification of Intention to Award shall be sent to each Bidder that submitted a Bid, unless the Bidder has previously received notice of exclusion from the process at an interim stage of the procurement process*]

[*Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form*]

For the attention of Bidder's Authorized Representative

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Bidders. The Notification must be sent to all Bidders simultaneously. This means on the same date and as close to the same time as possible.]

DATE OF TRANSMISSION: This Notification is sent by: [*email/fax*] on [*date*] (local time)

Notification of Intention to Award

Employer: *[insert the name of the Employer]*
Project: *[insert name of project]*
Contract title: *[insert the name of the contract]*
Country: *[insert country where RFB is issued]*
Loan No. /Credit No. / Grant No.: *[insert reference number for loan/credit/grant]*
RFB No: *[insert RFB reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

a) request a debriefing in relation to the evaluation of your Bid, and/or

b) submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Bidder

Name:	[*insert name of successful Bidder*]
Address:	[*insert address of the successful Bidder*]
Contract price:	[*insert contract price of the successful Bidder*]

Total combined score:	*[insert the total combined score of the successful Bidder]*

2. Other Bidders *[INSTRUCTIONS: insert names of all Bidders that submitted a Bid, Bid prices as read out and evaluated, technical and combined scores.]*

Name of Bidder	Technical Score	Bid price	Evaluated Bid cost	Combined Score
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	[*insert evaluated cost*]	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	[*insert evaluated price*]	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	[*insert evaluated price*]	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	[*insert evaluated price*]	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	[*insert evaluated price*]	*[insert combined score]*

3. Reason/s why your Bid was unsuccessful*[Delete if the combined score already reveals the reason]*

[INSTRUCTIONS: State the reason/s why <u>this</u> Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

4. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: [*insert full name of person, if applicable*]

Title/position: [*insert title/position*]

Agency: [*insert name of Employer*]

Email address: [*insert email address*]

Fax number: [*insert fax number*] ***delete if not used***

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

5. How to make a complaint

DEADLINE: The deadline for submitting a Procurement-related Complaint challenging the decision to award the contract expires on midnight, [*insert date*] (local time).

Provide the contract name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Attention: [*insert full name of person, if applicable*]

Title/position: [*insert title/position*]

Agency: [*insert name of Employer*]

Email address: [*insert email address*]

Fax number: [*insert fax number*] ***delete if not used***

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information see the Procurement Regulations for IPF Borrowers (Procurement Regulations) (Annex III). You should read these provisions before preparing and submitting your complaint. In addition, the World Bank's Guidance "How to make a Procurement-related Complaint" provides a useful explanation of the process, as well as a sample letter of complaint.

In summary, there are four essential requirements:

1. You must be an 'interested party'. In this case, that means a Bidder who submitted a Bid in this procurement process and is the recipient of a Notification of Intention to Award.
2. The complaint can only challenge the decision to award the contract.
3. You must submit the complaint within the period stated above.
4. You must include, in your complaint, all of the information required by the Procurement Regulations (as described in Annex III).

6. Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended. This may happen where we are unable to provide a debriefing within the five (5) Business Day deadline. If this happens we will notify you of the extension.

If you have any questions regarding this Notification, please do not hesitate to contact us.

On behalf of the Employer:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

Email: _____

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful Bidder. In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

- *directly or indirectly holding 25% or more of the shares*
- *directly or indirectly holding 25% or more of the voting rights*
- *directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder*

RFB No.: [*insert number of RFB process*]
Request for Bid No.: [*insert identification*]

To: **[*insert complete name of Employer*]**

In response to your request in the Letter of Acceptance *dated [insert date of letter of Acceptance]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the shares (Yes / No)	Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder (Yes / No)
[include full name (last, middle, first),			

nationality, country of residence]			

OR

(ii) *We declare that there is no Beneficial Owner meeting one or more of the following conditions:*

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]"

Name of the Bidder: *[*insert complete name of the Bidder*]_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder: **[*insert complete name of person duly authorized to sign the Bid*]_____

Title of the person signing the Bid: [*insert complete title of the person signing the Bid*]_____

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*]_____

Date signed [*insert date of signing*] **day of** [*insert month*], [*insert year*]_____

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to "Bidder" in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

** Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Letter of Acceptance

[on letterhead paper of the Employer***]***

. . . . . ***[date]***. . . . . .

To: . . . . . ***[name and address of the Contractor]*** . . . . . .

Subject: . . . . . ***[Notification of Award Contract No]***. . . . . .

This is to notify you that your Bid dated . . . . ***[insert date]*** . . . . for execution of the . . . . . ***[insert name of the contract and identification number, as given in the PCC]*** . . . . . for the Accepted Contract Amount of . . . . . ***[insert amount in numbers and words and name of currency],*** as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish (i) the Performance Security and an Environmental and Social (ES) Performance Security ***[Delete ES Performance Security if it is not required under the contract]*** within 28 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form and the ES Performance Security Form, ***[Delete reference to the ES Performance Security Form if it is not required under the contract]*** and (ii) the additional information on beneficial ownership in accordance with ITB 49.1, within eight (8) Business days using the Beneficial Ownership Disclosure Form, included in Section X - Contract Forms, of the bidding document.
[Choose one of the following statements:]

We accept that _____***[insert the name of Adjudicator proposed by the Bidder]*** be appointed as the Adjudicator.

[or]

We do not accept that _____***[insert the name of the Adjudicator proposed by the Bidder]*** be appointed as the Adjudicator, and by sending a copy of this Letter of Acceptance to _____***[insert name of the Appointing Authority],*** the Appointing Authority, we are hereby requesting such Authority to appoint the Adjudicator in accordance with ITB 51.1 and GCC Sub-Clause 23.1.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Agency: .....

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the . . . . . .day of . . . . . ., ..., between . . . . . ***[name of the*** Employer***]***. . . . . (hereinafter "the Employer"), of the one part, and . . . . . ***[name of the Contractor]***. . . . .(hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as . . . . . ***[name of the Contract]***. . . . .should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.

(a) the Letter of Acceptance

(b) the Letter of Bid

(c) the addenda Nos _____(if any)

(d) the Particular Conditions

(e) the General Conditions of Contract, including appendix;

(f) the Specification

(g) the Drawings

(h) Bill of Quantities; [1] and

(i) any other document listed in the PCC as forming part of the Contract, but not limited to;

i. the ES Management Strategies and Implementation Plans**;** and

ii. Code of Conduct for Contractor's Personnel (ES).

3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

[1] In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

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

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of . . . . . ***[name of the borrowing country]***. . . . .on the day, month and year specified above.

Signed by:	Signed by: .....
for and on behalf of the Employer	for and on behalf the Contractor
in the presence of:	in the presence of: .....
Witness, Name, Signature, Address, Date	Witness, Name, Signature, Address, Date

Performance Security
Option 1: Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of* Employer*]*

Date: *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _ *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of _ *[insert name of contract and brief description of* Works*]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*,[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the …. Day of ……, 2… [2], and any demand for payment under it must be received by us at this office indicated above on or before that date.

---

[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GCC Sub-Clause 57.1. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Performance Security
Option 2: Performance Bond

By this Bond *[insert name of Principal]* as Principal (hereinafter called "the Contractor") and *[insert name of Surety]* as Surety (hereinafter called "the Surety"), are held and firmly bound unto *[insert name of Employer]* as Obligee (hereinafter called "the Employer") in the amount of *[insert amount in words and figures]*, for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Contractor has entered into a written Agreement with the Employer dated the _____ day of _____, 20 ____, for *[name of contract and brief description of Works]* in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) complete the Contract in accordance with its terms and conditions; or

(2) obtain a Bid or Bids from qualified Bidders for submission to the Employer for completing the Contract in accordance with its terms and conditions, and upon determination by the Employer and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Employer and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Employer to Contractor under the Contract, less the amount properly paid by Employer to Contractor; or

(3) pay the Employer the amount required by Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of issue of the Certificate of Completion.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors, and assigns of the Employer.

In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this _____ day of _____ 20 _____.

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

Environmental and Social (ES) Performance Security

ES Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of* Employer*]*

Date: *[Insert date of issue]*

ES PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ ( ),[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its Environmental and/or Social (ES) obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the …. Day of ……, 2… [2], and any demand for payment under it must be received by us at this office indicated above on or before that date.

---

[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency (ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GCC Sub-Clause 57.1. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of* Employer*]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *[insert name of contract and brief description of* Works*]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* () *[insert amount in words]* is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

(a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or

(b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above

[1] *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.*

has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant's bank]*..

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the *[insert day]* day of *[insert month]*, 2 *[insert year]*,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

[2] *Insert the date twenty-eight days after the expected completion date as described in GCC Sub-Clause 57.1.. The Employer should note that in the event of an extension of the expected completion date, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

THE MERU NATIONAL POLYTECHNIC

Technology for Innovation & Development

HEALTH SAFETY AND ENVIRONMENT (HSE) REQUIREMENTS FOR THE CONTRACTOR

PROPOSED PROJECT:

CONSTRUCTION OF THE BUILDING TECHNOLOGY FLAGSHIP CENTER (PHASE 2)

CLIENT:

The Meru National Polytechnic

P.O. BOX 111-60200 Meru

LOCATION:

MERU COUNTY, KENYA

© NOVEMBER
2024

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1.0 INTRODUCTION

The objective of the she Management plan is to provide guidelines to all the proposed project implementation stakeholders namely; Client, Consultants, Contractors, Sub-Contractors and their employees on safety, health and appropriate conduct whilst working at the proposed East Africa Skills for Transformation & Regional Integration Project construction site. The aim of the SHE management plan is to achieve a 'Zero Harm' work environment for the aforementioned stakeholder during the project implementation phase.

Although every effort has been made to explain the construction site's rules and procedures, each stakeholder shall be charged with a duty of care to ensure that they work in a manner that does not endanger or cause harm to themselves or others.

The requirements of the SHE management plan must be followed by all parties and be applied according to the scope and nature of the work that is to be undertaken. Please note that should the local occupational safety and health (OSH) and environmental Management laws or any other specific requirement demand a higher standard, the relevant parties will be required to comply.

The site EHS Manager shall be responsible for the day to day administration of the SHE Management. S/He shall report to the Project Manager.

1.1 SHE Plan Requirements

The plan covers all the applicable local regulatory and legislative requirements. The plan can be reviewed to include other applicable SHE specification recommended by the client and the consultants. The SHE plan can also be reviewed to accommodate emerging endemic, communal or societal impacts.

- As a minimum the SHE plan shall contain the following.
    - Site location and address
    - Project description and key dates i.e. anticipated date for the commencement of work project duration and completion date.
    - Project description
    - Contact details (client project manager, designers, contractors and other consultants)
    - Schematic layout of the project site including site plans/services and surrounding land uses or any sensitive features.
- Site HSE Management plan
    - Analysis of hazards for each project work activity highlighting risks which need to be managed Management structure and responsibilities
    - HSE targets for the project-setting standards.
    - Communication and approval processes
- Plans for controlling significant site risks to ensure that the works proceed safely and without risks to health of the personnel, negative environmental impacts or adjacent operations.

- HSE file.
- No project activity will be exempt from the requirement of developing the applicable HSE plan.

1.2 Responsibility and Commitment

The Client, Consultants, Contractors, Sub-Contractors and their employees/agents shall be required to pledge to adhere to the laid down SHE requirements whilst on site.

All stakeholders accessing the site shall be expected to:

- Familiarize themselves with those parts of the SHE plan which affect them and their employees and/agents.
- Comply with HSE plans legal health and safety duties.

On arrival at the site, all parties should ensure that:

- they report to the site office and the HSE manager
- they abide by any site rules, particularly in respect of personal protective equipment
- the performance of their work does not place others at risk
- they are familiar with the first aid and accident reporting arrangements for the site
- they are familiar with all emergency procedures on the site
- any materials brought onto the site are safely handled, stored and disposed of in compliance, where appropriate, with the current Control of Substances Hazardous to Health Regulations
- they adopt adequate fire precaution and prevention measures when using equipment which could cause fires
- they minimize noise and vibration produced by their equipment and activities
- any ladders, scaffolds and other means of access are erected in conformity with good working practice and any local statutory requirements
- any welding or burning equipment brought onto the site is in safe operating condition and used safely with a suitable fire extinguisher at hand
- any lifting equipment brought onto the site complies with the current Lifting Operation and Lifting Equipment Regulations
- all electrical equipment complies with the current Electricity at Work Regulations
- any restricted access to areas on the site is observed
- welfare facilities provided on site are treated with respect
- Any vehicles brought onto the site observe any Site safety rules. Speed, condition or parking restriction.

1.2.2 Statutory Appointments and Staffing

1.2.2.1 OHS Act Appointments

The Client with the guidance of the consultants shall establish the onsite and offsite appointee requirements from the local Kenya OHS Act and ensure that the required appointees are made

aware of their accountabilities and responsibilities in terms of their appointment, and to advise and assist these appointees in the execution of their duties.

Appointment letters and competency certificates signed as may be required by the local Kenya OHS Act relevant section which refers to the relevant training certificates and proof of experience of appointees must be submitted with the HSE Plan.

All minimum required training are to be provided by accredited training service providers. The contractor must supply proof of accreditation of the training service provider when submitting training certificates of employees to the project manager.

The contractor shall ensure that competent persons are appointed in writing in accordance with the applicable appointments detailed in section 1.2.2.2 below on staffing.

1.2.2.2 Staffing

The Client shall employ a full time SHE Manager. The SHE Manager shall be responsible for the day to day administration of SHE aspects at the site. The SHE manager shall report to the Project Manager.

The training and qualification of the health and safety officer shall be at the National Diploma in Safety Management, Environmental Health or Environmental Management plus minimum 3 years' experience in construction management.

The following alternative qualifications shall be considered plus minimum 3 years' experience: Civil Engineering, Electrical Engineering, Mechanical Engineering or Construction Management plus some or all of the following short courses:

- A recognized safety certification (minimum of 2 weeks training) (e.g. Modern HSEQ management course)
- Hazard Identification and Risk Assessment Training
- Incident Investigation and Root Cause Analysis Training
- Emergency Preparedness Co-ordination Training

In executing his/her mandate, the SHE manager shall be assisted by the contractor's and sub-contractors' SHE Representatives. The contractor shall ensure that all the appointed staff, those providing supervisory roles and specialized skills and trades are adequately trained and qualified for the roles they are performing in the project. These positions include but not limited to:

1.2.3 Health and Safety Representative

- One trained Health and Safety Representative for every 20 employees or part thereof.
- To be elected and appointed per work area and discipline and in compliance with the applicable section of the local Kenya OHS Act section(s)
- Training for the staff to include.
  - General Health and Safety Training \Health and Safety Representative Training
  - Hazard Identification and Risk Assessment Training
  - Incident Investigation and Root Cause Analysis Training

1.2.4 First Aiders (Details of the requirements)

Two first aiders trained to Level 2 per team (or as per local OHS Act or project risk profile of scope of work) and taking into account absence, sick leave, training, etc.

The first aiders must possess a valid level 2 first aid certificates issued by a person or organization approved by the local OHS Act for this purpose e.g. Red Cross and St John's Ambulance and copies of the certificate should be placed in the HSE file.

1.2.5 Roles and Responsibilities of the SHE Team (as required by OSHA, 2007)

- Are responsible and held accountable for their group's health and safety performance.
- Attend safety and health meetings for employees at least monthly.
- Enforce method statements and/or safe job procedures.
- Report to site manager and act upon any weaknesses in method statements and/or safe job procedures, as revealed by health and safety risk assessments and observations.
- Report jobs not covered by safe job procedures.
- Review unsafe acts and conditions and direct daily health and safety activities to correct the causes.
- Instruct employees in health and safety rules and regulations; make records of instruction; and enforce all health and safety rules and regulations.
- Make daily inspections of assigned work areas and take immediate steps to correct unsafe or unsatisfactory conditions; report to the manager those conditions that cannot be immediately corrected; instruct employees on housekeeping standards.
- Instruct employees that tools/equipment are to be inspected before each use; make spot checks of tools'/equipment's condition.
- Instruct each new employee personally on job health and safety requirements in assigned work areas.
- Enforce the organization's/site's medical recommendations with respect to an employee's physical limitations.
- Enforce personal protective equipment requirements; make spot checks to determine that hard hats and other PPE are being used; and periodically appraise condition of equipment.
- See that, in a case of serious injury, the injured employee receives prompt medical attention; isolate the area or shut down equipment, as necessary; and immediately report to the site manager the facts regarding the employee's accident or illness and any action taken. In serious incident cases, the supervisor determines the cause, takes immediate steps to correct an unsafe condition, and isolates area and/or shuts down the equipment, as necessary. They immediately report facts and action taken to the manager.
- Make thorough investigation of all accidents, serious incidents, and cases of ill-health involving employees in assigned work areas; immediately after the accident, prepare a complete accident investigation report and include recommendations for preventing recurrence.

- Check changes in operating practices, procedures, and conditions at the start of each shift/day and before relieving the 'on-duty' supervisor (if applicable), noting health and safety-related incidents that have occurred since their last working period.
- Make, at the start of each day, an immediate check to determine absentees. If site injury is claimed, an immediate investigation is instituted and the site manager is notified.
- Make daily spot checks and take necessary corrective action regarding housekeeping, unsafe acts or practices, unsafe conditions, job procedures and adherence to health and safety rules.
- Attend all scheduled and assigned health and safety training meetings.
- Instruct personally or provide on-the-job instruction on safe and efficient performance of assigned jobs.
- Act on all employee health and safety complaints and suggestions.
- Maintain, in their assigned area, health and safety signs and notice boards in a clean and legible condition.

1.2.6 General Workers' SHE Responsibility

The following are key obligations of all workers as required by OSHA, 2007:

A worker is required to

- Ensure his own safety and health and that of other persons who may be affected by his acts or omissions at the site.
- Co-operate with his employer or any other person to fulfill their duty as required by the Act or other applicable laws; observe the site procedures, rules and regulations concerning HSE.
- At all times wear or use any protective equipment or clothing provided by his employer for the purpose of preventing risks to his safety and health; use the PPE provided by employer correctly.
- Comply with the safety and health procedures, requirements and instructions given by a person having authority over him for his own or any other person's safety; know the HSE procedures, rules and regulations that apply to him and comply.
- Report to his supervisor, any situation which he has reason to believe would present a hazard and which he cannot correct; - intervene to prevent accidents to himself and others by reporting potential incidents and near misses.
- Report to his supervisor any accident or injury that arises in the course of or in connection with his work. - report any accidents or injuries during his work's site procedures require him to do so, and so does the law!
- Not to return to a work place where there is continuing imminent or serious danger to safety or health. To ensure that any hazards at his workplace have been managed to enable safe working before he resume working. There is always time for safety!
- Not to enter any confined space unless authorized in writing by site HSE manager or any other person authorized to do so by the client. Not to perform work in a confined space unless he is sufficiently trained and informed on hazards involved in confined spaces.
- Undergo medical examinations for workers as required by the OSHA Act.

- not to willfully interfere with or misuse any means, appliance, convenience or other thing provided or done in the interests of safety, health and welfare; Not to tamper with health and safety equipment or welfare facilities.

1.2.7 Method Statements or written safe work procedures

Safe systems of work/method statements shall be properly prepared, documented and submitted by contractors and subcontractors.

The method statements shall detail how a specific job or process is to be undertaken together with the associated hazards and the necessary control measures that should be in place to ensure safety and health. Whatever method is used, all written systems of work/method statements shall be checked and approved by the HSE manager or a responsible person, such as the project manager, before the work starts.

When the work has started, the Safety manager is obliged, to ensure adherence to the method statement submitted by contractors and subcontractors and that a safe system of work is being used while the work is being undertaken.

Method statements or written safe work procedures shall identify:

- The supervisor for the task or job and the employees who will undertake the task.
- The tasks that are to be undertaken that pose risks.
- The equipment and substances that are used in these tasks.
- The control measures that have been built into these tasks.
- Any training or qualification needed to undertake the task.
- The personal protective equipment (PPE) to be worn.
- Actions to be undertaken to address safety issues that may arise while undertaking the task.

2.0 LEGAL REQUIREMENTS

The client, consultants, contractor and sub-contractors shall comply with all the applicable legislation as part of the contract. All expenses to the contractor, which result from compliance with this legislation as well as special requirements specific to the site, will be for the contractor's account.

It is the duty of the contractor and sub-contractor to ensure that they compile a site specific legal register based on all national and Meru County Legislation and applicable By Laws.

3.0 SITE ACCESS

3.1 Access Roads

To prevent unauthorized persons entering construction premises, the proposed construction site shall be fenced. Traffic to and from the construction site shall be via the gate on the access road to site. From time to time temporary gates may be established but may only be used as directed by Management.

3.2 Signing In

All persons accessing the site will be required to sign in and out at the security office/gate house when visiting or working at the construction site. Directions will be given (after logging in) to the HSE office for site induction.

3.3 Safety instructions for new employees and visitors

The purpose of the HSE induction is to ensure that visitors, contractors and sub-contractor employees are familiar with basic construction site HSE rules and regulations prior to commencing work at the construction site. All visitors, Contractors and sub-contractor employees, visitors shall receive an HSE induction prior to commencing work.

All authorized visitors should be given a hard hat, reflective jacket briefed on health and safety issues and supervised throughout the period of their visit. Walkways on the site should avoid hazards from workers at height, vehicles or excavation work.

- New employees shall be inducted on the safety and health policy and safe work procedures to be observed while at work before being allowed into the workplace.
- New employees may be required to undergo pre-employment medical examinations depending on the nature of work to be assigned.
- Visitors to the workplace will be provided with PPE where they are required to be worn.

- No visitor will be allowed into the workplace unless he/she is accompanied by an assigned staff.

4.0 HSE ORGANIZATION AND COMMUNICATION

An HSE organization and communication system shall be documented and implemented with the objectives to:

- Stimulate open and honest communication throughout the project site;
- Facilitate the participation and contribution of all personnel to the effective implementation of the HSE management system;
- Facilitate the consultation process for the implementation of changes to the policies, procedures or work instructions, which have an HSE implication;
- Stimulate further improvements to project site HSE performance;
- Secure the commitment of all personnel in the promotion of HSE.

The HSE communication systems shall include:

- Contractor subcontractor Tool Box Talk meetings-held before start of any task.
- Weekly HSE General Tool Box Talk held on every Monday and Thursday at 7.30 a.m.
- The HSE Committee meetings held every first week of the month.
- The Contractors/Subcontractors site inspection/ construction progress meeting.
- The Management HSE Committee meetings.
- HSE directional, precautionary and directional signage.

4.1 Breaches of Safety

In the event that a Contractor, Sub-Contractor or their employees are observed or reported to be operating in an unsafe manner, the Safety Manager will notify the Contractor to take immediate action. The incident will be investigated. The Responsible Officer may instruct the Contractor to cease work until the situation has been rectified and the work area and/or procedures are considered safe.

Non-compliance with the safety Manager's instructions or failure to comply with the HSE requirements plan shall result in:

- The issuing of a written notification for the required improvement.
- Termination of the contract due to a breach of contract.
- Reporting to, depending on the severity of the breach.
- Should the project manager receive three reports of non-compliance in a one-month period, the Contractor will be removed from the construction site and approved contract revoked.

5.0 EMERGENCY MANAGEMENT

Prior to the commencement of work, the Safety Manager shall be responsible for determining, where emergency exits and muster points are, or if in an outdoor environment, the procedure to follow to evacuate personnel, where to assemble and who has the responsibility of notifying the appropriate emergency service/s.

5.1 Emergency Evacuation from building under construction

In the event of an emergency requiring evacuation of the building under construction, an alarm will sound. Directions of evacuation shall be issued by the Safety Manager with the assistance of the SHE Representatives and the Fire Marshalls. Subjects will be required to proceed to the designated Muster point. DO NOT RE-ENTER the building for personal items until advised it is safe to do so by either the Safety Manager.

5.2 Fire Prevention & Control

The Contractor, Sub-Contractor and their employees are responsible for fire prevention at the worksite. This includes the provision of firefighting equipment, such as fire blankets and extinguishers (appropriate to the hazard e.g. CO2 for electrical hazards) and familiarity with the operation of this equipment. If an extinguisher is used it must be reported to your supervisor so that it can be refilled/replaced.

Ensure that adequate precautions are in place prior to commencing work in an area or on jobs that have a high risk of producing a fire (fuel storage, hot work, smoking, electrical and spark producing equipment, flammable/volatile substances) and obtain the required Permit, if appropriate.

5.3 First Aid

The contractor shall have one first aid box for the first 5 persons and thereafter one for every 50 or as per Kenya applicable local regulations whichever is more stringent. More first aid boxes shall be provided if the risks, distance between construction work teams or workplace requirements require it. The first aid box should always be available and accessible for the treatment of injured persons at site.

The contractor shall place a prominent notice or sign to meet both local and international applicable size and standard in a conspicuous place at the construction site indicating where the first aid box or boxes are kept as well as the name and contact details of the First Aider of such first aid box or boxes.

The contractor shall ensure that alternative arrangements shall be made for possible incidents occurring after normal working hours

Where services are not available from the medical centre or where there is no medical centre, the contractor shall make alternative arrangements for any medical assistance. Proof of this must be made available in the contractor's HSE plan.

The Contractor is responsible for providing a stand by vehicle for emergence cases just in case of medical referrals from site.

Any work related injury should be reported to the respective safety representative or Safety Manager as soon as possible.

5.4 Reporting of Incidents and Near Misses

An incident is an unplanned event or chain of events that has, or could have resulted in injury or illness or damage to assets, the environment or company reputation. Examples are a fire in the work area, an injury, a vehicle accident, an oil spill to soil.

A near miss is an incident that could have caused illness, injury or damage to assets, the environment or company reputation but did not. An example is a worker slipping off a ladder/ staircase but not getting injured.

All incidents and near misses must be reported to the Safety manager so that they can be investigated and learning points implemented to prevent a recurrence. The incident report form must be completed and forwarded to safety manager at the earliest opportunity.

6.0 ACCIDENT AVOIDANCE.

6.1 Driving Safety

- The following rules shall apply to all construction vehicles, machines and equipment operations.
- All vehicles, machines and equipment operators are required to have a current and valid drivers' license for the vehicle to be operated, i.e., dumper, backhoe, tipper trucks, concrete mixture truck, front end wheel loader, excavator, scissor lift, crane operators, trucks drivers' license (DL).
- No unauthorized use of vehicles shall be permitted.
- All cargo or other items, i.e., laptops, suitcases, etc, shall be loaded and secured to prevent them from creating hazards in the event of hard braking.
- Prior to entering the vehicle visually inspect the entire vehicle. Look for broken windows, light covers, low tire pressure, etc. Report all damage to your supervisor.
- Adjust all mirrors for the proper vision of the operator.
- All occupants shall fasten their seat belts. The vehicle shall not be started until all occupants have fastened their seat belts.
- Check all gauges and switches for proper function and location, i.e., cruise control, windshield wipers, lights, gearshift, and radio. Do not look for these while you are

operating the vehicle. Test the brakes to determine their effectiveness and get a “feel” for the necessary brake pressure.

- Obey all traffic laws while operating the vehicle. This includes the speed limit. Vehicles shall NOT be operated while under the influence of alcohol or drugs which may impair your driving ability. Some prescription drugs and over-the-counter drugs also may affect your driving and decision-making abilities.
- Cell phone operation must be conducted ONLY while stopped and out of traffic.
- Pay attention! Keep your mind on driving and watching the road. Watch out for other drivers. Make sure are well rested and alert.
- Don’t get involved in “road rage”. Don’t become angry at aggressive drivers. Simply pull over to the right lane or the side of the road and allow them to pass.
- Always stay at least two (2) seconds behind the vehicle in front of you. If driving conditions are not optimal, i.e., rain, snow, wind, or visibility, allow a further following distance.

6.2 Safety Training for Employees.

The contractor shall ensure that all employees on the project site are trained in Occupational health and safety programs and requirements, emergency management, the HSE safety plans and cascade any HSE requirements from the client and /or the project manager to all their employees

The contractor shall develop and implement a site specific HSE induction programme, a job specific induction programmes and general employee HSE awareness programme, including awareness amongst employees of the generic HSE issues associated with the project.

All the employees shall be trained on the safe work procedures to be observed while at work.

- The training given to employees on safety and health shall be documented.
- Information on safety shall be provided both verbally and in written form. Safety and health information in written form shall be displayed on the notice board at work site. The safety and health information to be provided - shall include the harmful effect of noise, vibration, chemicals etc.
- Employees scheduled for any safety and health training will attend such training.
- New employees shall be provided orientation training and shall be furnished with information and literature covering the health and safety, policy, rules and regulations and procedures. This orientation training must be provided prior to the employee's exposure to the work environment.
- Individual job/task training, to include the applicable regulations/standards for their job, shall be provided to all employees. Included in this training is: the recognition, avoidance, and prevention of unsafe conditions, areas and activities that require personal protection equipment, and how to use protective equipment (such as Gloves, etc.).
- Supervisors shall ensure employees working under them are scheduled and provided this training as required. Examples of specified training include (but not limited to):
  - Safety and Health Committee training.
  - Fire Training - safety committee members.
  - First Aiders.

- Training of fire marshals.
- Safe handling/use of flammables, poisons, or toxics.
- Confined space entry.
- Respirator care/use.
- Hazard communication (hazardous chemicals).
- Fall hazards and fall protection.
- Lockout/tag out procedures.
- Scaffold use, and erection/dismantling.
- Fuel attendants/supervisors training lectured by "a competent supplier" professional instructor (Certificates will be awarded to participants). – Applicable if there are changes in fuel department staff. Training addressed above will be documented in the employees' personnel records and/or in a master training record.

Safety manager should review the training requirements and include training time frames or schedules in the sections. Training outlines/guidelines should also be developed to ensure all areas/items are covered in this training.

6.3 Firefighting Equipment Inspection.

All firefighting equipment shall be conspicuously located, accessible, and inspected periodically, and maintained in operating condition. A six-month service checks and monthly visual inspections are required for fire extinguishers.

All employees must know the location of firefighting equipment in the work area and have knowledge of its use and application.

When heat producing equipment is used, the work area must be kept clear of all fire hazards and all sources of potential fires will be eliminated.

Fire extinguisher will be available at all times, when utilizing heat-producing equipment.

All the records regarding place of fire, dates, and injuries will be managed by safety officer and kept in safety manager / project manager office.

All firefighting equipment shall be conspicuously located, accessible, and inspected periodically, and maintained in operating condition. An annual service checks and monthly visual inspections are required for fire extinguisher.

All employees must know the location of firefighting equipment in the work area and have knowledge of its use and application.

Only approved safety cans shall be used for handling or storing flammable liquids in quantities greater than one gallon. For one or less gallon, only the original container or recommend Safety CAN will be used.

When heat producing equipment is used, the work area must be kept clear of all fire hazards and all sources of potential fires will be eliminated.

A salamander or other open-flame device will not be used in confined or enclosed structures without proper ventilation. Heaters will be vented to the atmosphere and located an adequate distance from walls, ceilings and floors. Fire extinguisher will be available at all times when utilizing heat-producing equipment. Storage of LPG within buildings is prohibited.

6.4 Explosive materials. (If available)

The arrangements and responsibilities for the storage and security of explosives on site should minimize the risk of loss or theft.

The keys to the explosives store should be kept safe at all times, either in the custody of a suitable person the explosives supervisor or explosives storekeeper, or in a secure place.

6.5 Hazardous Substances

Material Safety Data Sheets (MSDS's) shall be kept at the workplace whilst work is in progress.

The relevant precautions for handling, mixing, storing and spill response will be in place and be included in the JSA/SWP. All employees involved in the use of the substance/s will be trained in its safe use.

The quantities of substances being used will be kept to a minimum and as small as possible. If substances are stored on or used from a vehicle, the MSDS is to be kept on the vehicle. Cylinders of flammable and non-flammable compressed gases are to transported and stored in accordance with legislation.

Compressed air can cause serious injury to the eyes and ears, and if injected into the bloodstream (through the skin) can lead to death. Compressed air is not to be used to clean:

- Clothing or hair
- Work benches etc

If particular components have to be cleaned using compressed air, adequate PPE must be worn including goggles, face shield, long sleeved shirt & trousers (No loose clothes e.g. skirts are allowed on site) and rubber gloves as a minimum.

Safety glasses are NOT adequate protection. Before using compressed air or opening a supply valve ensure:

- Hoses are in good condition and couplings are properly installed;
- There are no unprotected people in the vicinity.

Solvents, such as petrol or acetone are highly volatile and are not to be used for cleaning or degreasing. Solvents can cause damage to the skin and respiratory track so the appropriate PPE must be worn (refer to the MSDS).

Combustible substances, flammables, toxic or corrosive materials have to be classified and separated according to the risk they impose on the employees. The name of the product should be

marked clearly with handling instructions and safety measures attached to it. All products should be kept in cool places.

All employees handling or using chemicals shall be:

- Informed of their harmful effects and how to prevent them.
- Trained on the safe handling procedures.
- Provided with suitable and adequate PPE.
- Taken to undergo medical examinations annually.
- Required to observe personal hygiene before eating or drinking.

MSDS's for the materials consumed in the project are in accordance with Occupational Safety and Health Act No. 15 of 2007 and posted in the relevant project areas.

6.6 Manual Handling

Manual handling means any activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain a person, animal or thing. It also includes any activity involving repetitive and/or forceful movements or activity where a person must maintain constrained or awkward postures.

Injuries most commonly linked with manual handling include sprains and sprains, damage to the back and hernias and these are most commonly caused by wear and tear and damage to the joints, ligaments, muscles and intervertebral discs. Most of these injuries are associated with day to day tasks. Often there is no sudden or unexpected event and the person may not feel pain until several hours after the injury occurs.

Factors that can increase the risk of injury include:

- Size, shape and weight of objects (if carried or held) and forces required (if pushed, pulled or restrained);
- Sudden unexpected or jarring movements;
- Awkward movements, such as twisting, bending, over-reaching, especially if combined with load handling;
- Static postures, like holding the body or part of the body in a fixed position for a long time; and Personal factors, such as age, physical dimensions and any disabilities the person may have.

These risk factors are influenced by:

- How long and how often the tasks are performed
- The way the work is organized, e.g. one person doing all the manual tasks instead of the tasks being shared by several employees;
- Design and layout of work environment; and
- The degree of familiarity with the task and associated training.

Manual handling is an essential activity in most workplaces, so to overcome problems each tasks needs to be assessed to identify the hazards, assess their risks and put controls in place to reduce those risks.

Firstly, ask is the manual handling activity necessary? – No then the risk is removed If not, then the risk factors can be reduced in a number of ways including:

- Modifying workplace layout/design of equipment and furniture to reduce twisting, reaching, stooping and awkward application of force;
- Use Lifting devices and mechanical equipment;
- Modify or re-package the load into bigger or smaller weights or different size or shape;
- Change or modify the work environment to allow for adequate lighting and room to handle the object;
- Redesign the work pattern – how long the activity is performed, how often and how it is done;
- Warming up and stretching prior to manual handling;
- Keeping strong, flexible and fit.

Safe Lifting Technique

- Plan the lift – know exactly where you are going with the load before you lift it.
- Corrects Feet Position – Assume a well-balanced position facing the direction you intend to move the load. The feet should be parted with one foot alongside the object to be lifted and one behind.
- Bend your knees, not your back. Use the large muscles in your legs to do the work.
- Get a firm grip on the load
- Abdominal muscles should be tightly braced and you should be close to the load,
- Keeping your spine in good alignment – don’t twist
- Carry the load by holding the object close against your body and maintain a firm grip.

7.0 HAZARDOUS WORKS AND PERMITS

The contractors will be required to follow the permit to work procedure operated on a client's site, it is required that all Contractors and Sub-Contractors to apply for a Permit to Work before any work commences for Hot Work, Confined Space, Working at Heights, Fire System Impairment, Movement of High/Wide Loads and Energy Isolation (gas, water, electrical). All permits must be authorized by the Safety Manager prior to the commencement of any work. A permit to Work can be obtained from the Safety Manager's office and are only valid for a 12-hour period.

7.1 Working at Heights

Contractors, Sub-Contractors and their employees may only work at heights if they have received training and have been assessed as competent. A Job Safety Analysis (JSA)/Risk Assessments (RA) and a Working at Heights Permit must be completed and authorised prior to any work being undertaken.

Unless an appropriate barrier is in place or a risk assessment establishes an alternative safe work method, fall protection shall be provided to all persons exposed to a fall of 2 metres or greater.

Employees must use the correct personal protective equipment for the task.

7.1.1 Types of Equipment which may be used

a. Mobile work platform
b. Ladder
c. Scaffold
d. Fixed work platform
e. Safety harness & fall arrestor
f. Cranes

Unless a risk assessment exists to the contrary, the following works will require fall protection procedures and equipment:

a. Work near unprotected open edges of floors and roofs;
b. Work near unprotected penetrations or openings in roofs, floors and walls;
c. Work near unguarded shafts or excavations;
d. Work from unstable structures (temporary or permanent);
e. Work on or near fragile or brittle surfaces (eg cement sheeting roofs, fiberglass sheeting roofs and skylights). Areas below must be made safe by erecting barriers, men at work signs etc.
Materials and scrap must not be dropped to lower levels without the area being made secure by erecting barricades, men at work signs and a person posted on the lower level supervising the area.

7.1.2 Lifting Machines and Lifting Tackle.

If the contractor's intents to use lifting machines on site, it should be indicated in the contractor's HSE plan as well as the inspection plans so that the HSE consultant and or/project manager can conduct an inspection when equipment is brought onto site.

All lifting machine operators shall be competent to operate a lifting machine. They must be in possession of a valid relevant permit.

If the contractor is making use of a sub-contractor to do lifting work, the contractor must ensure that the operator is competent and only once the contractor is satisfied with the operator's competency after looking at the operator's portfolio should accept to use their services. The contractor retains full responsibility and accountability for sub-contractor and their work at site.

- The contractor should verify if the lifting machines have been examined and a performance test done.
- The training should have been done according to the code of practice/requirements by a provider registered by the directorate of occupational safety & health services (DOSHS).
- Before using any lifting machines or tackle the operator should inspect it.
- All lifting machines shall be examined and subjected to a performance test by an accredited person/company at intervals not exceeding 12 months.
- All lifting tackle should be examined by an accredited person/company at intervals not exceeding 3 months.
- All lifting tackle should be recorded on a register.
- All hooks shall be fitted with a safety latch/catch.
- A lock out system should be implemented to ensure that only an operator that is competent can draw lifting machines and fork lifts.
- All lifting tackle should be conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed for.
- No person shall be moved or supported by means of a lifting machine unless such a machine is fitted with a cradle approved by an inspector.

7.1.3 Risk Assessment for crane lifting

A risk assessment shall be conducted prior to commencing with the task to identify the risk involved and appropriate mitigation measures must be put in place. Things to be covered will include but not limited to:

- Lifting plan and method statement.
- Account should be taken of wind forces.
- Lifting machines are erected taking into account a safe distance from excavations.
- When working in close proximity to power lines, the contractor must apply for a permit from the relevant power utility company/operator.
- Account should be taken of the bearing capacity of the ground.

- Contractors and their employees shall keep out from under suspended loads, including excavators, and between a load and a solid object where they might be crushed if the load should swing or fall They shall not pass or work under the boom or any crane or excavator.
- Contractors and their employees shall ensure that crane loads are not carried over the heads of any workmen.
- Guide ropes to be used to prevent loads from swinging.

7.1.4 Records for crane

- Record books and test certificates of lifting machined and tackle should be kept on the safety file
- A copy of the risk assessment should be kept on the safety file
- A certificate of approval shall be obtained from the DOSHS inspector
- Register of all lifting machines and tackle on site (For inspection purposes)
- Training certificates and certificates of fitness for operators of the equipment

7.2 Ladders

Ladders are not a fall protection measure; they are a means of providing access/egress to a work area.

All ladders used on the site shall be in compliance with local OHS Act regulations and international standards whichever is higher. All Ladders shall have an identification tag, logged in a register, and inspected on a monthly basis and prior to use. Damaged ladders shall be marked as "DAMAGED" and removed from the project site.

Ladders are only to be used where it can be shown that other risk control measures are not practicable to remove or reduce the risk of falling.

Where ladders are used in areas near pedestrians, moving plant/equipment (fork lifts, pallet jacks etc) the risk assessment is to clearly specify what system will be used to prevent the ladder being knocked over, for example:

- Safety cones
- Barricades
- Person to hold ladder and ensure access to area is restricted.

Ladders will not be used:

- In access areas or within the arc of swinging doors;
- When the work involves restricted vision or hot work e.g. welding;
- On scaffold to gain extra height;
- Where it is possible for the ladder or the user to come into contact with electrical power lines;
- In very windy or wet conditions;
- Over other people;

- Performing a task that requires over-reaching (belt buckle within the stiles of the ladder)
- Allowing anyone else to be on the ladder at the same time;
- Placed near the edge of an open floor or penetration where, if the ladder toppled or the feet move, a person could fall over the edge.

The use of ladders will:

- Placed at a slope of 4 (vertical) to 1 (horizontal) and be secured at the top;
- Supported on a firm, level, non-slip surface in the fully opened position;
- Fitted with safety feet, tied off while in use and inspection tags fitted;
- Perform all work facing the ladder;
- Placing their feet no higher than 900mm from the top of the ladder (2 rungs from the top rule);
- Always having two hands free to ascend and descend the ladder, transporting all material and tools which cannot be safely secured to the workers belt independently;
- Only use tools which are easily operated with one hand;
- Electrically approved for electrical work;
- Always maintaining 3 points of contact (2 hands & 1 foot OR 1 hand & 2 feet)

7.3 Scaffolding

- All scaffolding used shall comply with local OHS Act regulations and international standards whichever is higher. No wooden scaffoldings shall be used nor allowed at the site.
- Scaffold erectors shall be qualified and trained to perform the erections to the required standards.
- Scaffolding access ladders shall form part of the scaffold structure and not the ladder register.
- Scaffoldings shall be regularly inspected.

7.4 Digging & Excavation Work

Excavations must be constructed so that they are safe environments for construction work to take place. They must also be fenced and suitable notices posted so that neither people nor vehicles fall into them.

A Permit to Dig is required for any work involving excavation, earthworks, landscaping, trenching, spike driving and digging activities that exceeds a depth of 150mm and or/has the potential to damage essential service facilities such as:

- Underground power cables
- Sewers & drains
- Process piping & facilities
- Natural gas & other fuel lines
- Foundations & footings
- Potable water lines

- Telecommunications cables

The testing for underground services is to be performed by qualified/certified personnel only. Consult site engineer/project manager on information of the location of underground services. All services that are located must be marked as:

Never assume the depth, location or alignment of pipes and cables. All trenches & excavations over 1m in depth must be protected by solid barricades and signs as protection against people falling into the trench. Over burden or other material/objects are not to be placed in such a position that may either cause the sides of the excavation to collapse or the objects to fall in.

Access and egress methods for workers must be in place. Benching, Battering and Shoring will be required when the trench is:

- Less than 1.5m and prone to collapse and a person is to enter the trench
- Deeper than 1.5m Shoring & batters are to be designed and inspected by a suitably qualified and experienced engineer. Ensure the use of equipment near gas mains is kept at the safe working distance.

7.5 Hot Work

Prior to commencing Hot Work which generates heat, flame or sparks in an area other than workshops, a Hot Work Permit shall be obtained and completed. All Contractors shall comply with the requirements set out in the permit and identify the controls required to reduce the risk.

The appropriate use of PPE and other necessary equipment including fire extinguishers shall be documented in the permit.

A fire watch for 30 minutes is required after the hot work activities have ceased and then the Responsible Officer shall be advised on completion of the fire watch and sign off on the Permit.

7.6 Confined Space Entry

All work in a confined space requires a permit. A confined space is defined as:

- An enclosed space or partially enclosed space which:
- Is not intended or designed primarily as a workplace
- Is at an atmospheric pressure during occupancy and
- Has restricted means of entry & exit AND which either:
- H a s a n a t m o s p h e r e c o n t a i n i n g o r l i k e l y t o c o n t a i n p o t e n t i a l l y h a r m f u l l e v e l s o f contaminant
- Has or is likely to have an unsafe oxygen level or
- Is of a nature or is likely to be of a nature that could contribute to a person in the space being overwhelmed by an unsafe atmosphere or contaminant

Examples may include, but not limited to pipes, drains, sumps, sewers, pits, tanks etc. Confined space entry occurs when a person has their head or upper body within the space and is also

applicable if a person is periodically within the space or if the head is below the ground (i.e. trenching).

Only persons trained in confined space entry can undertake such work.

7.7 Energy Isolation (gas, water, electrical, communication)

A permit is required if energy isolation is necessary for work on any construction site assets including but not limited to buildings, transfer station, parks, reserves, car parks and footpaths. A permit is not required if the work involves water reticulation lines. If the isolation involves utility type services, the supplier/owner must be contacted.

An appropriate lockout/tag out system will be used.

7.8 Fire System Isolations

A permit is required for any work associated with the isolation of smoke detectors, sprinklers, fire water pumps or hydrants. The isolation is not to exceed one working day and fire systems are not to be left off over night. Ensure detectors are covered/ protected during dusty work to ensure they are not damaged. These must be removed at the end of the working day.

7.8.1 Use of Danger and Out-Of-Service Tags

The use of tags is an essential practice and forms an integral part of the construction site's safe systems of work.

Isolation of plant to facilitate activities such as maintenance, installation, inspection, testing or cleaning will necessarily involve the de-activation of all relevant energy sources (as well as other safeguards). It is essential that all energy sources and their isolating devices are correctly identified and these are operated.

7.8.2 DANGER Tags

'DANGER' tags are personal tags attached to all isolation devices to signify that persons are currently engaged in work on the plant, and that it is likely that those persons will be injured if the isolating devices are not maintained in the safe position.

Personal DANGER tags must:

- Be attached to all isolating devices for the purpose of preventing injury to persons undertaking work;
- Be attached only to isolating devices that are in the "off" or "safe" positions;
- Be attached and normally removed only by the person whose name is on the tag;
- Have all information clearly entered on the tag prior to attachment;

- Be securely attached at the isolation point in a prominent position by each person prior to commencing work;
- Be removed after completing the work and prior to leaving the worksite at the end of a working shift;
- Be replaced with equipment OUT OF SERVICE tags before removal when work is incomplete;
- Not be used in place of an equipment OUT OF SERVICE tag.

Plant, equipment and isolating devices displaying a personal DANGER tag must not be used, switched, manipulated or interfered with while the tag is in place.

7.8.3 OUT OF SERVICE Tags

Equipment OUT OF SERVICE tags are used to signify that an item of plant is not to be used. They must not be relied upon to provide personal protection, as they may be removed at any time by other authorised persons. Whenever work is required to be undertaken in, on or about equipment or machinery that could cause injury, personal DANGER tags are to be used.

Equipment OUT OF SERVICE tags must:

- In the absence of any personal DANGER tag, be attached to all plant or equipment which is unsafe to be operated;
- Normally by attached by competent persons and removed only by authorized persons;
- Be attached to isolating devices that are in the ‘off’ or ‘safe’ positions;
- Have all required information clearly entered on the tag prior to attachment;
- Be securely attached at the isolation point in a prominent position;
- Not be removed until it is safe to do so;
- Not be used in place of personal DANGER tags.

Plant, equipment and isolating devices displaying equipment OUT OF SERVICE tag must not be used, switched manipulated or interfered with while the tag is in place.

Paper tags are disposable and must be destroyed immediately after use to prevent any possibility of reuse. If you find an intact tag not attached to anything, assume that it has become unintentionally detached from an isolation point; place a substitute tag report to your supervisor.

Important Note - The unauthorized removal of a DANGER or OUT OF SERVICE tag is seen as a major breach of safety rules and may lead to instant dismissal.

7.8.4 Machinery and Tools

Do not operate electrically powered machines unless you are authorized and qualified to do so.

Machinery must never be started until you are sure it is safe to do so.

Do not operate machines with guards removed

Use the correct tool for the job

Do not use broken or damaged tools, tag OUT OF SERVICE and report faults to your supervisor immediately.

Avoid carrying sharp tools in your pockets.

Never place tools in high places from which they might fall

PPE must be worn as determined by the rules of the area, the requirements of the job or by the supervisor.

Always use retractable Stanley knives and cut away from yourself.

The use of direct-acting high velocity tools (e.g. nail gun) will not be permitted under any circumstances. Only low velocity captive piston type powder actuated tools shall be allowed to be used on sites.

7.9 Transporting High/Wide (Oversized) Loads

If transporting a load that is more than 4.3m high or 4.5m wide a respective county government where the load passes permit is required, a Mains Roads permit and a Kenya power permit will be required. Transporting oversize loads near overhead power lines or on narrow streets or access ways can be a dangerous operation if the appropriate safety measures are not taken.

For heights and widths less than the prescribed 4.3m or 4.5m, the proposed route must be travelled to ensure the width of the carriage way, height of bridges and other objects such as signs, road dividers and slow points are adequate to allow the safe passage of the loaded vehicle.

Consideration needs to be given to the need for a pilot escort.

8.0 OCCUPATIONAL HEALTH MANAGEMENT

The contractor to ensure that:

- All activities are assessed for potential damage to health to ensure that the risk from occupational health and industrial hygiene hazards are eliminated and where elimination is not possible, kept as low as reasonably practical.
- Health hazards are identified and evaluated and that effective controls are in place.
- Where risks are high or where legally required, occupational health and hygiene monitoring system is instituted and maintained.
- All staff receives information and training to enable them to actively participate in health control measures.

8.1 Worker's Compensation

The contractor shall submit proof of registration and letter of good standing with the local applicable compensation fund or with a licensed compensation insurer for his company and each of his sub-contractors.

This must remain valid for the duration of the contract. The letter of good standing must reflect the name of the contractor and/or sub-contractor. Contractors will not be allowed on site without a valid letter of compensation unless a proof of application is shown to the client's representative or the relevant stakeholder e.g. Ministry of Labour.

8.2 Employee Health and Wellness Programme

Contractor shall submit details of their workers' health and wellness programme as part of their HSE plan which should include a medical surveillance program and an employee assistance program.

9.0 PERSONAL PROTECTION – CLOTHING AND EQUIPMENT

- Ensure the required and appropriate personal protective equipment and clothing is being worn correctly and is well maintained/clean. Personal protective equipment must be worn as required for each job in all operations, where there is an exposure to hazardous conditions. Equipment requirements will be reviewed by supervisor/foreman and it is the responsibility of the supervisor to ensure that those working under them are in full PPEs as required by task assigned.
- It is the safety policy to provide to employees who are exposed to wet, offensive or injurious substances with adequate and suitable personal protective equipment (this may include coats/overalls, helmets, hand gloves, safety shoes, gum boots, nose masks / respirator etc).
- Employees are expected to utilize proper judgement in their personal habits. When they report to work each morning they must be in fit condition to meet daily obligations.
- Goggles, face shields, helmets and other comparable equipment are required to fit the eye and face protection needs of the employee for each job.
- Hard hats and steel-toed safety work boots/shoes must be worn by all employees at all times where required.
- Appropriate gloves, aprons and boots are to be used when necessary for protection against acids and other chemicals which could injure employees' skin.
- Any worn out PPE or any PPE which has ceased to give the protection required shall be replaced immediately.
- The employees provided PPE must use them while at work and shall not willfully misuse them.
- Any damage of the protective equipment due to normal usage shall be reported to the superintendent, with the request for replacement.
- Any damage of the protective equipment due to reckless usage will be penalized by withdrawing the value of the protective equipment from the employee salary.
- The superintendents shall ensure on daily basis that all employees are wearing and using the protective equipment delivered by the company.
- At the beginning of working day, the superintendents shall verify the presence, physical condition and use of the protective equipments by all employees.

- Any employee who doesn't have or use the protective equipment shall be dismissed from his working place and that particular day he/she will not be paid.
- For more than three such misuse or lack of use of the protective equipment, the employee shall be summary dismissed.

As a guide:

9.1 High Visibility Clothing or Vest

When working on construction site, roads or where vehicle movement could be a risk

9.2 Hearing Protection

Wherever constant loud or sudden noise is present hearing protection must be worn. As a general rule, if you have to raise your voice to be heard by someone standing about 1 metre away, this level of noise can damage your hearing over time.

9.3 Eye Protection

Safety glasses, safety goggles and face shields must be worn for tasks where objects could enter the eyes including foreign objects, dust, liquids, fumes and light. Activities include grinding, welding, edging, brush cutting, wash down, chemical mixing, spraying and drilling – concrete breaking.

9.4 Head Protection

Safety helmets must be worn for excavation, construction work area and all other work where there is a risk of being struck on the head. Broad brimmed hats must be worn if working in the sun

9.5 Footwear

Safety boots are to be worn when working out of office doors, construction sites and for other tasks where safety boots are stipulated. Ensure your boots are laced up and in good condition.

Covered low heeled shoes are to be worn in office /indoor environments. Thongs, open shoes and sandals are not to be worn.

Specialist type footwear may be required for specific tasks such as gum boots when working in wet concrete/wet plumbing work, sports shoes (when working on roofs so as not to damage roof materials).

9.6 Other PPE

These include rigger gloves, rubber gloves, respiratory equipment, and body harness/fall arrest equipment, wet weather gear, welding helmet, aprons and bump caps. Varying PPE may be required for different tasks. If unsure, the supervisor should be asked.

9.7 Welding

Welding is to be carried out by qualified personnel and in areas that are well ventilated and screened off from other workers. A fire extinguisher should be available within approximately 8 m from where the welding is being done.

The required personal protective equipment for a welder is:

- Fire resistant gauntlets (i.e. long sleeves)
- Welding helmet with the appropriately tinted sight glass.
- Cotton heavy drill long jeans/khakis and long sleeve shirts
- Safety boots with spats
- NEVER look toward the welding area unless you are wearing eye protection of the required tint.

9.8 Personal Fall Protection

A fall protection system with continuous attachment shall be used by personnel in work areas not protected by guardrails where there is a danger of the employees falling from a distance of 2 meters or greater. This includes falls to lower levels such as excavations, holes or pits. The required personal fall protection is F u l l B o d y H a r n e s s a n d L a n y a r d w i t h S h o c k Absorbers.

10.0 HOUSEKEEPING

Good housekeeping in the work area assists in reducing the risk of accidents and injury.

- Keep your work area clean and tidy.
- Ensure access ways are kept clear
- Exits are to be clear and unobstructed at all times
- Ensure floor/ground surfaces are even and objects have not been left lying around such as unused materials, industrial waste, electrical leads, hoses, cables etc
- Clean up spilt oil and other fluids immediately or if not practical sign and barricade to prevent slips and falls.
- Ensure objects are stored safely – not too high, not protruding, not next to an impacting hazard (acetylene gas bottle near a heat source), chocked pipes etc.

11.0 WELFARE FACILITIES

13.1 Water for cleaning hands.

An adequate supply of potable water shall be provided. The use of a common drinking cup is prohibited. Water for cleaning hands provided and available in any work section in the project site.

11.2 Drinking water.

Ensure that drinking water is provided and available in any section on the project. The employees have access to drinking water at any work section.

Drinking water must be readily accessible to the entire workforce. The supply of drinking water must be adequate and wholesome. Normally mains water is used and should be marked as 'drinking water' if water not fit for drinking is also available. On some sites, particularly during the early stages of construction, it may be necessary to provide bottled water or water in tanks.

In this event, the water should be changed regularly and protected from contamination. Cups or mugs should be available near the tap unless a drinking fountain is provided

11.3 Waste bins

Adequate waste bins be provided in all sites and maintained clean by assigned workers waste be cleared from site as soon as possible.

11.4 Toilets maintenance and cleaning.

Toilet facilities shall be provided as required for the number of workers.

Daily:

- Empty waste receptacles and change liners.
- Thoroughly clean and disinfect toilets and urinals.
- Thoroughly clean and disinfect dressing rooms.
- Restock dispensers: soap, paper towel, toilet tissue and sanitary napkins.
- Clean mirrors; clean and disinfect urinals and stools; clean basins
- Spot wash walls, lockers, and partitions.
- Dust mop and wet mop floors with disinfectant solution.

11.5 Alcohol and Drugs

A zero tolerance policy with respect to the abuse of alcohol and drugs applies to all on site. Any employee/worker found to be under the influence of alcohol or drugs during working hours will face disciplinary measures including immediate dismissal.

11.6 Discrimination and Harassment

A zero tolerance policy with respect to discrimination against employees or others applies to all on site. All employees must not practice or condone any form of discrimination against other employees, suppliers or colleagues on the grounds of race, color, religion, creed, sex, national origin, age, or disability. Sexual harassment of any employee, colleague or other party will not be tolerated. Failure to adhere to these policies will lead to disciplinary measures including immediate dismissal.

12.0 ENVIRONMENTAL MANAGEMENT

The Client is committed to sound environmental practices in all operations. The proposed East Africa Skills for Transformation & Regional Integration Project shall aim at eliminating or reducing long term environmental impacts from activities. Subject to national legislation and regulations, each project should be subject to a professional Environmental Impact Assessment with mitigation measures incorporated into the overall project HSE plan. The client is committed to meeting or exceeding the environmental objectives of all its projects. HSE Manager will play a leading role in assisting the attainment of these objectives.

The public must also be protected from environmental hazards resulting from the work, such as excessive dust, noise and mud on the public highway. Excessive dust may be controlled by damping down haul roads regularly, the sheeting of lorry loads and imposing speed limits on roads close to the site. During road repair operations, dust should be prevented from entering surface drains and precautions taken to prevent or restrict the effects of fuel spillage.

Noise levels may be reduced by the regular maintenance of equipment and the erection of noise barriers. Other controls include the use of quieter equipment and restricting the use of noisy machinery to late morning or early afternoon.

12.1 Environmental Responsibilities

12.1.1 Spills

Spills must be cleaned as quickly as possible but only when it is safe to do so. If you find or cause a spill, stop it from spreading immediately by containing it, clean up using spill kits provided on site and report it- Refer spill control procedures.

Hazardous chemical spills must be disposed of correctly – refer to the MSDS and your supervisor.

12.1.2 Waste

All wastes must be disposed according to NEMA - EMCA (Waste Management) Regulations, 2006. Reuse material and sort material that is recyclable for disposal and place in designated area. Dangerous goods and hazardous substances must not be disposed of in normal waste bins.

Whatever the type of construction project, the disposal of any waste produced must be planned. There are four requirements for the transfer of waste from the site to final treatment or disposal:

1. Firstly, the waste must be clearly identified. This will involve the determination of the chemical and physical properties of the material, the identification of any special problems associated with the waste, and that it is properly labelled with a written description.
2. Secondly, the waste must be securely stored with procedures to deal with spillages and prevent access, particularly by scavengers or children.
3. The third requirement is that the waste must be transferred only to an authorized person. Classes of authorized person include registered waste carriers, holders of waste management licences or exempt parties such as charities or waste collection authorities. Waste transfer notes must be transferred from one duty holder to the next along the waste chain. Checks are advised to ensure that prospective waste contractors are competent to deal with waste.
4. The final requirement is that adequate records of waste consignments must be kept for at least two years in the case of controlled waste, and three years for any hazardous waste

UNPRICED BILLS OF QUANTITIES

PROPOSED CONSTRUCTION OF THE BUILDING TECHNOLOGY FLAGSHIP CENTRE OF EXCELLENCE AT MERU NATIONAL POLYTECHNIC - PHASE II

CLIENT

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MAY 2024

PARTICULAR PRELIMINARIES

A	**PARTICULAR PRELIMINARIES** **PARTIES INVOLVED** (i) Employer The term "The Employer" is **Meru National Polytechnic,** Whose address unless otherwise notified, is P.O. Box 111 - 60200, **MERU**. (ii) Project Manager The term "Project Manager" shall be deemed to mean **Symbion Kenya,** whose address unless otherwise notified, is P.O. Box 24002 – 00502, **NAIROBI** (iii) Architect The term "Architect" shall be deemed to mean **Symbion Kenya,** whose address unless otherwise notified, is P.O. Box 24002 – 00502, **NAIROBI** (iv) Structural Engineer The term "Structural Engineer" shall be deemed to mean **Civil One Consulting Engineers**, whose address unless otherwise notified, is P.O. Box 103409 - 00101, **NAIROBI**. (v) Quantity Surveyor The term "Quantity Surveyor" shall be deemed to mean **Getso Consultants Ltd.**, whose address unless otherwise notified, is P.O. Box 52979 - 00200, **NAIROBI**. (vi) Mechanical / Electrical Engineers The term "Mechanical / Electrical Engineers" shall be deemed to mean **Maiteri & Associates**, whose address unless otherwise notified, is P.O. Box 75437 - 00200, **NAIROBI**. For the purposes of the works which are under the Consultants above, the respective Consultants shall be deemed to be vested with the duties and be representatives of the Project Manager. **LOCATION OF SITES**	Kshs.
B	The works to be carried out in this contract are located on plot LR No. NTIMA/IGOKI/1759.	
	Carried to collection	

		Kshs.
A	**GENERAL DESCRIPTION OF THE WORKS** The works to be carried out in this contract involve of the construction of the **Main block** comprising: an administration block, commercial lab, workshops, laboratories, lecture rooms, technical drawing rooms, computer rooms and a library. Complete with associated services and external works including gates and guard house, generator and switch room, driveways and parking, boundary wall and underground water tank, all as set out in the Bills of Quantities.	
B	**DRAWINGS** The drawings used in preparing these Bills of Quantities are as issued by the Architect, Civil / Structural Engineer and the Mechanical / Electrical Engineer.	
C	**FLOOR AREAS** The gross floor areas given for guidance purposes only are as follows: 1. Commercial Lab and Administration Block a. Ground Floor – 597 SM b. First Floor – 451 SM 2. Main Blocks a. Ground Floor – 3205 SM b. First Floor – 2649 SM c. Second Floor – 965 SM Total Floor Area = 7,867 SM Carried to collection	
	COLLECTION From page PP1 From page PP 2 Above	
	PARTICULAR PRELIMINARIES TOTAL CARRIED TO MAIN SUMMARY	

PARTICULAR CONDITIONS OF CONTRACT

	PARTICULAR CONDITIONS OF CONTRACT **FORM OF CONTRACT** The Contractor will be required to enter into a contract which will be the "General Conditions of Contract (GCC)" read in conjuntion with the "Particular Conditions of Contract (PCC)" which include amendments and additions to those General Conditions have been detailed in respective clauses, and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties. These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language. Tenderers are referred to the above-mentioned documents for the full intent and meaning of each clause thereof. These clauses are hereinafter referred to by clause number and heading only. Where modifications are incorporated these are referred to under the relevant clause or subclause heading as included in the "Particular Conditions". The Contractor shall allow any sums which he considers necessary for the carrying out and observance of such conditions, if the same have not been included in his rates. General Provisions	Kshs.
1.0	Definitions (oo) Further definitions (To be inserted to read as follows): "**Project Manager**" means Symbion Kenya Ltd, P.O. Box 24002 – 00502 Nairobi, Kenya, or such other person appointed by the Employer from time to time to act as the Project Manager for the purpose of this Contract.	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
	"**Architect**" means Symbion Kenya Ltd, P.O. Box 24002 – 00502 Nairobi, Kenya, or such other person appointed by the Employer from time to time to act as the Architect for the purpose of this Contract. "**Quantity Surveyor**" means Getso Consultants Ltd, P.O. Box 52979 – 00200 Nairobi, Kenya, or such other person appointed by the Employer from time to time to act as the Quantity Surveyor for the purpose of this Contract. "**Structural Engineer**" means Civil One Consulting Engineers, P.O. Box 103409 – 00101 Nairobi, Kenya, or such other person appointed by the Employer from time to time to act as the Structural Engineer for the purpose of this Contract. "**Mechanical / Electrical Engineers**" means Maiteri & Associates Ltd, P.O. Box 75437 – 00200 Nairobi, Kenya, or such other person appointed by the Employer from time to time to act as the Mechanical / Electrical Engineers for the purpose of this Contract.	
2.0	Interpretation	
	2.3 The following documents are added in the list of Priority Documents after (i): "(j) Appendix A to General Conditions - Fraud and Corruption; (k) Appendix B to General Conditions – Environmental and Social (ES) Metrics for Progress Reports; and the list renumbered accordingly.	
3.0	Language and Law	
4.0	Project Manager's Decisions	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
5.0	Delegation	
	5.2 "If any assistants are not fluent in this language, the Project Manager shall make competent interpreters available during all working hours, in a number sufficient for those assistants to properly perform their assigned duties and/or exercise their delegated authority." **Add**: the following paragraphs: The following duties of the Project Manager have been delegated to the parties below: a) 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. b) 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. c) In respect of the structural & 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. d) In respect of the mechanical, electrical and plumbing 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 Electrical and Plumbing Engineer.	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
6.0	Communications	
	6.2 Add: Any notice or other document sent by post shall be sent by prepaid first class recorded delivery post (if within the Country) or by prepaid airmail (if elsewhere). Any notice or other formal communication shall be deemed to have been given: a) if delivered, at the time of delivery; or b) if posted, at 10.00 a.m. on the second Business Day after it was put into post; or c) if sent by email, on the date of transmission, if transmitted before 3.00 p.m. on any business day, and in any other case on the business day following the date of transmission. In proving service of a notice or other formal communication, it shall be sufficient to prove: a) If delivered by post, that the envelope containing the communication was properly addressed and posted either by prepaid first class recorded delivery post or by b) prepaid airmail; and c) if sent by e-mail, that the email was delivered to the recipient's e-mail address referred to in this sub-clause as evidenced by a return confirmation from the receiving party's e-mail system.	
7.0	Subcontracting	
	7.2 The following is **added**: "All subcontracts relating to the Works shall include provisions which entitle the Employer to require the subcontract to be assigned to the Employer. Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors."	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
8.0	Other Contractors	
9.0	Personnel and Equipment	
10.0	Employer's and Contractor's Risks	
11.0	Employer's Risks	
12.0	Contractor's Risks	
13.0	Insurance	
	13.1 The Contractor shall effect and maintain the following insurances as required by this Clause and shall allow for all costs thereof: i) Insurance against injury to person and property (Work ii) Employers Liability (Workmen's Compensation) iii) Third party (Public Liability) for an Indemnity for any one accident or series of accidents arising from the same event (unlimited in aggregate) Should the Contractor already hold annual insurances covering the whole of his activities, and the indemnity required under this Contract exceeds the indemnity under the existing policy/ies, then further insurance shall be effected and maintained to cover such excess. The Contractor shall ensure that all sub-contractors effect and maintain such insurances as are necessary to cover their liabilities in respect of injury to persons and property and workmen's compensation. To give effect to the Conditions of Contract and the requirements contained herein, the Contractor shall effect a Contractor's All Risk Policy to cover the full value of the following and allow for all the costs thereof:- i) The works and Temporary works erected in performance of this Contract. ii) The materials on Site, Plant and Tools. iii) The cost and expense of removing debris of the property insured, destroyed or damaged by any peril insured iv) Professional Fees	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
	13.1 The Contractor shall deposit with the Architect the policy or policies and the receipts in respect of premiums paid.	
14.0	Site Data	
15.0	Contractor to Construct the Works	
16.0	The Works to be Completed by the Intended Completion Date	
17.0	Approval by the Project Manager	
18.0	Health, Safety and Protection of the Environment The Contractor's attention is drawn to Appendix B to the General Conditions – Environmental and Social (ES) Metrics for Progress Reports.	
19.0	Archaeological and Geological Findings	
20.0	Possession of the Site	
21.0	Access to the Site	
22.0	Instructions, Inspections and Audits	
23.0	Appointment of the Adjudicator	
24.0	Procedure for Disputes	
25.0	Fraud and Corruption The Contractor's attention is drawn to Appendix A to the General Conditions – Fraud and Corruption.	
26.0	Stakeholder Engagement	
27.0	Suppliers (other than Subcontractors)	
28.0	Code of Conduct	
29.0	Security of the Site	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
30.0	Program and Progress Reports The Contractor shall submit a detailed construction programme to the Project Manager within 21 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The programme shall be in the form of a Critical Path Method Network (CPM Network). The CPM Network shall be prepared in accordance with commonly accepted practices and shall show graphically the chain of activities/sub-activities and their sequential relationship with each other from the start of construction to the completion of the Contract. It shall show clearly all activities and their durations along with earliest and latest event times. The programme shall also be submitted in the form of a Time Bar-chart showing a Critical path and S-curve (cumulative progress in percentage).	
31.0	Extension of the Intended Completion Date	
32.0	Acceleration	
33.0	Delays Ordered by the Project Manager	
34.0	Management Meetings	
35.0	Early Warning	
36.0	Identifying Defects	
37.0	Tests	
38.0	Correction of Defects	
39.0	Uncorrected Defects	
40.0	Contract Price	
41.0	Changes in the Contract Price	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
42.0	Variations	
43.0	Cash Flow Forecasts	
44.0	Payment Certificates	
45.0	Payments	
46.0	Compensation Events	
47.0	Tax	
48.0	Currencies	
49.0	Price Adjustment The Contractor to note that this Clause will be deleted should the time of completion be less than 18 months.	
50.0	Retention	
51.0	Liquidated Damages The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the PCC for each day that the Completion Date is later than the Intended Completion Date.	
52.0	Bonus The Contractor's attention is drawn to Clause GCC 52.1 of the Particular Conditions of Contract.	
53.0	Advance Payment	
54.0	Securities	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
55.0	Dayworks Daywork Rates Any daywork ordered insert Sub-clause 30.6.3 of last clause shall be executed at the following rates: *The tenderer must insert percentages in each text Labour: The Prime Cost to which* ---------- per centum shall be added Materials: The Prime Cost to which* ---------- per centum shall be added Plant: The Prime Cost to which* ---------- per centum shall be added These percentage additions shall cover all insurances, use of small tools and non-mechanical plant, sharpening tools, water, supervision, watching, lighting, establishment and overhead charges and profit. These Bills of Quantities have been prepared in accordance with the "Standard Method of Measurement of Building Works and Associated Civil Works for Eastern Africa" Second Edition (Metric), 2008.	
56.0	Cost of Repairs	
57.0	Completion	
58.0	Taking Over	
59.0	Final Account	
60.0	Operating and Maintenance Manuals	
61.0	Termination	
62.0	Payment upon Termination	
	Carried to collection	

	PARTICULAR CONDITIONS OF CONTRACT CNT'D	Kshs.
63.0	Property	
64.0	Release from Performance	
65.0	Suspension of Bank Loan or Credit	
	4.1 The Contractor shall submit, to the Engineer for Review any additional MSIPs as are necessary to manage the ES risks and impacts of ongoing Works (e.g. excavation, earth works, bridge and structure works, stream and road diversions, quarrying or extraction of materials, concrete batching and asphalt manufacture). These MSIPs collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). The Contractor shall review the C-ESMP, periodically (but not less than every six (6) months), and update it as required to ensure that it contains measures appropriate to the Works. The updated C-ESMP shall be submitted to the Engineer for Review. The C-ESMP shall be part of the Contractor's Documents. The procedures for Review of the C-ESMP and its updates shall be as described in Sub-Clause 4.4.1 [Preparation and Review]." The following is added as (g); (g) and (h) of the Sub-Clause are then renumbered as (h) and (i) respectively. (g) "if so stated in the Specification, the Contractor shall: (i) design structural elements of the Works taking into account climate change considerations; (ii) apply the concept of universal access (the concept of universal access means unimpeded access for people of all ages and abilities in different situations and under various circumstances; (iii) consider the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events; and (iv) any other requirement stated in the Specification."	
	Carried to collection	

	Kshs.
COLLECTION	
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PARTICULAR CONDITIONS OF CONTRACT TOTAL CARRIED TO MAIN SUMMARY	

GENERAL PRELIMINARIES

		Kshs.
	GENERAL PRELIMINARIES	
A	**EXCEPTIONS TO THE STANDARD METHOD OF MEASUREMENT**	
	The exceptions to the Standard Method of Measurement are as follows:	
	a) Clause B 19 (b) of the Standard Method of Measurement is deleted and the following clause substituted: Attendance on nominated Sub-Contractors shall be deemed to include allowing use of standing scaffolding, messrooms, sanitary accommodation and welfare facilities; providing space for office accommodation and for storage of plant and materials; providing light and water for their work; clearing away rubbish; unloading facilities for storage (as specified under "Storage of materials" in these Preliminaries) hoisting, providing water and power as specified under "Water and Electricity Supply for the Works" in these preliminaries) and removing and replacing duct covers, pipe casings and the like necessary for the execution and testing of Sub-Contractor's work; providing templates, dimensions and supervision for the proper carrying out of the Sub-Contractor's work and being responsible for the accuracy of the same.	
	b) Clause D 18 (a) and (b) of the Standard Method of Measurement are deleted and the following clause is substituted: Keeping excavations free from all water including spring and running water shall be given as an item or alter-natively shall be given in the description of excavation.	
	Carried to collection	

		Kshs.
	GENERAL PRELIMINARIES	
	c) Clause D 19 of the Standard Method of Measurement. The last sentence which reads: "and shall be given as an item or shall be included in the description of excavation" shall be deleted and the following substituted: " and shall be deemed to be included in the description of all items of excavation.	
A	SUFFICIENCY OF TENDER	
	The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Works and of the rates and prices stated in the priced Bills of Quantities shall cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.	
B	STAMP CHARGES	
	The Contractor shall allow for the payment of all Stamp Charges in connection with the Surety Bond and Contract Agreement.	
C	ABBREVIATIONS AND DEFINITIONS	
	Throughout these Bills, units of the measurement and terms are abbreviated and shall be interpreted as follows:	
	mm shall mean millimeter	
	lm shall mean linear metre	
	sm shall mean square metre	
	m^2 shall mean square metre	
	cm shall mean cubic metre	
	Kg shall mean kilogramme	
	in or " shall mean inches	
	if shall mean linear foot	
	Carried to collection	

		Kshs.
sf	shall mean square foot	
cf	shall mean cubic foot	
lb	shall mean pound avoirdupois	
No.	shall mean number	
prs	shall mean Pairs	
m/s	shall mean measured separately	
B.S	shall mean the current British Standard specification published by the British Standard Institution 2 Park Street, LONDON W.I, England	
K.S	shall the current Kenya Standard specification published by The Kenya Bureau of Standards, P. O. Box 54974, NAIROBI, Kenya.	
'As described'	shall mean as described in this Bills of Quantities.	
'As before described'	shall mean in all respects as described in a previous item.	
" Approved"	shall mean approved by the Architect	
"As directed"	shall mean as directed by the Architect.	
A	**PROGRESS SCHEDULE AS CHART**	
	The Contractor shall upon receiving instructions to proceed with the work, draw up a Time and Progress Schedule setting out the order in which the works are to be carried out with the appropriate dates thereof. This Time and Progress Schedule is to be agreed with the Architect and no deviation from the order set out in this Schedule will be permitted without the written consent of the Architect. The Main Contractor will be responsible for arranging the above programme with all Sub-Contractors including the Nominated Sub-Contractors and Nominated Suppliers.	
	Carried to collection	

		Kshs.
A	**FIGURED DIMENSIONS** Figured dimensions are to be followed in preference to dimensions scaled from the Drawings; but whenever possible dimensions are to be taken on the Site or from the Buildings. Before any work is commenced by Sub-Contractors or Specialists Firms, dimensions must be checked on the Site and/or buildings and agreed with the Contractor, irrespective of the comparable dimensions shown on the Drawings. The Contractor shall be responsible for the accuracy of such dimensions.	
B	**PROVISIONAL WORK** All "provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the Quantity Surveyor. Immediately the work is taken for measurement, the Contractor shall give notice to the Quantity Surveyor. If the Contractor makes default in these respects he shall, if the Architect so directs, uncover the work at his own expense to enable the measurements to be taken.	
C	**EXISTING SERVICES** Prior to commencement of any work the Contractor is to ascertain from the relevant authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any service shall be reported immediately to the Architects and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense.	
D	**TRANSPORT TO AND FROM THE SITE** The Contractor shall include in his prices for the transport of materials, workmen, etc., to and from the Site of the proposed Works, at such hours and by such routes as are permitted by the Authorities.	
	Carried to collection	

		Kshs.
A	**PUBLIC AND PRIVATE ROADS, PAVEMENTS ETC** The Contractor will be required to make good, at his own expenses, any damage he may cause to the present road surfaces and pavements within or beyond the boundary of the Site, during the period of the Works. In particular all existing trees, shrubs, plants, etc., which may be destroyed or damaged during the progress of the works are to be made good by the Contractor to the approval of the Architect.	
B	**POLICE REGULATIONS** The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.	
C	**WATER** All water shall be fresh, clean and pure, free from earthy vegetable or organic matter, acid or alkaline substance in solution or suspension. The Contractor shall provide at his own risk and cost all water for use in connection with the Works (including the work of Sub-Contractors). The Contractor will be permitted to make a metered connection to the existing water supply and he shall provide at his own expense all temporary distribution pipes, storage tanks, meters, etc., and he shall clear away same upon completion of the Works. In this case however, these being works to existing premises there are metered connections. The client may provide, at their own discretion, for the contractor's use of the same. In this instance then, the client will assess the excess usage during the construction period and this excess shall be deemed to be then refundable to the client. Always providing that the said excess is representative of the amount of water that may reasonably have been used during the said period.	
D	**LIGHTING AND POWER** The Contractor shall provide at his own risk and cost all artificial lighting and power for use on the Works, including all Sub-Contractors' and Specialists' requirements and including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection therewith.	
	Carried to collection	

	LIGHTING AND POWER CNT'D	Kshs.
	The client may also allow the use of existing power in the branch, and in which case the rider applicable under use of client provided water in GP5 item C above shall be enforced.	
A	**TELEPHONE**	
	The Contractor shall arrange for a working telephone facility to be permanently on site. The Contractor shall pay all charges for hire or purchase of equipment, licences connecting, rental and calls made.	
B	**MATERIAL STORAGE SHEDS**	
	The Contractor shall provide, erect and maintain on the site, in such positions as may be directed, ample temporary watertight, lock-up sheds for the proper storage and protection of cement and other materials liable to damage, and shall remove the same at completion and make good all surfaces disturbed. He shall also provide storage space for sub contractors to store their materials.	
C	**SERVICES FOR THE ARCHITECT**	
	The contractor shall provide and maintain a fully equipped office for the Clerk of Works with furniture, a laptop computer, accessories, printer, internet connection, etc. throughout the duration of the contract.	
	The Contractor shall also provide, erect and maintain a lock-up European-type latrine for the sole use of the Architect and his representatives and to the satisfaction of the Local Authorities and shall provide the services of a sweeper, pay all charges and keep both office and latrine in a clean and sanitary condition during the whole period of the Works. The office and latrine shall be removed on completion.	
	The Contractor shall provide, maintain where directed on Site, approved office space for the sole use of the Architect and his representatives. The Contractor shall also provide a site meeting room of sufficient size to be used to hold site meetings.	
	Carried to collection	

		Kshs.
A	**PROPRIETARY MATERIALS** Where proprietary materials are specified hereinafter the Contractor may propose the use of materials of other manufacture but equal quality for approval by the Architect. All materials and goods, where specified to be obtained from a particular manufacturer or supplier are to be used or fixed strictly in accordance with their instructions.	
B	**SIGN FOR MATERIALS SUPPLIED** The Contractor will be required to sign a receipt for all articles and materials supplied by the Employer at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacement of any such loss or damage with articles and/or materials which will be supplied by the employer at current market prices including Customs Duty, all at the Contractor's own cost and expense, to the satisfaction of the Employer.	
C	**SAMPLES AND TESTING** The contractor shall furnish at the earliest possible opportunity before work commences and at his own cost, any samples of materials or workmanship that may be called for by the Architect for his approval or rejection and any further samples in the case of rejection until such samples are approved by the Architect and such samples, when approved shall be the minimum standard for the work to which they apply. This includes the cost of any individual imported items which may require to be flown in from overseas. The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the Architect for his approval or rejection until such samples are approved by the Architect. The Architect may reject any materials or workmanship carried out in the works which in his opinion does not conform to the approved samples.	
	Carried to collection	

SAMPLES AND TESTING CNT'D	Kshs.
All approved samples will be marked or labelled with the Architect's or Engineer's signature and stored and displayed in a dedicated lockable room for this purpose. The Architect may also instruct the preparation of any mock-ups for his approval. The Contractor will be required to ensure that all samples and mock-ups are approved within 6 months of contract commencement and any delays arising out of his failure to do so will be to his account. Any alternative materials or methods of construction different from the Architect's specifications must be submitted to the Architect for approval. Such alternatives can only be used after the Architect's approval. The Contractor shall arrange for the testing of such materials as directed by the Architect. The Contractor shall pay all charges in connection with the tests and such costs are deemed to be included in his tender. Notwithstanding the result of the tests the Architect may reject any materials that in his opinion are not in accordance with the specification. The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the Architect. The Contractor shall allow in his Tender for making and delivering samples and paying all charges of the Approved Testing Laboratory. Concrete test cubes shall include testing fee, labour and material, making, moulds transport and handling,etc., shall be the minimum standard for the work to which they apply.	
Carried to collection	

		Kshs.
A	**SANITATION** The Contractor shall provide the necessary latrines for his staff and workmen to the requirements and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required. The client may allocate an existing toilet for use by the contractor and his workmen. It shall be the responsibility of the contractor to keep this toilet in proper order and he shall ensure daily cleaning and sanitation to the clients expected standards.	
B	**PLANT, TOOLS AND SCAFFOLDING** The Contractor shall provide all necessary hoists, tackle, plant, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove same on completion. The Contractor shall provide, erect and maintain all temporary scaffolding, sufficiency strong and efficient for the due performance of the Works, including Sub-Contract works, provide special scaffolding as and when required during the Works and remove on completion and make good. All such plant, tools and scaffolding shall comply with all regulations whether general or local in force throughout the period of the Contract and shall be altered or adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations. Scaffolding is not measured hereinafter, and the Contractor must allow here or in high rates for the above	
C	**EXISTING AND ADJACENT PROPERTY** The Contractor must take all steps necessary to safeguard existing and adjacent property, make good at his own expense any damage to persons or property caused thereon, and hold the Employer indemnified against any such claim arising.	
	Carried to collection	

	EXISTING AND ADJACENT PROPERTY CNT'D	Kshs.
	The Contractor will be held fully responsible for the safety of the existing and adjacent buildings and for any damage caused in consequence of these Works. He must reinstate all damages at his own expense and indemnify the Employer against any loss. The Contractor must take such steps and exercise such care and diligence as to minimize nuisance from dust, noise or any other cause to the occupiers of the existing and adjacent properties and comply with NEMA regulations regarding the same.	
A	**HOARDING** The Contractor shall enclose the site as indicated on site with a hoarding 2400 mm high consisting of 30 gauge iron sheets on 100 mm x 50 mm Timber posts firmly secured at 1,800 mm centres with two 75 x 50 mm timber rails. The contractor is in addition required to take all precautions necessary for the safe custody of the works, materials and plant and public and Employer's property on the site. The hoarding is 300 mts. long (provisional) 300 l.m. @ Shs..... The Contractor shall allow for providing and clearing away on completion such hoarding, fencing, gates etc. as may be required for the security of the site, and as instructed by the Architect to prevent access to the site by the public. The exact location and type of these items are to be agreed with the Architect and negotiated with County Council by the Contractor who will also be responsible for paying any fees or taxes payable in respect of the hoarding, fencing or gates and providing any drawings necessary for approval. Hoarding shall be as per the Architect's details.	
	Carried to collection	

		Kshs.
A	**WATCHING AND LIGHTING** The contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, plant and materials, against damage and theft.	
B	**TEMPORARY ROADS** The Contractor is to allow for providing where directed all temporary access roads, tracks and paths necessary for the execution of the Works, including making good when no longer required.	
C	**NAME BOARDS / ADBVERTISEMENTS** The Contractor must allow for providing, erecting and maintaining a site signboard, the size, type of construction and lettering of which shall be to the Architect's design (see architects drawing) The board is to be fixed in an elevated position on the site where indicated by the Architect. On completion of the works, the notice board shall be removed and making good shall be carried out as necessary. The Contractor shall obtain approval, including statutory consents, and provide a temporary name board displaying: Title of the project: Name and logo of the Employer: Names and logos of the consultants: Names and logos of the contractors and subcontractors: NCC Approval Number: NEMA/EIA Approval Number: NCA Approval Number: Graphic Illustration of the project: Special requirements: As per the requirements of any other statutory body.	
	Carried to collection	

		Kshs.
A	**EXISTING SERVICE LINES** The Contractor's attention is drawn to the possibility of some existing utility cables/pipes on site. Before commencing any excavations/demolitions, the Contractor shall be required to ascertain the location of any of these services and ascertain whether they are "live" Contractor shall be deemed to have allowed for liaising with the necessary authorities with regard to the termination/re-routing of any service pipes/cables including paying for any charges thereof Extreme care must be taken at all times to ensure that any existing drainage and water supply pipes, electric cables, underground drains and other service lines are not damaged during excavation or other building operations and all necessary precautions must be taken to avoid such occurrence. Should such damage nevertheless occur, the Contractor shall immediately inform the Architect and the relevant Authority and then proceed expeditiously with the repairing of such damage at his own cost The Contractor shall be held responsible for and shall indemnify the Employer against all losses and expenses incurred as a result of such damage and disruption of services Where removal or disconnection of such service lines is required to be carried out under the Contract, the operations must be carried out in co-ordination with the relevant Local Service Authority so as to minimize any disruption of services to the surrounding buildings and to enable them to take any precautions necessary and to make any alternative arrangements for the temporary provision of the services affected. The Contractor will further be required to provide at his own cost any temporary service lines or connections for the duration of disruption caused by such disconnections or removal.	
	Carried to collection	

		Kshs.
A	**PERMANENT DIVERSION OF EXISTING SERVICES** If in the opinion of the Architect and/or competent Authority or Employer it should become necessary to permanently remove or realign any existing pipes, sewer, field drain, cable, ditch, or other service, other than allowed for in the Bills of Quantities, the contractor shall obtain permission, where necessary from the competent Authority or Employer and shall carry out and complete the work to the satisfaction of the Architect and such Authority or Employer. Payment for such additional works will be made in accordance with the Conditions of Contract, provided always that the necessity for such permanent diversion has not arisen due to the fault of the Contractor In the event of the Employer or responsible Authority electing to arrange for the permanent diversion of an existing service, the permanent diversion of which has become necessary due to the fault of the contractor, the contractor shall pay the cost of the said work within a reasonable period of the account being presented. The Employer reserves the right to settle the account and deduct the sum paid by him from monies due or which may become due to the contractor	
B	**ACCESS TO THE SITE** Means of access to site shall be agreed with the consultants prior to commencement of the work and the contractor must allow for building any temporary access roads for the transport of materials, plant and workmen as may be required for the complete execution of the works including provision of temporary culverts, crossings, bridges or any other means or gaining access. Upon completion of the works, the contractor shall remove such temporary roads, temporary culverts bridges etc and make good and reinstate all the works and services disturbed to the satisfaction of the Architect.	
	Carried to collection	

		Kshs.
A	**USE OF THE SITE** The Contractor is advised not use the site for any purpose other than carrying out the Works. The areas to be occupied by the Contractor for use as storage or for erection of workshops etc., shall be defined on the site by the Architect and the Contractor must confine his activities to the areas so marked and must ensure that his own and his sub –contractors workmen do not trespass on the adjoining property or cause inconvenience to its occupiers. The Contractor is advised to note the NEMA regulations on the working hours and conditions. No staff accommodation allowed on site.	
B	**SITE VISIT** Before tendering, the Contractor is required to ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works. **The Contractor shall visit the site to acquaint themselves with its nature and position, scope of demolition works, the nature of the ground, sub-strata and other local conditions, position of power and water supplies, access roads, existing structures as constructed or any other limitations, and no claims for extras will be considered on account of lack of knowledge in this respect.** The Contractor's attention is drawn to the fact that they shall confine themselves to the area necessary for executing the works as instructed by the Architect. The Contractor must obtain the Architect's approval and directions regarding the use of any materials found on the site. Any such material utilized in the execution of the Contract shall be measured and value assessed by the Quantity Surveyor and the amount credited to the Employer.	
	Carried to collection	

		Kshs.
A	**DRAWINGS GENERALLY** The Contractor will not receive any drawings from any team consultant in hard copies. All drawings will be uploaded in the document exchange portal set up by Symbion. The system will subsequently generate and remit an automatic notification. The Contractor will then log in and print. It will be the Contractor's responsibility to send a Request For Information (RFI) for any clarifications or missing information. No claims arising out of misapprehension in these respects will be allowed.	
B	**DISCREPANCIES IN DRAWINGS, SCHEDULES AND ADDITIONAL INFORMATION** The Contractor shall check all drawings and schedules on receipt of same and should he become aware of any discrepancies in the drawings or schedules he shall immediately inform the Architect of such discrepancy. If the Contractor requires clarification of any drawing or any additional information to enable him to carry out the works, he shall submit his request at least **seven days** before it is required.	
C	**SUBSTITUTION OF PRODUCTS** If an alternative product to that specified is proposed, obtain approval from the Architect before ordering the product. The Contractor should further submit reasons for the proposed substitution and submit relevant information, including, but not limited to: manufacturer and product reference; cost; availability; relevant standards; performance; function; compatibility of accessories; proposed revisions to drawings and specification; compatibility with adjacent work; appearance; copy of warranty/ guarantee. If alterations to adjacent work are needed, the Contractor is required to advise on the scope, nature and cost. If substitution of the product is accepted, the Contractor is required to submit manufacturer's guarantees before ordering products.	
	Carried to collection	

		Kshs.
A	**CONTRACTORS' SUPERINTENDENCE** The Contractor shall constantly keep on the Works a literate English-speaking Agent or Representative, competent and experienced in the kind of work involved, who shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor, directions and instructions from the Architect and such directions and instructions shall be deemed given to the Contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Architect. It is to be a specific condition of this Contract that the successful Tenderer shall provide on site throughout the period up to the Date for Practical Completion a suitably qualified, experienced and competent person to ensure that the works are carried out to the standard required by the specification and detailed on the Drawings; and shall ensure that upon any termination of employment a suitable replacement is found. Before the Tenderer's offer is accepted the Architect will personally interview the Contractor's proposed Representative. Curriculum vitae of past experience and qualifications must be provided for the Architect's scrutiny. The Architect's decision will be final regarding the suitability of the proposed Representative.	
B	**COMPLIANCE WITH LABOUR LAWS AND REGULATIONS** The Contractor shall be required to comply with all regulations relating to employment of labour, safety of labour, provision of sanitary facilities, first aid etc. The Contractor shall be required to provide toilets and shower facilities, safety implements for workers (helmets, overalls, gloves etc. The Contractor shall be required to indemnify the Employer for any claims arising out of non-compliance with the above requirements.	
	Carried to collection	

		Kshs.
A	**APPROVALS** The Contractor to note that the execution of the contract is subject to receipt of all formal Local Authority, NEMA and NCA approvals. No claim for loss of profit, loss and expense incurred shall be made or entertained if such approvals are delayed, denied or later withdrawn.	
B	**SITE MEETINGS** Site meetings will be held to review progress and other matters arising from administration of the Contract. The frequency of the site meetings will be as determined by the Architect. The location of the site meetings will be on site. The Contractor is required to ensure availability of accommodation at the time of such meetings. The Contractor is required to attend meetings and inform subcontractors and suppliers when their presence is required. The Architect will be the chairperson of the site meetings and will be responsible for taking and distributing minutes. The Contractor is required to make adequate arrangements must be allowed for with regard to tables, chairs, air conditioning, refreshments etc. must be provided by the Contractor.	
	Carried to collection	

		Kshs.
A	**CONTRACTOR'S PROGRESS REPORT** The Contractor is required to submit a progress report at least 48 hours before the site meeting. Notwithstanding the Contractor's obligations under the Contract the report must include: A progress statement by reference to the master programme for the Works; Details of any matters materially affecting the regular progress of the Work; Subcontractors' and suppliers' progress reports; Cash flow forecast; Payment Certificates; Contractors, subcontractors, resources and equipment; Drawings received during the month; Procurement; Queries report, RFIs, IR and RFA summary; Weather report; Variations / Instructions; Test Certificates; Permits, licenses or approvals received during the month; Health and Safety report; Insurance / security; Claims, disputes and arbitration.	
B	**CONTRACTOR'S SITE MEETINGS** The Contractor is required to hold meetings with appropriate subcontractors and suppliers shortly before main site meetings to facilitate accurate reporting of progress.	
C	**PHOTOGRAPHS** The Contractor is required to share photographs of 6-10 locations of the site depending on ongoing work or subject to directions of the Architect. The photographs should be shared every week and in jpeg format. The Contractor shall share a minimum of 10 images from each location subject to directions of the Architect. Photographic document of the site and area immediately adjacent to site including access roads before commencement of works. Taking of photographs, other than for the site progress is not encouraged on site. The contractor must allow for this requirement here or in his tender rates.	
	Carried to collection	

		Kshs.
A	**UNAVOIDABLE DELAYS IN IMPORTED MATERIALS** During the progress of the work where delays are anticipated in obtaining imported materials or locally manufactured materials requiring imported components, the Architect should be informed in writing as early as possible. An application for extension(s) of time must also be made in writing at the same time. Where the accepted Contractor can fully substantiate with documentary evidence that every effort has been made and the correct procedures followed for obtaining the materials or where applicable the import licences and the delays are unavoidable, the Architect will, if satisfied, not unreasonably withhold the granting of such extension(s) of time and Liquidated and Ascertained Damages will NOT then be imposed on such delays. The Contractor should state any materials which in his opinion it is anticipated may be short supply and likely to cause such delays.	
B	**CASH FLOW FORECAST** Before starting work on site submit a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period and based upon the programme for the Works.	
C	**LISTED PRODUCTS STORED OFF SITE** The Contractor is required to submit reasonable proof that the property in 'listed items' is vested in the Contractor. A copy of the contract of sale and a written statement from the supplier that any conditions of the sale relating to the passing of property have been fulfilled and the products are not subject to any encumbrance or charge. Where applicable, the Contractor is required to submit copies of the subcontract with the subcontractor and a written statement from the subcontractor that any conditions relating to the passing of property have been fulfilled.	
	Carried to collection	

		Kshs.
A	**CLIENT SUPPLY MATERIALS** The Employer reserves the right to supply any local or imported materials required for this Contract, whether measured or allowed as a P.C. or Provisional Sum in the B.Q. In the event of the Client exercising this right, the Q.S. or the Services Engineer will adjust the Contract or Sub-Contract Sum accordingly and no claims from the Main Contractor or Sub-Contractors will be accepted in this regard.	
B	**DIRECT CONTRACTS** Notwithstanding the foregoing Conditions, the Employer 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 such instance, profit relative to the P.C. Sum in the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.	
C	**PRACTICAL COMPLETION – OCCUPATION CERTIFICATE** Upon practical completion, the Contractor shall obtain from the relevant authorities the Occupation Certificate and submit the same to the Architect before release of the first moiety of retention. The Architect shall facilitate with necessary documentation for the process, but the responsibility of Obtaining the certificate shall rest upon the contractor and any cost arising should be factored in his tender herein.	
D	**ATTENDANCE UPON OTHER TRADESMEN, ETC.** The Contractor shall allow for the attendance upon other tradesmen engaged directly by the Employer for the execution of any work not included in this Contract, and shall afford such persons every facility for carrying out their work and also for the use of his ordinary scaffolding. The Contractor however shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the Architect and the work will be measured and paid for to the extent executed at rates provided in these Bills.	
	Carried to collection	

		Kshs.
A	**MATERIALS AND WORKMANSHIP** All materials shall be new unless otherwise directed or permitted by the Architect and in all cases where the quality of goods or materials is not described or otherwise specified, is to be the best quality obtainable in the ordinary meaning of the word "best" and not merely a trade signification of that word. All materials and workmanship shall, unless otherwise specified or described, conform to the appropriate British Standards Institution Specification current at the date of Tender. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are on Site when required for use in the Works. The Contractor shall be responsible for and shall replace or make good at his own expense any materials lost or damaged. The Works throughout shall be executed by skilled workmen well versed in their respective trades.	
B	**APPROVAL OF PRODUCTS** The Contractor shall ensure that submissions, samples, inspections and tests suite the works programme. Approval of products relates to a sample of the product and not to the product as used in the Works. The Contractor is required to not use the product until approval of the sample has been obtained.	
	Carried to collection	

		Kshs.
	APPROVAL OF PRODUCTS CNT'D Any request for substitution of products must be sent to the Architect with details including: Specification to be substituted including section and page; Proposed substitution, manufacturer, manufacturers address phone and e-mail contacts, Trade Name, Model number, details and contacts of the installer, history/age of the product; Differences between the proposed substitution and specified product in point by point form; Details of previous projects where the product has been used including the project architect; Reason for not providing specified item; Whether the substituted product affects other work; Cost implication of the substitution; Time implication of the substitution; Certification by the Contractor that: Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product. Same warranty will be furnished for proposed substitution as for specified product; Same maintenance service and source of replacement parts, as applicable, is available; Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule; Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived; Proposed substitution does not affect dimensions and functional clearances.	
A	**INSTRUMENTS** Instruments to be available under the contract for use by any Consultant or Clerk of Works: Rainfall Gauge; Maximum – Minimum Thermometer; Level and Staff; Theodolite and ranging rods; Measuring equipment; Sound level meter; Moisture meter; Concrete test equipment, sieves, scales; Cube mould, cone, curing tank; A glass graduated cylinder for use in the silt test for Organic Impurities in the sand; Tapes and scale; and Spirit level and plumb line.	
	Carried to collection	

		Kshs.
A	**SETTING OUT** The Contractor is requried to submit details of methods and equipment to be used in setting out the Works and confirm compliance with BS 5606. Contractor shall verify all information related to the site boundaries and datum levels through a certified surveyor. Any discrepancies are to be reported to the Architect for further instructions before proceeding with the works. The Contractor is also requried to check the levels and dimensions and record the results on a copy of drawings; to notify discrepancies and obtain instructions before proceeding. The Contractor shall inform the Architect when the setting out exercise is complete before commencing construction. Note that setting out is the responsibility of the contractor and the role of the Architect is not to approve but to verify the contractor's accuracy.	
B	**RECORDS** The contractor shall be required to keep all relevant records to the works and shall maintain on site a diary recording weather conditions, rainfall, visitors, plant, workforce to site, e.t.c., and such report and record shall be submitted to the Architect at every site meeting.	
C	**REJECTED WORKMANSHIP OR MATERIALS** Any workmanship or materials not complying with the specific requirements or approved samples or which have been damaged, contaminated or have deteriorated, must be immediately removed from the site and replaced at the Contractor's expense as required.	
	Carried to collection	

		Kshs.
A	**PROPOSALS FOR RECTIFICATION OF DEFECTIVE PRODUCTS / EXECUTIONS** Immediately any execution or product is known, or appears, to be not in accordance with the Contract, the Contractor shall submit proposals for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution. Such proposals may be unacceptable and contrary instructions may be issued.	
B	**WORK TO BE OPENED UP AT THE REQUEST OF THE ARCHITECT** The Contractor shall, at the request of the Architect within such time as the Architect shall name, open for inspection any work covered up, and, should the Contractor refuse or neglect to comply with such request, the Architect may employ workmen other than those employed by the Contractor to open up the same. If the said work has been covered up in contravention of the Architect instructions, or if, on being opened up, it be found not in accordance with the drawings or Bills of Quantities or the instructions of the Architect, the expenses of opening and covering it up again whether done by the Contractor or by the Architect, shall be borne by and be recoverable from the Contractor or may be deducted from any monies due to the Contractor. If the work has not been covered up in contravention of such instructions and be found in accordance with the said drawings and Bills of Quantities, then the expenses aforesaid shall be borne by the Employer, and be added to the Contract Sum, provided always that, in the case of foundations or of any other urgent work so opened up and requiring immediate attention, the Architect shall, within a reasonable time after the work has been opened, make or cause to be made the inspection thereof, and at the expiration of such time, if such inspection shall not have been made the Contractor may cover up the same and shall not be required to open it up again for inspection except at the expense of the Employer.	
	Carried to collection	

		Kshs.
A	**METHOD STATEMENT** The Contractor shall submit for approval a method statement for any component of works that the Architect may deem necessary. Such method statement shall be submitted within reasonable time and no works requiring the Architect's approval for a method statement shall be commenced before approval of the method statement.	
B	**SAFETY, HEALTH AND WELFARE** The Contractor shall allow for providing for the safety, health and welfare of workpeople and for complying with any relevant Ordinances, Regulations or Union Agreement. The Contractor to provide a method statement to the Project Manager and the Architect within 14 days of Contract award. The Contractor shall comply at all times with the requirements of the Factory Act (Cap 514), Building Construction Rules, Supplement 18, Legal Notice No. 40 dated 5th April, 1984 and ensure that the safety of his workpeople and authorized visitors to the Site is protected at all times. In particular there shall be proper provision of planked footways and guard-rails to scaffolding, etc., protection against falling materials and tools and the Site shall be kept tidy and clear of dangerous rubbish. The Contractor shall appoint a Safety Officer as required by the Factory Act and notify the Architect of his name. The Safety Officer shall be on site at all times and all directions given by the Architect to the Safety Officer shall be deemed to be Architect's Instructions, and shall be complied with promptly without additional cost to the contract. The contractor shall submit with his programme of works a workable procedure to be implemented in the event of an emergency for evacuation of injured personnel. The contractor shall provide adequate struts, props, braces and the like to properly shore up unstable existing and new structures, including trenches or pits more than 1500mm deep. The contractor will be required to maintain all construction equipments and machinery in good order in compliance with their designated noise and fume emission levels.	
	Carried to collection	

		Kshs.
	SAFETY, HEALTH AND WELFARE CNT'D The contractor shall take all necessary steps within his disposal to ensure that nuisance caused by dust and noise during construction is reduced to absolute minimum. The contractor shall maintain on site a full first aid kit for the management of injuries before arrival of or referral to qualified medical attention. A record of all notified injuries shall be kept on site and made available to the Architect. Scaffolding Platforms will require inspection and certification by a specialist. Specialist training shall be required. Reinforcement covers - Plastic covers to all exposed vertical steel shall be provided. Attached also find **"Health Safety and Environment (HSE) Requirements for the Contractor".** All costs associated with meeting the health & safety requirements as detailed must be included herein or in the contractor's rates. The Architect shall be empowered to suspend work on the site should he consider that safety, health and welfare of work people are not being observed by the contractor and no claim arising from such a suspension will be allowed.	
B	**SITE WASTE MANAGEMENT PLAN** The Contractor shall provide personell responsible for developing the site waste management plan. This plan should include details of: The Contractor; Location of the site; Description of the project; Estimated project cost; Types and quantities of waste that will be generated; Resource management options for these wastes including proposals for minimization/reuse/recycling; The use of appropriate and licensed waste management contractors; Record keeping procedures; Waste auditing protocols; and any other additional requirements. The site waste management plan should be submitted no later than 21 days after award of contract.	
	Carried to collection	

		Kshs.
A	**EXCAVATION METHODOLOGY** The Contractor shall submit the excavation methodology which shall include the following: Detail of method for ground protection treatment and dewatering; Survey of existing site conditions; Detail design or construction proposal regarding: Site/soil investigation report and geotechnical assumptions, Detail of excavation /protection works, Sequence and method of works, Monitoring proposal, and any Other information or specification that deem necessary. The excavation methodology should be submitted No later than 14 days after award of contract.	
B	**OUTLINE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN** The Contractor shall outline the construction phase health and safety plan which shall include: Method statements on how risks from hazards identified in pre-construction information and other hazards identified by the contractor will be addressed; Details of the management structure and responsibilities; Arrangements for issuing health and safety directions; Procedures for informing subcontractors and employees on health and safety hazards; Selection procedures for ensuring competency of subcontractors and designers; Procedures for communication between the project team, subcontractors and site operatives; Arrangements for cooperation and coordination between subcontractors; Procedures for carrying out risk assessment and for managing and controlling the risk; Emergency procedures including those for fire prevention and escape; Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded; Arrangements for welfare facilities; Procedures for ensuring that all persons on site have received relevant health and safety information and training; Arrangements for consulting with and taking the views of people on site; Arrangements for preparing site rules and drawing them to the attention of those affected and ensuring their compliance; Monitoring procedures to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements; and, Review procedures to obtain feedback.	
	Carried to collection	

		Kshs.
A	**NOISE CONTROL** The Contractor shall Comply with the recommendations of The National (Noise And Vibrations Standards And Control) Regulations 2013. Noise levels from the works should be a maximum level of 75dB (A) below maximum background level when measured from the boundary of the nearest building adjacent to the site. The Contractor is required to fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles. The Contractor should not use: Pneumatic drills and other noisy appliances without consent during the hours of 18:00 – 0800; and Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.	
B	**SECURITY** The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, plant and materials against damage and theft. The Contractor shall take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property. The Contractor shall provide for all necessary Site Safety Signage.	
C	**PESTICIDES** The Contractor shall use pesticides only where specified and approved by the Pest Control Board of Kenya. Evidence of compliance shall be submitted by the Contractor. Work near water, drainage ditches or land drains must comply with the 'Guidelines for the use of herbicides on weeds in or near watercourses and lakes'. The Contractor is requried to get guidelines from the Agrochemical society of Kenya or Water Resource management Authority. The Contractor must comply with manufacturer's disposal recommendations for containers and to remove from site immediately containers which are empty or no longer required. Operatives must hold a BASIS Certificate of Competence, or work under supervision of a Certificate holder.	
	Carried to collection	

		Kshs.
A	**NOTICES** Adequate temporary Notices and Signs shall be posted to indicate e.g. that "building operations are in progress" and "entry is at ones own risk" or "trespassers are liable to be prosecuted" or such other Notices and Signs as the Architect may consider necessary from time to time. The design and location of such signs will be to the approval of the Architect. No other signboards or advertising will be permitted without the authority of the Architect.	
B	**PASSES** Passes will be required for access to the site. Liaise with the Security manager: Contact: ……. The Contractor shall submit a list of the names of all persons requiring passes together with any other related information reasonably required. When requested or on completion of the work to which the pass relates, the user shall return the passes.	
C	**SUPERVISION AND WORKING HOURS** The working hours shall be as stated in the NEMA license and/or as approved by the Client. No concrete work shall be carried out at night or on gazetted holidays unless the Client / Architect shall so direct. Other works shall be executed at the discretion of the Contractor. The works shall be executed under the direction and to the entire satisfaction in all respects of the Architect who shall at all times during normal working hours have access to the works and to the yards and workshops of the contractor and subcontractors or other places where work is being prepared for the contract.	
	Carried to collection	

		Kshs.
	SUPERVISION AND WORKING HOURS CNT'D The working hours shall be those generally worked by good employers in the building and civil Engineering Trades in Kenya. No work shall be carried out on Sundays or on gazetted holidays unless the Architect shall so direct. No work shall be covered up nor shall any concreting be carried out in the absence of the Clerk of works and without the prior approval of the Architect in writing. The work must be carried out to cause minimum inconvenience to the neighborhood and adjoining premises. In particular, no hammering, mechanical drilling or other unduly noisy work may be commenced before 8.00am or continued after 5.00pm.	
A	**SITE ESTABLISHMENT** Contractor must submit and seek approval of Site Establishment and Traffic Management plan detailing proposed locations of the following: Site offices including sub contractor offices; First aid and Medical facilities; Changing and Rest areas; Sanitary facilities (toilet and washing); Meal and Shelter facilities; Drinking water; Fabrication yards and workshops; Scaffolding storage yard; Sampling / Testing laboratories. (If deemed necessary); Tools and Materials storage; Equipment and maintenance workshops; Batch plant and aggregates storage; Directional and Advisory signage; Fire hydrant and Extinguisher locations; Emergency evacuation points; Parking lots; Points of connection for power, water, sewage etc.; Traffic management including: Traffic flow, Loading and delivery areas, and Pedestrian access. The Contractor to provide, erect and maintain a satisfactory site office in a location to be agreed with the Architect. The Contractor to submit the site establishment plan no later than 14 days after award of contract.	
	Carried to collection	

		Kshs.
A	**TEMPORARY STRUCTURES** The Contractor shall allow for providing and clearing away on completion of the Works all temporary structures as directed by the Architect. All other such structures shall be maintained throughout the construction period as directed by the Architect. All such temporary structures shall be constructed in such a manner as to cause minimum inconvenience and disturbance to pedestrians and road users using the adjacent road. All such temporary structures shall comply in all respects with the National laws, rules and regulations currently in force and applicable to such structures. All temporary structures shall be erected in a manner so that the unloading or loading of materials causes minimum obstruction to the use of adjacent roads and other facilities. All temporary structures shall be kept properly lighted throughout the periods of darkness and any corners or projections shall be painted white. Temporary structures shall not be used or permitted to be used for advertisement purposes except with the consent of the Architect. All temporary structures shall be maintained at all times in good order and condition to the satisfaction of the Architect. All temporary structures shall be removed when so required by the Architect or at the end of the period for which it is required. The Contractor shall indemnify and shall keep the Employer indemnified against any expense, loss, claim or in connection with the temporary structures.	
	Carried to collection	

		Kshs.
A	**PROVISIONAL SUMS** The term "Provisional Sum" wherever used in these Bills of Quantities shall mean a sum provided for work or for costs which cannot be entirely foreseen, defined or detailed at the time the tendering documents are issued. Such sums are net and no addition shall be made to them for profit.	
B	**PRIME COST (OR P.C.) SUMS** The term `Prime Cost Sum' or `P.C. Sum' wherever used in these Bills of Quantities shall mean a sum provided for work or services to be executed by a nominated sub-contractor, a statutory authority or a public undertaking or for materials or goods to be obtained from a nominated supplier. Such sum shall be deemed to be exclusive of any profit and any attendance required by the general contractor and provision shall be made for the addition thereof.	
C	**ADJUSTMENT OF P.C. SUMS** In the final account all P.C. Sums shall be deducted and the amount properly expended upon the Architect's order in respect of each of them added to the Contract Sum. The Contractor shall produce to the Architect such quotations, invoices or bills, properly receipted as may be necessary to show the actual details of the sums paid by the Contractor. Item of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" and "special attendance" following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them. Should the Contractor be permitted to tender and his tender be accepted for any work for which a P.C. Sum is included in these Bills of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a nominated Sub-contractor.	
	Carried to collection	

		Kshs.
A	**ADJUSTMENT OF PROVISIONAL SUMS** In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the Architect's order added to the Contract Sum. Such work shall be valued as described for in the Conditions of Contract, but should any part of the work be executed by a Nominated Sub-Contractor or any articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.	
B	**NOMINATED SUB-CONTRACTORS** The Contractor shall be responsible for Nominated Sub- Contractors in every respect and in particular it shall be the Contractor's responsibility to ensure that each Sub-Contractor commences and completes the work in such manner and is ready on the site with his materials, labour and special plant at such times so as to conform with the progress Schedule, as specified previously, and to ensure satisfactory progress. The Contractor shall also accept liability for and bear the cost of General Attendance on Nominated Sub-Contractors which shall be deemed to include for:- Allowing the use of standing scaffolding, maintenance and alteration of all scaffolding, retention of all scaffolding until such time as all relevant Sub-Contractors' work are complete and removal of all scaffolding on completion. Providing space for office accommodation, and for storage of plant and materials; allowing use for sanitary accommodation; the supply of all necessary water, and lighting; and clearing away all rubbish.	
	Carried to collection	

		Kshs.
	NOMINATED SUB-CONTRACTORS CNT'D	
	The item for "General Attendance" given hereinafter following P.C. Sums in respect of Sub-Contractors' work shall be deemed all the above. The Contractor shall also accept liability for and bear the cost of Special Attendance on Nominated Sub-Contractors which shall include for one or more of the following:- Unloading, storing, hoisting, placing in position, providing power, provision of special scaffolding. The items of "Special Attendance" given hereinafter following P.C. Sums shall include any one or more of the above item with reference Cutting away for and making good after the work of Sub-Contractors as may be required will be measured and valued separately by the surveyor.	
A	**NOMINATED SUPPLIERS** The cost of "Fix Only" materials to be obtained from Nominated Suppliers which are covered by Prime Cost or Provisional Sums shall include for taking delivery where directed in Meru, checking with invoices or indents, reporting and claiming damages for shortages and damaged goods, defraying demurrage signing for as having been receiving in good order, transporting, unloading, storing, covering and protecting until time of fixing, unpacking, replacing anything lost or damaged, sorting, assembling, hoisting to required levels and fixing as described. Before placing any orders with Nominated Sub-Contractors or Nominated Suppliers the Contractor must ascertain that the terms and conditions of the quotations and the dates of delivery of materials or execution of works comply with the terms of the Contract, and the Progress Schedule.	
	Carried to collection	

		Kshs.
A	**PRIME COST RATES** Where descriptions of items include a P.C. rate per unit this rate is to cover the nett supply cost of the unit only. The contractor's price must include for the cost of the unit at the rate stated, plus waste, taking delivery, storage, fixing in position, profit and overheads. The actual nett cost per unit will be adjusted within the Final Account against the P.C. rate stated.	
B	**ALTERATIONS TO BILLS, PRICING, ETC** Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted. Lump Sums to cover any items of Preliminaries shall be likewise broken down if so required.	
C	**BLASTING OPERATIONS** Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.	
	Carried to collection	

		Kshs.
A	**MATERIALS ARISING FROM EXCAVATIONS** Materials of any kind obtained from the excavations shall be the property of the Employer. Unless the Architect directs otherwise, such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the Architect. Should such permission be given the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.	
B	**PROTECTION OF THE WORKS** The Contractor shall allow for the protection of his own and his Subcontractor's work liable to damage, and in other suitable ways protect all finished work liable to injury, to the satisfaction of the Architect until completion of the Contract. The Contractor shall allow for protection of the whole of the works contained in the Bills of Quantities, including casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the Architect and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Employer. From the beginning to the completion of the works, the same shall be under the entire care and control of the Contractor, who shall take all possible precautions to prevent any nuisance, inconvenience or injury to the holders or occupiers of surrounding properties and to the public generally, and shall at all times keep all paths and roads affected by the works in a safe and clear state, and shall use proper precautions to ensure the safety of all wheeled traffic and pedestrians. The Contractor shall allow for providing all watching, lighting, barriers, covering open trenches and protection of the works, including Subcontract works, as may be necessary for the safety of the works and for the protection of the public and his own and Subcontractors' employees.	
	Carried to collection	

		Kshs.
A	**REMOVAL OF RUBBISH, ETC** Remove all rubbish and debris from the buildings and site as it accumulates and at completion of the works and remove all plant, scaffolding and unused materials at completion.	
B	**WORKS TO BE DELIVERED UP CLEAN** Clean and flush all gutters, rainwater and waste pipes manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works which may require it; remove all marks, blemishes, stains and defects from joinery, fittings, and decorated surfaces generally, polish door furniture and bright parts of metal-work and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the Architect.	
C	**TRADE PREAMBLES** For the full description of material and workmanship method of execution of the work and notes for pricing the Contractor is referred to the specification and preambles which follow in this document, and which shall be followed in all respects unless they conflict with the Preliminaries, or other items in these Bills of Quantities in which case the contents of the Bills of Quantities shall apply.	
	Carried to collection	

		Kshs.
A	**ESF/SAFEGUARDS: COVID – 19 CONSIDERATIONS IN CONSTRUCTION/CIVIL WORKS PROJECTS** The COVID-19 pandemic presents construction with unprecedented challenges. Addressing COVID-19 related issues in both existing and new operations starts with recognizing that this is not business as usual and that circumstances require a highly adaptive responsive management design to avoid, minimize and manage what may be a rapidly evolving situation. The Contractor is required to use reasonable efforts in the circumstances, recognizing that what may be possible today may be different next week (both positively, because more supplies and guidance may be available, and negatively, because the spread of the virus may have accelerated). The Contractor's attention is drawn to the fact that the COVID-19 situation is rapidly evolving. Therefore, it is important to check whether any updates have been issued. The Contractor is required to strictly follow government guidelines and protocols with regard to COVID-19 which include but are not limited to: • Taking all necessary precautions to maintain the health and safety of the Contractor's Personnel • Appointing a health and safety officer at site, who will have the authority to issue directives for the purpose of maintaining the health and safety of all personnel authorized to enter and or work on the site and to take protective measures to prevent accidents • Ensuring, in collaboration with local health authorities, that medical staff, first aid facilities, sick bay, ambulance services and any other medical services specified are available at all times and at any accommodation • Ensuring suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics • Providing health and safety training for Contractor's Personnel (which include project workers and all personnel that the Contractor uses on site, including staff and other employees of the Contractor and Subcontractors and any other personnel assisting the Contractor in carrying out project activities)	
	Carried to collection	

ESF/SAFEGUARDS: COVID – 19 CONSIDERATIONS IN CONSTRUCTION/CIVIL WORKS PROJECTS CNT'D	Kshs.
• Putting in place workplace processes for Contractor's Personnel to report work situations that are not safe or healthy • Giving Contractor's Personnel the right to report work situations which they believe are not safe or healthy, and to remove themselves from a work situation which they have a reasonable justification to believe presents an imminent and serious danger to their life or health (with no reprisal for reporting or removing themselves) • Putting measures in place to avoid or minimize the spread of diseases, e.g., COVID-19, including measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or permanent contract-related labor • Providing an easily accessible grievance mechanism to raise workplace concerns The Contractor is also required to: • Assess the workforce characteristics in order to identify mitigation measures • Control and document entry/exit to the work site • Maintain general hygiene on site • Conduct regular and thorough cleaning of all site facilities, including offices, accommodation, canteens, common spaces etc. • Consider changes to work processes and timings to reduce or minimize contact between workers • Consider whether existing project medical services are adequate, taking into account existing infrastructure (size of clinic/medical post, number of beds, isolation facilities), medical staff, equipment and supplies, procedures and training. If these are not adequate, the Contractor should consider upgrading the said services	
Carried to collection	

ESF/SAFEGUARDS: COVID – 19 CONSIDERATIONS IN CONSTRUCTION/CIVIL WORKS PROJECTS CNT'D • Consider the need to refer sick workers to local medical services • Set out risk-based procedures to be followed, with differentiated approaches based on case severity (mild, moderate, severe, critical) and risk factors (such as age, hypertension, diabetes) • Ensure continuity of supplies and project activities where COVID-19 occurs • Provide workers with regular opportunities to understand their situation, and how they can best protect themselves, their families and the community • Carefully manage communication and contact with the community	Kshs.
Carried to collection	

	Kshs.
COLLECTION	
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COLLECTION CNT'D	Kshs.
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GENERAL PRELIMINARIES TOTAL CARRIED TO MAIN SUMMARY	

MEASURED BUILDERS WORKS SECTION

COMMERCIAL LAB AND ADMINISTRATION BLOCK SUBSTRUCTURES

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1: SUBSTRUCTURES (ALL PROVISIONAL)				
	CONCRETE				
	Insitu reinforced concrete **class 25/20**: in				
A	150mm thick floor bed	37	Sm		-
B	Ditto but 600mm wide bottom by 847mm wide top by 175mm deep concrete to form slab thickening under walls	37	Lm		-
	Formwork				
	Fairfaced formwork: Marine ply: to				
C	Sides: floor beds:over 150 mm but not exceeding 225 mm wide	35	Lm		-
	Reinforcement				
D	Ditto but mesh reinforcement No. A193 weighing 3.02 kg per square metre - *To 150mm thick slab*	37	Sm		-
	HARDCORE				
E	300mm thick selected hardcore filling of approved inert material in making up levels under floors: spread, leveled, well rammed and consolidated in 150 mm thick (maximum) layers	37	Sm		-
	ANTI-TERMITE TREATMENT				
F	Termidor 25 EC or other equal approved anti-termite chemical treatment: applied by an approved professional pest control specialist: 10 year warranty: strictly applied in accordance with the manufacturer's instructions	37	Sm		-
	BLINDING				
G	50 mm Thick approved quality murram or quarry dust blinding to surfaces of hardcore to receive damp proof membrane	37	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	DPM				
A	1000 Gauge polythene black sheet or other equal and approved polythene sheeting as damp proof membrane laid on blinded hardcore	37	Sm		-
	Plinth Finishes				
	25 mm Thick cement and sand (1:4) rendering: on concrete or stonework: wood float finished: to				
B	Plinths: externally	65	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
C	Plinths: externally	65	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 1/1				-
	From page 1/2				-
	TOTAL FOR ADMIN BLOCK - SUBSTRUCTURES CARRIED TO SUMMARY				**-**

COMMERCIAL LAB AND ADMINISTRATION BLOCK GROUND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to Porte Cochere				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	1	Cm		-
B	Beams	4	Cm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976				
C	Assorted Bars	1,050	Kg		-
	Sawn formwork: to				
D	Vertical sides of columns	7	Sm		-
E	Sides and soffits: beams	47	Sm		-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	300 mm Thick walls	101	Sm		-
B	200 mm Thick walls	133	Sm		-
C	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	138	Sm		-
	Lintels				
D	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	44	Lm		-
	Horizontal bituminous hessian base to BS 743 damp-proof course: in cement/ sand (1:3) mortar: to				
E	300 mm Wide: under walling	20	Lm		-
F	200 mm Wide: under walling	26	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
G	200 mm Thick walls	20	Sm		-
H	150 mm Thick walls	25	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	Curtain Walling				
	Powder coated aluminium hollow sections: glazed door: 100 x 50 x 3mm hollow section top rail and stiles: 100 x 50 x 3 mm hollow section bottom rail: **infilled with and including 8.38 mm thick laminated clear glass**: 20 x 20 mm glazing beads and rubber washleather gaskets; **To be carried out by an approved specialist;** all to approval by the Architect				
A	Powder coated aluminium curtain walling overall size 3000 x 9800 mm high; including double swing door and 2 No. openable window sash: complete with all ironmongery ***(D-01)*** - ***At Admin Block Entrance***	1	No		-
	Steel doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 50 x 25 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 3-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
B	Double door overall size 1800 x 3300mm high ***(D-02)***	2	No		-
C	Ditto but single leaf door overall size 1050 x 3300mm high ***(D-03)***	2	No		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel door surfaces internally	20	Sm		-
E	Ditto, externally	20	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	TIMBER DOORS				
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2700mm high; with 900 x 600mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-09)***	6	No		-
B	Ditto but overall size 1050 x 2700mm high ***(D-10)***	1	No		-
C	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	2	No		-
D	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Wrot Mahogany: prime grade				
E	150 x 50mm door frame with three labours	65	Lm		-
F	Ditto but transomes	10	Lm		-
G	40 x 15 mm Architrave: plugged	65	Lm		-
H	30 x 30 mm Quadrant: plugged	65	Lm		-
I	15mm Moulded glazing beads	15	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix ironmongery: matching screws: locks to include a set of 3 keys:				
A	3-Lever mortice door lock complete with aluminium handles and set lever furniture	11	No		-
B	Cylinder lock complete with thumbturn	1	No		-
C	Deadlock system to approval	1	No		-
D	38 mm Diameter rubber door stop:	19	No		-
E	100 x 75mm Heavy duty steel hinges	17	Prs		-
F	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	76	No		-
G	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	38	No		-
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
H	General timber surfaces 100 - 200mm girth	65	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
A	General timber surfaces 0 - 100mm girth	145	Lm		-
B	General timber surfaces 100 - 200mm girth	75	Lm		-
C	General timber surfaces	50	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 2/3				-
	From page 2/4				-
	From page 2/5				-
	From page 2/6 Above				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	36	Lm		-
	Mild steel curtain rods and rails: **Black pipe**				
B	Curtain and sheer rods; 30 mm diameter x 2 mm thick steel pipe for curtains; 25 mm diameter x 2 mm thick pipe for sheers: factory primed red oxide primer; fixed to walls with matching brackets and forming holes in brackets for sheer rod: including 50 mm diameter circular curtain and sheer hooks to both rods at 50 mm centres; complete with basket end on either side of curtain rod	43	Lm		-
C	225 x 150 mm Window board plugged	36	Lm		-
D	12 mm quadrant cover moulded ditto	36	Lm		-
	Prepare and apply one coat of aluminium wood primer: on timber surfaces in contact with concrete or masonry:				
E	Surfaces: 200 - 300mm girth	36	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
A	Window overall size 2400 x 2400mm high ***(W-01)***	2	No.		-
B	Ditto but overall size 3600 x 3000mm high ***(W-02)***	1	No.		-
C	Ditto but overall size 1200 x 1200mm high ***(W-04)***	7	No.		-
D	Ditto but overall size 1800 x 1200mm high ***(W-05)***	1	No.		-
E	Ditto but overall size 2400 x 1950mm high ***(W-08)***	2	No.		-
F	Ditto but overall size 2000 x 1950mm high ***(W-16)***	3	No.		-
G	Ditto but overall size 2700 x 1950mm high ***(W-17)***	1	No.		-
H	Ditto but overall size 3000 x 6300mm high ***(W-19)***	1	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
I	Panes over 0.1sm but not exceeding 0.50sm	75	Sm		-
J	Ditto but obscure to toilets	8	Sm		-
	Louvre Windows				
	Mild steel louvres: comprising 50 x 25mm frame all round: infilled in 2mm thick ms plate bent to shape and approval of the Architect:				
K	Window overall size 2150 x 900mm high	2	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	85	Sm		-
B	Ditto, externally	85	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 2/7				-
	From page 2/8				-
	From page 2/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in roof above Ground Floor porte cochere - 125 x 75 x 3mm thick RHS rafters spaced @ 1650mm c/c				
A	125 x 75 x 3mm thick RHS weighing 9.43 kg/m - *Rafters*	460	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Ridge*	69	Kg		-
C	125 x 125 x 5mm plate	10	Kg		-
D	M12 rawl bolts	64	No.		-
E	6mm thick splice plate for connection at the ridge	16	No.		-
F	14mm dia. Bolts	64	No.		-
	The following in roof above Ground Floor passage - 125 x 75 x 3mm thick RHS rafters spaced @ 1650mm c/c				
G	125 x 75 x 3mm thick RHS weighing 9.43 kg/m - *Rafters*	535	Kg		-
H	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Ridge*	50	Kg		-
I	125 x 125 x 5mm plate	25	Kg		-
J	M12 rawl bolts	160	No.		-
	Other members: Unframed steel members				
K	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	415	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
A	Roof covering	160	Sm		-
B	Ridge cover	15	Lm		-
C	150 x 150 x 200mm valleys	7	Lm		-
	Flashing				
D	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	30	Lm		-
	Rainwater goods				
E	300 mm diameter fulbora outlet	10	No		-
F	150 mm diameter downpipe	37	Lm		-
G	Extra over down pipe for swanneck	10	No		-
H	Ditto for shoe	10	No		-
	Carried to Collection Below				-
	Collection				
	From page 2/10				-
	From page 2/11 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	22	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	40	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	30	Lm		-
	Prepare surfaces and apply three coats: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	30	Lm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	50mm thick premix class 30 concrete flooring including hardener approved by the Architect and other additives necessary for polishing - *To workshops*	250	Sm		-
B	Ditto but 100mm high hardened screed skirting - *To workshops*	90	Lm		-
C	32 mm thick finished to receive rubber matt flooring - *Server Room*	14	Sm		-
D	32 mm thick finished to receive porcelain tiles floor finish - *Other areas*	333	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles : pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
E	Floor: fixing with approved quality adhesive	333	Sm		-
F	100 x 8mm thick skirting	210	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Electrostatic Dissipative Floor				
	Supply and fix 3mm thick x 2000mm wide **Electro Static Dissipative (ESD) Homogeneous vinyl sheet flooring sheets** laid with hot seam weld joints and fitted with radiused coved junction skirting; All to Architect's approval				
A	To floors - *Server Room*	14	Sm		-
B	100 mm high skirting	16	Lm		-
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
C	10 mm thick backing: to receive Ceramic tiles	56	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
D	Walls: internally on prepared backing (m.s.)	56	Sm		-
E	Extra over ditto for GENESIS chrome square edge strip	30	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
F	Walls and concrete: internally	1,495	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
A	Plastered walls and concrete surfaces: internally	1,495	Sm		-
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
B	Walls and concrete: externally	310	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to steel trowelled plastered surfaces				
C	Plastered walls and concrete surfaces: externally	310	Sm		-
	Ceiling Finishes				
	12mm thick suspended **moisture-resistant** gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
D	Ceiling - *Passage*	130	Sm		-
E	Ditto but vertical ceiling to bulkheads (Provisional)	35	Sm		-
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick , mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
F	Ceiling - *Server Room*	14	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Ceiling surfaces: internally	470	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint plastered masonry or concrete surfaces: to				
B	Ceiling surfaces: internally	470	Sm		-
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
C	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	13	Sm		-
D	Ditto: 300 mm wide treads	84	Lm		-
E	Ditto: 150 mm high risers	84	Lm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
F	Floor: fixing with approved quality adhesive	13	Sm		-
G	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	84	Lm		-
H	Ditto: to 150 mm high risers	84	Lm		-
I	100 x 8mm thick skirting cut to profile of steps	20	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Soffits: internally	23	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Plastered ceiling soffits: internally	23	Sm		-
	Entrance Floor Finish				
	Install Reversible entrance matting constructed of fibre reinforced rubber wiper strips interwoven with scraper strips and locked together with galvanised high tensile steel wire				
C	To floor: size 900 x 2400mm wide	1	No		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
D	50mm thick screed: to flat roof: to receive black bituminous paint	83	Sm		-
E	Extra over for working around 200 mm outlets	10	No.		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
F	Plastered concrete gutter surfaces	83	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 2/13				-
	From page 2/14				-
	From page 2/15				-
	From page 2/16				-
	From page 2/17				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Commercial Labs*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	100 mm thick suspended reinforced concrete worktop including recessing 100 mm deep into wall to achieve support for worktop	2	Sm		-
B	Extra over ditto for making hole size 500 x 300mm for sink	4	No		-
C	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	2	Sm		-
	Insitu concrete (1:3:6):				
D	100 mm Thick bottom mass concrete plinth	2	Sm		-
	Wrot formwork				
E	Edges of 100 mm worktop	6	Lm		-
F	Edges of 100 mm plinth	6	Lm		-
G	Soffits of worktop	2	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 4 mm second coat of cement/lime putty/sand (1:1:6): steel trowelled: on masonry or concrete: to				
H	Soffits of vanity top	2	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered sides of concrete walls: internally	2	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	Surfaces of concrete plinth	2	Sm		-
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
B	10 mm thick backing: to receive Ceramic tiles	10	Sm		-
	300 x 300 x 8 mm Approved first quality **Ceramic** tiles: to regular pattern: colour to architect's scheme: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement **all to approval by the Architect**				
C	Walls and worktop: internally on prepared backing (m.s.)	10	Sm		-
	Low Level Cabinets				
D	Supply and fix low level bathroom cabinets overall size 1600 x 600 x 900mm high comprising 20mm thick laminated MDF in 1 No. Shelf; 3 No. cabinet doors average size 550 x 800mm high; complete with iron mongery for doors; Worktops and other concrete works (m/s); All to Architect's detail and approval	2	No		-
	Storage Cabinets				
	Insitu concrete (1:3:6):				
E	100 mm Thick bottom mass concrete plinth	15	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
F	Surfaces of concrete plinth	15	Sm		-
G	Supply and fix storage cabinets overall size 12200 x 600 x 2700mm high; with 1 No. high level storage overall size 12200 x 600 x 700mm high; 24 No. cabinet doors average size 500 x 700mm high; 24 No. cabinet doors average size 500 x 2000mm high; complete with iron mongery for drawers; Concrete works (m/s); All to Architect's detail and approval	2	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	2	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	2	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	6	Lm		-
D	Soffits of worktop	2	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	2	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	2	Sm		-
G	150mm high granite fascia fixed on concrete surface to Architect's approval	3	Lm		-
	Stainless steel channel				
H	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	3	Lm		-
	Mirror				
I	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	4	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 2/19				-
	From page 2/20				-
	From page 2/21				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		2/2		-
2	**WALLING**		2/3		-
3	**DOORS**		2/7		-
4	**WINDOWS**		2/10		-
5	**ROOF**		2/12		-
6	**BALUSTRADING**		2/13		-
7	**FINISHES**		2/19		-
8	**JOINERY FIXTURES**		2/23		-
	TOTAL FOR ADMIN BLOCK - GROUND FLOOR CARRIED TO SUMMARY				-

COMMERCIAL LAB AND ADMINISTRATION BLOCK FIRST FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	6	Cm		-
B	Ring Beams	17	Cm		-
C	Roof Level Beams	5	Cm		-
D	Concrete Gutter	19	Cm		-
E	175mm thick suspended roof tank slab	52	Sm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
F	Y8 Bars	1,689	Kg		-
G	Y10 Bars	1,425	Kg		-
H	Y12 Bars	751	Kg		-
I	Y16 Bars	2,623	Kg		-
J	Y20 Bars	2,033	Kg		-
	Sawn formwork: to				
K	Vertical sides of columns	66	Sm		-
L	Sides and soffits: ring beams	177	Sm		-
M	Sides and soffits: roof level beams	50	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
A	Sides and soffits of concrete gutter	152	Sm		-
B	Soffits of 175mm thick suspended roof tank slab	52	Sm		-
C	Edges of slabs: over 150mm but not exceeding 225mm girth	45	Lm		-
	Carried to Collection				-
	Collection				
	From page 3/1				-
	From page 3/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	300 mm thick walls	119	Sm		-
B	200 mm thick walls	45	Sm		-
C	Ditto but parapet walls	215	Sm		-
	Lintels				
D	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	35	Lm		-
	Copings				
	Approved pre-cast concrete coping: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
E	300 x 50 mm Thick coping; twice weathered and throated	100	Lm		-
F	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	70	Sm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
G	200 mm Thick walls	87	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS **PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT** **Curtain Walling** Powder coated aluminium hollow sections: glazed door: 100 x 50 x 3mm hollow section top rail and stiles: 100 x 50 x 3 mm hollow section bottom rail: **infilled with and including 8.38 mm thick laminated clear glass**: 20 x 20 mm glazing beads and rubber washleather gaskets; **To be carried out by an approved specialist;** All to approval of the Architect				
A	Powder coated aluminium curtain walling with two swing doors overall size 6000 x 3000 mm high; complete with all ironmongery ***(D-07)*** - ***At First Floor Staffroom Entrance and Exit***	1	No		-
	Steel doors Supply, assemble and fix the following purpose-made welded mild steel casement doors with 50 x 25 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 600mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 3-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
B	Single leaf door overall size 1000 x 2700mm high ***(D-17)***	1	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	TIMBER DOORS				
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	10	No		-
B	Ditto but overall size 900 x 2700mm high ***(D-09)***	2	No		-
C	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	5	No		-
D	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Wrot Mahogany: prime grade				
E	150 x 50mm door frame with three labours	110	Lm		-
F	Ditto but transomes	18	Lm		-
G	40 x 15 mm Architrave: plugged	110	Lm		-
H	30 x 30 mm Quadrant: plugged	110	Lm		-
I	15mm Moulded glazing beads	30	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
A	3-Lever mortice door lock complete with aluminium handles and set lever furniture	19	No		-
B	Cylinder lock complete with thumbturn	2	No		-
C	Deadlock system to approval	2	No		-
D	38 mm Diameter rubber door stop	21	No		-
E	100 x 75mm Heavy duty steel hinges	29	Prs		-
F	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	84	No		-
G	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	42	No		-
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
H	General timber surfaces 100 - 200mm girth	110	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
I	General timber surfaces 0 - 100mm girth	250	Lm		-
J	General timber surfaces 100 - 200mm girth	128	Lm		-
K	General timber surfaces	80	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 3/4				-
	From page 3/5				-
	From page 3/6				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	52	Lm		-
	Mild steel curtain rods and rails: **Black pipe**				
B	Curtain and sheer rods; 30 mm diameter x 2 mm thick steel pipe for curtains; 25 mm diameter x 2 mm thick pipe for sheers: factory primed red oxide primer; fixed to walls with matching brackets and forming holes in brackets for sheer rod: including 50 mm diameter circular curtain and sheer hooks to both rods at 50 mm centres; complete with basket end on either side of curtain rod	60	Lm		-
C	225 x 150 mm Window board plugged	52	Lm		-
D	12 mm quadrant cover moulded ditto	52	Lm		-
	Prepare and apply one coat of aluminium wood primer: on timber surfaces in contact with concrete or masonry:				
E	Surfaces: 200 - 300mm girth	52	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
A	Window overall size 2400 x 1800mm high ***(W-06)***	1	No.		-
B	Ditto but overall size 3600 x 1800mm high ***(W-07)***	5	No.		-
C	Ditto but overall size 2400 x 1500mm high ***(W-09)***	3	No.		-
D	Ditto but overall size 2950 x 1950mm high ***(W-11)***	2	No.		-
E	Ditto but overall size 3600 x 1950mm high ***(W-12)***	3	No.		-
F	Ditto but overall size 500 x 1950mm high ***(W-14)***	4	No.		-
G	Ditto but overall size 1200 x 600mm high ***(W-23)***	4	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
I	Panes over 0.1sm but not exceeding 0.50sm	85	Sm		-
J	Ditto but obscure to toilets	3	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	88	Sm		-
B	Ditto, externally	88	Sm		-
	Mild Steel Decorative Grille				
	Mild steel decorative grilles fixed consisting of 100 x 25mm ms border frame embedded in column; 75 x 25mm ms frames; all primed and painted to Architect's details and approval; **all as per Sheet No. 2527-SK-XX-DR-A-53404**				
C	Grilles overall size 4200 x 4600mm high - ***(Grille 02)***	2	No.		-
D	Ditto but overall size 2600 x 4600mm high - ***(Grille 03)***	1	No.		-
E	Ditto but overall size 3000 x 4000mm high - (***Grille 01)***	1	No.		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of mild steel grille surfaces internally	65	Sm		-
G	Ditto, externally	65	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 3/7				-
	From page 3/8				-
	From page 3/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in Truss '1': 5 No: spanning 9700 mm long and hoisting 7500 mm high from existing ground level				
A	75 x 75 x 4mm thick SHS weighing 9.43 kg/m - *Top Chord*	575	Kg		-
B	75 x 75 x 4mm thick SHS weighing 9.43 kg/m - *Bottom Chord*	575	Kg		-
C	75 x 75 x 4mm thick SHS weighing 9.43 kg/m - *Internal Members*	1,081	Kg		-
D	125 x 125 x 5mm plate	13	Kg		-
E	M12 rawl bolts	80	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	776	Kg		-
G	75mm dia. CHS bracings	64	Lm		-
H	12mm dia. sag rods	48	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering:	165	Sm		-
	Flashing				
J	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	17	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	The following in Truss '2': 5 No: spanning 13500 mm long and hoisting 7500 mm high from existing ground level				
A	75 x 75 x 4mm thick SHS weighing 9.43 kg/m - *Top Chord*	955	Kg		-
B	75 x 75 x 4mm thick SHS weighing 9.43 kg/m - *Bottom Chord*	955	Kg		-
C	75 x 75 x 4mm thick SHS weighing 9.43 kg/m - *Internal Members*	1,760	Kg		-
D	125 x 125 x 5mm plate	15	Kg		-
E	M12 rawl bolts	96	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	1,219	Kg		-
G	75mm dia. CHS bracings	81	Lm		-
H	12mm dia. sag rods	79	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering	300	Sm		-
	Mild steel Flashing				
J	450mm wide flashing including turn - in groove and three coats of approved first grade roof paint to match roofing tiles - Included Above	20	Lm		-
	Rainwater goods				
K	300 mm diameter fulbora outlet	9	No		-
L	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	70	Lm		-
M	Extra over down pipe for swanneck	9	No		-
N	Ditto for shoe	9	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	The following in roof above Water Tanks - 125 x 75 x 3mm thick RHS rafters spaced @ 1650mm c/c				
A	125 x 75 x 3mm thick RHS weighing 9.43 kg/m - *Rafters*	612	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Ridge*	176	Kg		-
C	125 x 125 x 5mm plate	18	Kg		-
D	M12 rawl bolts	115	No.		-
E	6mm thick splice plate for connection at the ridge	29	No.		-
F	14mm dia. Bolts	115	No.		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
G	Roof covering	90	Sm		-
H	Allow a provisional sum of Kenya Shillings One Hundred and Fifty Thousand for additional works at roof above water tanks		Sum		150,000.00
	Carried to Collection Below				
	Collection				
	From page 3/10				-
	From page 3/11				-
	From page 3/12 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish - *Other areas*	432	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	432	Sm		-
C	100 x 8mm thick skirting	355	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	120	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	120	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	1,500	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	1,500	Sm		-
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
F	Walls and concrete: externally	880	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to : to steel trowelled plastered surfaces				
A	Plastered walls and concrete surfaces: externally	880	Sm		-
	Ceiling Finishes				
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick , mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
B	Ceiling	450	Sm		-
	Heavy Duty Roof Insulation				
C	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	456	Sm		-
	Flat Roof Finishes - Roof Tank Slab				
	Water Proofing Membrane				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
D	50mm Thick screed: to flat roof: to receive APP (m.s.)	52	Sm		-
E	Extra over for working around 200 mm outlets	4	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	APP Membrane to weigh 4 kg/sq.mt (or 3 mm thick): stone chipped finish: 100 mm side laps and 150 mm end laps: bonding between layers: with and including bituminous primer and bonding to cement sand screed base (m/s): laid to falls				
A	To flat roofs	52	Sm		-
B	Ditto; Parapet walls (200mm high)	7	Sm		-
C	Working roofing membrane to rainwater 200 mm diameter outlets and dishing around them (m/s)	4	No.		-
	Supply and fix paving tiles, laid in approved patterns on prepared backings, include for matching grouts, spacers etc.				
D	30mm Thick tiles, Terra Cotta / Black shade, laid in cologne / tyne and Architect's patterns; including 20mm thick cement and sand (1:4) screed below	52	Sm		-
	Rainwater Goods (PVC)				
E	300 mm diameter fulbora outlet	4	No		-
F	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	30	Lm		-
G	Extra for shoe	4	No		-
H	Extra for swanneck	4	No		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
I	50mm thick screed: to flat roof: to receive black bituminous paint	66	Sm		-
J	Extra over for working around 200 mm outlets	9	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
A	Plastered concrete gutter surfaces	66	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 3/14				-
	From page 3/15				-
	From page 3/16				-
	From page 3/17				-
	From page 3/18 Above				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	KITCHEN JOINERY				
	Low Level Kitchen Cabinets				
A	Supply and fix low level kitchen cabinets overall size 3700 x 600 x 900mm high comprising 20mm thick laminated MD; 6 No. cabinet doors average size 575 x 750mm high; 6 No. drawers size 575 x 150mm high; complete with 165 degrees close malpa hinges, stainlesss steel handles and all other iron mongery; Worktops and other concrete works (m/s); All to Architect's detail and approval	1	No		-
B	Ditto but overall size 2200 x 600 x 900mm high	1	No		-
	High Level Kitchen Cabinets				
C	Supply and fix high level kitchen cabinets overall size 4300 x 600 x 750mm high comprising 20mm thick laminated MD; 6 No. cabinet doors average size 575 x 750mm high; 3 No. open cabinets size 650 x 250mm high; complete with 165 degrees close malpa hinges, stainlesss steel handles and all other iron mongery; bearers, plugs etc; All to Architect's detail and approval	1	No		-
	Insitu concrete (1:2:4): vibrated: reinforced				
D	75 mm thick suspended reinforced concrete worktop including recessing 100 mm deep into wall to achieve support for worktop	5	Sm		-
E	Extra over ditto for making hole size 800 x 450mm for sink	1	No		-
F	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	5	Sm		-
	Insitu concrete (1:3:6):				
G	100 mm Thick bottom mass concrete plinth	5	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wrot formwork				
A	Edges of 75 mm worktop	7	Lm		-
B	Edges of 75 mm plinth	7	Lm		-
C	Soffits of worktop	5	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 4 mm second coat of cement/lime putty/sand (1:1:6): steel trowelled: on masonry or concrete: to				
D	Soffits of vanity top	5	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered sides of concrete walls: internally	5	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
F	Surfaces of concrete plinth	5	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
G	Worktop	5	Sm		-
H	100mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
I	100mm high granite splashback to Architect's approval	7	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	5	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	5	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	7	Lm		-
D	Soffits of worktop	5	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	5	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	5	Sm		-
G	150mm high granite fixed on concrete surface to Architect's approval	1	Lm		-
	Stainless steel channel				
H	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	6	Lm		-
	Mirror				
I	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	7	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 3/19				-
	From page 3/20				-
	From page 3/21				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		3/2		-
2	**WALLING**		3/3		-
3	**DOORS**		3/7		-
4	**WINDOWS**		3/10		-
5	**ROOF**		3/13		-
6	**FINISHES**		3/18		-
7	**JOINERY FIXTURES**		3/22		-
	TOTAL FOR ADMIN BLOCK - FIRST FLOOR CARRIED TO SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ADMINISTRATION BLOCK SUMMARY				
1	**SUBSTRUCTURES**		1/3		-
2	**GROUND FLOOR**		2/23		-
3	**FIRST FLOOR**		3/23		-
	TOTAL FOR ADMIN BLOCK CARRIED TO MAIN SUMMARY				-

BLOCK A SUBSTRUCTURES

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1: SUBSTRUCTURES (ALL PROVISIONAL)				
	Plinth Finishes				
	25 mm Thick cement and sand (1:4) rendering: on concrete or stonework: wood float finished: to				
A	Plinths: externally	50	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
B	Plinths: externally	50	Sm		-
	TOTAL FOR BLOCK A SUBSTRUCTURES CARRIED TO SUMMARY				**-**

BLOCK A GROUND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	42	Sm		-
B	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	464	Sm		-
	Lintels				
C	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	42	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
E	200 mm thick walls	30	Sm		-
F	200 mm thick walls - *Mezzanine Floor*	10	Sm		-
G	150 mm thick walls	0	Sm		-
H	100 mm thick walls	15	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : DOORS				
	Curtain Walling				
	Powder coated aluminium hollow sections: glazed door: 100 x 50 x 3mm hollow section top rail and stiles: 100 x 50 x 3 mm hollow section bottom rail: **infilled with and including 8.38 mm thick laminated clear glass**: 20 x 20 mm glazing beads and rubber washleather gaskets; **To be carried out by an approved specialist;** all to approval by the Architect				
A	Powder coated aluminium curtain walling overall size 5401 x 15325mm high; **including opening size 3845 x 4475mm high** as per Architectural Sheet No. 2527-SK-SL-DR-A-52101 - ***To main block entrance***	1	No		-
B	Ditto but overall size 5386 x 15325mm high; as per Architectural Sheet No. 2527-SK-SL-DR-A-52101 - ***To main block entrance***	1	No		-
	Steel doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100 x 50 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
C	Double door overall size 1800 x 3300mm high ***(D-02)***	6	No		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel door surfaces internally	50	Sm		-
E	Ditto, externally	50	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Steel louvre doors Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 3-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel double door overall size 1500 x 3300mm high ***(D-05)***	1	No		-
B	Ditto but single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
C	Ditto but single leaf door overall size 900 x 2400mm high ***(D-14)*** - *Mezzanine Floor*	2	No		-
	TIMBER DOORS **Flush doors: B.S. 459** 45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
D	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	3	No		-
E	Ditto but overall size 900 x 2700mm high ***(D-09)***	3	No		-
F	Ditto but overall size 1050 x 2400mm high ***(D-15)***	1	No		-
G	Ditto but overall size 900 x 2100mm high; but without fanlight ***(D-16)***	3	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
A	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	8	No		-
B	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Wrot Mahogany: prime grade				
C	150 x 50mm door frame with three labours	110	Lm		-
D	Ditto but transomes	17	Lm		-
E	40 x 15 mm Architrave: plugged	110	Lm		-
F	30 x 30 mm Quadrant: plugged	110	Lm		-
G	15mm Moulded glazing beads	15	Lm		-
	Ironmongery				
	Supply and fix ironmongery: matching screws: locks to include a set of 3 keys				
H	3-Lever mortice door lock complete with aluminium handles and set lever furniture	20	No		-
I	38 mm Diameter rubber door stop	33	No		-
J	100 x 75mm Heavy duty steel hinges	30	Prs		-
K	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	132	No		-
L	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	66	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
A	General timber surfaces 100 - 200mm girth	110	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
B	General timber surfaces 0 - 100mm girth	235	Lm		-
C	General timber surfaces 100 - 200mm girth	127	Lm		-
D	General timber surfaces	80	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 5/2				-
	From page 5/3				-
	From page 5/4				-
	From page 5/5 Above				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : WINDOWS				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	75	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 500 x 1950mm high ***(W-14)***	3	No.		-
C	Ditto but overall size 2000 x 1950mm high ***(W-16)***	12	No.		-
D	Ditto but overall size 2700 x 1950mm high ***(W-17)***	8	No.		-
E	Ditto but overall size 1800 x 1950mm high ***(W-18)***	2	No.		-
F	Ditto but overall size 2000 x 600mm high ***(W-20)***	1	No.		-
G	Ditto but overall size 2000 x 600mm high ***(W-20)*** *- Mezzanine Floor*	1	No.		-
H	Ditto but overall size 4800 x 600mm high ***(W-21)***	1	No.		-
I	Ditto but overall size 4800 x 600mm high ***(W-21)*** *- Mezzanine Floor*	1	No.		-
J	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
K	Ditto but overall size 1000 x 1950mm high ***(W-24)***	3	No.		-
L	Ditto but overall size 1500 x 1800mm high ***(W-25)***	4	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
A	Panes over 0.1sm but not exceeding 0.50sm	120	Sm		-
B	Ditto but obscure to toilets	10	Sm		-
	Louvre Windows				
	Mild steel louvres: comprising 50 x 25mm frame all round: infilled in 2mm thick ms plate bent to shape and approval of the Architect:				
C	Mild steel louvre vents overall size 2700 x 1050mm high ***(V-01)***	8	No.		-
D	Ditto but overall size 6000 x 1050mm high ***(V-02)***	2	No.		-
E	Ditto but overall size 7700 x 1050mm high ***(V-03)***	6	No.		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of steel casement surfaces internally	210	Sm		-
G	Ditto, externally	210	Sm		-
	Weld Mesh Screen				
	Weld mesh screen comprising of 100 x 100 ms galvanized weld mesh with 4mm thick wire fixed at 45 degrees sandwitched between the frames; 100 x 50 ms border frame; 25 x 40mm ms frame at 1200mm c/c; 75 x 25mm ms frame fixed on the outer side inclined on various angle; all primed and finished with gun metal grey paint to match window frame; all to approval of the Architect; **all as per Sheet No. 2527-SK-SL-DR-A-52104/5/6/7**				
H	Weld mesh	70	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Mild Steel Scaffold Like Feature Mild steel **2-D** scaffold like feature consisting of 100 x 50 ms border frame fixed on RC beam; 150mm dia ms tube embedded into RC base to S.E's detail; 100 x 50 ms frame at 2400 c/c starting at 2700mm from ground floor level; 100 x 50 ms struts frame; 50 x 25mm ms frames; all primed and finished with gun metal grey paint to match window frame; all to approval of the Architect; **all as per Architectural Sheet No. 2527-SK-XX-DR-A-53405**				
A	Mild steel scaffold like feature	190	Sm		-
	Carried to Collection				-
	Collection				
	From page 5/6				-
	From page 5/7				-
	From page 5/8 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	14	Lm		-
	Prepare surfaces and apply three coats gloss oil paint on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	24	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	26	Lm		-
	Prepare surfaces and apply three coats gloss oil paint on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	26	Lm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	50mm thick premix class 30 concrete flooring including hardener approved by the Architect and other additives necessary for polishing - *To workshops*	610	Sm		-
B	Ditto but 100mm high hardened screed skirting - *To workshops*	240	Lm		-
C	32 mm thick finished to receive porcelain tiles floor finish - *Other GF areas*	115	Sm		-
D	32 mm thick finished to receive porcelain tiles floor finish - *Mezzanine Floor*	95	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
E	Floor: fixing with approved quality adhesive - *Ground Floor*	115	Sm		-
F	Ditto but to mezzanine floor	95	Sm		-
G	100 x 8mm thick skirting - *Ground Floor*	76	Lm		-
H	Ditto but to mezzanine floor	67	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	120	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	120	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	2,500	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	2,500	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	200	Sm		-
B	Extra over ditto for 20mm thick square grooves; to approval by the Architect	50	Lm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to: to steel trowelled plastered surfaces				
C	Plastered walls and concrete surfaces: externally	200	Sm		-
	Ceiling Finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Ceiling surfaces: internally	815	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Ceiling surfaces: internally	815	Sm		-
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
F	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	13	Sm		-
G	Ditto: 300 mm wide treads	68	Lm		-
H	Ditto: 150 mm high risers	72	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
A	Floor: fixing with approved quality adhesive	13	Sm		-
B	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	68	Lm		-
C	Ditto: to 150 mm high risers	72	Lm		-
D	100 x 8mm thick skirting cut to profile of steps	25	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
E	Soffits: internally	22	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
F	Plastered ceiling soffits: internally	22	Sm		-
	Mild Steel Grating				
G	300mm wide mild steel gratings comprising 25 x 25 x 3mm framing built into concrete on either side of the drain infilled with 25 x 6mm flats at 30mm centres in one direction; welding ground smooth; including painting grating	25	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 5/10				-
	From page 5/11				-
	From page 5/12				-
	From page 5/13				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Commercial Labs*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	100 mm thick suspended reinforced concrete worktop including recessing 100 mm deep into wall to achieve support for worktop	4	Sm		-
B	Extra over ditto for making hole size 500 x 300mm for sink	8	No		-
C	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Insitu concrete (1:3:6):				
D	100 mm Thick bottom mass concrete plinth	4	Sm		-
	Wrot formwork				
E	Edges of 100 mm worktop	15	Lm		-
F	Edges of 100 mm plinth	10	Lm		-
G	Soffits of worktop	4	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 4 mm second coat of cement/lime putty/sand (1:1:6): steel trowelled: on masonry or concrete: to				
H	Soffits of vanity top	4	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered sides of concrete walls: internally	4	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	Surfaces of concrete plinth	4	Sm		-
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
B	10 mm thick backing: to receive Ceramic tiles	10	Sm		-
	300 x 300 x 8 mm Approved first quality **Ceramic** tiles: to regular pattern: colour to architect's scheme: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement **all to approval by the Architect**				
C	Walls and worktop: internally on prepared backing (m.s.)	10	Sm		-
	Low Level Cabinets				
D	Supply and fix low level bathroom cabinets overall size 3200 x 600 x 900mm high comprising 20mm thick laminated MDF in 1 No. Shelf; 6 No. cabinet doors average size 550 x 800mm high; complete with iron mongery for doors; Worktops and other concrete works (m/s); All to Architect's detail and approval	2	No		-
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
E	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
F	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wrot formwork				
A	Edges of 100 mm worktop	14	Lm		-
B	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
C	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
D	Worktop	4	Sm		-
E	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Stainless steel channel				
F	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
G	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	8	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 5/15				-
	From page 5/16				-
	From page 5/17				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**WALLING**		5/1		-
2	**DOORS**		5/5		-
3	**WINDOWS**		5/8		-
4	**BALUSTRADING**		5/9		-
5	**FINISHES**		5/14		-
6	**JOINERY FIXTURES**		5/18		-
	TOTAL FOR BLOCK A - GROUND FLOOR CARRIED TO SUMMARY				-

BLOCK A FIRST FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	4	Cm		-
B	Beams	72	Cm		-
C	Upstand beams	2	Cm		-
D	175mm thick suspended second floor slab	510	Sm		-
E	150mm thick suspended second floor slab	210	Sm		-
F	175mm thick landings	7	Sm		-
G	Staircase	4	Cm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
H	Y8 Bars	3,702	Kg		-
I	Y10 Bars	7,188	Kg		-
J	Y12 Bars	1,628	Kg		-
K	Y16 Bars	1,535	Kg		-
L	Y20 Bars	2,968	Kg		-
M	Y20 Bars	12,949	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sawn formwork: to				
A	Vertical sides of columns	370	Sm		-
B	Sides and soffits: beams	560	Sm		-
C	Sides: upstand beams	21	Sm		-
D	Soffits of 175mm thick suspended second floor slab	510	Sm		-
E	Soffits of 150mm thick suspended second floor slab	210	Sm		-
F	Edges of slabs: over 150mm but not exceeding 225mm girth	288	Lm		-
G	Risers: over 150 mm but not exceeding 225 mm girth	48	Lm		-
H	Staircase strings: cut to profile of steps	9	Sm		-
I	Soffits of landings	7	Sm		-
J	Sloping soffits: staircases	16	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 6/1				-
	From page 6/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	35	Sm		-
B	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	135	Sm		-
	Lintels				
C	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	20	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
D	200 mm thick walls	25	Sm		-
E	100 mm thick walls	20	Sm		-
	Gypsum Drywall Partitions				
F	**100mm** thick gypsum partition; Comprising of 67 x 32 mm U section galvanized frames at 600 mm centres both ways with 1 layer 12.5mm gypsum board on both sides;inclusive of skimming, undercoat & painting in 3 coats of roller applied silk vinyl emulsion to approval by the Architect	23	Sm		-
	Aluminium partitions				
G	Single glazed partition comprising of powder coated aluminium sections size 100 x 50 x 3mm hollow section top rail and stiles: 100 x 50 x 3 mm hollow section bottom rail: infilled with and including 8.36 mm thick clear laminated glass; 20 x 20 mm glazing beads and rubber washleather gaskets; to approval by the Architect	7	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel louvre doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
	TIMBER DOORS				
	Mahogany Doors: B.S. 1186 part 1 and B.S. 4047				
B	Solid mahogany single leaf door overall size 900 x 3000 mm high door:; with 900 x 1050mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-04)***	12	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	3	No		-
B	Ditto but overall size 1050 x 2400mm high ***(D-15)***	1	No		-
C	Ditto but overall size 900 x 2100mm high; but without fanlight	2	No		-
D	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	8	No		-
E	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Wrot Mahogany: prime grade				
F	150 x 50mm door frame with three labours	175	Lm		-
G	Ditto but transomes	25	Lm		-
H	40 x 15 mm Architrave: plugged	175	Lm		-
I	30 x 30 mm Quadrant: plugged	175	Lm		-
J	15mm Moulded glazing beads	35	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix ironmongery: matching screws: locks to include a set of 3 keys				
A	5-Lever mortice door lock complete with aluminium handles and set lever furniture	12	No		-
B	3-Lever mortice door lock complete with aluminium handles and set lever furniture	16	No		-
C	38 mm Diameter rubber door stop	29	No		-
D	100 x 75mm Heavy duty steel hinges	42	Prs		-
E	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	116	No		-
F	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	58	No		-
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
G	General timber surfaces 100 - 200mm girth	175	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
H	General timber surfaces 0 - 100mm girth	385	Lm		-
I	General timber surfaces 100 - 200mm girth	200	Lm		-
J	General timber surfaces	60	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 6/4				-
	From page 6/5				-
	From page 6/6				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	65	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 3000 x 240mm high ***(W-03)***	6	No.		-
C	Ditto but overall size 2700 x 2400mm high ***(W-10)***	8	No.		-
D	Ditto but overall size 2000 x 2400mm high ***(W-15)***	6	No.		-
E	Ditto but overall size 2000 x 600mm high ***(W-20)***	1	No.		-
F	Ditto but overall size 4800 x 600mm high ***(W-21)***	1	No.		-
G	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
H	Panes over 0.1sm but not exceeding 0.50sm	125	Sm		-
I	Ditto but obscure to toilets	5	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint : on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	130	Sm		-
B	Ditto, externally	130	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 6/8				-
	From page 6/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	12	Lm		-
	Prepare surfaces and apply three coats gloss oil paint : on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	24	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	26	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	26	Lm		-
	Corridor Balustrading				
E	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	55	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of steel balustrading - Measured both sides	95	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish - *All areas*	720	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	720	Sm		-
C	100 x 8mm thick skirting	360	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	120	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	120	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	1,500	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	1,500	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	385	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to: to steel trowelled plastered surfaces				
B	Plastered walls and concrete surfaces: externally	385	Sm		-
	Ceiling Finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
C	Ceiling surfaces: internally	720	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
D	Ceiling surfaces: internally	720	Sm		-
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	7	Sm		-
F	Ditto: 300 mm wide treads	50	Lm		-
G	Ditto: 150 mm high risers	52	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
A	Floor: fixing with approved quality adhesive	7	Sm		-
B	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	50	Lm		-
C	Ditto: to 150 mm high risers	52	Lm		-
D	100 x 8mm thick skirting cut to profile of steps	25	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
E	Soffits: internally	16	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
F	Plastered ceiling soffits: internally	16	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 6/11				-
	From page 6/12				-
	From page 6/13				-
	From page 6/14				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	14	Lm		-
D	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	4	Sm		-
G	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Stainless steel channel				
A	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
B	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	8	No.		-
	Carried to Collection Below				-
	Collection				
	From page 6/16				-
	From page 6/17 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		6/2		-
2	**WALLING**		6/3		-
3	**DOORS**		6/7		-
4	**WINDOWS**		6/9		-
5	**BALUSTRADING**		6/10		-
6	**FINISHES**		6/15		-
7	**JOINERY FIXTURES**		6/17		-
	TOTAL FOR BLOCK A - FIRST FLOOR CARRIED TO SUMMARY				-

BLOCK A SECOND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	33	Cm		-
B	Ring beams	69	Cm		-
C	Upstand beams	2	Cm		-
D	Concrete Gutter	25	Cm		-
E	150mm thick suspended roof tank slab	135	Sm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
F	Y8 Bars	2,517	Kg		-
G	Y10 Bars	3,187	Kg		-
H	Y12 Bars	829	Kg		-
I	Y16 Bars	1,343	Kg		-
J	Y20 Bars	2,908	Kg		-
K	Y20 Bars	4,544	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sawn formwork: to				
A	Vertical sides of columns	370	Sm		-
B	Sides and soffits: beams	600	Sm		-
C	Sides: upstand beams	21	Sm		-
D	Sides and soffits of concrete gutter	200	Sm		-
E	Soffits of 150mm thick suspended roof tank slab	135	Sm		-
F	Edges of slabs: over 150mm but not exceeding 225mm girth	48	Lm		-
	Carried to Collection Below				-
	Collection				
	From page 7/1				-
	From page 7/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	395	Sm		-
B	Ditto but parapet walls	240	Sm		-
C	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	79	Sm		-
	Copings				
	Approved pre-cast concrete coping: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
D	300 x 50 mm Thick coping; twice weathered and throated	90	Lm		-
	Lintels				
E	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	25	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
F	200 mm thick walls	295	Sm		-
G	100 mm thick walls	45	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel louvre doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
	TIMBER DOORS				
	Mahogany Doors: B.S. 1186 part 1 and B.S. 4047				
B	Solid mahogany single leaf door overall size 900 x 3000 mm high door:; with 900 x 1050mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-04)***	12	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	3	No		-
B	Ditto but overall size 1050 x 2400mm high ***(D-15)***	1	No		-
C	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	8	No		-
D	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Wrot Mahogany: prime grade				
E	150 x 50mm door frame with three labours	175	Lm		-
F	Ditto but transomes	25	Lm		-
G	40 x 15 mm Architrave: plugged	175	Lm		-
H	30 x 30 mm Quadrant: plugged	175	Lm		-
I	15mm Moulded glazing beads	35	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
A	5-Lever mortice door lock complete with aluminium handles and set lever furniture	12	No		-
B	3-Lever mortice door lock complete with aluminium handles and set lever furniture	14	No		-
C	38 mm Diameter rubber door stop	27	No		-
D	100 x 75mm Heavy duty steel hinges	39	Prs		-
E	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	108	No		-
F	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	54	No		-
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
G	General timber surfaces 100 - 200mm girth	175	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
H	General timber surfaces 0 - 100mm girth	385	Lm		-
I	General timber surfaces 100 - 200mm girth	200	Lm		-
J	General timber surfaces	55	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 7/4				-
	From page 7/5				-
	From page 7/6				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	65	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 3000 x 240mm high ***(W-03)***	6	No.		-
C	Ditto but overall size 2700 x 2400mm high ***(W-10)***	8	No.		-
D	Ditto but overall size 2000 x 2400mm high ***(W-15)***	6	No.		-
E	Ditto but overall size 2000 x 600mm high ***(W-20)***	1	No.		-
F	Ditto but overall size 4800 x 600mm high ***(W-21)***	1	No.		-
G	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
H	Panes over 0.1sm but not exceeding 0.50sm	125	Sm		-
I	Ditto but obscure to toilets	5	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	130	Sm		-
B	Ditto, externally	130	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 7/8				-
	From page 7/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in Truss '1': 13 No: spanning 11425 mm long and hoisting 14100 mm high from existing ground level				
A	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Top Chord*	1,517	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Bottom Chord*	1,517	Kg		-
C	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Internal Members*	2,733	Kg		-
D	125 x 125 x 5mm plate	33	Kg		-
E	M12 rawl bolts	208	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	2,484	Kg		-
G	75mm dia. CHS bracings	98	Lm		-
H	12mm dia. sag rods	163	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering:	836	Sm		-
	Flashing				
J	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	90	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Rainwater goods				
A	300 mm diameter fulbora outlet	12	No		-
B	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	176	Lm		-
C	Extra over down pipe for swanneck	12	No		-
D	Ditto for shoe	12	No		-
E	Allow a provisional sum of Kenya Shillings Five Hundred Thousand for alucobond covering to MS girder		Sum		500,000.00
	Carried to Collection Below				
	Collection				
	From page 7/10				-
	From page 7/11 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6 : BALUSTRADING				
	Corridor Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	55	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	95	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish	720	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	720	Sm		-
C	100 x 8mm thick skirting	375	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	120	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	120	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	1,650	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	1,650	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	875	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint to steel trowelled plastered surfaces				
B	Plastered walls and concrete surfaces: externally	875	Sm		-
	Ceiling Finishes				
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
C	Ceiling	773	Sm		-
	Heavy Duty Roof Insulation				
D	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	773	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	12mm thick suspended **moisture-resistant** gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
A	Ceiling - *Passage*	95	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
B	Ceiling surfaces: internally	135	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
C	Ceiling surfaces: internally	135	Sm		-
	Flat Roof Finishes - Roof Tank Slab				
	Water Proofing Membrane				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
D	50mm Thick screed: to flat roof: to receive APP (m.s.)	135	Sm		-
E	Extra over for working around 200 mm outlets	4	No.		-
	APP Membrane to weigh 4 kg/sq.mt (or 3 mm thick): stone chipped finish: 100 mm side laps and 150 mm end laps: bonding between layers: with and including bituminous primer and bonding to cement sand screed base (m/s): laid to falls				
F	To flat roofs	135	Sm		-
E	Ditto; Parapet walls (200mm high)	7	Sm		-
F	Working roofing membrane to rainwater 200 mm diameter outlets and dishing around them (m/s)	4	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Supply and fix paving tiles, laid in approved patterns on prepared backings, include for matching grouts, spacers etc.				
A	30mm Thick tiles, Terra Cotta / Black shade, laid in cologne / tyne and Architect's patterns; including 20mm thick cement and sand (1:4) screed below	135	Sm		-
	Rainwater Goods (PVC)				
B	300 mm diameter fulbora outlet	4	No		-
C	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	30	Lm		-
D	Extra for shoe	4	No		-
E	Extra for swanneck	4	No		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
F	50mm thick screed: to flat roof: to receive black bituminous paint	103	Sm		-
G	Extra over for working around 200 mm outlets	12	No.		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
H	Plastered concrete gutter surfaces	103	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 7/13				-
	From page 7/14				-
	From page 7/15				-
	From page 7/16				-
	From page 7/17				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	14	Lm		-
D	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	4	Sm		-
G	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Stainless steel channel				
A	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
B	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	8	No.		-
	Carried to Collection Below				-
	Collection				
	From page 7/19				-
	From page 7/20 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		7/2		-
2	**WALLING**		7/3		-
3	**DOORS**		7/7		-
4	**WINDOWS**		7/9		-
5	**ROOF**		7/11		-
6	**BALUSTRADING**		7/12		-
7	**FINISHES**		7/18		-
8	**JOINERY FIXTURES**		7/20		-
	TOTAL FOR BLOCK A - SECOND FLOOR CARRIED TO SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	BLOCK A SUMMARY				
1	**SUBSTRUCTURES**		4/1		-
2	**GROUND FLOOR**		5/18		-
3	**FIRST FLOOR**		6/18		-
4	**SECOND FLOOR**		7/21		-
	TOTAL FOR BLOCK A CARRIED TO MAIN SUMMARY				-

BLOCK B SUBSTRUCTURES

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1: SUBSTRUCTURES				
	Plinth Finishes				
	25 mm Thick cement and sand (1:4) rendering: on concrete or stonework: wood float finished: to				
A	Plinths: externally	52	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
B	Plinths: externally	52	Sm		-
	TOTAL FOR BLOCK B - SUBSTRUCTURES CARRIED TO SUMMARY				**-**

BLOCK B GROUND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	42	Sm		-
B	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	464	Sm		-
	Vent block walling: minimum crashing strength 7Kn/mm Bhimji Ramji or equal and approved				
C	200 mm thick walls	50	Sm		-
	Lintels				
D	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	50	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
E	200 mm thick walls	22	Sm		-
F	200 mm thick walls - *Mezzanine Floor*	15	Sm		-
G	100 mm thick walls	15	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100 x 50 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Double door overall size 1800 x 3300mm high ***(D-02)***	4	No		-
B	Ditto but overall size 1500 x 3300mm high ***(D-06)***	1	No		-
C	Ditto but single leaf door overall size 1050 x 3300mm high ***(D-03)***	1	No		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel door surfaces internally	40	Sm		-
E	Ditto, externally	40	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Steel louvre doors Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
	TIMBER DOORS **Flush doors: B.S. 459** 45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
B	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	3	No		-
C	Ditto but overall size 900 x 2400mm high ***(D-08)*** *- Mezzanine Floor*	2	No		-
D	Ditto but overall size 900 x 2700mm high ***(D-09)***	2	No		-
E	Ditto but overall size 1050 x 2400mm high ***(D-15)***	1	No		-
F	Ditto but overall size 900 x 2100mm high; but without fanlight ***(D-16)***	2	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
A	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	8	No		-
B	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	1	No		-
	Wrot Mahogany: prime grade				
C	150 x 50mm door frame with three labours	105	Lm		-
D	Ditto but transomes	17	Lm		-
E	40 x 15 mm Architrave: plugged	105	Lm		-
F	30 x 30 mm Quadrant: plugged	105	Lm		-
G	15mm Moulded glazing beads	17	Lm		-
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
H	3-Lever mortice door lock complete with aluminium handles and set lever furniture	17	No		-
I	38 mm Diameter rubber door stop	32	No		-
J	100 x 75mm Heavy duty steel hinges	29	Prs		-
K	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	128	No		-
L	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	64	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
A	General timber surfaces 100 - 200mm girth	105	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish : on wood surfaces: to				
B	General timber surfaces 0 - 100mm girth	227	Lm		-
C	General timber surfaces 100 - 200mm girth	122	Lm		-
D	General timber surfaces	75	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 9/2				-
	From page 9/3				-
	From page 9/4				-
	From page 9/5 Above				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	70	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 500 x 1950mm high ***(W-14)***	2	No.		-
C	Ditto but overall size 2000 x 1950mm high ***(W-16)***	10	No.		-
D	Ditto but overall size 2700 x 1950mm high ***(W-17)***	7	No.		-
E	Ditto but overall size 1800 x 1950mm high ***(W-18)***	1	No.		-
F	Ditto but overall size 2000 x 600mm high ***(W-20)***	1	No.		-
G	Ditto but overall size 2000 x 600mm high ***(W-20)*** *- Mezzanine Floor*	1	No.		-
H	Ditto but overall size 4800 x 600mm high ***(W-21)***	1	No.		-
I	Ditto but overall size 4800 x 600mm high ***(W-21)*** *- Mezzanine Floor*	1	No.		-
J	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
K	Ditto but overall size 1000 x 1950mm high ***(W-24)***	3	No.		-
L	Ditto but overall size 1500 x 1800mm high ***(W-25)***	2	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
A	Panes over 0.1sm but not exceeding 0.50sm	95	Sm		-
B	Ditto but obscure to toilets	10	Sm		-
	Louvre Windows				
	Mild steel louvres: comprising 50 x 25mm frame all round: infilled in 2mm thick ms plate bent to shape and approval of the Architect:				
C	Mild steel louvre vents overall size 2700 x 1050mm high ***(V-01)***	6	No.		-
D	Ditto but overall size 6000 x 1050mm high ***(V-02)***	2	No.		-
E	Ditto but overall size 7700 x 1050mm high ***(V-03)***	4	No.		-
F	Ditto but overall size 7275 x 1050mm high ***(V-05)***	1	No.		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
G	General surfaces of steel casement surfaces internally	175	Sm		-
H	Ditto, externally	175	Sm		-
	Weld Mesh Screen				
	Weld mesh screen comprising of 100 x 100 ms galvanized weld mesh with 4mm thick wire fixed at 45 degrees sandwitched between the frames; 100 x 50 ms border frame; 25 x 40mm ms frame at 1200mm c/c; 75 x 25mm ms frame fixed on the outer side inclined on various angle; all primed and finished with gun metal grey paint to match window frame; all to approval of the Architect				
I	Weld mesh	42	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Mild Steel Scaffold Like Feature Mild steel scaffold like feature consisting of 100 x 50 ms border frame fixed on RC beam; 150mm dia ms tube embedded into RC base to S.E's detail; 100 x 50 ms frame at 2400 c/c starting at 2700mm from ground floor level; 100 x 50 ms struts frame; 50 x 25mm ms frames; all primed and finished with gun metal grey paint to match window frame; all to approval of the Architect				
A	Mild steel scaffold like feature	190	Sm		-
	Carried to Collection				-
	Collection				
	From page 9/6				-
	From page 9/7				-
	From page 9/8 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	45	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	65	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	62	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	62	Lm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	50mm thick premix class 30 concrete flooring including hardener approved by the Architect and other additives necessary for polishing - *To workshops*	650	Sm		-
B	Ditto but 100mm high hardened screed skirting - *To workshops*	185	Lm		-
C	32 mm thick finished to receive porcelain tiles floor finish - *Other GF areas*	115	Sm		-
D	32 mm thick finished to receive porcelain tiles floor finish - *Mezzanine Floor*	99	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
E	Floor: fixing with approved quality adhesive - *Ground Floor*	115	Sm		-
F	Ditto but to mezzanine floor	99	Sm		-
G	100 x 8mm thick skirting - *Ground Floor*	85	Lm		-
H	Ditto but to mezzanine floor	67	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	110	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	110	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	2,200	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	2,200	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	580	Sm		-
B	Extra over ditto for 20mm thick square grooves; to approval by the Architect	40	Lm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to: to steel trowelled plastered surfaces				
C	Plastered walls and concrete surfaces: externally	580	Sm		-
	Ceiling Finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Ceiling surfaces: internally	789	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Ceiling surfaces: internally	789	Sm		-
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
F	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	42	Sm		-
G	Ditto: 300 mm wide treads	182	Lm		-
H	Ditto: 150 mm high risers	186	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
A	Floor: fixing with approved quality adhesive	42	Sm		-
B	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	182	Lm		-
C	Ditto: to 150 mm high risers	186	Lm		-
D	100 x 8mm thick skirting cut to profile of steps	41	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
E	Soffits: internally	45	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
F	Plastered ceiling soffits: internally	45	Sm		-
	Stainless Steel Expansion Joint Cover Plate				
G	Supply and fix 300mm wide stainless steel expansion joint cover plate fixed to RC slab; as SJP-600SS or other equivalent as manufactured by Allway Expansion; all to approval of the Architect	13	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 9/10				-
	From page 9/11				-
	From page 9/12				-
	From page 9/13				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	14	Lm		-
D	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	4	Sm		-
G	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Stainless steel channel				
A	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
B	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	8	No.		-
	Carried to Collection Below				-
	Collection				
	From page 9/15				-
	From page 9/16 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**WALLING**		9/1		-
2	**DOORS**		9/5		-
3	**WINDOWS**		9/8		-
4	**BALUSTRADING**		9/9		-
5	**FINISHES**		9/14		-
6	**JOINERY FIXTURES**		9/16		-
	TOTAL FOR BLOCK B - GROUND FLOOR CARRIED TO MAIN SUMMARY				-

BLOCK B FIRST FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	5	Cm		-
B	Beams and Ring beams	86	Cm		-
C	Upstand beams	2	Cm		-
D	Concrete Gutter	18	Cm		-
D	175mm thick suspended first floor slab	160	Sm		-
E	175mm thick landings	30	Sm		-
F	Staircase	7	Cm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
G	D8 Bars	3,594	Kg		-
H	D10 Bars	3,373	Kg		-
I	D12 Bars	2,633	Kg		-
J	D16 Bars	1,308	Kg		-
K	D20 Bars	3,388	Kg		-
L	D25 Bars	10,761	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sawn formwork: to				
A	Vertical sides of columns	400	Sm		-
B	Sides and soffits: beams	680	Sm		-
C	Sides: upstand beams	21	Sm		-
D	Sides and soffits of concrete gutter	150	Sm		-
E	Soffits of 175mm thick suspended second floor slab	160	Sm		-
F	Edges of slabs: over 150mm but not exceeding 225mm girth	78	Lm		-
F	Risers: over 150 mm but not exceeding 225 mm girth	115	Lm		-
G	Staircase strings: cut to profile of steps	7	Sm		-
H	Soffits of landings	30	Sm		-
I	Sloping soffits: staircases	25	Sm		-
	Expansion Joint				
J	25mm thick "Styrofoam" filler between walls, columns etc	10	Sm		-
K	20 x 10mm deep Hot applied sealant "Bitubond"	15	Lm		-
L	25mm thick jumbolene sealant cord	15	Lm		-
	Carried to Collection Below				-
	Collection				
	From page 10/1				-
	From page 10/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	55	Sm		-
B	Ditto but parapet walls	185	Sm		-
C	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	145	Sm		-
	Copings				
	Approved pre-cast concrete coping: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
D	300 x 50 mm Thick coping; twice weathered and throated	70	Lm		-
	Lintels				
E	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	40	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
F	200 mm thick walls	20	Sm		-
G	100 mm thick walls	15	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel louvre doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
	TIMBER DOORS				
	Mahogany Doors: B.S. 1186 part 1 and B.S. 4047				
B	Solid mahogany single leaf door overall size 900 x 3000 mm high door:; with 900 x 1050mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-04)***	10	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	3	No		-
B	Ditto but overall size 1050 x 2400mm high ***(D-15)***	1	No		-
C	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	8	No		-
D	Ditto but double leaf overall size 1200 x 2050mm high; but fitted above 100mm high raised threshold ***(D-19)***	1	No		-
	Wrot Mahogany: prime grade				
E	150 x 50mm door frame with three labours	145	Lm		-
F	Ditto but transomes	22	Lm		-
G	40 x 15 mm Architrave: plugged	145	Lm		-
H	30 x 30 mm Quadrant: plugged	145	Lm		-
I	15mm Moulded glazing beads	30	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
A	5-Lever mortice door lock complete with aluminium handles and set lever furniture	10	No		-
B	3-Lever mortice door lock complete with aluminium handles and set lever furniture	13	No		-
C	38 mm Diameter rubber door stop	24	No		-
D	100 x 75mm Heavy duty steel hinges	35	Prs		-
E	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	96	No		-
F	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	48	No		-
	Prepare and apply one coat aluminium hardwood primer : on timber surfaces into contact with masonry or concrete: to				
G	General timber surfaces 100 - 200mm girth	145	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
H	General timber surfaces 0 - 100mm girth	320	Lm		-
I	General timber surfaces 100 - 200mm girth	167	Lm		-
J	General timber surfaces	110	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 10/4				-
	From page 10/5				-
	From page 10/6				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	55	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 3000 x 240mm high ***(W-03)***	5	No.		-
C	Ditto but overall size 2700 x 2400mm high ***(W-10)***	6	No.		-
D	Ditto but overall size 2000 x 2400mm high ***(W-15)***	6	No.		-
E	Ditto but overall size 2000 x 600mm high ***(W-20)***	1	No.		-
F	Ditto but overall size 4800 x 600mm high ***(W-21)***	1	No.		-
G	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
H	Panes over 0.1sm but not exceeding 0.50sm	105	Sm		-
I	Ditto but obscure to toilets	5	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	110	Sm		-
B	Ditto, externally	110	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 10/8				-
	From page 10/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in Truss '1': 11 No: spanning 11425 mm long and hoisting 10500 mm high from existing ground level				
A	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Top Chord*	1,323	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Bottom Chord*	1,323	Kg		-
C	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Internal Members*	2,358	Kg		-
D	125 x 125 x 5mm plate	28	Kg		-
E	M12 rawl bolts	176	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	2,450	Kg		-
G	75mm dia. CHS bracings	98	Lm		-
H	12mm dia. sag rods	135	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering:	615	Sm		-
	Flashing				
J	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	72	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Rainwater goods				
A	300 mm diameter fulbora outlet	9	No		-
B	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	95	Lm		-
C	Extra over down pipe for swanneck	9	No		-
D	Ditto for shoe	9	No		-
	Carried to Collection Below				-
	Collection				
	From page 10/10				-
	From page 10/11 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	30	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	55	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	36	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	36	Lm		-
	Corridor Balustrading				
E	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	55	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of steel balustrading - Measured both sides	95	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish - *All areas*	690	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	690	Sm		-
C	100 x 8mm thick skirting	310	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	110	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	110	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	1,450	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	1,450	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	425	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint:to steel trowelled plastered surfaces				
B	Plastered walls and concrete surfaces: externally	425	Sm		-
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick, mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
C	Ceiling	575	Sm		-
	Heavy Duty Roof Insulation				
D	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	575	Sm		-
	12mm thick suspended **moisture-resistant** gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
E	Ceiling - *Passage*	60	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	30	Sm		-
B	Ditto: 300 mm wide treads	115	Lm		-
C	Ditto: 150 mm high risers	120	Lm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tile: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
D	Floor: fixing with approved quality adhesive	30	Sm		-
E	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	115	Lm		-
F	Ditto: to 150 mm high risers	120	Lm		-
G	100 x 8mm thick skirting cut to profile of steps	41	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
H	Soffits: internally	25	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered ceiling soffits: internally	25	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
A	50mm thick screed: to flat roof: to receive black bituminous paint	75	Sm		-
B	Extra over for working around 200 mm outlets	9	No.		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
C	Plastered concrete gutter surfaces	75	Sm		-
	Stainless Steel Expansion Joint Cover Plate				
D	Supply and fix 300mm wide stainless steel expansion joint cover plate fixed to RC slab; as SJP-600SS or other equivalent as manufactured by Allway Expansion; all to approval of the Architect	13	Lm		-
	Carried to Collection Below				-
	Collection				
	From page 10/13				-
	From page 10/14				-
	From page 10/15				-
	From page 10/16				-
	From page 10/17 Above				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	14	Lm		-
D	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	4	Sm		-
G	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Stainless steel channel				
A	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
B	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	8	No.		-
	Carried to Collection Below				-
	Collection				
	From page 10/18				-
	From page 10/19 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		10/2		-
2	**WALLING**		10/3		-
3	**DOORS**		10/7		-
4	**WINDOWS**		10/9		-
5	**ROOF**		10/11		-
6	**BALUSTRADING**		10/12		-
7	**FINISHES**		10/17		-
8	**JOINERY FIXTURES**		10/19		-
	TOTAL FOR BLOCK B - FIRST FLOOR CARRIED TO MAIN SUMMARY				-

BLOCK B SECOND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	10	Cm		-
B	Ring beams	26	Cm		-
C	Upstand beams	1	Cm		-
D	Concrete Gutter	4	Cm		-
E	150mm thick suspended roof tank slab	110	Sm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
F	D8 Bars	1,496	Kg		-
G	D10 Bars	2,181	Kg		-
H	D12 Bars	602	Kg		-
I	D16 Bars	816	Kg		-
J	D20 Bars	1,636	Kg		-
K	D25 Bars	3,917	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sawn formwork: to				
A	Vertical sides of columns	75	Sm		-
B	Sides and soffits: beams	205	Sm		-
C	Sides: upstand beams	7	Sm		-
D	Sides and soffits of concrete gutter	30	Sm		-
E	Soffits of 150mm thick suspended roof tank slab	110	Sm		-
F	Edges of slabs: over 150mm but not exceeding 225mm girth	48	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 11/1				-
	From page 11/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	165	Sm		-
B	Ditto but parapet walls	72	Sm		-
C	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	33	Sm		-
	Lintels				
D	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	7	Lm		-
	Copings				
	Approved pre-cast concrete coping: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
E	300 x 50 mm Thick coping; twice weathered and throated	40	Lm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	TIMBER DOORS				
	Mahogany Doors: B.S. 1186 part 1 and B.S. 4047				
A	Solid mahogany single leaf door overall size 900 x 3000 mm high door:; with 900 x 1050mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-04)***	2	No		-
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
B	Double leaf solid core flush door overall size 1200 x 2050mm high; but fitted above 100mm high raised threshold ***(D-19)***	1	No		-
	Wrot Mahogany: prime grade				
C	150 x 50mm door frame with three labours	25	Lm		-
D	Ditto but transomes	5	Lm		-
E	40 x 15 mm Architrave: plugged	25	Lm		-
F	30 x 30 mm Quadrant: plugged	25	Lm		-
G	15mm Moulded glazing beads	5	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
A	5-Lever mortice door lock complete with aluminium handles and set lever furniture	2	No		-
B	3-Lever mortice door lock complete with aluminium handles and set lever furniture	1	No		-
C	38 mm Diameter rubber door stop	4	No		-
D	100 x 75mm Heavy duty steel hinges	6	Prs		-
E	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	16	No		-
F	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	8	No		-
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
G	General timber surfaces 100 - 200mm girth	25	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
H	General timber surfaces 0 - 100mm girth	55	Lm		-
I	General timber surfaces 100 - 200mm girth	30	Lm		-
J	General timber surfaces	20	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 11/4				-
	From page 11/5				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	10	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 3000 x 240mm high ***(W-03)***	1	No.		-
C	Ditto but overall size 2700 x 2400mm high ***(W-10)***	2	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
D	Panes over 0.1sm but not exceeding 0.50sm	22	Sm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
E	General surfaces of steel casement surfaces internally	22	Sm		-
F	Ditto, externally	22	Sm		-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in Truss '1': 4 No: spanning 11425 mm long and hoisting 14100 mm high from existing ground level				
A	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Top Chord*	403	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Bottom Chord*	403	Kg		-
C	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Internal Members*	690	Kg		-
D	125 x 125 x 5mm plate	10	Kg		-
E	M12 rawl bolts	48	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	477	Kg		-
G	75mm dia. CHS bracings	15	Lm		-
H	12mm dia. sag rods	54	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering:	135	Sm		-
	Flashing				
J	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	40	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Rainwater goods				
A	300 mm diameter fulbora outlet	2	No		-
B	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	40	Lm		-
C	Extra over down pipe for swanneck	2	No		-
D	Ditto for shoe	2	No		-
	Carried to Collection Below				-
	Collection				
	From page 11/8				-
	From page 11/9 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6 : BALUSTRADING				
	Corridor Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	25	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	95	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish - *All areas*	160	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	160	Sm		-
C	100 x 8mm thick skirting	56	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: internally	350	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Plastered walls and concrete surfaces: internally	350	Sm		-
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
C	Walls and concrete: externally	309	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to steel trowelled plastered surfaces				
D	Plastered walls and concrete surfaces: externally	309	Sm		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
E	50mm thick screed: to flat roof: to receive black bituminous paint	16	Sm		-
F	Extra over for working around 200 mm outlets	2	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
A	Plastered concrete gutter surfaces	16	Sm		-
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick, mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
B	Ceiling	130	Sm		-
	Heavy Duty Roof Insulation				
C	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	130	Sm		-
	12mm thick suspended **moisture-resistant** gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
E	Ceiling - *Passage*	15	Sm		-
	Stainless Steel Expansion Joint Cover Plate				
F	Supply and fix 300mm wide stainless steel expansion joint cover plate fixed to RC slab; all to approval of the Architect	13	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 11/11				-
	From page 11/12				-
	From page 11/13				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		11/2		-
2	**WALLING**		11/3		-
3	**DOORS**		11/6		-
4	**WINDOWS**		11/7		-
5	**ROOF**		11/9		-
6	**BALUSTRADING**		11/10		-
7	**FINISHES**		11/14		-
	TOTAL FOR BLOCK B - SECOND FLOOR CARRIED TO MAIN SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	BLOCK B SUMMARY				
1	**SUBSTRUCTURES**		8/1		-
2	**GROUND FLOOR**		9/17		-
3	**FIRST FLOOR**		10/20		-
4	**SECOND FLOOR**		11/15		-
	TOTAL FOR BLOCK B CARRIED TO MAIN SUMMARY				-

BLOCK C SUBSTRUCTURES

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1: SUBSTRUCTURES				
	Plinth Finishes				
	25 mm Thick cement and sand (1:4) rendering: on concrete or stonework: wood float finished: to				
A	Plinths: externally	65	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
B	Plinths: externally	65	Sm		-
	TOTAL FOR BLOCK C - SUBSTRUCTURES CARRIED TO MAIN SUMMARY				**-**

BLOCK C GROUND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	56	Sm		-
B	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	440	Sm		-
	Lintels				
C	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	15	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
E	200 mm thick walls	21	Sm		-
F	200 mm thick walls - *Mezzanine Floor*	10	Sm		-
G	100 mm thick walls	10	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 50 x 25 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Double door overall size 1800 x 3300mm high ***(D-02)***	4	No		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel door surfaces internally	30	Sm		-
C	Ditto, externally	30	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Steel louvre doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
B	Ditto but overall size 900 x 2400mm high ***(D-14)*** *- Mezzanine Floor*	2	No		-
	TIMBER DOORS				
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
C	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	4	No		-
D	Ditto but overall size 900 x 2700mm high ***(D-09)***	2	No		-
E	Ditto but overall size 900 x 2100mm high; but without fanlight ***(D-16)***	2	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
A	Overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	6	No		-
B	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Wrot Mahogany: prime grade				
C	150 x 50mm door frame with three labours	90	Lm		-
D	Ditto but transomes	15	Lm		-
E	40 x 15 mm Architrave: plugged	90	Lm		-
F	30 x 30 mm Quadrant: plugged	90	Lm		-
G	15mm Moulded glazing beads	15	Lm		-
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
H	3-Lever mortice door lock complete with aluminium handles and set lever furniture	16	No		-
I	38 mm Diameter rubber door stop	30	No		-
J	100 x 75mm Heavy duty steel hinges	24	Prs		-
K	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	120	No		-
L	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	60	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
A	General timber surfaces 100 - 200mm girth	90	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
B	General timber surfaces 0 - 100mm girth	185	Lm		-
C	General timber surfaces 100 - 200mm girth	100	Lm		-
D	General timber surfaces	65	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 13/2				-
	From page 13/3				-
	From page 13/4				-
	From page 13/5 Above				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	65	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Ditto but overall size 2000 x 1950mm high ***(W-16)***	16	No.		-
C	Ditto but overall size 2700 x 1950mm high ***(W-17)***	4	No.		-
D	Ditto but overall size 2000 x 600mm high ***(W-20)***	2	No.		-
E	Ditto but overall size 2000 x 600mm high ***(W-20)*** *- Mezzanine Floor*	2	No.		-
F	Ditto but overall size 3200 x 600mm high ***(W-22)***	1	No.		-
G	Ditto but overall size 3200 x 600mm high ***(W-22)*** *- Mezzanine Floor*	1	No.		-
H	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
I	Ditto but overall size 1200 x 600mm high ***(W-23)*** *- Mezzanine Floor*	1	No.		-
J	Ditto but overall size 1000 x 1950mm high ***(W-24)***	2	No.		-
K	Ditto but overall size 1500 x 1800mm high ***(W-25)***	2	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
A	Panes over 0.1sm but not exceeding 0.50sm	95	Sm		-
B	Ditto but obscure to toilets	10	Sm		-
	Louvre Windows				
	Mild steel louvres: comprising 50 x 25mm frame all round: infilled in 2mm thick ms plate bent to shape and approval of the Architect:				
C	Ditto but overall size 6000 x 1050mm high ***(V-02)***	4	No.		-
D	Ditto but overall size 8700 x 1050mm high ***(V-04)***	4	No.		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
E	General surfaces of steel casement surfaces internally	160	Sm		-
F	Ditto, externally	160	Sm		-
	Weld Mesh Screen				
	Weld mesh screen comprising of 100 x 100 ms galvanized weld mesh with 4mm thick wire fixed at 45 degrees sandwitched between the frames; 100 x 50 ms border frame; 25 x 40mm ms frame at 1200mm c/c; 75 x 25mm ms frame fixed on the outer side inclined on various angle; all primed and finished with gun metal grey paint to match window frame; all to approval of the Architect				
G	Weld mesh	53	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 13/6				-
	From page 13/7				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in roof above Ground Floor - 125 x 75 x 3mm thick RHS rafters spaced @ 1650mm c/c				
A	125 x 75 x 3mm thick RHS weighing 9.43 kg/m - *Rafters*	820	Kg		-
B	125 x 125 x 5mm plate	21	Kg		-
C	M12 rawl bolts	136	No.		-
	Other members: Unframed steel members				
D	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	766	Kg		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
E	Roof covering	160	Sm		-
	Flashing				
F	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	40	Lm		-
	Rainwater goods				
G	300 mm diameter fulbora outlet	8	No		-
H	150 mm diameter downpipe	45	Lm		-
I	Extra over down pipe for swanneck	8	No		-
J	Ditto for shoe	8	No		-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	14	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	24	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	26	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	26	Lm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	50mm thick premix class 30 concrete flooring including hardener approved by the Architect and other additives necessary for polishing - *To workshops*	640	Sm		-
B	Ditto but 100mm high hardened screed skirting - *To workshops*	170	Lm		-
C	32 mm thick finished to receive porcelain tiles floor finish - *Other GF areas*	225	Sm		-
D	32 mm thick finished to receive porcelain tiles floor finish - *Mezzanine Floor*	75	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
E	Floor: fixing with approved quality adhesive - *Ground Floor*	225	Sm		-
F	Ditto but to mezzanine floor	75	Sm		-
G	100 x 8mm thick skirting - *Ground Floor*	70	Lm		-
H	Ditto but to mezzanine floor	67	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	110	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	110	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	2,050	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	2,050	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	550	Sm		-
B	Extra over ditto for 20mm thick square grooves; to approval by the Architect	60	Lm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to steel trowelled plastered surfaces				
C	Plastered walls and concrete surfaces: externally	550	Sm		-
	Ceiling Finishes				
	Suspended Gypsum Ceiling				
	12mm thick suspended gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
D	Ceiling	150	Sm		-
E	Ditto but vertical ceiling to bulkheads (Provisional)	35	Sm		-
	Heavy Duty Roof Insulation				
F	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	150	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Ceiling surfaces: internally	635	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Ceiling surfaces: internally	635	Sm		-
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
C	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	13	Sm		-
D	Ditto: 300 mm wide treads	68	Lm		-
E	Ditto: 150 mm high risers	72	Lm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
E	Floor: fixing with approved quality adhesive	13	Sm		-
F	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	68	Lm		-
G	Ditto: to 150 mm high risers	72	Lm		-
H	100 x 8mm thick skirting cut to profile of steps	25	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Soffits: internally	22	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Plastered ceiling soffits: internally	22	Sm		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
C	50mm thick screed: to flat roof: to receive black bituminous paint	65	Sm		-
D	Extra over for working around 200 mm outlets	8	No.		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
E	Plastered concrete gutter surfaces	65	Sm		-
	Stainless Steel Expansion Joint Cover Plate				
F	Supply and fix 300mm wide stainless steel expansion joint cover plate fixed to RC slab; all to approval of the Architect	13	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 13/11				-
	From page 13/12				-
	From page 13/13				-
	From page 13/14				-
	From page 13/15				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Workshops*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	100 mm thick suspended reinforced concrete worktop including recessing 100 mm deep into wall to achieve support for worktop	6	Sm		-
B	Extra over ditto for making hole size 500 x 300mm for sink	10	No		-
C	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	6	Sm		-
	Insitu concrete (1:3:6):				
D	100 mm Thick bottom mass concrete plinth	6	Sm		-
	Wrot formwork				
E	Edges of 100 mm worktop	15	Lm		-
F	Edges of 100 mm plinth	10	Lm		-
G	Soffits of worktop	6	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 4 mm second coat of cement/lime putty/sand (1:1:6): steel trowelled: on masonry or concrete: to				
H	Soffits of vanity top	6	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered sides of concrete walls: internally	6	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	Surfaces of concrete plinth	6	Sm		-
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
B	10 mm thick backing: to receive Ceramic tiles	20	Sm		-
	300 x 300 x 8 mm Approved first quality **Ceramic** tiles: to regular pattern: colour to architect's scheme: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement **all to approval by the Architect**				
C	Walls and worktop: internally on prepared backing (m.s.)	20	Sm		-
	Low Level Cabinets				
D	Supply and fix low level bathroom cabinets overall size 4300 x 600 x 900mm high comprising 20mm thick laminated MDF in 1 No. Shelf; 8 No. cabinet doors average size 550 x 800mm high; complete with iron mongery for doors; Worktops and other concrete works (m/s); All to Architect's detail and approval	2	No		-
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
E	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
F	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wrot formwork				
A	Edges of 100 mm worktop	14	Lm		-
B	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
C	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
D	Worktop	4	Sm		-
E	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Stainless steel channel				
F	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
G	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	6	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 13/17				-
	From page 13/18				-
	From page 13/19				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**WALLING**		13/1		-
2	**DOORS**		13/5		-
3	**WINDOWS**		13/8		-
4	**ROOF**		13/9		-
5	**BALUSTRADING**		13/10		-
6	**FINISHES**		13/16		-
7	**JOINERY FIXTURES**		13/20		-
	TOTAL FOR BLOCK C - GROUND FLOOR CARRIED TO MAIN SUMMARY				-

BLOCK C FIRST FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete **class 25/20:** in				
A	Columns	37	Cm		-
B	Ring beams	36	Cm		-
C	Roof anchor beam - 550 x 200 (Casted on first floor slab)	4	Cm		-
D	150mm thick suspended roof tank slab	60	Sm		-
E	Upstand beams	1	Cm		-
F	Concrete Gutter	20	Cm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
G	D8 Bars	899	Kg		-
H	D10 Bars	447	Kg		-
I	D12 Bars	1,054	Kg		-
J	D16 Bars	909	Kg		-
K	D20 Bars	875	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sawn formwork: to				
A	Vertical sides of columns	350	Sm		-
B	Sides and soffits: beams	480	Sm		-
C	Sides and soffits: roof anchor beam	0	Sm		-
D	Sides: upstand beams	16	Sm		-
E	Sides and soffits of concrete gutter	160	Sm		-
F	Soffits of 150mm thick suspended roof tank slab	60	Sm		-
G	Edges of slabs: over 150mm but not exceeding 225mm girth	35	Lm		-
	Carried to Collection				-
	Collection				
	From page 14/1				-
	From page 14/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	53	Sm		-
B	Ditto but parapet walls	185	Sm		-
C	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	112	Sm		-
	Copings				
	Approved pre-cast concrete coping: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
D	300 x 50 mm Thick coping; twice weathered and throated	75	Lm		-
	Lintels				
E	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	40	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
F	200 mm thick walls	25	Sm		-
G	100 mm thick walls	10	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100 x 50 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Double door overall size 1800 x 3300mm high ***(D-02)***	3	No		-
B	Ditto but double door overall size 1500 x 3300mm high ***(D-06)***	1	No		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
C	General surfaces of steel door surfaces internally	30	Sm		-
D	Ditto, externally	30	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Steel louvre doors Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	1	No		-
	TIMBER DOORS **Flush doors: B.S. 459** 45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
B	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	4	No		-
C	Ditto but overall size 900 x 2700mm high ***(D-09)***	2	No		-
D	Ditto but overall size 900 x 2100mm high; but without fanlight ***(D-16)***	2	No		-
E	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	6	No		-
F	Ditto but overall size 700 x 2050mm high; but fitted above 100mm high raised threshold ***(D-18)***	2	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wrot Mahogany: prime grade				
A	150 x 50mm door frame with three labours	90	Lm		-
B	Ditto but transomes	15	Lm		-
C	40 x 15 mm Architrave: plugged	90	Lm		-
D	30 x 30 mm Quadrant: plugged	90	Lm		-
E	15mm Moulded glazing beads	15	Lm		-
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
F	3-Lever mortice door lock complete with aluminium handles and set lever furniture	16	No		-
G	38 mm Diameter rubber door stop	25	No		-
H	100 x 75mm Heavy duty steel hinges	24	Prs		-
I	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	100	No		-
J	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	50	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
A	General timber surfaces 100 - 200mm girth	90	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
B	General timber surfaces 0 - 100mm girth	185	Lm		-
C	General timber surfaces 100 - 200mm girth	100	Lm		-
D	General timber surfaces	65	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 14/4				-
	From page 14/5				-
	From page 14/6				-
	From page 14/7 Above				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	60	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Ditto but overall size 2000 x 1950mm high ***(W-16)***	10	No.		-
C	Ditto but overall size 2700 x 1950mm high ***(W-17)***	9	No.		-
D	Ditto but overall size 2000 x 6000mm high ***(W-20)***	2	No.		-
E	Ditto but overall size 3200 x 600mm high ***(W-22)***	1	No.		-
F	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
G	Ditto but overall size 1000 x 1950mm high ***(W-24)***	2	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
H	Panes over 0.1sm but not exceeding 0.50sm	95	Sm		-
I	Ditto but obscure to toilets	10	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	100	Sm		-
B	Ditto, externally	100	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 14/8				-
	From page 14/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in Truss '1': 10 No: spanning 11425 mm long and hoisting 10500 mm high from existing ground level				
A	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Top Chord*	1,319	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Bottom Chord*	1,319	Kg		-
C	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Internal Members*	2,377	Kg		-
D	125 x 125 x 5mm plate	29	Kg		-
E	M12 rawl bolts	184	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	2,486	Kg		-
G	75mm dia. CHS bracings	115	Lm		-
H	12mm dia. sag rods	126	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering:	605	Sm		-
	Flashing				
J	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	75	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Rainwater goods				
A	300 mm diameter fulbora outlet	10	No		-
B	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	95	Lm		-
C	Extra over down pipe for swanneck	10	No		-
D	Ditto for shoe	10	No		-
	Carried to Collection Below				-
	Collection				
	From page 14/10				-
	From page 14/11 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: BALUSTRADING				
	Corridor Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	45	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	70	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish	560	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	560	Sm		-
C	100 x 8mm thick skirting	260	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	110	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	110	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	1,150	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	1,150	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: externally	690	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to steel trowelled plastered surfaces				
B	Plastered walls and concrete surfaces: externally	690	Sm		-
	Ceiling Finishes				
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick , mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
C	Ceiling	570	Sm		-
	Heavy Duty Roof Insulation				
D	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	570	Sm		-
	12mm thick suspended **moisture-resistant** gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
E	Ceiling - *Passage*	76	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Ceiling surfaces: internally	60	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Ceiling surfaces: internally	60	Sm		-
	Flat Roof Finishes - Roof Tank Slab				
	Water Proofing Membrane				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
C	50mm Thick screed: to flat roof: to receive APP (m.s.)	60	Sm		-
D	Extra over for working around 200 mm outlets	4	No.		-
	APP Membrane to weigh 4 kg/sq.mt (or 3 mm thick): stone chipped finish: 100 mm side laps and 150 mm end laps: bonding between layers: with and including bituminous primer and bonding to cement sand screed base (m/s): laid to falls				
E	To flat roofs	60	Sm		-
F	Ditto; Parapet walls (200mm high)	7	Sm		-
G	Working roofing membrane to rainwater 200 mm diameter outlets and dishing around them (m/s)	4	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Supply and fix paving tiles, laid in approved patterns on prepared backings, include for matching grouts, spacers etc.				
A	30mm Thick tiles, Terra Cotta / Black shade, laid in cologne / tyne and Architect's patterns; including 20mm thick cement and sand (1:4) screed below	60	Sm		-
	Rainwater Goods (PVC)				
B	300 mm diameter fulbora outlet	4	No		-
C	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	30	Lm		-
D	Extra for shoe	4	No		-
E	Extra for swanneck	4	No		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
F	50mm thick screed: to flat roof: to receive black bituminous paint	85	Sm		-
G	Extra over for working around 200 mm outlets	10	No.		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
H	Plastered concrete gutter surfaces	85	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 14/13				-
	From page 14/14				-
	From page 14/15				-
	From page 14/16				-
	From page 14/17				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Workshops*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	100 mm thick suspended reinforced concrete worktop including recessing 100 mm deep into wall to achieve support for worktop	6	Sm		-
B	Extra over ditto for making hole size 500 x 300mm for sink	10	No		-
C	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	6	Sm		-
	Insitu concrete (1:3:6):				
D	100 mm Thick bottom mass concrete plinth	6	Sm		-
	Wrot formwork				
E	Edges of 100 mm worktop	15	Lm		-
F	Edges of 100 mm plinth	10	Lm		-
G	Soffits of worktop	6	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 4 mm second coat of cement/lime putty/sand (1:1:6): steel trowelled: on masonry or concrete: to				
H	Soffits of vanity top	6	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered sides of concrete walls: internally	6	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	Surfaces of concrete plinth	6	Sm		-
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
B	10 mm thick backing: to receive Ceramic tiles	15	Sm		-
	300 x 300 x 8 mm Approved first quality **Ceramic** tiles: to regular pattern: colour to architect's scheme: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement **all to approval by the Architect**				
C	Walls and worktop: internally on prepared backing (m.s.)	15	Sm		-
	Low Level Cabinets				
D	Supply and fix low level bathroom cabinets overall size 3300 x 600 x 900mm high comprising 20mm thick laminated MDF in 1 No. Shelf; 6 No. cabinet doors average size 550 x 800mm high; complete with iron mongery for doors; Worktops and other concrete works (m/s); All to Architect's detail and approval	1	No		-
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
E	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
F	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wrot formwork				
A	Edges of 100 mm worktop	14	Lm		-
B	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
C	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
D	Worktop	4	Sm		-
E	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Stainless steel channel				
F	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
G	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	6	No.		-
	Carried to Collection Below				-
	Collection				
	From page 14/19				-
	From page 14/20				-
	From page 14/21 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		14/2		-
2	**WALLING**		14/3		-
3	**DOORS**		14/7		-
4	**WINDOWS**		14/9		-
5	**ROOF**		14/11		-
6	**BALUSTRADING**		14/12		-
7	**FINISHES**		14/18		-
8	**JOINERY FIXTURES**		14/21		-
	TOTAL FOR BLOCK C - FIRST FLOOR CARRIED TO MAIN SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	BLOCK C SUMMARY				
1	**SUBSTRUCTURES**		12/1		-
2	**GROUND FLOOR**		13/21		-
3	**FIRST FLOOR**		14/22		-
	TOTAL FOR BLOCK C CARRIED TO MAIN SUMMARY				-

BLOCK D SUBSTRUCTURES

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1: SUBSTRUCTURES				
	Plinth Finishes				
	25 mm Thick cement and sand (1:4) rendering: on concrete or stonework: wood float finished: to				
A	Plinths: externally	50	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
B	Plinths: externally	50	Sm		-
	TOTAL FOR BLOCK D - SUBSTRUCTURES CARRIED TO MAIN SUMMARY				**-**

BLOCK D GROUND FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	RC works to each floor are measured starting from the finished surfaces of the (but not including) slab below upto and including floor slab above				
	Insitu reinforced concrete class 25/20: in				
A	Ramp beams	23	Cm		-
B	Bridge beams	14	Cm		-
C	175mm thick suspended bridge slab	50	Sm		-
D	175mm thick suspended ramp	140	Sm		-
E	175mm thick ramp landings	73	Sm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
F	Assorted Bars	5,576	Kg		-
	Sawn formwork: to				
G	Sides and soffits: ramp beams	230	Sm		-
H	Sides and soffits: bridge beams	80	Sm		-
I	Soffits of 175mm thick suspended bridge slab	50	Sm		-
J	Soffits of 175mm thick suspended ramp	140	Sm		-
K	Edges of ramp: over 150mm but not exceeding 225mm girth	217	Sm		-
	Expansion Joint				
L	25mm thick "Styrofoam" filler between walls, columns etc	30	Sm		-
M	20 x 10mm deep Hot applied sealant "Bitubond"	15	Lm		-
N	25mm thick jumbolene sealant cord	15	Lm		-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	40	Sm		-
B	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	348	Sm		-
	Vent block walling: minimum crashing strength 7Kn/mm Bhimji Ramji or equal and approved				
C	200 mm thick walls	50	Sm		-
	Lintels				
D	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	75	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
E	200 mm thick walls	46	Sm		-
F	150 mm thick walls	20	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 50 x 25 x 3mm RHS framing and gauge 16 mild steel plate welded on both sides with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Double door overall size 1800 x 3300mm high ***(D-02)***	6	No		-
B	Ditto but single leaf door overall size 1050 x 3300mm high ***(D-03)***	1	No		-
C	Ditto but double leaf door overall size 4000 x 3300mm high ***(D-12)***	2	No		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel door surfaces internally	55	Sm		-
E	Ditto, externally	55	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	TIMBER DOORS				
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2700mm high ***(D-09)***	16	No		-
B	Ditto but overall size 900 x 2100mm high; but without fanlight ***(D-16)***	2	No		-
	Wrot Mahogany: prime grade				
C	150 x 50mm door frame with three labours	115	Lm		-
D	Ditto but transomes	20	Lm		-
E	40 x 15 mm Architrave: plugged	115	Lm		-
F	30 x 30 mm Quadrant: plugged	115	Lm		-
G	15mm Moulded glazing beads	35	Lm		-
	Ironmongery				
	Supply and fixapproved ironmongery: matching screws: locks to include a set of 3 keys				
H	3-Lever mortice door lock complete with aluminium handles and set lever furniture	18	No		-
I	38 mm Diameter rubber door stop	35	No		-
J	100 x 75mm Heavy duty steel hinges	27	Prs		-
K	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	140	No		-
L	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	70	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
A	General timber surfaces 100 - 200mm girth	115	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
B	General timber surfaces 0 - 100mm girth	265	Lm		-
C	General timber surfaces 100 - 200mm girth	135	Lm		-
D	General timber surfaces	90	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 16/3				-
	From page 16/4				-
	From page 16/5 Above				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	75	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Ditto but overall size 2000 x 1950mm high ***(W-16)***	23	No.		-
C	Ditto but overall size 2700 x 1950mm high ***(W-17)***	2	No.		-
D	Ditto but overall size 1500 x 1800mm high ***(W-25)***	2	No.		-
E	Ditto but overall size 1200 x 1800mm high ***(W-26)***	11	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
F	Panes over 0.1sm but not exceeding 0.50sm	130	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Louvre Windows				
	Mild steel louvres: comprising 50 x 25mm frame all round: infilled in 2mm thick ms plate bent to shape and approval of the Architect:				
A	Mild steel louvre vents overall size 2700 x 1050mm high ***(V-01)***	2	No.		-
B	Ditto but overall size 6000 x 1050mm high ***(V-02)***	4	No.		-
C	Ditto but overall size 7700 x 1050mm high ***(V-03)***	5	No.		-
D	Ditto but overall size 7275 x 1050mm high ***(V-05)***	1	No.		-
E	Ditto but overall size 2000 x 1050mm high ***(V-06)***	3	No.		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of steel casement surfaces internally	220	Sm		-
G	Ditto, externally	220	Sm		-
	Weld Mesh Screen				
	Weld mesh screen comprising of 100 x 100 ms galvanized weld mesh with 4mm thick wire fixed at 45 degrees sandwitched between the frames; 100 x 50 ms border frame; 25 x 40mm ms frame at 1200mm c/c; 75 x 25mm ms frame fixed on the outer side inclined on various angle; all primed and finished with gun metal grey paint to match window frame; all to approval of the Architect				
H	Weld mesh	58	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 16/6				-
	From page 16/7 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in roof above Ground Floor - 125 x 75 x 3mm thick RHS rafters spaced @ 1650mm c/c				
A	125 x 75 x 3mm thick RHS weighing 9.43 kg/m - *Rafters*	1,070	Kg		-
B	125 x 125 x 5mm plate	27	Kg		-
C	M12 rawl bolts	180	No.		-
	Other members: Unframed steel members				
D	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	995	Kg		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
E	Roof covering	240	Sm		-
	Flashing				
F	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	50	Lm		-
	Rainwater goods				
G	300 mm diameter fulbora outlet	10	No		-
H	150 mm diameter downpipe	45	Lm		-
I	Extra over down pipe for swanneck	10	No		-
J	Ditto for shoe	10	No		-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6 : BALUSTRADING				
	Staircase Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	14	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	24	Sm		-
	Wall Mounted Handrail				
C	Wall mounted handrail consisting of 50mm dia m/s handrail; 15mm dia m/s bar bracket welded to mild steel plate fixed to wall with 12mm dia. stainless steel rawl bolts to manufacturers details: handrail to be 900mm high from finished floor level: all as per Architect's detail	26	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	26	Lm		-
	Ramp Balustrading				
E	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	155	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of steel balustrading - Measured both sides	278	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	50mm thick premix class 30 concrete flooring including hardener approved by the Architect and other additives necessary for polishing - *To workshops*	835	Sm		-
B	Ditto but 100mm high hardened screed skirting - *To workshops*	440	Lm		-
C	32 mm thick finished to receive porcelain tiles floor finish - *Other GF areas*	30	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
D	Floor: fixing with approved quality adhesive - *Ground Floor*	30	Sm		-
E	100 x 8mm thick skirting - *Ground Floor*	10	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Walls and concrete: internally	3,100	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Plastered walls and concrete surfaces: internally	3,100	Sm		-
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
C	Walls and concrete: externally	435	Sm		-
D	Extra over ditto for 20mm thick square grooves; to approval by the Architect	40	Lm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to steel trowelled plastered surfaces				
E	Plastered walls and concrete surfaces: externally	435	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ceiling Finishes				
	Suspended Gypsum Ceiling				
	12mm thick suspended gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
A	Ceiling	230	Sm		-
B	Ditto but vertical ceiling to bulkheads (Provisional)	45	Sm		-
	Heavy Duty Roof Insulation				
C	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	230	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Ceiling surfaces: internally	825	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Ceiling surfaces: internally	825	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Staircase Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	32 mm thick finished to receive porcelain tiles floor finish - *Landings*	13	Sm		-
B	Ditto: 300 mm wide treads	68	Lm		-
C	Ditto: 150 mm high risers	72	Lm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
D	Floor: fixing with approved quality adhesive	13	Sm		-
E	Ditto: to 300 mm wide treads with 3 No. non-slip grooves	68	Lm		-
F	Ditto: to 150 mm high risers	72	Lm		-
G	100 x 8mm thick skirting cut to profile of steps	25	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
H	Soffits: internally	21	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered ceiling soffits: internally	21	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ramp Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	32 mm thick finished to receive terrazzo floor finish	213	Sm		-
	Terrazzo Flooring				
	Polished Terrazzo; of approved colour; white cement and chippings (1:2); washed; with and including laying PVC dividing strips to match existing; to be carried out by an approved specialist sub-contractor; All as per approved sample by the Architect				
	20mm thick; 1 No. coat work to cement and sand screed (m/s) generally to;				
B	Floors including non-strip slip on ramps	213	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
C	Soffits: internally	213	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
D	Plastered ceiling soffits: internally	213	Sm		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
E	50mm thick screed: to flat roof: to receive black bituminous paint	87	Sm		-
F	Extra over for working around 200 mm outlets	10	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
A	Plastered concrete gutter surfaces	87	Sm		-
	Stainless Steel Expansion Joint Cover Plate				
B	Supply and fix 300mm wide stainless steel expansion joint cover plate fixed to RC slab; all to approval of the Architect	18	Lm		-
	Carried to Collection Below				-
	Collection				
	From page 16/10				-
	From page 16/11				-
	From page 16/12				-
	From page 16/13				-
	From page 16/14				-
	From page 16/15 Above				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Workshops*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	100 mm thick suspended reinforced concrete worktop including recessing 100 mm deep into wall to achieve support for worktop	3	Sm		-
B	Extra over ditto for making hole size 500 x 300mm for sink	4	No		-
C	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	3	Sm		-
	Insitu concrete (1:3:6):				
D	100 mm Thick bottom mass concrete plinth	3	Sm		-
	Wrot formwork				
E	Edges of 100 mm worktop	5	Lm		-
F	Edges of 100 mm plinth	5	Lm		-
G	Soffits of worktop	3	Sm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 4 mm second coat of cement/lime putty/sand (1:1:6): steel trowelled: on masonry or concrete: to				
H	Soffits of vanity top	3	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
I	Plastered sides of concrete walls: internally	3	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Cement and sand (1:4) screed: on concrete: wood floated: in				
A	Surfaces of concrete plinth	3	Sm		-
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
B	10 mm thick backing: to receive Ceramic tiles	15	Sm		-
	300 x 300 x 8 mm Approved first quality **Ceramic** tiles: to regular pattern: colour to architect's scheme: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement **all to approval by the Architect**				
C	Walls and worktop: internally on prepared backing (m.s.)	15	Sm		-
	Low Level Cabinets				
D	Supply and fix low level bathroom cabinets overall size 3200 x 600 x 900mm high comprising 20mm thick laminated MDF in 1 No. Shelf; 6 No. cabinet doors average size 550 x 800mm high; complete with iron mongery for doors; Worktops and other concrete works (m/s); All to Architect's detail and approval	1	No		-
	Carried to Collection Below				-
	Collection				
	From page 16/16				-
	From page 16/17 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		16/1		-
2	**WALLING**		16/2		-
3	**DOORS**		16/5		-
4	**WINDOWS**		16/7		-
5	**ROOF**		16/8		-
6	**BALUSTRADING**		16/9		-
7	**FINISHES**		16/15		-
8	**JOINERY FIXTURES**		16/17		-
	TOTAL FOR BLOCK D - GROUND FLOOR CARRIED TO MAIN SUMMARY				-

BLOCK D FIRST FLOOR

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 1 : SUPERSTRUCTURE CONCRETE				
	Insitu reinforced concrete class 25/20: in				
A	Columns	7	Cm		-
B	Ring beams	117	Cm		-
B1	Roof anchor beam - 550 x 200 (Casted on first floor slab)	4	Cm		-
C	Ramp beams	13	Cm		-
D	Bridge beams	14	Cm		-
E	175mm thick suspended ramp	94	Sm		-
F	175mm thick suspended bridge slab	50	Sm		-
G	175mm thick landings	8	Sm		-
H	175mm thick ramp landings	40	Sm		-
I	150mm thick suspended roof tank slab	100	Sm		-
J	Upstand beams	2	Cm		-
K	Concrete Gutter	22	Cm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
L	D8 Bars	2,905	Kg		-
M	D10 Bars	3,123	Kg		-
N	D12 Bars	1,282	Kg		-
O	D16 Bars	1,065	Kg		-
P	D20 Bars	3,500	Kg		-
Q	D25 Bars	8,054	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sawn formwork: to				
A	Vertical sides of columns	86	Sm		-
B	Sides and soffits: beams	850	Sm		-
C	Sides and soffits: roof anchor beam	0	Sm		-
D	Sides and soffits: ramp beams	110	Sm		-
E	Sides and soffits: bridge beams	80	Sm		-
F	Soffits of 175mm thick suspended bridge slab	50	Sm		-
G	Soffits of 175mm thick suspended ramp	94	Sm		-
H	Sides: upstand beams	22	Sm		-
I	Sides and soffits of concrete gutter	180	Sm		-
J	Soffits of 150mm thick suspended roof tank slab	100	Sm		-
K	Edges of bridge slab: over 150mm but not exceeding 225mm girth	99	Lm		-
L	Edges of ramp: over 150mm but not exceeding 225mm girth	118	Lm		-
M	Edges of slab: over 75mm but not exceeding 150mm girth	72	Lm		-
	Carried to Collection Below				-
	Collection				
	From page 17/1				-
	From page 17/2 Above				-
	TOTAL FOR R.C SUPERSTRUCTURE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2 : WALLING				
	EXTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
A	200 mm thick walls	25	Sm		-
A1	150 mm thick walls	30	Sm		-
B	Ditto but parapet walls	210	Sm		-
C	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	131	Sm		-
	Copings				
	Approved pre-cast concrete coping: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
D	300 x 50 mm Thick coping; twice weathered and throated	80	Lm		-
	Lintels				
E	200 x 200mm thick lintel reinforced with 4 No. Y10 with Y8 rings; complete with formwork	40	Lm		-
	INTERNAL WALLS				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
F	200 mm thick walls	21	Sm		-
G	100 mm thick walls	10	Sm		-
	TOTAL FOR WALLING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3 : DOORS				
	PS: ALL DOORS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Steel louvre doors				
	Supply, assemble and fix the following purpose-made welded mild steel casement doors with 100x 50 x 3mm thick shutter frame: 50 x 50 x 3mm RHS stiles and intermediate members at 1237mm centres vertically and 1250mm centres horizontally: 1250 x 1237 x 3mm thick MS panels welded to RHS members with 1050mm high glazed view panel and fanlight with 25mm pv gap above glazing: complete with all iron mongery, 5-lever steel door lock, handles, lever or finger pulls and pins, hinges and building lugs to jambs and reveals of masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer, including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights: all to Architectural details on :-				
A	Steel plated panel single leaf door overall size 900 x 2400mm high ***(D-14)***	2	No		-
	TIMBER DOORS				
	Mahogany Doors: B.S. 1186 part 1 and B.S. 4047				
B	Solid mahogany single leaf door overall size 900 x 3300 mm high door:; with 900 x 1050mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-04)***	10	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Flush doors: B.S. 459				
	45 mm thick solid core flush doors: hardwood lipped all round: mahogany faced both sides:				
A	Single leaf solid core flush door overall size 900 x 2400mm high; with 900 x 300mm glazed view panel and fanlight with 25mm pv gap above glazing ***(D-08)***	3	No		-
B	Ditto but overall size 800 x 2100mm high; but without fanlight; but with undercut ***(D-11)***	8	No		-
C	Ditto but double leaf overall size 1200 x 2050mm high; but fitted above 100mm high raised threshold ***(D-19)***	1	No		-
	Wrot Mahogany: prime grade				
D	150 x 50mm door frame with three labours	140	Lm		-
E	Ditto but transomes	22	Lm		-
F	40 x 15 mm Architrave: plugged	140	Lm		-
G	30 x 30 mm Quadrant: plugged	140	Lm		-
H	15mm Moulded glazing beads	30	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ironmongery				
	Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys				
A	5-Lever mortice door lock complete with aluminium handles and set lever furniture	10	No		-
B	3-Lever mortice door lock complete with aluminium handles and set lever furniture	12	No		-
C	38 mm Diameter rubber door stop	24	No		-
D	100 x 75mm Heavy duty steel hinges	33	Prs		-
E	250 x 25 x 3 mm Thick mild steel fixing cramps: one end bent and screwed to frame: other end flanged and built into block work or concrete	96	No		-
F	Mild steel dowels 10 mm diameter x 100 mm long: mortice in timber and concrete	48	No		-
	Prepare and apply one coat aluminium hardwood primer: on timber surfaces into contact with masonry or concrete: to				
G	General timber surfaces 100 - 200mm girth	140	Lm		-
	Prepare surfaces and apply three coats first grade clear polyurethane varnish: on wood surfaces: to				
H	General timber surfaces 0 - 100mm girth	310	Lm		-
I	General timber surfaces 100 - 200mm girth	162	Lm		-
J	General timber surfaces	50	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 17/4				-
	From page 17/5				-
	From page 17/6				-
	TOTAL FOR DOORS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4 : WINDOWS				
	PS: ALL WINDOWS ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Approved pre-cast concrete cill: bedded and jointed in cement (sand (1:3) mortar: pointed in matching coloured cement				
A	275 x 75 mm Thick cill; once weathered and throated	60	Lm		-
	Steel Casement Windows				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with all ironmongery and building lugs to masonry or concrete and incorporating permanent hooded high level ventilation panels infilled with approved mosquito gauze wire netting, primed with one coat or red - oxide primer,including all necessary coupling mullions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on :-				
B	Window overall size 3000 x 2400mm high ***(W-03)***	5	No.		-
C	Ditto but overall size 2000 x 2400mm high ***(W-15)***	15	No.		-
D	Ditto but overall size 2000 x 600mm high ***(W-20)***	1	No.		-
E	Ditto but overall size 4800 x 600mm high ***(W-21)***	1	No.		-
F	Ditto but overall size 1200 x 600mm high ***(W-23)***	1	No.		-
	Glazing				
	4mm thick one way sheet glass and glazing in metal putty in:				
G	Panes over 0.1sm but not exceeding 0.50sm	110	Sm		-
H	Ditto but obscure to toilets	5	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
A	General surfaces of steel casement surfaces internally	115	Sm		-
B	Ditto, externally	115	Sm		-
	Carried to Collection Below				-
	Collection				
	From page 17/8				-
	From page 17/9 Above				-
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: ROOF				
	The following in **framed structural steel** framework, **including all necessary welds, site welds, cleats, plates and sundry fixings**, priming with red lead graphite primer, painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in Truss '1': 11 No: spanning 11425 mm long and hoisting 10500 mm high from existing ground level				
A	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Top Chord*	1,553	Kg		-
B	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Bottom Chord*	1,553	Kg		-
C	75 x 75 x 3mm thick SHS weighing 7.07 kg/m - *Internal Members*	2,703	Kg		-
D	125 x 125 x 5mm plate	31	Kg		-
E	M12 rawl bolts	203	No.		-
	Other members: Unframed steel members				
F	127 x 50 x 20 x 2mm Purlin REF ZP40 weighing 4.05Kg/m	2,838	Kg		-
G	75mm dia. CHS bracings	116	Lm		-
H	12mm dia. sag rods	160	Lm		-
	ROOF COVERING				
	26 gauge IT5 roofing sheets fixed to purlins on steel truss structure (m.s), with and including fixing accessories - Roof pitch 7.5 degrees				
I	Roof covering:	725	Sm		-
	Flashing				
J	450mm wide by 0.5mm thick GI flushing sheet tucked groove and three coats of approved first grade roof paint to match IT5 roofing to S. Eng's detail	80	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Rainwater goods				
A	300 mm diameter fulbora outlet	11	No		-
B	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	105	Lm		-
C	Extra over down pipe for swanneck	11	No		-
D	Ditto for shoe	11	No		-
E	Allow a provisional sum of Kenya Shillings One Million Six Hundred and Fifty Thousand for roof above bridge		Sum		1,650,000.00
F	Allow a provisional sum of Kenya Shillings One Million Five Hundred Thousand for concrete gutter and rainwater goods		Sum		1,500,000.00
	Carried to Collection Below				
	Collection				
	From page 17/10				-
	From page 17/11 Above				-
	TOTAL FOR ROOFING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6 : BALUSTRADING				
	Corridor Balustrading				
A	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	60	Lm		-
	Prepare surfaces and apply three coats gloss oil pain: on steel surfaces: to				
B	General surfaces of steel balustrading - Measured both sides	96	Sm		-
	Ramp Balustrading				
C	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	115	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
D	General surfaces of steel balustrading - Measured both sides	208	Sm		-
	Bridge Balustrading				
E	900mm high overall mild steel balustrading; comprising of 50 x 1.5 mm CHS moulded handrail: 25 x 25mm m/s RHS footrail: 900mm high 40 x 40mm m/s balusters at 1000mm c/c, one end of balusters grouted to concrete floor complete with square ms cover rosette and other end welded to handrail: 20mm dia. m/s member at 120mm c/c: all as per Architect's detail	80	Lm		-
	Prepare surfaces and apply three coats gloss oil paint: on steel surfaces: to				
F	General surfaces of steel balustrading - Measured both sides	144	Sm		-
	TOTAL FOR BALUSTRADING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: FINISHES				
	PS: ALL FINISHES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	Floor finishes				
	Cement and sand (1:4) screed: to concrete surfaces: in				
A	32 mm thick finished to receive porcelain tiles floor finish	735	Sm		-
	Porcelain Tiles				
	450 x 450 x 8 mm Approved first quality non-slip **Porcelain** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 2,000 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Floor: fixing with approved quality adhesive	735	Sm		-
C	100 x 8mm thick skirting	340	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Wall Finishes				
	Internal Wall Finishes				
	Cement and sand (1:4): to walls: in				
A	10 mm thick backing: to receive Ceramic tiles	110	Sm		-
	450 x 250 x 6 mm Approved first quality **Ceramic** tiles: pattern and colour to Architect's scheme and approval: **allow a rate of Kshs. 1,500 per square metre for purchase: add for wastage, transport and fixing on site** with approved adhesive: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement: all to approval by the Architect				
B	Walls: internally on prepared backing (m.s.)	110	Sm		-
C	Extra over ditto for GENESIS chrome square edge strip	70	Lm		-
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
D	Walls and concrete: internally	1,675	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
E	Plastered walls and concrete surfaces: internally	1,675	Sm		-
	External wall finishes				
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
F	Walls and concrete: externally	795	Sm		-
	Prepare surfaces: apply undercoat and two finishing coats Permaplast emulsion paint: to as: to steel trowelled plastered surfaces				
G	Plastered walls and concrete surfaces: externally	795	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Ceiling Finishes				
	Suspended Acoustic Ceiling				
	Suspended ceiling tile system: 600mm x 600 mm x 17mm thick, mineral fibre drop-in ceiling tile, with fissured finish. Ceiling tiles laid on suspension grid system to manufacturer's requirements, and installed with a metal edge profile and all necessary accessories, to approval.				
A	Ceiling	680	Sm		-
	Heavy Duty Roof Insulation				
B	5mm thick double-sided reflective foil insulation with a closed-cell polyethylene form core: To ceilings	680	Sm		-
	12mm thick suspended **moisture-resistant** gypsum plasterboard ceiling: taped and filled joints: with and including skimming and Teflon paint to approval; on and including pressed metal suspended brandering system: allow for cutting and trimming to light fittings, AC unit or other equipments as required (all quantities measured flat overall over light fittings): with and including inspection trap doors where directed: to				
C	Ceiling - *Passage*	84	Sm		-
	Ramp Finishes				
	Cement and sand (1:4) screed: on concrete: wood floated: in				
D	32 mm thick finished to receive terrazzo floor finish	134	Sm		-
	Terrazzo Flooring				
	Polished Terrazzo; of approved colour; white cement and chippings (1:2); washed; with and including laying PVC dividing strips to match existing; to be carried out by an approved specialist sub-contractor; All as per approved sample by the Architect				
E	20mm thick; to floors including non-strip slip on ramps	134	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Plaster: 9 mm first coat of cement/lime putty/sand (1:2:9): 3 mm second coat of cement/lime putty/sand (1:1:6): steel toweled: on masonry or concrete: to				
A	Soffits: internally	102	Sm		-
	Prepare surfaces and apply undercoat and two finishing coats silk vinyl emulsion paint on plastered masonry or concrete surfaces: to				
B	Plastered ceiling soffits: internally	102	Sm		-
	Flat Roof Finishes - Roof Tank Slab				
	Water Proofing Membrane				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
C	50mm Thick screed: to flat roof: to receive APP (m.s.)	100	Sm		-
D	Extra over for working around 200 mm outlets	4	No.		-
	APP Membrane to weigh 4 kg/sq.mt (or 3 mm thick): stone chipped finish: 100 mm side laps and 150 mm end laps: bonding between layers: with and including bituminous primer and bonding to cement sand screed base (m/s): laid to falls				
E	To flat roofs	100	Sm		-
F	Ditto; Parapet walls (200mm high)	9	Sm		-
G	Working roofing membrane to rainwater 200 mm diameter outlets and dishing around them (m/s)	4	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Supply and fix paving tiles, laid in approved patterns on prepared backings, include for matching grouts, spacers etc.				
A	30mm Thick tiles, Terra Cotta / Black shade, laid in cologne / tyne and Architect's patterns; including 20mm thick cement and sand (1:4) screed below	100	Sm		-
	Rainwater Goods (PVC)				
B	300 mm diameter fulbora outlet	4	No		-
C	150 x 100mm deep brown PVC box profile downipe; holderbats at 1500 mm (maximum) centres	30	Lm		-
D	Extra for shoe	4	No		-
E	Extra for swanneck	4	No		-
	Concrete Gutter Finishes				
	Screed/ plaster: waterproof cement and lightweight aggregate (1:4): on horizontal concrete surfaces: laid to falls				
F	50mm thick screed: to flat roof: to receive black bituminous paint	92	Sm		-
G	Extra over for working around 200 mm outlets	11	No.		-
	Prepare surfaces and apply undercoat and two finishing coats black bituminous water resistant paint: on rendered surfaces: to				
H	Plastered concrete gutter surfaces	92	Sm		-
	Stainless Steel Expansion Joint Cover Plate				
I	Supply and fix 300mm wide stainless steel expansion joint cover plate fixed to RC slab; all to approval of the Architect	18	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 17/13				-
	From page 17/14				-
	From page 17/15				-
	From page 17/16				-
	From page 17/17				-
	TOTAL FOR FINISHES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: JOINERY FIXTURES				
	PS: ALL FIXTURES ARE AS PER SCHEDULE PROVIDED BY THE ARCHITECT				
	CONCRETE WORKTOPS - *Washrooms*				
	Insitu concrete (1:2:4): vibrated: reinforced				
A	75 mm thick suspended reinforced concrete worktop including recessing into wall to achieve support for worktop; cast to slope; with and including channel as per Architect's details	4	Sm		-
B	Mesh reinforcement No. A98 weighing 1.54 kg per square metre: in worktop: including all necessary supports	4	Sm		-
	Wrot formwork				
C	Edges of 100 mm worktop	14	Lm		-
D	Soffits of worktop	4	Sm		-
	Cement and sand (1:4) screed: on concrete: wood floated: in				
E	Surfaces of worktop	4	Sm		-
	20mm thick Approved first quality **Granite top** with rounded edge: **allow a rate of Kshs. 15,000 per square metre for purchase: add for wastage, transport and fixing on site**: allow for bedding and jointing in cement mortar (1:4): grouting joints with matching cement				
F	Worktop	4	Sm		-
G	150mm high granite fascia fixed on concrete surface to Architect's approval	7	Lm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Stainless steel channel				
A	50 x 75mm high stainless steel channel fixed to concrete surface: laid to slope	7	Lm		-
	Mirror				
B	6mm thick polished plate glass silver backed mirror with bevelled edges, overall size 450 x 700mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	6	No.		-
	Carried to Collection Below				-
	Collection				
	From page 17/19				-
	From page 17/20 Above				-
	TOTAL FOR JOINERY FIXTURES CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**RC SUPERSTRUCTURE**		17/2		-
2	**WALLING**		17/3		-
3	**DOORS**		17/7		-
4	**WINDOWS**		17/9		-
5	**ROOF**		17/11		-
6	**BALUSTRADING**		17/12		-
7	**FINISHES**		17/18		-
8	**JOINERY FIXTURES**		17/20		-
	TOTAL FOR BLOCK D - FIRST FLOOR CARRIED TO MAIN SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	BLOCK D SUMMARY				
1	**SUBSTRUCTURES**		15/1		-
2	**GROUND FLOOR**		16/18		-
3	**FIRST FLOOR**		17/21		-
	TOTAL FOR BLOCK D CARRIED TO MAIN SUMMARY				-

EXTERNAL WORKS

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	EXTERNAL WORKS (ALL PROVISIONAL)				
	ELEMENT NO.1: FOUL DRAINAGE				
A	Excavate trench: part backfill and remove surplus spoil plank and strut sides of excavations: keep excavations free of surface water: not exceeding 1.5 metres deep from existing ground level: average 1500 mm deep: for 200 mm diameter pipe: backfill and cart away surplus spoil	350	Lm		-
	uPVC pipes and fittings: to B.S. 4514 and 5255: jointing to manufacturer's instructions				
D	200mm diameter underground quality UPVC pipe with 300mm thick selected imported granular material well compacted; in grass areas as per S. Eng's details - *"Standard Trench Details"*	230	Lm		-
C	200mm diameter underground quality UPVC pipe: with 150mm thick concrete class 15/20 bed; 150mm thick concrete class 15/20 surround; under roads as per S. Eng's details - *"Concrete Surround Type C"*	130	Lm		-
	Extra for:				
E	Socket plugs	100	No		-
F	Sweeping bend	50	No		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Manholes Consisting of 50mm thick blinding class 15/20; 150mm thick concrete class 20/20 bed with BRC A142 mesh; 150mm thick concrete class 20/20 wall surround reinforced with T-10-200 c/c; precast concrete shaft chamber sections and cover slab to be bedded with mortar, proprietary bitumen or resin mastic sealant to be BS EN 1917:2002; internal PVC pipe to appropriate height complete with holderbats, cleaning eye and bed; standard step irons staggered at 300mm intervals; heavy duty cast iron circular cover and frame having min. clear opening of 800mm dia. bedded in mortar; mortar haunching to M.H. cover and frame; including all necessary excavation, formwork, approved filling and cart away; all as per S. Eng's details (ManholeType I)				
A	1200 mm dia. internal dimensions: 1500 mm average depth to invert	25	No.		-
	Inspection Chambers Consisting of 50mm class 15/20 blinding; 150mm thick concrete base class 20/20 reinforced with BRC A142 in centre; 150mm thick masonry blockwork finished in 12mm thick cement / sand rendering to both sides (1:3); lintol - conc. class 20/20; 12mm thick cement/sand mortar (1:3) to benching; plastic fibres reinforced cover complete with 6mm dia. standard lifting handles; haunch to cover concrete class 20/20; 1:3 cement / sand mortar bedding to cover: including all necessary excavation, formwork, approved filling and cart away: all as per S. Eng's details *(Inspection Chamber Details as per S. Eng's Section H-H and G-G)*				
B	600 x 600 mm internal dimensions: 100 mm average depth to invert	25	No.		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Sundries				
	Labour and materials:				
A	Build in ends of 200mm diameter pipes to manholes walls 150mm thick	50	No		-
B	Ditto: to inspection chamber walls	50	No		-
C	Allow for testing the whole of foul sewer drainage installations to the satisfaction of The Engineer and the relevant Authorities		Item		
	Carried to Collection Below				-
	Collection				
	From page 18/1				-
	From page 18/2				-
	From page 18/3 Above				-
	TOTAL FOR FOUL DRAINAGE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 2: STORMWATER DRAINAGE				
	Excavations				
A	Excavate trench: part backfill and remove surplus spoil plank and strut sides of excavations: keep excavations free of surface water: not exceeding 1.5 metres deep from existing ground level: average 1500 mm deep: for 300 mm diameter pre-cast concrete pipe: backfill and cart away surplus spoil	380	Lm		-
	Pre-cast concrete spun ogee pipe				
B	300 mm diameter PCC pipe: tongued on one end and grooved on the other side for proper jointing: all jointed and neatly pointed in cement and sand (1:3) mortar; with 150mm thick concrete class 15/20 bed; 150mm thick concrete class 15/20 surround; under roads as per S. Eng's details - *Under roads*	380	Lm		-
	Gully Traps				
	Gully trap comprising 75mm thick insitu concrete base, concrete benching encased in and including 150 mm thick masonry to both end and sides: 300 mm diameter outlet, 346 x 406 concrete filled gully grating tolerance + 3mm; standard 250 x 250 mm mild steel grating and frame cover including all necessary formwork, 50mm thick blinding and excavations: all concrete to be class 20/20 insitu; all as per S. Eng's details				
C	450 x 450 mm internal dimensions: 400 mm average depth to invert	48	No.		-
	TOTAL FOR STORMWATER DRAINAGE CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 3: DRIVEWAY AND PARKING				
	Excavations				
A	Clear site off all vegetation including small trees, scrubs and bushes: removal of any materials dumped on site	2,400	Sm		-
B	Excavate to reduce levels: average depth of 600mm starting from existing ground level	1,440	Cm		-
C	Remove surplus spoil from site to a place approved by the Meru County Council	1,440	Cm		-
D	Extra over all excavations and earthworks for breaking up rock at any point	145	Cm		-
E	Plank and strut to uphold sides of excavations: keep excavations free from all fallen material		Item		
F	Keep excavations free from all water: spring or running		Item		
	Filling and Treatment				
G	300 mm thick Hardcore base filling in making up levels well rolled and compacted to 95% maximum density : depositing and compacting in layers maximum 150mm thick	2,400	Sm		-
H	150mm thick handpacked stones	2,400	Sm		-
I	Ditto but 125mm thick	2,400	Sm		-
J	50mm quarry dust bed on handpacked stones (m/s) to receive concrete paving blocks	2,400	Sm		-
K	Approved herbicide treatment to quarry dust bed: with 20 years guarantee	2,400	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Concrete paving blocks: to diplomat pattern: laid and compacted with and including approved sand to manufacturer's specifications				
A	80mm thick heavy duty blocks: to prepared sub-base (m/s): to parking: laid to falls not exceeding 15 degrees from horizontal	2,400	Sm		-
	Precast concrete: normal: class 20/ (20) : vibrated: surface fair finish				
B	Kerbs and channel size 250 x 125mm and 125 x 125 respectively: splayed: B.S. 340: bedding, jointing and pointing in cement/sand mortar 1:3; including all necessary excavation, disposal and formwork: laid on and including 100mm thick plain insitu concrete class 20/ (20) haunched base and back 375mm wide: as shown in attached drawing	350	Lm		-
C	Ditto but curved	150	Lm		-
D	Kerb size 250 x 125mm: splayed: B.S. 340: bedding, jointing and pointing in cement/sand mortar 1:3; including all necessary excavation, disposal and formwork: laid on and including 100mm thick plain insitu concrete class 20/ (20) haunched base and back 375mm wide	350	Lm		-
	Roadmarking Paint				
	Prepare and apply three coats of approved weather resistant road marking paint to:				
E	Apply yellow thermoplastic roadmarking paint; 100mm wide: to approval	200	Lm		-
F	Allow a provisional sum of Kenya Shillings Eighty Four Thousand for concrete bases supports to street lights		Sum		84,000.00
	Carried to Collection Below				
	Collection				
	From page 18/5				-
	From page 18/6 Above				-
	TOTAL FOR DRIVEWAY AND PARKING CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 4: WALKWAYS				
	Paving Slabs				
A	Clear site off all vegetation including small trees, scrubs and bushes	1,060	Sm		-
B	Excavate and spread spoil as directed on site: average 200mm deep	1,060	Sm		-
C	300 mm Thick Hardcore base filling in making up levels well rolled and compacted to 95% maximum density: depositing and compacting in layers maximum 150mm thick	1,060	Sm		-
D	50 mm Thick approved quarry dust blinding to surfaces of compacted crushed stone (m/s)	1,060	Sm		-
E	Approved herbicide treatment to quarry dust bed: with 20 years guarantee	1,060	Sm		-
F	Precast concrete (PC) slabs: 600 x 600 x 50 mm thick jointed and neatly pointed in cement and sand (1:3) mortar mix	1,060	Sm		-
	TOTAL FOR WALKWAYS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 5: BOUNDARY WALL				
	Excavation				
A	Excavate foundation trenches commencing from ground level: not exceeding 1.5 m deep	63	Cm		-
B	Ditto but exceeding 1.5m deep but not exceeding 3.0 m deep from reduced level	13	Cm		-
C	Extra over all excavations and earthworks for breaking up rock at any point	12	Cm		-
D	Plank and strut to uphold sides of excavations: keep excavations free from all fallen material		Item		
E	Keep excavations free from general water: by pumping or any other means including barring off underground springs or rivers		Item		
F	Remove surplus spoil from site to a place approved by the Meru County Council	36	Cm		-
G	Return, fill and ram selected excavated material around foundations	40	Cm		-
	Concrete Works				
	Insitu plain concrete (1:4:8) : in				
H	50 mm thick blinding under strip footing	42	Sm		-
	Insitu reinforced concrete **class 25/20**: in				
I	Strip foundation	13	Cm		-
I1	Column Bases	4	Cm		-
J	Columns	4	Cm		-
J1	Ground Beam	6	Cm		-
	Sawn formwork: to				
K	Sides: strip footing	35	Sm		-
K1	Sides: column bases	21	Sm		-
L	Vertical sides: columns	46	Sm		-
L1	Vertical sides: ground beam	56	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
A	Assorted Reinforcement Bars (Provisional)	2,253	Kg		-
	Foundation Walling				
	Natural hard approved quarry stone walling with a crushing strength of 8.0 N/mm²; walling bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25mm wide x 20 gauge hoop iron at every alternate course as described in:				
B	200 mm Thick walls	88	Sm		-
	Superstructure Walling				
	Machine cut natural stone: bedded, jointed and pointed in cement sand (1:3) mortar				
C	200 mm Thick walls	126	Sm		-
D	Extra over for 25mm thick horizontal rectangular keying to Architect's approval	252	Sm		-
	Superstructure Concrete				
	Insitu reinforced concrete **class 25/20:** in				
E	Columns	5	Cm		-
	Sawn formwork: to				
F	Vertical sides: columns	62	Sm		-
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
G	Assorted Reinforcement Bars	552	Kg		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Pre-cast concrete copings; bedded and jointed in cement sand (1:3)				
A	300 x 50mm copings; twice weathered and throated	160	Lm		-
B	400 x 400 x 750 mm high Copings; four times weathered and throated	41	No		-
	Burglar Proofing Grilles				
	Mild steel burglar proofing grilles fixed internally; all welded; one coat red oxide primer to all surfaces; to Architect's details and approval				
C	Grille overall size 2700 x 1450mm high	27	No		-
	Carried to Collection Below				-
	Collection				
	From page 18/8				-
	From page 18/9				-
	From page 18/10 Above				-
	TOTAL FOR BOUNDARY WALL CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 6: UNDERGROUND WATER TANK				
	(INTERNAL DIMENSIONS OF THE TANK - 9.5M LONG X 5.5M WIDE X 2.3M DEEP)				
A	Clear site off any vegetation including shrubs, bushes and small trees	0	Sm		-
B	Excavate to reduced levels: not exceeding 1.5m from existing ground level	0	Cm		-
C	Ditto: exceeding 1.5m from existing ground level but not exceeding 3.0m from existing ground level	0	Cm		-
D	Extra over all excavations for excavating in hard rock class II	0	Cm		-
E	Remove surplus spoil from site to a place approved by the Meru County Council	0	Cm		-
F	Plank and strut to uphold sides of excavations: keep excavations free from all fallen material		Item		-
G	Keep excavations free from general water: by pumping or any other means including barring off underground springs or rivers		Item		-
	CONCRETE				
	Insitu plain concrete (1:4:8) : in				
H	50 mm thick blinding under base slab	0	Sm		-
	Insitu vibrated reinforced concrete class 30 (20): in				
I	275 mm thick base slab - With waterproofing additive	0	Sm		-
J	Ditto but 200 x 150mm deep slab edging - With waterproofing additive	0	Cm		-
K	200 mm thick roof slab - With waterproofing additive	0	Sm		-
L	275 mm thick walling - With waterproofing additive	0	Sm		-
M	Beam	0	Cm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Reinforcement				
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
A	Assorted Reinforcement Bars	0	Kg		-
	Sawn formwork: to				
B	Edges of base slab	0	Sm		-
C	Soffits of roof slab	0	Sm		-
D	Extra over ditto for formwork to create manholes size 1000 x 1000	0	No.		-
E	Sides: walls	0	Sm		-
F	Sides: beam	0	Sm		-
	Cast iron manhole cover and frame: including building in the frame into the concrete and making good: medium duty				
G	1000 x 1000mm cover: heavy duty	1	No		-
	WATERPROOFING				
	FLOOR FINISHES				
	Cement and sand (1:4) screed with waterproofing mortar: applied strictly as per Manufacturer's instructions: on concrete: in				
H	40 mm thick protective screed laid to falls and cross falls on tank base slab	67	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	WALL FINISHES				
	15mm thick Plaster: cement/sand (1:2): with waterproofing: applied strictly as per Manufacturer's instructions: steel trowelled: on concrete: to				
A	Walls: internally	72	Sm		-
B	200 mm wide water bars: standard PVC; bulb edged strip	35	Lm		-
C	Allow provisional sum of Kenya Shillings One Hundred and Fifty Thousand for inlet, outlet and vent pipes		Item		**150,000.00**
	Carried to Collection Below				
	Collection				
	From page 18/11				-
	From page 18/12				-
	From page 18/13 Above				-
	TOTAL FOR UNDERGROUND WATER TANK CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 7: WASTE WATER TREATMENT PLANT TANK				
A	Clear site off any vegetation including shrubs, bushes and small trees	85	Sm		-
B	Excavate to reduced levels: not exceeding 1.5m from existing ground level	128	Cm		-
C	Ditto: exceeding 1.5m from existing ground level but not exceeding 3.0m from existing ground level	123	Cm		-
D	Ditto: exceeding 3.0m from existing ground level but not exceeding 34.5m from existing ground level	45	Cm		-
E	Extra over all excavations for excavating in hard rock class II	37	Cm		-
F	Remove surplus spoil from site to a place approved by the Meru County Council	296	Cm		-
G	Plank and strut to uphold sides of excavations: keep excavations free from all fallen material		Item		
H	Keep excavations free from general water: by pumping or any other means including barring off underground springs or rivers		Item		
	CONCRETE				
	Insitu plain concrete (1:4:8) : in				
I	50 mm thick blinding under base slab	85	Sm		-
	Insitu vibrated reinforced concrete class 30 (20): in				
J	300 mm thick base slab	85	Sm		-
K	Ditto but 200 x 150mm deep slab thicknessing	4	Cm		-
L	175 mm thick roof slab	30	Sm		-
M	250 mm thick walling	28	Sm		-
N	300 mm thick walling	115	Sm		-
O	350 mm thick walling	22	Sm		-
	Carried to Collection				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Reinforcement				
	High yield square twisted steel bar reinforcement to BS 4461 and KS 02-22:1976 **(Provisional)**				
A	Assorted Reinforcement Bars	8,395	Kg		-
	Sawn formwork: to				
B	Edges of base slab	21	Sm		-
C	Soffits of roof slab	30	Sm		-
D	Extra over ditto for formwork to create opening size 3000 x 2500	1	No.		-
E	Extra over ditto for formwork to create opening size 3500 x 18500	2	No.		-
F	Sides: walls	330	Sm		-
	WATERPROOFING				
	FLOOR FINISHES				
	Cement and sand (1:4) screed with waterproofing mortar: applied strictly as per Manufacturer's instructions: on concrete: in				
G	40 mm thick protective screed laid to falls and cross falls on tank base slab	85	Sm		-
	WALL FINISHES				
	15mm thick Plaster: cement/sand (1:2): with waterproofing mortar: applied strictly as per Manufacturer's instructions: steel trowelled: on concrete: to				
H	Walls: internally	175	Sm		-
I	200 mm wide water bars: standard PVC; bulb edged strip	60	Lm		-
J	Allow provisional sum of Kenya Shillings One Hundred and Fifty Thousand for inlet, outlet and vent pipes		Item		**100,000.00**
	Carried to Collection				

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	Collection				
	From page 18/14				-
	From page 18/15				-
	TOTAL FOR WASTE WATER TREATMENT PLANT TANK - BUILDERS WORKS CARRIED TO SUMMARY				-

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 8: SERVICE BUILDINGS				
	GENERATOR, SWITCH AND TRANSFORMER ROOMS				
A	Erect generator room, switch room and transformer room size 13100 x 7000 x 3000 mm high overall dimensions: constructed in 150mm thick concrete slab reinforced with BRC A142 mesh on hardcore fill, natural stone foundation walling on 600 x 200mm wide foundation strip on 50mm thick blinding: 200 mm thick masonry walling to superstructure plastered and painted to approval: 2 No. 2500 x 2400 mm high mild steel vent door and 1 No. 4200 x 2400mm high mild steel door; 2 No. 1050 x 2400 mm high mild steel door; 6 No. 1800 x 2400 mm high concrete vents to approval; 450 x 200mm ringbeam all reinforced with assorted bars: 0.5mm IT5 rooofing sheets on insulation on Zed purlins fixed to 75 x 75 x 4mm thick steel truss structure; Roof pitch = 7.5 deg.; 1000mm high parapet walling complete with coping; powerfloat screed with hardener to floors; 300mm wide x 23000mm long electrical channel with galvanized grating; Internal walls plastered and painted; All to Architect's details		Sum		
	PUMP ROOM				
B	Erect pump room size 2800 x 2800 x 3000 mm high overall dimensions: constructed in 150mm thick concrete slab reinforced with BRC A142 mesh on hardcore fill, natural stone foundation walling on 600 x 200mm wide foundation strip on 50mm thick blinding: 200 mm thick masonry walling to superstructure plastered and painted to approval: 1 No. 900 x 2400 mm high mild steel vent door; 3 No. 1800 x 2400 mm high concrete vents to approval; 450 x 200mm ringbeam all reinforced with assorted bars: 0.5mm IT5 rooofing sheets on insulation on Zed purlins fixed to 75 x 75 x 4mm thick steel truss structure; Roof pitch = 7.5 deg.; 1000mm high parapet walling complete with coping; powerfloat screed with hardener to floors; 600 x 600 mm service hatch to ME's specifications;complete with cat ladder consisting 75 x 38 mm RHS galvanized mild steel stringer, 38 x 25 mm RHS galvanized mild steel rungs 338mm c/c with the first rung @ 450mm above floor finish level, 38 x 6mm galvanized mild steel flat bar cage strringers, 50 x 6mm galvanized mild steel bar cage hoops, 75 x 6mm galvanized mild steel flat bar bottom hoop, 38mm dia. galvanized mild steel stay welded to stringer and cast into wall; Internal walls plastered and painted; All to Architect's details		Sum		
	Carried to Collection				

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	GARBAGE CUBICLE				
A	Erect garbage cubicle size 3400 x 3400 x 3000 mm high overall dimensions: constructed in 150mm thick concrete slab reinforced with BRC A142 mesh on hardcore fill, natural stone foundation walling on 600 x 200mm wide foundation strip on 50mm thick blinding: 200 mm thick masonry walling to superstructure plastered and painted to approval: 1 No. 1800 x 2400 mm high mild steel vent door; 1 No. 1800 x 2400 mm high concrete vents to approval; 450 x 200mm ringbeam all reinforced with assorted bars: 0.5mm IT5 rooofing sheets on insulation on Zed purlins fixed to 75 x 75 x 4mm thick steel truss structure; Roof pitch = 7.5 deg.; 1000mm high parapet walling complete with coping; powerfloat screed with hardener to floors; Internal walls plastered and painted; All to Architect's details		Sum		
	Carried to Collection Below				-
	Collection				
	From page 18/17				-
	From page 18/18 Above				-
	TOTAL FOR SERVICE BUILDINGS CARRIED TO SUMMARY				**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	ELEMENT NO. 9: DEMOLITIONS				
A	Demolish existing pavilion of 180 square metres approximate area consisting of concrete bed; steel columns supporting steel roof structure and roofing sheets cover; make good disturbed surfaces and cart away resulting debris		Sum		
TOTAL FOR DEMOLITIONS CARRIED TO SUMMARY					**-**

Item	Description	Qty	Unit	Rate	Amount (KShs.)
	SUMMARY				
1	**FOUL DRAINAGE**		18/3		-
2	**STORMWATER DRAINAGE**		18/4		-
3	**DRIVEWAY AND PARKING**		18/6		-
4	**WALKWAYS**		18/7		-
5	**BOUNDARY WALL**		18/10		-
6	**UNDERGROUND WATER TANK**		18/13		-
7	**WASTE WATER TREATMENT PLANT TANK**		18/16		-
8	**SERVICE BUILDINGS**		18/18		-
9	**DEMOLITIONS**		18/19		-
	TOTAL FOR EXTERNAL WORKS CARRIED TO MAIN SUMMARY				-

SCHEDULE OF DEFECTS

Item	Description	Qty	Unit	Rate	Amount (Kshs.)
	SCHEDULE OF DEFECTS RECTIFICATION				
	ADMINISTRATION BLOCK				
A	Carefully remove reinforcement bars; make good all disturbed areas and cart away all arising debris to Porte Cochere beams (291 kgs)		Item		
B	Carefully remove formwork to sides and soffits of beams; make good all disturbed areas and cart away all arising debris to Porte Cochere (44 sm)		Item		
C	Carry out appropriate concrete tests to fire escape staircase		Item		
D	Carefully demolish overcast columns by 600mm; make good all disturbed areas and cart away all arising debris to allow appropriate reinforcement to ring beams to First Floor (3 Cm)		Item		
E	Carefully Repair honeycombs on cast beams and slab		Item		
	BLOCK A				
A	Carefully remove formwork to sides and soffits of beams and slabs; make good all disturbed areas and cart away all arising debris (727 sm)		Item		
B	Wire brush or clean all exposed steelworks to columns and beams to the approval of the Structural Engineer		Item		
	BLOCK B				
A	Clean slab soffits in appropriate applicants including wire brushing to remove rusting effect (611 Sm)	611	Sm	200	
B	Wire brush or clean all exposed steelworks to columns and beams to the approval of the Structural Engineer		Item		
	BLOCK C				
A	Carry out appropriate concrete tests to roof beams		Item		
B	Carefully remove formwork to sides and soffits of beams; make good all disturbed areas and cart away all arising debris (727 sm)		Item		
C	Wire brush or clean all exposed steelworks to columns and beams to the approval of the Structural Engineer		Item		
	Carried forward to next page				

Item	Description	Qty	Unit	Rate	Amount (Kshs.)
	Brought forward from previous page				
	BLOCK D				
A	Clean slab soffits in appropriate applicants including wire brushing to remove rusting effect (611 Sm)	611	Sm	200	
B	Carefully remove formwork to sides and soffits of beams; make good all disturbed areas and cart away all arising debris (727 sm)		Item		
C	Wire brush or clean all exposed steelworks to columns and beams to the approval of the Structural Engineer		Item		
	TOTAL FOR DEFECTS RECTIFICATION CARRIED TO MAIN SUMMARY				

PC AND PROVISIONAL SUMS

Item	Description	Qty	Unit	Rate	Amount (Kshs.)
	PROVISIONAL SUMS				
	All Provisional Sums are to be measured on completion and priced in accordance with the rates contained in these bills of Quantities or pro-rata thereto or deducted in the whole if not required				
A	Allow a provisional sum of Kenya Shillings One Million for Builders Works to Specialist Installations		Item		1,000,000.00
B	Allow a provisional sum of Kenya Shillings Three Hundred and FiftyThousand for roof tanks access cat ladders		Item		350,000.00
C	Allow a provisional sum of Kenya Shillings One Hundred Thousand for steel cage around pumps - Second Floor Roof Tank		Item		100,000.00
D	Allow a provisional sum of Kenya Shillings Six Million Five Hundred Thousand for Gate House and Gates		Item		6,500,000.00
	PRIME COST SUMS				
	P.C. Sums for works to be executed by nominated Sub-contractors				
E	Allow a Prime Cost Sum of Kenya Shillings Nine Million Five Hundred Thousand for Waste Water Treatment Plant		Item		9,500,000.00
F	Allow for profit and attendance				-
G	Allow a Prime Cost Sum of Kenya Shillings Two Hundred Thousand for Plate Loading Tests		Item		200,000.00
H	Allow for profit and attendance				-
I	Allow a Prime Cost Sum of Kenya Shillings Three Million for Landscaping		Item		3,000,000.00
J	Allow for profit and attendance				-
	Carried to Collection				

Item	Description	Qty	Unit	Rate	Amount (Kshs.)
A	Provide a Prime Cost Sum of Kenya Shillings Five Hundred Thousand for Signage		Item		500,000.00
B	Allow for profit and attendance				-
C	Provide a Prime Cost Sum of Kenya Shillings Five Million Five Hundred Thousand for Generator Installations		Item		5,500,000.00
D	Allow for profit and attendance				-
E	Provide a Prime Cost Sum of Kenya Shillings Twenty Seven Million One Hundred and Fifty Thousand for Structured Cabling, ICT, Security and TV Systems Installations		Item		27,150,000.00
F	Allow for profit and attendance				-
G	Provide a Prime Cost Sum of Kenya Shillings Seven Hundred and Ninety Seven Thousand Eight Hundred for Air Conditioning Installations		Item		797,800.00
H	Allow for profit and attendance				-
	Carried to Collection Below				
	Collection				
	From page 19/1				-
	From page 19/2 Above				-
	TOTAL FOR P. C. AND PROVISIONAL SUMS CARRIED TO MAIN SUMMARY				**-**

ELECTRICAL INSTALLATIONS

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

Page No. E1/1

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
1.10	**GROUND FLOOR.** **LIGHTING POINTS AND FITTINGS** **Civil (Bitumen,Soil,Hydraulic & Survey Labs),Building & Plumbing Workshops, Masonry,Decoration Cubicles,Commercial Labs, Server Room, Reception,Waiting loddy,Guard house & Servivce Building.**				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
	For the Supply & Installation of the following complete as specified:				
	ALL RATES TO BE VAT INCLUSIVE				
A	Lighting and switching outlets wired in 3x1.5mm² pvc sc copper cables drawn in 20mm dia. HG pvc conduits complete with all wiring accessories and fittings but excluding switch plates and light fittings, Wired as for 1 way 2 way switching or on Presence detector control.	No	402		-
	Supply, assemble, fix, test & commision the following light fittings complete with lamps, tubes, and all accessories.				-
B	. Type A [600x600 Panel Lights]	No.	20		-
C	. Type B [5ft twin Batten T5 LED tubes light fitting complete with white Metal Reflector attachement and suspesion chain 3m long and fixings. LED lights in Workshops)].	No.	193		-
D	. Type F [4ft single Batten T5 LED tubes light fitting in Serve Room & Store].	No.	44		-
E	. Type C3 [Downlight]	No.	5		-
F	. Type C4 [Downlight] for Corridor/Walkway	No.	10		-
G	. Type D [Surface Downlights] for Stairs	No.	21		-
H	. Type D2 [Downlight] Corridor/Lobby	No.	8		-
I	. Type Ex[8wEmergency Exit Lights].	No.	11		-
J	LOGO lighting point wired in 2x4.0+1x2.5 sq mm PVC insulated single core copper cables drawn in 20 mm dia. heavy gauge PVC conduit with concealed all accessories but excluding fitting	No.	2		-
K	63A DP Pole contactor as ABB for LOGO signage above	No.	1		-
L	LED strip for Reception area	LM	15		-
M	. 10A MK logic plate switch 1 gang 1-way SP	No.	5		-
N	. 10A MK logic plate switch 1 gang 2-way SP	No.	28		-
O	. 10A MK logic plate switch 2 gang 2-way SP	No.	29		-
P	. 10A MK logic plate switch Intermediate SP	No.	8		-
Q	. Passive Infrared Detector	No.	8		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/2

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
1.20	**POWER POINTS AND OUTLETS**				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
	Supply, install, test, commission and maintain: -				
A	Power outlets on recessed switch box wired as for a ringmaincircuit in 3x2.5mm2 PVC cables enclosed in 20mm dia HG concealed PVC conduit or enclosed in metal cable trunking complete with all accessories but excluding outlet plate	No	31		-
B	Ditto but wired as for a radial circuit for 15A Standard Single switched socket outlet	No	308		-
C	Ditto but wired as for a radial circuit for Fire Alarm Panel, AC Units for Serve Room & Smart Class.	No	4		-
D	15A Standard Single switched socket outlet as MK logic K781WHI	No	308		-
E	13A standard Twin switched socket outlet as MK logic K781WHI	No	31		-
F	13A Fused Un-switched Spur Unit Fire Alarm Panel , AC Units for Serve Room & Smart Class.	No.	4		-
G	IP56 20A TP Isolator as MK as Cat. No. M4418	No.	3		-
H	3 Pin Industrial socket with Isolator plus 3 Pin top plug	No.	6		-
I	5 Pin Industrial socket with Isolator plus 5 Pin top plug	No.	79		-
J	250mm x50mm 3 compartment metal powder coated trunking complete with clip-on cover, factory made bends and tees installed on perimeter wall	LM	630		-
K	3 compartment recessed in floor box complete with cover and 1No. Twin socket outlet, 1No. Non-standard socket outlet and and 2No. Dual RJ/11, RJ45 outlet	No	2		-
L	38mm dia PVC concealed conduit runs complete with all bends and fittings linking trunking	LM	250		-
M	50mm dia PVC concealed conduit runs complete with all bends and fittings linking trunking	LM	120		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/3

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
	TELEVISION,CCTV,AUDIO & TELEPHONE OUTLETS				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
A	Television outlet points comprising of 25mm dia HG PVC concealed conduits with all accessories and draw wire but excluding face plates from cable draw-in box ,trunking or between intermediate outlets as shown on drawing(average length 20m)	No	2		-
B	Ditto, but for buzer point outlets	No	1		-
C	Ditto, but for telephone/Data/Voice/WIFI outlets	No	49		-
D	Ditto, but for CCTV/ACCESS outlets	No	91		-
E	MK logic cover plates over switch boxes	No	15		-
1.40	**FIRE ALARM SYSTEM**				-
F	Fire alarm initiating points wired in 2x1.5mm^2 FP200 cables enclosed in 25 dia. HG high impact concealed PVC conduit	No.	69		-
G	Optical smoke detector	No.	51		-
H	Heat detectors	No.	2		-
I	Sounders	No.	8		-
J	Break glass unit with protection cover	No.	8		-
K	Addressable control module	No.	5		-
L	Addressable monitoring module	No.	2		-
M	Addressable 4loops fire alarm panel with batteries (72hrs standby) and integral charger and pri	No.	1		-
N	Repeater Panel at Guard House	No.	1		-
O	Connect power supply to the fire alarm panel from adjacent 13A fused spur unit comprising in 2.5mm2 PVC PVC 3 core cable enclosed in 25 dia.HG high impact concealed PVC conduit.	LM	20		-
P	Switchbox behind fire alarm panel with 1x32mm dia concealed HG PVC conduit link to tele/data service riser duct	LM	20		-
1.50	**DISABLED TOILETS ALARM SYSTEM**				-
Q	10 zone Disabled alarm control /indicator panel as C-TEC N944 complete with power supply unit installed at the reception on ground floor	Item	1		-
R	32mm dia. HG PVC conduit link between riser and disabled toilet controller	LM	20		-
S	Disabled alarm outlet points comprising push button, pull cord switch , reset button and lamps and tone generator wired in 1.5mm sqmm 4core control cable enclosed in HG PVC conduit	No	3		-
T	Pull cord switch in disabled toilet as C-TEC NC807C	No	3		-
U	Remote reset unit with sounder in the disabled toilet as C-TEC NC809DBB	No	3		-
V	Over door lamp and with tone generator as C-TEC NC806CS	No	3		-
W	25mm dia. HG PVC conduit link between riser and disabled toilet	LM	20		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/4				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/4

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	GROUND FLOOR - COLLECTION PAGE				
A	Total Brought Forward From Page No. E1/1				-
B	Total Brought Forward From Page No. E1/2				-
C	Total Brought Forward From Page No. E1/3				-
	Total				-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

COMPLETION BoQ

ELECTRICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
	FIRST FLOOR.				
2.10	**LIGHTING POINTS AND FITTINGS**				
	Staff Room,Secretary,Board Room,HOD,Exam,Kitchen, (Water Treatment Training and Power Supply & Electrical Installation Lab), IT & Computer Labs,Smart Class, Lecture Rooms and TD Labs, Mezzanine.				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
	For the Supply & Installation of the following complete as specified:				
A	Lighting and switching outlets wired in 3x1.5mm² pvc sc copper cables drawn in 20mm dia. HG pvc conduits complete with all wiring accessories and fittings but excluding switch plates and light fittings, Wired as for 1 way 2 way switching or on Presence detector control.	No	410		-
	Supply, assemble, fix, test & commision the following light fittings complete with lamps, tubes, and all accessories.				-
B	. Type A [600x600 Panel Lights]	No.	28		-
C	. Type B [5ft twin Batten T5 LED tubes light fitting complete with white Metal Reflector attachement and suspesion chain 3m long and fixings. LED lights in Workshops)].	No.	24		-
D	. Type F [4ft single Batten T5 LED tubes light fitting in Serve Room & Store].	No.	203		-
E	. Type F [4ft single Batten T5 LED tubes light fitting in Kitchen]. With Diffuser	No.	2		-
F	. Type C4 [Downlight] for Corridor/Walkway	No.	57		-
G	. Type D [Surface Downlights] for Stairs	No.	29		-
H	. Type Ex[8wEmergency Exit Lights].	No.	12		-
I	. 10A MK logic plate switch 1 gang 1-way SP	No.	8		-
J	. 10A MK logic plate switch 1 gang 2-way SP	No.	8		-
K	. 10A MK logic plate switch 2 gang 2-way SP	No.	32		-
L	. 10A MK logic plate switch Intermediate SP	No.	8		-
M	. Passive Infrared Detector	No.	5		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/8				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

COMPLETION BoQ

ELECTRICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
2.20	**POWER POINTS AND OUTLETS**				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
	Supply, install, test, commission and maintain: -				
A	Power outlets on recessed switch box wired as for a ringmaincircuit in 3x2.5mm2 PVC cables enclosed in 20mm dia HG concealed PVC conduit or enclosed in metal cable trunking complete with all accessories but excluding outlet plate	No	138		-
B	Ditto but wired as for a radial circuit for Kitchen	No	1		-
C	Ditto but wired as for a radial circuit for Air-conditioning unit for Smart Class	No	1		-
D	13A standard Twin switched socket outlet as MK logic K781WHI	No	138		-
E	13A Surge protected multi-way (4No. Standard outlets with neon light) power distribution unit complet with 3m long 2.5sqmm 3core PVC copper cable and fused top plug as solatec for Computer Labs	No	56		-
F	20A DP switch with pilot lamp as MK K 5423 WHI	No.	2		-
G	IP56 20A TP Isolator as MK as Cat. No. M4418	No.			-
H	3 Pin Industrial socket with Isolator plus 3 Pin top plug	No.	1		-
I	5 Pin Industrial socket with Isolator plus 5 Pin top plug	No.	19		-
J	250mm x50mm 3 compartment metal powder coated trunking complete with clip-on cover, factory made bends and tees installed on perimeter wall	LM	160		-
K	3 compartment recessed in floor box complete with cover and 1No. Twin socket outlet, 1No. Non-standard socket outlet and and 2No. Dual RJ/11, RJ45 outlet	No	3		-
L	38mm dia PVC concealed conduit runs complete with all bends and fittings linking trunking	LM	200		-
M	50mm dia PVC concealed conduit runs complete with all bends and fittings linking trunking	LM	120		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/8				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
2.30	**TELEVISION,CCTV,AUDIO & TELEPHONE OUTLETS** ***Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary***				
A	Television outlet points comprising of 25mm dia HG PVC concealed conduits with all accessories and draw wire but excluding face plates from cable draw-in box ,trunking or between intermediate outlets as shown on drawing(average length 20m)	No	2		-
B	Ditto, but for telephone/Data/Vioce/WIFI outlets	No	259		-
C	Ditto, but for CCTV/ACCESS outlets	No	52		-
D	MK logic cover plates over switch boxes	No	15		-
2.40	**FIRE ALARM SYSTEM**				-
E	Fire alarm initiating points wired in 2x1.5mm^2 FP200 cables enclosed in 25 dia. HG high impact concealed PVC conduit	No.	65		-
F	Optical smoke detector	No.	48		-
G	Heat detectors	No.	1		-
H	Sounders	No.	8		-
I	Break glass unit with protection cover	No.	8		-
2.50	**DISABLED TOILETS ALARM SYSTEM**				-
J	32mm dia. HG PVC conduit link between riser and disabled toilet controller	LM	20		-
K	Disabled alarm outlet points comprising push button, pull cord switch , reset button and lamps and tone generator wired in 1mm sqmm 4core control cable enclosed in HG PVC conduit	No	2		-
L	Pull cord switch in disabled toilet as C-TEC NC807C	No	2		-
M	Remote reset unit with sounder in the disabled toilet as C-TEC NC809DBB	No	2		-
N	Over door lamp and with tone generator as C-TEC NC806CS	No	2		-
O	25mm dia. HG PVC conduit link between riser and disabled toilet	LM	20		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/8				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	FIRST FLOOR - COLLECTION PAGE				
A	Total Brought Forward From Page No. E1/5				-
B	Total Brought Forward From Page No. E1/6				-
C	Total Brought Forward From Page No. E1/7				-
	Total				-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
	SECOND FLOOR.				
3.10	**LIGHTING POINTS AND FITTINGS**				
	Lecture Rooms				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
	For the Supply & Installation of the following complete as specified:				
A	Lighting and switching outlets wired in 3x1.5mm² pvc sc copper cables drawn in 20mm dia. HG pvc conduits complete with all wiring accessories and fittings but excluding switch plates and light fittings, Wired as for 1 way 2 way switching or on Presence detector control.	No	157		-
	Supply, assemble, fix, test & commision the following light fittings complete with lamps, tubes, and all accessories.				
B	. Type A [600x600 Panel Lights]	No.	84		-
C	. Type C4 [Downlight] for Corridor/Walkway	No.	27		-
D	. Type D [Surface Downlights] for Stairs	No.	21		-
E	. Type Ex[8wEmergency Exit Lights].	No.	4		-
F	. 10A MK logic plate switch 2 gang 2-way SP	No.	14		-
G	. 10A MK logic plate switch Intermediate SP	No.	3		-
H	. Passive Infrared Detector	No.	4		-
3.20	**POWER POINTS AND OUTLETS**				-
	Supply, install, test, commission and maintain: -				-
I	Power outlets on recessed switch box wired as for a ringmaincircuit in 3x2.5mm2 PVC cables enclosed in 20mm dia HG concealed PVC conduit or enclosed in metal cable trunking complete with all accessories but excluding outlet plate	No	30		-
J	13A standard Twin switched socket outlet as MK logic K781WHI	No	30		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/11				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

COMPLETION BoQ

ELECTRICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
3.30	**TELEVISION,CCTV,AUDIO & TELEPHONE OUTLETS**				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
A	Telephone/Data/Voice/WIFI outletst points comprising of 25mm dia HG PVC concealed conduits with all accessories and draw wire but excluding face plates from cable draw-in box ,trunking or between intermediate outlets as shown on drawing(average length 20m)	No	10		-
B	Ditto, but for CCTV/ACCESS outlets	No	2		-
C	MK logic cover plates over switch boxes	No	4		-
3.40	**FIRE ALARM SYSTEM**				-
D	Fire alarm initiating points wired in 2x1.5mm^2 FP200 cables enclosed in 25 dia. HG high impact concealed PVC conduit	No.	20		-
E	Optical smoke detector	No.	14		-
F	Sounders	No.	3		-
G	Break glass unit with protection cover	No.	3		-
3.50	**DISABLED TOILETS ALARM SYSTEM**				-
H	32mm dia. HG PVC conduit link between riser and disabled toilet controller	LM	20		-
I	Disabled alarm outlet points comprising push button, pull cord switch , reset button and lamps and tone generator wired in 1mm sqmm 4core control cable enclosed in HG PVC conduit	No	1		-
J	Pull cord switch in disabled toilet as C-TEC NC807C	No	1		-
K	Remote reset unit with sounder in the disabled toilet as C-TEC NC809DBB	No	1		-
L	Over door lamp and with tone generator as C-TEC NC806CS	No	1		-
M	25mm dia. HG PVC conduit link between riser and disabled toilet	LM	20		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/11				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/11

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	SECOND FLOOR - COLLECTION PAGE				
A	Total Brought Forward From Page No. E1/9				-
B	Total Brought Forward From Page No. E1/10				-
	Total				-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/12

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
4.10	**WASHROOMS / TOILETS**				
	LIGHTING POINTS AND FITTINGS				
	Inspect the existing installations and identify cable pathways and allow within your rates for clearing or providing mising links if necessary				
	For the Supply & Installation of the following complete as specified:				
A	Lighting and switching outlets wired in 3x1.5mm² pvc sc copper cables drawn in 20mm dia. HG pvc conduits complete with all wiring accessories and fittings but excluding switch plates and light fittings, Wired as for 1 way 2 way switching or on Presence detector control.	No	194		-
B	Emergency Lighting and switching outlets wired in 4 x 1.5mm2 PVC SC copper cables drawn in 20mm dia. PVC concealed HG conduit with all glands and connectors as neccessary for 1 or 2 ways switching with all accessories.	No	16		-
	Supply, assemble, fix, test & commision the following light fittings complete with lamps, tubes, and all accessories.				
C	. Type C1 [Downlight] for Washroom	No.	71		-
D	. Type C2 [Downlight] for Washroom	No.	46		-
E	. Type C3 [Downlight] for Corridor/Lobby	No.	34		-
F	. TypeCE2 [Downlight] for Corridor Non - Maintained Ceiling Mounted Emergency Light Fitting complete with 3 Hrs Backup batteries and all other accessories	No.	16		-
G	. Type X [OBV 2 x 8W bulkhead] for Duct	No.	8		-
H	. 10A MK logic plate switch 2 gang 2-way SP	No.	11		-
I	. Passive Infrared Detector	No.	24		-
4.20	**POWER POINTS AND OUTLETS**				-
J	Power outlets on recessed switch box wired as for a ringmaincircuit in 3x2.5mm2 PVC cables enclosed in 20mm dia HG concealed PVC conduit or enclosed in metal cable trunking complete with all accessories but excluding outlet plate	No	8		-
K	Ditto radial for handriers	No.	16		-
L	13A standard Twin switched socket outlet as MK logic K781WHI	No	8		-
M	20A DP switch with pilot lamp as MK K 5423 WHI for handriers	No.	16		-
4.30	**FIRE ALARM SYSTEM**				-
N	Fire alarm initiating points wired in 2x1.5mm^2 FP200 cables enclosed in 25 dia. HG high impact concealed PVC conduit	No.	49		-
O	Optical smoke detector	No.	29		-
P	Sounders	No.	20		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.10	**SUB-MAINS AND DISTRIBUTION**				
	Supply, install, test, commission and maintain: -				
	For the supply and installation of the following complete as specified. All cables shall be copper and complete with glands, lugs and necessary termination kit.				
	125A TPN 20 way Distribution Boards DBs or Panel Boards 1.1,1.2,2.1,2.2,3.1,3.2,4.1,4.2,5.1,5.2,6.1,6.2 ,7.1,7.2, 8.1 & 8.2 complete with MCCBs and Blanking Plates as specified. (Custom made with shunt trip Incomer breaker) for Ground & First Floor Labs & Workshops C/W all fixings,bonding to earth and labelling. Refer to Schematic Drawing.				
A	Commercial Labs 1	No.	1		-
B	Commercial Labs 2	No.	1		-
C	Power Supply & Electrical Installations lab	No.	1		-
D	Civil (Soil Lab)	No.	1		-
E	Civil (Bitumen Lab)	No.	1		-
	As described above but 125A TPN 18 way Distribution Boards DB or Panel Board. Refer to Schematic Drawing.				-
F	Civil (Concrete Lab)	No.	1		-
G	Water Treatment Training Lab	No.	1		-
	As described above but 125A TPN 16 way Distribution Boards DB or Panel Board. Refer to Schematic Drawing.				-
H	Building Workshops (Carpentry Machines Shops)	No.	1		-
I	Building Workshops (Carpentry Joinery Shop)	No.	1		-
J	Masonry 02 (Rebar Training Room)	No.	1		-
K	Masonry 01 (Steel Building Plaster Training Room)	No.	1		-
	As described above but 163A TPN 12 way Distribution Boards DB or Panel Board. Refer to Schematic Drawing.				-
L	Civil (Hydraulic Lab)	No.	1		-
M	Plumbing Workshop 01	No.	1		-
	As described above but 125A TPN 9 way Distribution Boards DB or Panel Board. Refer to Schematic Drawing.				-
N	Plumbing Workshop 02	No.	1		-
O	Survey Lab	No.	1		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.20	**SUB-MAINS AND DISTRIBUTION**				
A	Emergency stop buttons wired in parallel and connected to the Shunt trip in 2.5sqmm 2C.				
B	Emergency stop switch complete with back box	No.	12		-
	125A TPN 6 way Distribution Board complete with MCCBs and Blanking Plates as specified. C/W all fixings,bonding to earth and labelling. For				-
C	Admin Block Ground & First Floor	No.	1		-
D	First Floor TD Labs	No.	1		-
	125A TPN 8 way Distribution Board complete with MCCBs and Blanking Plates as specified. C/W all fixings,bonding to earth and labelling. For				-
E	First Floor Labs	No.	2		-
F	Second Floor Lecture rooms	No.	1		-
	125A TPN 4 way Distribution Boards DB complete with MCCBs and Blanking Plates as specified. C/W all fixings,bonding to earth and labelling. For				-
G	Gate house	No.	1		-
	16mm^2 pvc/swa/pvc 4 core copper cables to Distribution Boards located as follows: (with cable brass compression glands,shrouding and lugs at both ends).				-
H	Plumbing Workshop 01	LM	65		-
I	Plumbing Workshop 02	LM	48		-
J	Survey Lab	LM	34		-
K	Masonry 01 (Steel Building Plaster Training Room)	LM	83		-
	25mm^2 pvc/swa/pvc 4 core copper cables to Distribution Boards located as follows: (with cable brass compression glands,shrouding and lugs at both ends).				-
L	Civil (Soil Lab)	LM	55		-
M	Masonry 02 (Rebar Training Room)	LM	71		-
N	Water Treatment Training Lab	LM	75		-
O	Ground & First Floor Administration	LM	68		-
P	First Floor Riser Duct 1	LM	16		-
Q	First Floor Riser Duct 2	LM	33		-
R	Second Floor Riser Duct 1	LM	22		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/15

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.30	**SUB-MAINS AND DISTRIBUTION**				
	35mm^2 pvc/swa/pvc 4 core copper cables to Distribution Boards located as follows: (with cable brass compression glands,shrouding and lugs at both ends).				
A	Commercial Lab 1	LM	52		-
B	Commercial Lab 2	LM	62		-
C	Civil 04 (Concrete Lab)	LM	47		-
D	Building Workshop (Carpentry Machine Shops)	LM	50		-
E	Building Workshop (Carpentry & Joinery Shop)	LM	67		-
F	Civil (Hydraulic Lab)	LM	40		-
G	Power Supply & Electrical Installations	LM	58		-
	50mm^2 pvc/swa/pvc 4 core copper cables to Distribution Boards located as follows: (with cable brass compression glands,shrouding and lugs at both ends).				
H	Civil (Bitumen Lab)	LM	70		-
5.4	**Sub-Distribution Cables from DBs/Panel Boards to final circiut connection i.e Industrial Sockets and Isolators (with cable brass compression glands,shrouding and lugs at both ends).**				-
	From DB - Civil (Concrete Training Room) to:				
I	**Digital Point load Tester:-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	15		-
J	**Impact Testing:-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	12		-
	From DB - Carpentry Training Room to:				
K	**Pressure Plane:-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	16		-
L	**Swing blade circular saw machine:-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	14		-
M	**Vertical Milling:-** 4Core X 10Sq. mm CU. PVC/PVC + 1No. X 1Core X 10Sq. mm CU/ PVC/YG ECC.	LM	12		-
N	**Vibrating table saw :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	18		-
O	**Circular tenon machine:-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	16		-
P	**Hand sanding Machine:-** 4Core X 10Sq. mm CU. PVC/PVC + 1No. X 1Core X 10Sq. mm CU/ PVC/YG ECC.	LM	10		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/16

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.50	**SUB-MAINS AND DISTRIBUTION**				
A	**Vacuum heater(constant temperature drying room) :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	10		-
B	**Garland saw :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	15		-
	From DB/Panel Board - Survey Lab to:				-
C	**Material Testing Machine :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	12		-
D	**Oven :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
	From DB/Panel Board - Soil Lab to:				-
E	**Liquid Plastic Limit Tester :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	10		-
F	**Permeability Testing Machine :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	12		-
G	**Multifunctional Electric Demolding Machine :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
	From DB/Panel Board - Steel Building Plaster Training Room to:				-
H	**Mortar Mixer :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
I	**Vibrating Table :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	10		-
J	**Block Making Machineer :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	14		-
	From DB/Panel Board - Rebar Training Room to:				-
K	**Rebar Stirrup Bender :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	12		-
L	**Arc Welding Machine :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	16		-
	From DB/Panel Board - Civil (Hydraulic Lab) to:				-
M	**Isolator for Water Supply and Drainage System Simulation Room:-** 4Core X 25Sq. mm CU. PVC/PVC + 1No. X 1Core X 16Sq. mm CU/ PVC/YG ECC.	LM	20		-
	From DB/Panel Board - Commercial Labs 1 & 2 to:				-
N	**Digital Point load Tester :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	18		-
O	**Impact Testing :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	16		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

COMPLETION BoQ

ELECTRICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.60	**SUB-MAINS AND DISTRIBUTION**				
A	**Digital Point load Tester :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	10		-
B	**Material Testing Machine :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	12		-
C	**Oven :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
D	**Liquid Plastic Limit Tester :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	16		-
E	**Permeability Testing Machine :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	18		-
F	**Mortar Mixer :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	20		-
	From DB/Panel Board - Power Supply & Electrical Workshops to:				
G	**PLC and inverter training :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	12		-
H	**Electrical control box :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
I	**Motor mounting platform:-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	16		-
J	**Machine tool electrical training assessment unit :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	18		-
K	**Centrifugal Pump :-** 4Core X 10Sq. mm CU. PVC/PVC + 1No. X 1Core X 10Sq. mm CU/ PVC/YG ECC.	LM	16		-
	From DB/Panel Board - Civil Bitumen Rooms to:				
L	**Material Testing Machine :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
M	**Universal Testing Machine (Stretching and Bending) :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	16		-
N	**Cement Mortar Mixer :-** 4Core X 10Sq. mm CU. PVC/PVC + 1No. X 1Core X 10Sq. mm CU/ PVC/YG ECC.	LM	16		-
O	**Boiling Tank :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	12		-
P	**Concrete Mixer :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
Q	**Constant Temperature Water Tank :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	16		-
R	**Electric Furnace :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	18		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.70	**SUB-MAINS AND DISTRIBUTION**				
	From DB/Panel Board - Plumbing Shops 1 & 2 to:				
A	**Centrifugal Pump :-** 4Core X 10Sq. mm CU. PVC/PVC + 1No. X 1Core X 10Sq. mm CU/ PVC/YG ECC.	LM	16		-
B	**Pipe Bender (Electric) :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	14		-
C	**Testbed :-** 4Core X 4Sq. mm CU. PVC/PVC + 1No. X 1Core X 4Sq. mm CU/ PVC/YG ECC.	LM	18		-
	From Sub-board Board - Switch Room to:				
D	**Isolator for Rebar Butt Welder in Rebar Training Room :-** 4Core X 70Sq. mm CU. PVC/PVC + 1No. X 1Core X 35Sq. mm CU/ PVC/YG ECC.	LM	71		-
E	**Decoration Cubicles :-** 4Core X 6Sq. mm CU. PVC/PVC + 1No. X 1Core X 6Sq. mm CU/ PVC/YG ECC.	LM	59		-
F	**Gate House :-** 4Core X 10Sq. mm CU. PVC/PVC + 1No. X 1Core X 10Sq. mm CU/ PVC/YG ECC.	LM	114		-
	From DB/Panel Board to:				
G	**3 Pin Industrial socket with Isolator plus 3 Pin top plug :** - 2Core X 2.5Sq. mm CU. PVC/PVC + 1No. X 1Core X 2.5Sq. mm CU/ PVC/YG ECC.	LM	795		-
H	**5 Pin Industrial socket with Isolator plus5 Pin top plug :** - 4Core X 2.5Sq. mm CU. PVC/PVC + 1No. X 1Core X 2.5Sq. mm CU/ PVC/YG ECC.	LM	360		-
	12 way SPN Consumer Unit complete with MCBs and Blanking Plates as specified				
I	Main Block Washrooms First Floor lobby areas -	No.	4		-
J	Decoration Cubicles	No.	4		-
	9 way SPN Consumer Unit complete with MCBs and Blanking Plates as specified				
K	First Floor Computer Labs	No.	15		-
	6 way SPN Consumer Unit complete with MCBs and Blanking Plates as specified				
L	Service Building	No.	1		-
	4 way TPN Unit complete with MCBs and Blanking Plates as specified				
M	Roof & Pump Room	No.	2		-
N	$4mm^2$ pvc/swa/pvc 4 core copper cables to Hose Reel Water Pumps at Roof (with cable brass compression glands,shrouding and lugs at both ends).	LM	36		-
O	20A TP & N Isolator for Hose Reel Water Pumps at Roof	No.	1		-
P	$6mm^2$ pvc/swa/pvc 4 core copper cables to Booster Water Pumps (with cable brass compression glands,shrouding and lugs at both ends).	LM	85		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
5.80	**SUB-MAINS AND DISTRIBUTION**				
A	20A TP & N Isolator for Booster Water Pumps	No.	1		- -
B	150A TPN Isolator for Rebar Butt Welder in Rebar Training Room (Rebar Butt Welder to receive power directly from the Sub-board)	No.	1		- -
C	100A TPN Isolator for Water Supply and Drainage System in Civil (Hydraulic Lab)	No.	1		- -
D	2x300mm^2 pvc/swa/pvc 4 core copper cables From main switch board to Main building Subboard (with cable brass compression glands,shrouding and lugs at both ends).	LM	220		- -
E	Main Switch Board. Refer to Schematic Drawing.	No.	1		- -
F	Sub-board for Main Building and Administration. Refer to Schematic Drawing.	No.	1		- -
G	630 KVA 50 HZ 3 phase Voltage Stabilizer as specified in the particualr specification including setup and configuration. Power Supply …3 phase, 415/240V Operation:Individual phases to be regulated independently Output Voltage Tolerence ± 25% of nominal supply voltage Output :± 1% of 415/240V.Warranty:Not less than 2 years	No.	1		-
	TOTAL CARRIED FORWARD TO PAGE No. E1/20				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/20

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	POWER DISTRIBUTION - COLLECTION PAGE				
A	Total Brought Forward From Page No. E1/13				-
B	Total Brought Forward From Page No. E1/14				-
C	Total Brought Forward From Page No. E1/15				-
D	Total Brought Forward From Page No. E1/16				-
E	Total Brought Forward From Page No. E1/7				-
F	Total Brought Forward From Page No. E1/18				-
G	Total Brought Forward From Page No. E1/19				-
	Total				-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
6.10	**CABLE MANAGEMENT SYSTEM & SITE RETICULATION**				
	For the supply and installation of the following complete as specified:				
A	150mm x50mm galvanised steel cable tray complete with all mounting brackets, nuts and accessories White/Cream Powder Coated or to the Architect's designated colour for Power in the vertical Riser duct..	LM	18		-
B	150mm x50mm galvanised steel cable tray complete with all mounting brackets, nuts and accessories White/Cream Powder Coated or to the Architect's designated colour for ICT in the vertical Riser duct.	LM	18		-
C	PVC heavy gauge interlinking conduits as follows:				-
	. 50mm dia.	LM	500		-
	. 38mm dia.	LM	1500		-
	. 32mm dia.	LM	500		-
D	200x200x75 Galv A/Box	No.	120		-
	POWER RETICULATION				-
	CABLE PITS AND DUCT				-
	Masonry cable pits, with 100mm thick concrete base (class 21/20 minimum) and heavy duty removable precast concrete cover (load bearing 5000kg.minimum) clearly marked with respective to service cable and associated excavations.				-
	The dimensions given are clear internal dimensions				-
E	600mmx600mmx550mm deep for LV cables (at TX & Switch rooms)	No.	5		-
F	450mmx450mmx550mm deep for LV cables	No.	18		-
	UPVC HG cable ducts including trenches excavations (not exceeding 1000mm depth),bed, back fill , polythene marker tape over entire route ,carting away excess soil and clearing the site.				-
G	. 100mm dia duct for LV Power cable	LM	90		-
H	. 150mm dia. pvc heavy duct for external power cables.	LM	600		-
	Insitu concrete class 13.5/25 beds and surrounds at road crossings				-
I	150mm thick to 100mm & 150mm dia LV pipes	M	80		-
	ICT RETICULATION				-
	CABLE PITS AND DUCT				-
	Masonry cable pits, with 100mm thick concrete base (class 21/20 minimum) and heavy duty removable precast concrete cover (load bearing 5000kg.minimum) clearly marked with respective to service cable and associated excavations.				-
	The dimensions given are clear internal dimensions				-
J	450mmx450mmx550mm deep for ICT cables	No.	14		-
	UPVC HG cable ducts including trenches excavations (not exceeding 1000mm depth),bed, back fill , polythene marker tape over entire route ,carting away excess soil and clearing the site.				-
K	100mm diameter for ICT cables including draw wires	M	350		-
	Insitu concrete class 13.5/25 beds and surrounds at road crossings				-
L	150mm thick to 100mm dia ICTpipes	M	60		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

COMPLETION BoQ

ELECTRICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
7.10	**LIGHTNING PROTECTION SYSTEM** **LIGHTNING PROTECTION SYSTEM** **Supply, install, test, commission and maintain in compliance with KS04503 and BS code of Practice :-**				
A	Early Streamer 102007 Lightning rod as INGESCO PDC.E mod. E 60	No	1		- -
B	111012 Adapter head mast 1'1/2"	No	1		- -
C	114043 Telescopic mast 1M	No	1		- -
D	115056 T connection	No	4		- -
E	117072 Braided copper cable 50mm2	M	40		- -
F	118109 Folding clamping bracket	No	2		- -
G	119109 Protection tube 2m	No	1		- -
H	250026 Test joint in Access box	No	2		- -
I	253058 Registry case	No	1		- -
J	115055 Electrode-ground rod connection 14mm	No	2		- -
K	115104 C connection	No	6		- -
L	430019 Lightning counter CDR-11	No	1		- -
M	INSPECTION, TESTING AND COMMISSIONING	Item	1		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
MAIN BLOCK & ADMINISTRATION BLOCK

Page No. E1/23

ELECTRICAL INSTALLATIONS

COMPLETION BoQ

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
8.10	EXTERNAL/AMENITY LIGHTING				
A.	Supply, install, test and commission the following complete as specified:				
	. Type R5 - Steet Light fitting	No.	13		- -
	. Type FL-100W LED flood light	No.	45		- -
	. Type U - Up and Down Lighter (entrance pilar)	No.	4		- -
	. 8m Street Light Pole for Type R5 light fitting	No.	13		- -
	. Bollard Light B1	No.	4		- -
	. Type Q[Security Bulkhead].	No.	4		- -
	Photo electric cell switch with mounting bracket	No.	6		- -
B.	2.5mm^2 pvc twin with earth copper cables to above lights.	LM	150		- -
C.	4.0mm^2 pvc/swa/pvc 2 core copper cable.	LM	250		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

Page No. M/S

COMPLETION BoQ

MAIN BLOCK & ADMINISTRATION BLOCK
ELECTRICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
	SUMMARY PAGE				
A	Total Brought Forward - 1.GROUND FLOOR - PAGE No. E1/4				-
B	Total Brought Forward -2.FIRST FLOOR - PAGE No. E1/8				-
C	Total Brought Forward -3.SECOND FLOOR - PAGE No. E1/11				-
D	Total Brought Forward - 4.WASHROOMS/TOILETS - PAGE No. E1/12				-
E	Total Brought Forward - 5.SUB-MAINS AND DISTRIBUTION - PAGE No. E1/20				-
F	Total Brought Forward -6.CABLE MANAGEMENT SYSTEM & SITE RETICULATION - PAGE No. E1/21				-
G	Total Brought Forward -7. LIGHTNING PROTECTION SYSTEM - PAGE No. E1/22				-
H	Total Brought Forward - 8. EXTERNAL/AMENITY LIGHTING - PAGE No. E1/23				-
I	Total Brought Forward - 9. WORKS NOT MEASURED ELSEWEHRE - PAGE No. E1/24				389,700.00
J					
	TOTAL CARRIED FORWARD TO FORM OF TENDER PAGE				

Amount in Words:
Kshs…….

……
…….

Official Stamp & Address of Sub-contractor:……..

……
…….

……
…….

Tenderer's Signature:……..Date:……...……
.

Witness' Name:……..……Witness' Signature:……..

Witness Address:……
…….

……
…….

Date:……
……..

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

BILL OF QUANTITIES- ELECTRICAL SERVICES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
	WORKS NOT MEASURED ELSEWHERE:				
a.)	Allow for identification and labelling of installation on completion of works.	Item		20,000.00	20,000.00
b.)	Allow for testing, commissioning and demonstration of entire installation on completion of works.	Item		20,000.00	20,000.00
c.)	Allow for preparing and providing in soft and hard copy (scale 1:100 for layouts, 1:10 for general arrangement) of working drawings for approval prior to commencement of works	Item		20,000.00	20,000.00
d.)	Allow for preparing and providing in soft and hard copy (scale 1:100 for layouts, 1:10 for general arrangement) of working drawings for handover as part of documentaion of works 3 sets	Item		20,000.00	20,000.00
e.)	Allow for operation and maintenace manual in hard and soft copied, well indexed and in box file format,equipment warranties and test logs signed and witnessed	Item		10,000.00	10,000.00
f.)	CD copy of or of 'As Installed' drawings on Autocad release 2010 or 2014.	Item		25,000.00	25,000.00
g.)	Allow for marking on site the proposed location of service outlets for approval.	Item		10,000.00	10,000.00
h.)	Check and record loadings in Amps on each phase of submain cables and allow for balancing of loads	Item		50,000.00	50,000.00
i.)	Allow for liaison with Kenya Power Co. Ltd.	Item		#########	134,700.00
j.)	Allow for liaison with and other ISPs	Item		20,000.00	20,000.00
k.)	Train clients representativesprovide sylabus for approval and certficates after training	Item		20,000.00	20,000.00
l.)	Allow for all contractual insuarances,bonds and levis requared to execute the subcontractor as necessary			40,000.00	40,000.00
	TO SUMMARY PAGE				**389,700.00**

CCTV, SECURITY TV, VOICE AND DATA SYSTEMS

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

STRUCTURED CABLING, ICT, SECURITY AND TV SYSTEMS INSTALLATIONS BoQ

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	Refer to page 1 of 77 to 77 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section. **Supply ,install, test and commission**				
	BILL NO 1.				
	STRUCTURED CABLING (DATA INFRASTRUCTURE) **as described in page 13 of 77 to 24 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.** **Horizontal cabling**				
	Wire outlet points as described in specifications in CAT 6A UTP copper cable for indoor applications including terminations on both ends (to patch panels and or face plates modules) including labling at both ends. Conduits will be provided by others.				
A	From data racks to workstations fixed on RJ45 faceplate.	No	119		-
B	From data rack to unfixed workstation or device (with RJ45 snug free boot for direct patching to equipment or device).	No	464		-
	Ivory plastic module with RJ45 module complete with labling				
C	Single module Face plate	No.	25		-
D	Dual modules Face plate	No.	47		-
E	Networking accessories comprising of masking tapes, labels, cable ties etc.	Lot	1		-
	Backbone Cabling				
	Fibre Panels complete terminations and labling				
F	1x8 port ODF fibre cable splitter complete with connectectors for 7 outputs and blanks for all unused ports, rack mount in server room cabinet.	No	1		-
G	Fibre patch panel cum splitter ,1x 8 way in server room cabinet	No	1		-
H	Fibre patch panel cum splitter ,1x 2 way (one each in all other cabinets)	No	7		-
I	1m long 4 core fibre patch cords complete with 2 core fibre connectors and labling on each end with spare cores blanked .	No	40		-
	4 Core fibre cable outdoor application as specified complete with terminals and blankings for unused cores at both ends as neccessary.				
J	To Data cabinet "SRD" in admin/ server room	LM	10		-
K	To Data cabinet "SRS" in admin/ server room	LM	10		-
L	To Gate house cabinet "GD/S"	LM	200		-
	TOTAL CARRIED FORWARD TO PAGE No. E3				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	BILL NO 1.				
	PASSIVE EQUIPMENT.				
	The following items as described in the specifications				
M	To Main building riser duct 1 cabinet "MG1D"	LM	90		-
N	To Main building riser duct 2 cabinet "MF2D"	LM	110		-
O	To Main building riser duct 1 cabinet "MG1S"	LM	90		-
P	To Main building riser duct 2 cabinet "MF2S"	LM	110		-
Q	1U Cable managers in various data cabinets	No	40		-
R	Cabinet accessories and consumerbles for various cabinets	Item	7		-
S	Networking accessories comprising of masking tapes, labels, cable ties etc.	Lot	1		-
T	Fibre connectors	No.	16		-
U	Fibre duplex adapters	No.	74		-
V	SFP modules	No.	22		-
	Data Cabinet, Patch panels and Patch Cords with snug free boots, complete with labling and earthing and bonding				-
W	42U "SRD" in main server room (Admin block)	No	1		-
X	32U "SRS" in main server room (Admin block) and riser Duct 1 "MG1D" (Main Building-Ground Floor)	No	2		-
Y	12U in Gate House " GD/S and Main Building ("MG1S" riser duct 1," and MF2D and "MF2S" in first floor riser duct 2)	No	4		-
Z	48 port RJ45 Patch Panels	No	7		-
AA	24 port RJ45 Patch Panels	No	13		-
AB	1m long RJ45- RJ45 Patch Cords	No	626		-
AC	3m long RJ45- RJ45 Patch Cords	No	44		-
4.10	**ACTIVE EQUIPMENT AS SPECIFIED** **Complete with Licence and next day servcie and 1 year support (provide evidence)** ***as described in page 24 of 77 to 28 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.***				-
	Refer to matrix for distribution in various cabinets				-
	48 port Access level switch (type 1A)	No	7		-
	24 port Access level switch (type 2A)	No	13		-
	24 port Core level switch (type C) "Server room "	No	1		-
	24 port Aggregation level switch (type B) complete with chasis, power supplies,supervisor engine and memory) "Server room "	No	1		-
AD	Firewall system Router in data rack "Server room "	No.	1		-
AE	3 KVA Online Rackmount UPS	No.	2		-
AF	1.5 KVA Online Rackmount UPS	No.	6		-
AG	Set up and configure the whole system	Item	1		-
	TOTAL CARRIED FORWARD TO PAGE No. E3				-

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	BILL NO. 1 - COLLECTION PAGE				
A	Total Brought Forward From Page No. E1				-
B	Total Brought Forward From Page No. E2				-
C	Allow sum for linking new installations to existing network within the institution	Item	1		50,000.00
	Total				
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	BILL NO 2. **TELEPHONY INSTALLATIONS** **as described in page 29 of 77 to 30 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.** **Supply ,install, test and commission**				
A	IPBX including rack mount PC and all peripherals and licence as specified	No	1		- -
B	Standard POE Head set (type 1)	No	34		- -
C	Medium end POE Head set (type 2)	No	2		- -
D	Boardroom POE Head set (type 4)	No	1		- -
E	Operators head set as specified (type 3)	No	1		- -
F	Operators console+ DSS unit for minimum 50 extensions as specified	No	1		- -
G	Allow for GSM Modems/Routers (Airtel & Safaricom)	No.	2		- -
H	Set up and configure the whole system	Item	1		- -
I	Allow sum for linking telephone system to existing network within the institution	Item	1		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	BILL NO 3. **Supply ,install, test and commission** **WIFI SYSTEM INSTALLATIONS** *as described in page 31of 77 to 35 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.*				
A	WI-FI Router controller complete as specified,installaed in cabinet SRD in server room	No	1		-
B	POE indoor WI-FI access point as specified (type 1)	No	13		-
C	POE outdoor WI-FI access point as specified (type 2)	No	10		-
D	Set up and configure the whole system	Item	1		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	BILL NO 4. **Supply ,install, test and commission** **CCTV INSTALLATIONS)** **as described in page 36 of 77 to 43 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.** IP based, 10/100 baseT , POE Cameras with necessary mounting brackets, junction boxes,micro-SD, fixings,etc complete ready for connection and configuration				
A	Indoor IP POE , Camera type 1A	No.	10		-
B	Indoor IP POE ,Camera type 1B	No.	23		-
C	Outdoor IP POE, Camera type 2a	No.	2		-
D	Outdoor IP POE, Camera type 2b	No.	4		-
E	Outdoor IP POE, Camera type 3	No.	15		-
F	4m high above ground ,100mm dia Steel galvanized pole for mounting outdoor cameras complete with fixing brackets for two cameras and all fixings as	No.	1		-
G	300mmx300mmx500mm deep concrete pad with studs for mounting the pole including excavating , backfilling and cable sleeves as necessary	No.	1		-
H	64 Ch network video recorder for rack mounting	No.	1		-
I	1.6 TB Hardisk	No.	8		-
J	42" TV LED (4K commercial grade screen) complete with wall mounting brackets in control room including 3m long HDMI cables for each complete with connectors and both ends	No.	2		-
K	Workstation PC complete with 20 inch monitor in Control room control and monitoring complete with power and HDMI cable.	No.	3		-
L	All software and licences such as for Video management,compression,network client for management intelex on network, third party integration including configuration as necessary	Lot	1		-
M	Proprietary keyboard controller, touch tracker, controls,mouse , joystick and all accessories necessary for a monitoring workstation etc.	Item	3		-
N	4-port Firewall system Router in data rack "SRS"	No.	1		-
O	Set up and configure the whole system	Item	1		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	BILL NO 5. **ACCESS CONTROL AND INTRUDER ALARM INSTALLATIONS** **Supply ,install, test and commission including liaison with the door supplier with respect to fixing details** **DOOR ACCESS CONTROL SYSTEMS INSTALLATIONS as described in *page 44 of 77 to 53 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.*** **NETWORK IP BASED DOOR ACCESS CONTROL SYSTEM**				
A	Wiring between Door contollers , monitors, breakglass units , readers, request to exit buttons with multi-stranded 6/8 core unscreened cable drawn in conduits / trunking (wire ways will be provided by others) to and including all the necessary accessories to meet IEC requirements	No	24		-
B	Intruder alarm sytem points comprising of **wiring between devices and I/O contoller**s with multi-stranded 6/8 core unscreened cable drawn in conduits / trunking (wire ways will be provided by others) to and including all the necessary accessories to meet IEC requirements	No	105		-
	Door Access readers				-
C	Intelligent Face recogination+ Biometric+Pin+Proximity reader	No	2		-
D	Intelligent 'Proximity card reader	No	16		-
E	Inteligent Proximity card+Pin reader	No	8		-
F	Inteligent Over ride key switch complete with wiring and all the necessary accessories	No.	8		-
	The following IP based 1or 2 Door Contollers as specfied complete with enclosure and power supply unit to achive the following door operation				-
G	Proximity+PIN + Face+ Biometrics for entry and exit	No.	1		-
H	Proximity+PIN for entry and Push Button for exit (REX) (1 Doors)	No.	1		-
I	Proximity+PIN for entry and Push Button for exit (REX) (1 Doors) (2 doors)	No.	4		-
J	Proximity IN, request to exit button and Emergency override switch for exit) (2 Doors)	No.	7		-
K	(Proximity IN and exit) (1-door)	No.	4		-
L	Request to Exit push button on standard switchbox	No.	24		-
M	Electromagnetic locks complete with door monitor, bracket and all other necessary accessories	No.	27		-
N	Heavy duty door closers complete with all accessories	No.	27		-
O	Intelligent emergency break glass complete with all accessories	No.	12		-
	Control and Server romm related installations 'as described in page 59 of 77 to 68 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.				-
P	Control room hardware and software inclusive of PC / server, interface kit with desktop reader,card printing equipment, interface to fire alarm control system installation,Face/ card /biometric programmer,system management software.The software should allow integration to other aspects of security & safety installation	LOT	1		-
Q	Cards with Wiegand function capabilities for door access	No	3000		-
	TOTAL CARRIED FORWARD TO PAGE No. E9				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	INTRUDER ALARM SYSTEM INSTALLATIONS as described in page 53 of 77 to 58 of 77 in structured cabling,ICT,Security and TV sytstems Installations Specification Section.				
A	IP based I/O controller used with panic buttons, motion sensors, remote panic buttons complete with Power supply unit and enclouser	No	5		-
B	12m range motion sensor	No	4		-
C	360 degree. View 20m radius range motion sensors	No	15		-
D	Panic button	No	2		-
E	Remote kit (1 receiver & two buttons)	No	1		-
F	Siren complete with flasher including connection to power supply unit	No	1		-
G	300VA 240V/12V 50Hz Power supply units complete enclousure, wiring and all accessories	No.	30		-
H	Key pad	No	1		-
I	Magnetic contacts	No	76		-
J	Programming , set up and configure the whole system	No.	1		-
K	Allow for CCK annual licence	Item	1		-
	TOTAL CARRIED FORWARD TO PAGE No. E9				-

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	BILL NO. 5 - COLLECTION PAGE				
A	Total Brought Forward From Page No. E7				-
B	Total Brought Forward From Page No. E8				-
	Total				-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

ITEM No.	DESCRIPTION	UNIT	QTY	RATES KSHS	AMOUNT KSHS
	BILL NO 6.				
	TV SIGNAL DISTRIBUTION INSTALLATIONS				
A	UHF aerial complete pole and mounting brackets	No.	1		-
B	90cm Digital antennae satellite dish with 4 LNB and support at roof	No.	1		-
C	MATV Video+Audio +RF modulator as Televez	No.	1		-
D	Master head amplifier unit (BOOSTER) as Televez	No.	1		-
E	Professional channelised combiner as Televez	No.	1		-
F	13A 240V ac Surge protected power distribution unit 6 ways socket outlets and backplate and 2m 2.5 sqmm 3core power cable with top plug.	No.	1		-
G	Wiring between multiswitches in RG-11 quad shielding cable including terminations at outlets or splitter units including F connectors	LM	100		-
H	Low loss loop through dual outlet TV/FM as Televez	No.	3		-
I	IP55 500mmx500mmx300mmx20mm SWG ventilated powder coated with 1No.twin socket and space for amplifiers,power supply units and multiswitches.	No.	1		-
J	Complete earthing of cabinet to IEE requirements comprising copper clad earth rod,earth inspection Pit,4sqmm insulated copper conductor including terminations at rod and aerial mast at roof (aprox 25m).	Item	1		-
	Total carried to Main Summary Page M/S				-

ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	AMOUNT TOTAL
	SUMMARY PAGE				
A	Preliminaries				
B	Total Brought Forward - 1.BILL NO. 1 - PAGE No. E3				-
C	Total Brought Forward -2.BILL NO. 2- PAGE No. E4				-
D	Total Brought Forward -3.BILL NO. 3- PAGE No. E5				-
E	Total Brought Forward - 4.BILL NO. 4- PAGE No. E6				-
F	Total Brought Forward - 5.BILL NO. 5 - PAGE No. E9				-
G	Total Brought Forward - 6.BILL NO. 5 - PAGE No. E10				-
H	ALLOW FOR CONTIGENCIES				
	TOTAL CARRIED FORWARD TO FORM OF TENDER PAGE				-

Amount in Words:
Kshs……
…….

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…….

Official Stamp & Address of Sub-
contractor:……..

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…….

……
…….

Tenderer's
Signature:……...Date:……...……
…….

Witness' Name:……..……Witness'
Signature:……..

Witness
Address:……
…….

……
…….

Date:……
……..

GENERATOR INSTALLATIONS

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

GENERATOR SET AND CABLING - SCHEDULE No.6

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	TOTAL Kshs
	Supply, deliver, install, test and commission the following:-				
A	Sound attenuated 330KVA(prime)/358 KVA (standby), 75dbA at 7M diesel engine generator set, rated 3 phase, 415V 50Hz @ 1500 rpm suitable for AMF operation	No.	1		-
B	1200 litres daily fuel tank fully charged complete with fuel transfer piping, isolating valves and hose between the tank and engine	Item	1		-
C	Engine exhaust system piping fabricated from mild steel plate of 3mm thickness to be painted with heat resistant paint, complete with bends, expansion bellows, bird / rain water protection cap and adequate support including with 50mm thick fibre glass lugging with aluminium cladding over withing areas that of human reach under normal operation(.Total length not exeeding 10m).	Item	1		-
D	Radiator extract system ducting fabricated from mild steel plate 2mm thick to be painted with heat resistant paint, including support structures as per approved design layout (distance from generator radiator to discharge point not exceeding 4m).	Item	1		-
E	240mm^2 XPLE /SWA/ PVC 1 core copper cable from generator control panel to load transfer /AMFpanel complete with CU lugs and brass compression glands (connected as 2 runs in parallel)	LM	60		-
F	240mm^2 XPLE /SWA/ PVC 1 core copper cable from generator set to control panel, earthing stations and earthing pit complete with CU lugs	LM	40		-
G	2.5mm^2 x 12 core PVC PVC PVC control cable between LV switch board, generator set and load transfer / AMF panel	LM	10		-
H	Copper earthing mat 1000mmx1000mm constructed of 25mmx3mm copper tape at 150mm intervals laid 600mm deep in ground	No.	1		-
	TOTAL CARRIED FORWARD TO PRICES SUMMARY SCHEDULE				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

GENERATOR INSTALLATIONS - PRICES SUMMARY SCHEDULE

ITEM	DESCRIPTION	AMOUNT Kshs.
A	Sub contract Preliminaries	
B	Total Brought Forward From Page No. E/12 For Schedule No.3	
C	Total Brought Forward From Page No. E/13 For Schedule No.4	
D	Total Brought Forward From Page No. E/14 For Schedule No.5	
E	Total Brought Forward From Page No. E/16 For Schedule No.6	
F	Provisional contingency sum	
	TOTAL CARRIED FORWARD TO FORM OF TENDER	

Amount in Figures: Kshs.……..…….

Amount in Words: Kenya Shillings……..

…….

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Official Stamp & Address:……..

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…….

Tenderer's Signature:……...Date:……...…….

Witness' Name:…….…….…….……Witness' Signature:…….……..

Address:…….

…….
…….

Date:……..

Witness' Name:…….…….…….……Witness' Signature:…….……..

Address:…….

…….

Date:……..

PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATIONS

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
1.00	**SANITARY FITTINGS**				
	Supply, Deliver to site and install,test & commission the following appliances including their support brackets, screws etc. and their connection to water supply, waste/soil drainage and electrical power supply:-				
	SANITARY FITTINGS - MAIN BLOCK				
A	Close coupled WC suite consisting of WC pan 9litre cistern and fittings complete with seat and cover	No.	65		-
B	90 degrees WC connector	No.	24		-
C	Straight WC connector	No.	41		-
D	550 x 455 mm counter top Wash Hand Basin	No.	0		-
E	Basin tap	No.	5		-
F	Non-concussive Pressmatic basin tap, Wall Mounted	No.	60		-
G	White vitreous china 600 x 460 mm pedestal type WHB with one taphole and complete with semi pedestal	No.	5		-
H	Basin Tap: pillar mounted Tap	No.	0		-
I	Schlosser : Angle Valve, with Extension 1/2" Crome Plated	No.	70		-
J	25mm Dia flexible pipe 600mm	No.	70		-
K	Tapis 32mm pop up basin waste	No.	65		-
L	Tapis 32mm plastic bottle trap with 200mm tail pipe, cap nut and wall flange	No.	65		-
M	Toilet roll holder	No.	65		-
N	Soap Dispensor, ABS thermoplastic valve, plastic, wall mounted complete with anti-dripping and anti corrossion valve, 1.1 litres polyethylene inner tank, standard mediclinic's key for accessing the interior, window for refill time indication as Mediclinics	No.	37		-
O	Associated Steel Ltd,Lab sink made out of 304 type stainless steel of size 600 x 500 x 260 mm complete with legs and bright machine polish	No.	6		-
P	Franke, sink made out of 304 type stainless steel of size 400 x 450 x 200 mm for countertop mounting and bright machine polish Model	No.	24		-
Q	**Tapis** jeal Long Neck 1/2" diameter wall type	No.	33		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F1/4				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	1 1/2" sink grid waste Zeda	No.	33		-
B	1 1/2" Tubular plastic P-trap Zeda, 75mm Seal	No.	33		-
	Mobility Impared Person (MIP) Washroom				
C	White Enamel, 610mm long, 1.5mm thick and 32mm diameter disabled toilet grab rails complete with wall fixing mounting flange	No.	20		-
D	Mediclinics White Enamel verical swing grab bar, 610mm long, 1.5mm thick of 32mm diameter tube disabled toilet grab rails complete with wall fixing mounting flange with toilet paper hook	No	5		-
E	urinal bowl size 305 x 295 x 570mm, back entry inlet with concealed trap with doomed waste	No.	30		-
F	**Docol Pressmatic Vandal - proof low pressure** urinal flush valve,complete with automatic closing valve in approimately 6seconds	No.	30		-
G	White Cotto urinal divider 400 x 705 x 8mm thick,	No.	22		-
H	Associated Steel Ltd, cleaner's sink made out of 304 type stainless steel of size 600 x 500 x 260 mm with bucket grating and bright machine polish	No.	3		-
	Paper Towel Dispenser				
I	330 x 275 x 133mm deep, White Epoxy, 0.8mm thick one piece body, lock with standard key, frontal window refill indicator capable of 400 C-fold towels	No.	21		-
J	225mm Diameter medium gauge Aluminium grating cover	No.	2		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F1/4				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	SANITARY FITTINGS - GATE HOUSE				
K	Close coupled WC suite consisting of WC pan 9litre cistern and fittings complete with seat and cover	No.	2		-
L	Flexible WC connector	No.	2		-
M	Pressmatic basin tap	No.	2		-
N	560 mm Basin complete with two tapholes and pedestal	No.	2		-
O	Schlosser : Angle Valve, with Extension 1/2" Crome Plated	No.	4		-
P	25mm Dia flexible pipe 600mm	No.	4		-
Q	Tapis 32mm pop up basin waste in CP	No.	2		-
R	Tapis 32mm plastic bottle trap with 200mm tail pipe, cap nut and wall flange	No.	2		-
S	Toilet roll holder	No.	2		-
T	Urinal bowl size 305 x 295 x 570mm, back entry inlet with concealed trap with doomed waste	No.	1		-
U	Vandal - proof low pressure urinal flush valve,complete with automatic closing valve in approimately 6seconds	No.	1		-
	Paper Towel Dispenser				
V	330 x 275 x 133mm deep, Stainless Steel , bright finish, 0.8mm thick one piece body, lock with standard key, frontal window refill indicator capable of 400 C-fold towels	No.	2		-
W	Soap Dispensor, ABS thermoplastic valve, plastic, wall mounted complete with anti-dripping and anti corrossion valve, 1.1 litres polyethylene inner tank, standard key for accessing the interior, window for refill time indication as	No.	2		-
X	Allow for setting to work, testing and commissioning.	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F1/3				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F1/1				-
B	Total Brought Forward From Page No. F1/2				-
C	Total Brought Forward From Page No. F1/3				-
	TOTAL FOR SANITARY FITTINGS ON MAIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - MAIN BLOCK PAGE No. F6/1				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
2.00	**INTERNAL PLUMBING**				
	Supply, deliver and install plastic PPRC pipes				
	Tenderers must allow in their pipework prices for all the couplings, connectors, unions, expansion loops, jointing materials etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed, and pipe sleeves through structural members.				
	COLD WATER PPRC PIPES				
A	25 mm diameter PPRC PN 20 Grey Pipes	LM	270		-
A1	25 mm diameter PPRC PN 20 Grey Pipes - Install Only	LM	90		-
B	32 mm diameter PPRC PN 20 Grey Pipes	LM	20		-
B1	32 mm diameter PPRC PN 20 Grey Pipes - Install Only	LM	80		-
C	40 mm diameter PPRC PN 20 Grey Pipes	LM	49		-
C1	40 mm diameter PPRC PN 20 Grey Pipes - Install Only	LM	20		-
D	50 mm diameter PPRC PN 20 Grey Pipes	LM	50		-
E	63 mm diameter PPRC PN 20 Grey Pipes	LM	310		-
F	110 mm diameter PPRC PN 20 Grey Pipes	LM	13		-
	Extra Over PPRC Tubing for the following:-				
G	32 mm diameter PPRC 45 degrees Bend	No.	1		-
H	25 mm diameter PPRC 90 degrees Bend	No.	30		-
H1	25 mm diameter PPRC 90 degrees Bend - Install Only	No.	100		-
I	32 mm diameter PPRC Bend	No.	5		-
I1	32 mm diameter PPRC Bend - Install Only	No.	20		-
J	40 mm diameter PPRC Bend	No.	1		-
J1	40 mm diameter PPRC Bend - Install Only	No.	34		-
K	50 mm diameter PPRC Bend	No.	15		-
L	63 mm diameter PPRC Bend	No.	23		-
M	110 mm diameter PPRC Bend	No.	6		-
N	25 mm diameter PPRC 90 Degrees Equal Tee	No.	5		-
N1	25 mm diameter PPRC 90 Degrees Equal Tee - Install Only	No.	70		-
O	32 mm diameter PPRC 90 Degrees Equal Tee	No.	25		-
O1	32 mm diameter PPRC 90 Degrees Equal Tee - Install Only	No.	15		-
P1	40 mm diameter PPRC 90 Degrees Equal Tee - Install Only	No.	20		-
Q	50 mm diameter PPRC 90 Degrees Equal Tee	No.	7		-
R	63 mm diameter PPRC 90 Degrees Equal Tee	No.	10		-
S	110 mm diameter PPRC 90 Degrees Equal Tee	No.	5		-
T	25 mm diameter PPRC End Cap	No.	0		-
U	25 x 20 mm diameter PPRC Reducer	No.	0		-
V	32 x 25 mm diameter PPRC Reducer	No.	60		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F2/5				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	40 x 25 mm diameter PPRC Reducer	No.	11		-
B	40 x 32 mm diameter PPRC Reducer	No.	25		-
C	50 x 25 mm diameter PPRC Reducer	No.	0		-
D	50 x 32 mm diameter PPRC Reducer	No.	0		-
E	50 x 40 mm diameter PPRC Reducer	No.	12		-
F	63 x 25 mm diameter PPRC Reducer	No.	3		-
G	63 x 32 mm diameter PPRC Reducer	No.	3		-
H	63 x 40 mm diameter PPRC Reducer	No.	6		-
I	63 x 50 mm diameter PPRC Reducer	No.	6		-
J	90 x 63 mm diameter PPRC Reducer	No.	6		-
K	110 x 90 mm diameter PPRC Reducer	No.	6		-
L	25 x 1/2" diameter PPRC Female Screwed Elbow	No.	170		-
M	25 x 3/4" diameter PPRC Female Screwed Elbow	No.	10		-
N	32 x 1" diameter PPRC Female Screwed Adaptor	No.	0		-
O	32 x 1" diameter PPRC Male Screwed Adaptor	No.	4		-
P	40 x 1 1/4" diameter PPRC Male Screwed Adaptor	No.	30		-
Q	50 x 1 1/2" diameter PPRC Male Screwed Adaptor	No.	2		-
R	63 x 2" diameter PPRC Male Screwed Adaptor	No.	8		-
S	110 x 4" diameter PPRC Male Screwed Adaptor	No.	2		-
T	25 x 1/2" diameter PPRC Female Screwed Adaptor	No.	0		-
U	25 x 3/4" diameter PPRC female Screwed Adapter	No.	20		-
V	25 x 3/4" diameter PPRC Male Screwed Adaptor	No.	20		-
W	25 x 1/2" diameter PPRC Female Screwed Tee	No.	0		-
	Gate Valves				
A1	20 mm diameter approved high pressure screw-down fullway non-rising stem, solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing.	No.	10		-
B1	25mm diameter ditto	No.	2		-
C1	32mm diameter ditto	No.	16		-
D1	40mm diameter ditto	No.	1		-
E1	50mm diameter ditto	No.	4		-
F1	100mm diameter ditto	No.	1	-	-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F2/5				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	**Pressed Steel Water Roof Storage Tank**				
	Pressed steel sectional water tank manufactured to BS 1564 Grade 43A with external flanges and 1,000 x 1,000mm pressed steel plates				
	□ Capacity: 40,000Litres				
	□ Size: 5,000 x 4,000 x 2,000mm deep (76 panels)				
	The tank shall be complete with:-				
	□ Flanged plates, cleats, stays, bolts and washers				
	□ All other necessary fittings and material for jointing.				
	□ 40mm diameter inlet pipe connection.				
	□ 1 No. 50 diameter outlet pipe connection. (Hose Reel)				
	□ 1 No. 100 diameter outlet pipe connection. (Puplic Health)				
	□ 100mm diameter wash-out pipe connection.				
	□ 65mm diameter overflow pipe connection.				
	□ Cover with a mosquito-proof vent and manhole.				
	□ Tank external ladder.				
	□ Tank internal ladder.				
	□ Tank water level indicator clearly marked capacity and pointer	Item	1		-
	Accessories To The GRP Water Storage Tank				
	Ball Valve				
B	Bricon 1" (25mm) diameter high pressure cast brass ball valve MOH Pattern with 1 1/4" shank	No.	1		-
	Ball Float				
C	Bricon 4 1/2" diameter high pressure polypropylene plastic float.	No.	1		-
	Float Switch & Cable				
D	Water level cut out float switch inclusive of cable and laying from the pump control panel to the control float switch. (approx. 80 metres).	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F2/5				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.		AMOUNT Kshs
	Sterilization				
A	Allow for sterilization of plumbing system with chlorine	Item	1		-
	Testing & Commissioning				
B	Allow for setting to work, testing and commissioning.	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F2/5				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F2/1				-
B	Total Brought Forward From Page No. F2/2				-
C	Total Brought Forward From Page No. F2/3				-
D	Total Brought Forward From Page No. F2/4				-
	TOTAL FOR INTERNAL PLUMBING ON MAIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - MAIN BLOCK PAGE No. F6/1				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FOUL WATER DRAINAGE - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
3.00	**FOUL WATER DRAINAGE**				
	Supply and fix uPVC soil system to BS 4660 and BS 4515; and MuPVC waste systems to BS 5255 with screwed and socketed joints to BS 21.				
	Solvent welded joints shall be as per the systems manufacturer's written instructions.				
	Tenderers must allow in their pipework prices for all the couplings, connectors, joints etc as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed.				
	The installation must comply with BS 5572.				
	MuPVC Waste System conforming to BS 5255 Heavy Gauge Pipework Class 41.				
A	32 mm diameter waste pipe	LM	20		-
B	40 mm diameter waste pipe	LM	10		-
B1	40 mm diameter waste pipe - Install only	LM	80		-
C	50 mm diameter Waste pipe - Install only	LM	20		-
	Extra Over MuPVC Waste Pipework for the following:-				
D	32 mm diameter 90 degrees Sweep Bend	No.	50		-
E	32 mm diameter 135 degrees Sweep Bend	No.	5		-
F	40 mm diameter 90 degrees Sweep Bend	No.	15		-
F1	40 mm diameter 90 degrees Sweep Bend - Install Only	No.	20		-
G	40 mm diameter 135 degrees Sweep Bend	No.	65		-
H	50 mm diameter 90 degrees Sweep Bend	No.	11		-
H1	50 mm diameter 90 degrees Sweep Bend - Install Only	No.	10		-
I	50 mm diameter 135 degrees Sweep Bend	No.	2		-
J	32 mm diameter 90 degrees Sweep Tee	No.	5		-
K	40 mm diameter 90 degrees Sweep Tee	No.	110		-
K1	40 mm diameter 90 degrees Sweep Tee - Install Only	No.	8		-
L	40 mm diameter 45 degrees Wye Tee	No.	6		-
M	50 mm diameter 90 degrees Sweep Tee - Install Only	No.	4		-
N	50 mm diameter 45 degrees Wye Tee	No.	1		-
O	40 x 32 mm diameter Socket Reducer	No.	70		-
P	50 x 40 mm diameter Socket Reducer	No.	6		-
Q	110 x 40 mm diameter Socket Reducer	No.	6		-
R	110 x 50 mm diameter Socket Reducer	No.	16		-
S	32 mm diameter Access Plug	No.	4		-
T	40 mm diameter Access Plug	No.	46		-
U	50 mm diameter Access Plug	No.	2		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F3/3				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FOUL WATER DRAINAGE - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	100 mm diameter Light Grey Soil Pipe	LM	85		-
B	100 mm diameter Light Grey Soil Pipe - Install Only	LM	180		-
	Extra Over uPVC Soil Pipework for the following: -				
B	100 mm diameter 92 Deg. Light Grey Sweep Bend	No.	1		-
B1	100 mm diameter 92 Deg. Light Grey Sweep Bend - Install only	No.	19		-
C	100 mm diameter 135 Degrees Light Grey Sweep Bend	No.	15		-
D	100 mm diameter Light Grey Single Branch	No.	70		-
E	110 mm diameter PVC Puddle flanges	No.	0		-
F	100 mm diameter Light Grey Weathering Apron	No.	18		-
G	100 mm diameter Light Grey Weathering Slate	No.	18		-
H	100 mm diameter Light Grey Vent Cowl	No.	18		-
I	110 mm diameter Access Plug	No.	16		-
	uPVC Buried Drain System conforming to BS 4660 Heavy Gauge Class 41 Pipework				
J	100 mm diameter Golden Brown Buried Drain Pipe	LM	220		-
	Inspection Chambers - Heavy Duty				
K	Allow excavation, concreting to Class 1:3:6, walling 150 mm thick solid concrete block walls with 1:3 mortar and plastering to 1:2, heavy duty rectangular cover and frame for manhole not exceeding 1000 mm depth.	No.	33		-
	Gully Trap - Concrete Cover				
L	Allow for a masonry gully trap of size 300 x 300 x 450 mm deep with cast Iron P-Trap, cast iron grating, drain pipe, concrete cover, etc.	No.	22		-
M	100 x 50 Trapped Floor with 3 No. 40 mm diameter inlets and 50 mm diameter outlet	No.	2		-
N	Stainless steel floor trap cover 150 x 150 mm with 100 mm diameter inlet	No.	37		-
	Excavation				
O	Excavate trench for buried drain pipes not exceeding 1000 mm and average 600 mm deep, part return, fill in, ram and remainder cart away.	LM	220		-
	Testing & Commissioning				
P	Allow for setting to work, testing and commissioning	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F3/3				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FOUL WATER DRAINAGE - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No.F3/1				-
B	Total Brought Forward From Page No.F3/2				-
	TOTAL FOR FOUL DRAINAGE ON MAIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - MAIN BLOCK PAGE No. F6/1				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
STORM WATER DRAINAGE - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
4.00	**RAIN WATER DRAINAGE**				
	Supply, deliver and install the following for rain water drainage disposal from roof to ground disposal as shown on drawings: -				
	Fulbora outlet				
A	100mm diameter fulbora outlet of hardened plastic or other approved material and to take 110mm uPVC piping including adaptor	No.	26		-
B	Ditto but Install Only	No.	30		-
	Supply and fix uPVC soil system to BS 4660 and BS 4515; and MuPVC waste systems to BS 5255 with screwed and socketed joints to BS 21. Solvent welded joints shall be as per the systems manufacturer's written instructions.				
	Tenderers must allow in their pipework prices for all the couplings, connectors, joints etc as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed.				
	The installation must comply with BS 5572. uPVC Soil System conforming to BS 4514. Heavy Gauge Class 41 Pipework				
B	50 mm diameter Soil Pipe	LM	15		-
C	100 mm diameter Soil Pipe	LM	300		-
	Extra Over uPVC Soil Pipework for the following: -				
D	50 mm diameter 90 degrees Sweep Bend	No.	20		-
E	50 mm diameter 135 degrees Sweep Bend	No.	4		-
F	100 mm diameter Sweep Bend	No.	120		-
G	100 mm diameter 135 degrees Sweep Bend	No.	30		-
H	50 mm diameter 92 degrees Sweep Tee	No.	0		-
I	100 mm diameter 135 Degrees Wye Tee	No.	2		-
J	100 x 50 Trapped Floor with 3 No. 40 mm diameter inlets and 50 mm diameter outlet	No.	0		-
K	Stainless Steel trap cover 150 x 150 mm with 100 mm diameter inlet	No.	1		-
L	50 mm diameter Access Plug	No.	10		-
M	110 mm diameter Access Plug	No.	2		-
	Testing & Commissioning				
N	Allow for setting to work, testing and commissioning	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION - MAIN BLOCK PAGE No. F6/1				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FIRE FIGHTING INSTALLATIONS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
5.00	**PORTABLE FIRE EXTINGUISHER**				
	CO_2 Fire Extinguishers				
	5 kg manganese steel portable CO_2 gas fire extinguishers conforming to BS 1288 complete with:-				
	□ charge and fixing bracket				
	□ pictorial instructions				
	□ colour code				
	□ visual discharge indicator				
A	□ serviceable on site	No.	24		-
	W/CO_2 Fire Extinguishers				
	9 litre polythene lined portable water/CO_2 (gas cartridge) fire manufactured to BS 5423 complete with:-				
	□ charge and fixing bracket				
	□ pictorial instructions				
	□ colour code				
	□ visual discharge indicator				
B	□ serviceable on site	No.	24		-
	Ceiling Mounted Automatic Fire Extinguishers				
	Bulb Temperature operated 15kg ceiling mounted powder fire extinguisher manufactured to BS 5423 complete with:-				
	□ break glass bulb, 68 degrees for actuation				
	□ charge and fixing bracket				
	□ pictorial instructions				
	□ colour code				
	□ visual discharge indicator				
C	□ serviceable on site	No.	8		-
	Dry Powder Fire Extinguishers				-
	Cartridge operated 9kg portable dry powder fire extinguisher				-
	manufactured to BS 5423 complete with:-				-
					-
	□ charge and fixing bracket				-
	□ pictorial instructions				-
	□ colour code				-
	□ visual discharge indicator				-
D	□ serviceable on site	No.	24		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F5/4				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FIRE HOSE REEL INSTALLATIONS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
5.00	**FIRE HOSE REEL INSTALLATIONS**				
	Galvanised Mild Steel Tubing to B.S.1387 Heavy Grade Class C" with screwed and socketted Joints to BS 21 and Galvanised Cast Iron fittings to BS 143 and 1256, including fixing and jointing.				
	Tenderers must allow in their pipework prices for all the couplings, connectors, unions, joints etc as required in the running lengths of pipework and also where necessary for pipe fixing clips, holderbrats plugged and screwed and pipe sleeves through structural members.				
	The tenderer must allow also for painting the pipework and fittings with an undercoat and 2 coats of signal red oil paint				
A	20 mm diameter GMS Class "C" Tubing	LM	6		-
B	25 mm diameter GMS Class "C" Tubing	LM	42		-
C	50 mm diameter GMS Class "C" Tubing	LM	330		-
D	65 mm diameter GMS Class "C" Tubing	LM	4		-
	Extra Over GMS Tubing for the following: -				
E	20 mm diameter GCI bend	No.	0		-
F	25 mm diameter GCI bend	No.	10		-
G	50 mm diameter GCI bend	No.	35		-
H	50 mm diameter GCI Equal Tee	No.	20		-
I	65 mm diameter GCI Equal Tee	No.	1		-
J	65 x 50 mm diameter GCI Reducer	No.	4		-
K	50 x 25 mm diameter GCI Reducer	No.	16		-
L	25 x 20 mm diameter GCI Reducer	No.	16		-
M	20 mm diameter GCI Union	No.	16		-
N	25 mm diameter GCI Union	No.	32		-
O	50 mm diameter GCI Union	No.	66		-
P	**Gate Valves** 25 mm diameter approved high pressure screw-down fullway non-rising stem, solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing.	No.	16		-
Q	50 mm diameter Ditto	No.	1		-
	Expansion Bellows				
R	50mm dia. Nom. Expansion bellow	NO.	4		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F5/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

FIRE HOSE REEL INSTALLATIONS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	Non-Return Valves				
A	50mm diameter screwed-in cap, lift type metal disc bronze non-return valve to BS 5154 PN 32 for Series "B" ratings	No.	1		-
	Hose Reel				
B	Standard manual swinging recessed fire hose reel comprising of 35m length of non-kinking 19 mm bore rubber hose wound on a metal reel with a hollow rotating shaft. The shaft shall be permanently connected to the water supply by special pipe-work. One end of rubber hose shall be connected to the rotating shaft and other to the shut-off nozzle. The hose shall conform to BS 3169: 1981. Hose reel	No.	16		-
	Hose Reel Water Booster Pumps				
C	Fire booster pump set on a base frame comprising of 2 No. Pumps, one duty and one standby capable of a flow rate of **8.28m3/hr** against a pressure head of 2.5 bar complete with a pressure control switch, 1 No. 100 litres diaphragm tank, electrical wiring, control panel, gate valves, non-return valves etc as necessary for automatic operation on a three phase power supply. On 1.5kW 415V, 50Hz power supply. Complete with **control panel** Electrical control panel comprising of all set of accessories such as pressure switches, thermal overload relay protection, pressure transducers,Automatic Changeover, Phase Failure, Operational timer relays, inter connecting power and control cabling etc. complete with diodes to indicate pump ready, pump running, fault . All alarms should be displayed in the controller. System should be equipped with dry running protection	Set	1		-
	Float Switch & Cable				
D	Tank low water level cut out float switch inclusive of cable and laying from the pump control panel to the control float switch. (approx. 6 metres).	Item	1		-
	Testing and commissioning				
E	Allow for testing and commissioning of the entire Hosereel system to the satisfaction of the Architect/Engineer	Sum	1		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F5/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

FIRE HOSE REEL INSTALLATIONS - MAIN BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F5/1				-
B	Total Brought Forward From Page No. F5/2				-
C	Total Brought Forward From Page No. F5/3				-
	TOTAL FOR FIRE FIGHTING INSTALLATIONS ON MAIN BLOCK				**-**
	TOTAL CARRIED FORWARD TO COLLECTION - MAIN BLOCK PAGE No. F6/1				-

SUMMARY PAGE - MAIN BLOCK

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

ITEM	DESCRIPTION	AMOUNT KSHS
A	Total Brought Forward From Page No. F1/3 For Sanitary	-
B	Total Brought Forward From Page No. F2/5 For Internal Plumbing	-
C	Total Brought Forward From Page No. F3/3 For Foul Water Drainage	-
D	Total Brought Forward From Page No. F4/1 For Storm Water Drainage System	-
E	Total Brought Forward From Page No. F5/4 For Fire Fighting Installations	-
	Total for Main Block	**-**
F	Contigency Sum	300,000.00
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S	

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
1.00	**SANITARY FITTINGS - SUPPLY & INSTALLATION.**				
	Supply, Deliver to site and install,test & commission the following appliances including their support brackets, screws etc. and their connection to water supply, waste/soil drainage and electrical power supply:-				
	SANITARY FITTINGS - ADMIN BLOCK				
	Closed Coupled WC				
A	Close coupled WC suite consisting of WC pan 9litre cistern and fittings complete with seat and cover	No.	8		-
B	90 degrees WC connector	No.	3		-
C	Straight WC connector	No.	5		-
D	550 x 455 mm counter top Wash Hand Basin	No.	11		-
E	Basin tap	No.	12		-
F	Wash Hand Basin with one Tap Hole and complete with pedestal	No.	1		-
G	Angle Valve, with Extension 1/2" Crome Plated	No.	20		-
H	25mm Dia flexible pipe 600mm	No.	20		-
I	Tapis 32mm pop up basin waste	No.	12		-
J	Tapis 32mm plastic bottle trap with 200mm tail pipe, cap nut and wall flange	No.	12		-
K	Toilet roll holder	No.	8		-
L	Single bowl Single drainer kitchen sink size 1004x514mm	No.	1		-
M	jeal Long Neck 1/2" diameter wall type	No.	6		-
N	1 1/2" sink grid waste Zeda	No.	6		-
O	1 1/2" Tubular plastic P-trap Zeda, 75mm Seal	No.	6		-
	Mobility Impared Person (MIP) Washroom				
P	White Enamel, 610mm long, 1.5mm thick and 32mm diameter disabled toilet grab rails complete with wall fixing mounting flange	No.	4		-
Q	Mediclinics White Enamel verical swing grab bar, 610mm long, 1.5mm thick of 32mm diameter tube disabled toilet grab rails complete with wall fixing mounting flange with toilet paper hook	No	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F7/3				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	Urinal bowl size 305 x 295 x 570mm, back entry inlet with concealed trap with doomed waste	No.	5		-
B	Low pressure urinal flush valve,complete with automatic closing valve in approimately 6seconds Ref: 170115006	No.	5		-
C	**U**rinal divider 400 x 705 x 8mm thick,	No.	3		-
	Soap Dispenser				
D	Soap Dispensor, ABS thermoplastic valve, bright finish, wall mounted complete with anti-dripping and anti corrossion valve, 1.1 litres polyethylene inner tank, standard mediclinic's key for accessing the interior, window for refill time indication	No.	7		-
	Automatic Hand Drier				
E	289 x 266.8 x 100mm deep sensor operated, White Epoxy, 1.5mm thick one piece cover, 2.15kW, 240V, 50Hz, 325Km/hr air velocity, noise level at 68 - 75dB at 2m complete with a manually adjustable by a potentiometer high speed motor automatic hand drier	No.	5		-
	Paper Towel Dispenser				
F	330 x 275 x 133mm deep, White Epoxy, 0.8mm thick one piece body, lock with standard key, frontal window refill indicator capable of 400 C-fold towels	No.	5		-
G	Associated Steel Ltd, cleaner's sink made out of 304 type stainless steel of size 600 x 500 x 260 mm with bucket grating and bright machine polish	No.	1		-
H	Franke, sink made out of 304 type stainless steel of size 400 x 450 x 200 mm for countertop mounting and bright machine polish	No.	4		-
I	Jeal Long Neck 1/2" diameter wall type	No.	5		-
J	1 1/2" sink grid waste Zeda	No.	5		-
K	1 1/2" Tubular plastic P-trap Zeda, 75mm Seal	No.	5		-
L	Allow for setting to work, testing and commissioning.	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F7/3				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
SANITARY FITTINGS - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
				Kshs	Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F7/1				-
B	Total Brought Forward From Page No. F7/2				-
	TOTAL FOR SANITARY FITTINGS ON ADMIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - ADMIN BLOCK PAGE No. F11/1				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
2.00	**INTERNAL PLUMBING**				
	Supply, deliver and install plastic PPRC pipes				
	Tenderers must allow in their pipework prices for all the couplings, connectors, unions, expansion loops, jointing materials etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed, and pipe sleeves through structural members.				
	COLD WATER PPRC PIPES				
A	25 mm diameter PPRC PN 20 Grey Pipes	LM	25		-
B	32 mm diameter PPRC PN 20 Grey Pipes	LM	6		-
C	40 mm diameter PPRC PN 20 Grey Pipes	LM	60		-
D	50 mm diameter PPRC PN 20 Grey Pipes	LM	30		-
	Extra Over PPRC Tubing for the following:-				
E	25 mm diameter PPRC 45 degrees Bend	No.	0		-
F	25 mm diameter PPRC 90 degrees Bend	No.	20		-
G	32 mm diameter PPRC Bend	No.	5		-
H	40 mm diameter PPRC Bend	No.	10		-
I	50 mm diameter PPRC Bend	No.	10		-
J	63 mm diameter PPRC Bend	No.	0		-
K	110 mm diameter PPRC Bend	No.	0		-
L	25 mm diameter PPRC 90 Degrees Equal Tee	No.	7		-
M	32 mm diameter PPRC 90 Degrees Equal Tee	No.	4		-
N	40 mm diameter PPRC 90 Degrees Equal Tee	No.	2		-
N	40 mm diameter PPRC 90 Degrees Equal Tee - Install Only	No.	10		-
O	50 mm diameter PPRC 90 Degrees Equal Tee	No.	2		-
P	32 x 25 mm diameter PPRC Reducer	No.	6		-
Q	40 x 25 mm diameter PPRC Reducer	No.	10		-
R	40 x 32 mm diameter PPRC Reducer	No.	2		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F8/3				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	50 x 40 mm diameter PPRC Reducer	No.	2		-
B	25 x 1/2" diameter PPRC Female Screwed Elbow	No.	30		-
C	25 x 3/4" diameter PPRC Female Screwed Elbow	No.	4		-
D	32 x 1" diameter PPRC Female Screwed Adaptor	No.	0		-
E	32 x 1" diameter PPRC Male Screwed Adaptor	No.	0		-
F	40 x 1 1/4" diameter PPRC Male Screwed Adaptor	No.	4		-
G	50 x 1 1/2" diameter PPRC Male Screwed Adaptor	No.	2		-
H	25 x 1/2" diameter PPRC Male Screwed Adaptor	No.	10		-
I	25 x 3/4" diameter PPRC female Screwed Adapter	No.	0		-
J	25 x 3/4" diameter PPRC Male Screwed Adaptor	No.	0		-
K	25 x 1/2" diameter PPRC Female Screwed Tee	No.	0		-
	Gate Valves				
L	25 mm diameter approved high pressure screw-down fullway non-rising stem, solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing	No.	0		-
M	32mm diameter ditto	No.	2		-
N	40mm diameter ditto	No.	1		-
	Sterilization				
O	Allow for sterilization of plumbing system with chlorine	Item	1		-
	Testing & Commissioning				
P	Allow for setting to work, testing and commissioning.	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F8/3				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
INTERNAL PLUMBING - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F8/1				-
B	Total Brought Forward From Page No. F8/2				-
	TOTAL FOR INTERNAL PLUMBING ON ADMIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - ADMIN BLOCK PAGE No. F11/1				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FOUL WATER DRAINAGE - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
3.00	**FOUL WATER DRAINAGE**				
	Supply and fix uPVC soil system to BS 4660 and BS 4515; and MuPVC waste systems to BS 5255 with screwed and socketed joints to BS 21.				
	Solvent welded joints shall be as per the systems manufacturer's written instructions.				
	Tenderers must allow in their pipework prices for all the couplings, connectors, joints etc as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed.				
	The installation must comply with BS 5572.				
	MuPVC Waste System conforming to BS 5255 Heavy Gauge Pipework Class 41.				
A	32 mm diameter waste pipe	LM	4		-
B	40 mm diameter waste pipe	LM	16		-
C	50 mm diameter Waste pipe - Install Only	LM	16		-
	Extra Over MuPVC Waste Pipework for the following:-				
D	32 mm diameter 90 degrees Sweep Bend	No.	2		-
E	32 mm diameter 135 degrees Sweep Bend	No.	3		-
F	40 mm diameter 90 degrees Sweep Bend	No.	8		-
G	40 mm diameter 135 degrees Sweep Bend	No.	7		-
H	50 mm diameter 90 degrees Sweep Bend	No.	10		-
I	50 mm diameter 135 degrees Sweep Bend	No.	3		-
J	32 mm diameter 90 degrees Sweep Tee	No.	4		-
K	40 mm diameter 90 degrees Sweep Tee	No.	17		-
L	50 mm diameter 90 degrees Sweep Tee - Install Only	No.	7		-
M	75 mm diameter 90 degrees Sweep Tee	No.	0		-
N	40 x 32 mm diameter Socket Reducer	No.	12		-
O	50 x 40 mm diameter Socket Reducer	No.	5		-
P	32 mm diameter Access Plug	No.	4		-
Q	40 mm diameter Access Plug	No.	7		-
R	50 mm diameter Access Plug	No.	3		-
S	100 x 50 Trapped Floor with 3 No. 40 mm diameter inlets and 50 mm diameter outlet	No.	0		-
T	Stainless steel floor trap cover 150 x 150 mm with 100 mm diameter inlet	No.	0		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F9/3				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FOUL WATER DRAINAGE - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
A	100 mm diameter Light Grey Soil Pipe	LM	10		-
	Extra Over uPVC Soil Pipework for the following: -				
B	100 mm diameter 92 Deg. Light Grey Sweep Bend	No.	8		-
C	100 mm diameter 135 Degrees Light Grey Sweep Bend	No.	0		-
D	100 mm diameter Light Grey Single Branch	No.	9		-
E	100 mm x 40mm Socket Reducer	No.	2		-
F	100 mm x 50mm Socket Reducer	No.	1		-
G	110 mm diameter PVC Puddle flanges	No.	0		-
H	100 mm diameter Light Grey Weathering Apron	No.	3		-
I	100 mm diameter Light Grey Weathering Slate	No.	3		-
J	100 mm diameter Light Grey Vent Cowl	No.	3		-
K	110 mm diameter Access Plug	No.	2		-
	uPVC Buried Drain System conforming to BS 4660 Heavy Gauge Class 41 Pipework				
L	100 mm diameter Golden Brown Buried Drain Pipe	LM	45		-
	Inspection Chambers - Heavy Duty				
M	Allow excavation, concreting to Class 1:3:6, walling 150 mm thick solid concrete block walls with 1:3 mortar and plastering to 1:2, heavy duty rectangular cover and frame as manufactured for manhole not exceeding 1000 mm depth.	No.	8		-
	Gully Trap - Concrete Cover				
N	Allow for a masonry gully trap of size 300 x 300 x 450 mm deep with cast Iron P-Trap, cast iron grating, drain pipe, concrete cover, etc.	No.	5		-
	Excavation				
O	Excavate trench for buried drain pipes not exceeding 1000 mm and average 600 mm deep, part return, fill in, ram and remainder cart away.	LM	45		-
	Testing & Commissioning				
P	Allow for setting to work, testing and commissioning	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F9/3				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FOUL WATER DRAINAGE - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
				Kshs	Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No.F9/1				-
B	Total Brought Forward From Page No.F9/2				-
	TOTAL FOR FOUL DRAINAGE ON ADMIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - ADMIN BLOCK PAGE No. F11/1				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
PORTABLE FIRE EXTINGUISHER - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
				Kshs	Kshs
5.00	**PORTABLE FIRE EXTINGUISHER**				
	CO_2 Fire Extinguishers				
	5 kg manganese steel portable CO_2 gas fire extinguishers conforming to BS 1288 complete with:-				
	□ charge and fixing bracket				
	□ pictorial instructions				
	□ colour code				
	□ visual discharge indicator				
A	□ serviceable on site	No.	4		-
	W/CO_2 Fire Extinguishers				
	9 litre polythene lined portable water/CO_2 (gas cartridge) fire manufactured to BS 5423 complete with:-				
	□ charge and fixing bracket				
	□ pictorial instructions				
	□ colour code				
	□ visual discharge indicator				
B	□ serviceable on site	No.	4		-
	Ceiling Mounted Automatic Fire Extinguishers				
	Bulb Temperature operated 6kg ceiling mounted powder fire extinguisher manufactured to BS 5423 complete with:-				
	□ break glass bulb, 68 degrees for actuation				
	□ charge and fixing bracket				
	□ pictorial instructions				
	□ colour code				
	□ visual discharge indicator				
C	□ serviceable on site	No.	2		-
	Fire Blanket				
D	1210 x 1800 mm Asbestos Fire blanket made from cloth woven with pure asbestos yarn to be installed in kitchen.	No.	1		-
	Dry Powder Fire Extinguishers				-
	Cartridge operated 9kg portable dry powder fire extinguisher manufactured to BS 5423 complete with:-				-
					-
	□ charge and fixing bracket				-
	□ pictorial instructions				-
	□ colour code				-
	□ visual discharge indicator				-
E	□ serviceable on site	No.	4		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F10/4				**-**

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
FIRE HOSE REEL INSTALLATIONS - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	FIRE HOSE REEL INSTALLATIONS				
	Galvanised Mild Steel Tubing to B.S.1387 Heavy Grade Class C" with screwed and socketted Joints to BS 21 and Galvanised Cast Iron fittings to BS 143 and 1256, including fixing and jointing.				
	Tenderers must allow in their pipework prices for all the couplings, connectors, unions, joints etc as required in the running lengths of pipework and also where necessary for pipe fixing clips, holderbrats plugged and screwed and pipe sleeves through structural members.				
	The tenderer must allow also for painting the pipework and fittings with an undercoat and 2 coats of signal red oil paint				
A	20 mm diameter GMS Class "C" Tubing	LM	0.5		-
B	25 mm diameter GMS Class "C" Tubing	LM	5		-
C	50 mm diameter GMS Class "C" Tubing	LM	60		-
	Extra Over GMS Tubing for the following: -				
D	20 mm diameter GCI bend	No.	0		-
E	25 mm diameter GCI bend	No.	2		-
F	50 mm diameter GCI bend	No.	12		-
G	50 mm diameter GCI Equal Tee	No.	1		-
H	65 mm diameter GCI Equal Tee	No.	0		-
I	65 x 50 mm diameter GCI Reducer	No.	0		-
J	50 x 25 mm diameter GCI Reducer	No.	2		-
K	25 x 20 mm diameter GCI Reducer	No.	2		-
L	20 mm diameter GCI Union	No.	2		-
M	25 mm diameter GCI Union	No.	6		-
N	50 mm diameter GCI Union	No.	12		-
	Gate Valves 25 mm diameter approved high pressure screw-down fullway non-rising stem, solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing.				
O		No.	3		-
P	50 mm diameter Ditto	No.	0		-
	Expansion Bellows				
Q	50mm dia. Nom. Expansion bellow	NO.	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F10/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

FIRE HOSE REEL INSTALLATIONS - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	Non-Return Valves				
A	50mm diameter screwed-in cap, lift type metal disc bronze non-return valve to BS 5154 PN 32 for Series "B" ratings	No.	0		-
	Hose Reel				
B	Standard manual swinging recessed fire hose reel comprising of 35m length of non-kinking 19 mm bore rubber hose wound on a metal reel with a hollow rotating shaft. The shaft shall be permanently connected to the water supply by special pipe-work. One end of rubber hose shall be connected to the rotating shaft and other to the shut-off nozzle. The hose shall conform to BS 3169: 1981.	No.	2		-
	Float Switch & Cable				
C	Tank low water level cut out float switch inclusive of cable and laying from the pump control panel to the control float switch. (approx. 6 metres).	Item	0		-
	Testing and commissioning				
D	Allow for testing and commissioning of the entire Hosereel system to the satisfaction of the Architect/Engineer	Sum	1		-
	TOTAL CARRIED FORWARD TO COLLECTION Page No. F10/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

FIRE HOSE REEL INSTALLATIONS - ADMINISTRATION BLOCK

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F10/1				-
B	Total Brought Forward From Page No. F10/2				-
C	Total Brought Forward From Page No. F10/3				-
	TOTAL FOR FIRE FIGHTING INSTALLATIONS ON ADMIN BLOCK				-
	TOTAL CARRIED FORWARD TO COLLECTION - ADMIN BLOCK PAGE No. F11/1				-

SUMMARY PAGE - ADMINISTRATION BLOCK

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

ITEM	DESCRIPTION	AMOUNT KSHS
A	Total Brought Forward From Page No. F7/3 For Sanitary	-
B	Total Brought Forward From Page No. F8/3 For Internal Plumbing	-
C	Total Brought Forward From Page No. F9/3 For Foul Water Drainage	-
D	Total Brought Forward From Page No. F10/4 For Fire Fighting Installation	-
	Total for Administration Block	-
E	Contigency Sum	100,000.00
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S	

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
WATER RETICULATION

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	Excavation				
A	Excavate trench in compacted hard core/murram Cold water pipes , not exceeding 800mm deep and average 600mm deep, part return; fill in; ram and remainder cart away.	LM	41		-
B	Allow for keeping the whole of the excavation free from water, and mud by pumping, bailing or otherwise	Item	1		-
	Supply and fix PVC Pressure Pipes Class E water supply system to BS 4660 and BS 4515; with screwed and socketed joints.				
	Solvent welded joints shall be as per the systems manufacturer's written instructions.				
C	25 mm diameter PVC Class E Pipe (Rising Mains)	LM	95		-
D	32 mm diameter PVC Class E Pipe (Pump Inlet)	LM	3		-
E	40 mm diameter PVC Class E Pipe (Underground Tank Inlet)	LM	5		-
E1	40 mm diameter PVC Class E Pipe (Underground Tank Inlet) - Install Only	LM	100		-
F	50 mm diameter PVC Class E Pipe (Overflow Pipe)	LM	36		-
	Extra Over PVC Pipework for the following				
G	25 mm diameter PVC Class E Bend	No.	16		-
H	32 mm diameter PVC Class E Bend	No.	6		-
I	40 mm diameter PVC Class E Bend	No.	6		-
J	50 mm diameter PVC Class E Bend	No.	6		-
	Concrete Surround				
K	Allow 150 mm thick Class 1:3:6 concrete surround for 25 mm diameter PVC buried pipes.	LM	16		-
	Gate Valves				
L	25 mm diameter approved high pressure screw-down fullway non-rising stem, solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing.	No.	2		-
M	40mm diameter ditto	No.	1		-
	Extra Over PVC Tubing for the following:-				
N	25 x 1" diameter PVC Male Screwed Adaptor (brass)	No.	4		-
O	40 x 1 1/2" diameter PVC Male Screwed Adaptor (brass)	No.	2		-
P	40 x 1 1/2" diameter PVC Female Screwed Adaptor (brass)	No.	1		-
Q	50 x 2" diameter PVC Male Screwed Adaptor (brass)	No.	2		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F12/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
WATER RETICULATION

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	Valve Chamber				
A	Allow for a masonry valve chamber for 40 mm diameter valve and below of size 450 x 450 x 450 mm maximum depth with reinforced concrete cover with mild steel frame conforming to NCC requirements.	No.	4		-
	PORTABLE WATER RETICULATION SYSTEM				
B	**Booster Water Pump**				
	Supply, Installation, Testing And Commissioning of Horizontal Multistage Pumps As Follows:				
	In-Line, Multistage, centrifugal pumps with Cast Iron casing and impeller made of SS-304 stainless steel,				
	(Vendor to submit performance curves and technical catalog of the proposed model for review & information)				
	The pump shall be selected for performance at best efficiency point. However, the pump selection shall be suitable for performance with set point @ ± 20% of the rated head.				
	Nos. of Pumps : 2 Nos. Water Flow Rate : 8.0 m3/hr (2 nos. - 1 W +1S) Head : 30 M NPSH : 2 M				
	1.1kW , 40V, 50Hz power supply.				
	Installation shall be complete with pressure sensor transmitter, 6bar pressure gauge , diodes to indicate pump ready, pump running, fault . All alarms should be displayed in the controller. System should be equipped with dry running protection				
	Electrical control panel comprising of all set of accessories such as pressure switches, thermal overload relay protection, pressure transducers,Automatic Changeover, Operational timer relays, inter connecting power and control cabling etc. complete.				
	Receiving at site above equipment, unloading, storing, handling, installing in position with necessary MS base frame (epoxy coated after fabrication), anti vibration mounting arrangement including supply of bolts, nuts, fasteners etc., effecting proper connections, anchoring, grouting testing and commissioning above equipment all complete as required. Pump shall all Factory fitted set including all Stainer, valves,NRV,PG etc.	set	1		-
	Electrical Works				
C	Allow for all electrical works associated with the electrical wiring from the isolator and to control panel and to the pump	Item	1		-
	Floatless Water Level Switch				
D	Floatless Level Switch, C61F-GP AC220V 50/60Hz Liquid Level Controller	Item	1		-
	Wiring Complete with Conduiting				
E	1 Core x 1.0 Sqmm Cu. PVC Insulated Red Colour	LM	120		-
F	1 Core x 1.0 Sqmm Cu. PVC Insulated Blue Colour	LM	120		-
G	1 Core x 1.0 Sqmm Cu. Green Colour	LM	120		-
	Electrode Holder Complete with Electrodes				
H	Length 1.5m, 1m and 0.5m	No	1		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F12/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
WATER RETICULATION

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	Accessories To Underground R C Water Storage Tank				
	Foot Valve				
A	1 1/4" diameter Foot Valve. All 303 Stainless body. Tapered stainless steel strainer, end cap, Spring and fasteners. - Install Only	No.	1		-
	Non-Return Valves				
B	50mm diameter screwed-in cap, lift type metal disc bronze non-return valve to BS 5154 PN 32 for Series "B" ratings	No.	1		-
	Ball Valve				
C	Bricon 1 1/2" (40mm) diameter high pressure cast brass ball valve MOH Pattern with 1 1/4" shank	No.	1		-
	Ball Float				
D	Bricon 4 1/2" diameter high pressure polypropylene plastic float	No.	1		-
E	40 mm diameter steel paddle flanges	No.	1		-
F	50 mm diameter steel paddle flanges	No.	2		-
G	100 mm diameter steel paddle flanges (for breathers)	No.	2		-
H	100 mm diameter breathers	No.	2		-
I	250 x 250mm Gully complete with stainless steel grating with 50mm Outlet (for pump room drainage)	No.	1		-
J	600 x 600mm Concrete Access Manhole	No.	1		-
K	1.5m Long Stainless Steel Access Ladder	No.	1		-
	Float Switch & Cable				
L	Tank low water level cut out float switch inclusive of cable and laying from the pump control panel to the control float switch. (approx. 10 metres).	Item	1		-
M	Allow for connecting 40mm and 2No. 25mm pipes to existing water reticulation pipe, allow for introduction of Tee connection and making good of disturbed areas	Item	1		-
	Hose Taps				
N	Heavy duty, chrome plated 3/4" hose bibcock with star handles complete with GI stand pipe and support, and hose union	No.	2		-
	Sterilization				
O	Allow for sterilization of plumbing system with chlorine	Item	1		-
	Testing & Commissioning				
P	Allow for setting to work, testing and commissioning.	Item	1		-
	TOTAL CARRIED FORWARD TO COLLECTION PAGE No. F12/4				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
WATER RETICULATION

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
	COLLECTION PAGE				
A	Total Brought Forward From Page No. F12/1				-
B	Total Brought Forward From Page No. F12/2				-
C	Total Brought Forward From Page No. F12/3				-
	SUB-TOTAL				-
	ADD CONTINGENCY SUM				**50,000.00**
	TOTAL				
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE No. M/S				-

WORKS NOT MEASURED ELSEWHERE

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

ITEM	DESCRIPTION	AMOUNT KSHS
A	Allow for identification and labelling of installation on completion of works.	
B	Allow for testing, commissioning and demonstration of entire installation on completion of works.	
C	Allow for preparing and providing 3 copies of working drawings for approval prior to commencement of works	
D	Allow for preparing and providing 3 copies of 'As Built' drawings and 6 copies of operating instructions as necessary	
E	Provide 2 copy diskettes of 'As Installed' drawings on Autocad release 2007 or 2013.	
F	Allow for marking on site the proposed location of service outlets for approval.	
G	Allow for 3 Copies of maitenance manuals, loose leaf type with stiff covers and cloth bound	
H	Train clients representatives on operation of the system	
	TOTAL CARRIED FORWARD TO PLUMBING MAIN SUMMARY PAGE	-

PLUMBING MAIN SUMMARY PAGE

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

ITEM	DESCRIPTION	AMOUNT KSHS
A	Total Brought Forward For Main Block From Page No. F6/1	-
B	Total Brought Forward For Adminstration Block From Page No. F11/1	-
C	Total Brought Forward For Water Reticulation From Page No. F12/4	-
D	Total Brought Forward For Works Not Measured Elsewhere Page No. F13/1	-
	TOTAL CARRIED FORWARD TO FORM OF TENDER	-

Amount in Words: Kenya Shillings……

……

……

Official Stamp & Address:……

……

……

Tenderer's Signature:……..……...Date:……...……

Witness' Name:……..……..……Witness' Signature:……

Address:……

……

……

Date:……

……

Date:……

AIR CONDITIONING INSTALLATIONS

WORKS NOT MEASURED ELSEWHERE

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

ITEM	DESCRIPTION	AMOUNT KSHS
A	Allow for identification and labelling of installation on completion of works.	
B	Allow for testing, commissioning and demonstration of entire installation on completion of works.	
C	Allow for preparing and providing 3 copies of working drawings for approval prior to commencement of works	
D	Allow for preparing and providing 3 copies of 'As Built' drawings and 6 copies of operating instructions as necessary	
E	Provide 2 copy diskettes of 'As Installed' drawings on Autocad release 2007 or 2013.	
F	Allow for marking on site the proposed location of service outlets for approval.	
G	Allow for 3 Copies of maitenance manuals, loose leaf type with stiff covers and cloth bound	
H	Train clients representatives on operation of the system	
	TOTAL CARRIED FORWARD TO PLUMBING MAIN SUMMARY PAGE	-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
VENTILATION AND AIR CONDITIONING

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
1.00	**Supply, deliver, install, test and commission the following equipment as described:-**				
	Server Room Split Unit				
A	7.1Kw Cooling load split unit complete with an outdoor unit and Wall Mounted (1030x325x255mm) indoor air conditioners complete with direct expansion unit, room thermostat, easily cleanable reusable filters, drain pan,remote control, direct expansion cooling coil, mounting brackets etc.	No	2		-
	AVS Power Surge Protector				
B	30 amps AVS Power Surge Protector from the isolator to the control panel	Item	2		-
	Electrical Works				
C	Allow for all electrical works associated with the electrical wiring from the isolator to the control panel	Item	1		-
	Refrigeration Pipework				
	Supply and installation of Refrigerant Copper pipe insulated with Nitrile Rubber Tubular Insulation covered with Gauge 20 Aluminium Cladding. Allow for holderbats, pipework fittings, trays and any other for complete installation.				
D	9.52 mm (3/8") diameter with 25 mm thick insulation.	LM	7		-
E	15.88 mm (5/8") diameter with 25 mm thick insulation.	LM	7		-
	Condensate Drain Piping				
	Supply and install of MuPVC drain pipe work to connect Air Handling system units to drainage outlets complete with all fittings, support brackets ets.				
F	25 mm diameter waste pipe	LM	6		-
	Extra Over MuPVC Waste Pipework for the following:-				
G	25 mm diameter 91 degrees Sweep Bend	No.	8		-
	Trunking				
H	100 x 100mm Powder Coated Single compartment surface mounted prepainted steel trunking made of 16 SWG Steel sheets and frame complete with cover and fixing accessories	LM	7		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE				-

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic
VENTILATION AND AIR CONDITIONING

ITEM	DESCRIPTION	UNIT	QTY.	RATE Kshs	AMOUNT Kshs
2.00	**Supply, deliver, install, test and commission the following equipment as described:-**				
	Smart Class Room Split Unit				
A	7.1Kw Cooling load split unit complete with an outdoor unit and Wall Mounted (1030x325x255mm) indoor air conditioners complete with direct expansion unit, room thermostat, easily cleanable reusable filters, drain pan,remote control, direct expansion cooling coil, mounting brackets etc.	No	2		-
	AVS Power Surge Protector				
B	30 amps AVS Power Surge Protector from the isolator to the control panel	Item	2		-
	Electrical Works				
C	Allow for all electrical works associated with the electrical wiring from the isolator to the control panel	Item	1		-
	Refrigeration Pipework				
	Supply and installation of Refrigerant Copper pipe insulated with Nitrile Rubber Tubular Insulation covered with Gauge 20 Aluminium Cladding. Allow for holderbats, pipework fittings, trays and any other for complete installation.				
D	9.52 mm (3/8") diameter with 8 mm thick insulation.	LM	35		-
E	15.88 mm (5/8") diameter with 10 mm thick insulation.	LM	35		-
	Condensate Drain Piping				
	Supply and install of MuPVC drain pipe work to connect Air Handling system units to drainage outlets complete with all fittings, support brackets ets.				
F	25 mm diameter waste pipe	LM	20		-
	Extra Over MuPVC Waste Pipework for the following:-				
G	25 mm diameter 91 degrees Sweep Bend	No.	4		-
H	25 mm diameter 91 degrees Tee	No.	1		-
	Trunking				
H	100 x 100mm Powder Coated Single compartment surface mounted prepainted steel trunking made of 16 SWG Steel sheets and frame complete with cover and fixing accessories	LM	15		-
	Instruction Period				
K	Allow for instruction period, necessary stock of spare parts and maintenance during the 6 months defects liability period	Item	1		-
	Operating Manuals and Drawings				
L	Allow for the preparation of operating manuals and "As Installed Drawings"	Item	1		-
	Testing and Commissioning				
M	Allow for setting to work, air balancing, testing and commissioning of the ventilation system to the satisfaction of the Engineer.	Item	1		-
	TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE				-

MAIN SUMMARY PAGE

PROPOSED EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

VENTILATION AND AIR CONDITIONING

	DESCRIPTION	AMOUNT Kshs.
A	Total Brought Forward For Works Not Measured Elsewhere From Page No.D1/0	-
B	Total Brought Forward from Page No. D1/1	-
C	Total Brought Forward from Page No. D1/2	-
	SUB - TOTAL	
	ADD: Contigency	**100,000.00**
	TOTAL CARRIED FORWARD TO FORM OF TENDER	

Amount in Words: Kshs.…….

…….

Official Stamp & Address of Sub-contractor:……..

…….

…….

Tenderer's Signature:……...Date:……...…….

Witness' Name:……..……Witness' Signature:……..

Witness Address:…….

…….

Date:……..

MAIN SUMMARY

ITEM		DESCRIPTION	AMOUNT (KSHS)
		MAIN SUMMARY	
1		PARTICULAR PRELIMINARIES	
2		CONTRACT PARTICULARS	
3		GENERAL PRELIMINARIES	
4	ADMIN / 1	ADMINISTRATION BLOCK	-
5	BLOCK - A / 1	MAIN BLOCK A	-
6	BLOCK - B / 1	MAIN BLOCK B	-
7	BLOCK - C / 1	MAIN BLOCK C	-
8	BLOCK - D / 1	MAIN BLOCK D	-
9	18/20	EXTERNAL WORKS	-
10	PC/2	PC AND PROVISIONAL SUMS	-
11		ELECTRICAL SERVICES INSTALLATIONS	-
12		CCTV, SECURITY TV, VOICE AND DATA STSYEMS	-
13		GENERATOR INSTALLATIONS	-
14		PLUMBING, DRAINAGE AND FIRE FIGHTING INSTALLATION	-
15		AIR CONDITIONING INSTALLATIONS	-
16		CONTINGENCIES Provide the Provisional Sum of **Fifteen Million Shillings** for Contingencies to be expended at the discretion of the Project Manager	15,000,000.00
TOTAL CARRIED TO FORM OF TENDER (INCLUSIVE OF VAT)			

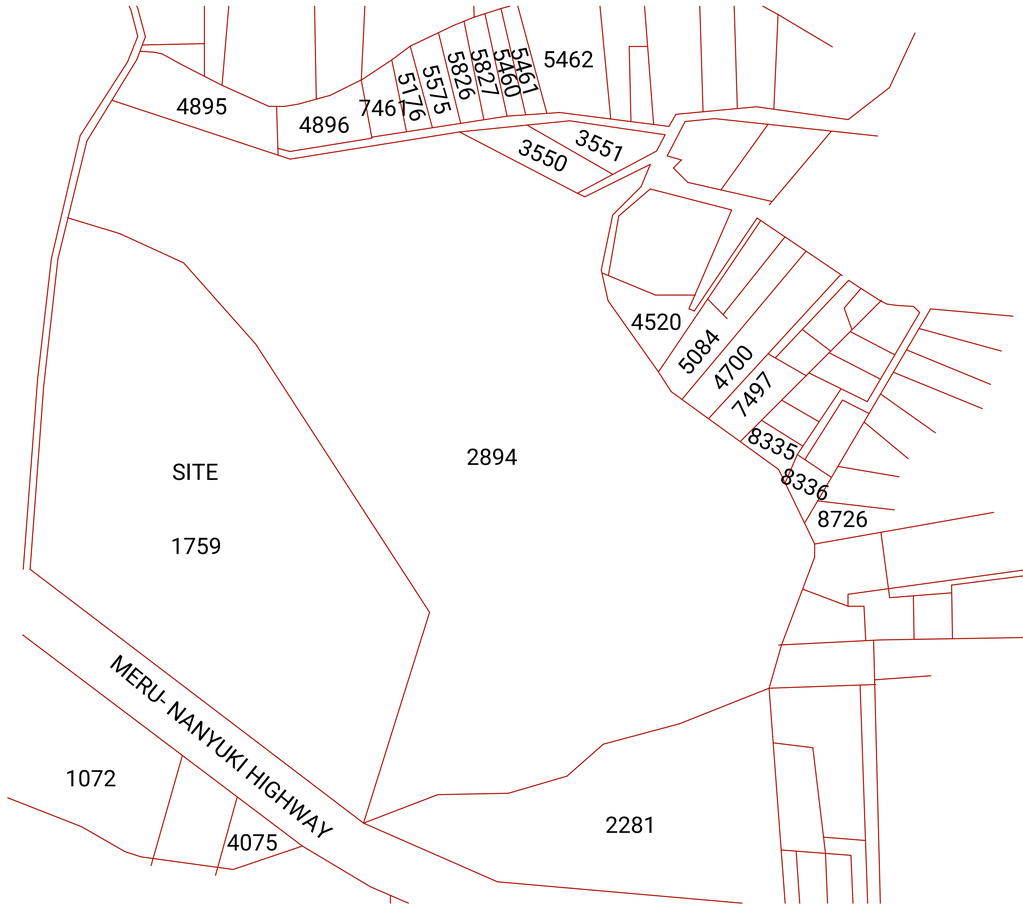
ARCHITECTURAL DRAWINGS

PROJECT NAME	EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU.		
PROJECT NUMBER	SK-20-25327		
PROJECT CODE	2527		
PROJECT STAGE	4.0		
STAGE DESCRIPTION	TECHNICAL DESIGN		
Sheet Number	**Drawing Title**	**Paper size**	**Scale**
1000	**GENERAL ARRANGEMENT LAYOUTS**		
SITE			
2527-SK-XX-DR-A-1000	Site & Location Plan	A1	1:1000 1:2000
2527-SK-XX-DR-A-1001	Part Site Plan	A1	1:300
1100	**SETTING-OUT LAYOUTS**		
TUTION BLOCK			
2527-SK-00-DR-A-1101	Tuition & Admin Block Ground Floor.	A1	1:200
2527-SK-M1-DR-A-1102	Tuition Block Mezzanine & Admin First Floor.	A1	1:200
2527-SK-01-DR-A-1103	Tuition Block First Floor & Admin Block Roof.	A1	1:200
2527-SK-02-DR-A-1104	Tution Block 2nd Floor.	A1	1:200
2527-SK-03-DR-A-1105	Tuition & Admin Block Roof.	A1	1:200
2527-SK-FL-4.0-DR-A-1108	FIRST FLOOR PART PLAN - (BLOCK B&D)	A1	1:100
TUTION BLOCK PART	**SETTING-OUT LAYOUTS**		
Tuition & Admin Ground Floor Plan.			
2527-SK-00-DR-A-1101A	Admin Block Ground Floor.	A1	1:100
2527-SK-00-DR-A-1101B	Tuition Block (A&C) Ground Floor.	A1	1:100
2527-SK-00-DR-A-1101C	Tuition Block (B&D) Ground Floor.	A1	1:100
Tuition Block Mezzanine & Admin First Floor Plan.			
2527-SK-M1-DR-A-1102A	Admin Block First Floor Plan.	A1	1:100
2527-SK-M1-DR-A-1102B	Tuition Block (A&C)Mezzanine Floor	A1	1:100
2527-SK-M1-DR-A-1102C	Tuition Block (B&D)Mezzanine Floor	A1	1:100
Tuition Block First Floor & Admin Block Roof Plan			
2527-SK-01-DR-A-1103A	Admin Block Roof.	A1	1:100
2527-SK-01-DR-A-1103B	Tuition Block (A&C) First Floor.	A1	1:100
2527-SK-01-DR-A-1103C	Tuition Block (B&D) First Floor.	A1	1:100
Tuition Block Second Floor & Admin Block Roof Plan			
2527-SK-02-DR-A-1104A	Admin Block Roof.	A1	1:100
2527-SK-02-DR-A-1104B	Tuition Block (A&C) Second Floor.	A1	1:100
2527-SK-02-DR-A-1104C	Tuition Block (B&D) Second Floor.	A1	1:100
Tuition Block Roof Plan			
2527-SK-03-DR-A-1105B	Tuition Block (A&C) Roof.	A1	1:100
2527-SK-03-DR-A-1105C	Tuition Block (B&D) Roof.	A1	1:100
GUARD HOUSE			
2527-SK-00-DR-A-1121	Guard House Ground Floor Plan	A3	1:125
2527-SK-01-DR-A-1122	Guard House Roof Plan	A3	1:125
SERVICE BUILDING			
2527-SK-XX-DR-A-1130	Power House Plan	A1	1:100
GARBAGE BUILDING			
2527-SK-00-DR-A-1140	Garbage Cubicle Plan	A3	1:50
PUMPROOM			
2527-SK-00-DR-A-1150	Pumproom Floor Plan	A3	1:50
ROOFTOP PUMP CAGE			
2527-SK-03-DR-A-1160	Rooftop Pump Cage Plan.	A3	1:25
1300	**OPENING LAYOUTS**		
MAIN BLOCK			
2527-SK-00-DR-A-1301A	Admin Block Ground Floor Plan.	A1	1:100
2527-SK-00-DR-A-1301B	Tuition Block (A&C) Ground Floor Plan	A1	1:100

2527-SK-00-DR-A-1301C	Tuition Block (B&D) Ground Floor Plan	A1	1:100
2527-SK-M1-DR-A-1302A	Admin Block First Floor Plan.	A1	1:100
2527-SK-M1-DR-A-1302B	Tuition Block (A&C)Mezzanine Floor Plan	A1	1:100
2527-SK-M1-DR-A-1302C	Tuition Block (B&D)Mezzanine Floor Plan	A1	1:100
2527-SK-01-DR-A-1303B	Tuition Block (A&C) First Floor Plan	A1	1:100
2527-SK-01-DR-A-1303C	Tuition Block (B&D) First Floor Plan.	A1	1:100
2527-SK-02-DR-A-1304B	Tuition Block (A&C) Second Floor.	A1	1:100
2527-SK-02-DR-A-1304C	Tuition Block (B&D) Second Floor Plan.		
GUARD HOUSE			
2527-SK-00-DR-A-1320	Guard House Floor Plan	A3	1:125
POWER HOUSE			
2527-SK-00-DR-A-1330	Power House Floor Plan	A3	1:100
GARBAGE BUILDING			
2527-SK-00-DR-A-1340	Garbage Cubicle Floor plan	A3	1:50
PUMPROOM			
2527-SK-00-DR-A-1350	Pumproom Floor Plan	A3	1:50
ROOFTOP PUMP CAGE			
2527-SK-03-DR-A-1360	Rooftop Pump Cage Plan.	A3	1:25
2000	**BUILDING SECTIONS & ELEVATIONS**		
MAIN BLOCK			
2527-SK-XX-DR-A-2001	Adminstration Block Sections.	A1	1:100
2527-SK-XX-DR-A-2002	Tuition Block Sections.	A1	1:100
2527-SK-XX-DR-A-2003	Tuition Block Sections.	A1	1:100
2527-SK-03-DR-A-2501	Adminstration Block Elevations	A1	1:125
2527-SK-03-DR-A-2502	Tution Block Elevations	A1	1:125
2527-SK-03-DR-A-2503	Tution Block Elevations	A1	1:125
GUARD HOUSE			
2527-SK-XX-DR-A-2021	Guard House Section	A3	1:125
2527-SK-XX-DR-A-2022	Guard House Section	A3	1:125
2527-SK-XX-DR-A-2521	Guard House Elevations	A3	1:125
2527-SK-XX-DR-A-2522	Guard House Elevations	A3	1:125
POWER HOUSE			
2527-SK-XX-DR-A-2031	Power House Section	A3	1:100
2527-SK-XX-DR-A-2531	Power House Elevations	A3	1:100
GARBAGE BUILDING			
2527-SK-XX-DR-A-2041	Garbage Cubicle Section.	A3	1:50
2527-SK-XX-DR-A-2541	Garbage Cubicle Elevations	A3	1:50
PUMPROOM			
2527-SK-XX-DR-A-2050	Pumproom Section	A3	1:50
2527-SK-XX-DR-A-2550	Pumproom Elevations	A3	1:50
PUMP CAGE			
2527-SK-XX-DR-A-2060	Rooftop Pump Cage Section	A3	1:25
2527-SK-XX-DR-A-2560	Rooftop Pump Cage Elevations	A3	1:25
2527-SK-XX-DR-A-2561	Rooftop Pump Cage Elevations	A3	1:25
2527-SK-XX-DR-A-2562	Rooftop Pump Cage Elevations	A3	1:25
32100	**EXTERNAL WALL BLOW-UP**		
2527-SK-XX-DR-A-32101	External Wall Section.	A1	1:50
2527-SK-XX-DR-A-32102	External Wall Section.	A1	1:50
2527-SK-XX-DR-A-32103	Curtain Wall Detail	A1	1:50
2527-SK-XX-DR-A-32104	Weld Mesh Screen 01	A1	1:20 1:50
2527-SK-XX-DR-A-32105	Weld Mesh Screen 02	A1	1:20 1:50
2527-SK-XX-DR-A-32106	Weld Mesh Screen 03&04	A1	1:50
2527-SK-XX-DR-A-32107	Weld Mesh Screen 05&06	A1	1:50
32200	**INTERNAL WALL BLOW-UP**		

2527-SK-XX-DR-A-32201	Technician Cubicle Layout Plan.	A3	1:20
2527-SK-XX-DR-A-32202	Technical Cubicle Elevation.	A1	1:20
2527-SK-XX-DR-A-32203	Technical Cubicle Elevation.	A1	1:20
2527-SK-XX-DR-A-32204	Technical Cubicle Section..	A1	1:20
2527-SK-XX-DR-A-32105	Weld Mesh Screen 02	A1	1:20 1:50
2527-SK-XX-DR-A-32106	Weld Mesh Screen 03&04	A1	1:50
2527-SK-XX-DR-A-32107	Weld Mesh Screen 05&06	A1	1:50
34400	**STAIRCASE & RAMP BLOW-UP**		
2527-SK-XX-DR-A-34401	Main Staircse Detail-Ground Floor Plan	A3	1:50
2527-SK-XX-DR-A-34402	Main Staircse Detail - First Floor Plan	A3	1:50
2527-SK-XX-DR-A-34403	Main Staircse Detail-Second Floor Plan	A3	1:50
2527-SK-XX-DR-A-34404	Main Staircse Detail-Section B	A3	1:50
2527-SK-XX-DR-A-34405	Main Staircse Detail-Section A	A3	1:50
2527-SK-XX-DR-A-34406	Fire Escape Staircse 01 - Ground & Mezzanine Floor Plans	A3	1:50
2527-SK-XX-DR-A-34407	Fire Escape Staircse 01 -First & Second Floor Plans	A3	1:50
2527-SK-XX-DR-A-34408	Fire Escape Staircse 01 -Section C	A3	1:50
2527-SK-XX-DR-A-34409	Fire Escape Staircse 02 - Ground Floor Plan	A3	1:50
2527-SK-XX-DR-A-34410	Fire Escape Staircse 02 - Mezzanine Floor.	A3	1:50
2527-SK-XX-DR-A-34411	Fire Escape Staircse 02 - First Floor	A3	1:50
2527-SK-XX-DR-A-34412	Fire Escape Staircse 02 -Section D	A3	1:50
2527-SK-XX-DR-A-34413	Fire Escape Staircse 03 - Ground Floor Plan	A3	1:50
2527-SK-XX-DR-A-34414	Fire Escape Staircse 03 - Mezzanine Floor Plan	A3	1:50
2527-SK-XX-DR-A-34415	Fire Escape Staircse 03 - First Floor Plan	A3	1:50
2527-SK-XX-DR-A-34416	Fire Escape Staircse 03 - Section E	A3	1:50
2527-SK-XX-DR-A-34417	Fire Escape Staircse 04 - Ground Floor Plan	A3	1:50
2527-SK-XX-DR-A-34418	Fire Escape Staircse 04 - Mezzanine Floor Plan	A3	1:50
2527-SK-XX-DR-A-34419	Fire Escape Staircse 04 - First Floor Plan	A3	1:50
2527-SK-XX-DR-A-34420	Fire Escape Staircse 04 - Section F	A3	1:50
2527-SK-XX-DR-A-34421	Main Admin Staircase - Ground Floor Plan	A3	1:50
2527-SK-XX-DR-A-34422	Main Admin Staircase - First Floor Plan	A3	1:50
2527-SK-XX-DR-A-34423	Main Admin Staircase - Section G	A3	1:50
2527-SK-XX-DR-A-34424	Admin Fire Escape Staircase - Ground and First Floor Plan	A3	1:50
2527-SK-XX-DR-A-34425	Admin Fire Escape Staircase - Section H	A3	1:50
2527-SK-XX-DR-A-34426	Main Ramp Plans	A1	1:50
2527-SK-XX-DR-A-34427	Main Ramp Plan & Section	A1	1:50
37200	**FITTINGS BLOW UPS**		
2527-SK-XX-DR-A-37201	Commercial Laboratory Worktop	A3	1:50
2527-SK-XX-DR-A-37202	Commercial Laboratory Worktop	A1	1:20
37300	**KITCHEN FITTINGS BLOW UPS**		
2527-SK-XX-DR-A-37301	Kitchenette Plan and Elevations	A3	1:50
37400	**TOILET BLOW UPS**		
	TUITION		
2527-SK-ZZ-DR-A-37401	Washroom 01 Plan	A3	1:50
2527-SK-XX-DR-A-37402	Washroom 01 Elevations	A3	1:50
2527-SK-XX-DR-A-37403	Washroom 01 Elevations	A3	1:50
2527-SK-ZZ-DR-A-37404	Washroom 02 Plan	A3	1:50
2527-SK-XX-DR-A-37405	Washroom 02 Elevations	A3	1:50
2527-SK-XX-DR-A-37406	Washroom 02 Elevations	A3	1:50
2527-SK-ZZ-DR-A-37407	Washroom 03 Plan	A3	1:50
2527-SK-XX-DR-A-37408	Washroom 03 Elevations	A3	1:50
	ADMIN BLOCK		
2527-SK-00-DR-A-37409	Washroom 04 Plan & Elevation	A3	1:50
2527-SK-XX-DR-A-37410	Washroom 04 Elevations	A3	1:50
2527-SK-01-DR-A-37411	Washroom 05 Plans	A3	1:50
2527-SK-XX-DR-A-37412	Washroom 05 Elevations	A3	1:50
2527-SK-XX-DR-A-37413	Washroom 05 Elevations	A3	1:50

	GUARDHOUSE		
2527-SK-XX-DR-A-37414	Washroom 06 Plan & Elevation	A3	1:50
2527-SK-XX-DR-A-37415	Washroom 06 Elevations	A3	1:50
43200	**INTERNAL OPENINGS SCHEDULES**		
2527-SK-4.0-XX-DG-A-43201	DOOR SCHEDULE		
2527-SK-4.0-XX-DG-A-43202	Door Schedule		
52200	**INTERNAL WALL DETAILS**		
2527-SK-XX-DR-A-52201	Technical Cubicle Partion Detail	A3	1:5
2527-SK-XX-DR-A-52202	Gypsum Dry wall Partion Detail Above Workshop Ofices and Stores.	A3	1:5
52700	**ROOF DETAILS**		
2527-SK-XX-DR-A-52701	**Porte cochere roof**	A3	1:20
2527-SK-XX-DR-A-52703	**Admin Roof Section**	A3	1:10
2527-SK-XX-DR-A-52704	**Admin Roof Eave detail.**	A3	1:10
2527-SK-XX-DR-A-52721	Gate House Truss Detail	A3	1:50
2527-SK-XX-DR-A-52722	Gate House Truss Detail	A3	1:50
2527-SK-XX-DR-A-52723	Gate House Truss Detail	A3	1:50
53400	**HANDRAILS AND BARRIERS SCHEDULES**		
2527-SK-XX-DR-A-53401	**Railing Detail. (at staircase Atrium)**	A3	1:10
2527-SK-XX-DR-A-53402	**Railing Detail. (at staircase Atrium)**	A3	1:10
2527-SK-XX-DR-A-53403	**Passage & Bridge Railing Detail.**	A3	1:10
2527-SK-XX-DR-A-53404	**Passage & Bridge Railing Detail.**	A3	1:10
2527-SK-XX-DR-A-53405	**Ms Decorative grill 01**	A3	1:50
2527-SK-XX-DR-A-53406	**Ms Decorative grill 02**	A3	1:50
2527-SK-XX-DR-A-53407	**Ms Decorative grill 03**	A3	1:50
2527-SK-XX-DR-A-53408	**Ms Scaffold Like Feature**	A3	1:100
54300	**INTERNAL FLOOR FINISHES DETAILS**		
2527-SK-XX-DR-A-54301	Matwell Detail	A3	1:2, 1:50
2527-SK-XX-DR-A-54302	**Expansion Joint Detail.**	A3	1:2
54400	**STAIRCASE AND RAMP DETAILS**		
2527-SK-XX-DR-A-54401	**Water Tank Catladder Detail.**	A3	1:20
2527-SK-XX-DR-A-54402	**Roof Tank access Catladder.**	A3	1:20
2527-SK-XX-DR-A-54403	**Ramp Railing Section Detail.**	A3	1:10
2527-SK-XX-DR-A-54404	**Ramp Railing Detail.**	A3	1:10
2527-SK-XX-DR-A-54405	**Staircase Railing Detail.**	A3	1:10
57100	**SIGNAGE DETAILS**		
2527-SK-XX-DR-A-57100	**Meru polythenic Logo Detail**	A3	1:25
57200	**FITTINGS DETAILS**		
2527-SK-XX-DR-A-57201	**Commercial Laboratory Worktop Detail**	A3	1:10
57300	**KITCHEN AND BAR FITTINGS DETAIL**		
2527-SK-XX-DR-A-57301	**Kitchen Cabinet details**	A3	1:10
57400	**TOILET AND BATHROOM FITTINGS DETAIL**		
2527-SK-XX-DR-A-57401	**Main Block Vanity Details**	A3	1:10
2527-SK-XX-DR-A-57402	**Workshop Worktop with Ss Sink Detail.**	A3	1:10
59100	**BOUNDARY WALL DETAIL**		
2527-SK-XX-DR-A-59101	**Boundary Wall Details**	A3	1:50
527-SK-XX-DR-A-591012	**Boundary Wall Details**	A3	1:10 1:20



1000 **LOCATION PLAN** **1:2000**

1001 **SITE PLAN** **1:1000**

NOTES

1. This drawing is a copyright © of Symbion Kenya Ltd.
2. Do not scale off this drawing
3. All levels and dimensions to be checked on site before any building work commences
4. Any discrepancies to be reported to the office of the consultant
5. All work to be strictly in accordance to with the standard specifications and notes
6. This drawing is to be read in conjunction with specifications and all other relevant drawings
7. Walls below 200mm thick to be reinforced with hoop iron at every alternate course
8. Depth of foundations to be decided on site
9. pv denotes permanent air vents over doors and windows as shown on drawings
10. A single layer of 3-ply bituminous felt to be provided between masonry and r.c. work
11. Drain pipes passing under tarmac, driveways, and buildings to be encased in 150mm thick concrete surround
12. All reinforced concrete work to Structural Engineer's drawings
13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

SYMBION

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Sheet Name
Site & Location Plans
Site & Location Plan

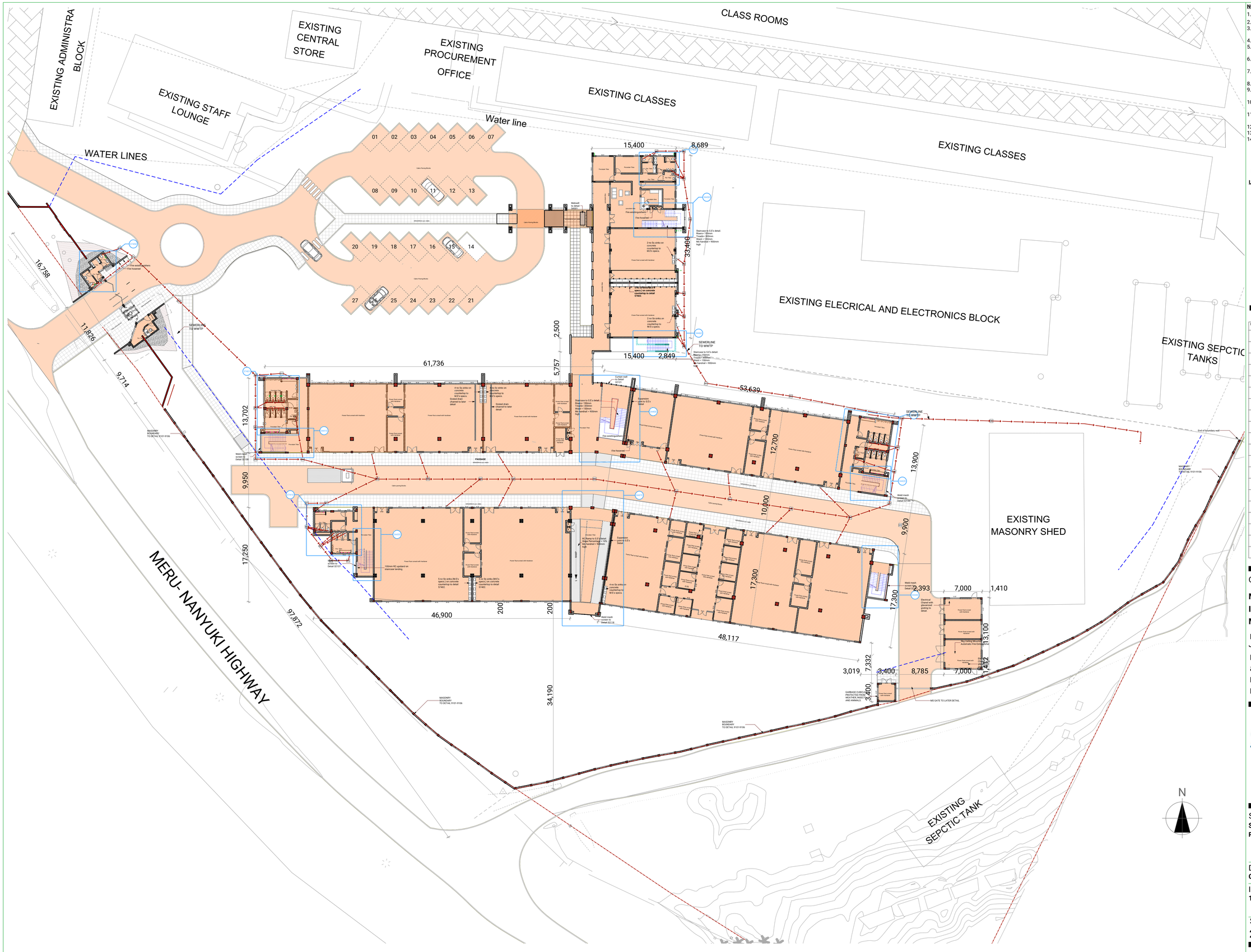
Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:1000, 1:2000**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-1000

Job Number
SK-20-2527

File Path
\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS \stage 4-TD\4 2\PH\MNP - PDs.pln

FOR TENDER



NOTES

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8. Depth of foundations to be decided on site
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10. A single layer of 3-ply bituminous felt to be provided between masonry and r.c. work
11. Drain pipes passing under tarmac, driveways, and buildings to be encased in 150mm thick concrete surround
12. All reinforced concrete work to Structural Engineer's drawings
13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

SYMBION

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Sheet Name
Site & Location Plans
Part Site Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:300**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-1001

Job Number
SK-20-2527

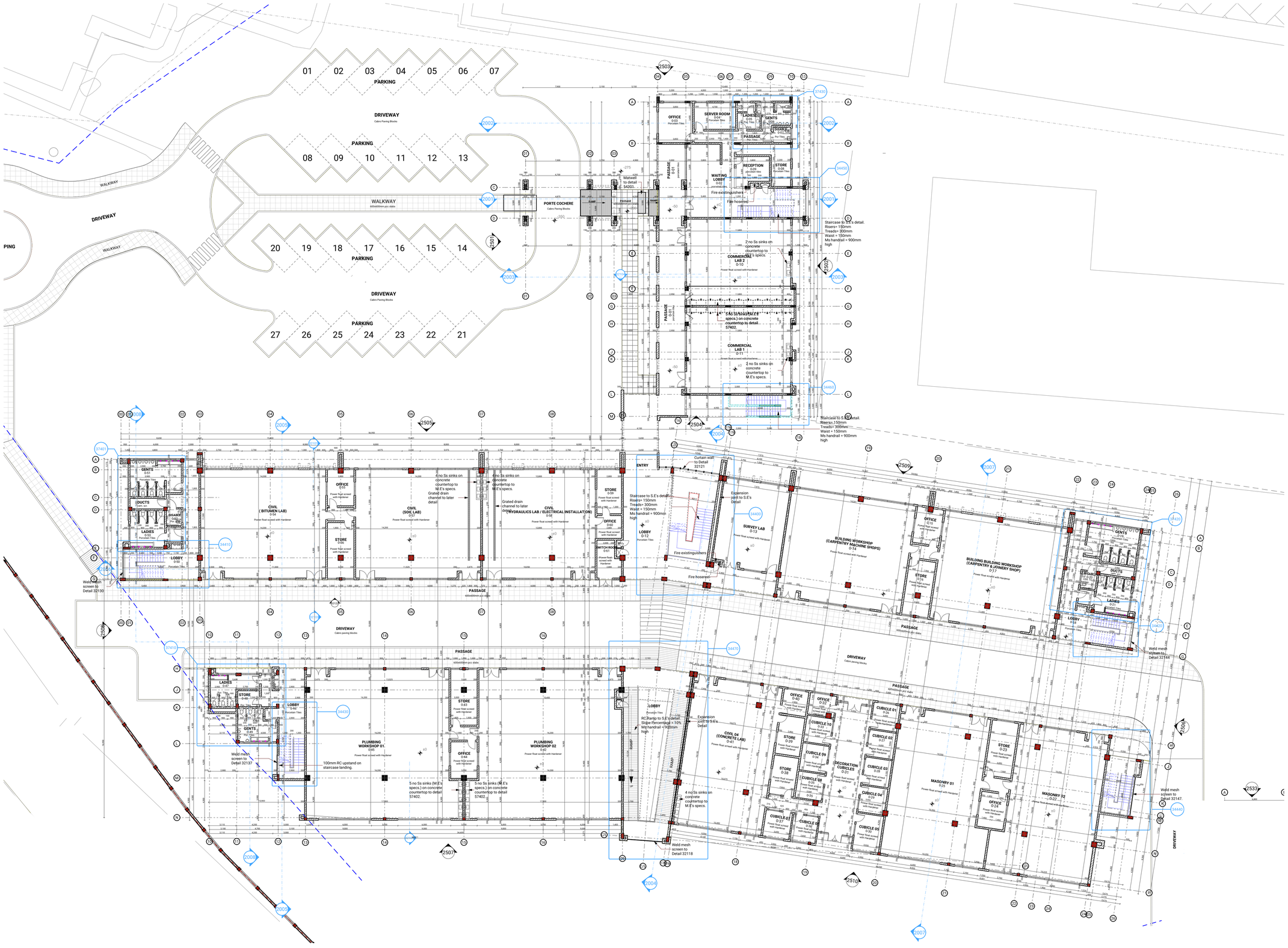
File Path
\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS \stage 4-TD\4.2\Pln\MNP - PDs.pln

1002

PART SITE PLAN

1:300

FOR TENDER



1101 **Tuition & Admin Block Ground Floor Plan** 1:200

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Settingout Plans
Tuition & Admin Block Ground Floor.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:200	00

Sheet No.
2527-SK-00-DR-A-1101

Job Number
SK-20-2527

File Path
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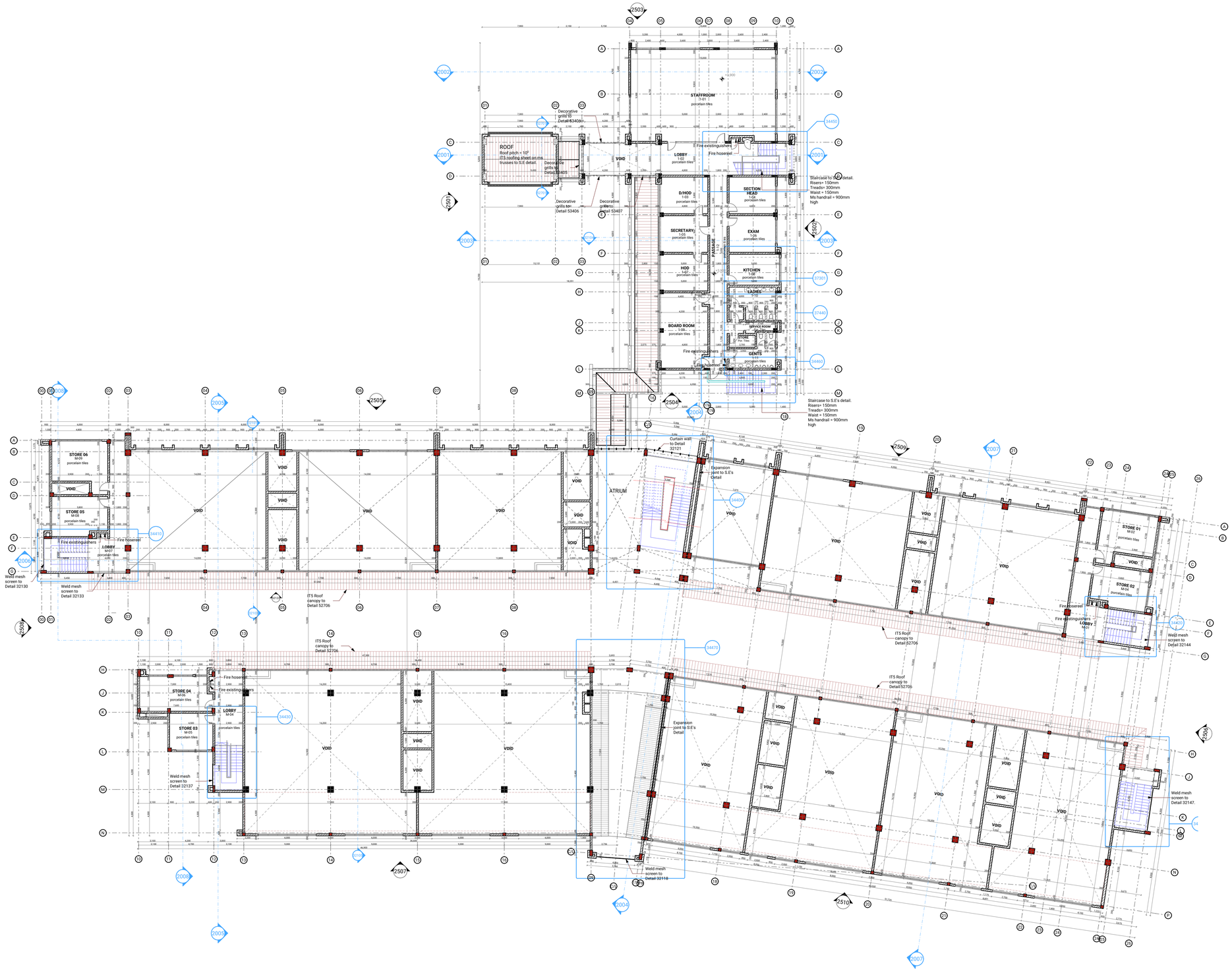

1102 Tuition Block Mezzanine & Admin First Floor 1:200

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Sheet Name

Settingout Plans
Tuition Block Mezzanine & Admin First Floor.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:200**	Revision **00**

Sheet No.

2527-SK-M1-DR-A-1102

Job Number

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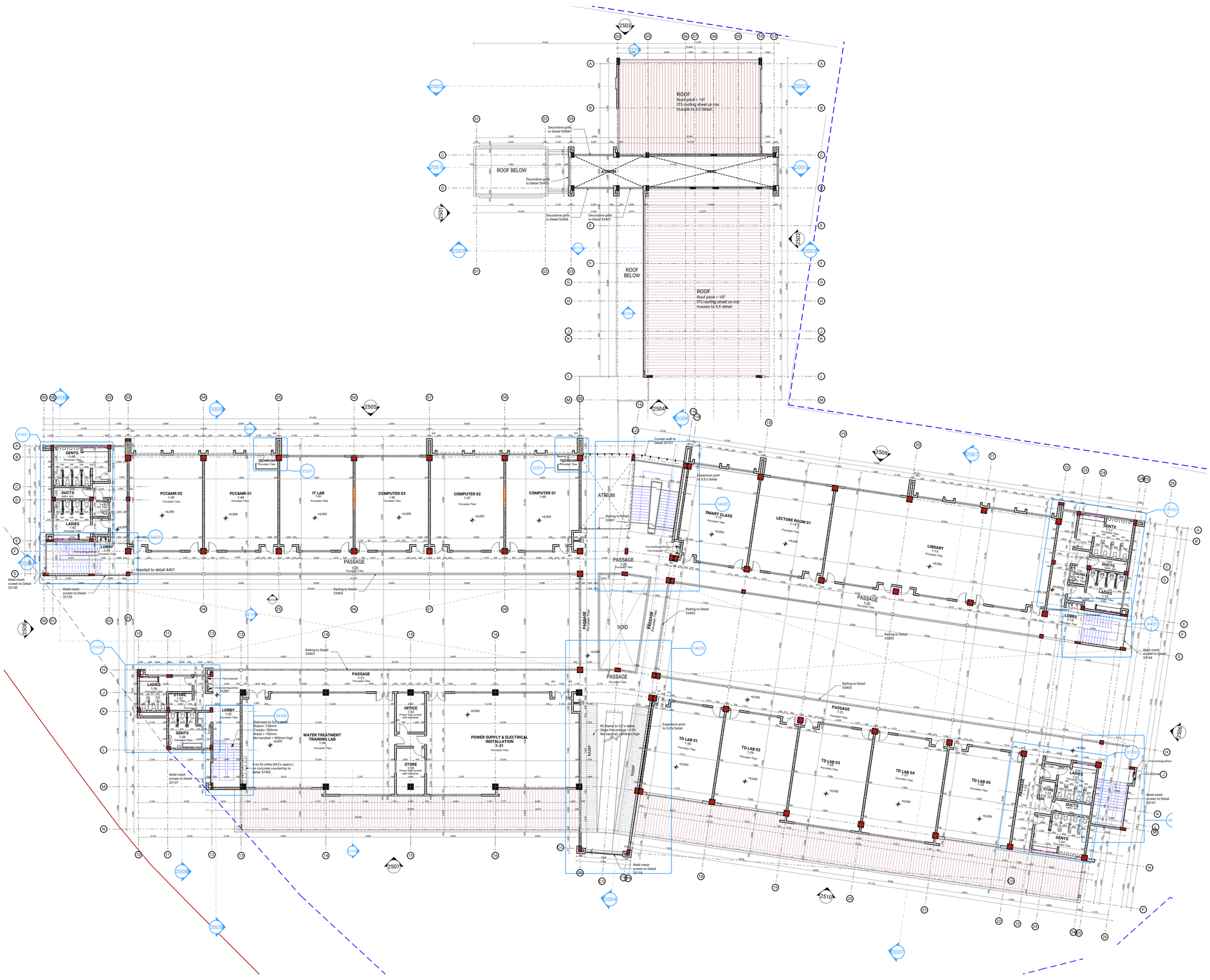

1103 Tuition Block First Floor Plan & Admin Block Roof 1:200

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Sheet Name

Settingout Plans
Tuition Block First Floor & Admin Block Roof.

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Sheet No.

2527-SK-01-DR-A-1103

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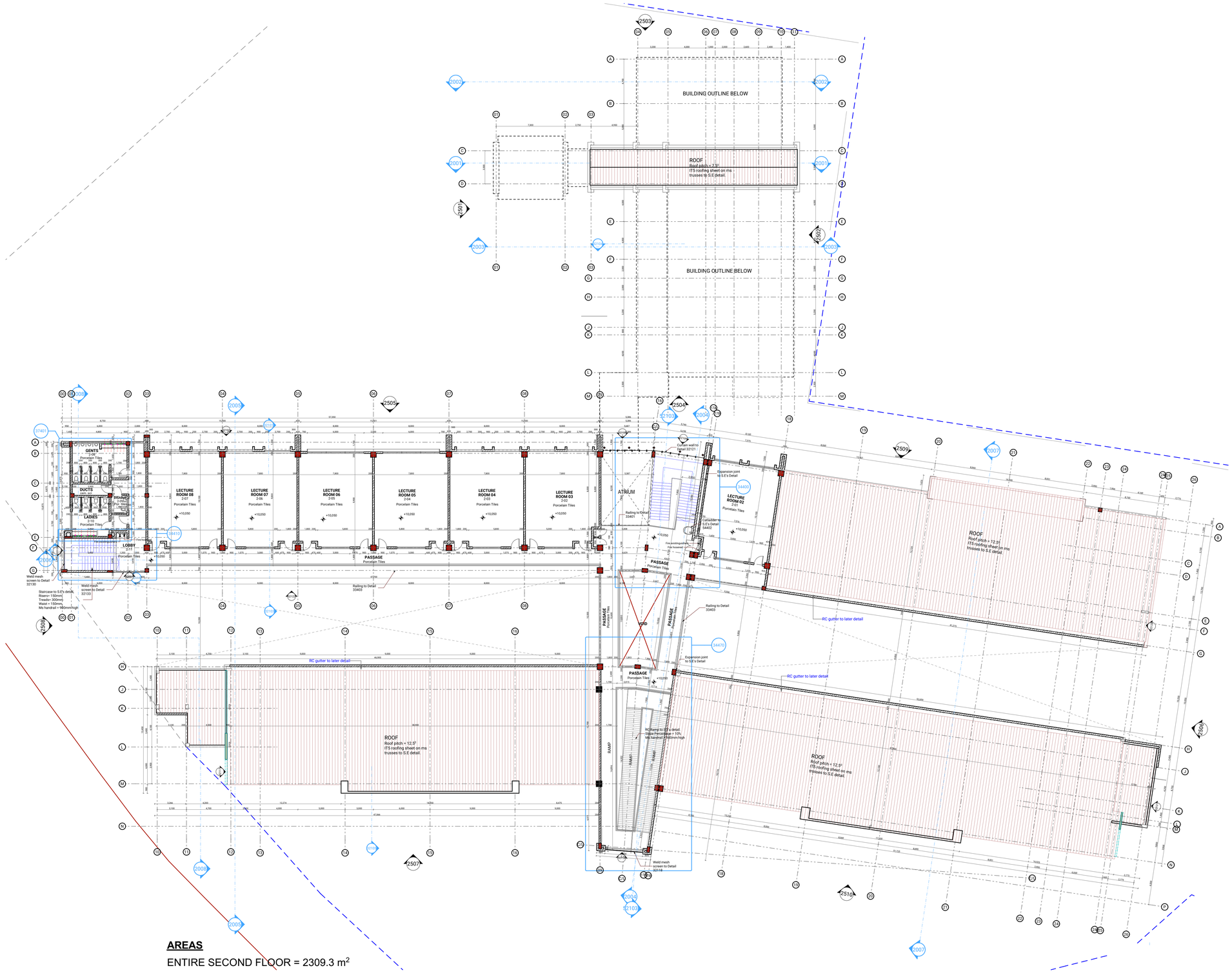

AREAS

ENTIRE SECOND FLOOR = 2309.3 m²

1104 Tuition Block 2nd Floor Plan 1:200

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Tution Block 2nd Floor.

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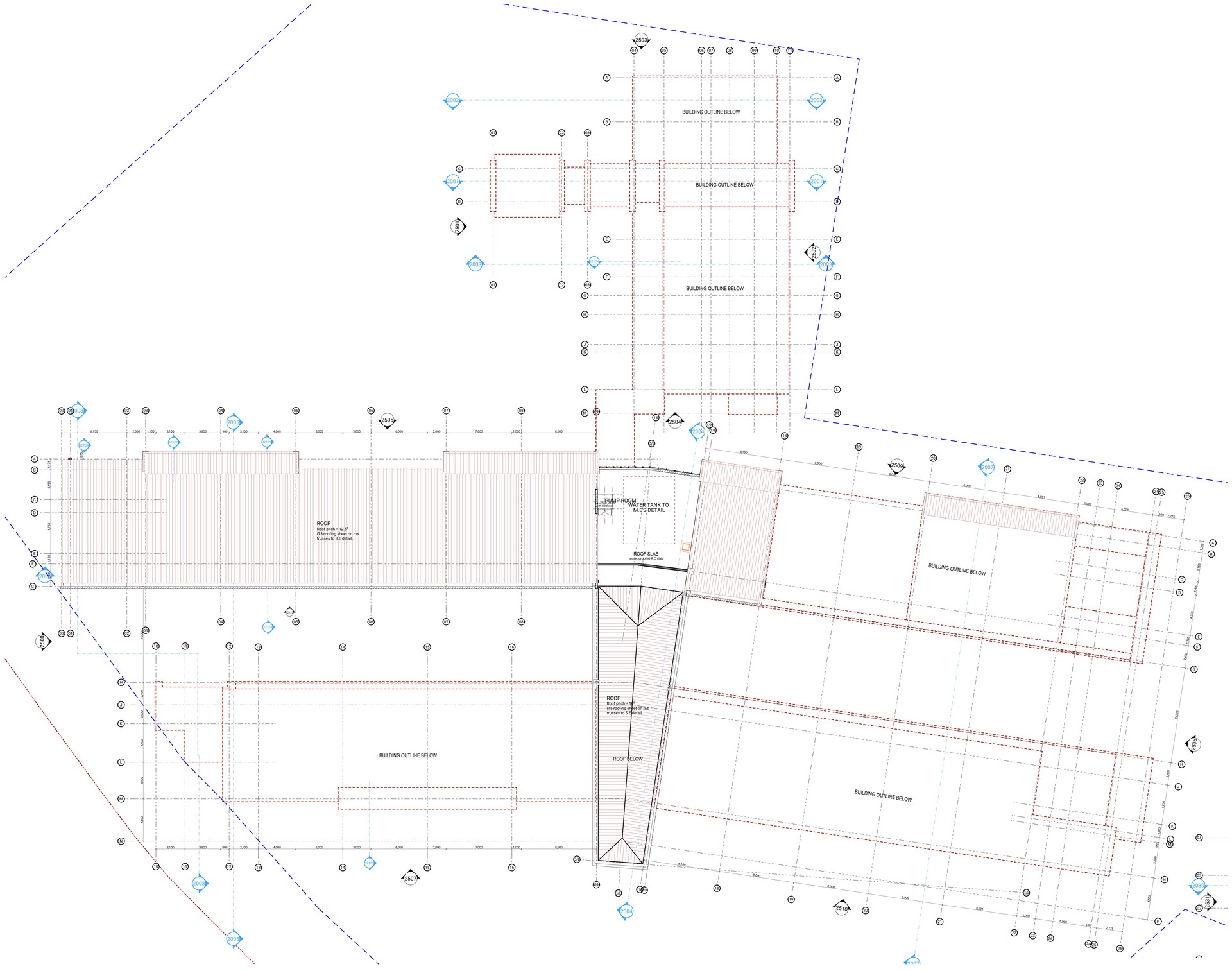

1105 **Tuition & Admin Block Roof Plan** **1:200**

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Rev ID	Chg ID	Description	Issue Date

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Settingout Plans
Tuition & Admin Block Roof.

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2527-SK-03-DR-A-1105

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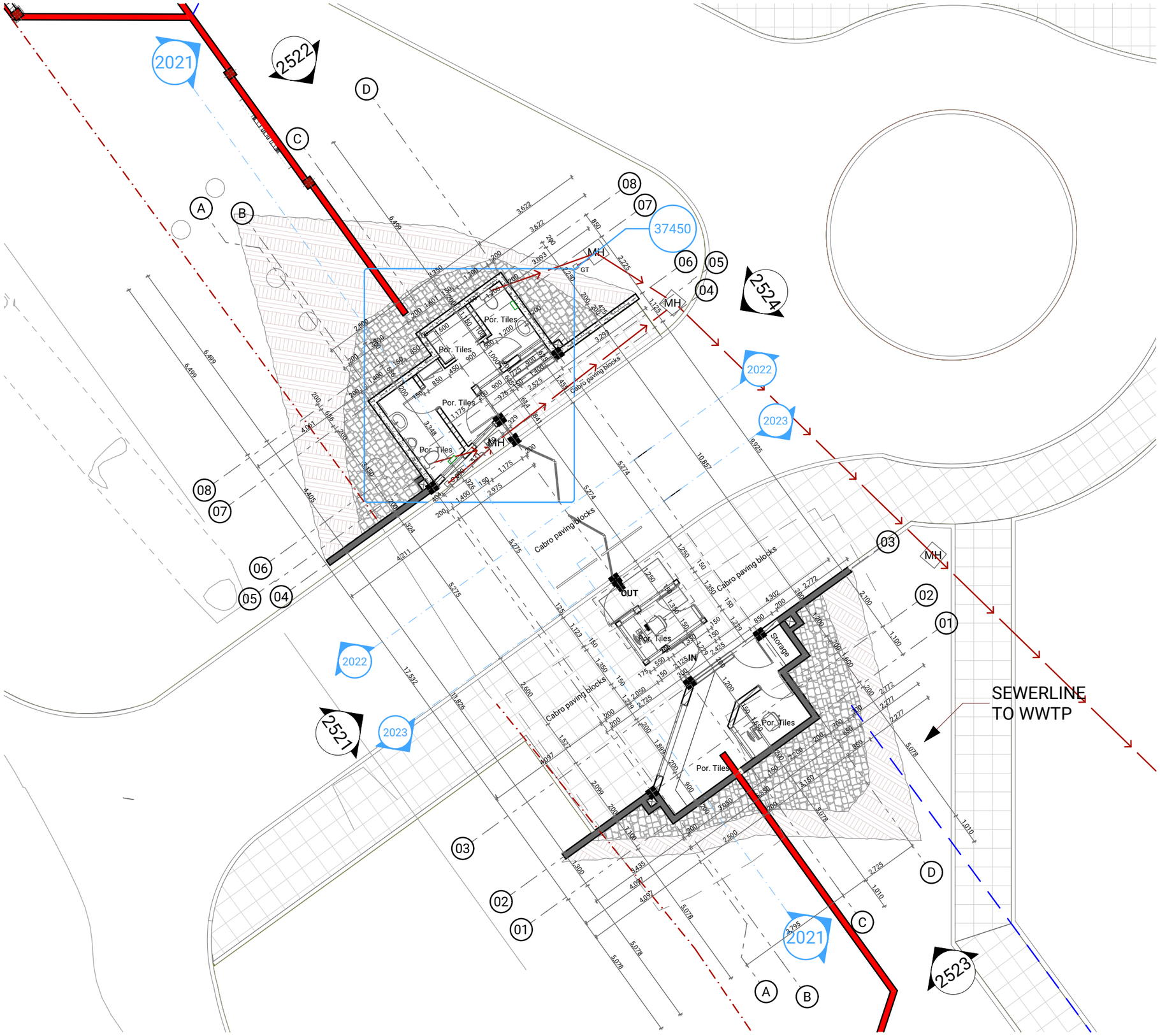

1121

Guard House Ground Floor Plan

1:125

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Settingout Plans

Guard House Ground Floor.

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Issue Date **13/04/2021**	Scale (A3) **1:125**	Revision **00**

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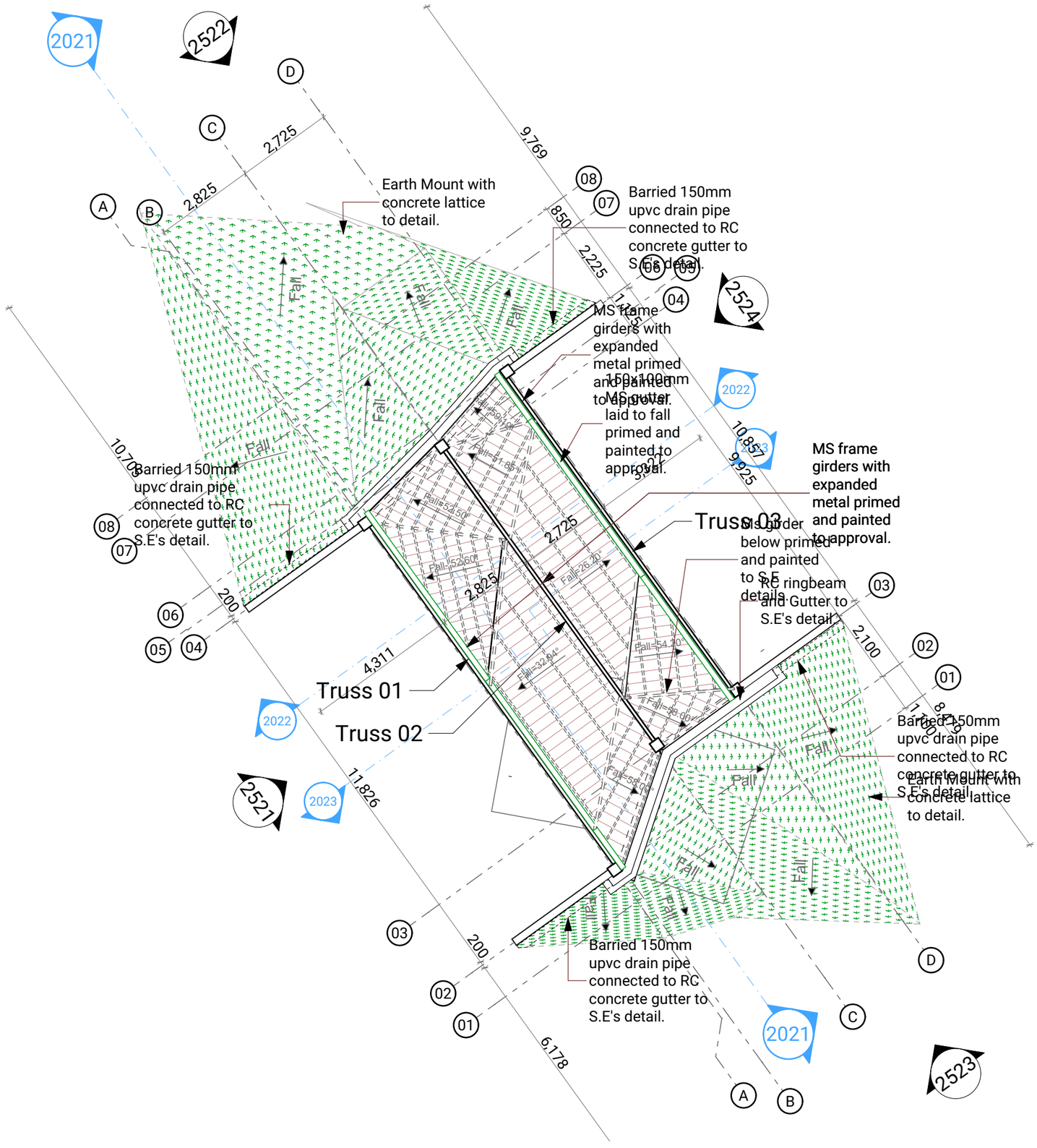

1122 **Guard House Roof Plan** 1:125

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Sheet Name

Settingout Plans

Guard House Roof.

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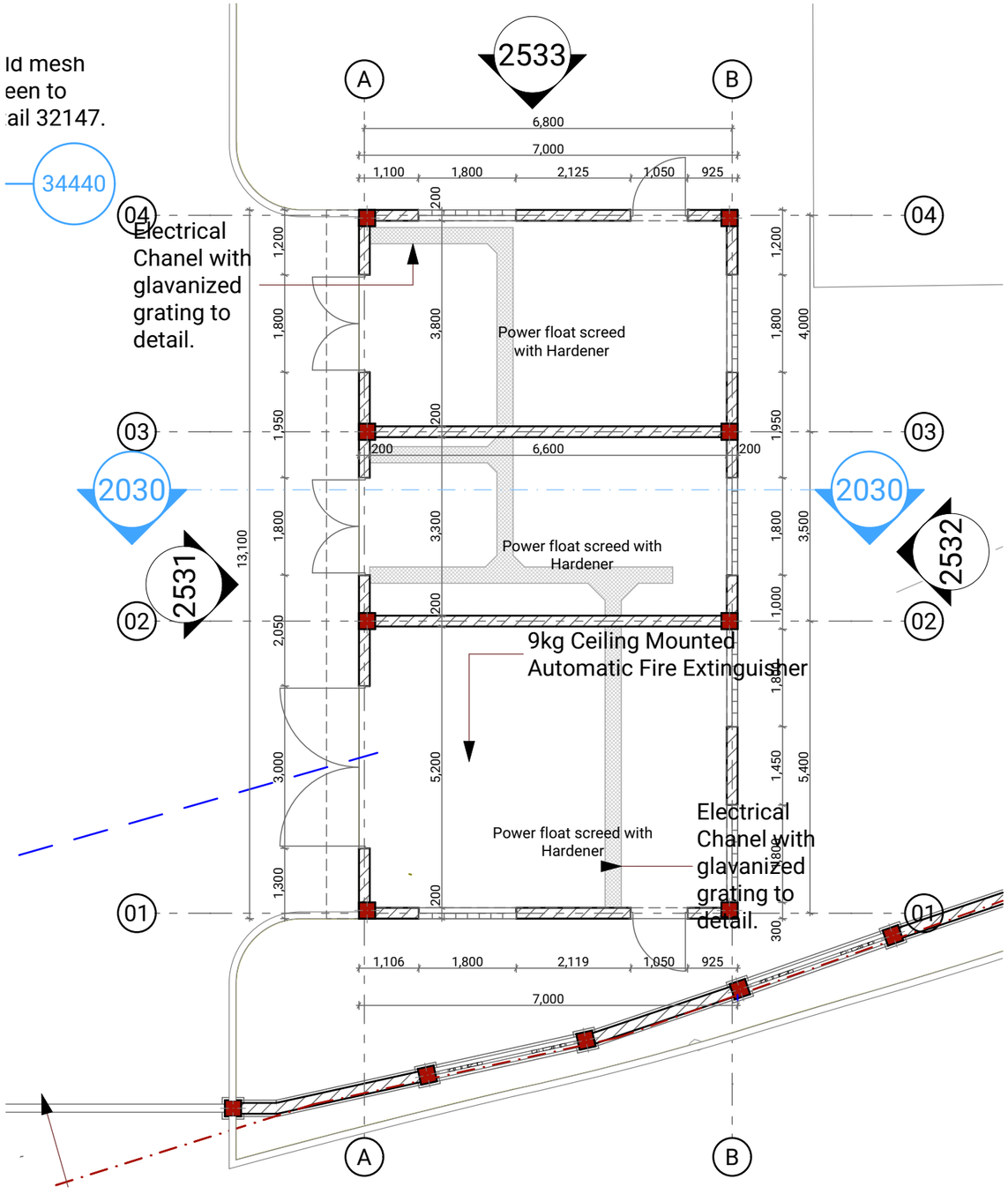

1130 Service Building plan. 1:100

FOR TENDER

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Sheet Name

Settingout Plans

Power House.

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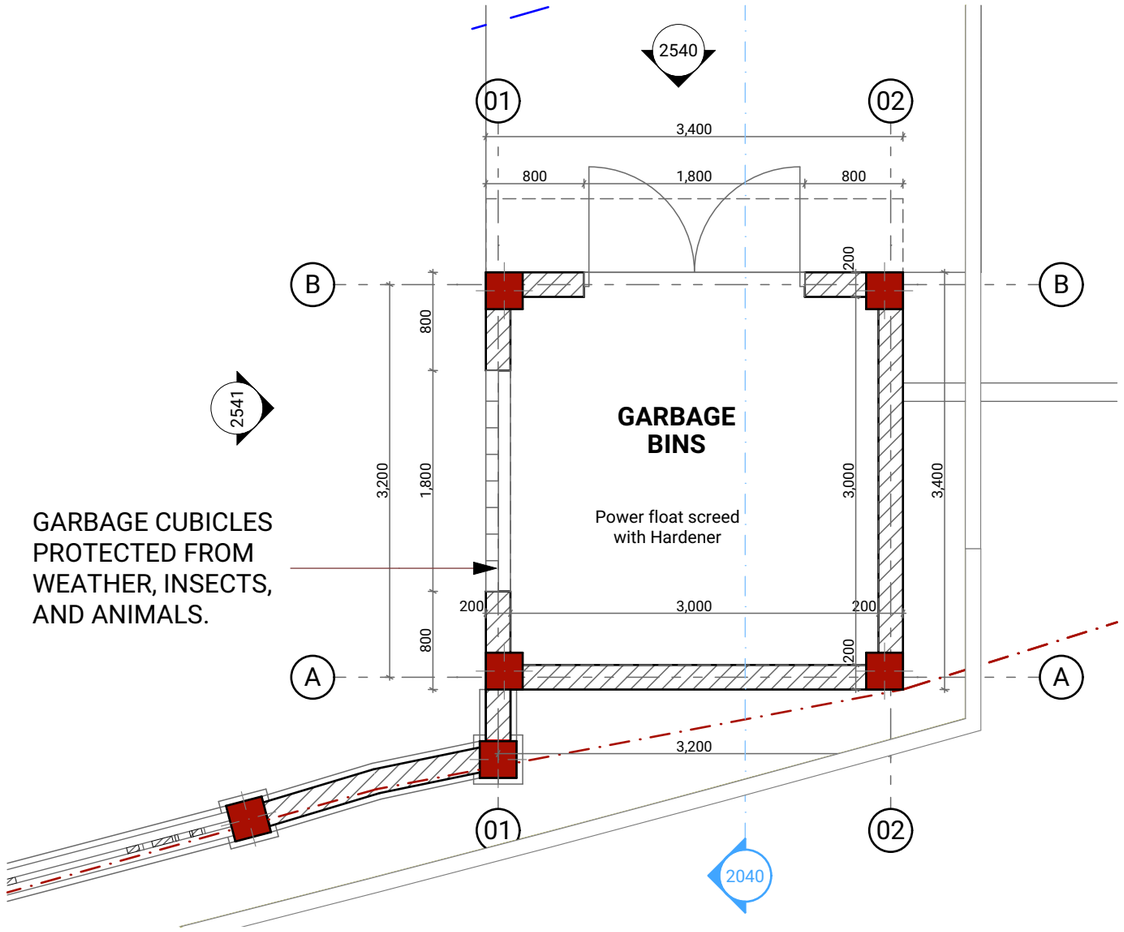

37403 **Washroom 01 Section** **1:50**

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Sheet Name

Settingout Plans

Garbage Cubicle.

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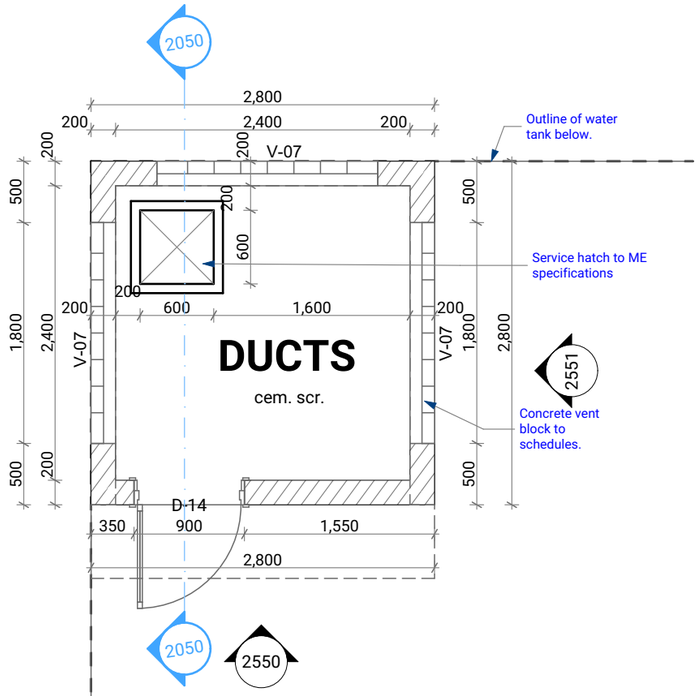

1150 **Pump room Floor Plan** 1:50

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Settingout Plans

Pumproom Floor Plan

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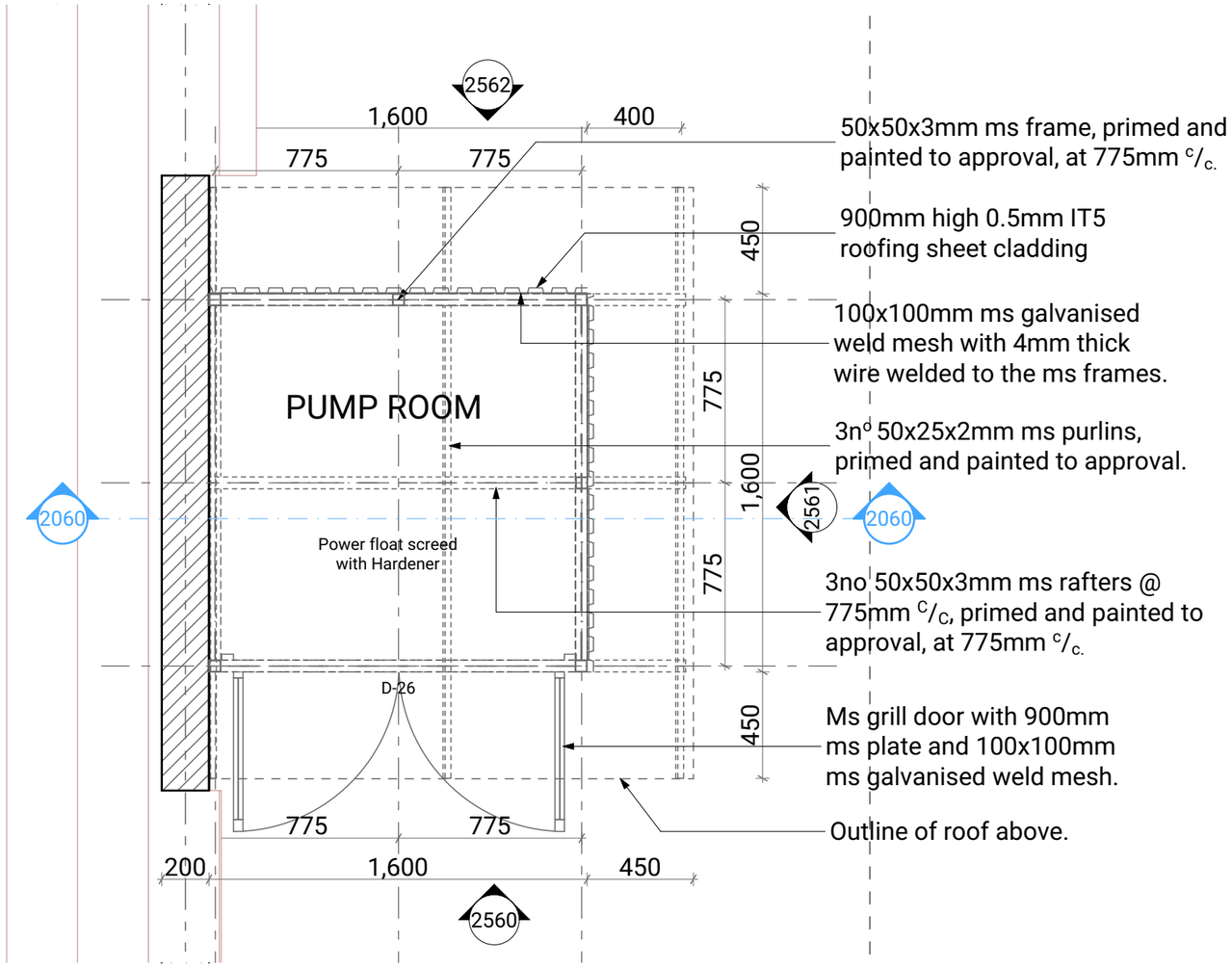

1160 **Roof Top Pump Cage** **1:25**

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Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

SYMBION

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E-mail:symbionkenya@symbion-int.com
WEBSITE: www.symbion-int.com

Sheet Name
Settingout Plans
Rooftop Pump Cage.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:25**	Revision **00**

Sheet No.
2527-SK-03-DR-A-1160

Job Number
SK-20-2527

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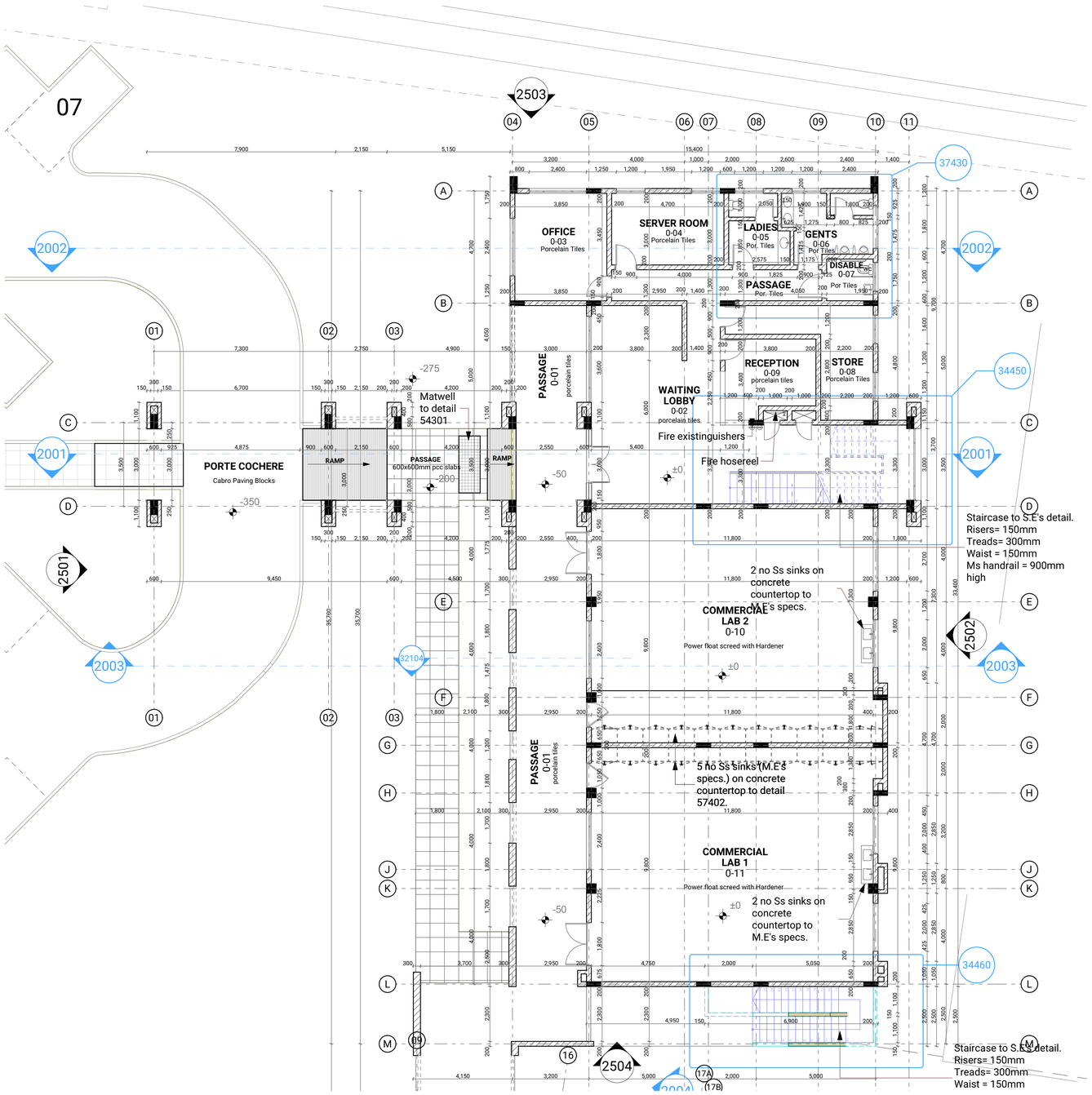
FOR TENDER



1101A **Admin Block Ground Floor.** **1:100**

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13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

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Sheet Name

Tuition & Admin Ground Floor Plan.
Admin Block Ground Floor.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1101A

Job Number

SK-20-2527

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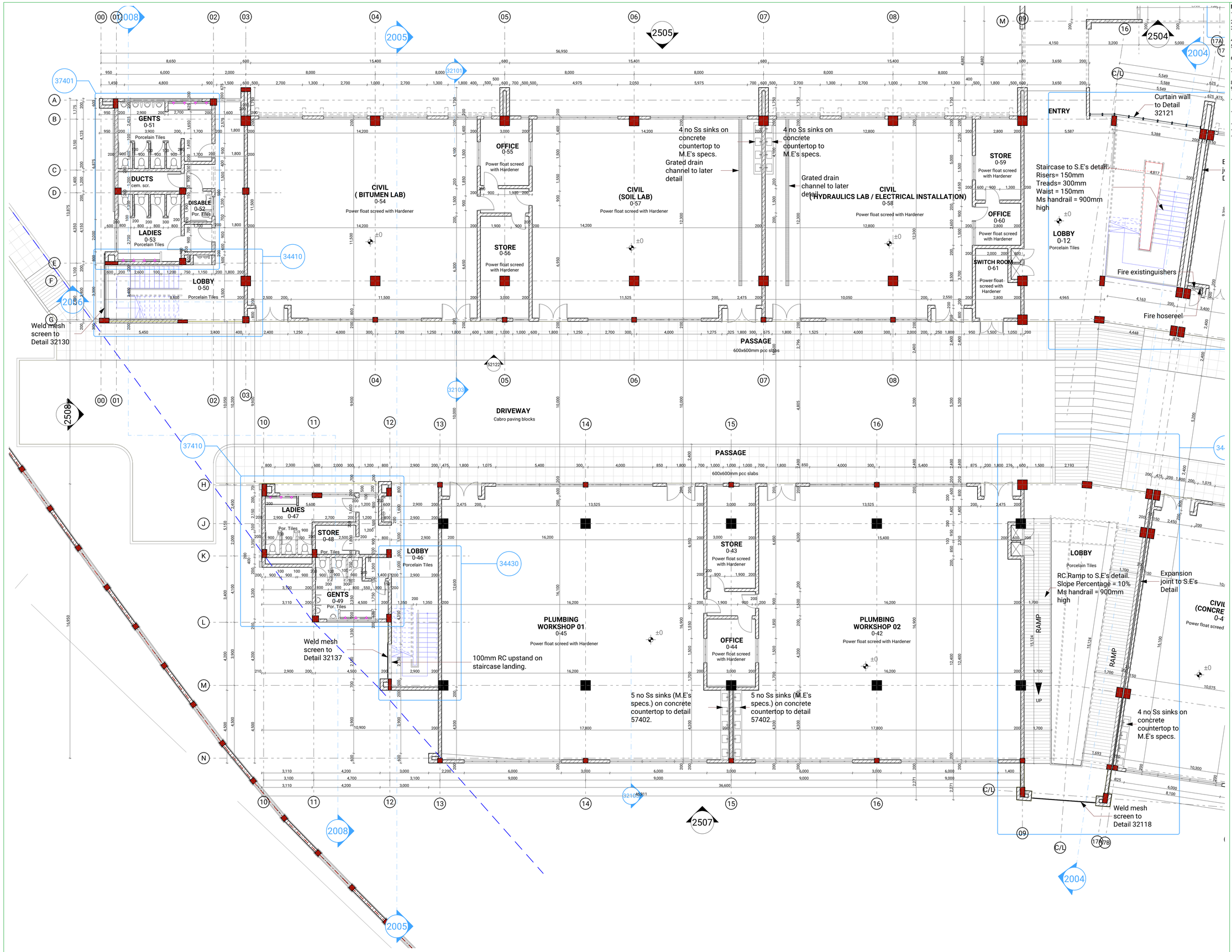

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Sheet Name

Tuition & Admin Ground Floor Plan.
Tuition Block (A&C) Ground Floor.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1101B

Job Number

SK-20-2527

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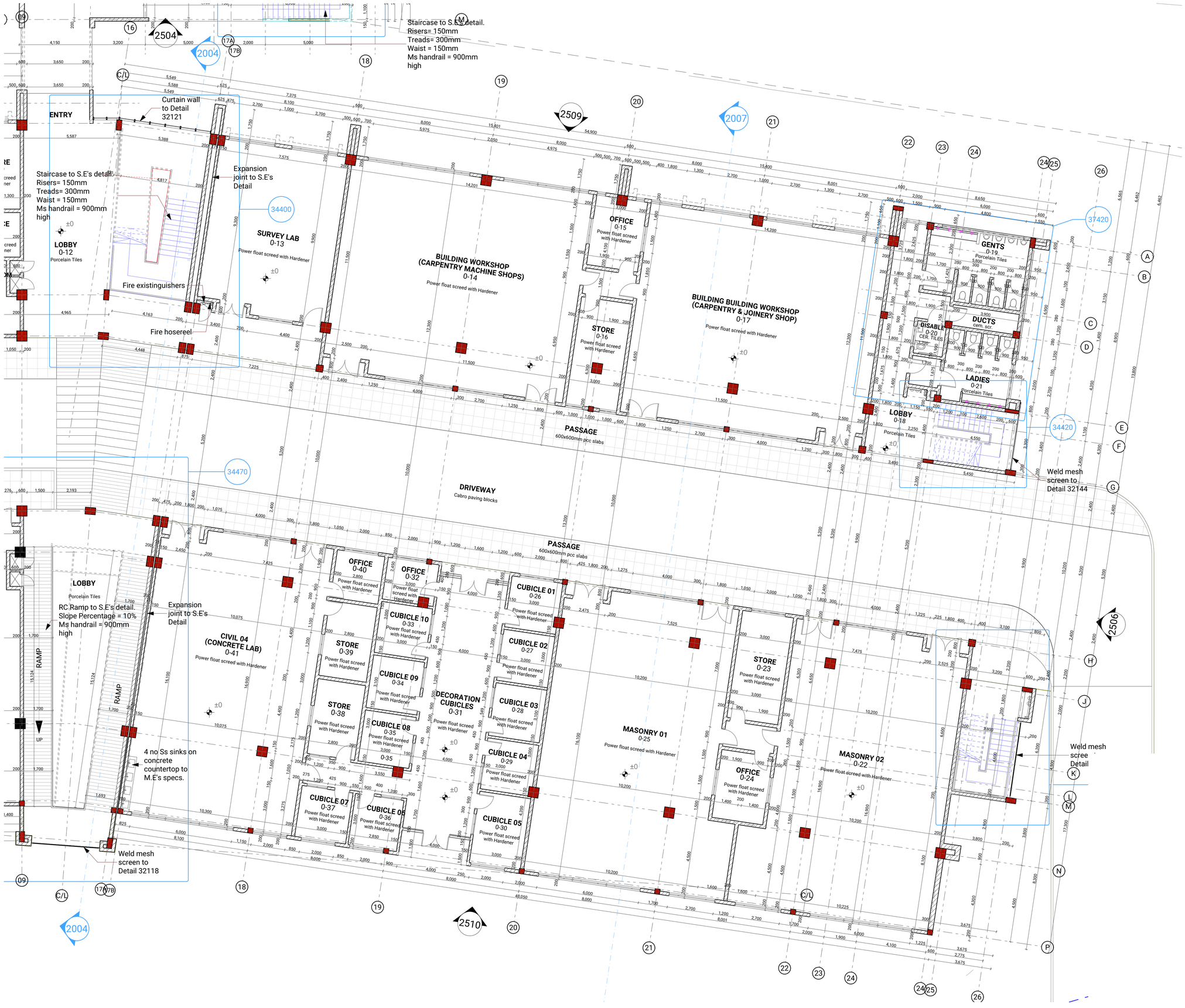
1101B

Tuition Block (A&C) Ground Floor.

1:100

FOR TENDER



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Sheet Name

Tuition & Admin Ground Floor Plan.
Tuition Block (B&D) Ground Floor.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.

2527-SK-00-DR-A-1101C

Job Number

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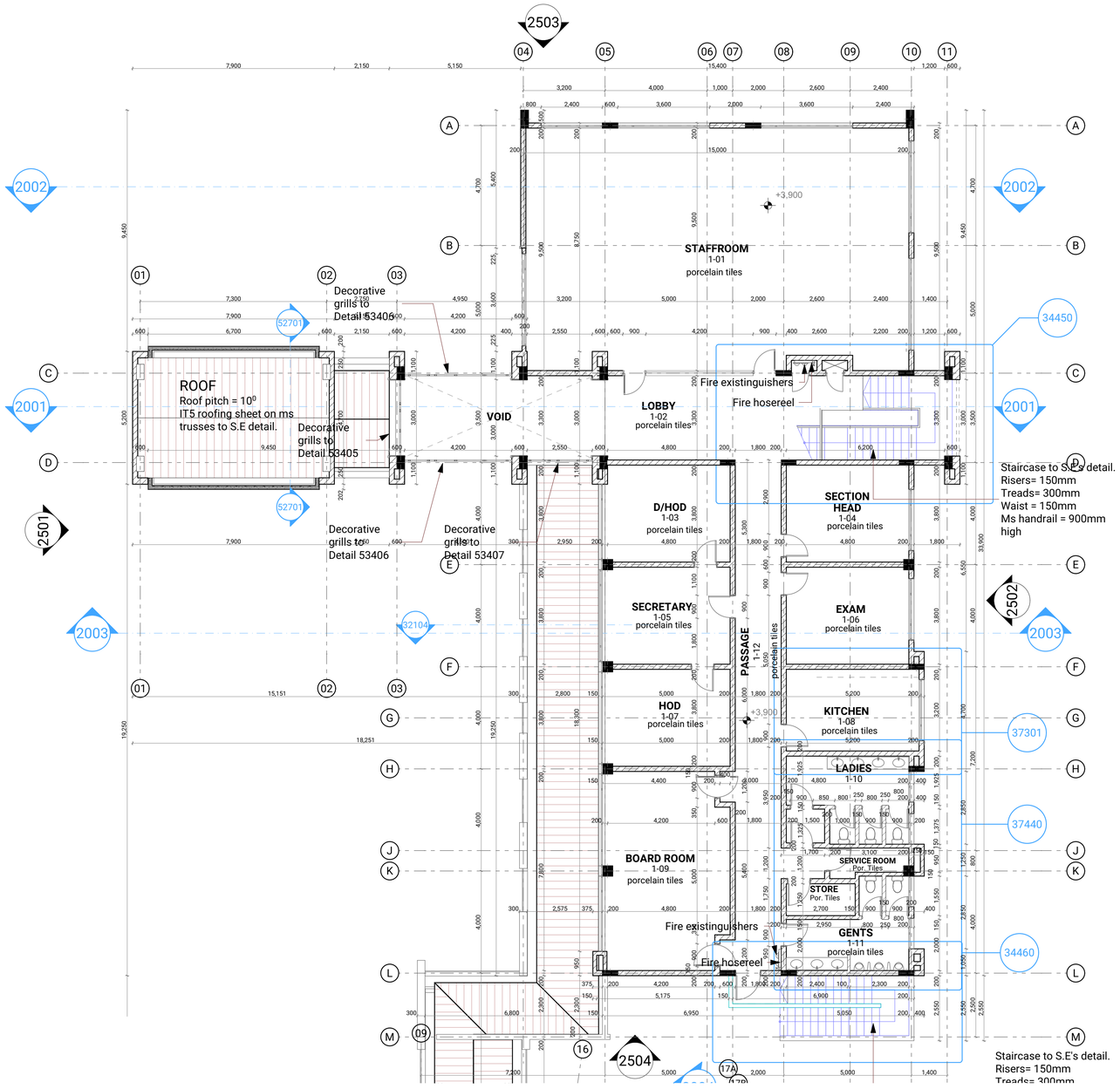
1101C **Tuition Block (B&D) Ground Floor.** **1:100** FOR TENDER



1102A **Admin First Floor** **1:100**

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LOCATION PLAN

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Sheet Name

Tuition Block Mezzanine & Admin First Floor Plan.
Admin Block First Floor Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

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2527-SK-M1-DR-A-1102A

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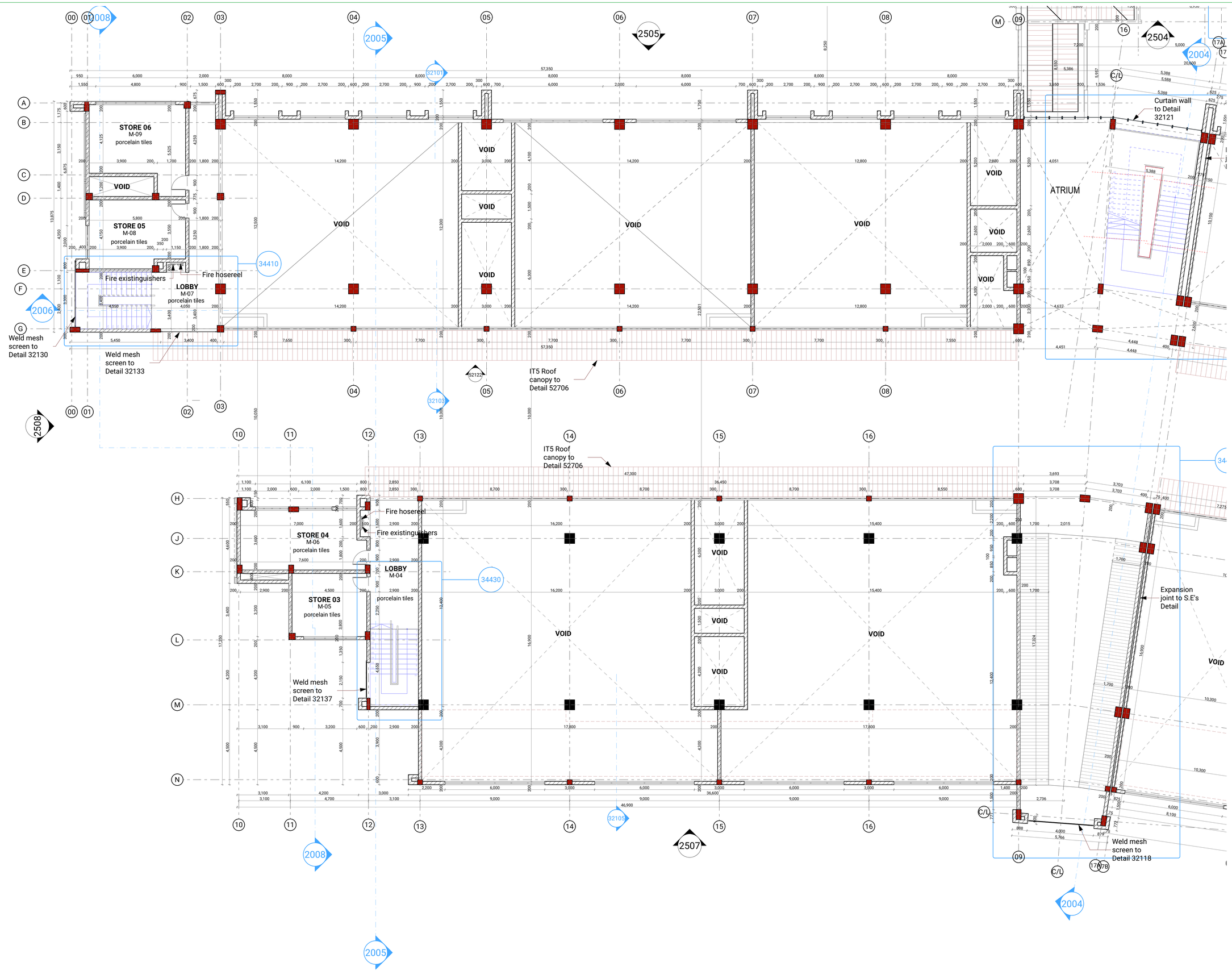

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Sheet Name

Tuition Block Mezzanine & Admin First Floor Plan.
Tuition Block (A&C)Mezzanine Floor

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-M1-DR-A-1102B

Job Number

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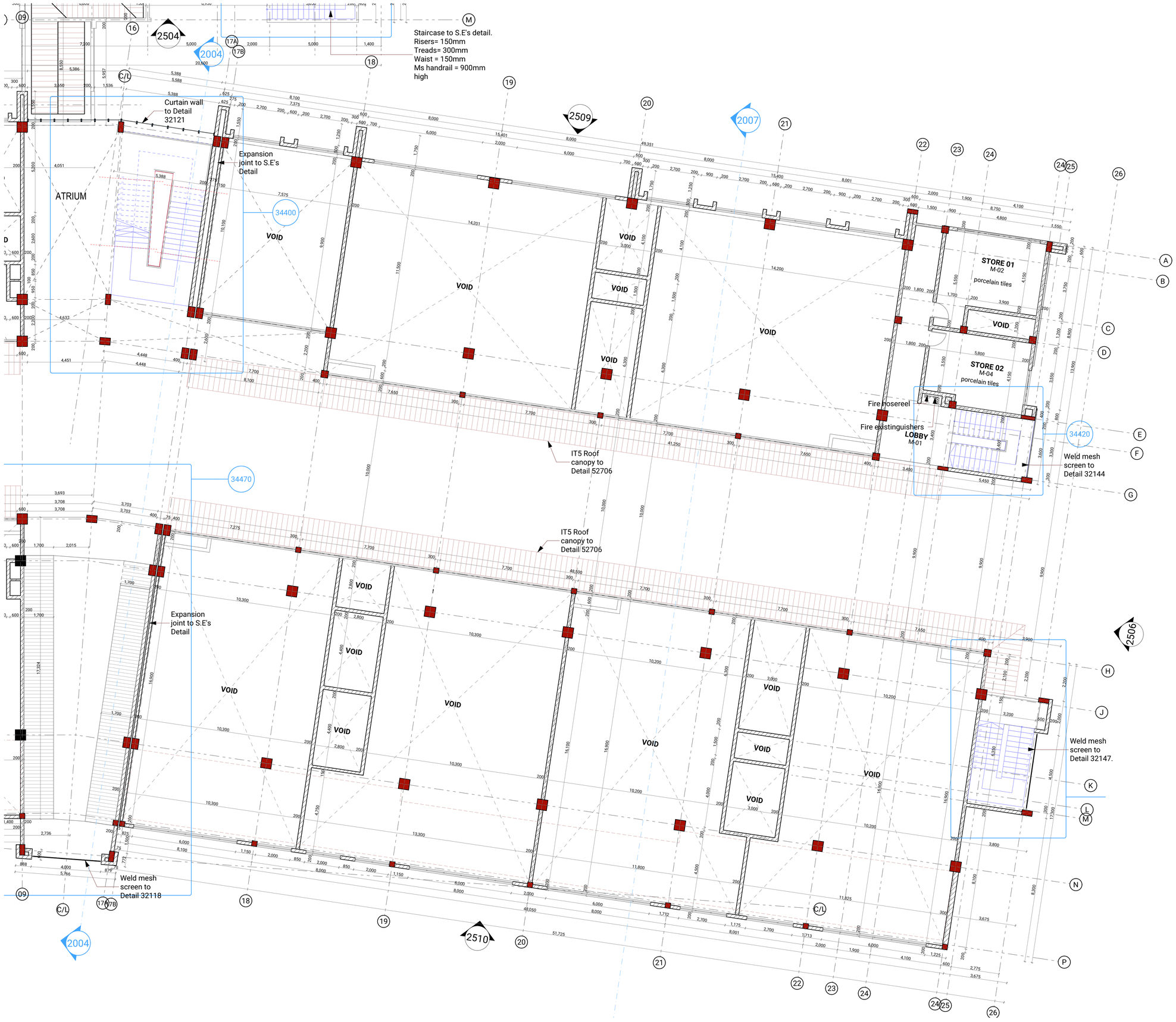
1102 B **Tuition Block (A&C)Mezzanine Floor** **1:100**

FOR TENDER



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Sheet Name

Tuition Block Mezzanine & Admin First Floor Plan.
Tuition Block (B&D)Mezzanine Floor

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

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2527-SK-M1-DR-A-1102C

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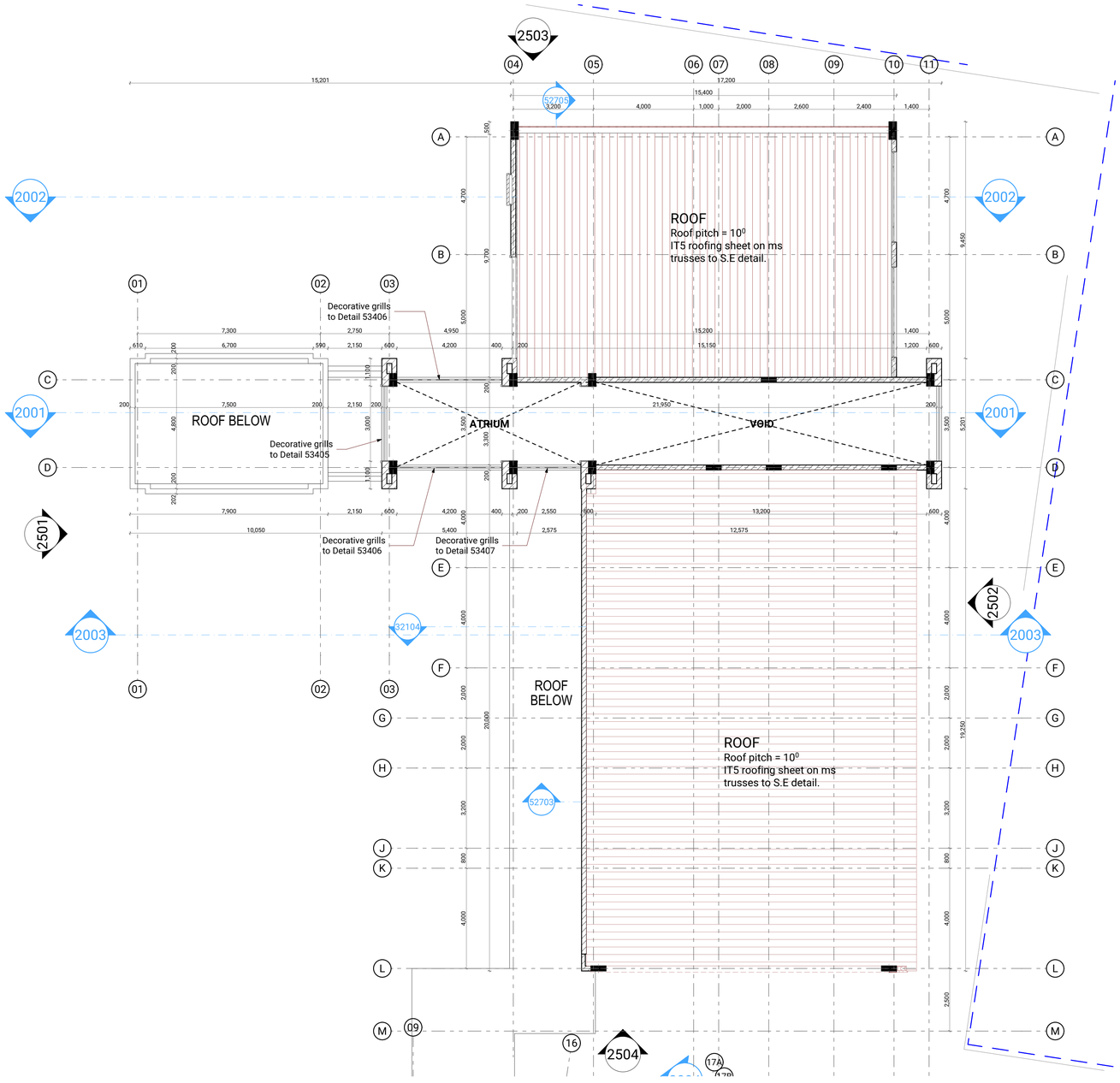
1102 **Tuition Block (B&D)Mezzanine Floor** **1:100** FOR TENDER



1103A **Admin Block Roof** **1:100**

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Sheet Name

Tuition Block First Floor & Admin Block Roof Plan Admin Block Roof.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

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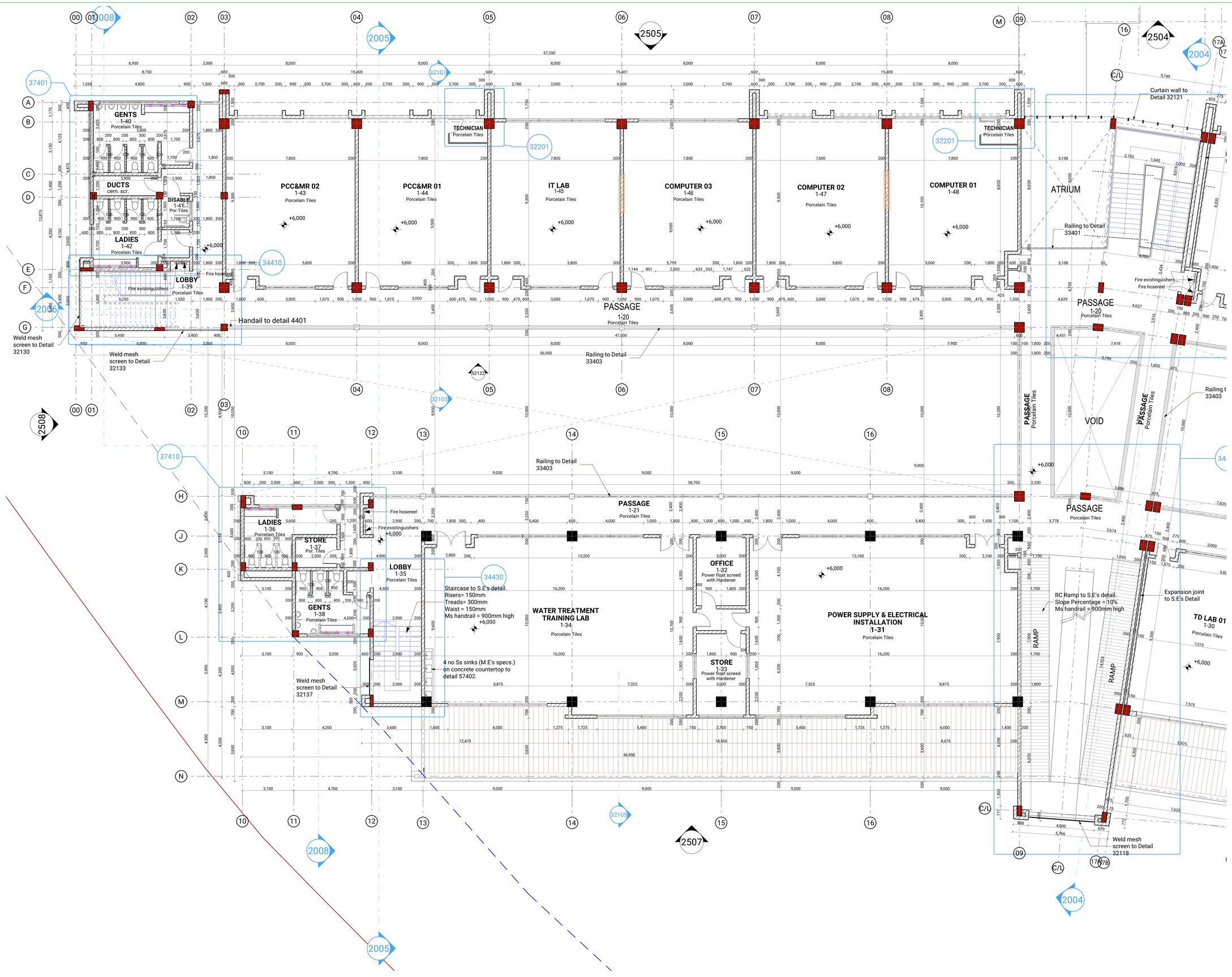

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Sheet Name

Tuition Block First Floor & Admin Block Roof Plan
Tuition Block (A&C) First Floor Plan

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.

2527-SK-01-DR-A-1103B

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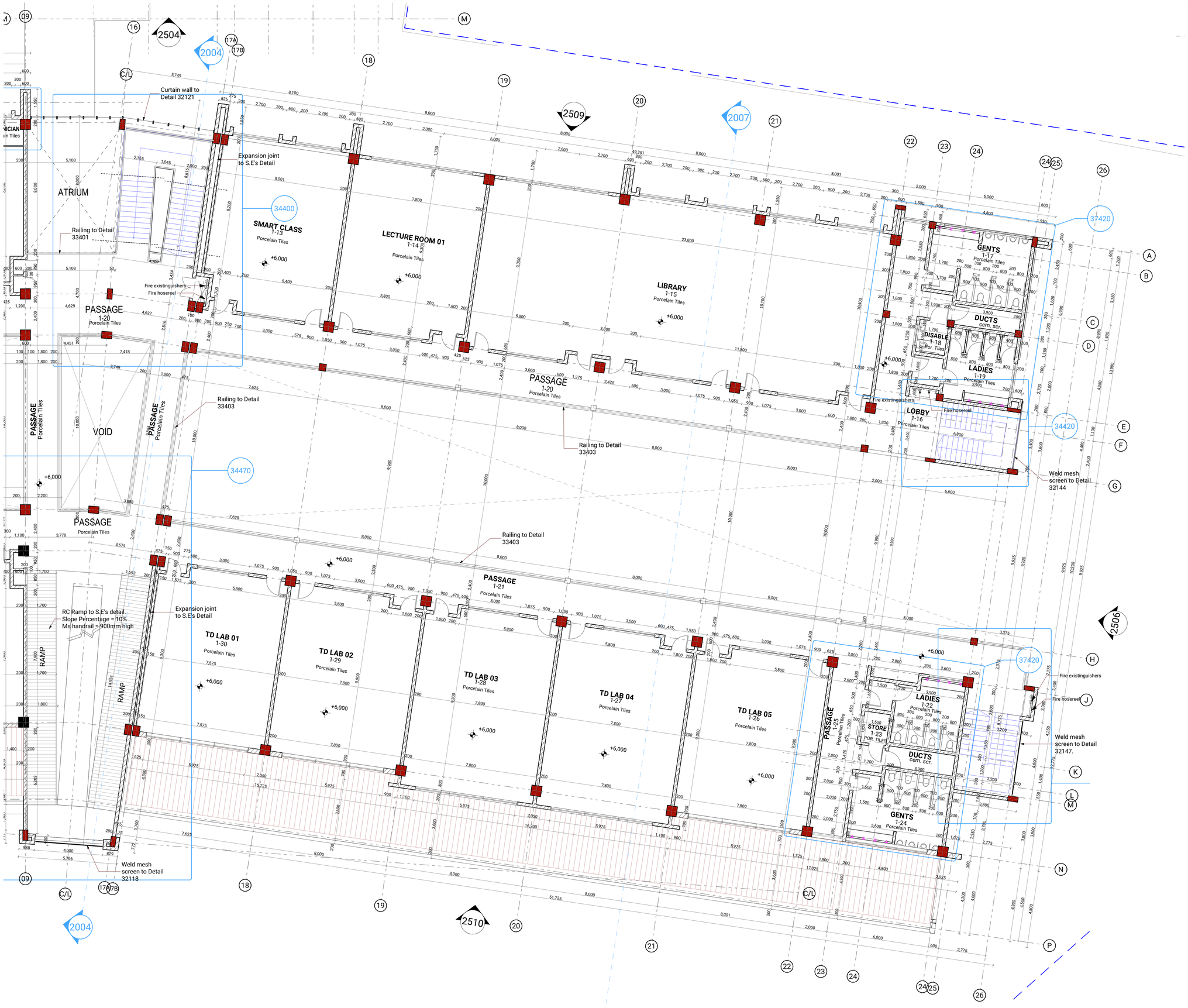
1103B

Tuition Block (A&C) First Floor.

1:100

FOR TENDER



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Sheet Name

Tuition Block First Floor & Admin Block Roof Plan
Tuition Block (B&D) First Floor Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-01-DR-A-1103C

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SK-20-2527

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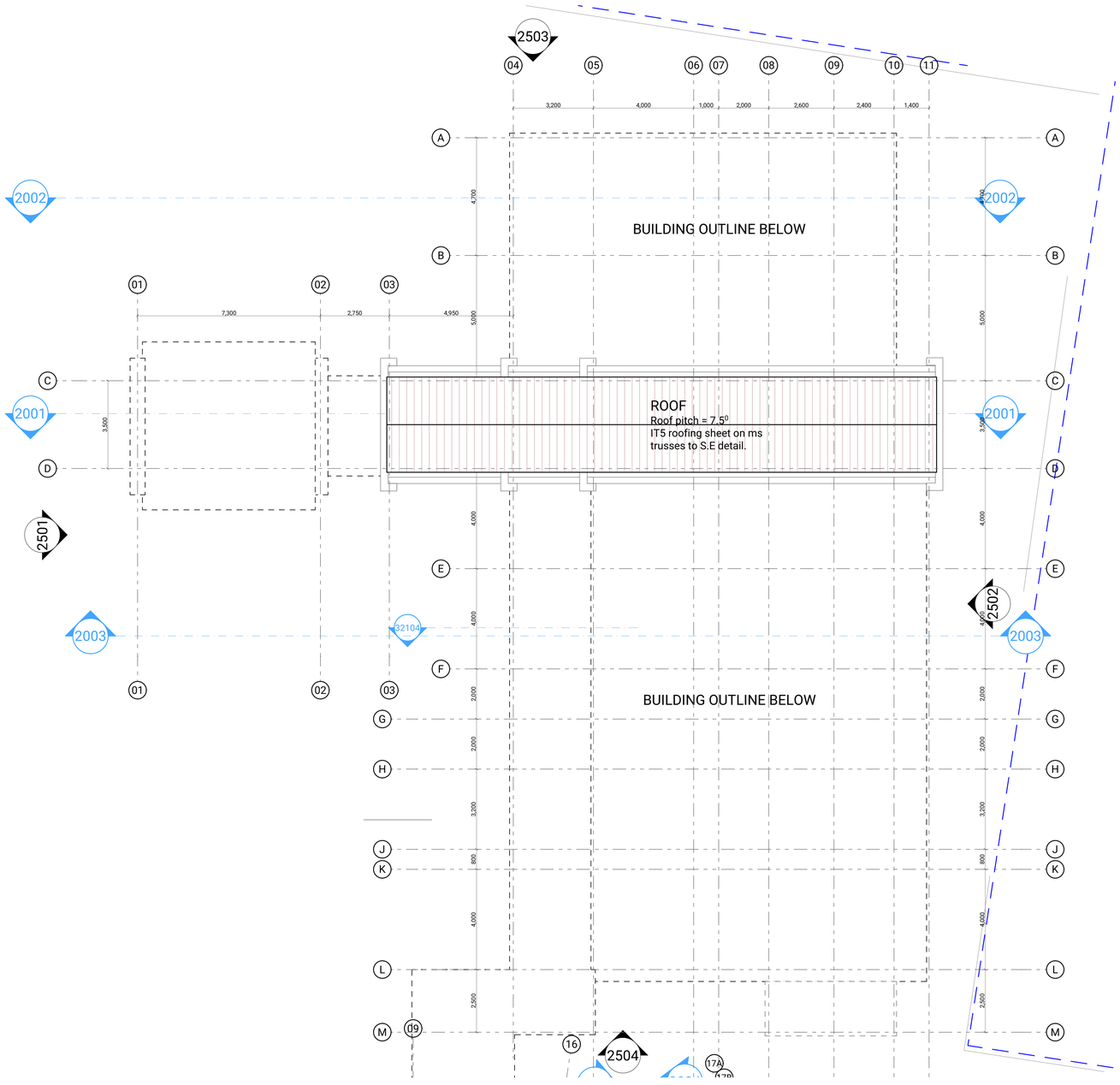
1103C **Tuition Block (B&D) First Floor.** **1:100**

FOR TENDER



1104A **Admin Block Roof** **1:100**

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Sheet Name

Tuition Block Second Floor & Admin Block Roof Plan Admin Block Roof.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-02-DR-A-1104A

Job Number

SK-20-2527

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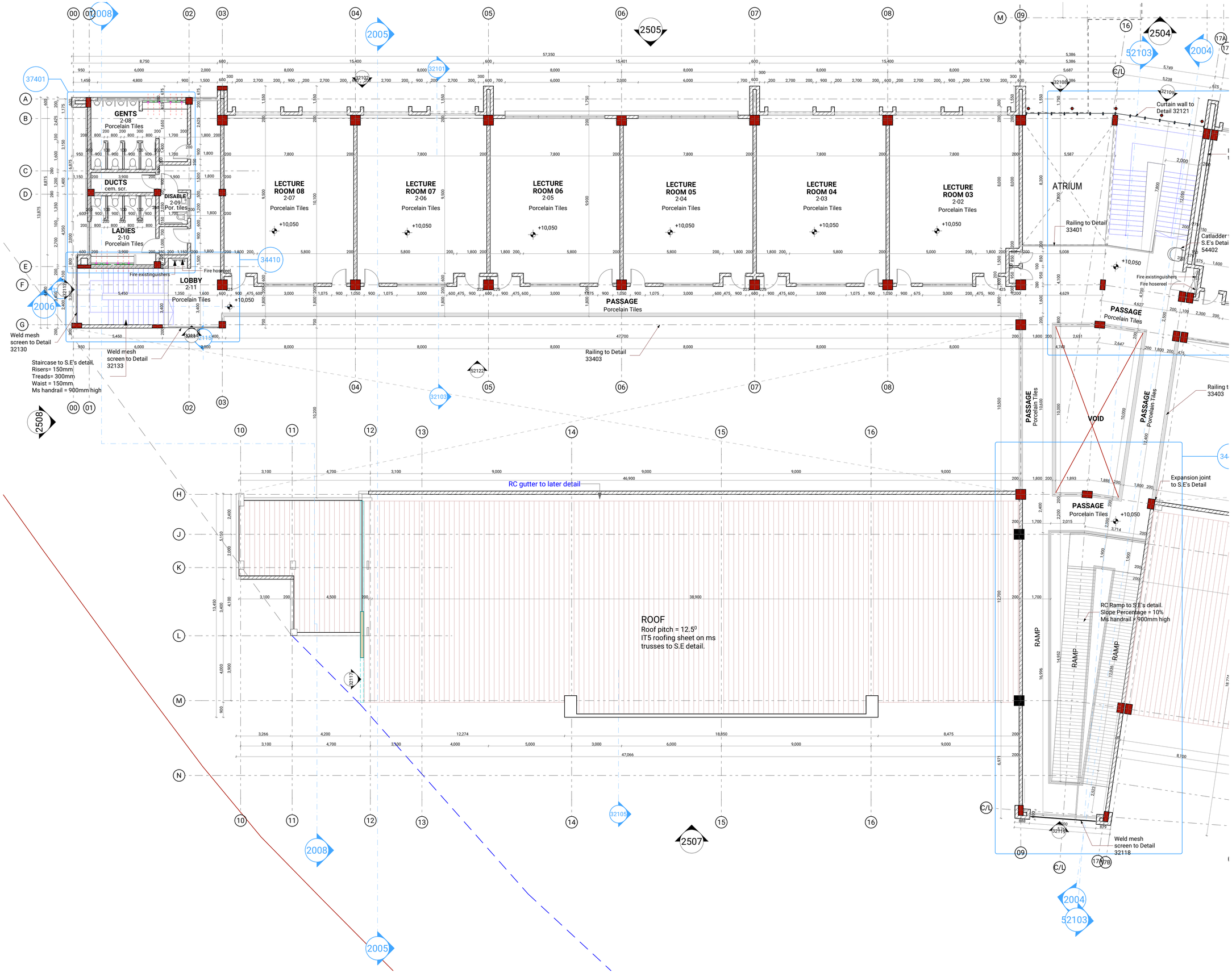
FOR TENDER



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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Tuition Block Second Floor & Admin Block Roof Plan
Tuition Block (A&C) Second Floor.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.

2527-SK-02-DR-A-1104B

Job Number

SK-20-2527

File Path

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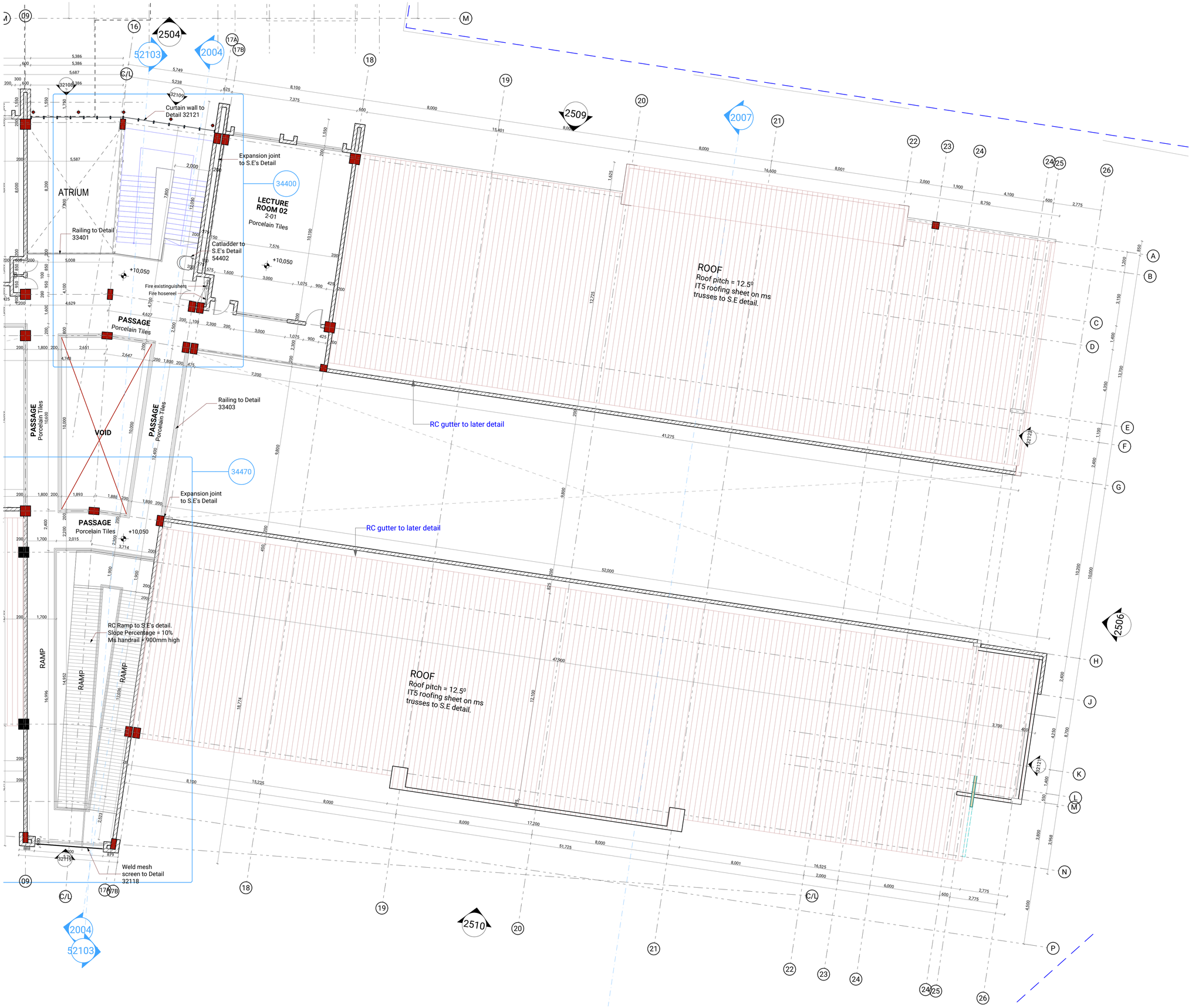
1104B **Tuition Block (A&C) Second Floor.** **1:100**

FOR TENDER



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Rev ID	Chg ID	Description	Issue Date

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Sheet Name

Tuition Block Second Floor & Admin Block Roof Plan
Tuition Block (B&D) Second Floor.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.

2527-SK-02-DR-A-1104C

Job Number

SK-20-2527

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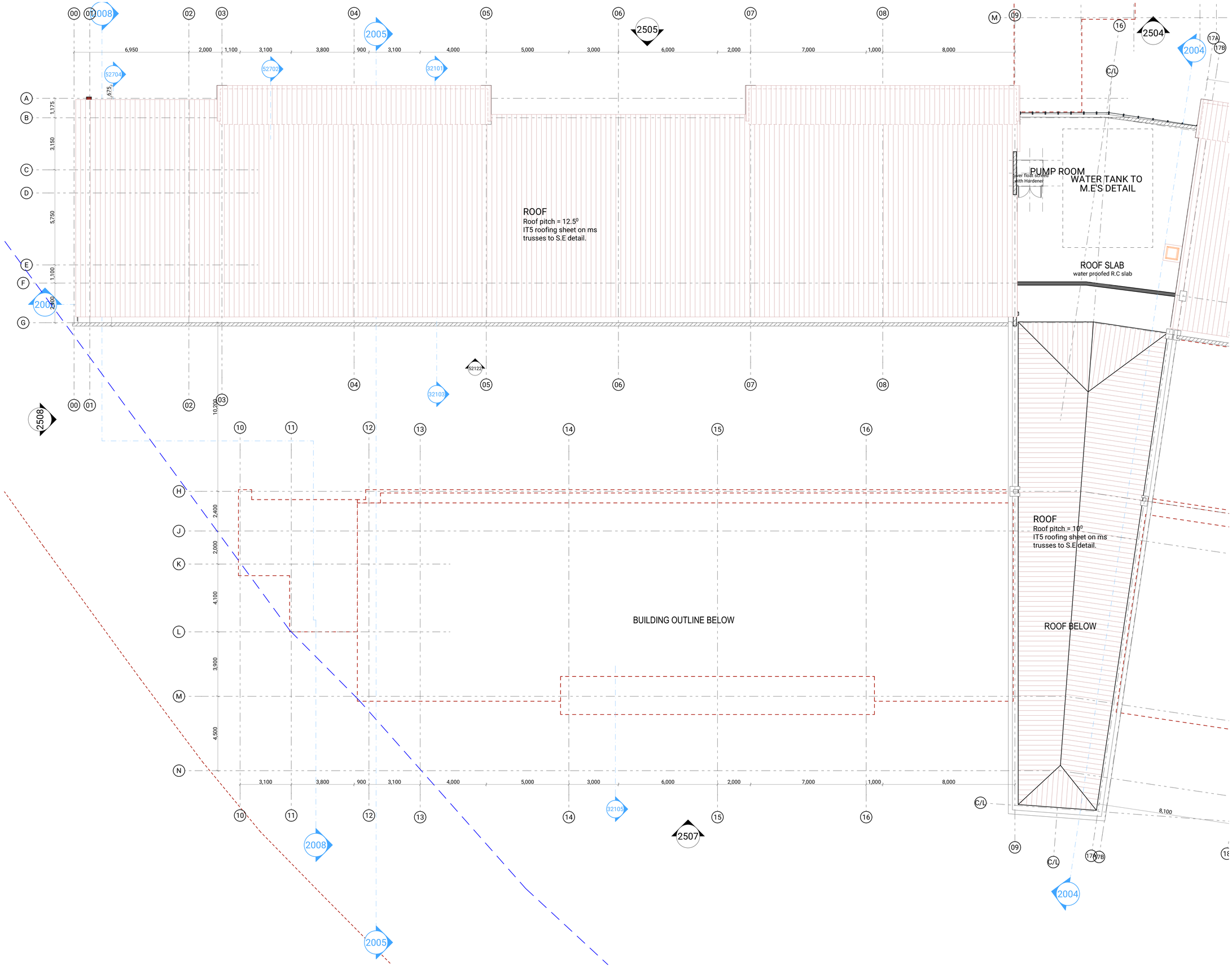
1104C **Tuition Block (B&D) Second Floor.** **1:100**

FOR TENDER



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Sheet Name

Tuition Block Roof Plan
Tuition Block (A&C) Roof.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-03-DR-A-1105B

Job Number

SK-20-2527

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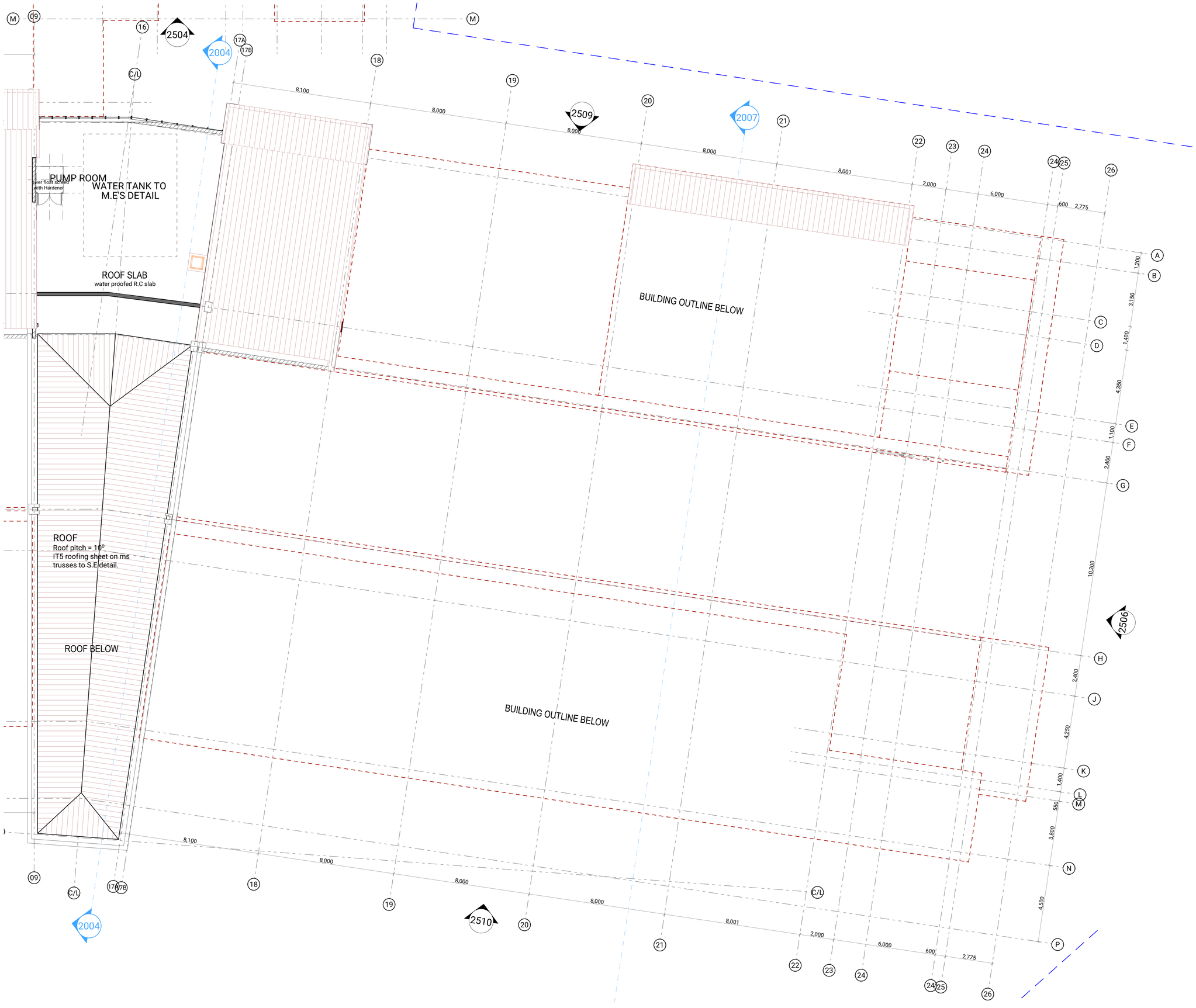
1105B **Tuition Block (A&C) Roof.** **1:100**

FOR TENDER



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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

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Sheet Name
Tuition Block Roof Plan
Tuition Block (B&D) Roof.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.
2527-SK-03-DR-A-1105C

Job Number
SK-20-2527

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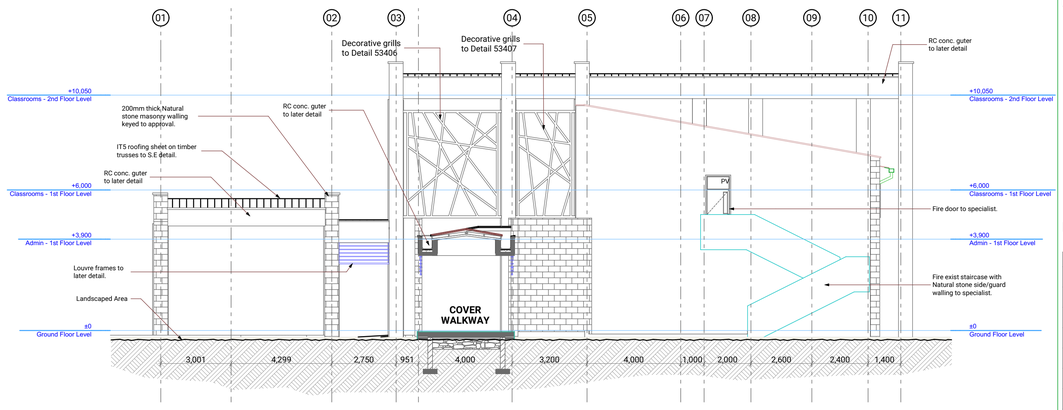
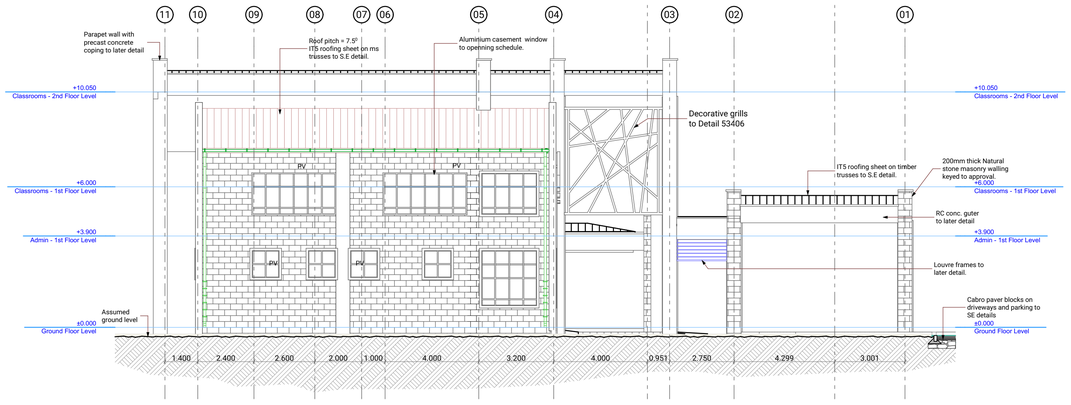
1105C **Tuition Block (B&D) Roof.** **1:100**

FOR TENDER

2501 **Admin Building Elevation** **1:125**



2504 **Admin Building Elevation** **1:125**



2503 **Admin Building Elevation** **1:125**

2502 **Admin Building Elevation** **1:125**

FOR TENDER

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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WEBSITE: www.symbion-int.com

Sheet Name

Elevations
Adminstration Block.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:125**	Revision **00**

Sheet No.

2527-SK-03-DR-A-2501

Job Number

SK-20-2527

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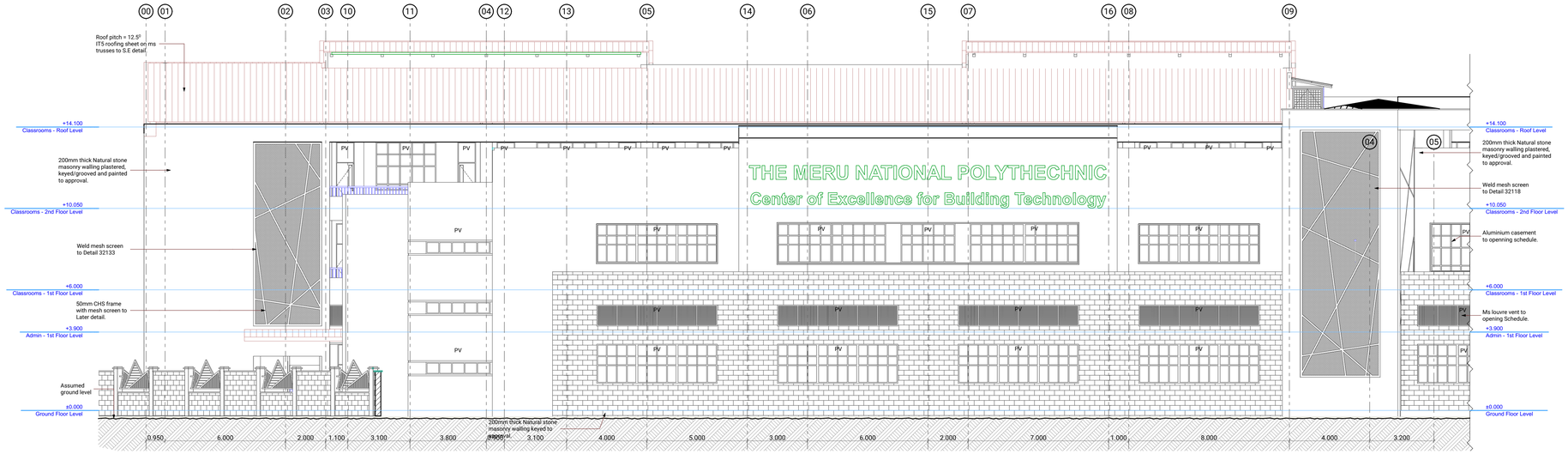
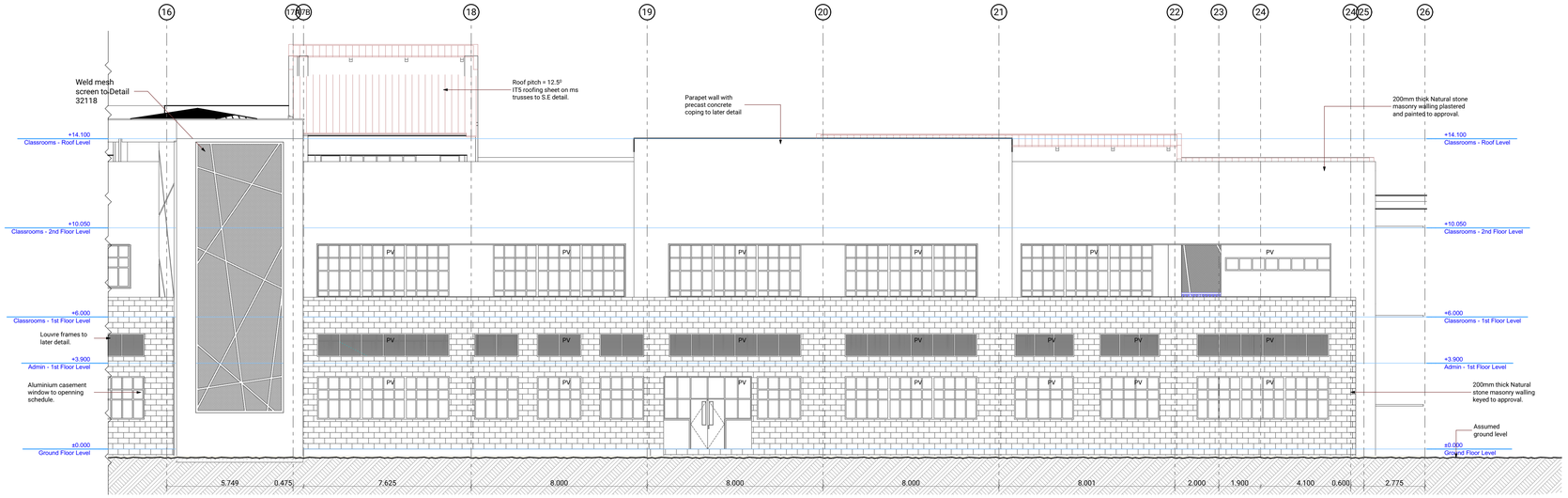
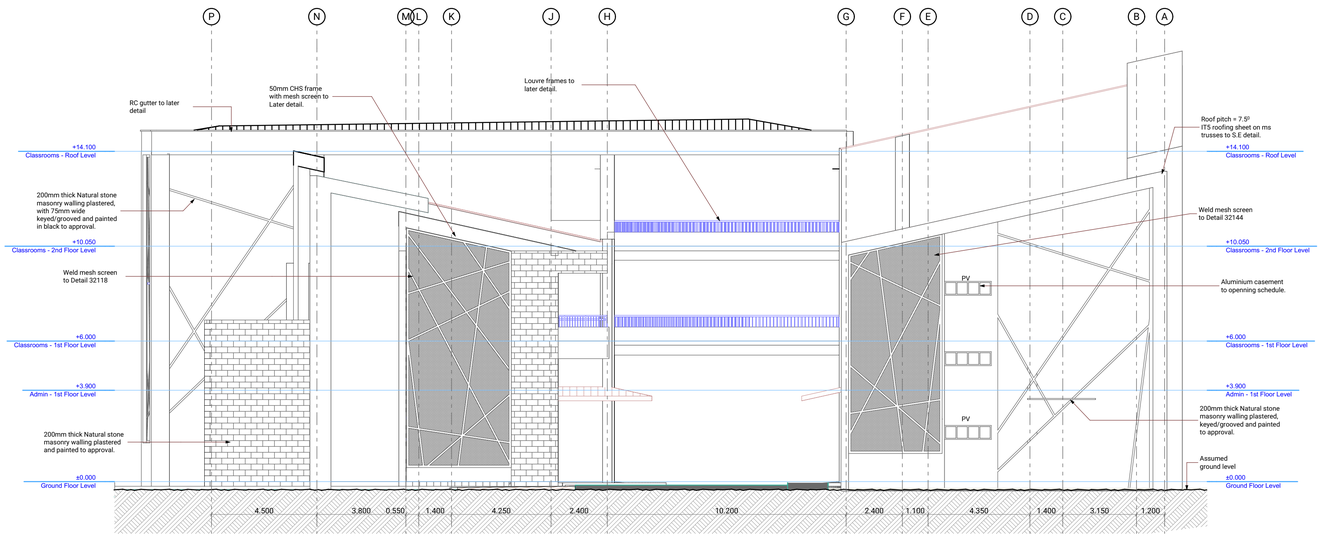


2507 **Elevation** **1:125**



2510 **Elevation** **1:125**



2506 **Elevation** **1:125**

FOR TENDER

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name

Elevations
Tuition Block.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:125**	Revision **00**

Sheet No.

2527-SK-03-DR-A-2502

Job Number

SK-20-2527

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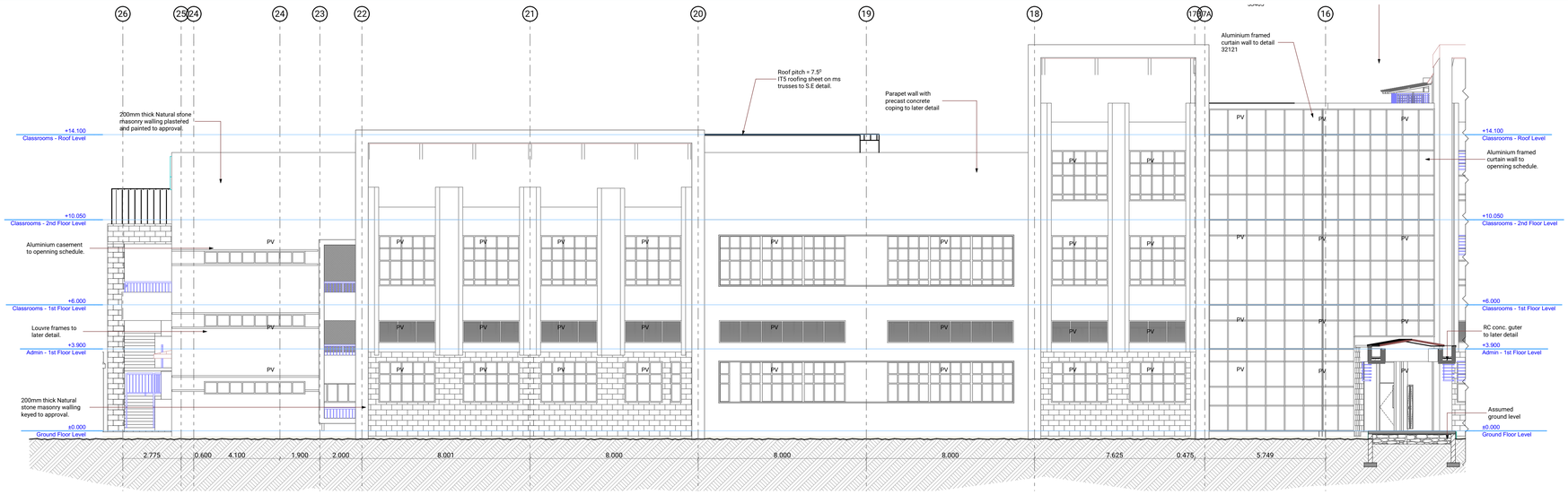

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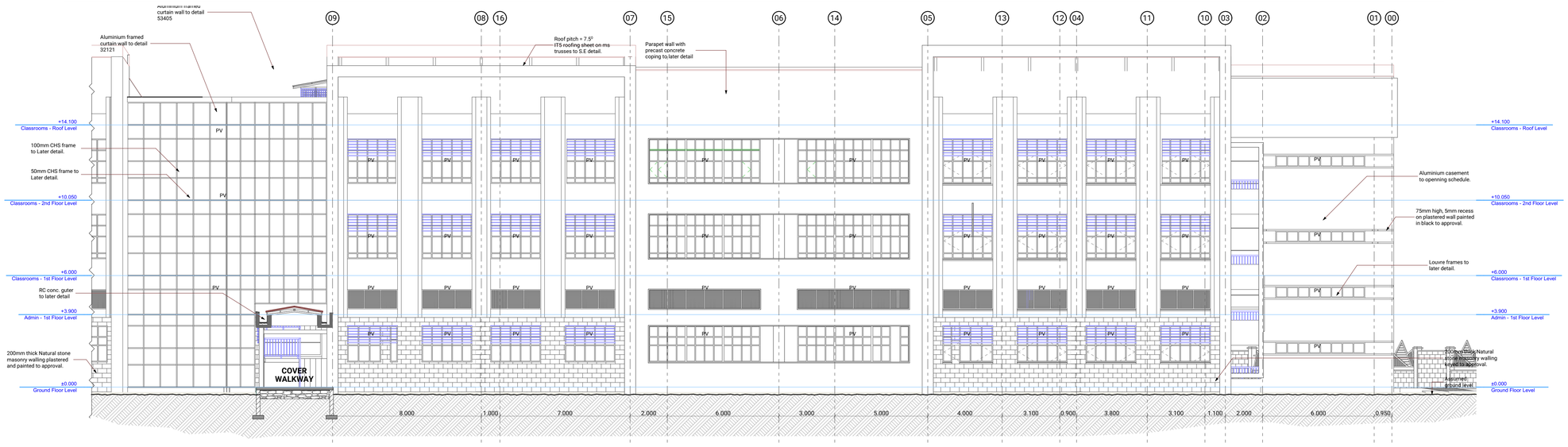
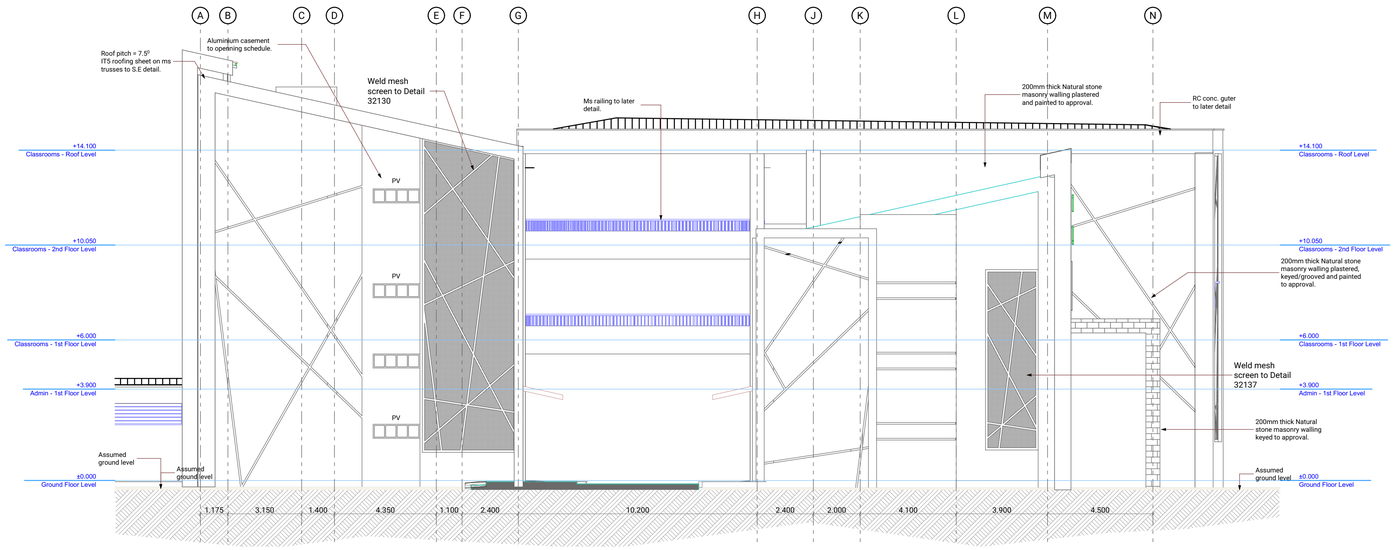


2505 **Elevation** **1:125**



2508 **Elevation** **1:125**

FOR TENDER

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Elevations
Tuition Block.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:125**	Revision **00**

Sheet No.
2527-SK-03-DR-A-2503

Job Number
SK-20-2527

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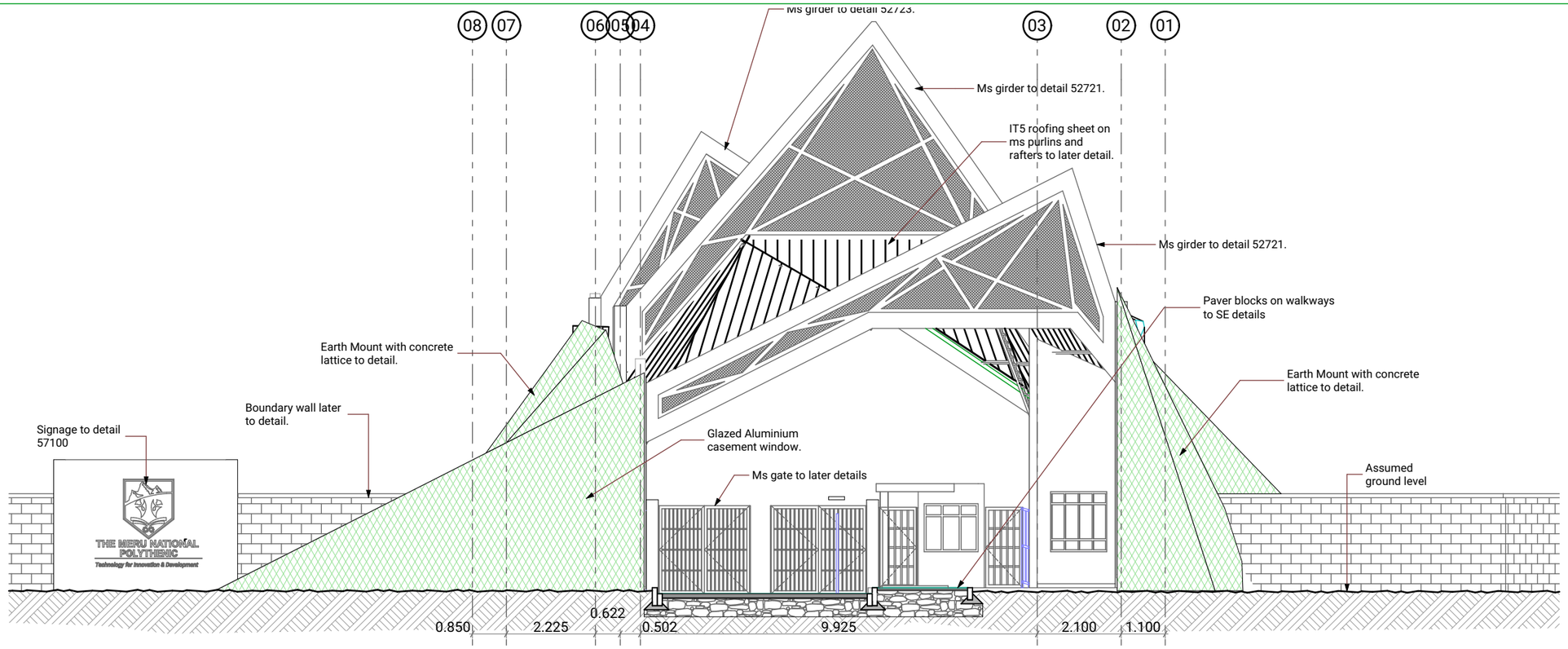
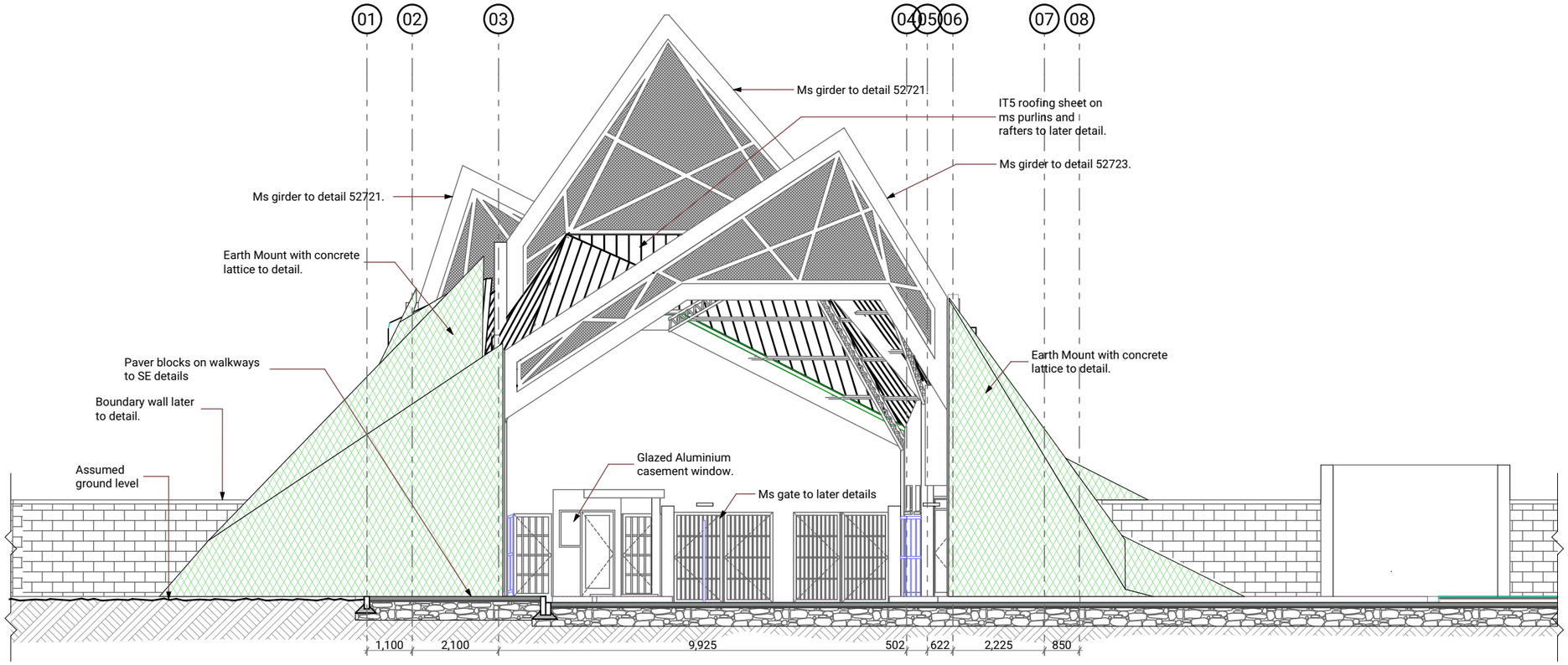


2521 **Elevation** **1:125**



2524 **Elevation** **1:125**

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Rev ID	Description	Issue Date

Client

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Sheet Name

Elevations

Guard House.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:125**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2521

Job Number

SK-20-2527

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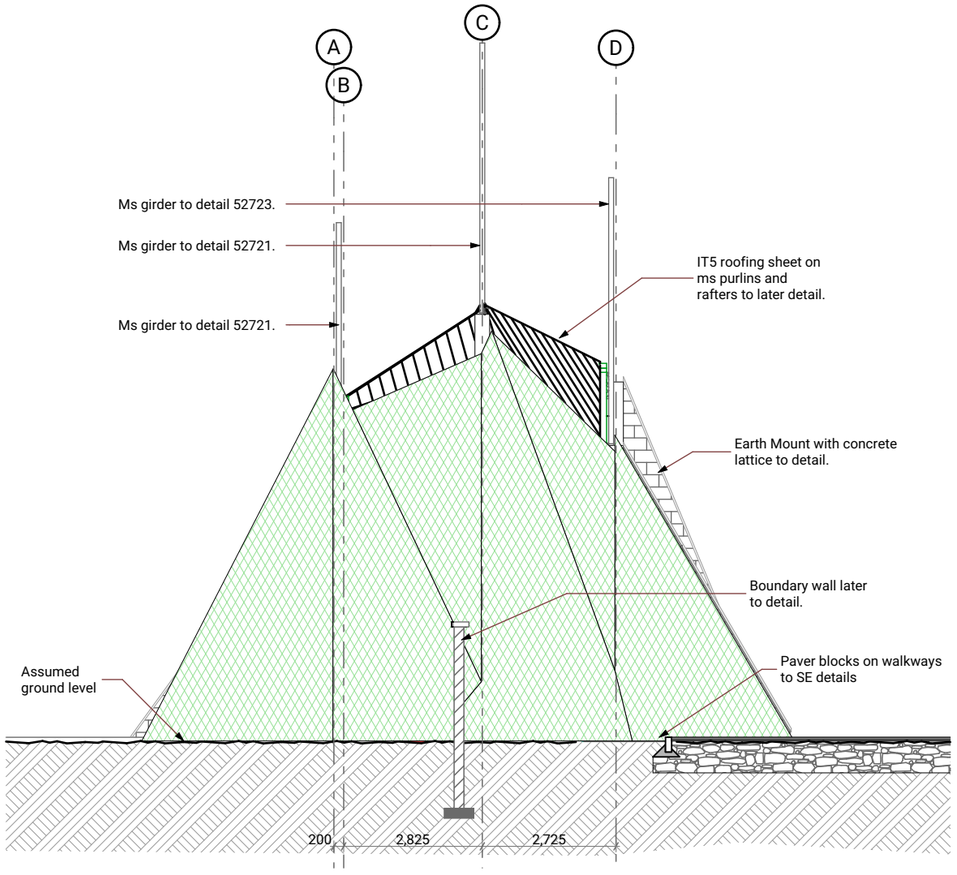
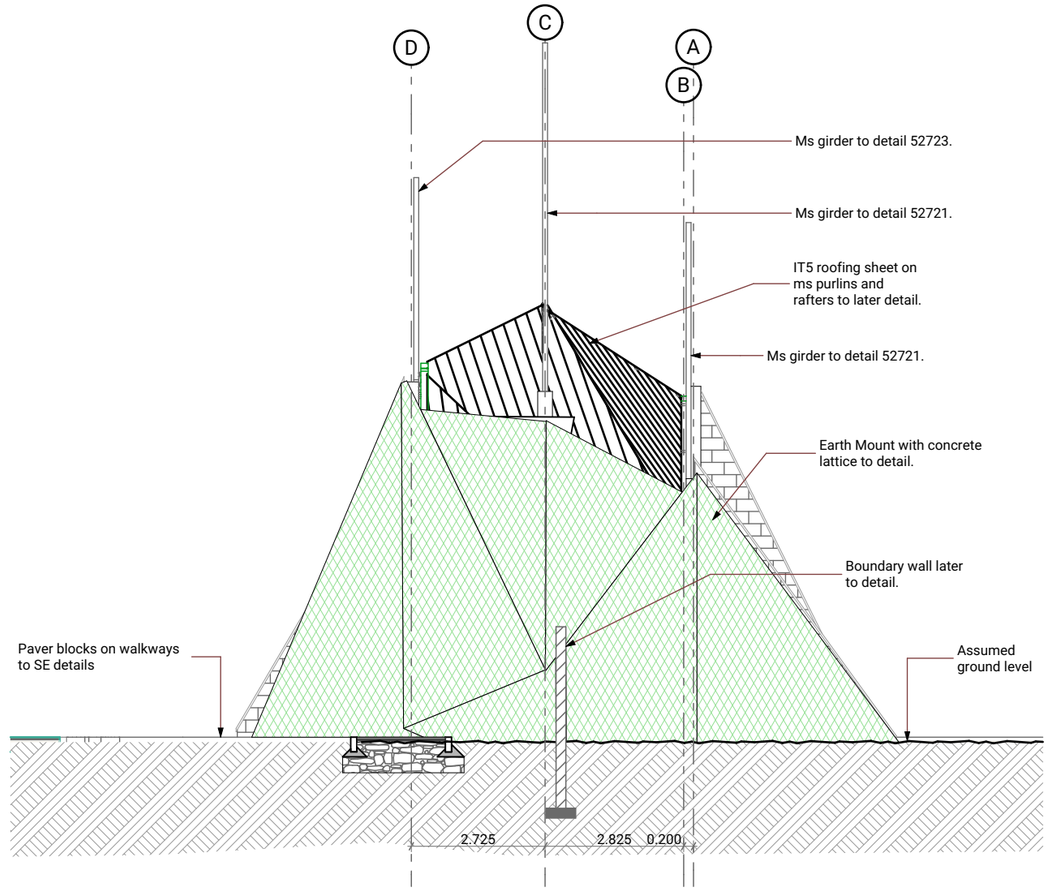


2523 **Elevation** **1:125**



2522 **Elevation** **1:125**

FOR TENDER

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Sheet Name

Elevations

Guard House.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:125**	Revision **00**

Sheet No.

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Job Number

SK-20-2527

File Path

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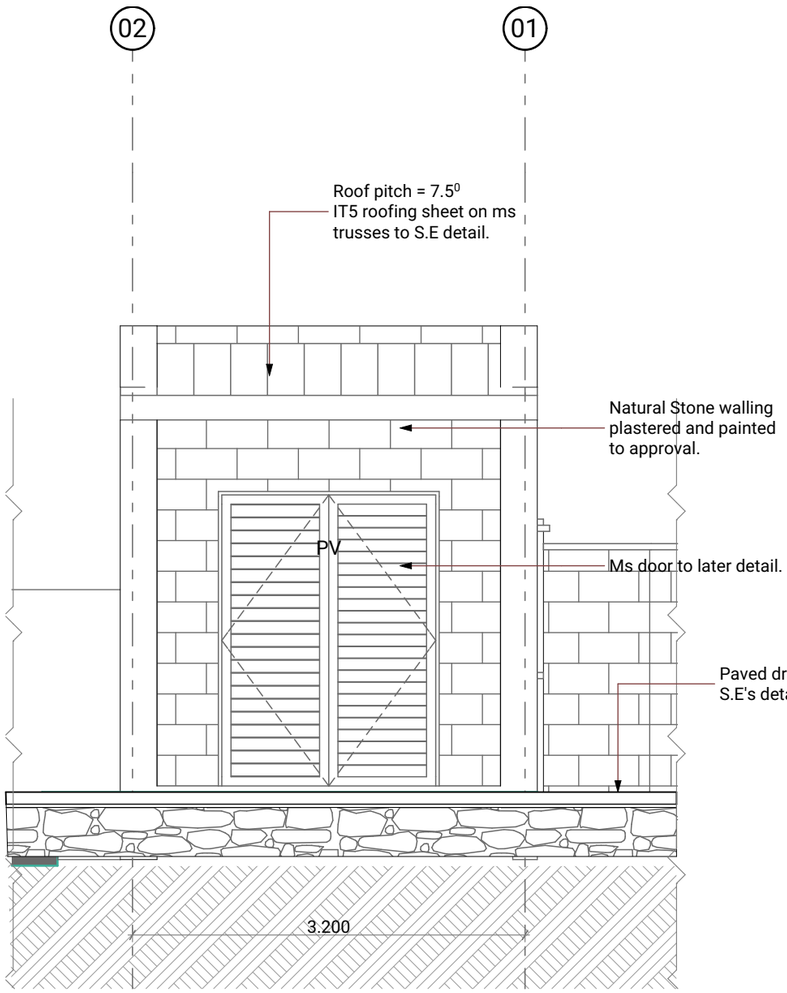
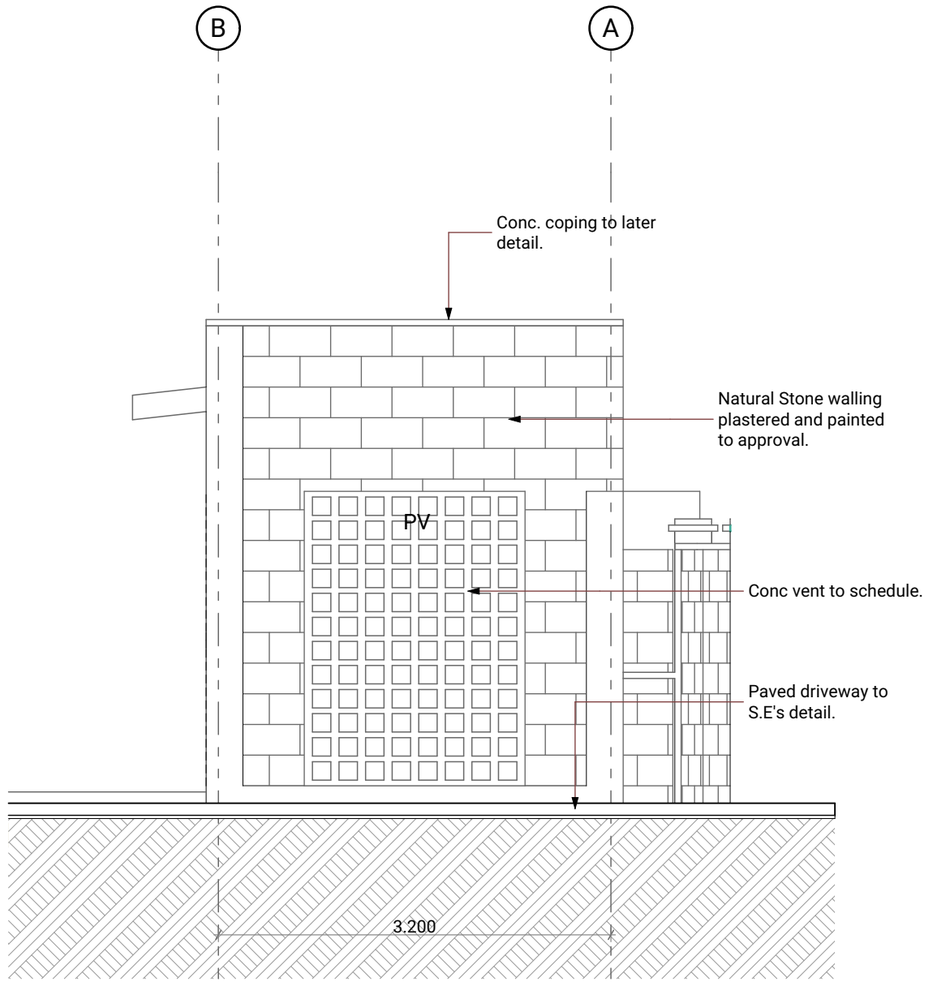


2540 **Elevation** **1:50**



2541 **Elevation** **1:50**

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13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client
MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Elevations
Garbage Cubicle.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-2541

Job Number
SK-20-2527

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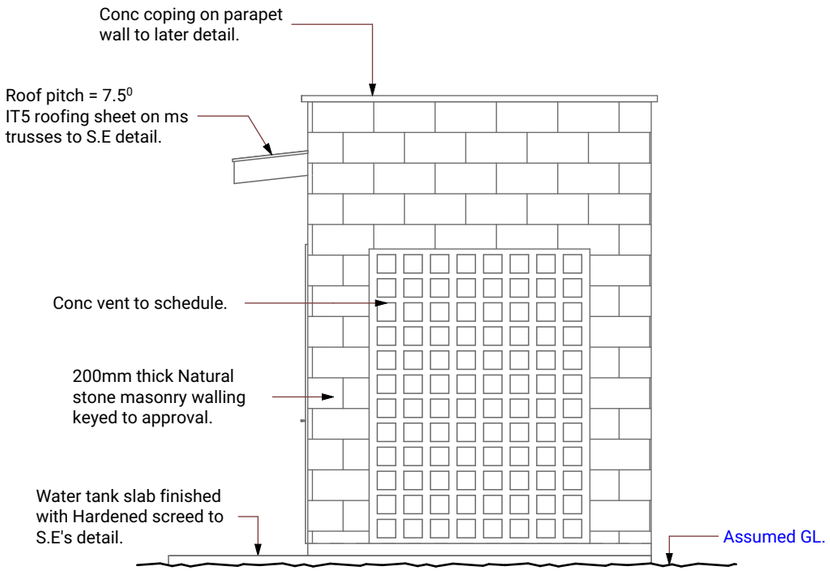
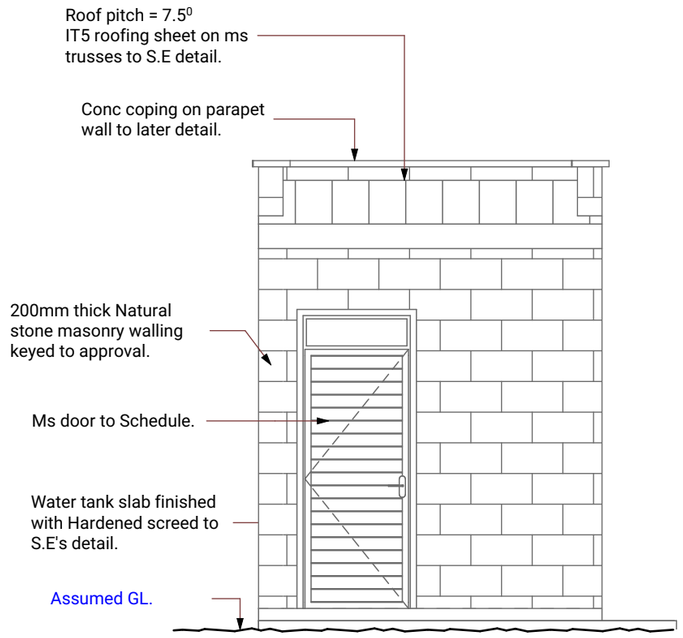
FOR TENDER



2551 Elevation 1:50



2550 Elevation 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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Sheet Name

Elevations

Underground Water tank Pumproom.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2550

Job Number

SK-20-2527

File Path

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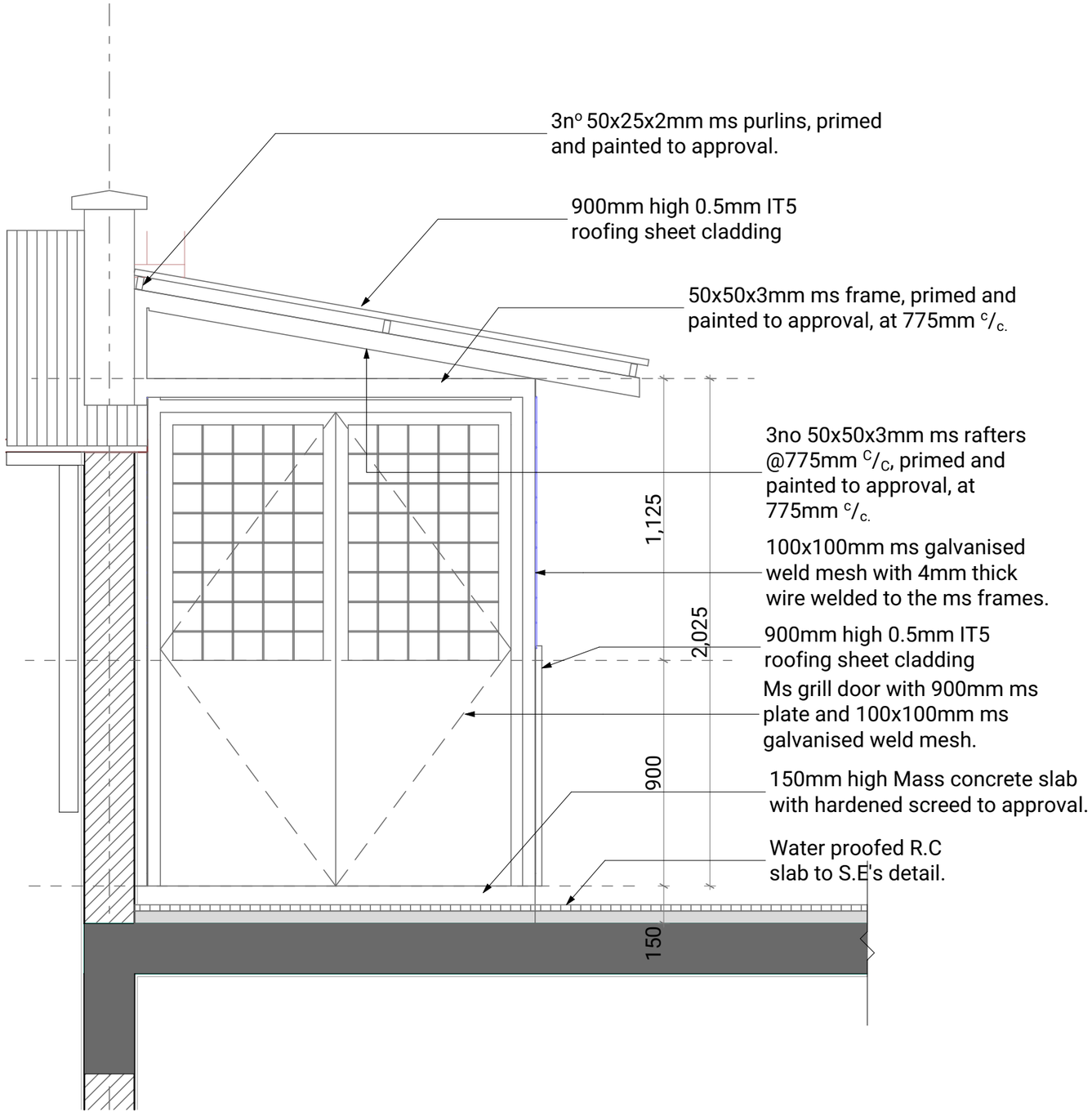

2560 **Roof Top Pump Cage Elevation** **1:20**

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Sheet Name

Elevations

Rooftop Pump Cage.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:20**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2560

Job Number

SK-20-2527

File Path

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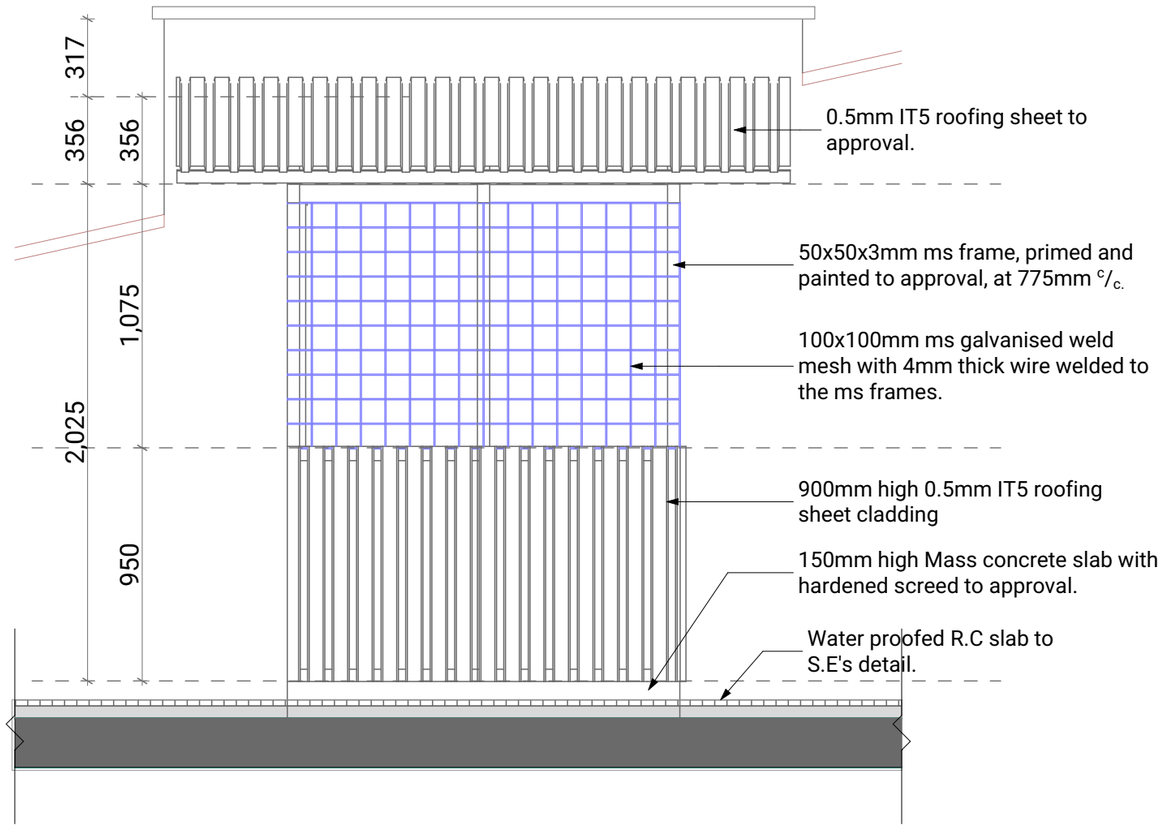

2561 **Roof Top Pump Cage Elevation** **1:25**

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Rev ID	Description	Issue Date

Client

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Job Title

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Sheet Name

Elevations

Rooftop Pump Cage.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:25**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2561

Job Number

SK-20-2527

File Path

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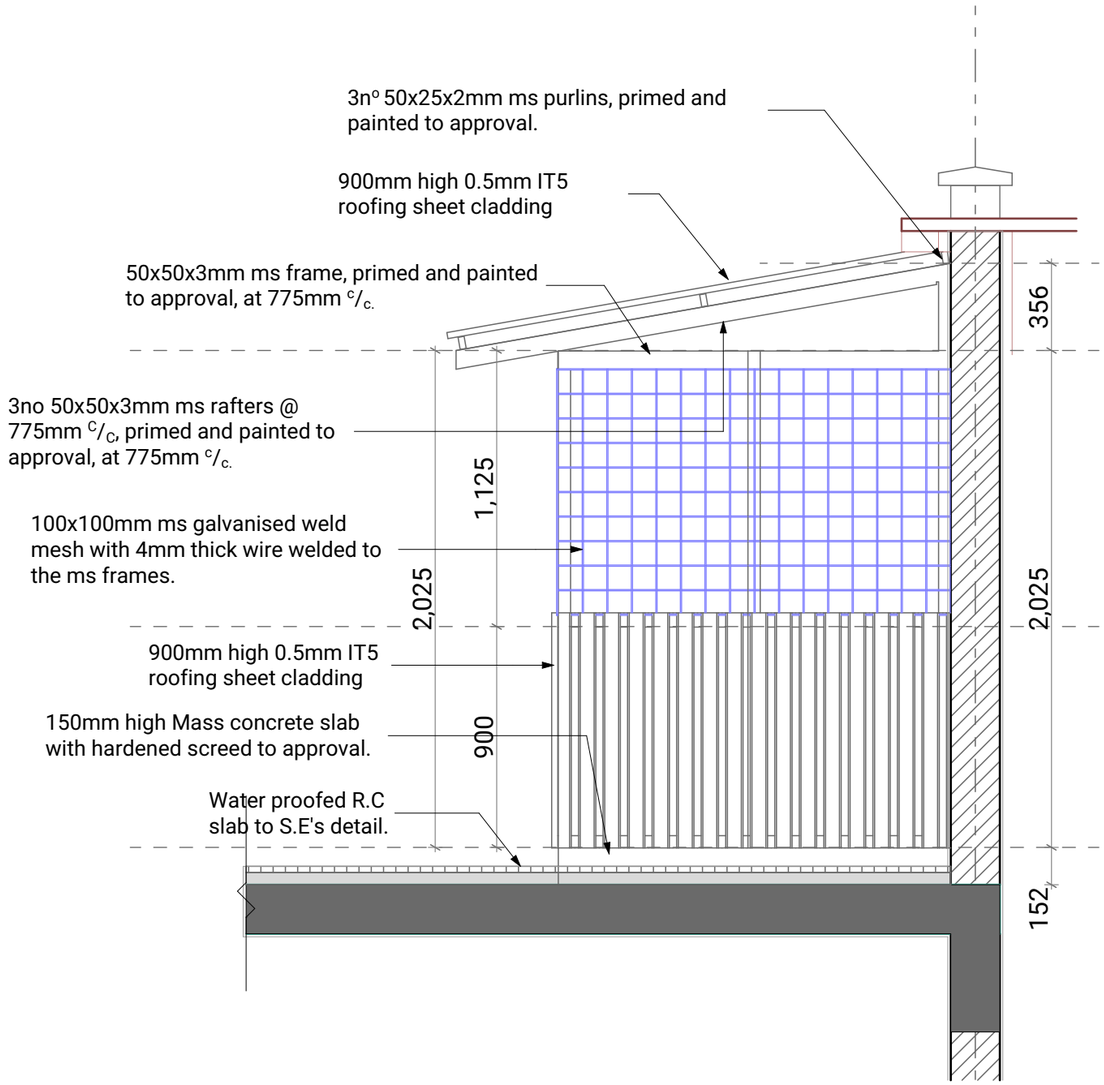

2562 Roof Top Pump Cage Elevation 1:25

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Rev ID	Description	Issue Date

Client
MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name
Elevations
Rooftop Pump Cage.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:25	00

Sheet No.
2527-SK-XX-DR-A-2562

Job Number
SK-20-2527

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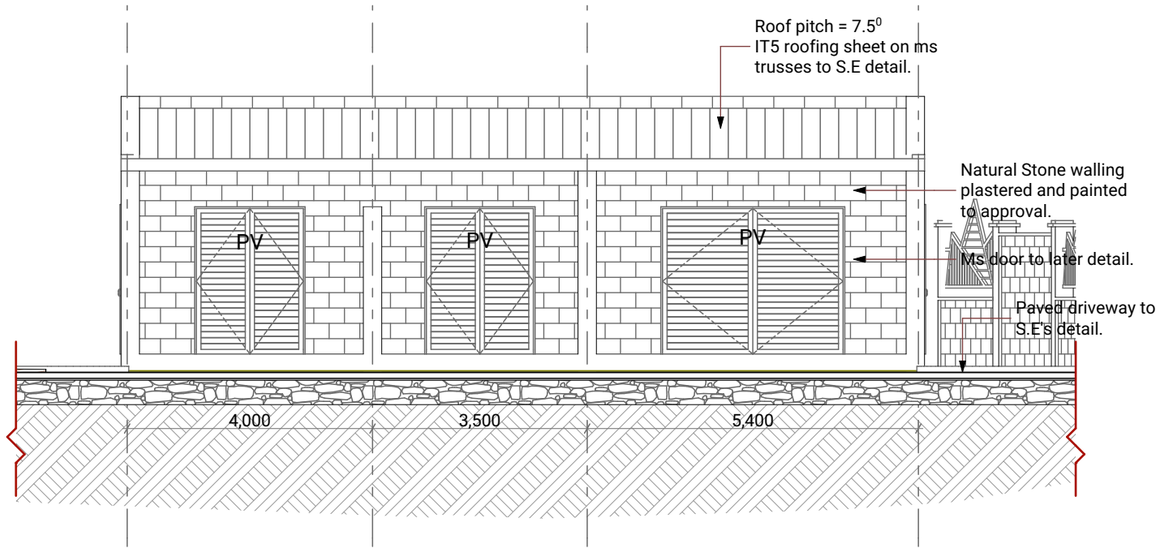
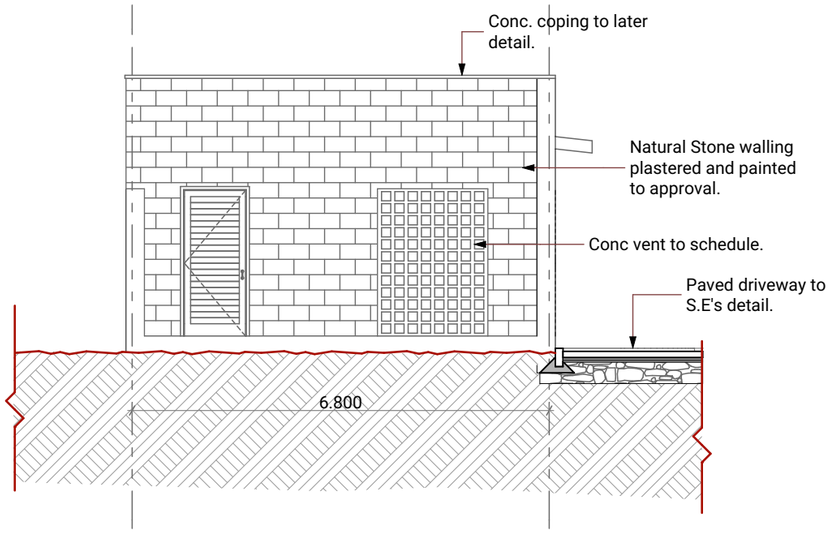
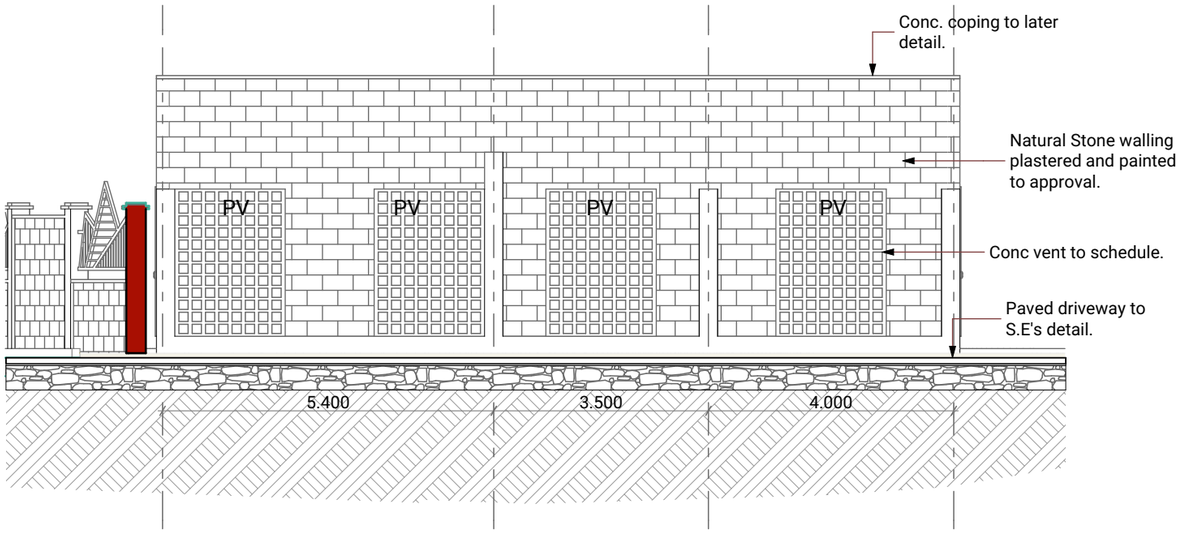


2531 Elevation 1:100



2533 Elevation 1:100



2532 Elevation 1:100

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

SYMBION

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Office +254733801386|+254722808000
E-mail:symbionkenya@symbion-int.com
WEBSITE: www.symbion-int.com

Sheet Name

Elevations

Power House.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:100**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2531

Job Number

SK-20-2527

File Path

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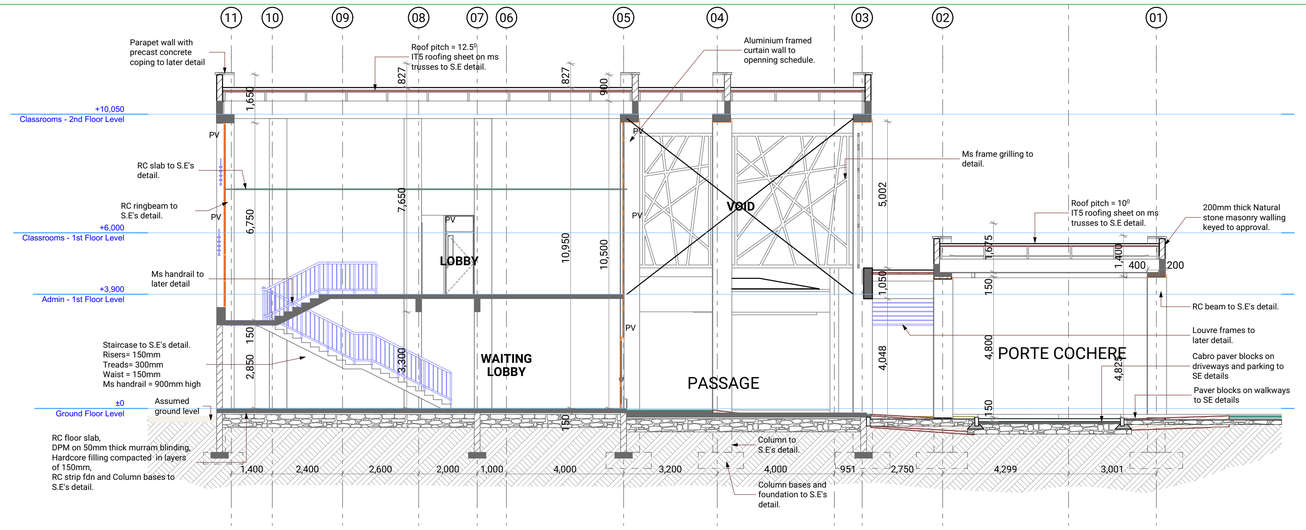
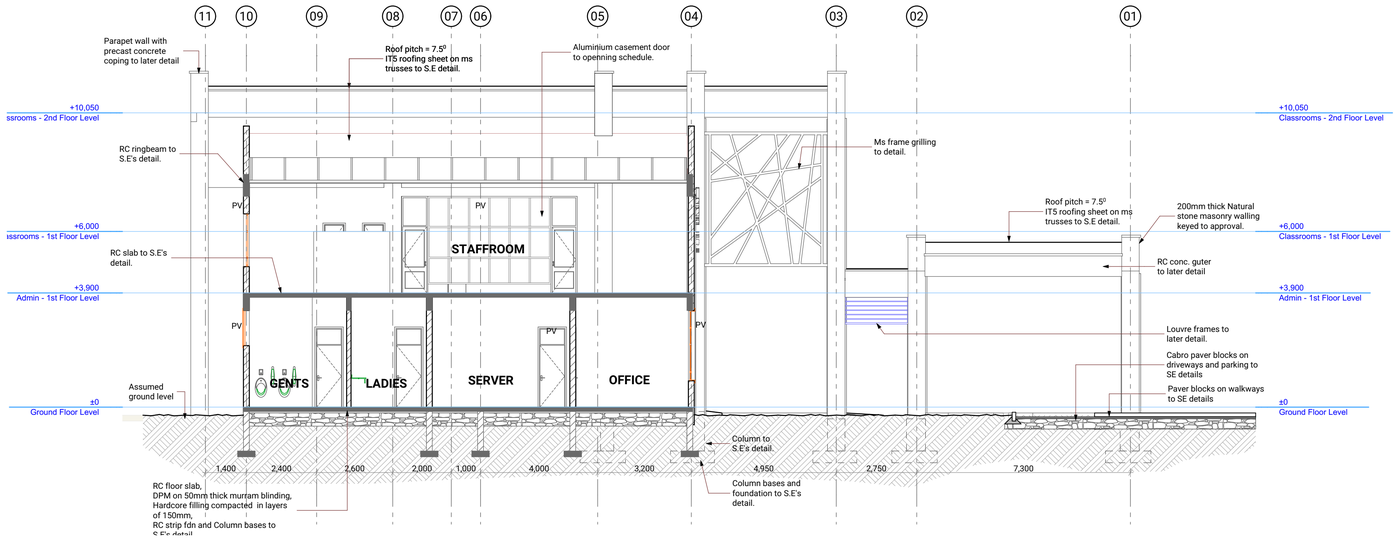
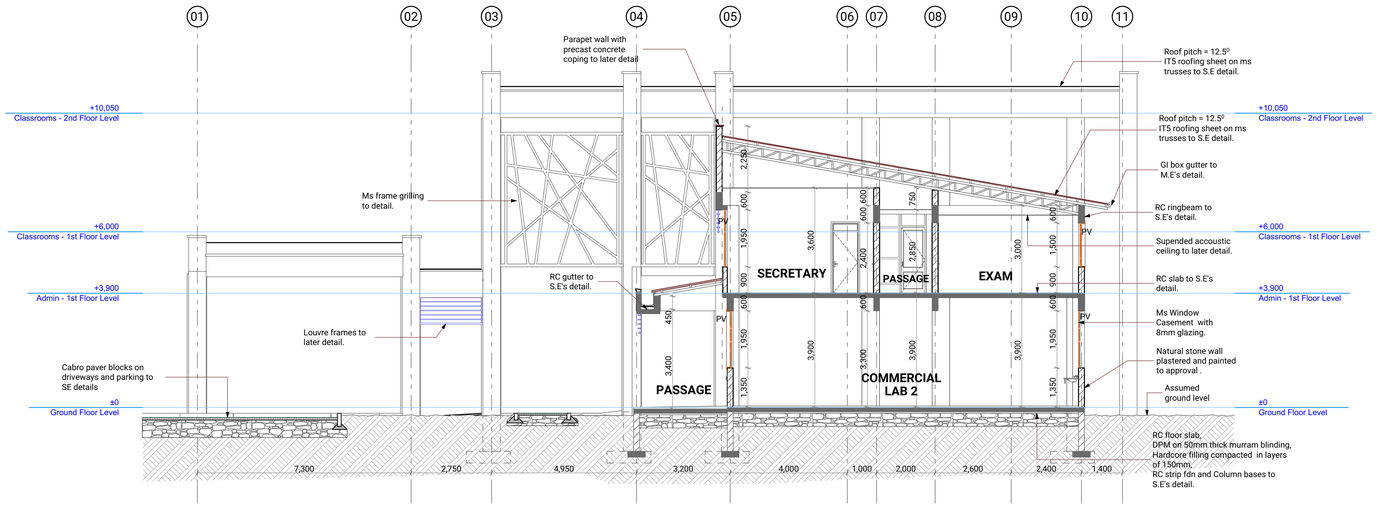


2001 **Admin Building Section** **1:100**



2002 **Admin Building Section** **1:100**



2003 **Admin Block Section** **1:100**

FOR TENDER

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Sections
Adminstration Block.

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GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.

2527-SK-XX-DR-A-2001

Job Number

SK-20-2527

File Path

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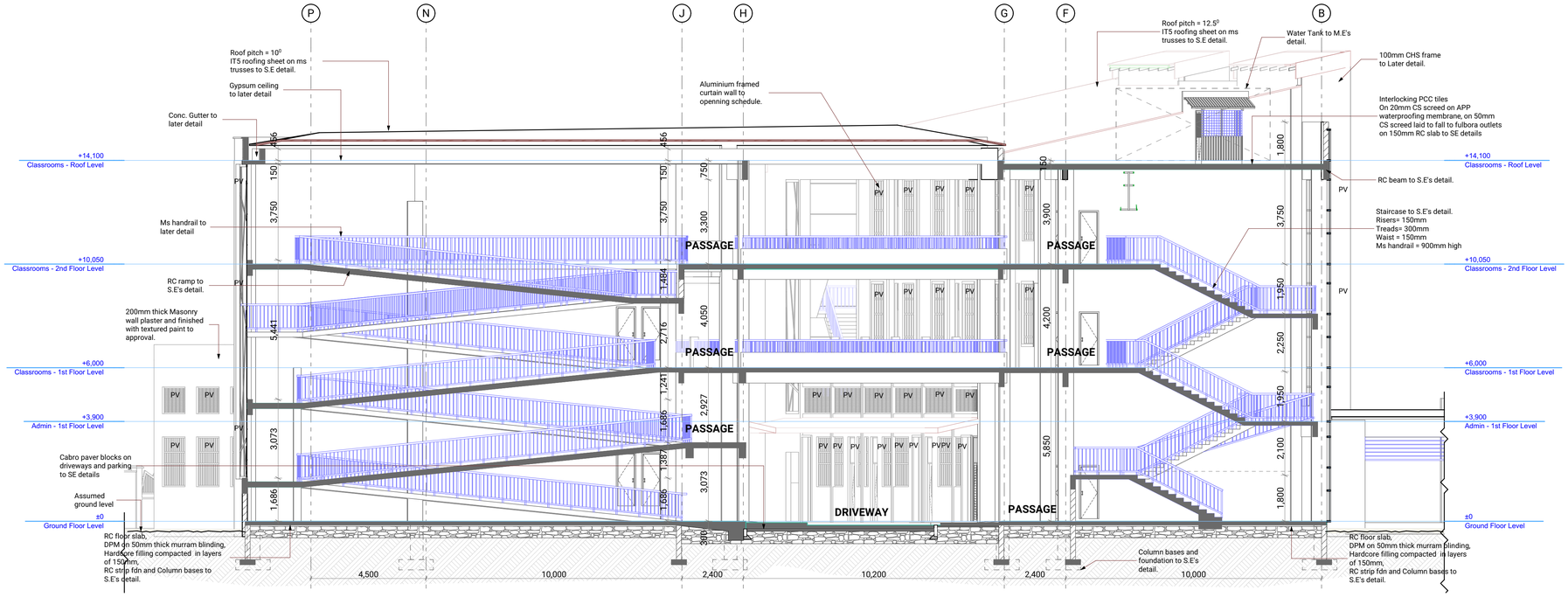
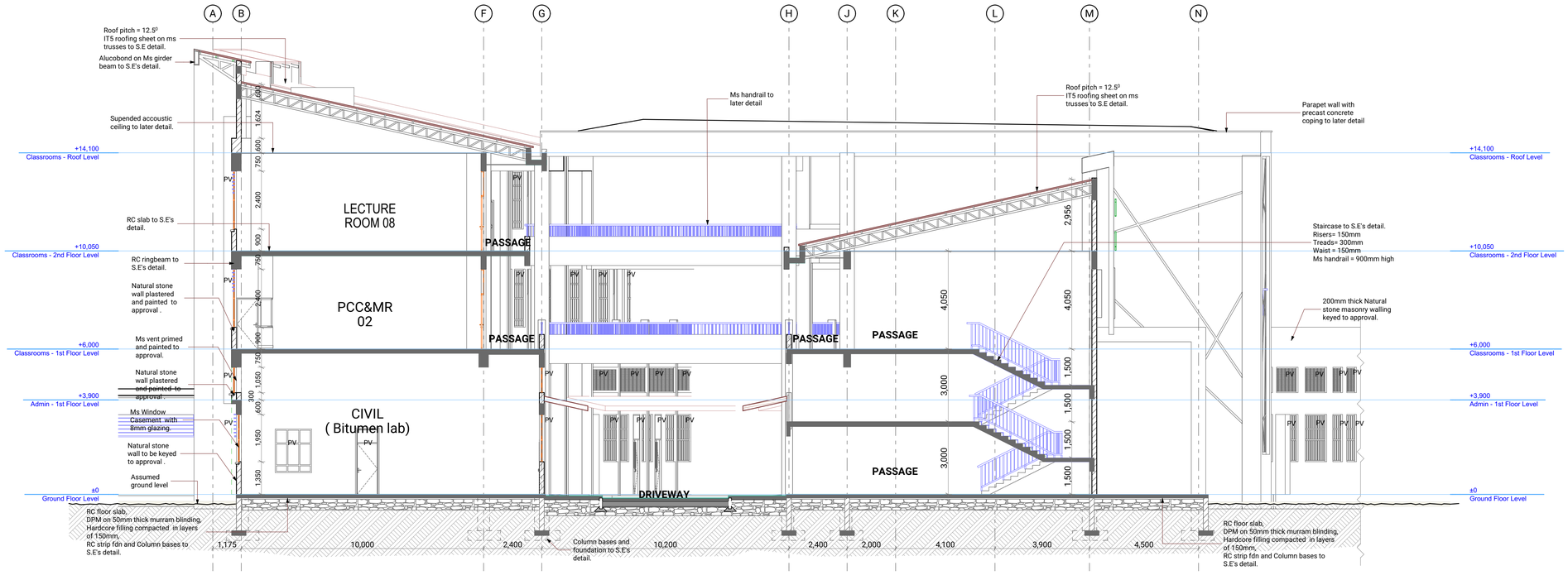


2004 Tuition Block Section. 1:100



2005 Tuition Block Section. 1:100

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Sections
Tuition Block.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-2002

Job Number
SK-20-2527

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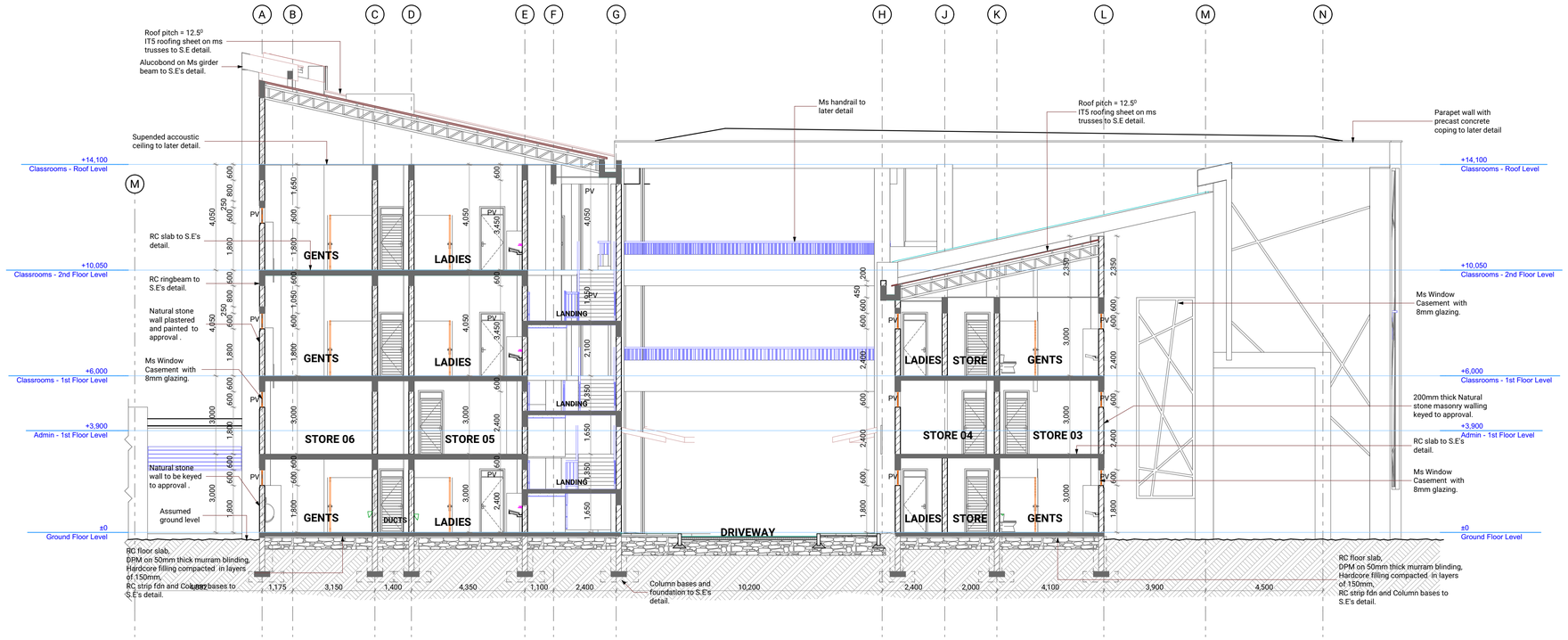

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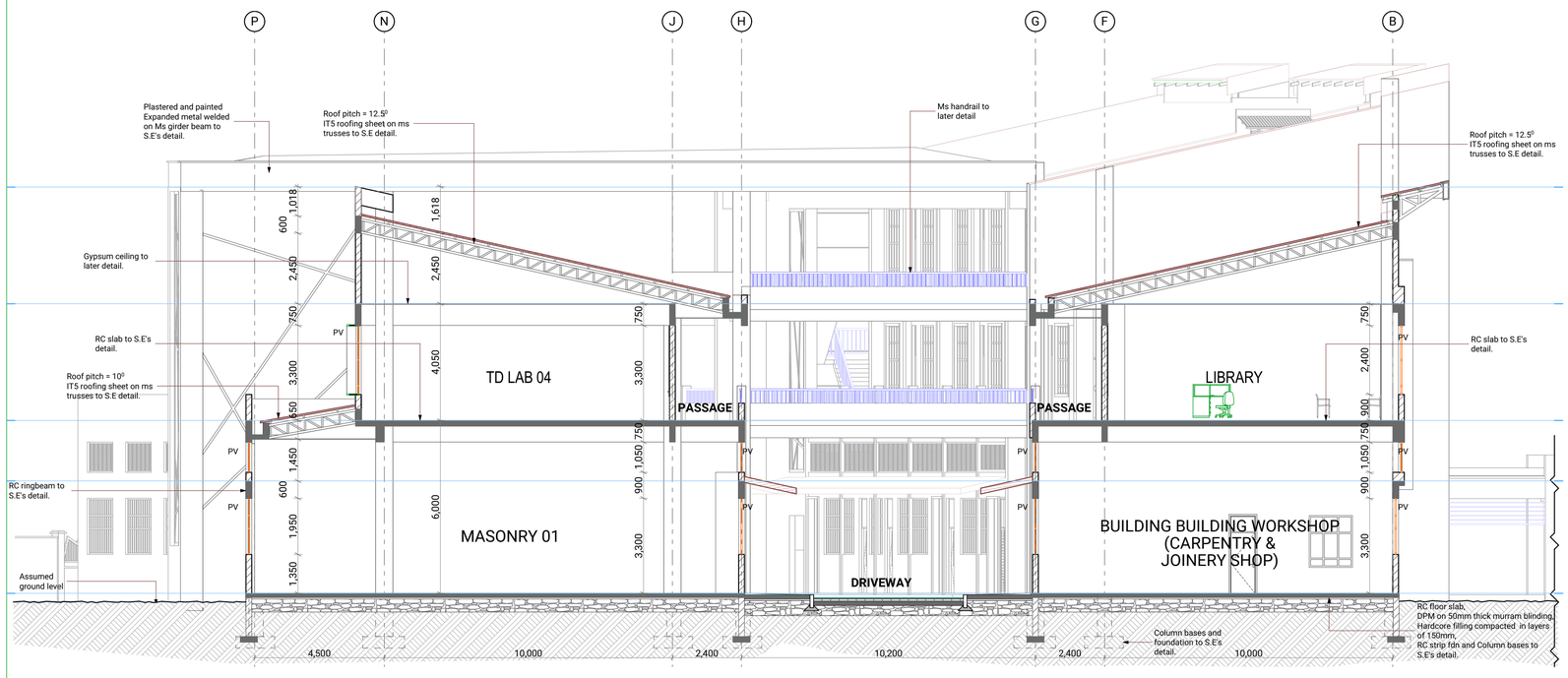
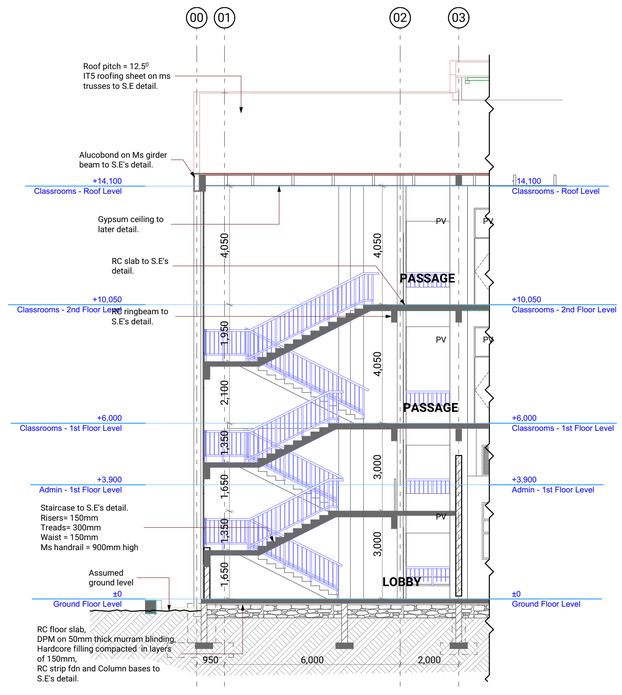


2007 **Tuition Block Section.** **1:100**



2006 **Tuition Block Section.** **1:100**

FOR TENDER

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

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Job Title

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Sheet Name
Sections
Tuition Block.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-2503

Job Number
SK-20-2527

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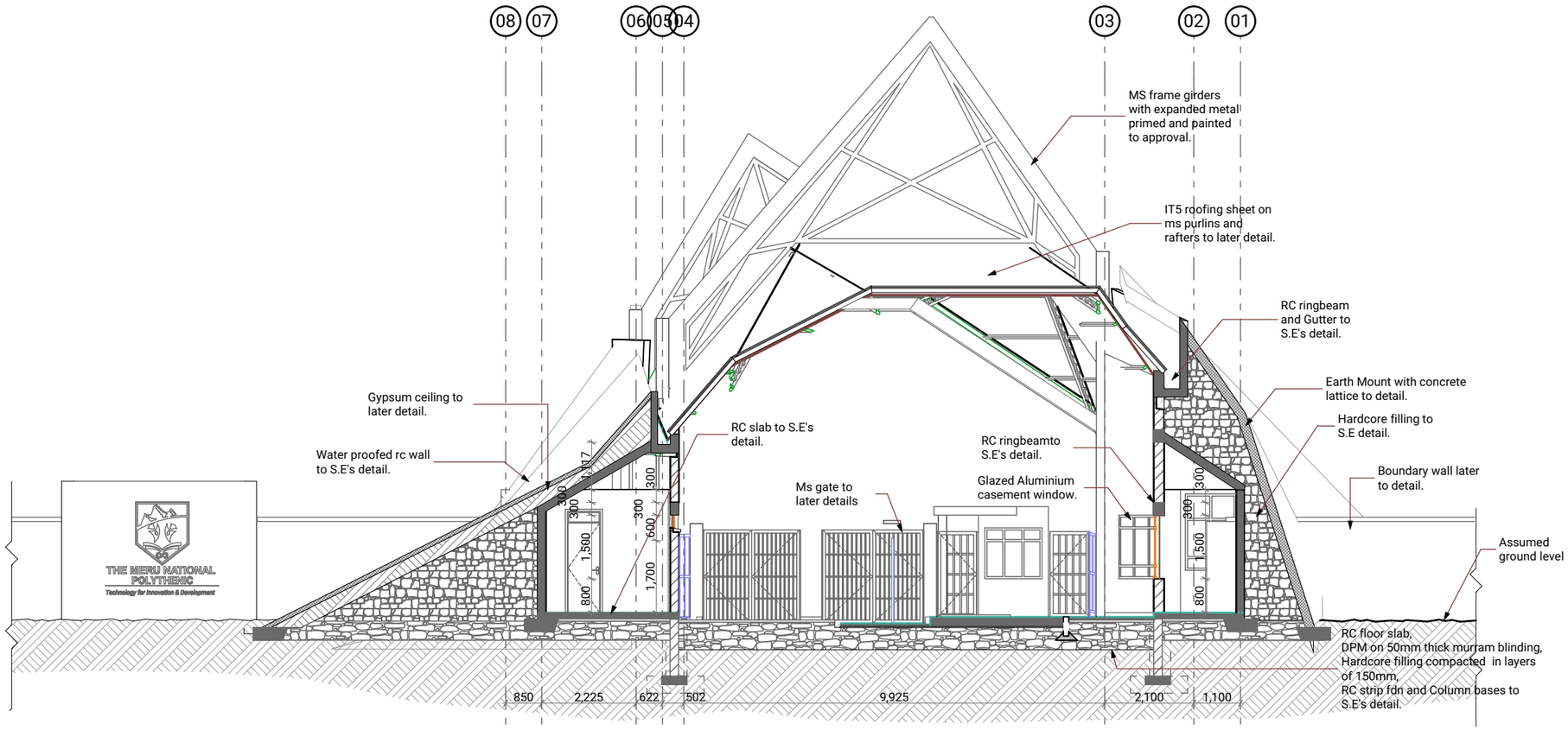

2021 **Guardhouse Section** **1:125**

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Rev ID	Description	Issue Date

Client
MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name
Sections
Guard House.

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:125**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-2021

Job Number
SK-20-2527

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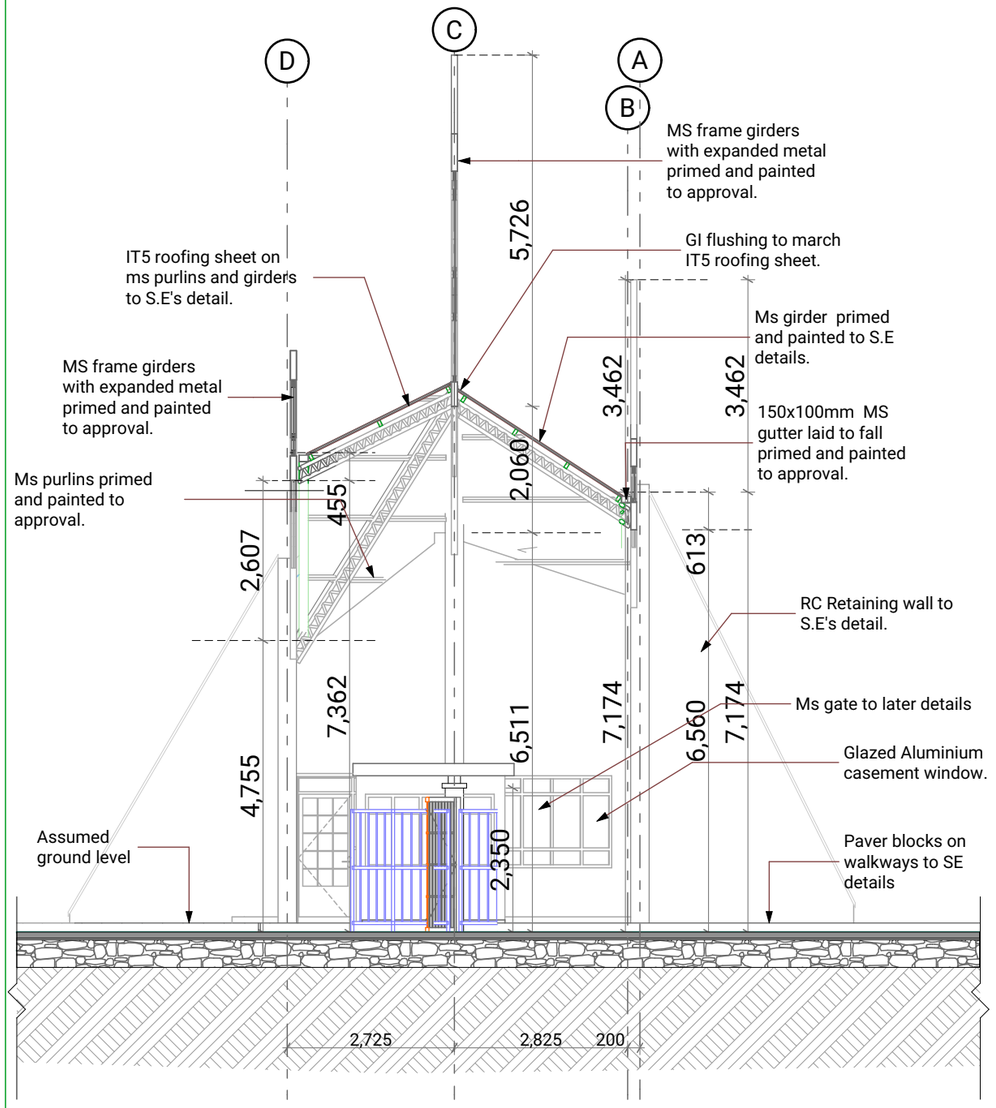
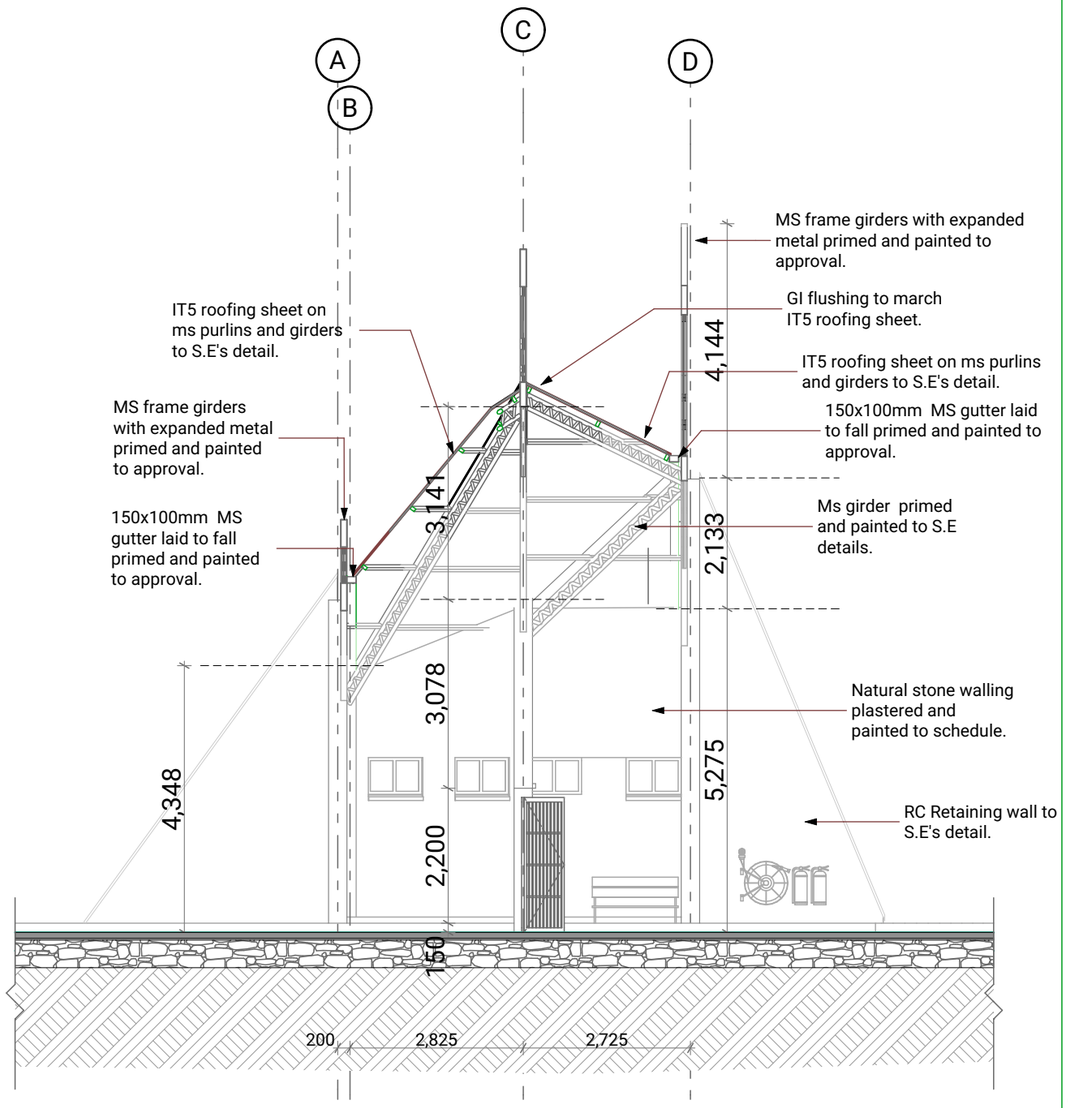


2023 Guardhouse Section 1:100



2022 Guardhouse Section 1:100

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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Sheet Name

Sections

Guard House.

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50, 1:100**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2022

Job Number

SK-20-2527

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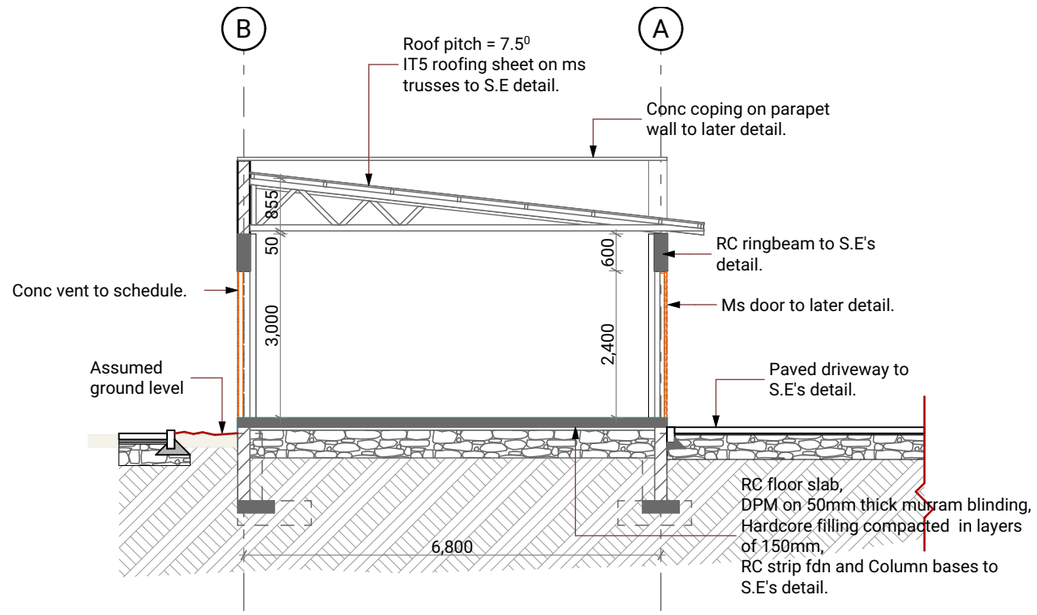

2031 Building Section 1:100

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Rev ID	Description	Issue Date

Client

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Sheet Name

Sections

Power House.

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:100**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-2031

Job Number

SK-20-2527

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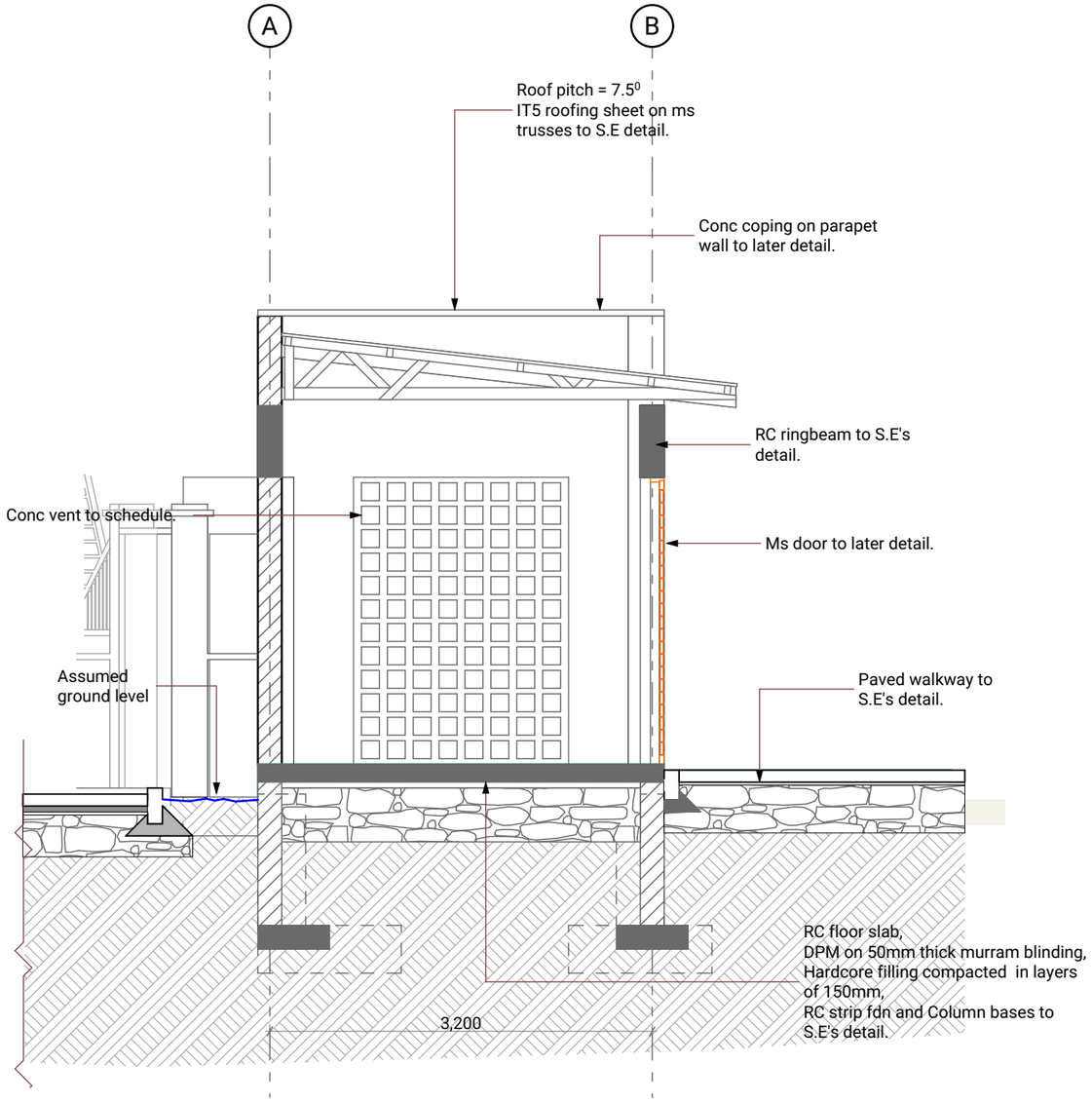

2040 **Building Section** **1:50**

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Sheet Name

Sections

Garbage Cubicle.

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Sheet No.

2527-SK-XX-DR-A-2041

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SK-20-2527

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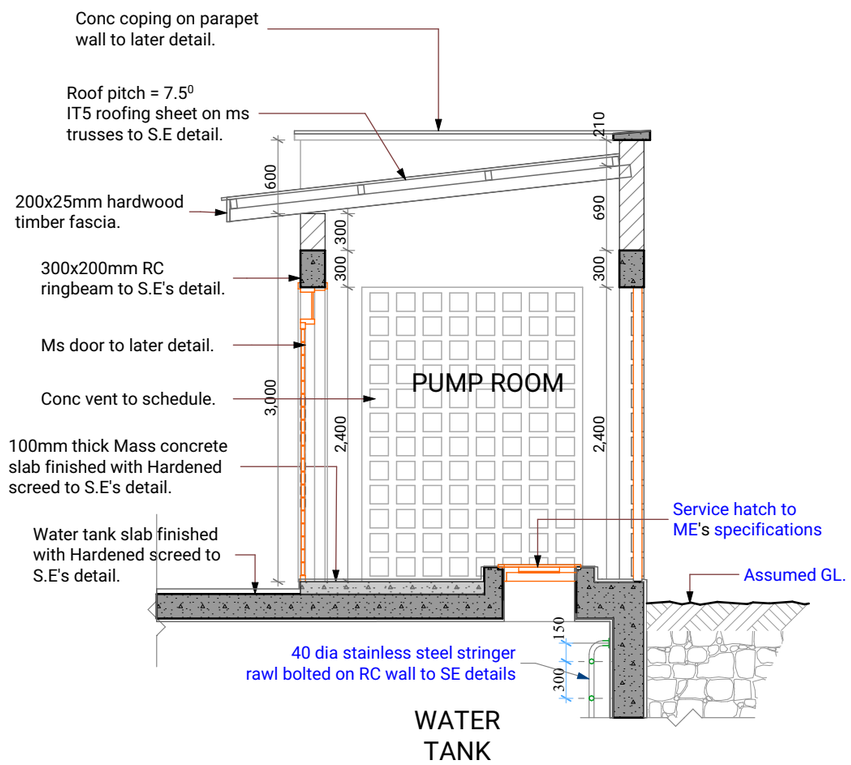

2050 **Pumproom Section** **1:50**

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Rev ID	Description	Issue Date

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Sheet Name
Sections
Underground Water tank Pumproom.

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

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2527-SK-XX-DR-A-2050

Job Number
SK-20-2527

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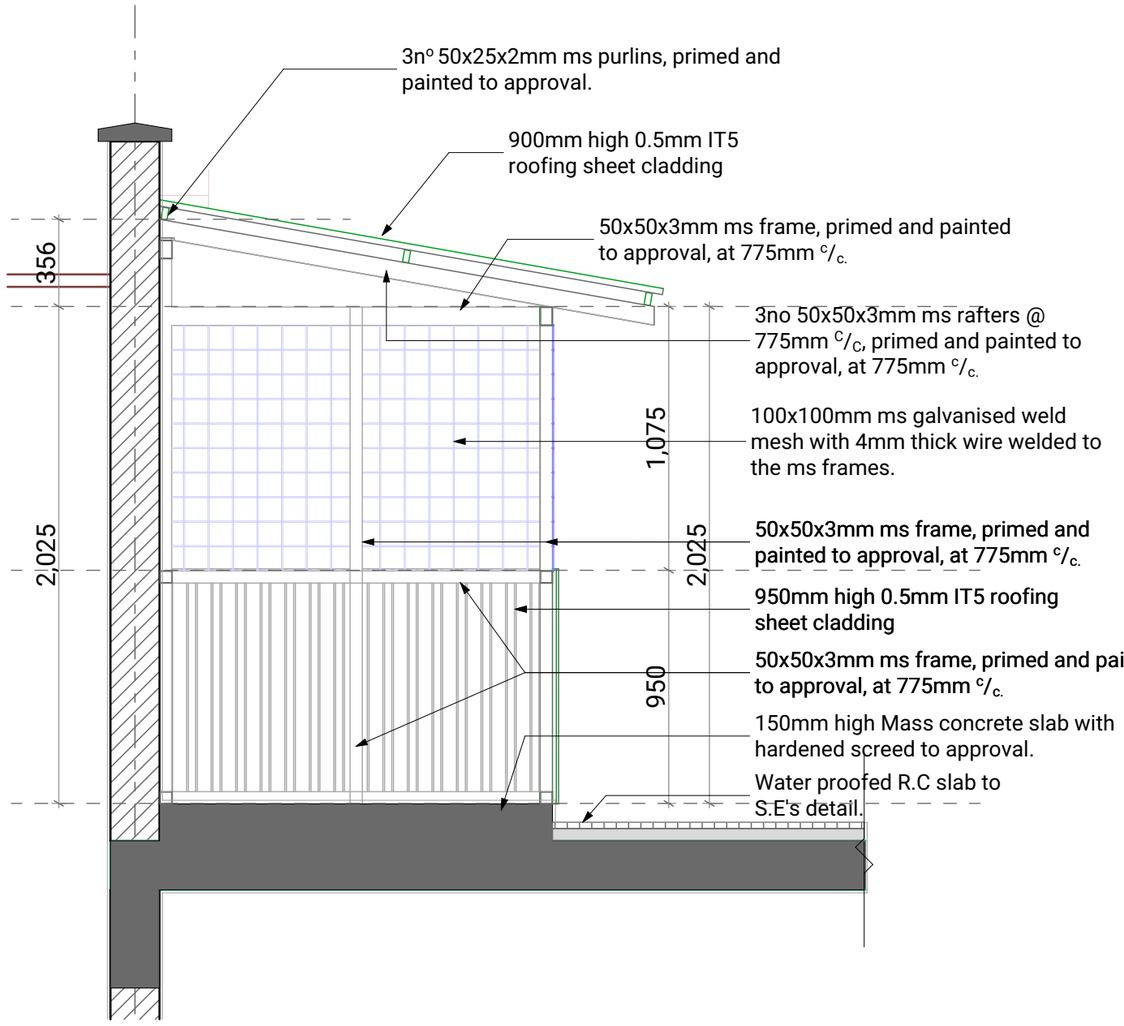

2060 **Roof Top Pump Cage Section** **1:25**

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Sheet Name

Sections

Rooftop Pump Cage.

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Sheet No.

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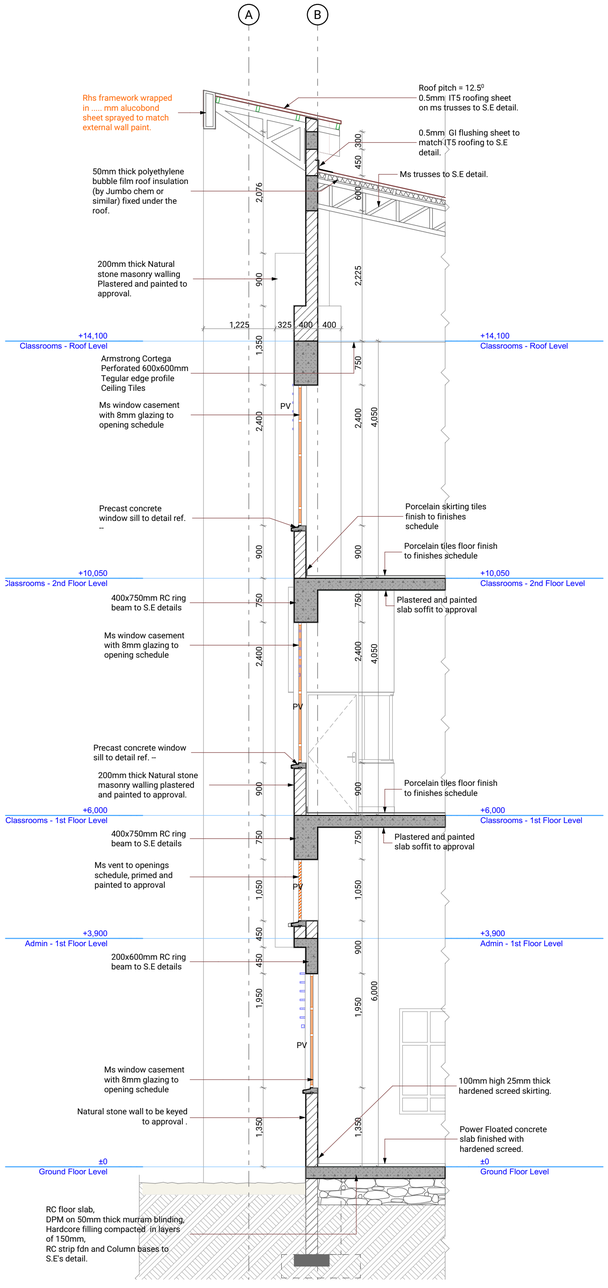
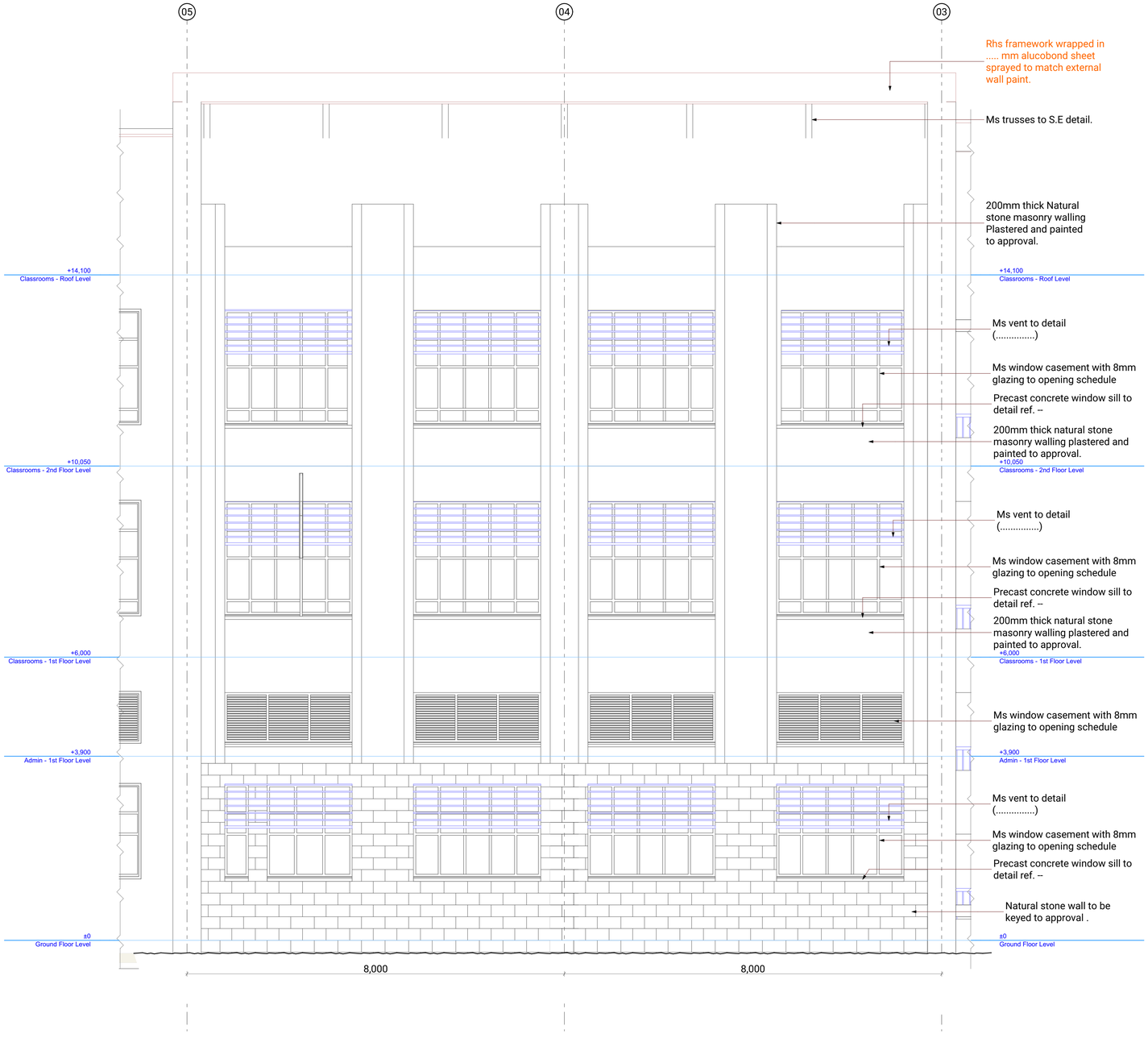


32101 **External Wall Section** **1:50**



32102 **External wall Elevation** **1:50**

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Wall Blowups
External Wall Section

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:50**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-32101

Job Number
SK-20-2527

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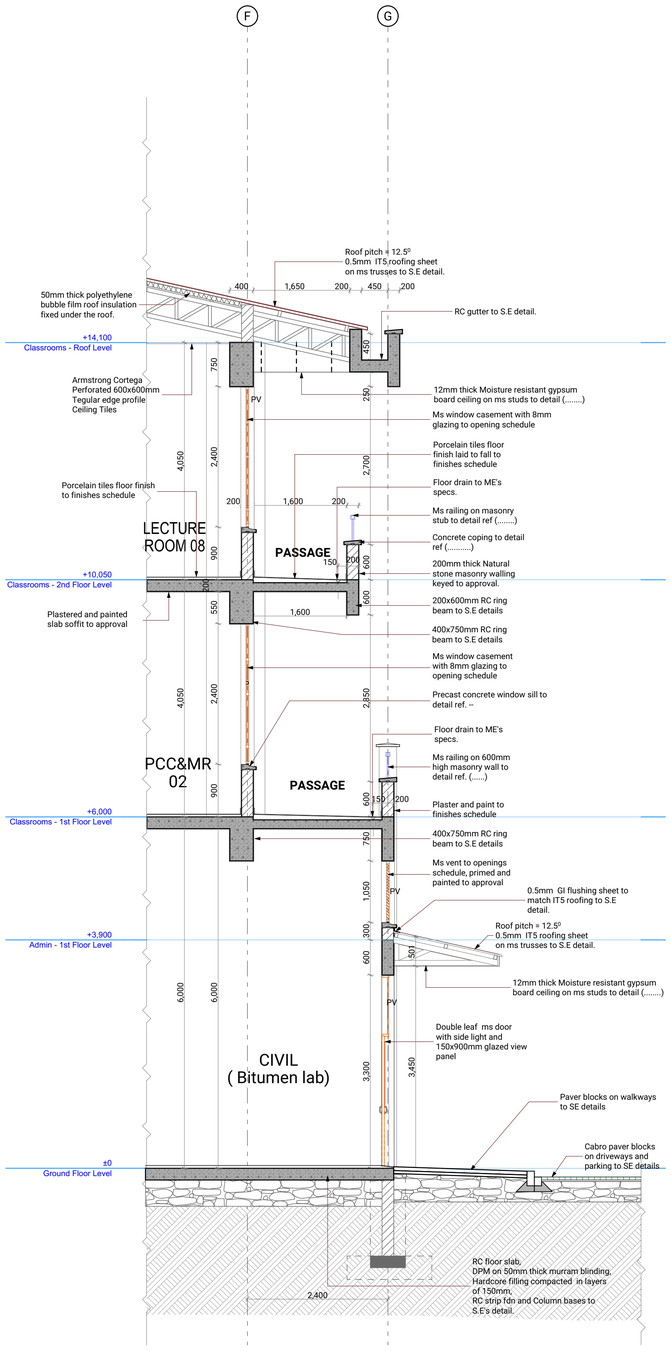
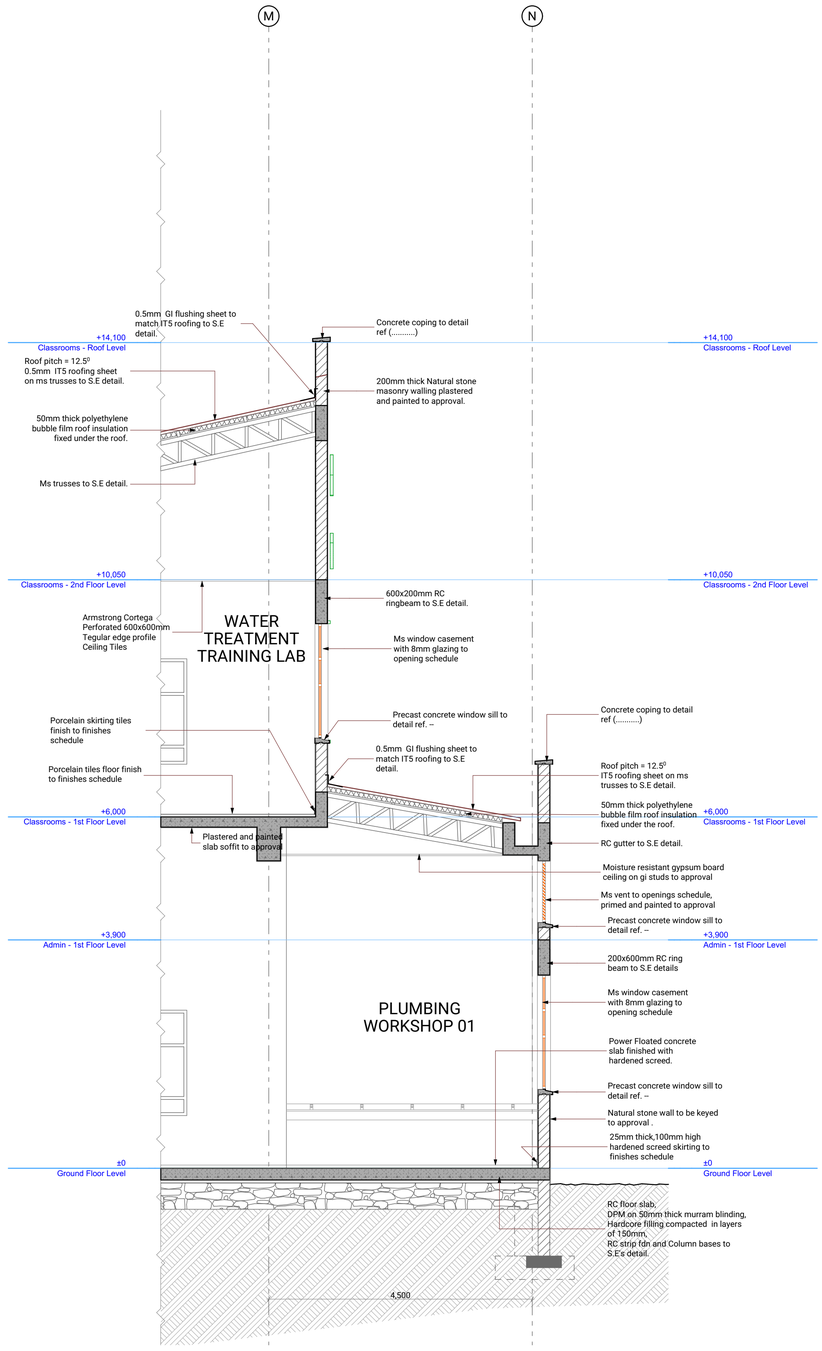
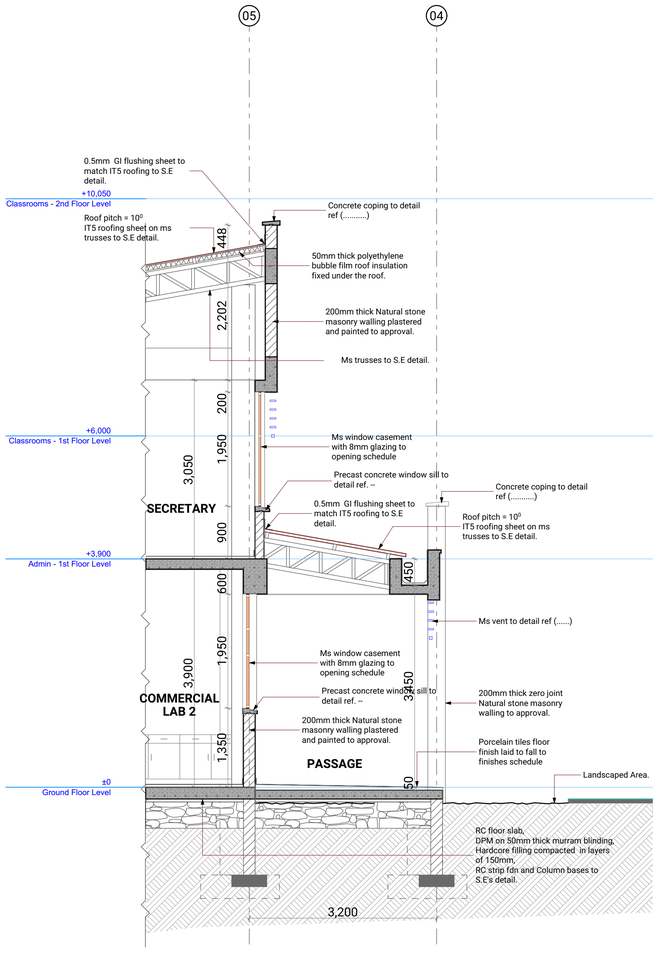


32103 **External Wall Section** **1:50**



32105 **External Wall Section** **1:50**



32104 **External Wall Section** **1:50**

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Wall Blowups
External Wall Section

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-32102

Job Number

SK-20-2527

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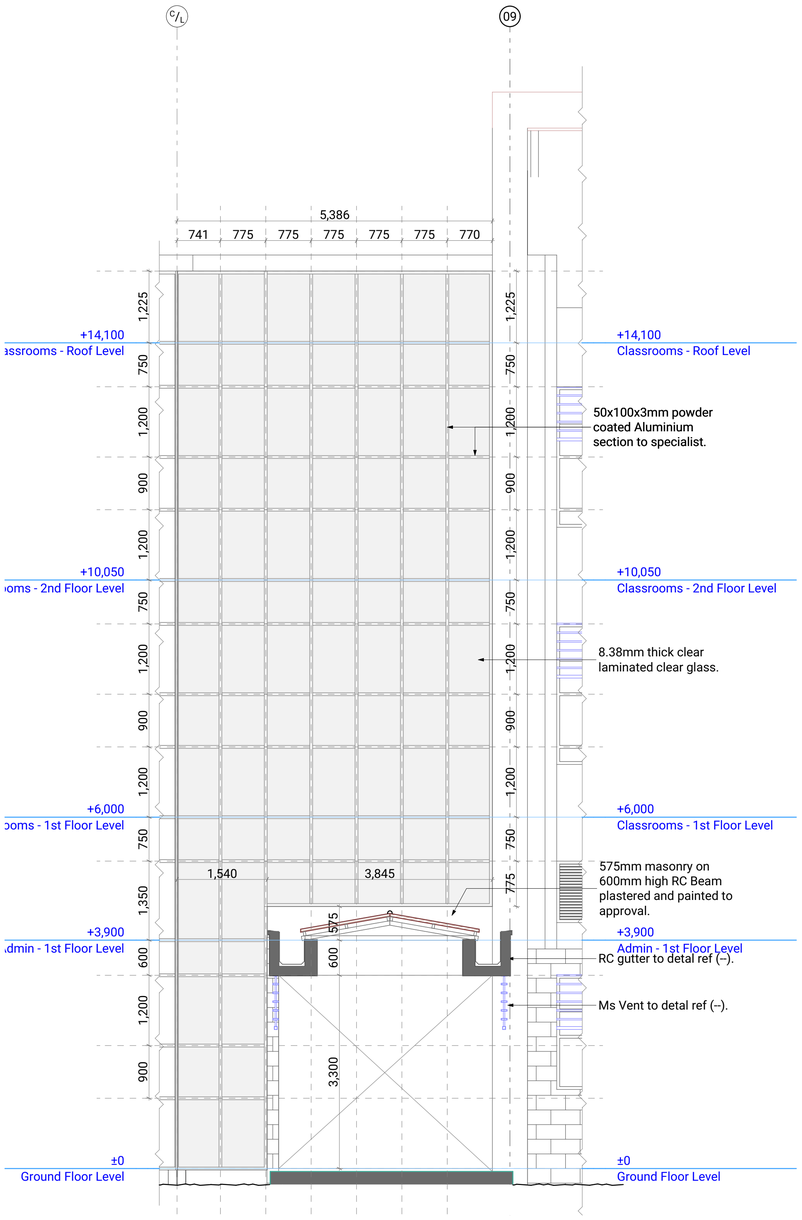
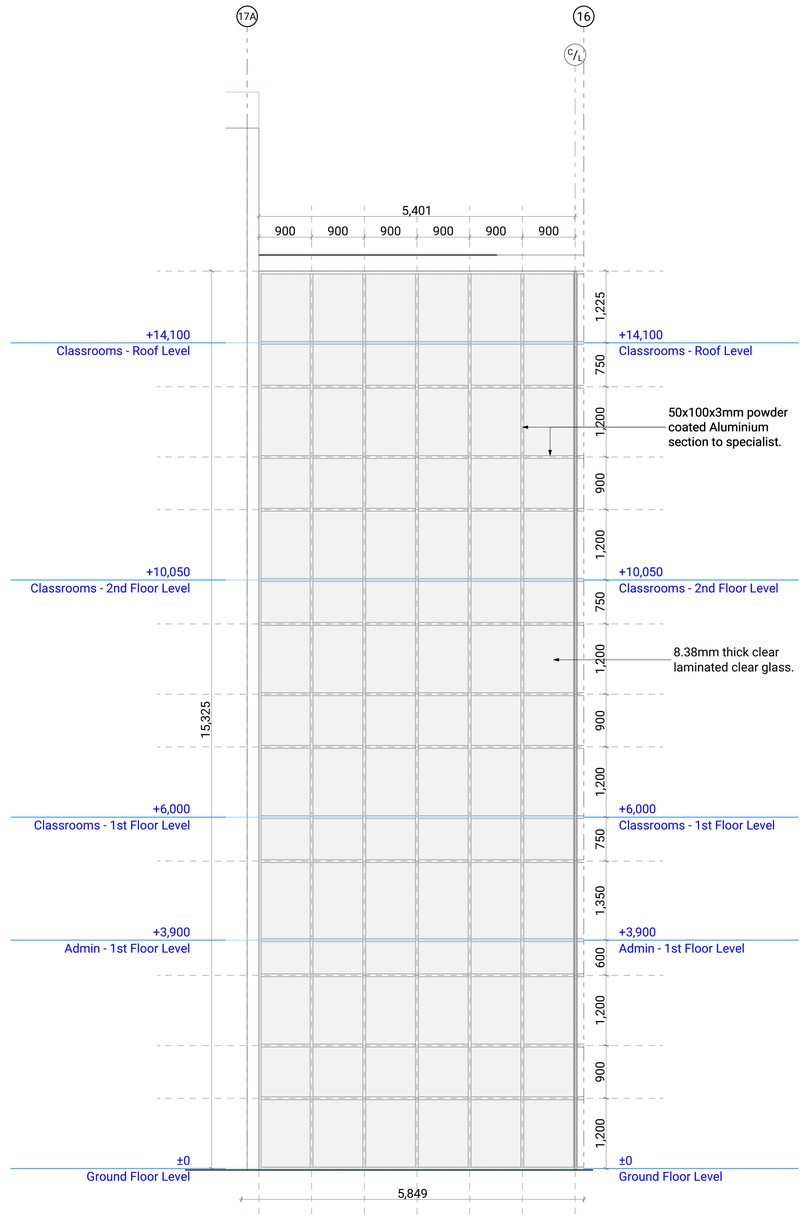
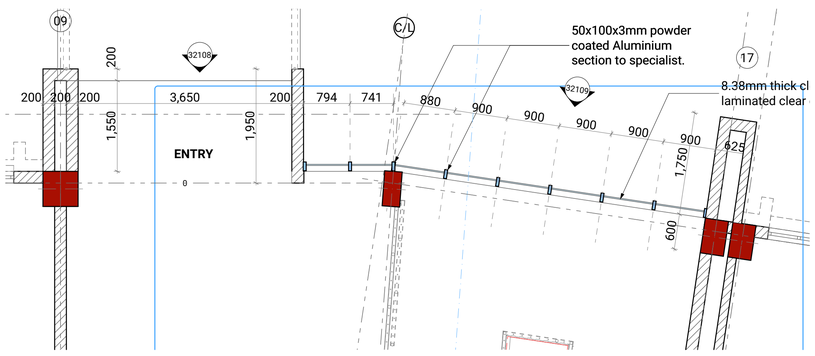


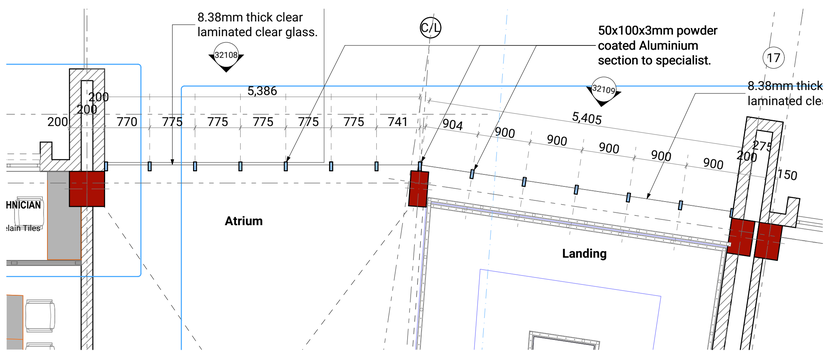
32108 **Curtain wall Elevation** **1:50**



32109 **Curtain wall Elevation** **1:50**



32106 **Curtain wall Plan- Ground Floor** **1:50**



32107 **Curtain wall Plan- Typical Mezz-2nd Floor** **1:50**

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

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Sheet Name
Wall Blowups
Curtain Wall Detail

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GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:50	00

Sheet No.
2527-SK-XX-DR-A-32103

Job Number
SK-20-2527

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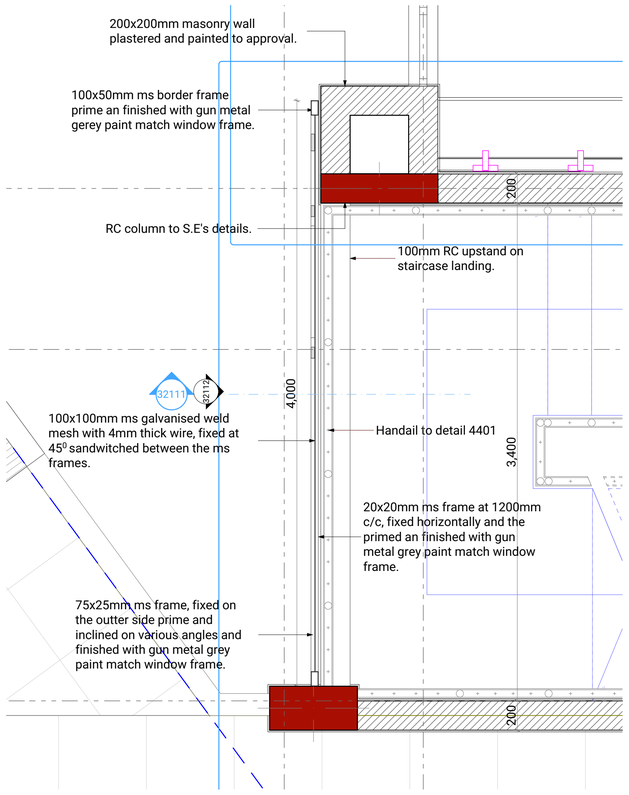
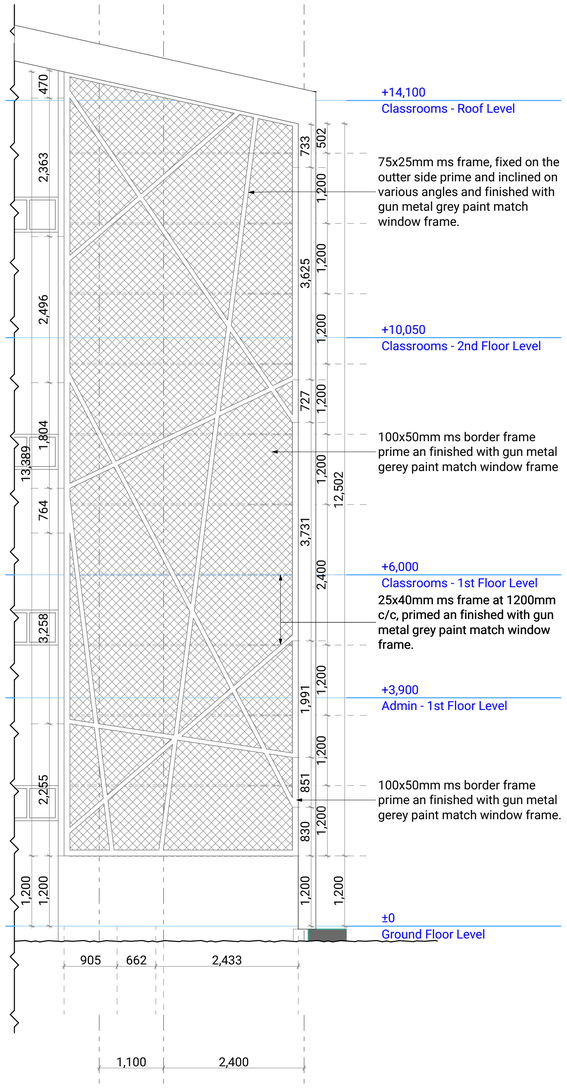
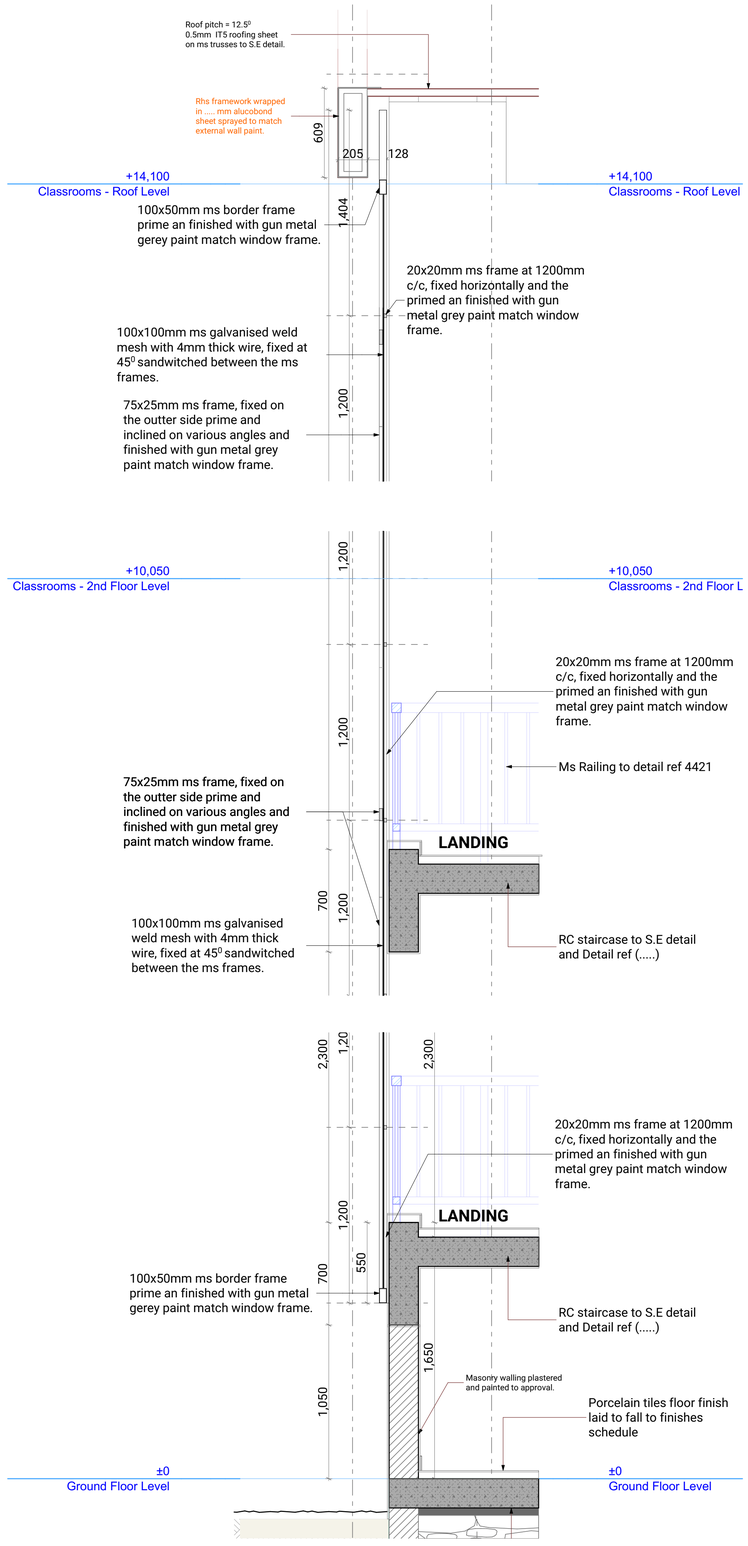
FOR TENDER



32110 **Weld Mesh Screen 01 Plan** **1:20**



32112 **Weld Mesh Screen 01 Elevation** **1:50**



32111 **Weld Mesh Screen 01 Section** **1:20**

FOR TENDER

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13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Wall Blowups
Weld Mesh Screen 01

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:20, 1:50**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-32104

Job Number
SK-20-2527

File Path
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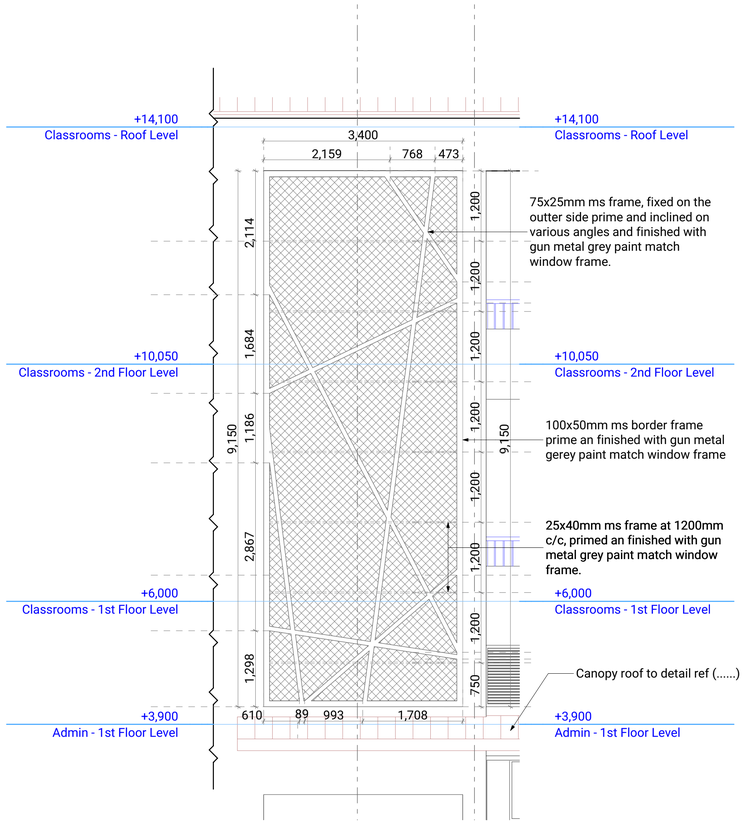
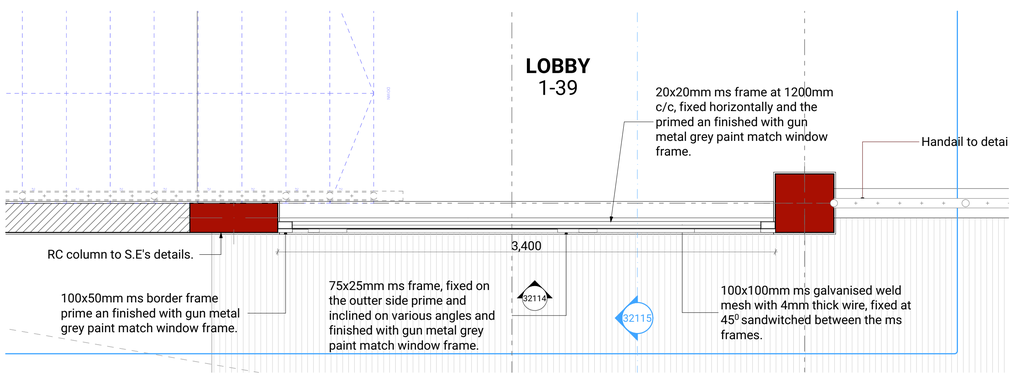
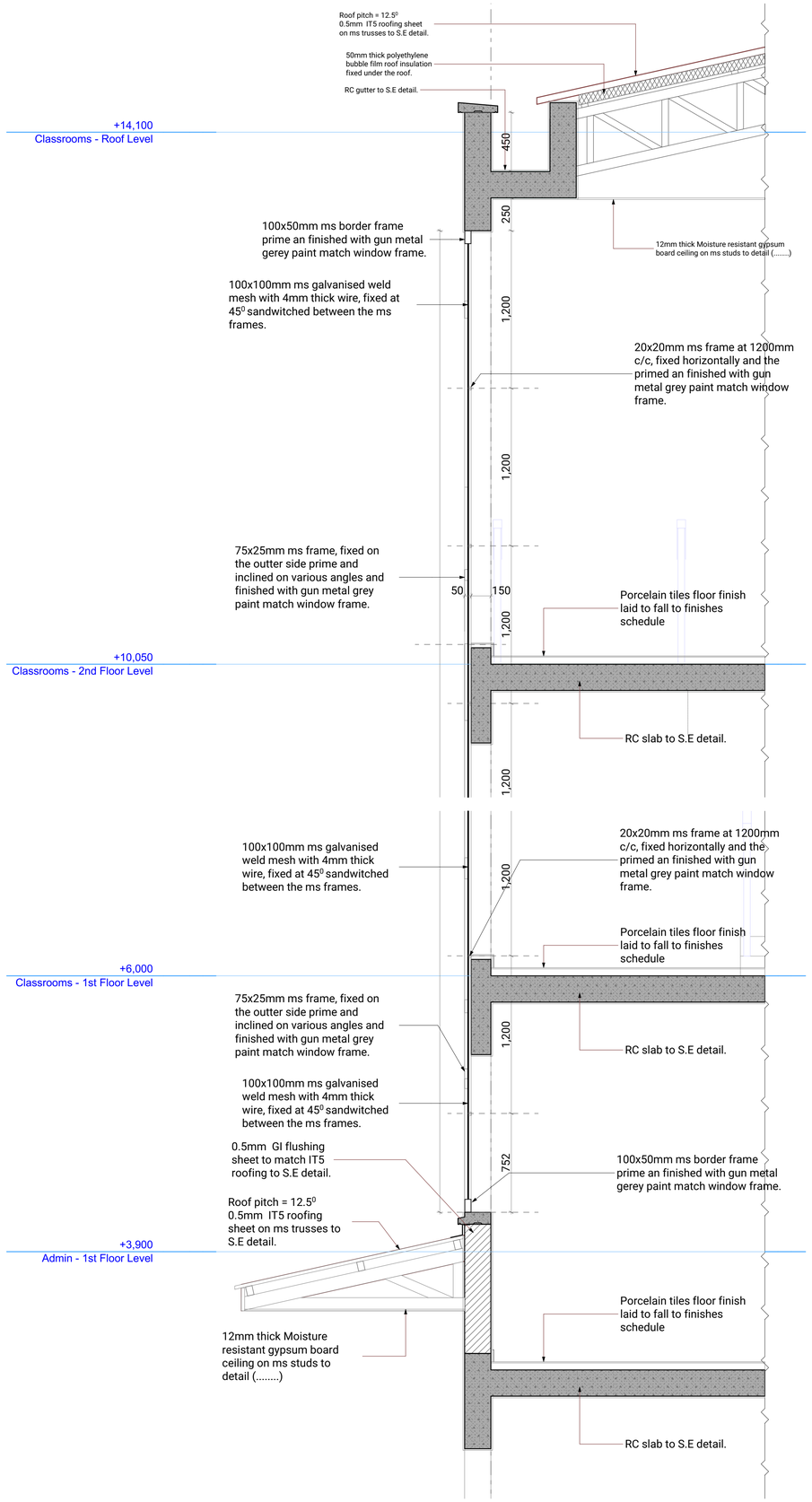


32114 **Weld Mesh Screen 02 Elevation** **1:50**



32113 **Weld Mesh Screen 02 Plan** **1:20**



32115 **Weld Mesh Screen 02 Section** **1:20**

FOR TENDER

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Wall Blowups
Weld Mesh Screen 02

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:20, 1:50**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-32105

Job Number
SK-20-2527

File Path
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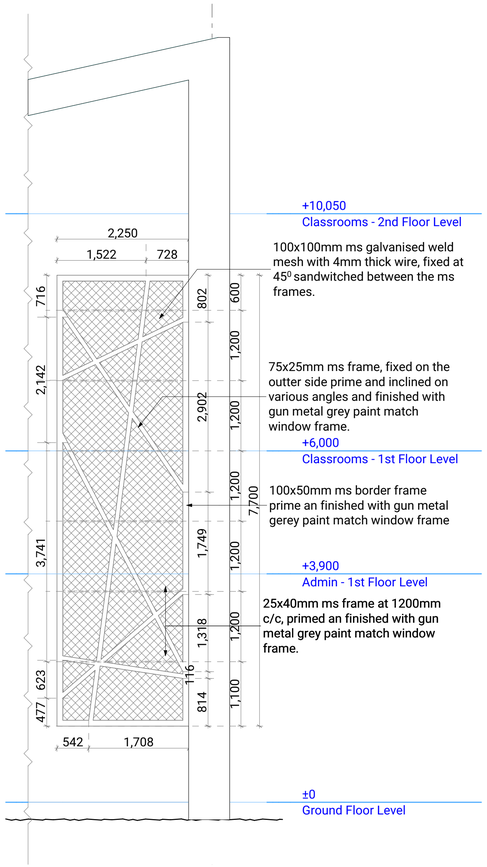
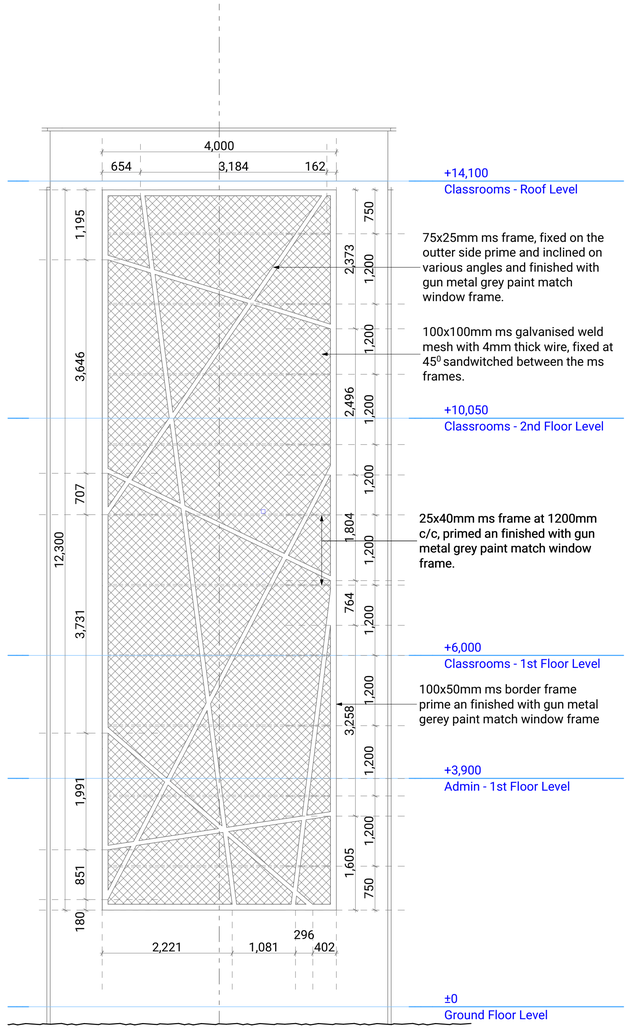
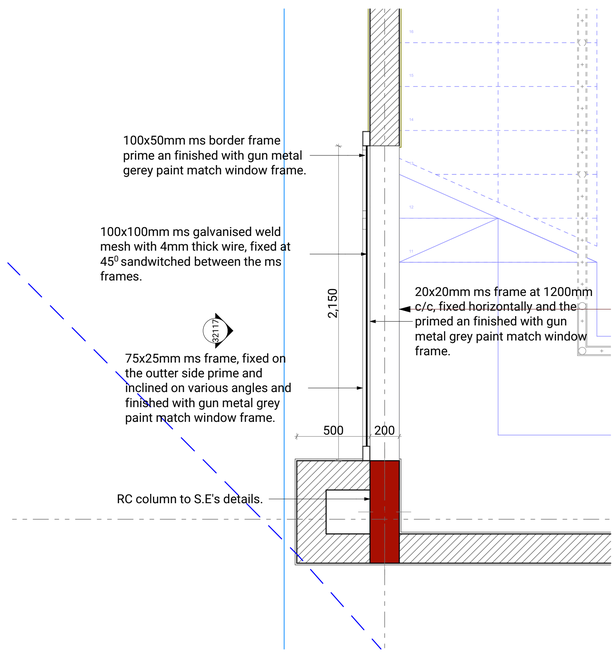


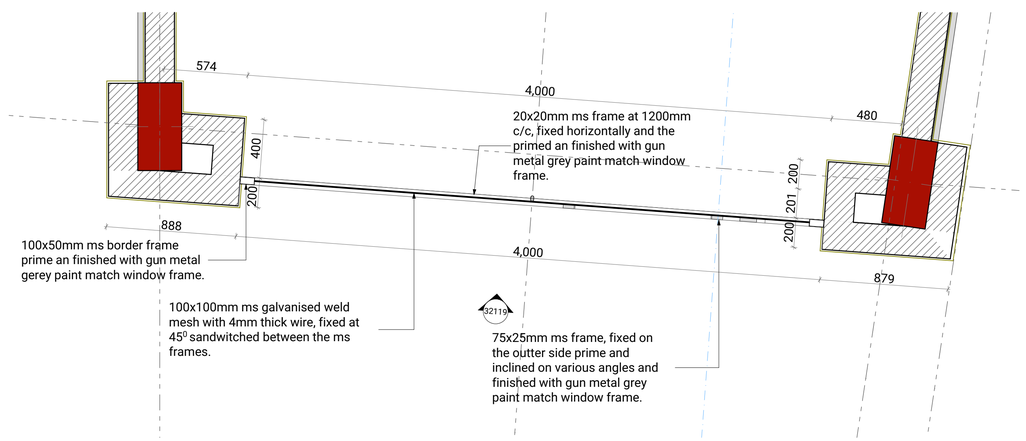
32117 Weld Mesh Screen 04 Elevation 1:50



32119 Weld Mesh Screen 03 Elevation 1:50



32116 Weld Mesh Screen 03 1:20



32118 Weld Mesh Screen 04 1:20

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name
Wall Blowups
Weld Mesh Screen 03&04

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:20, 1:50**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-32106

Job Number
SK-20-2527

File Path
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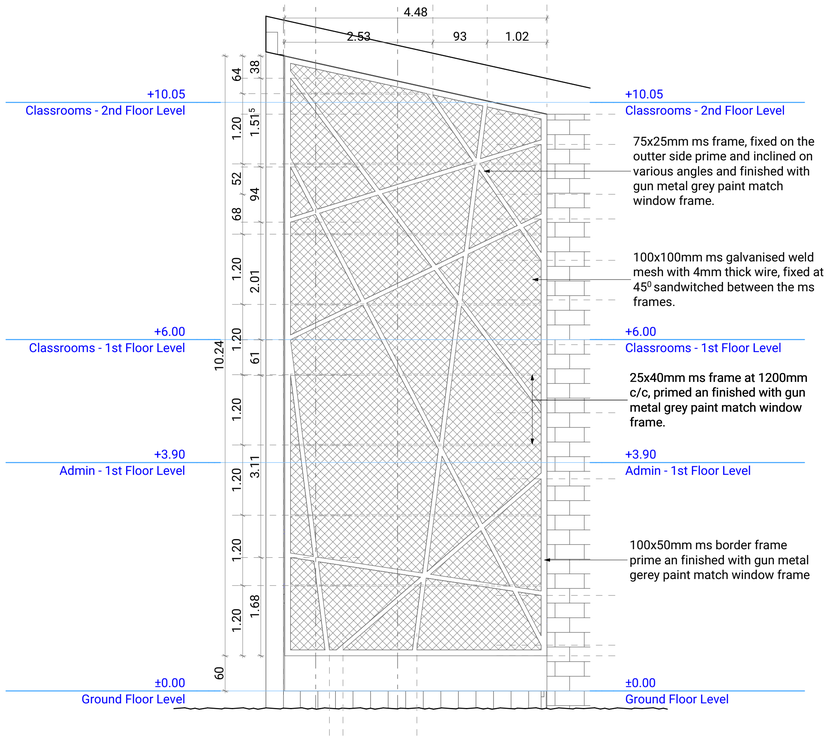
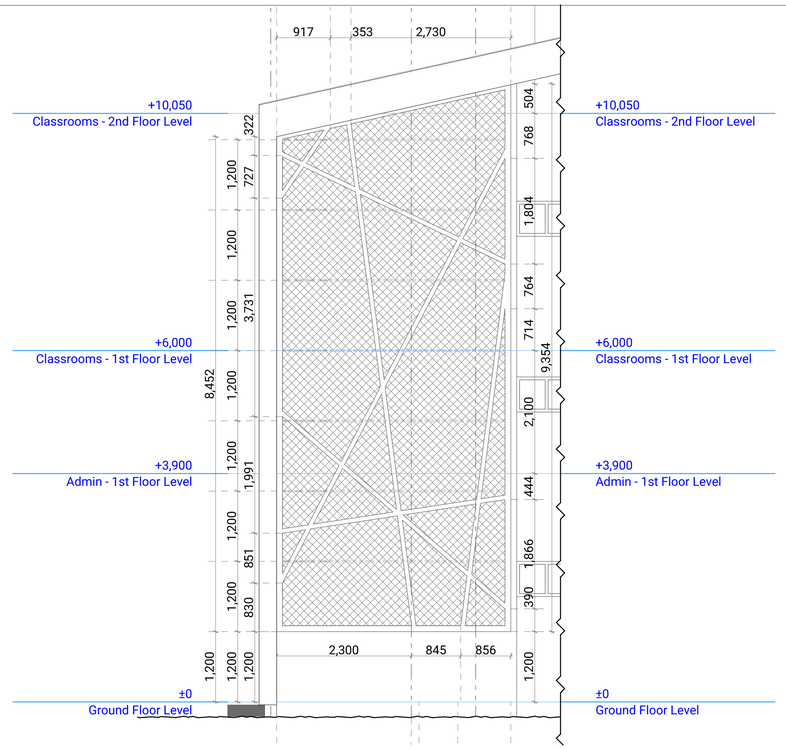
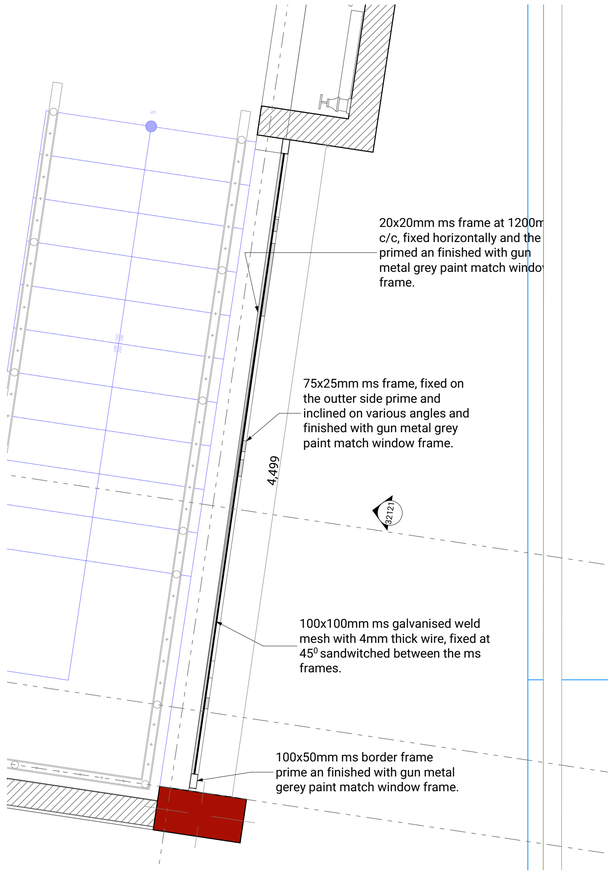


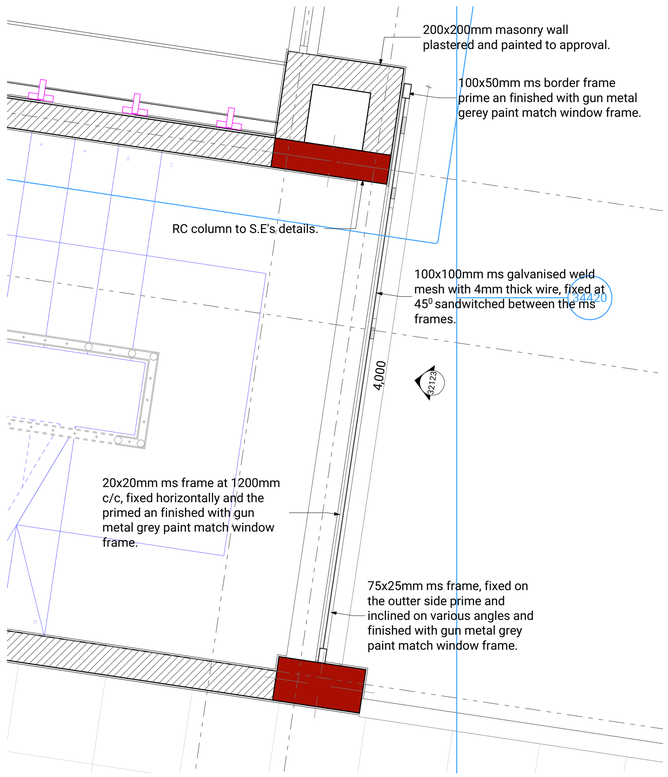
32121 **Weld Mesh Screen 05 Elevation** **1:50**



32123 **Weld Mesh Screen 06 Elevation** **1:50**



32120 **Weld Mesh Screen 05** **1:20**



32122 **Weld Mesh Screen 06** **1:20**

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Wall Blowups
Weld Mesh Screen 05&06

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:20, 1:50**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-32107

Job Number
SK-20-2527

File Path
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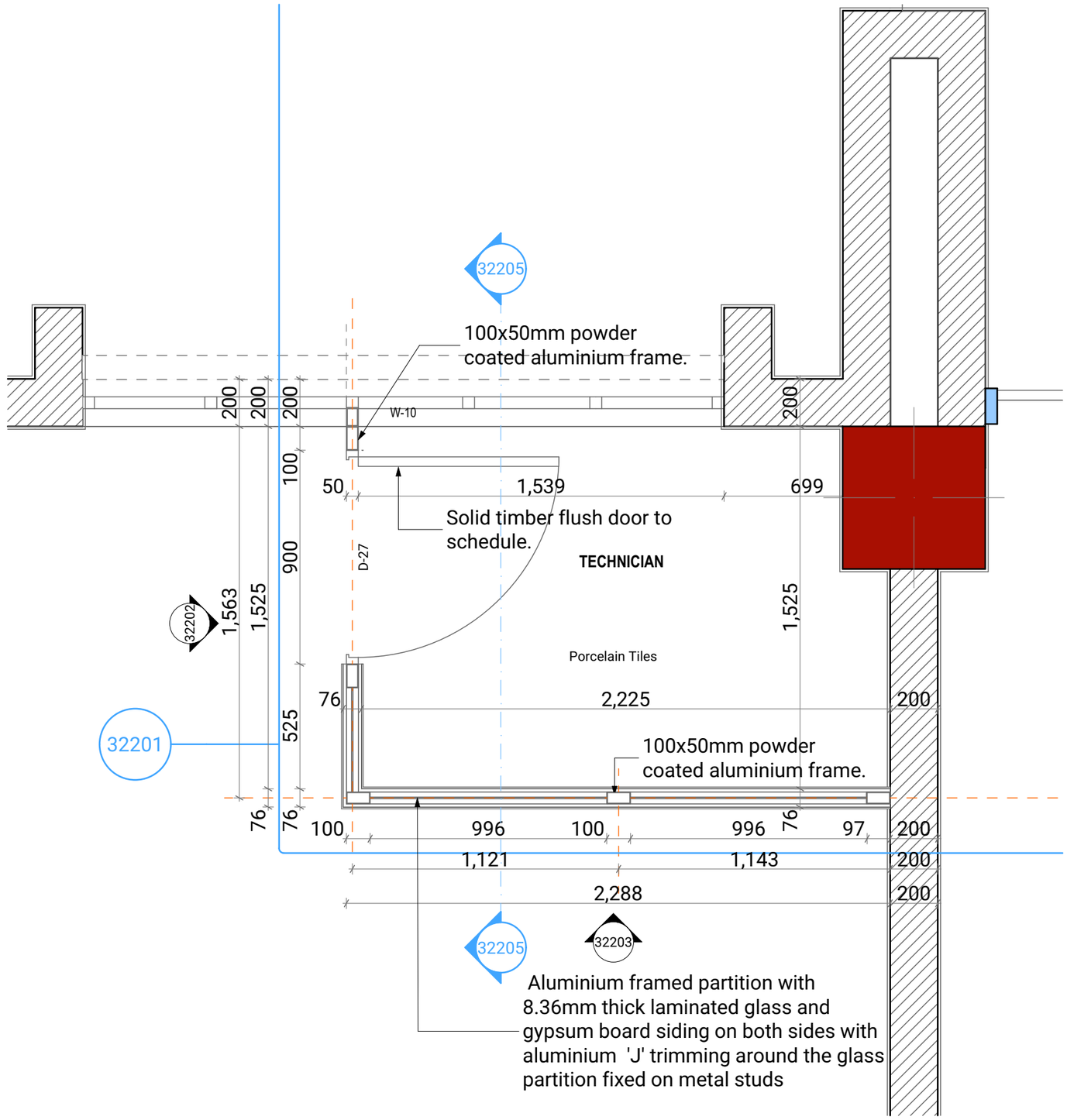

32201 **Technician Cubicle (2 No)** **1:20**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Internal Wall Details

Technician Cubicle Layout Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:20**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-32201

Job Number

SK-20-2527

File Path

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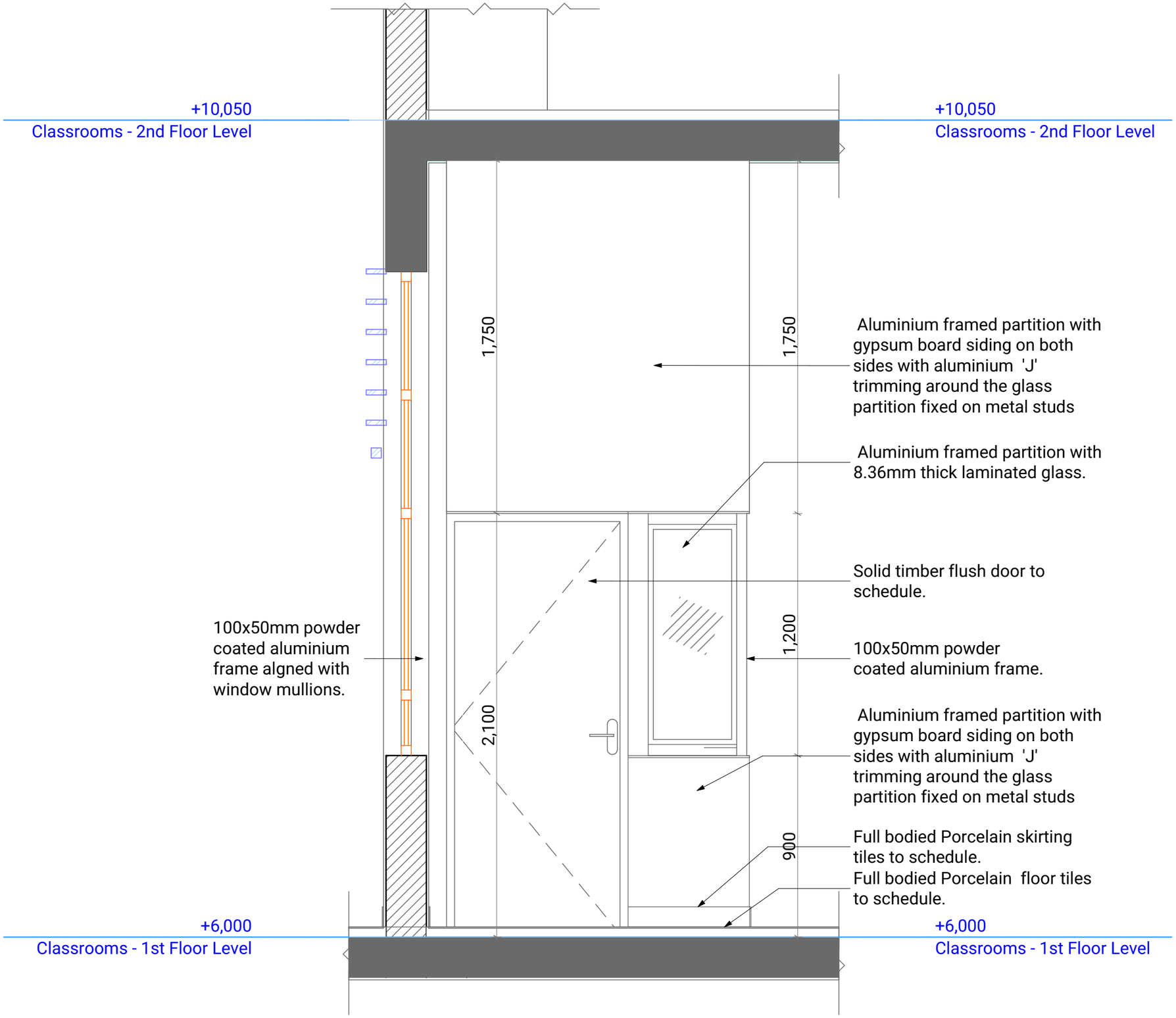

32202 **Technical Cubicle Elevation.** **1:20**

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Internal Wall Details

Technical Cubicle Elevation.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale **(A3) 1:20**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-32202

Job Number

SK-20-2527

File Path

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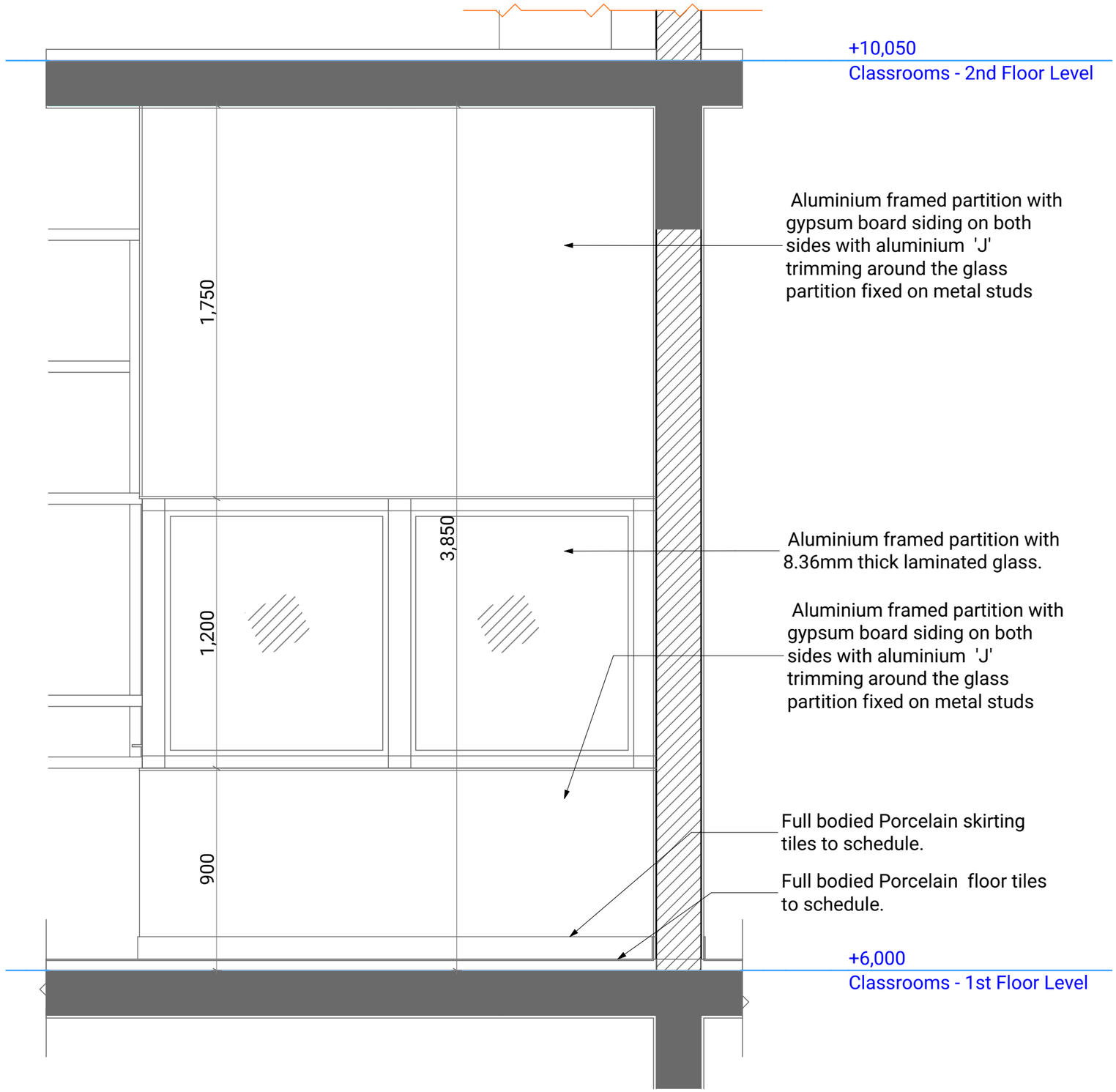

32203 **Technical Cubicle Elevation.** **1:20**

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Internal Wall Details

Technical Cubicle Elevation.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:20**	Revision **00**

Sheet No.

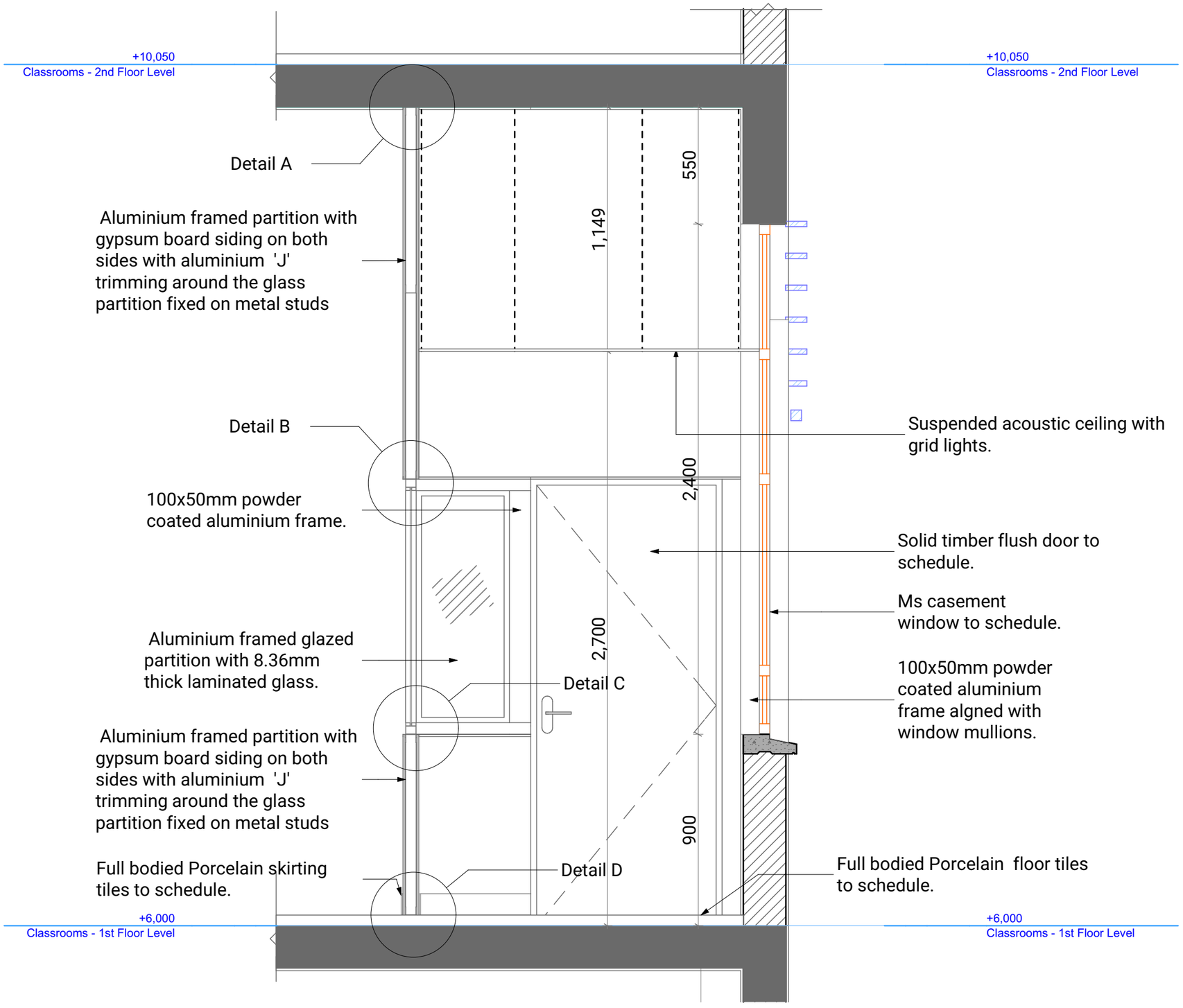
2527-SK-XX-DR-A-32203

Job Number

SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln



32205 **Technical Cubicle Section.** **1:20**

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name

Internal Wall Details

Technical Cubicle Section..

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:20**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-32204

Job Number

SK-20-2527

File Path

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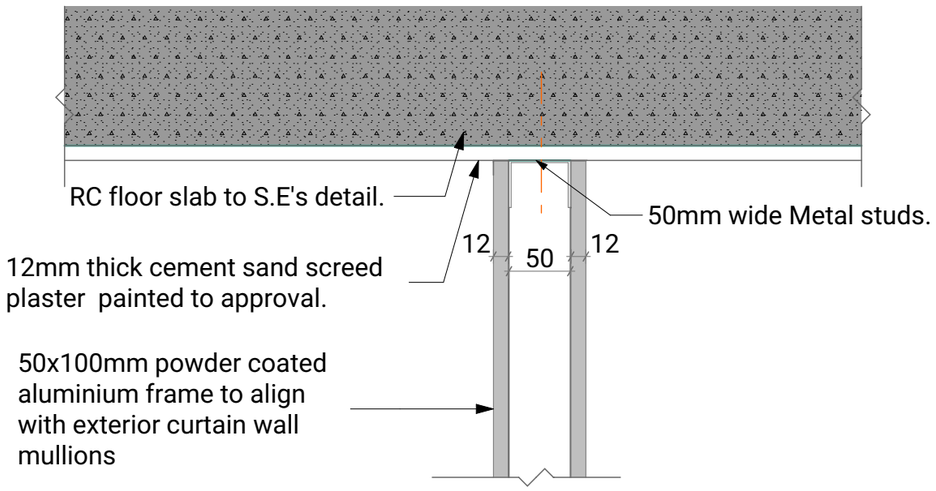
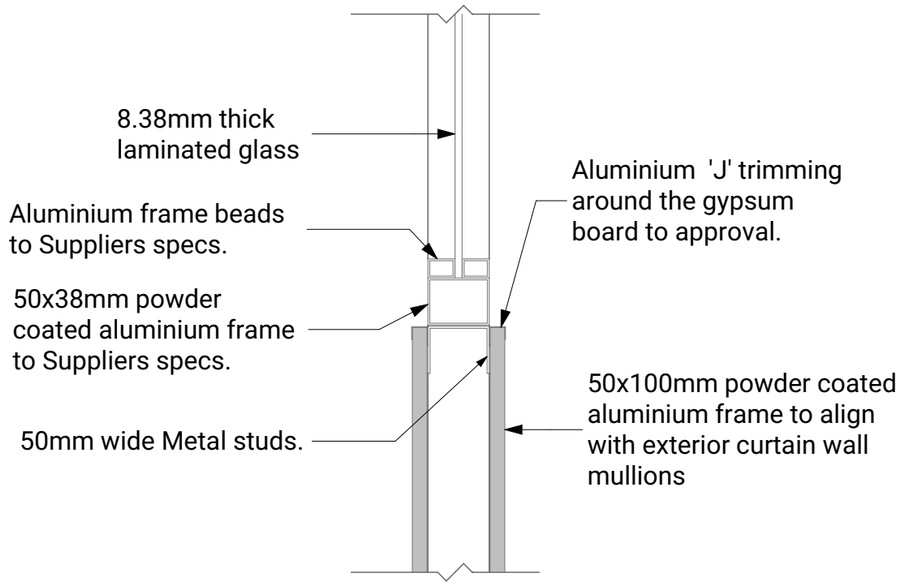
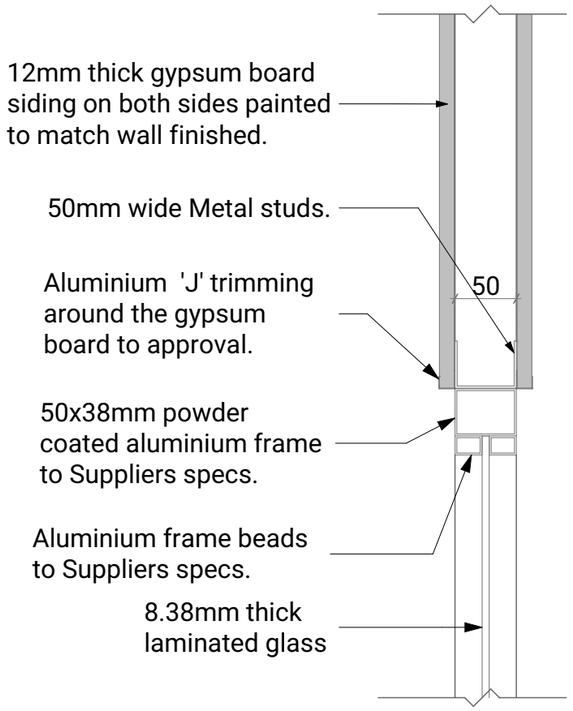


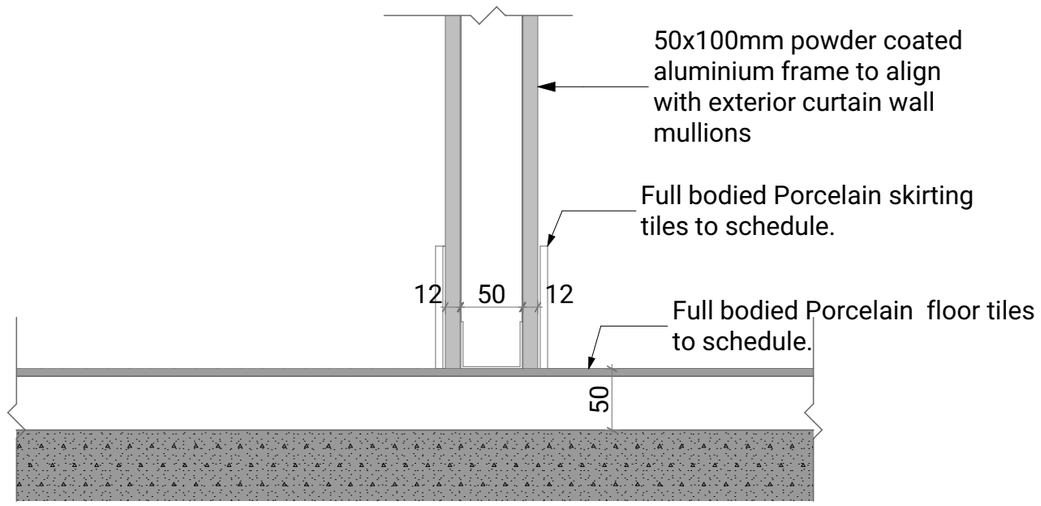
Deatil A Gypsum wall Partion Detail 1:5



Detail C Gypsum wall Partion Detail 1:5



Detail B Gypsum wall Partion Detail 1:5



Detail D Gypsum wall Partion Detail 1:5

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client
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Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Internal Wall Details
Technical Cubicle Partion Detail

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:5	00

Sheet No.
2527-SK-XX-DR-A-52201

Job Number
SK-20-2527

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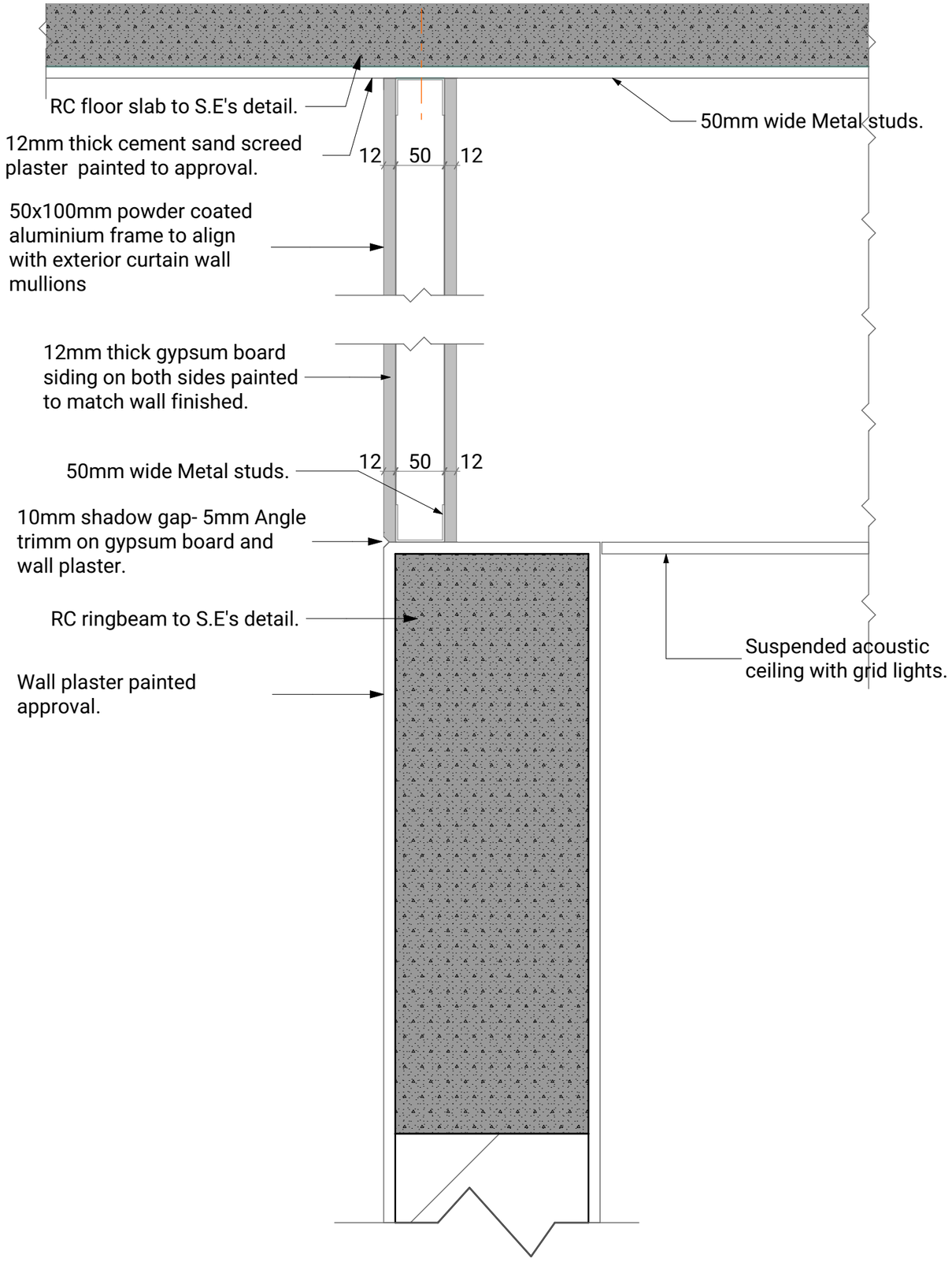

52202 **Typical Gypsum wall Partion Detail.** **1:5**

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Rev ID	Description	Issue Date

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Sheet Name

Internal Wall Details

Gypsum Dry wall Partion Detail Above Workshop Ofices and Stores.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale **(A3)** **1:5**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-52202

Job Number

SK-20-2527

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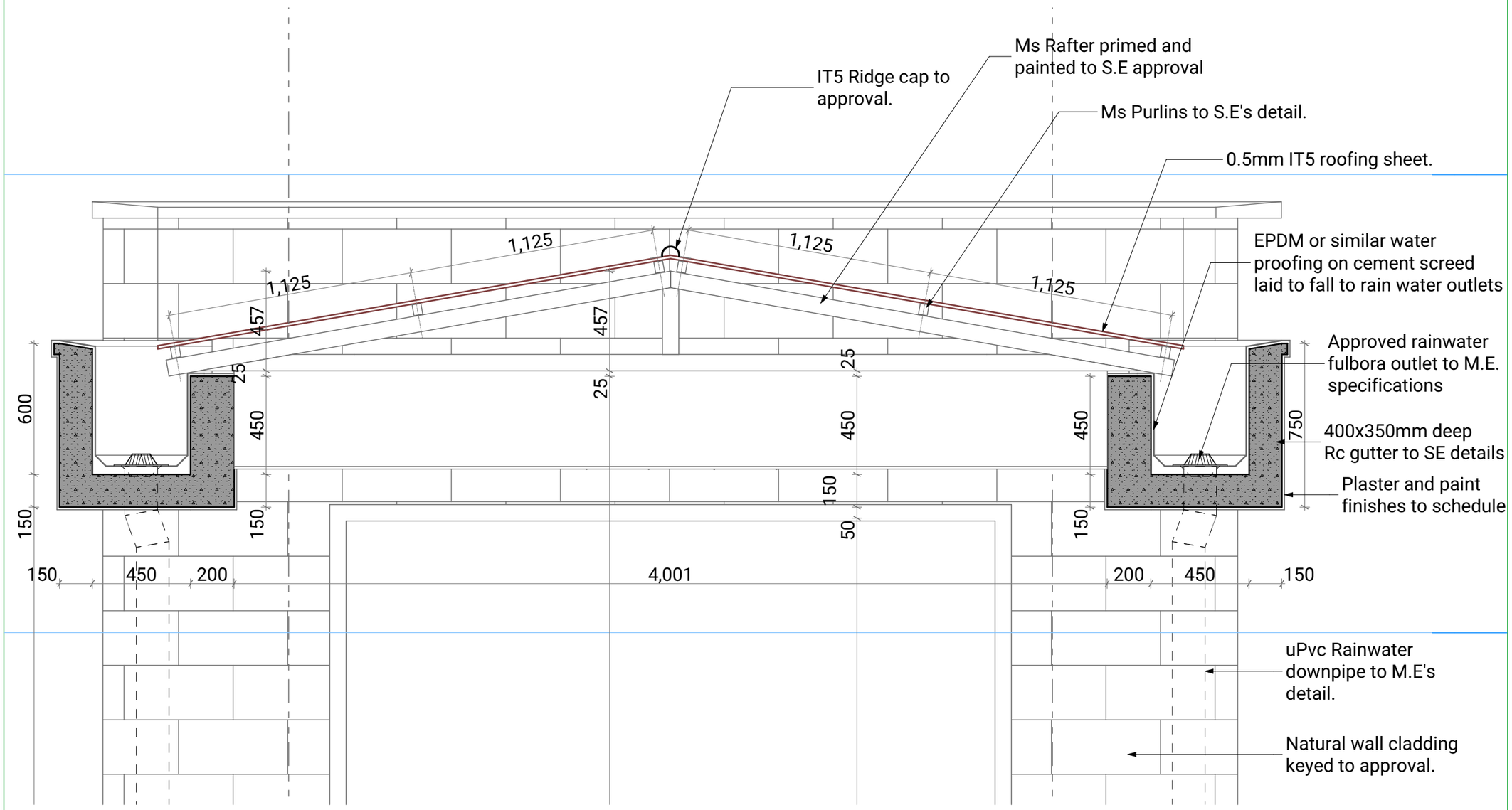

52701

Porte cochere roof

1:20

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Rev ID	Description	Issue Date

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Sheet Name

Roof Details

External Wall Section

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:20**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-52701

Job Number

SK-20-2527

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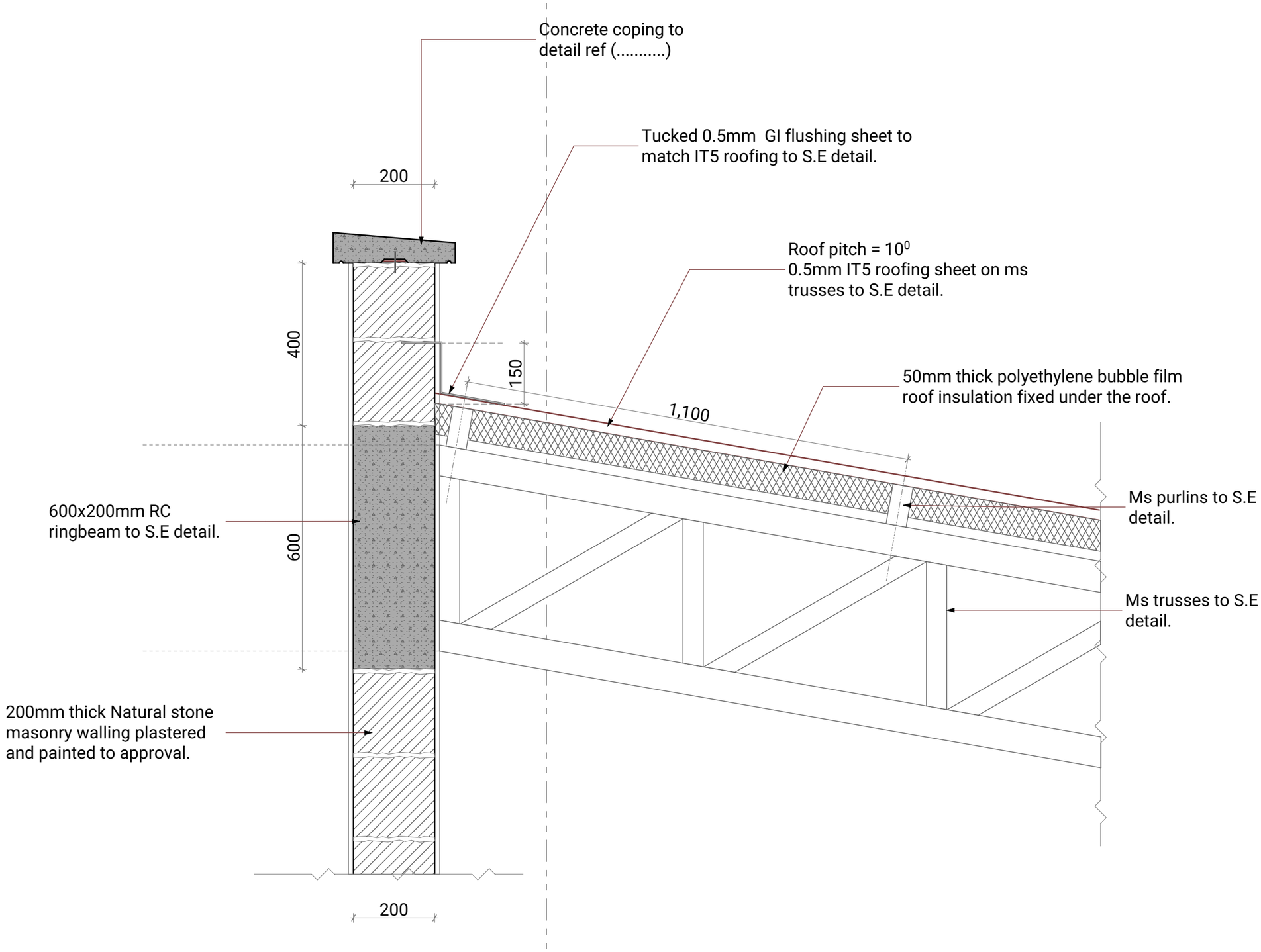

52703 **Admin Roof** **1:10**

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Rev ID	Description	Issue Date

Client

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Sheet Name

Roof Details

Admin Roof

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale **(A3)** **1:10**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-52703

Job Number

SK-20-2527

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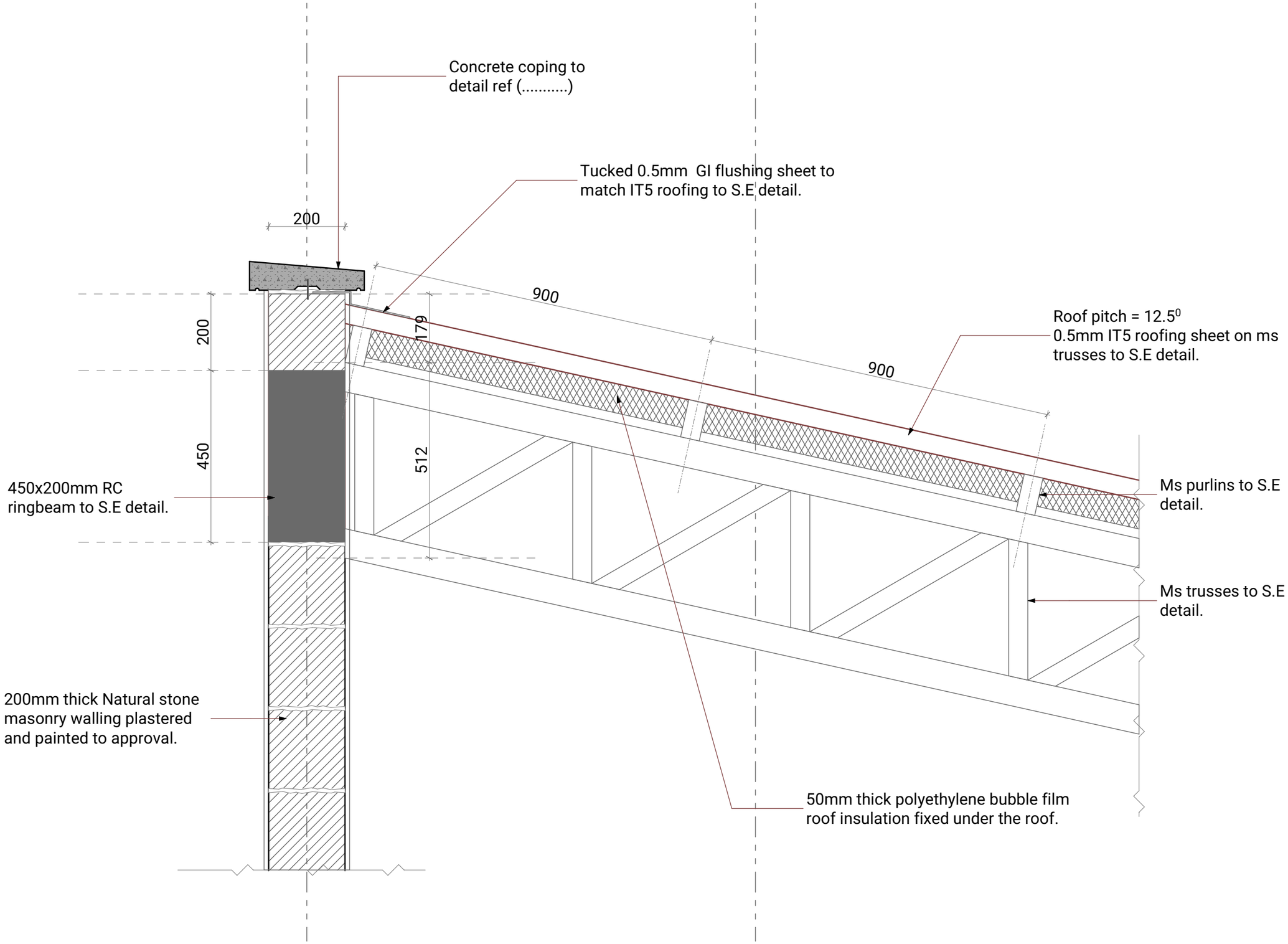

52704

Main Block Parapet Wall Detail.

1:10

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Rev ID	Description	Issue Date

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Sheet Name

Roof Details

Main Block Parapet Wall Detail.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

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2527-SK-XX-DR-A-52704

Job Number

SK-20-2527

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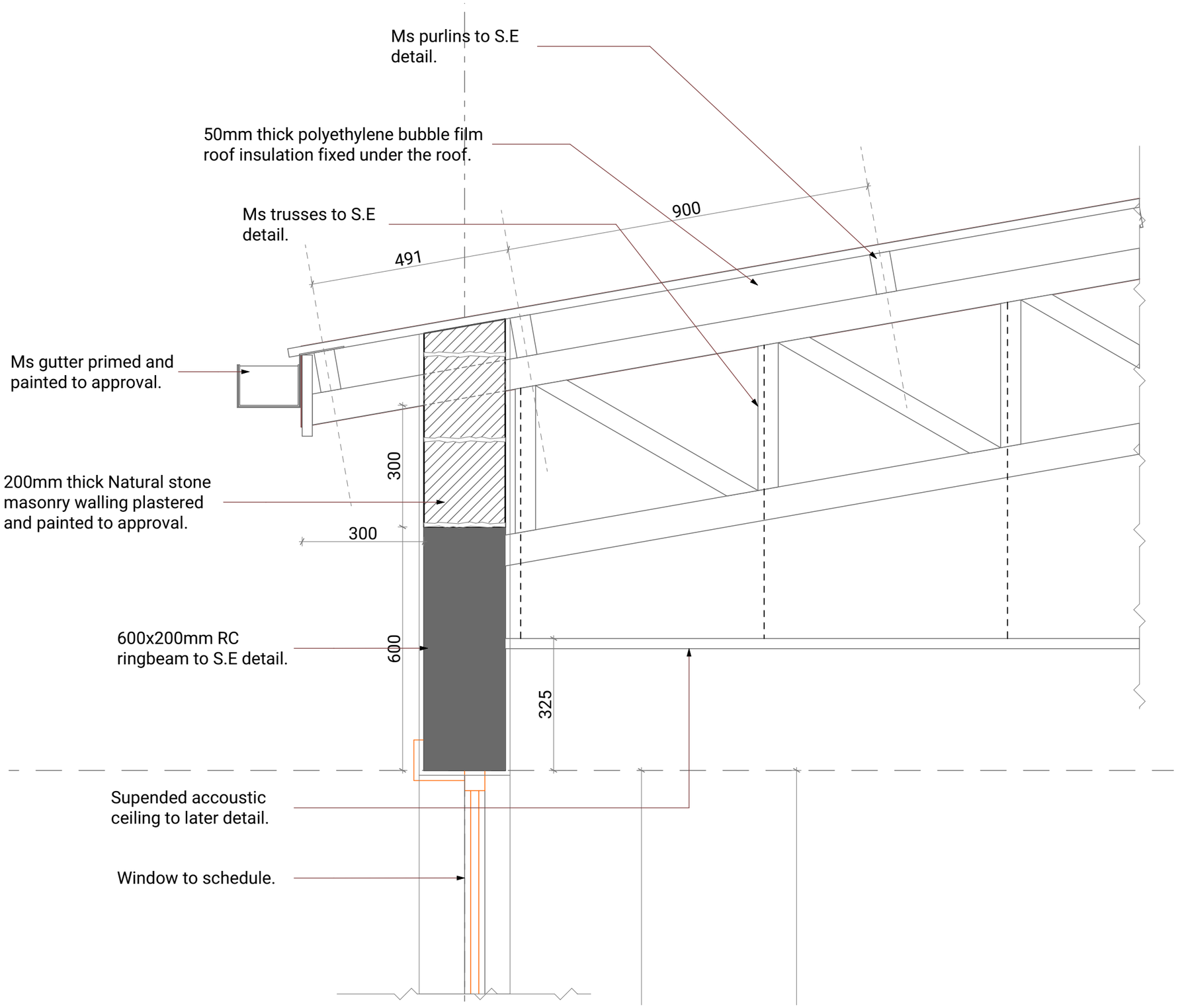

52705 **Roof Detail.** **1:10**

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Sheet Name
Roof Details
Roof Eave detail.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-52705

Job Number
SK-20-2527

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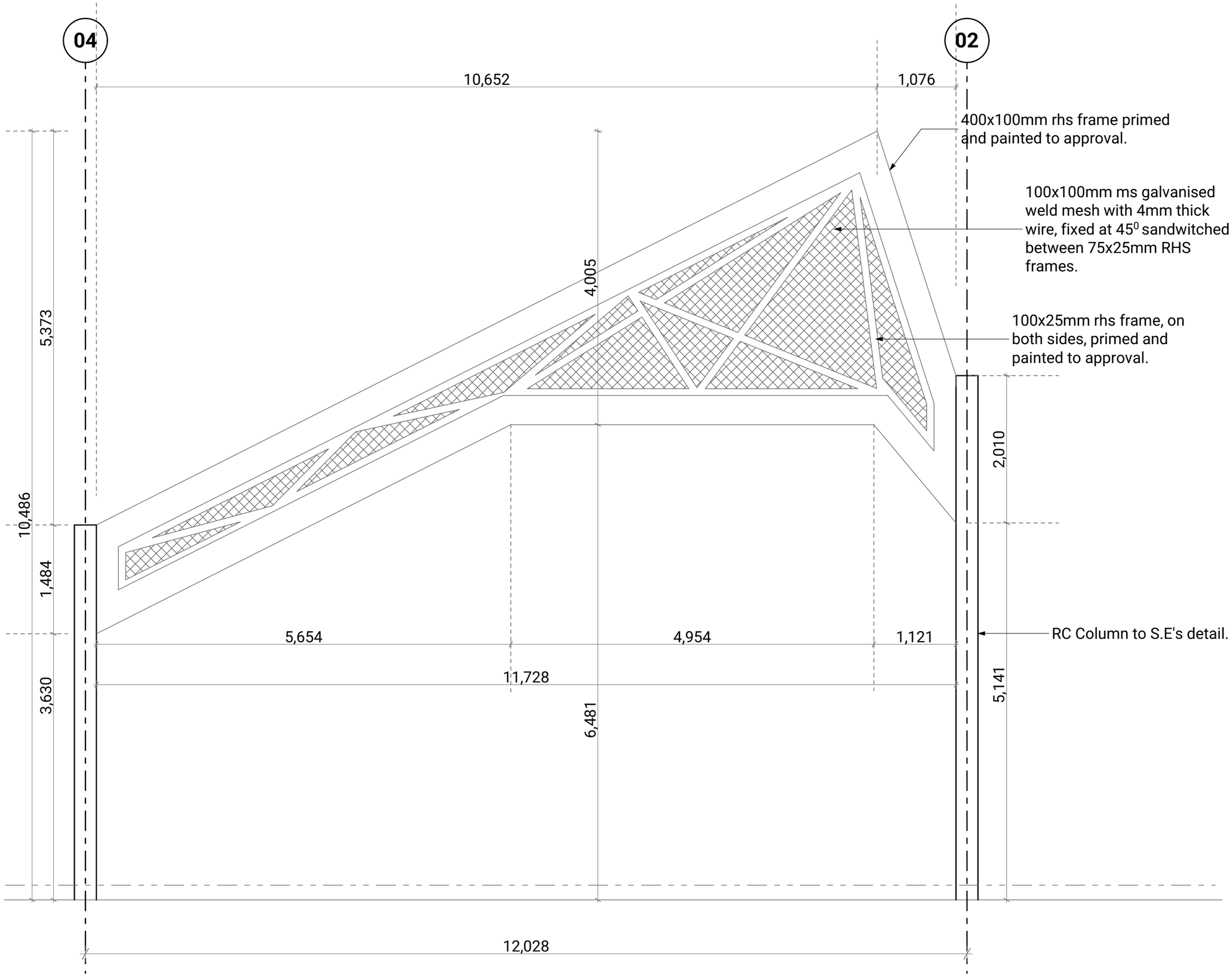

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Rev ID	Description	Issue Date

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Sheet Name

Roof Details

Gate House Truss Detail

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-52721

Job Number

SK-20-2527

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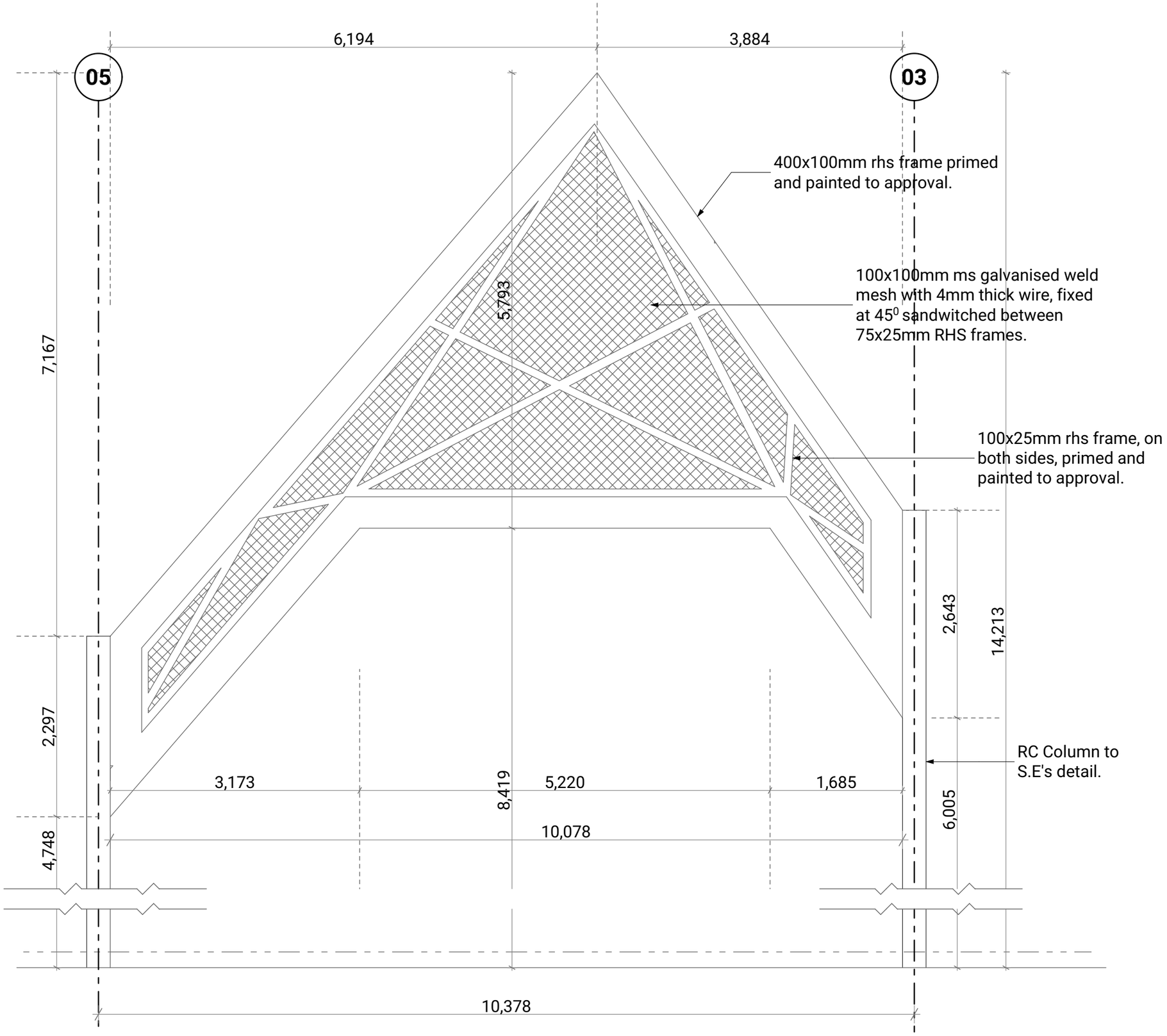
52721

Gate House Truss 01

1:50

FOR TENDER



52722 **Gate House Truss 02** **1:50**

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Rev ID	Description	Issue Date

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Sheet Name

Roof Details

Gate House Truss Detail

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-52722

Job Number

SK-20-2527

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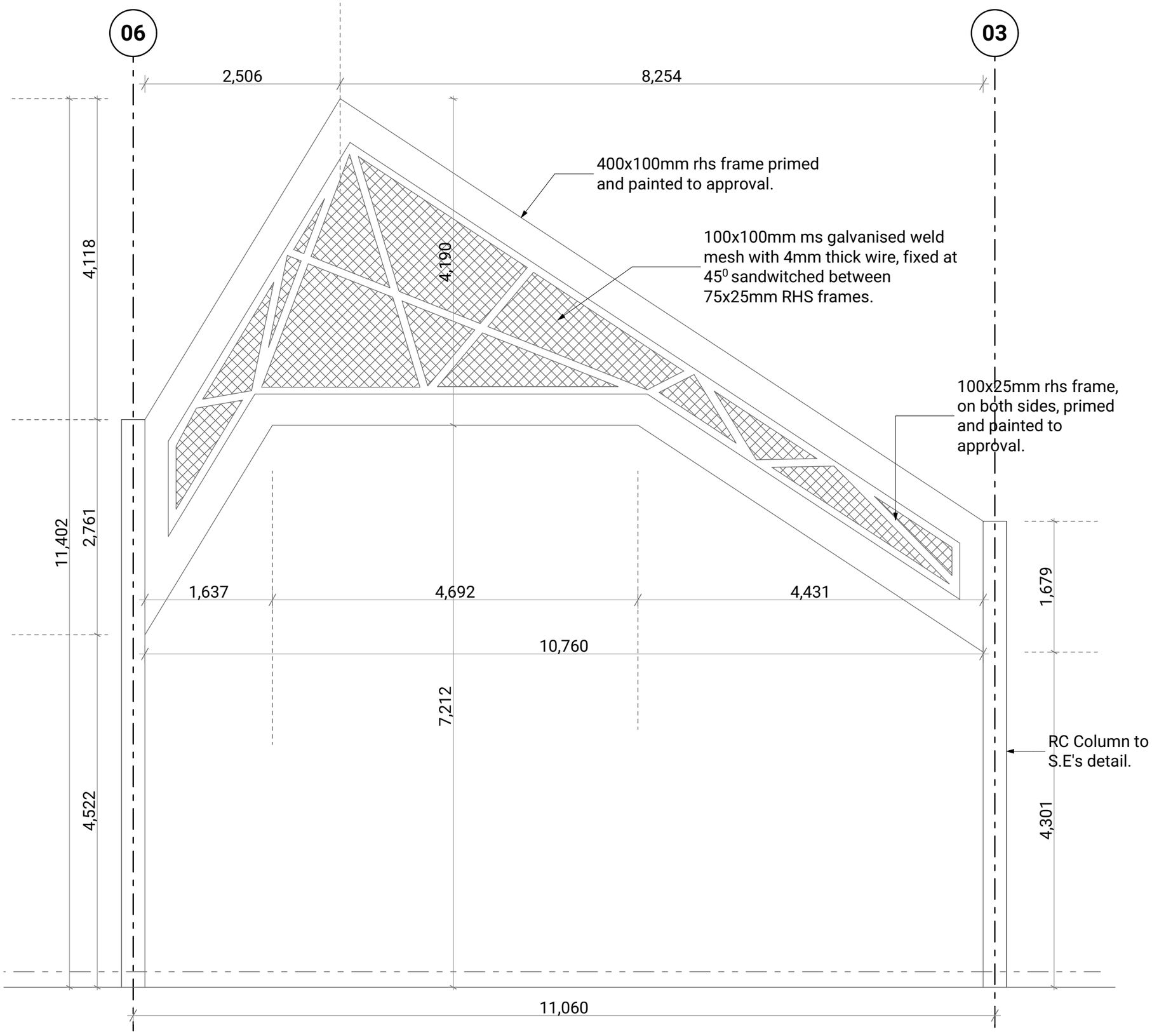

52723 **Gate House Truss 03** **1:50**

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Rev ID	Description	Issue Date

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Sheet Name

Roof Details

Gate House Truss Detail

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-52723

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SK-20-2527

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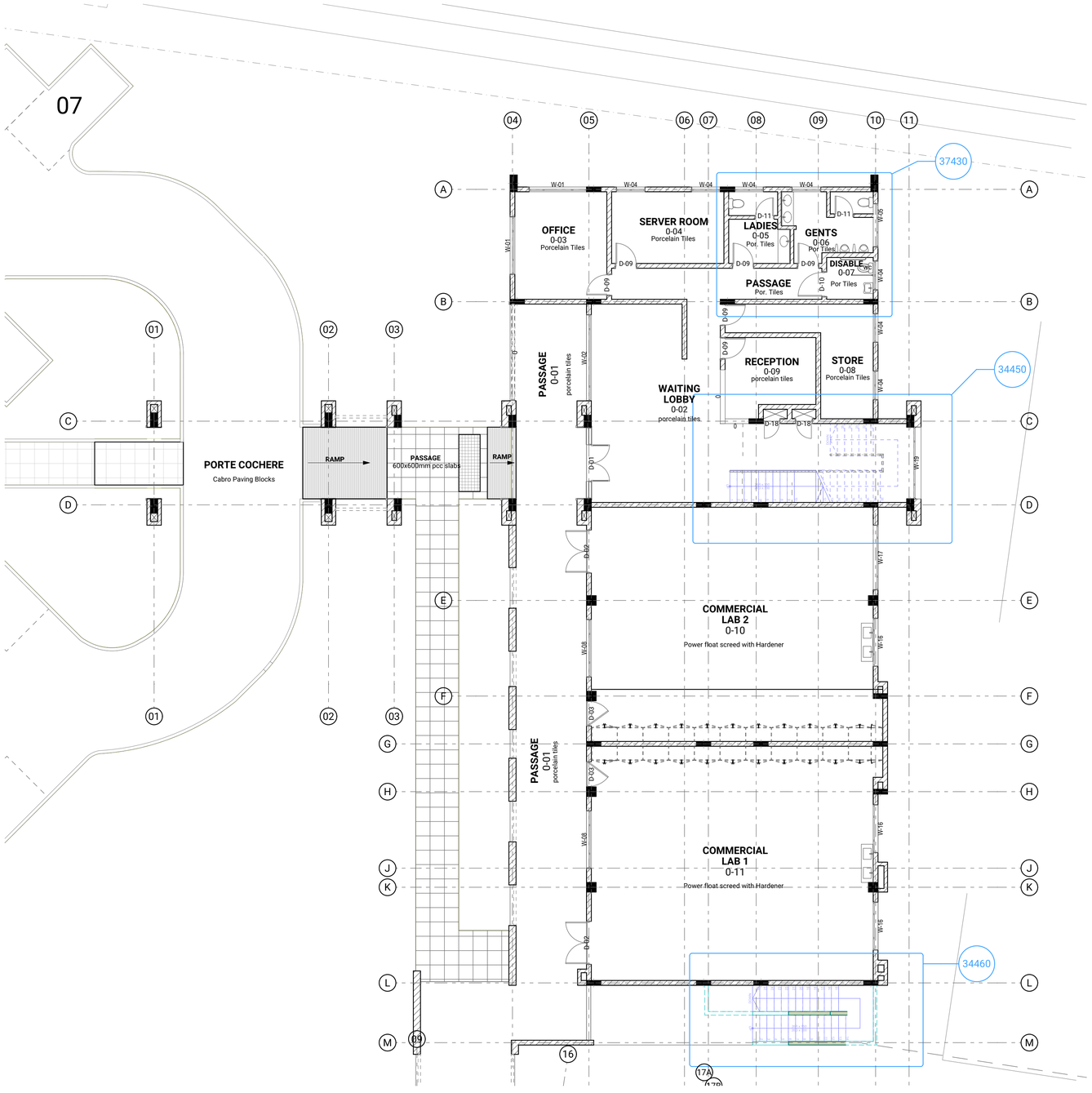

1301A **Admin Block Ground Floor Plan** **1:100**

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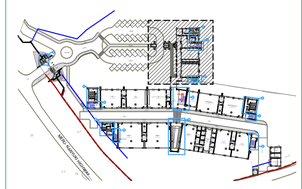
LOCATION PLAN



Rev ID	Chg ID	Description	Issue Date

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Sheet Name

Opening Layouts
Admin Block Ground Floor Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1301A

Job Number

SK-20-2527

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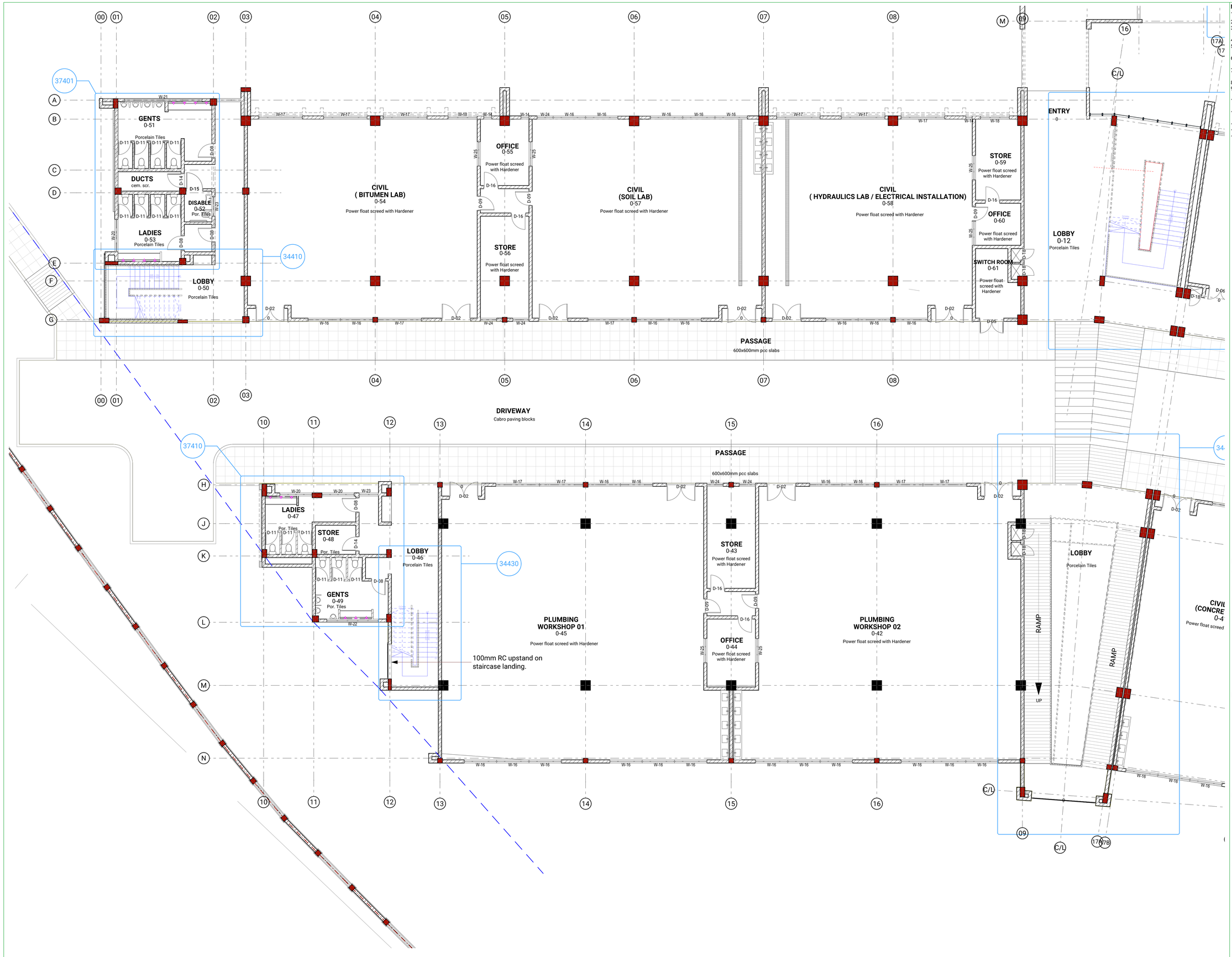

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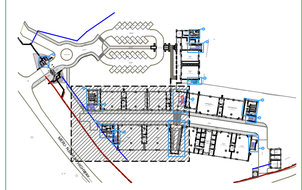
LOCATION PLAN



Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Opening Layouts
Tuition Block (A&C) Ground Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1301B

Job Number

SK-20-2527

File Path

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1301B

Tuition Block (A&C) Ground Floor Plan

1:100

FOR REVIEW

1301C

Tuition Block (B&D) Ground Floor Plan

1:100

FOR TENDER

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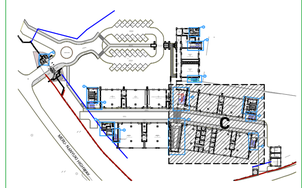

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Sheet Name

Opening Layouts
Tuition Block (B&D) Ground Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1301C

Job Number

SK-20-2527

File Path

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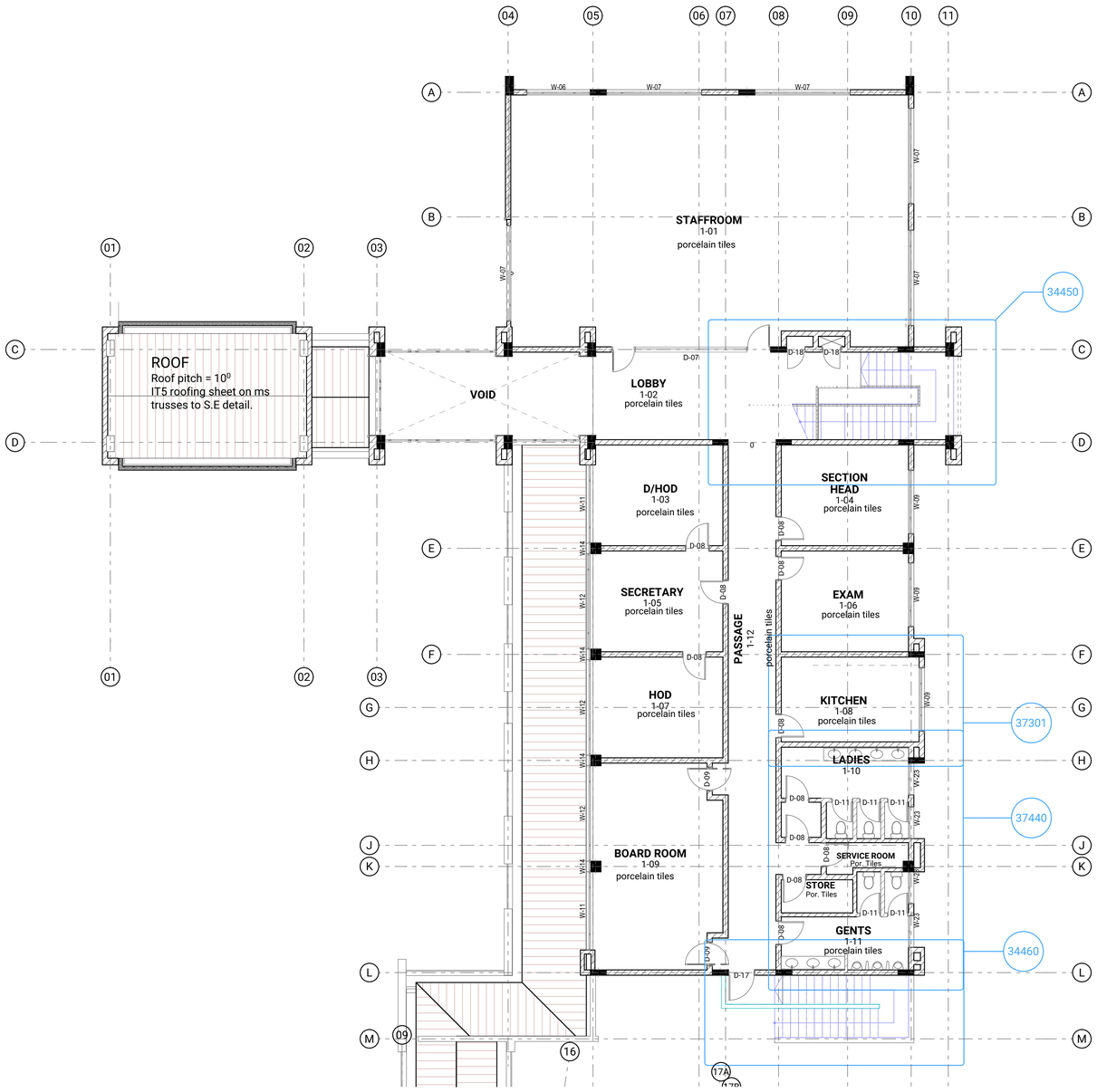

1302A **Admin Block First Floor Plan.** **1:100**

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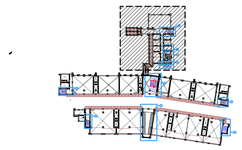

Rev ID	Chg ID	Description	Issue Date

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Sheet Name

Opening Layouts
Admin Block First Floor Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-M1-DR-A-1302A

Job Number

SK-20-2527

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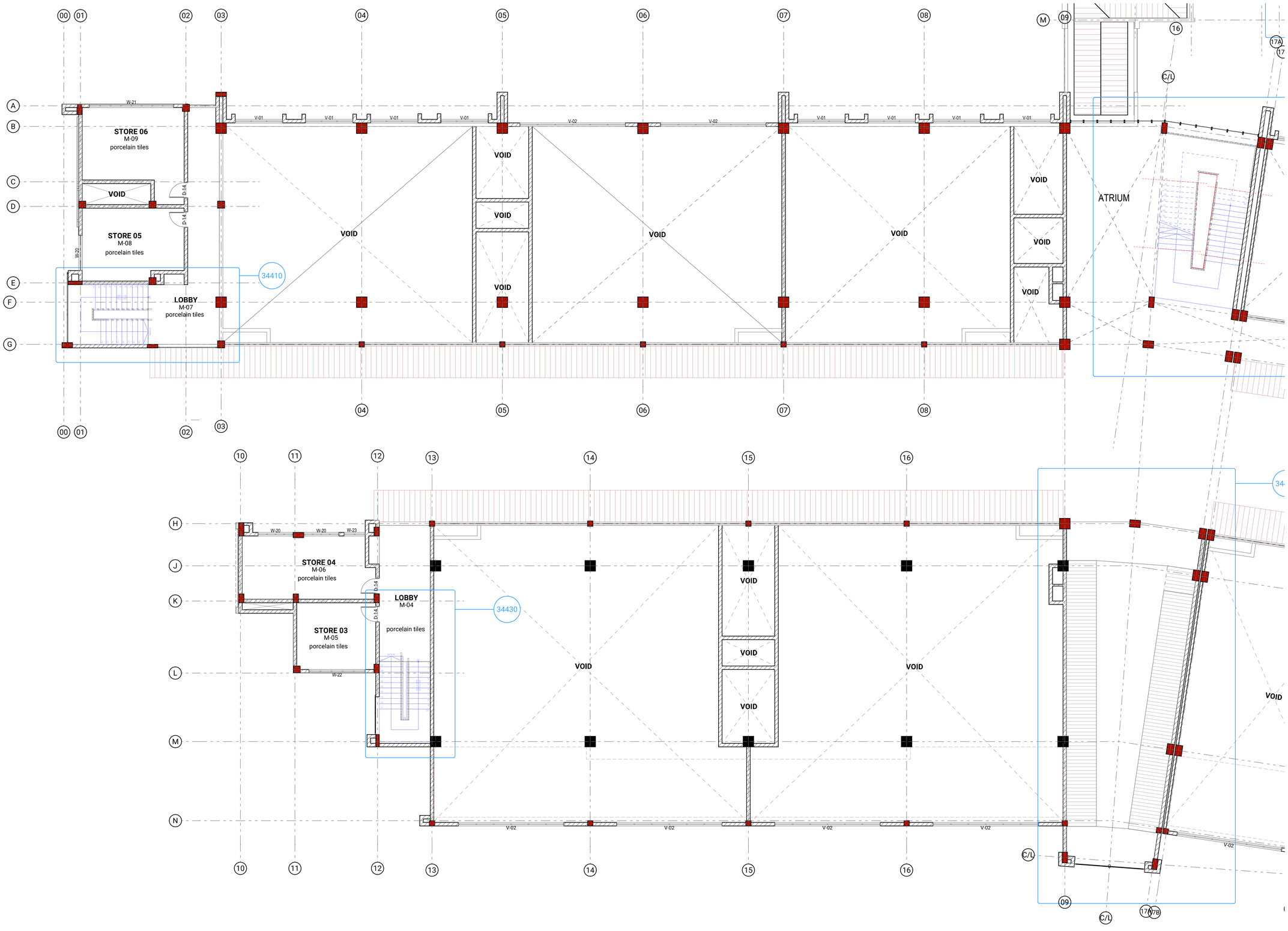
FOR TENDER



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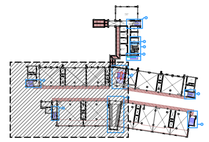

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Sheet Name

Opening Layouts
Tuition Block (A&C)Mezzanine Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-M1-DR-A-1302B

Job Number

SK-20-2527

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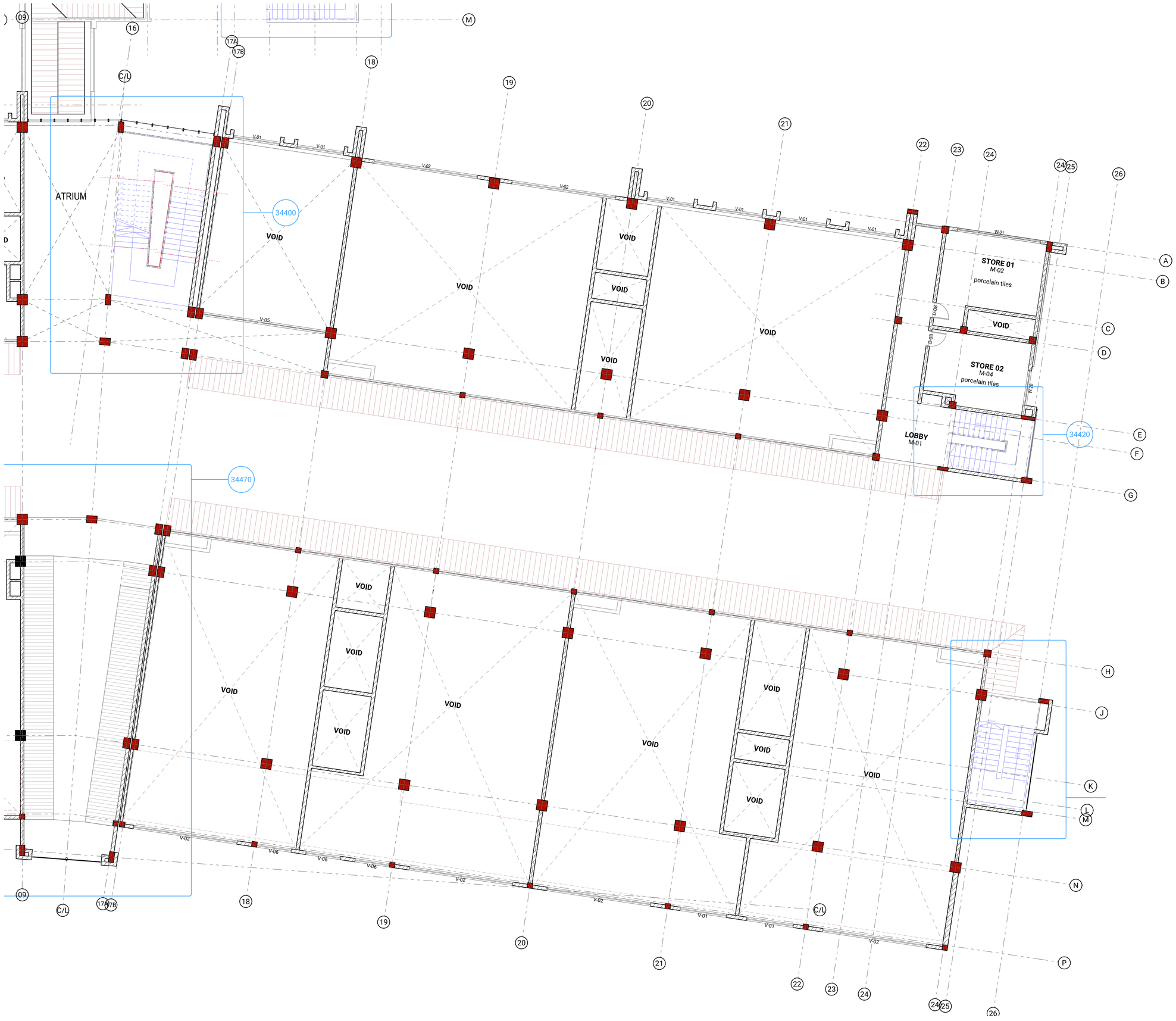
1302B

Tuition Block (A&C)Mezzanine Floor Plan

1:100

FOR TENDER



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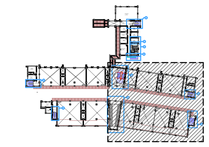

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Sheet Name

Opening Layouts
Tuition Block (B&D)Mezzanine Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-M1-DR-A-1302C

Job Number

SK-20-2527

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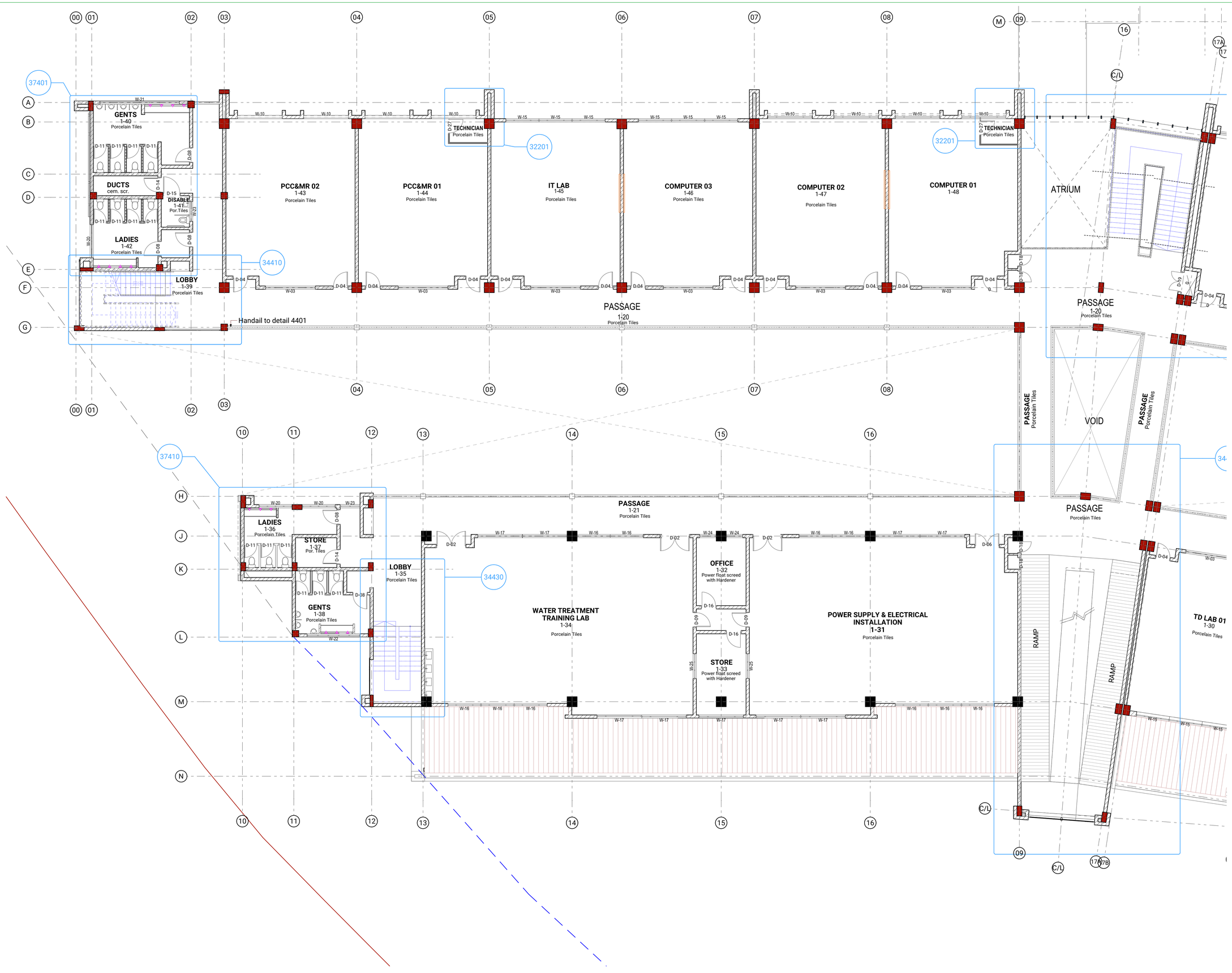
1302C **Tuition Block (B&D)Mezzanine Floor Plan** **1:100** **FOR TENDER**



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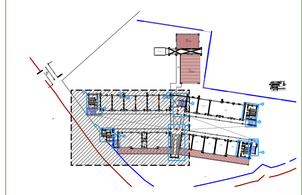

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Job Title

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Sheet Name
Opening Layouts
Tuition Block (A&C) First Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.
2527-SK-01-DR-A-1303B

Job Number
SK-20-2527

File Path
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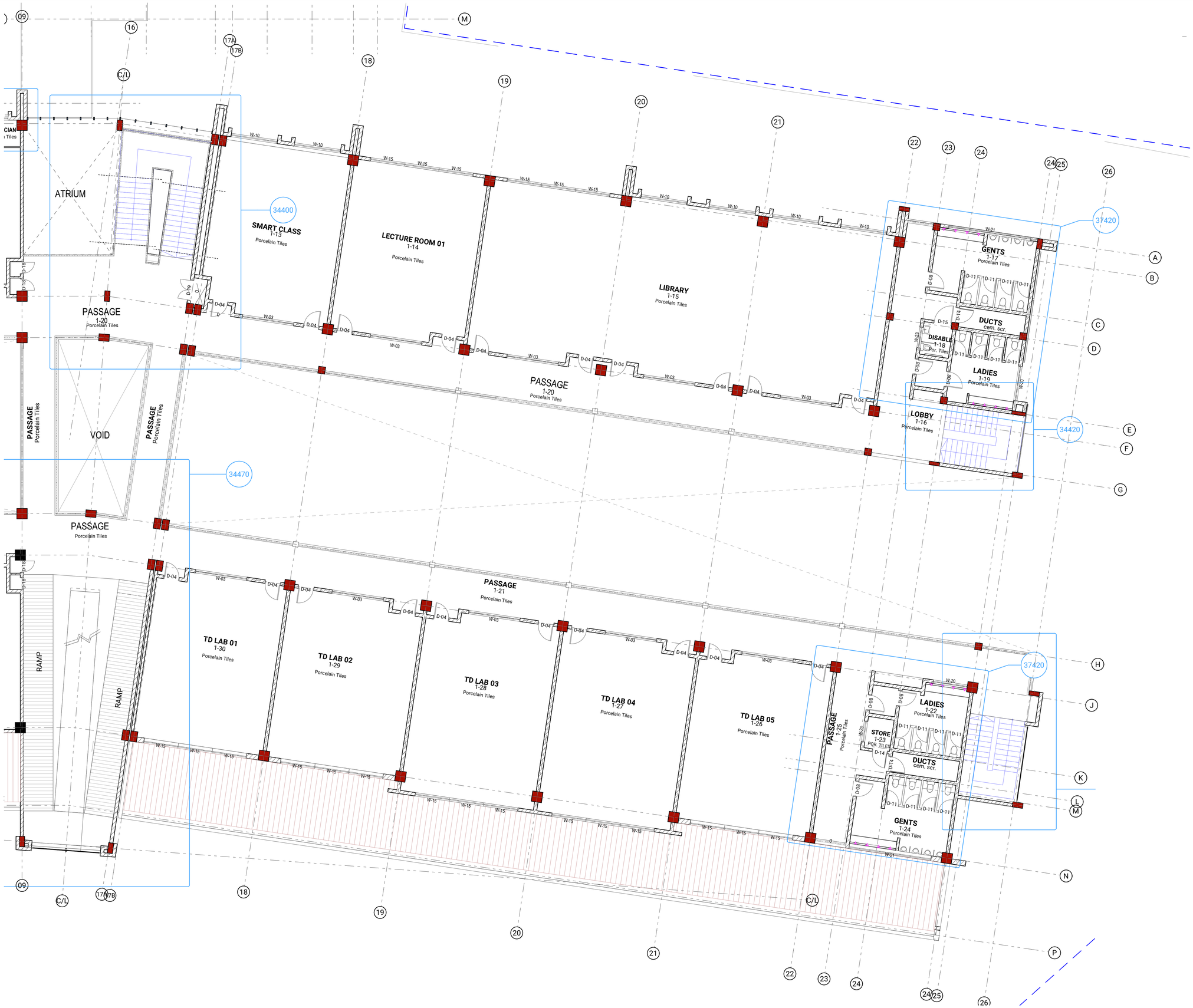
1303B

Tuition Block (A&C) First Floor Plan

1:100

FOR TENDER



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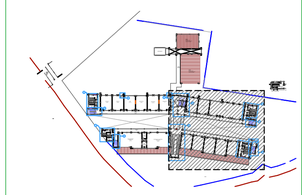

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Sheet Name

Opening Layouts
Tuition Block (B&D) First Floor Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.

2527-SK-01-DR-A-1303C

Job Number

SK-20-2527

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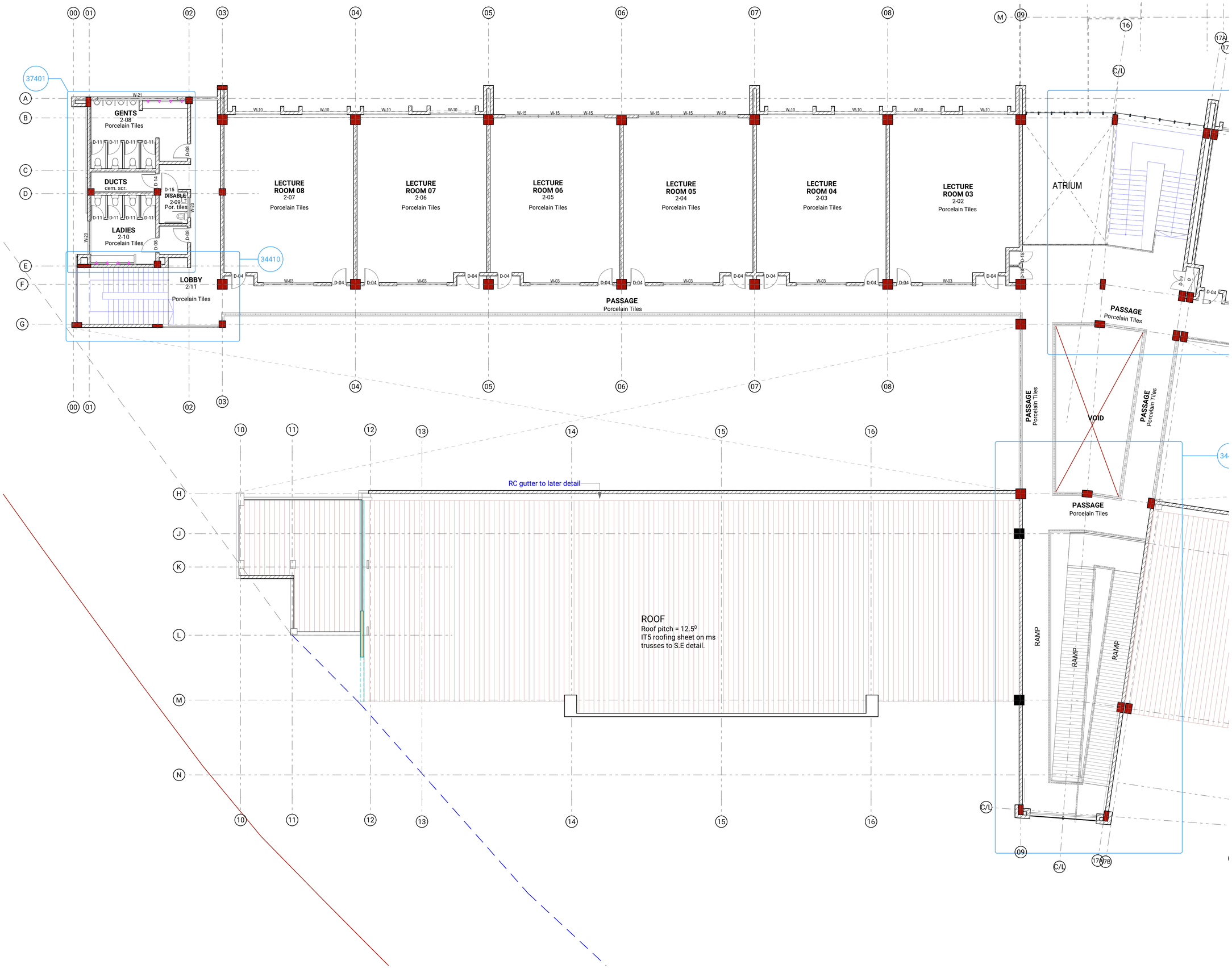
1302C

Tuition Block (B&D) First Floor Plan.

1:100 FOR TENDER



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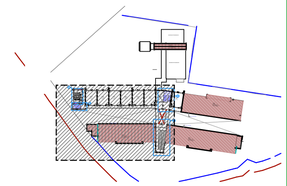

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Sheet Name

Opening Layouts
Tuition Block (A&C) Second Floor.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:100	00

Sheet No.

2527-SK-02-DR-A-1304B

Job Number

SK-20-2527

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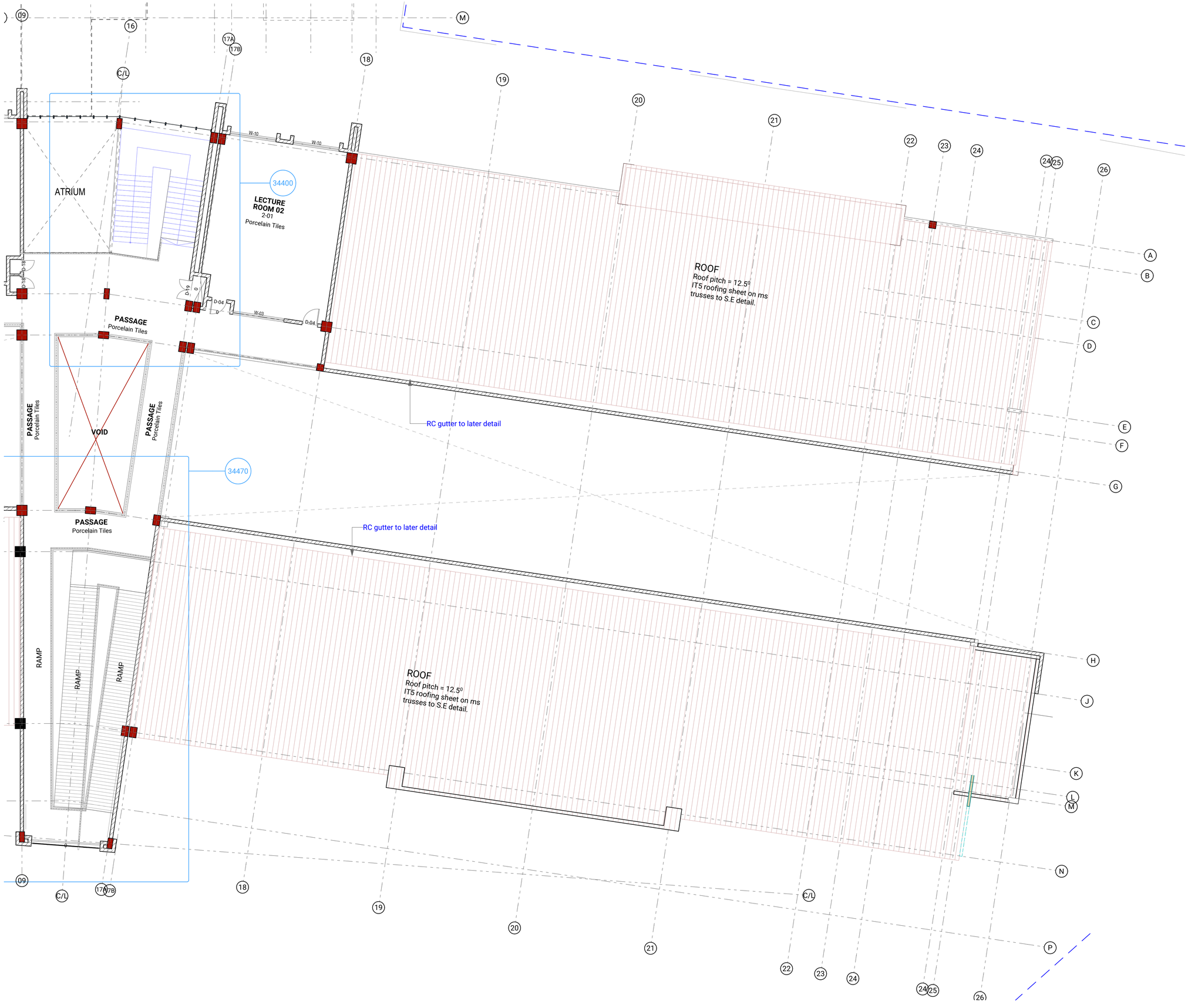
1304B **Tuition Block (A&C) Second Floor.** **1:100**

FOR TENDER



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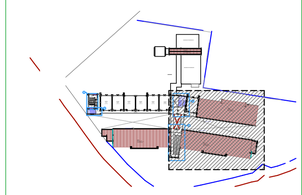
LOCATION PLAN



Rev ID	Chg ID	Description	Issue Date

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Sheet Name
Opening Layouts
Tuition Block (B&D) Second Floor Plan.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A1) **1:100**	Revision **00**

Sheet No.
2527-SK-02-DR-A-1304C

Job Number
SK-20-2527

File Path
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1304C **Tuition Block (B&D) Second Floor.** **1:100** **FOR TENDER**

1320 Guard House Ground Floor Plan 1:125

FOR TENDER

NOTES

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8. Depth of foundations to be decided on site
9. pv denotes permanent air vents over doors and windows as shown on drawings
10. A single layer of 3-ply bituminous felt to be provided between masonry and r.c. work
11. Drain pipes passing under tarmac, driveways, and buildings to be encased in 150mm thick concrete sorround
12. All reinforced concrete work to Structural Engineer's drawings
13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name

Opening Layouts

Guard House Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:125**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1320

Job Number

SK-20-2527

File Path

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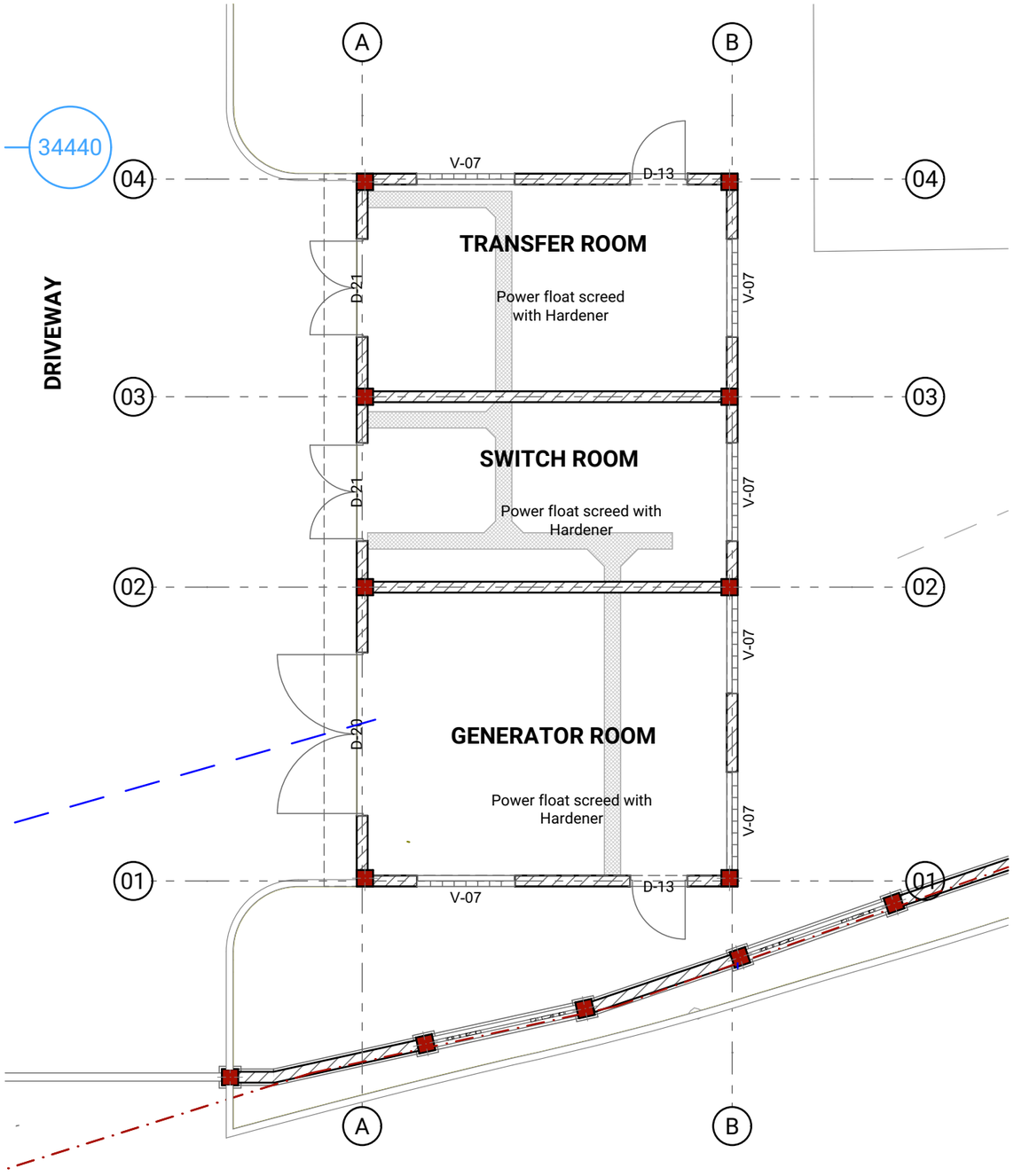

1330 **Power House Floor Plan** **1:100**

NOTES

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Rev ID	Description	Issue Date

Client

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Job Title

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Sheet Name

Opening Layouts

Power House Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:100**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1330

Job Number

SK-20-2527

File Path

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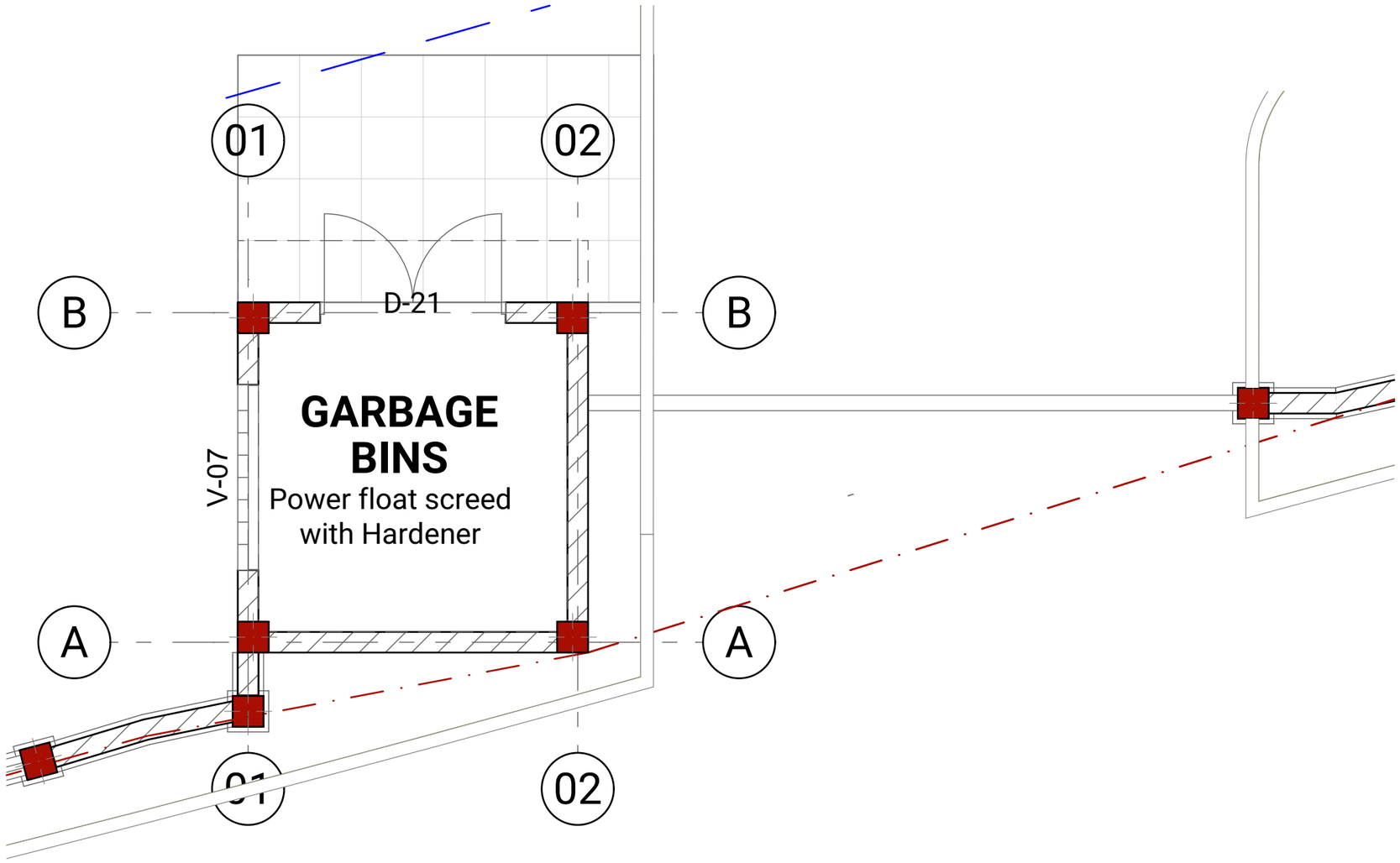
FOR TENDER



1340 **Garbage Cubicle Floor plan** **1:50**

NOTES

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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Sheet Name

Opening Layouts

Garbage CubicleFloor plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1340

Job Number

SK-20-2527

File Path

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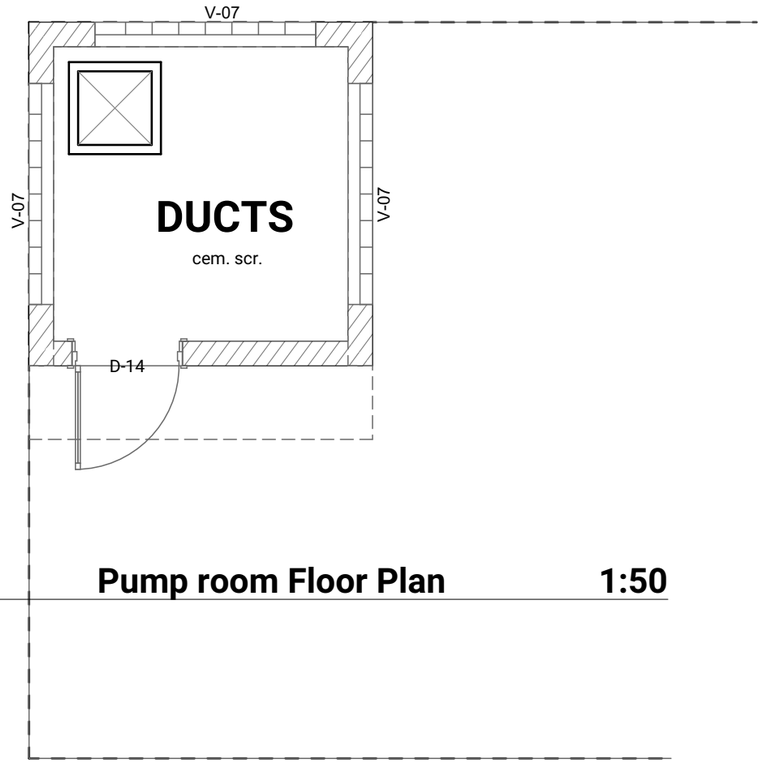
FOR TENDER



1350 **Pump room Floor Plan** 1:50

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Client

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Sheet Name

Opening Layouts

Pumproom Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-00-DR-A-1350

Job Number

SK-20-2527

File Path

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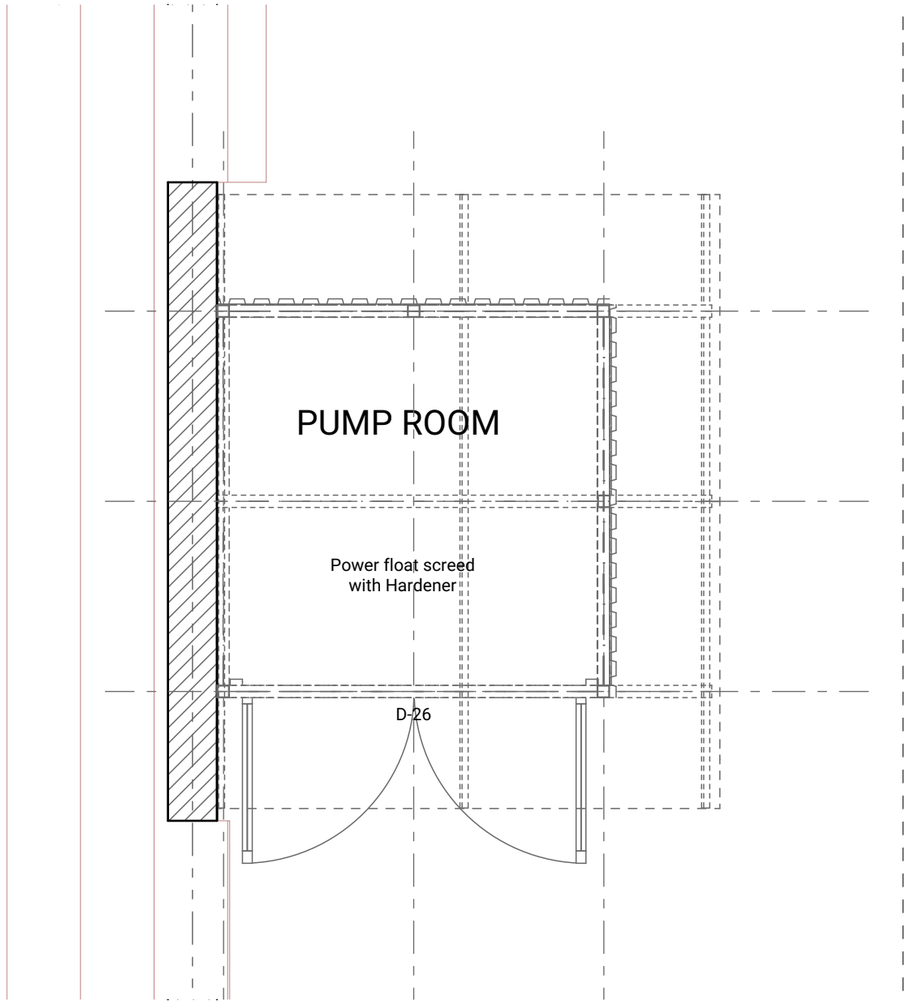
FOR TENDER



1360 **Roof Top Pump Cage** **1:25**

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Sheet Name

Opening Layouts

Rooftop Pump Cage.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:25**	Revision **00**

Sheet No.

2527-SK-03-DR-A-1360

Job Number

SK-20-2527

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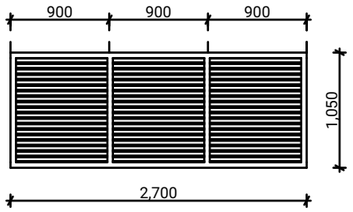
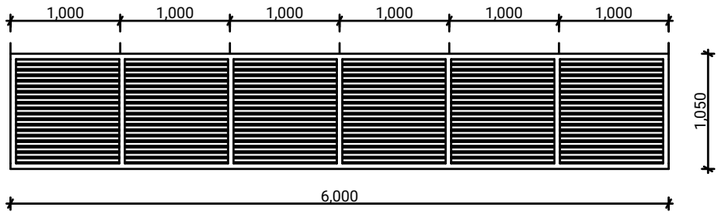
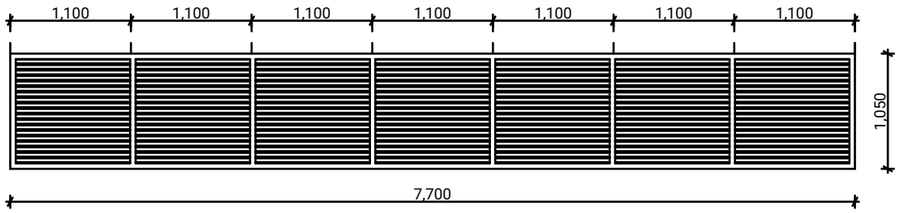
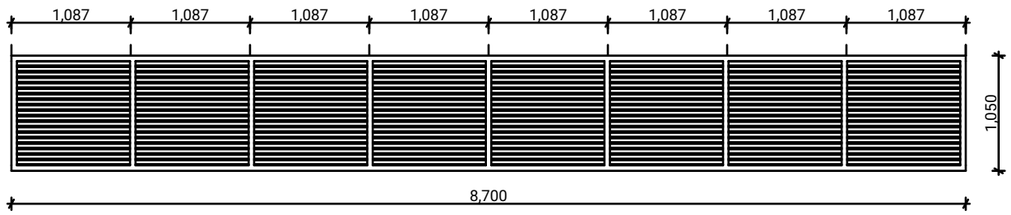
FOR TENDER

Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
V-01		2,700×1,050	16	4,200	Ms vent primed and painted to approval.
V-02		6,000×1,050	12	4,200	Ms vent primed and painted to approval.
V-03		7,700×1,050	15	4,200	Ms vent primed and painted to approval.
V-04		8,700×1,050	4	4,200	Ms vent primed and painted to approval.

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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E-mail:symbionkenya@symbion-int.com
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Sheet Name

Opening Schedule

Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

Job Number

SK-20-2527

File Path

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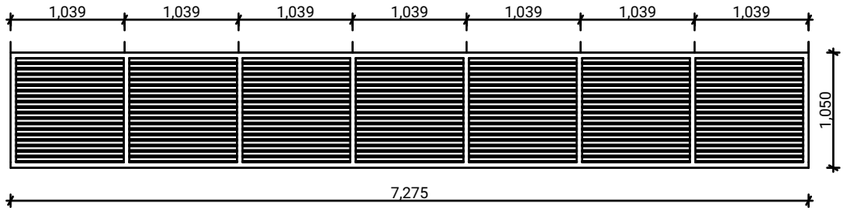
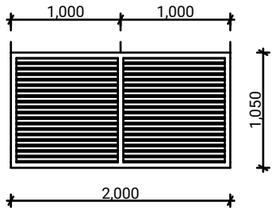
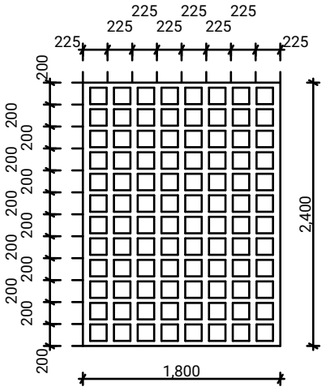
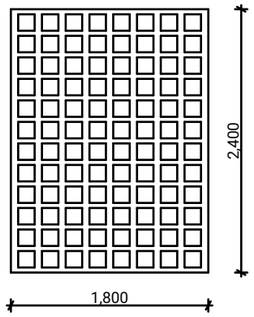
Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
V-05		7,275×1,050	2	4,200	Ms vent primed and painted to approval.
V-06		2,000×1,050	3	4,200	Ms vent primed and painted to approval.
V-07		1,800×2,400	7	0	Concrete Vent blocks painted to approval.
V-07		1,800×2,400	3		

FOR TENDER

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Job Title

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Sheet Name

Opening Schedule

Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

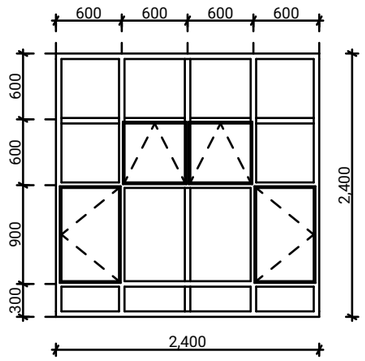
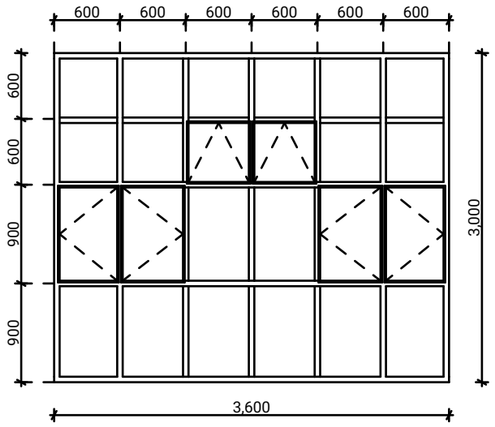
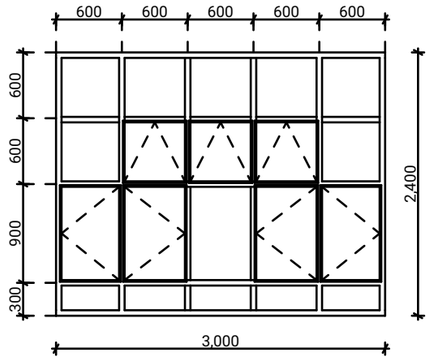
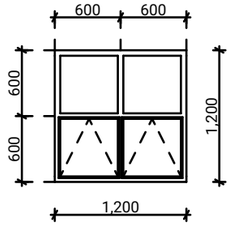
Job Number

SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln

Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-01		2,400×2,400	2	4,200	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-02		3,600×3,000	1	300	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-03		3,000×2,400	23	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-04		1,200×1,200	7	2,100	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

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WEBSITE: www.symbion-int.com

Sheet Name

Opening Schedule

Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

Job Number

SK-20-2527

File Path

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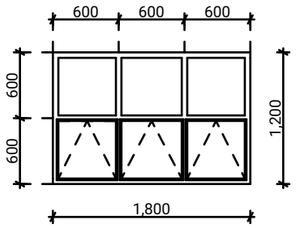
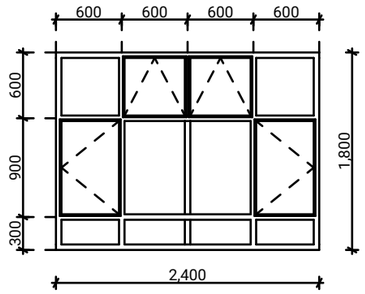
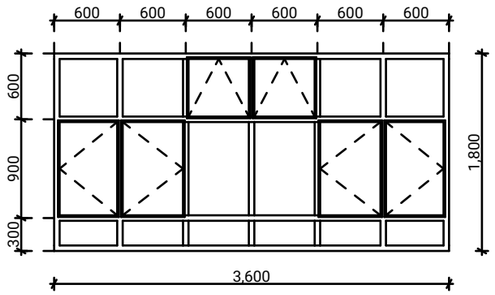
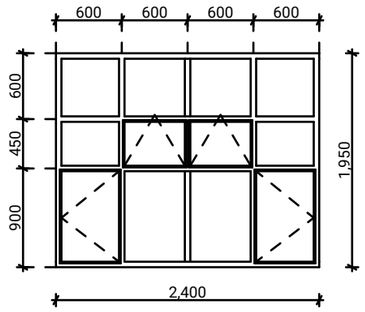
Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-05		1,800×1,200	1	2,100	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-06		2,400×1,800	1	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-07		3,600×1,800	5	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-08		2,400×1,950	2	1350	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name

Opening Schedule

Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

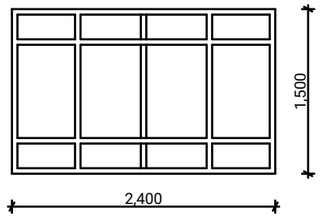
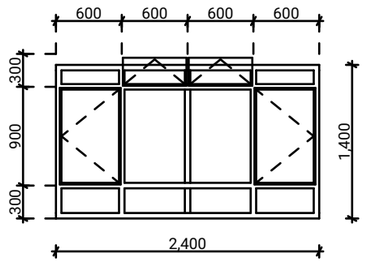
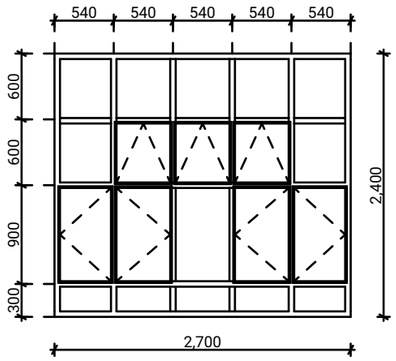
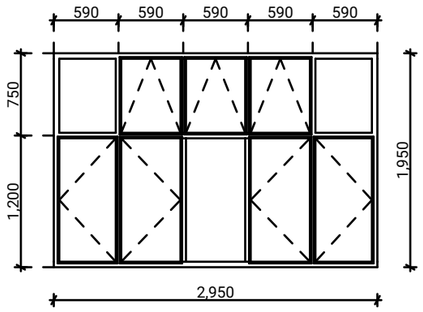
Job Number

SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln

Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-09		2,400×1,500	2	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-09		2,400×1,400	1	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-10		2,700×2,400	24	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-11		2,950×1,950	2	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

FOR TENDER

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Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

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Job Number

SK-20-2527

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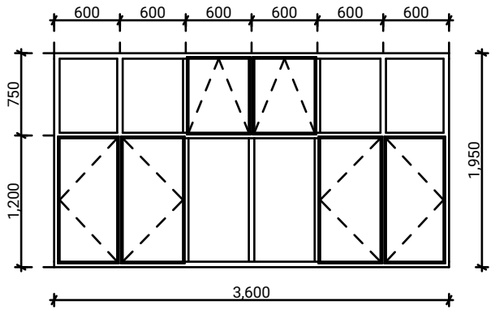
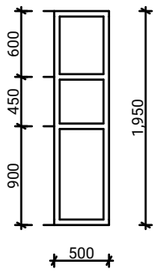
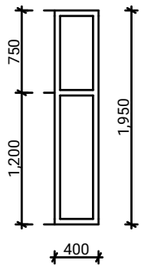
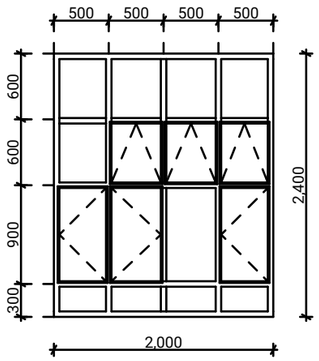
Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-12		3,600×1,950	3	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-14		500×1,950	4	1350	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-14		400×1,950	5	900 (except 1no @ 1350)	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-15		2,000×2,400	33	900	Purpose made ms casement module window frame with PV and with 8mm thick clear glazing.

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Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

Job Number

SK-20-2527

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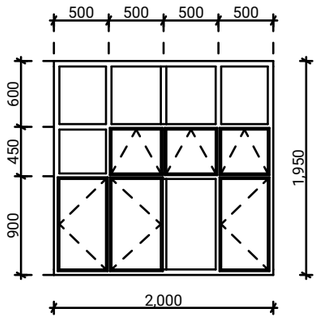
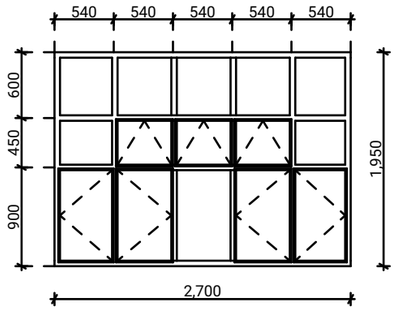
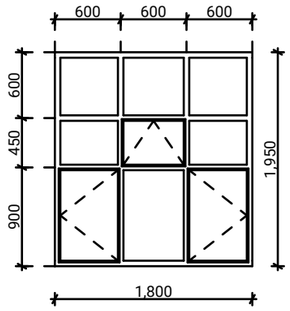
Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-16		2,000×1,950	74	1350	Purpose made ms casement module window frame with PV and with 8mm thick clear glazing.
W-17		2,700×1,950	31	1350	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-18		1,800×1,950	3	1350	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

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GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:1.12	Revision 00

Sheet No.

2527-SK-FL-XX-A-43100

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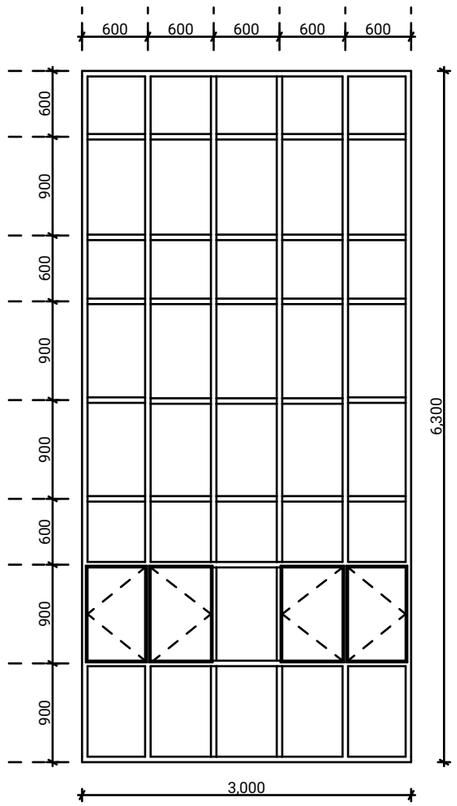
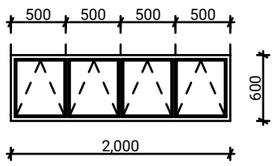
Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-19		3,000×6,300	1	300	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-20		2,000×600	14	1950	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

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Sheet Name
Opening Schedule
Window Schedule

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:1.12	00

Sheet No.
2527-SK-FL-XX-A-43100

Job Number
SK-20-2527

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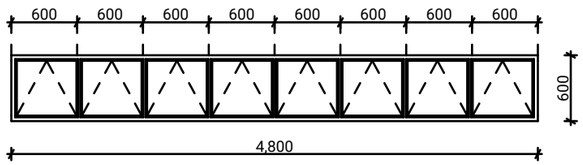
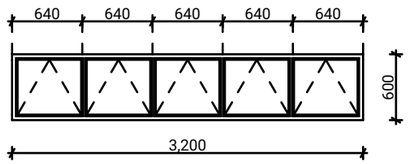
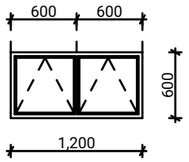
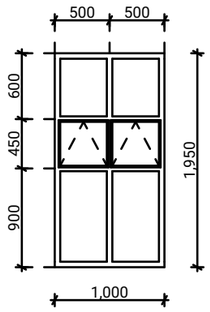
Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-21		4,800×600	8	1950	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-22		3,200×600	3	1950	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-23		1,200×600	13	1950	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-24		1,000×1,950	10	1350	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

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Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

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2527-SK-FL-XX-A-43100

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SK-20-2527

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Window Schedule

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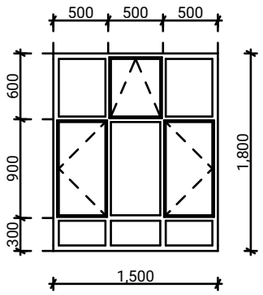
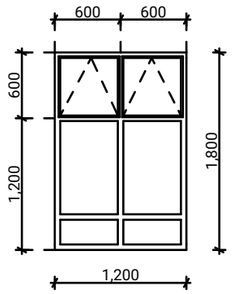
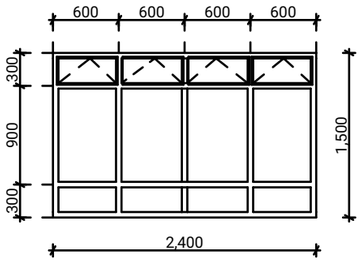
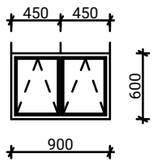
W-25		1,500×1,800	12	900	Purpose made ms casement window with 8mm thick clear glazing.
W-26		1,200×1,800	13	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-27		2,400×1,500	1	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
W-28		900×600	4	2100	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

FOR TENDER

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11. Drain pipes passing under tarmac, driveways, and buildings to be encased in 150mm thick concrete sorround
12. All reinforced concrete work to Structural Engineer's drawings
13. All sanitary works to the entire satisfaction of MoH
14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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WEBSITE: www.symbion-int.com

Sheet Name

Opening Schedule

Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

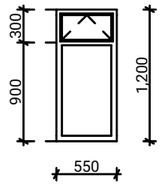
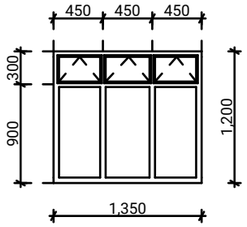
Job Number

SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln

Window Schedule

Window ID	View from Opening Side	Nominal W x H Size	Quantity	Cill	Description
W-29		550×1,200	2	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.
WT-30		1,350×1,200	3	900	Purpose made ms casement window frame with PV and with 8mm thick clear glazing.

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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WEBSITE: www.symbion-int.com

Sheet Name

Opening Schedule

Window Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.12**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43100

Job Number

SK-20-2527

File Path

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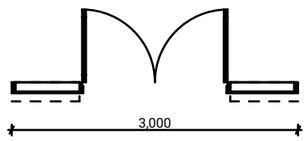
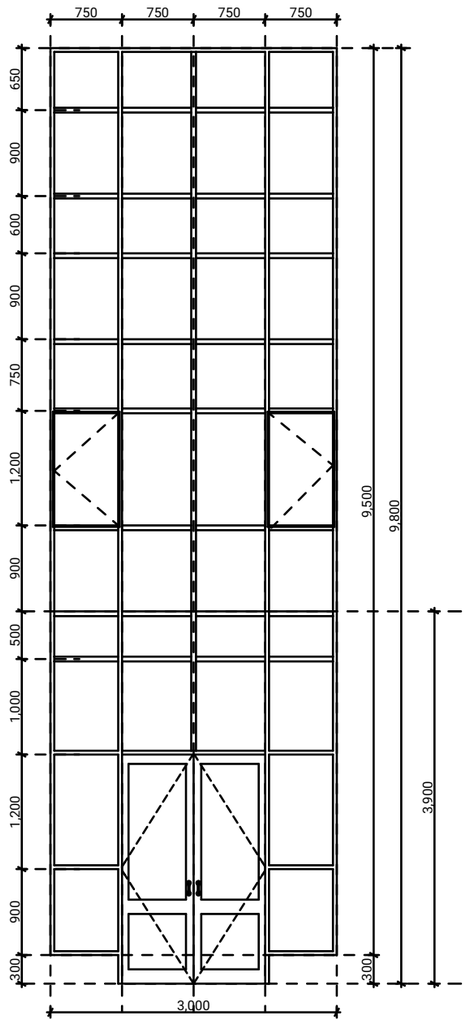
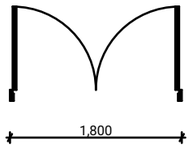
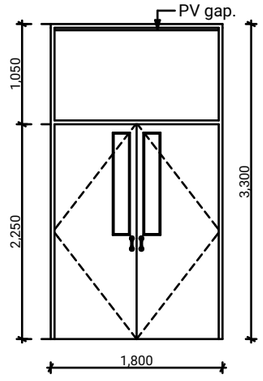
Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-01	3,000×9,800		1		Powder coated aluminium curtain walling with double swing door and 2 no openable window sash.
D-02	1,800×3,300		25		Double leaf Ms door made of Ms frame with gauge 16 ms plate welded on both sides with 150x900mm glazed view panel and Funlight with 25mm pv gap above glazing.

FOR TENDER

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Sheet Name

Opening Schedule

Door Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.29**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43200

Job Number

SK-20-2527

File Path

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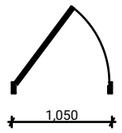
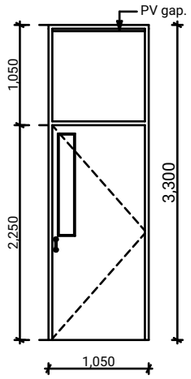
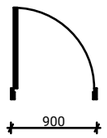
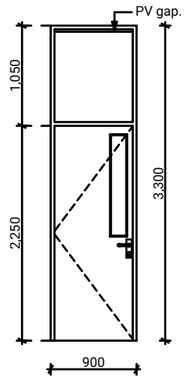
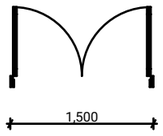
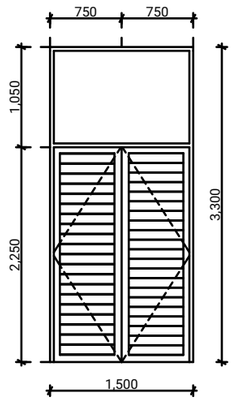
Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-03	1,050×3,300		4		Single leaf Ms door made of Ms frame with gauge 16 ms plate welded on both sides with 150x900mm glazed view panel and Funlight with 25mm pv gap above glazing.
D-04	900×3,300		46		Solid mahogany timber door with 150x900mm glazed view panel and Funlight with 25mm pv gap above glazing.
D-05	1,500×3,300		1		Double leaf Ms louvre door with funlight.

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Rev ID	Description	Issue Date

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Job Title

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Sheet Name

Opening Schedule

Door Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.29**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43200

Job Number

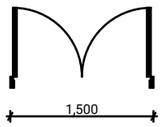
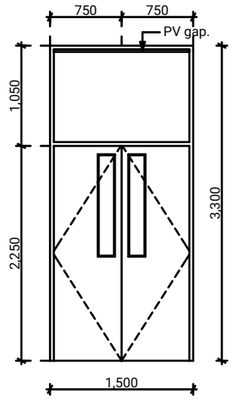
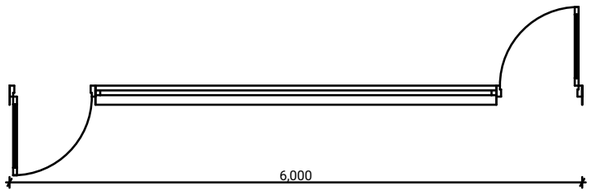
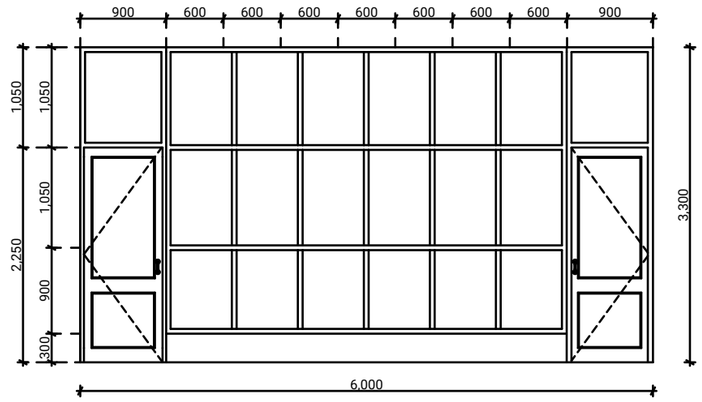
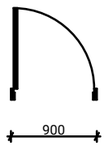
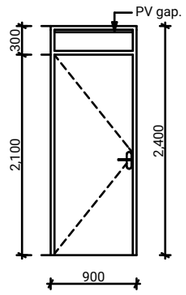
SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln

FOR TENDER

Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-06	1,500×3,300		2		Double leaf Ms door made of Ms frame with gauge 16 ms plate welded on both sides with 150x900mm glazed view panel and Funlight with 25mm pv gap above glazing.
D-07	6,000×3,300		1		Powder coated aluminium curtain walling with two swing doors
D-08	900×2,400		36		Solid core flush door with Funlight with 25mm pv gap above glazing.

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Opening Schedule

Door Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.29**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43200

Job Number

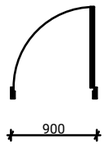
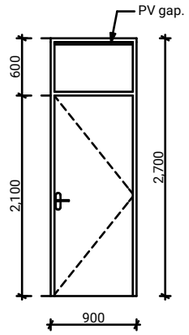
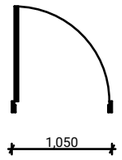
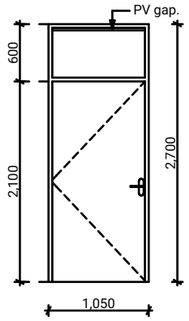
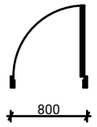
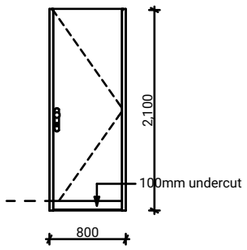
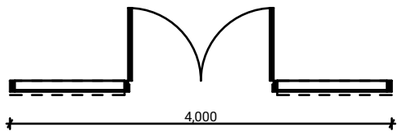
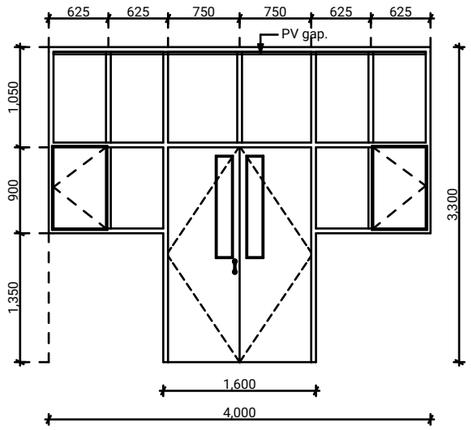
SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln

FOR TENDER

Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-09	900×2,700		33		Solid core flush door with Funlight with 25mm pv gap above glazing.
D-10	1,050×2,700		1		Solid core flush door with Funlight with 25mm pv gap above glazing.
D-11	800×2,100		67		2,000mm high Solid core flush door with 100mm undercut.
D-12	4,000×3,300		2		Double leaf Ms door with side light made of Ms frame with gauge 16 ms plate welded on both sides with 150x900mm glazed view panel and Funlight with 25mm pv gap above glazing.

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

SYMBION

Office: +254-0202610691,2455071,2688045/9
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E-mail:symbionkenya@symbion-int.com
WEBSITE: www.symbion-int.com

Sheet Name

Opening Schedule

Door Schedule

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:1.29**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43200

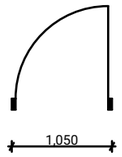
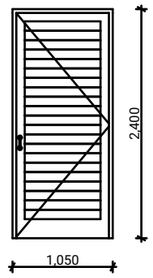
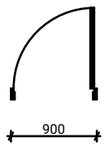
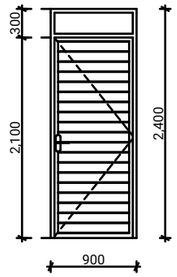
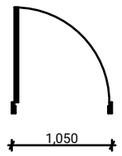
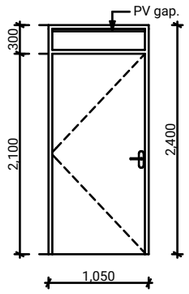
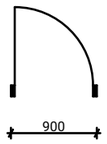
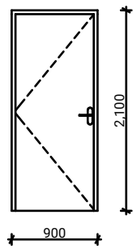
Job Number

SK-20-2527

File Path

\\Appserver\projects\SK-20-2527 East Africa Skills for Transformation & Regional Integration Project at Meru National Polytechnic\PROJECT DOCUMENTS\PROJECT TEAM\DESIGN LEAD AND ARCHITECTS\stage 4-TD\4.2\Pln\MNP - PDs.pln

Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-13	1,050×2,400		2		Single leaf Ms louvre door.
D-14	900×2,400		14		Sing leaf Ms louvre door with funlight.
D-15	1,050×2,400		6		Solid core flush door with Funlight with 25mm pv gap above glazing.
D-16	900×2,100		11		Solid core flush door.

FOR TENDER

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Issue Date **13/04/2021**	Scale (A3) **1:1.29**	Revision **00**

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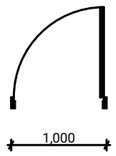
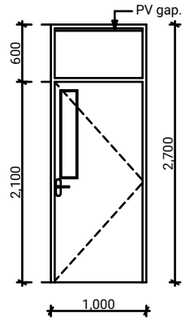
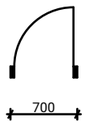
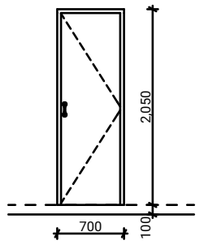
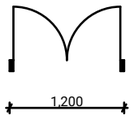
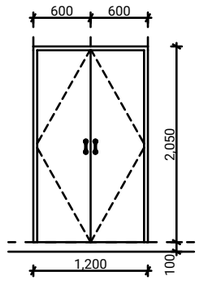
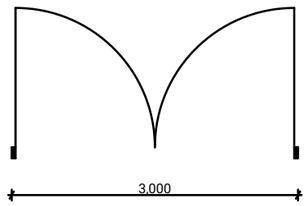
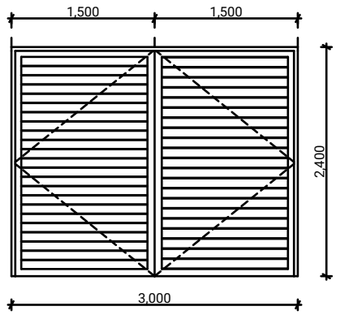
Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-17	1,000×2,700		1		Single leaf Ms door made of Ms frame with gauge 16 ms plate welded on both sides with 150x900mm glazed view panel and Funlight.
D-18	700×2,050		15		Solid core flush door. fitted above 100mm high raised threshold.
D-19	1,200×2,050		2		Solid core flush door. fitted above 100mm high raised threshold.
D-20	3,000×2,400		1		Double leaf Ms louvre door.

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Door Schedule

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Issue Date **13/04/2021**	Scale (A3) **1:1.29**	Revision **00**

Sheet No.

2527-SK-FL-XX-A-43200

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SK-20-2527

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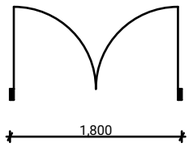
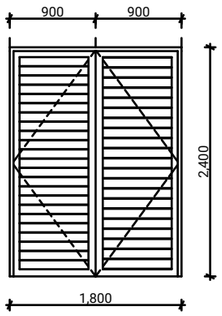
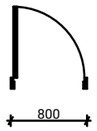
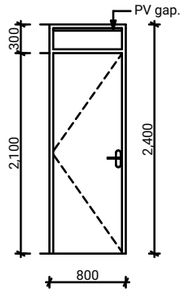
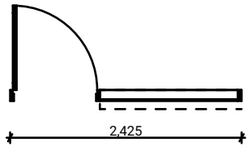
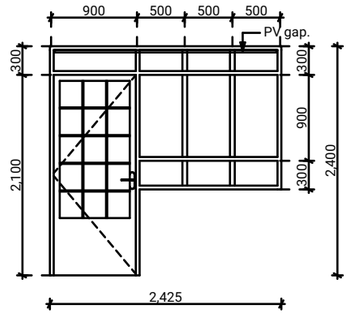
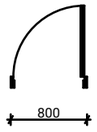
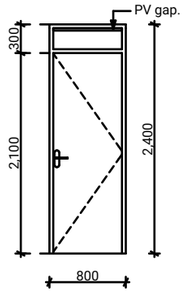
Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-21	1,800×2,400		3		Double leaf Ms louvre door.
D-22	800×2,400		1		Solid core flush door with Funlight with 25mm pv gap above glazing.
D-23	2,425×2,400		1		Sigle leaf Ms door with side light made of Ms frame with gauge 16 ms plate welded on both sides and glazed view panel above 900mm and Funlight with 25mm pv gap above glazing.
D-24	800×2,400		2		Solid core flush door with Funlight.

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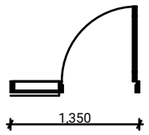
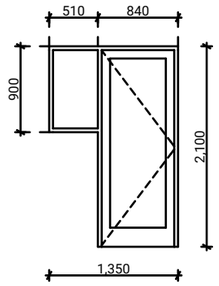
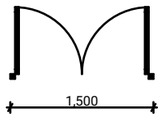
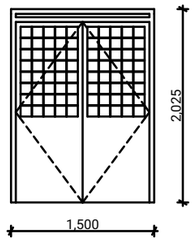
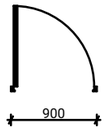
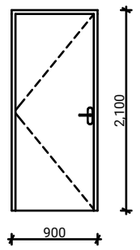
Door Schedule

Element ID	W x H Size	2D Symbol	Quantity	View from Side Opposite to Opening Side	Description
D-25	1,350×2,100		1		Solid core flush door with Funlight with 25mm pv gap above glazing.
D-26	1,500×2,025		1		Double leaf Ms grill door with 900mm high ms plate.
D-27	900×2,100		2		Solid core flush door with Funlight with 25mm pv gap above glazing.

FOR TENDER

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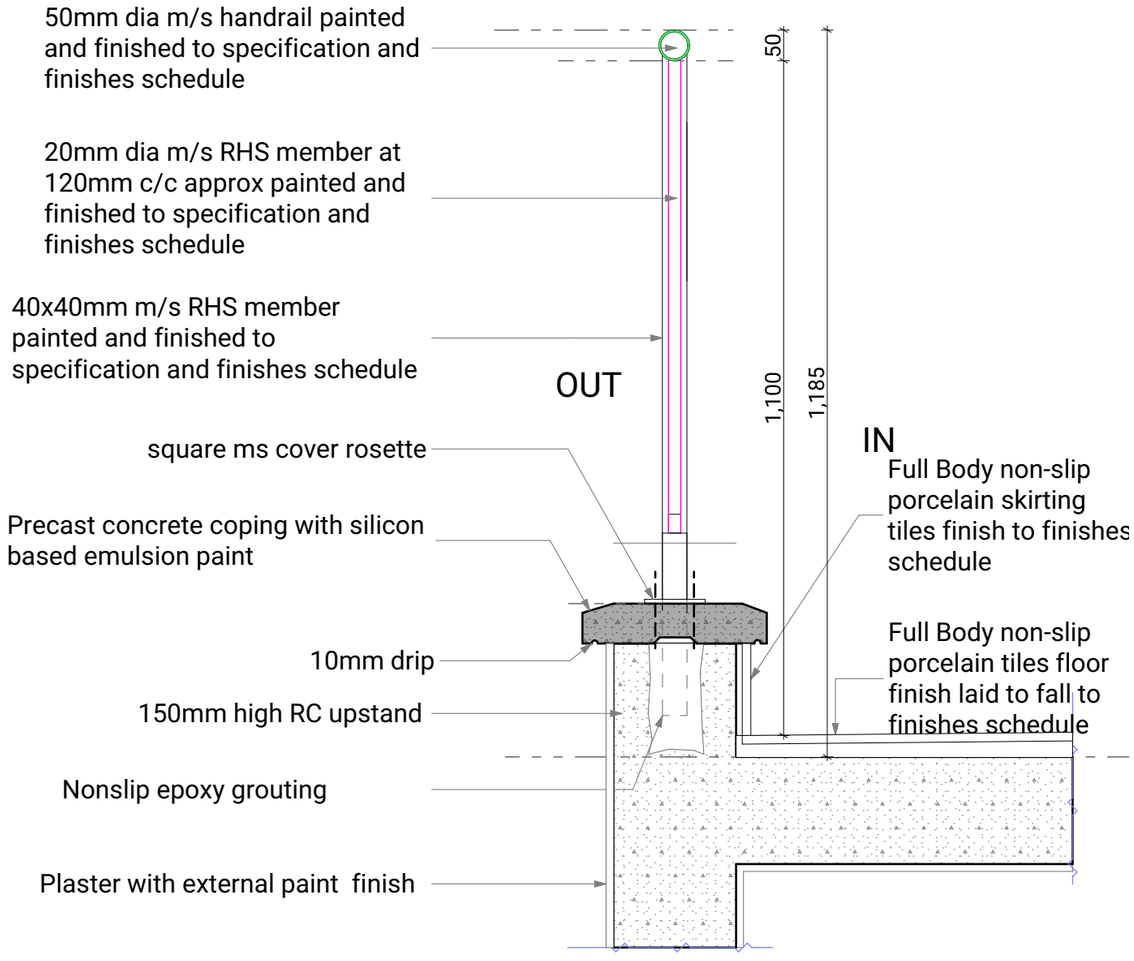

SECTION

53401 **Section** **1:10**

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Sheet Name

Railings & Grills

Railing Detail. (at staircase Atrium)

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-53401

Job Number

SK-20-2527

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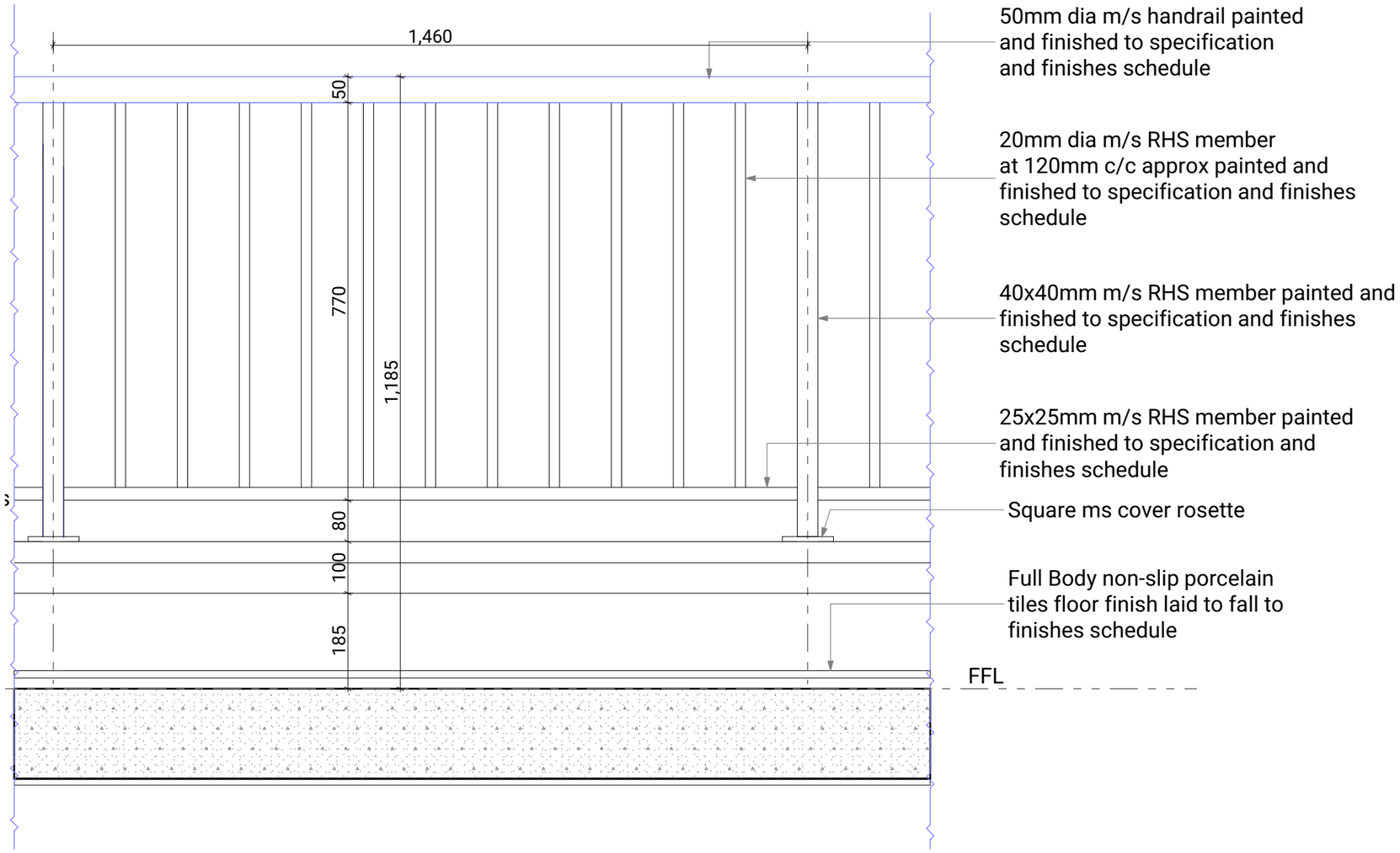
FOR TENDER



ELEVATION FROM INSIDE

53402 **Elevation** **1:10**

FOR TENDER

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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E-mail:symbionkenya@symbion-int.com
WEBSITE: www.symbion-int.com

Sheet Name

Railings & Grills

Railing Detail. (at staircase Atrium)

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-53402

Job Number

SK-20-2527

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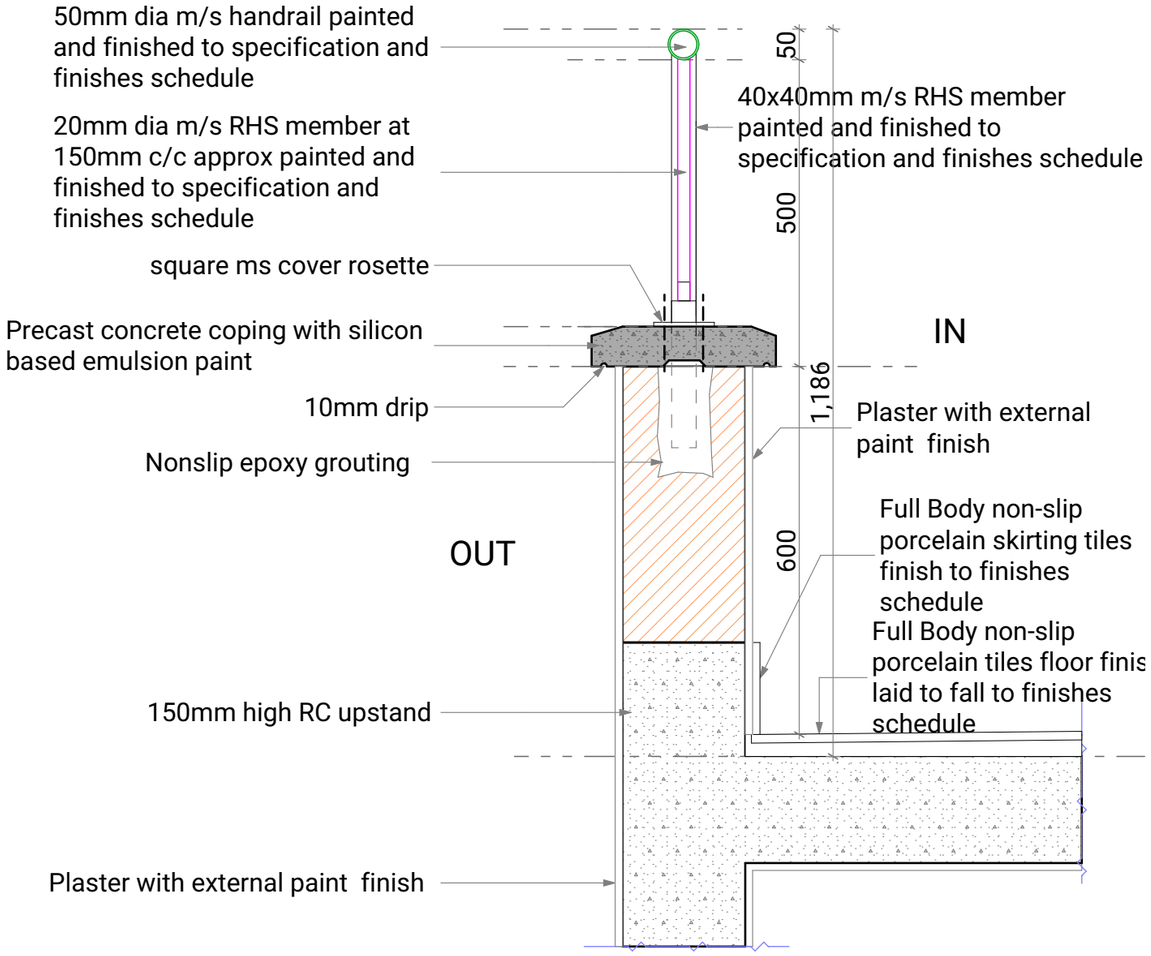

SECTION

53403 **Section** **1:10**

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Sheet Name
Railings & Grills
Passage & Bridge Railing Detail.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-53403

Job Number
SK-20-2527

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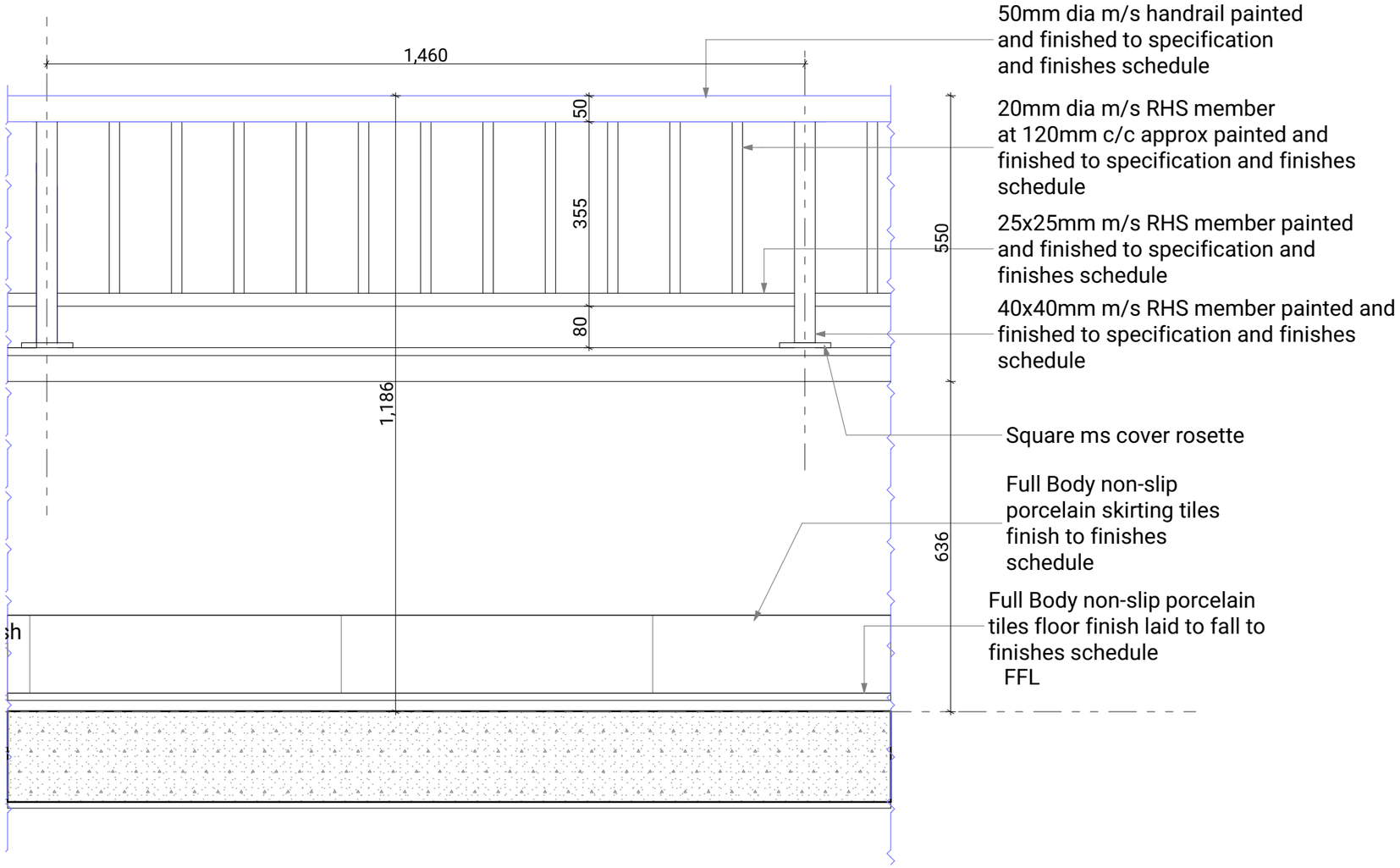

53404 **Elevation** **1:10**

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Sheet Name
Railings & Grills
Passage & Bridge Railing Detail.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:10	00

Sheet No.
2527-SK-XX-DR-A-53404

Job Number
SK-20-2527

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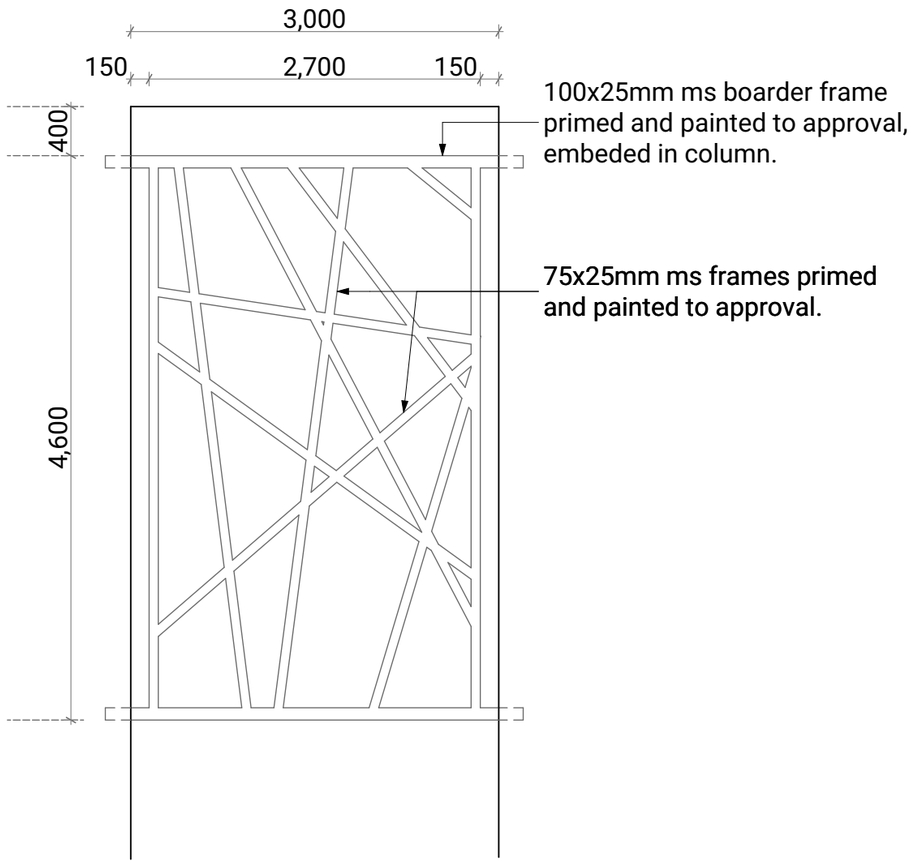

53405 Ms Decorative grills 01 (1 No) 1:50

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Sheet Name

Railings & Grills

Ms Decorative grill 01

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

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Job Number

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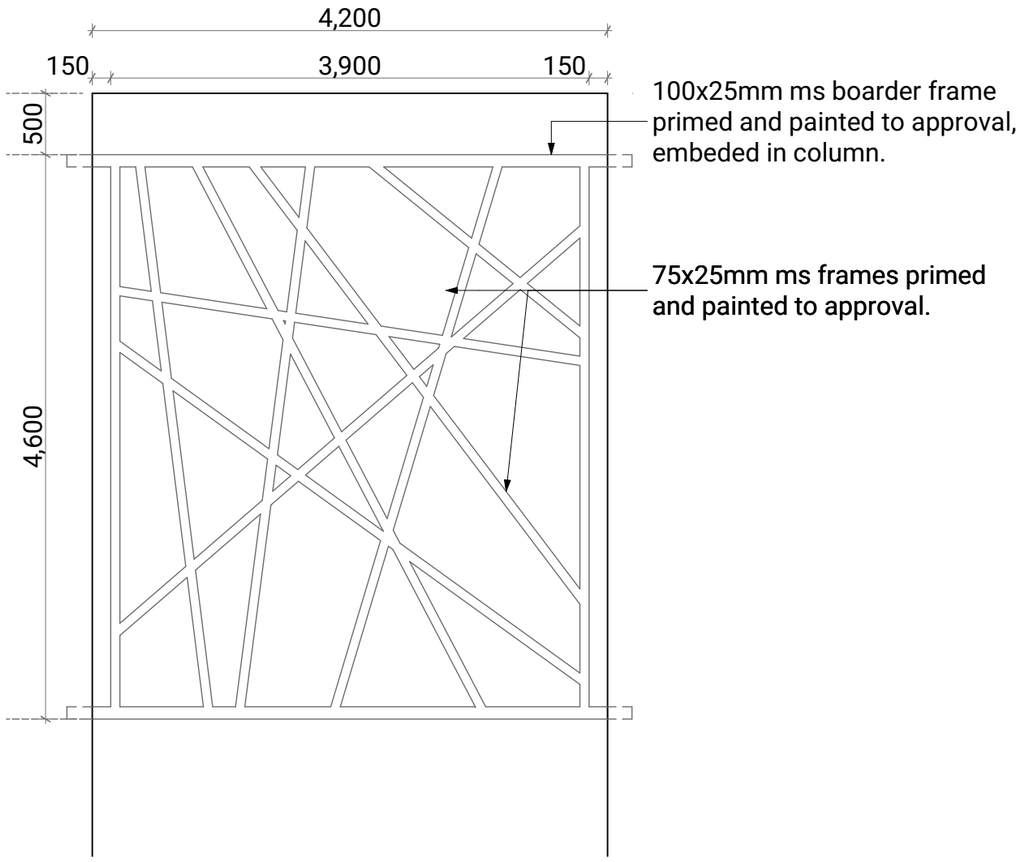

53406 **Ms Decorative grills 02 (2 No)** **1:50**

FOR TENDER

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Sheet Name

Railings & Grills

Ms Decorative grill 02

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

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2527-SK-XX-DR-A-53406

Job Number

SK-20-2527

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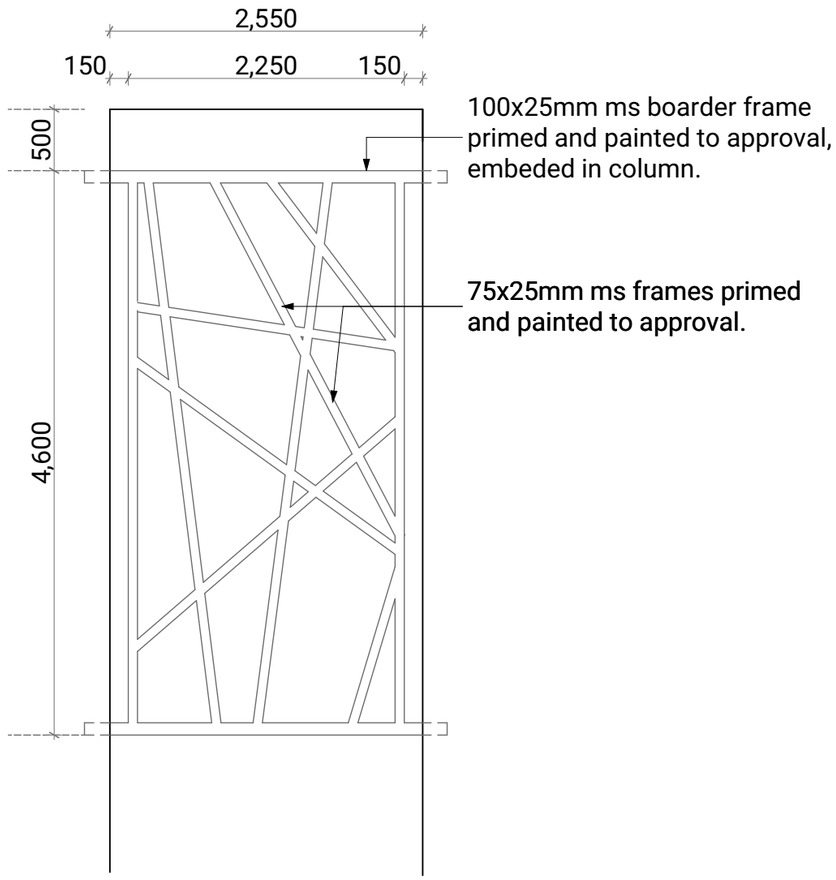

Grille 03 (1 Nº)

53407 Ms Decorative grills 03 (1 No) 1:50

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Sheet Name

Railings & Grills

Ms Decorative grill 03

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale **(A3)** **1:50**	Revision **00**

Sheet No.

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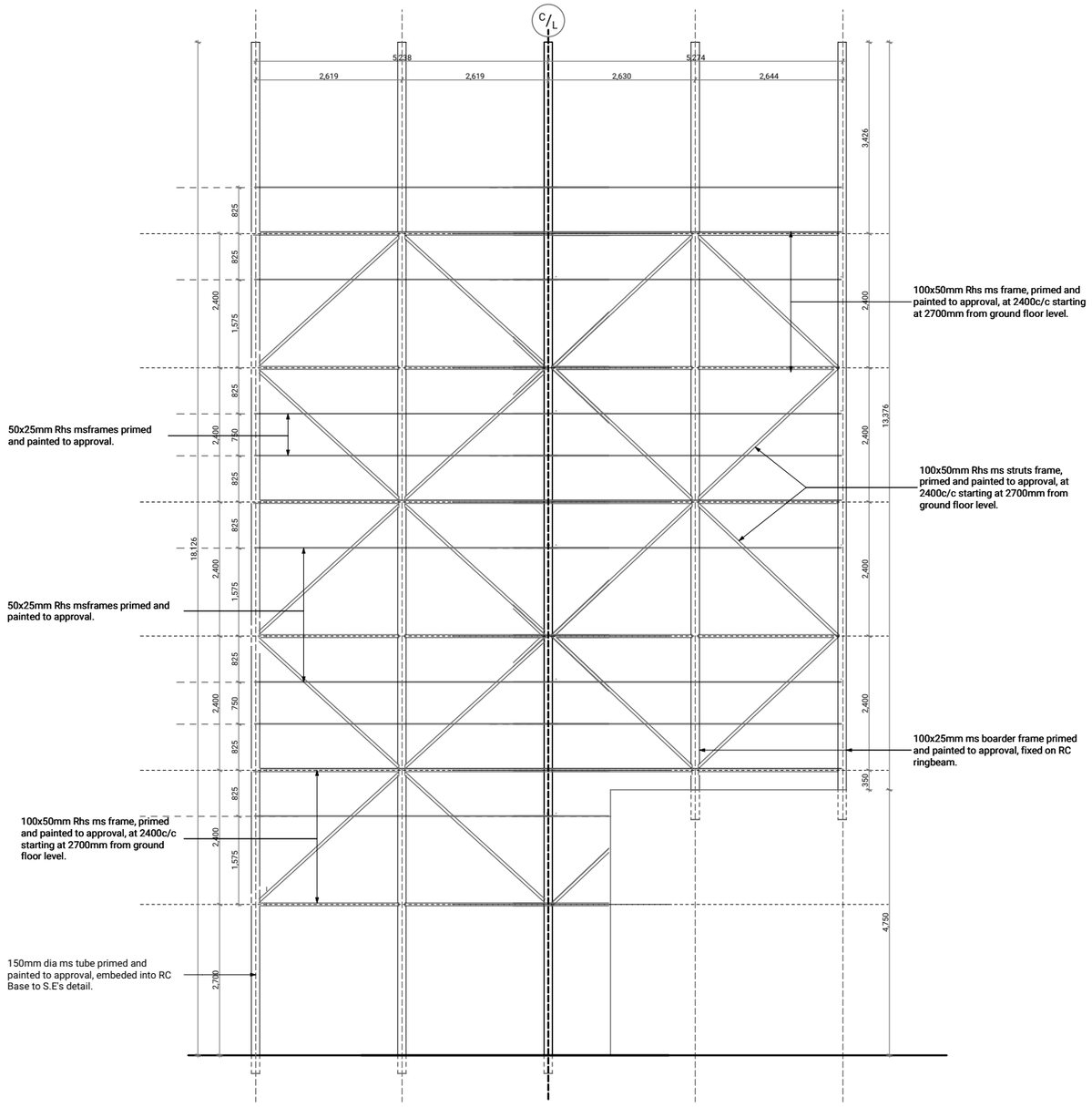

53408 Ms Scaffold Like Feature 1:100

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Sheet Name

Railings & Grills

Ms Scaffold Like Feature

Drawn by	Checked by	
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Issue Date **13/04/2021**	Scale (A3) **1:100**	Revision **00**

Sheet No.

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Job Number

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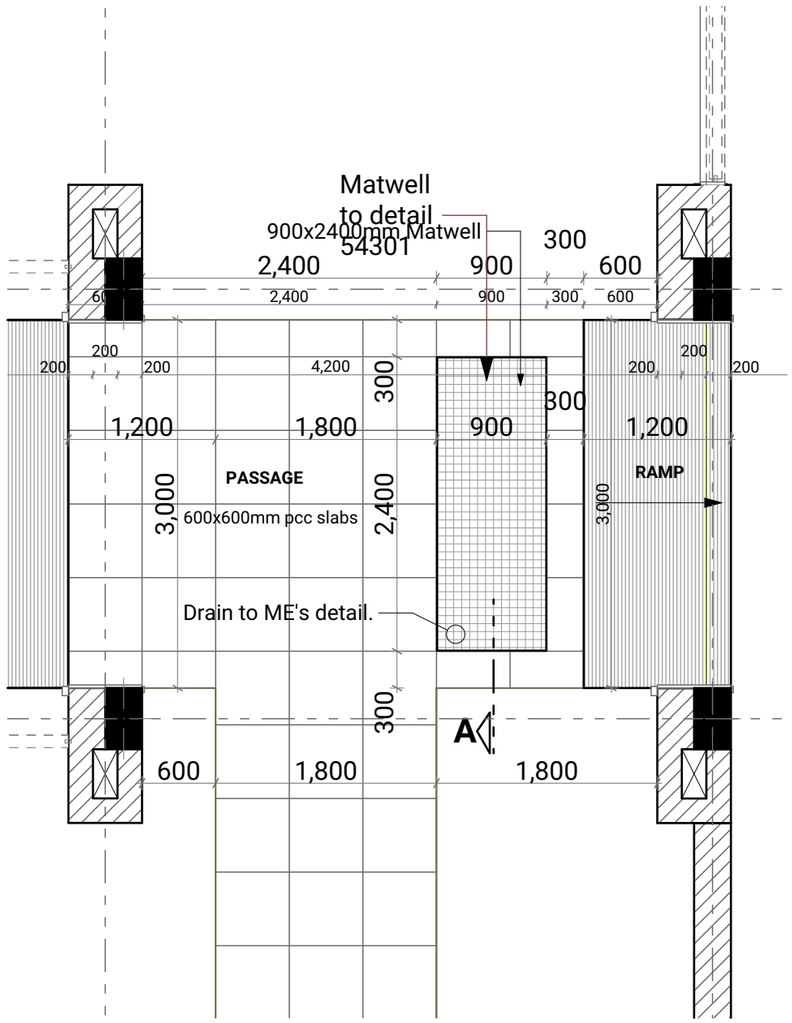
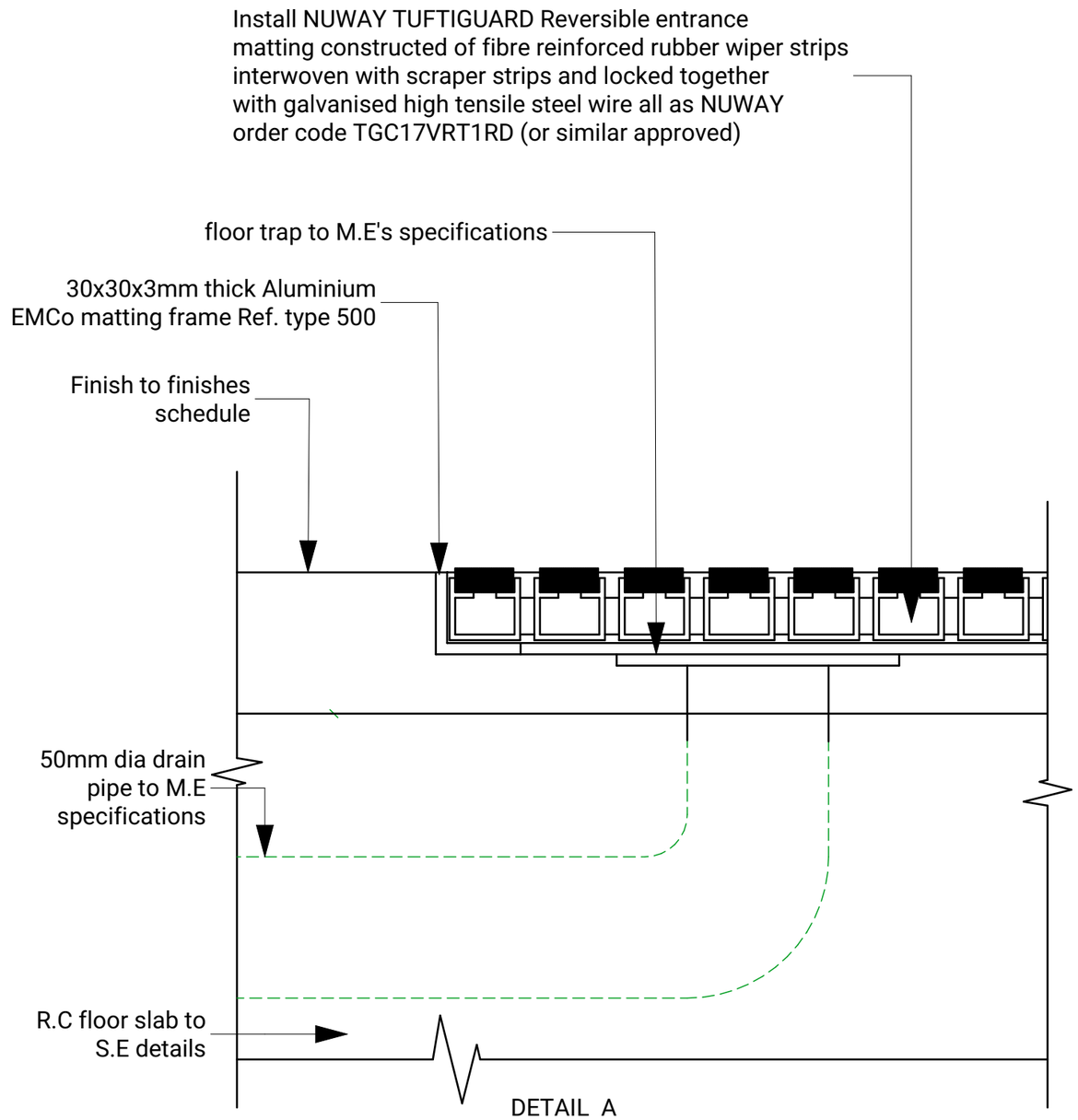


54301 **Matwell Plan** **1:50**



54302 **Matwell Detail** **1:2**

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Rev ID	Description	Issue Date

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Sheet Name

Floor Finish Details

Matwell Detail

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50, 1:2	00

Sheet No.

2527-SK-XX-DR-A-54301

Job Number

SK-20-2527

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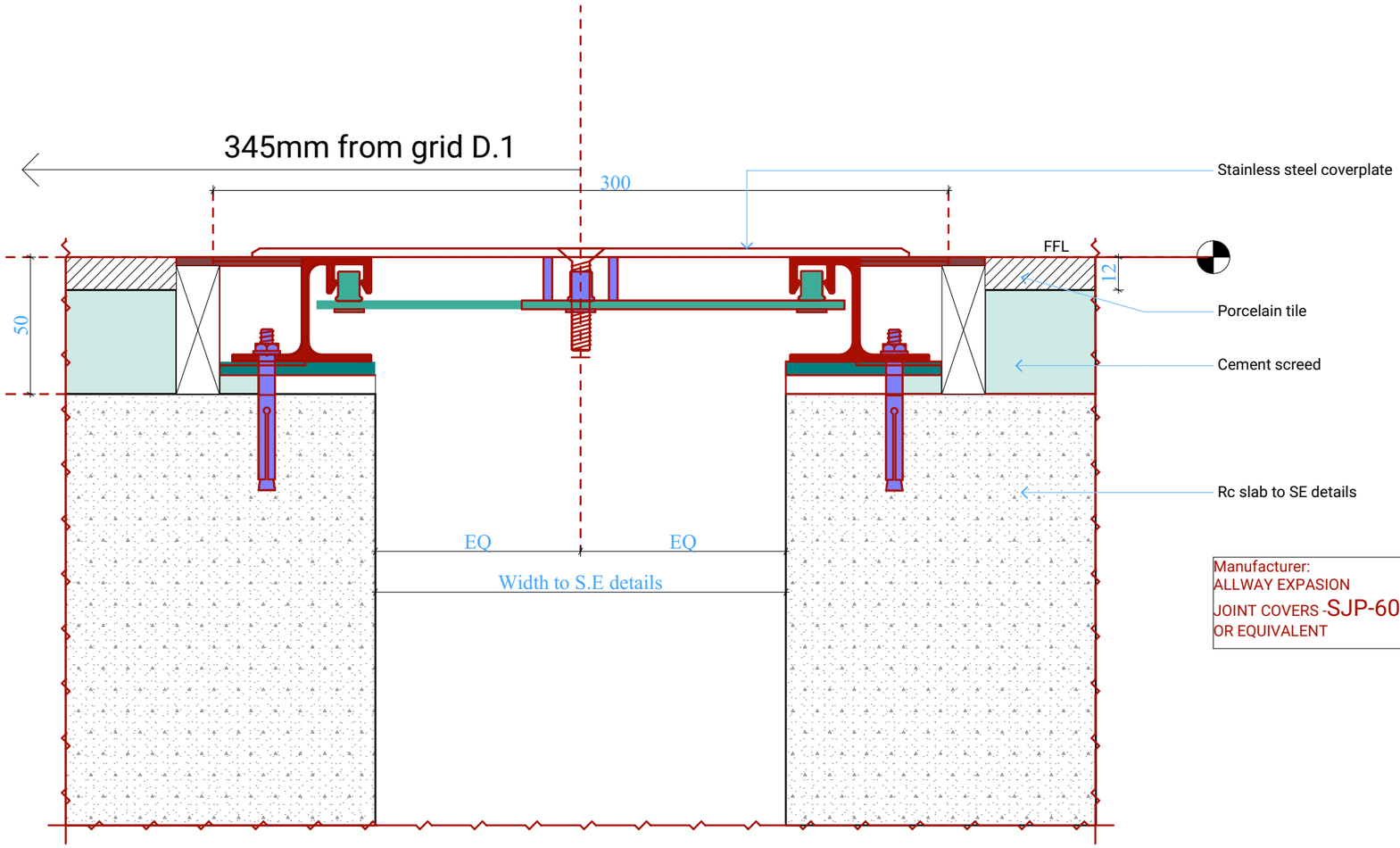

Manufacturer:
ALLWAY EXPASION
JOINT COVERS -SJP-600SS
OR EQUIVALENT

STAINLESS STEEL EXPANSION JOINT
COVER PLATE

54302 **Floor Expansion Joint Detail.** **1:2**

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Sheet Name
Floor Finish Details
Expansion Joint Detail.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:2	00

Sheet No.
2527-SK-XX-DR-A-54302

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SK-20-2527

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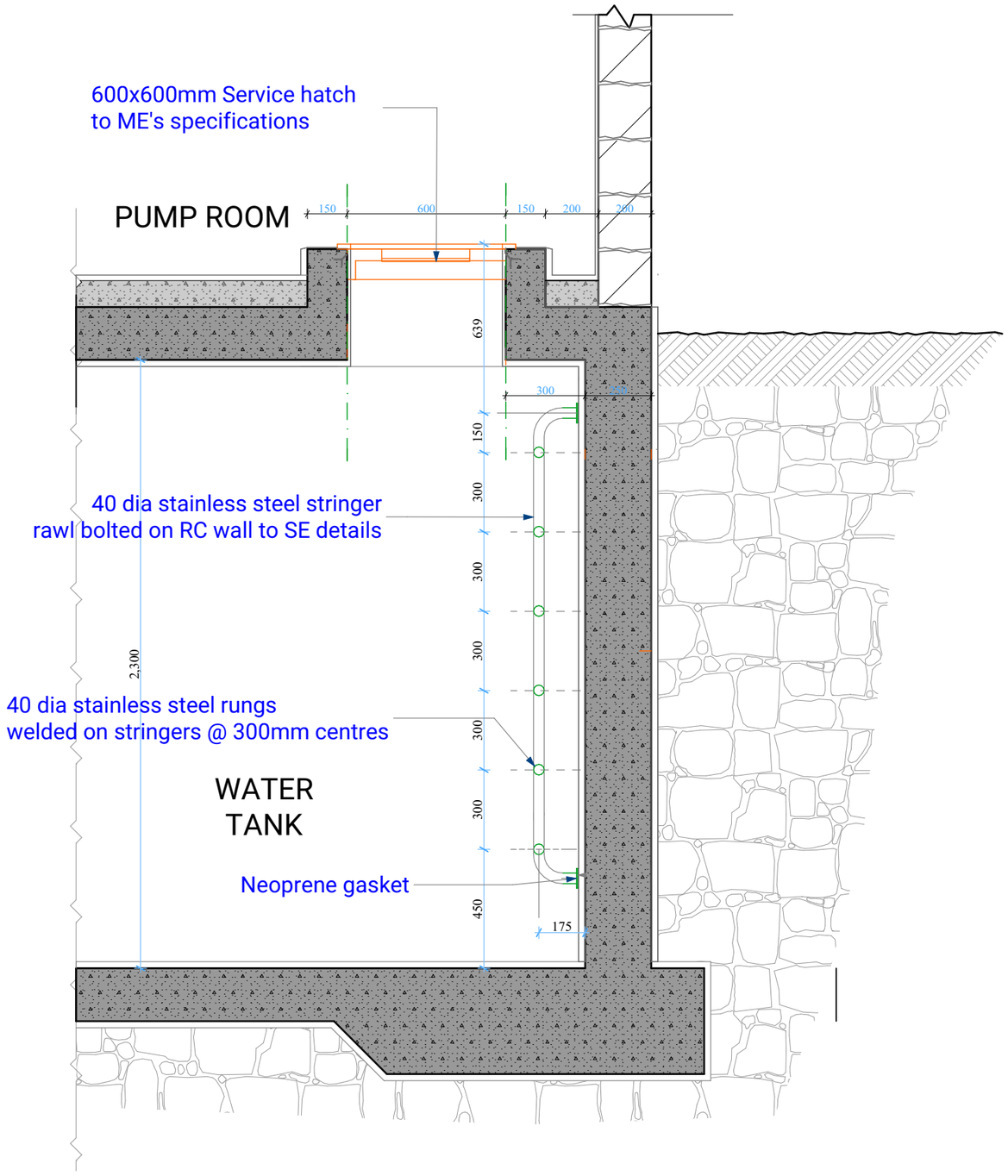

54401 **Catladder** **1:20**

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Sheet Name

Staircase, Ramp & Catladders

Water Tank Catladder Detail.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:20**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-54401

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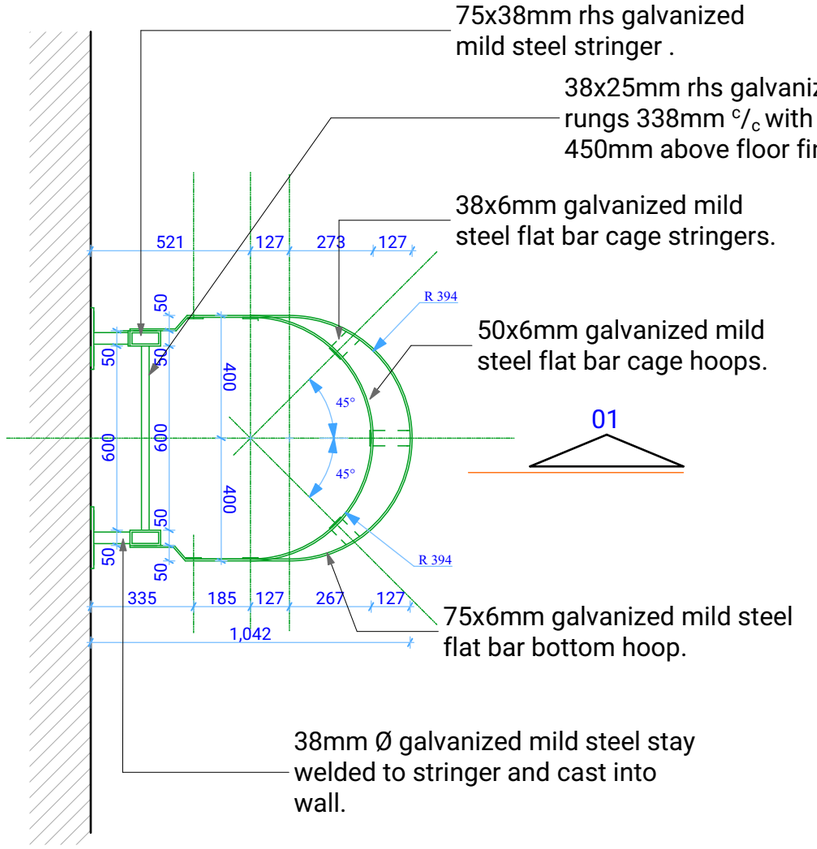

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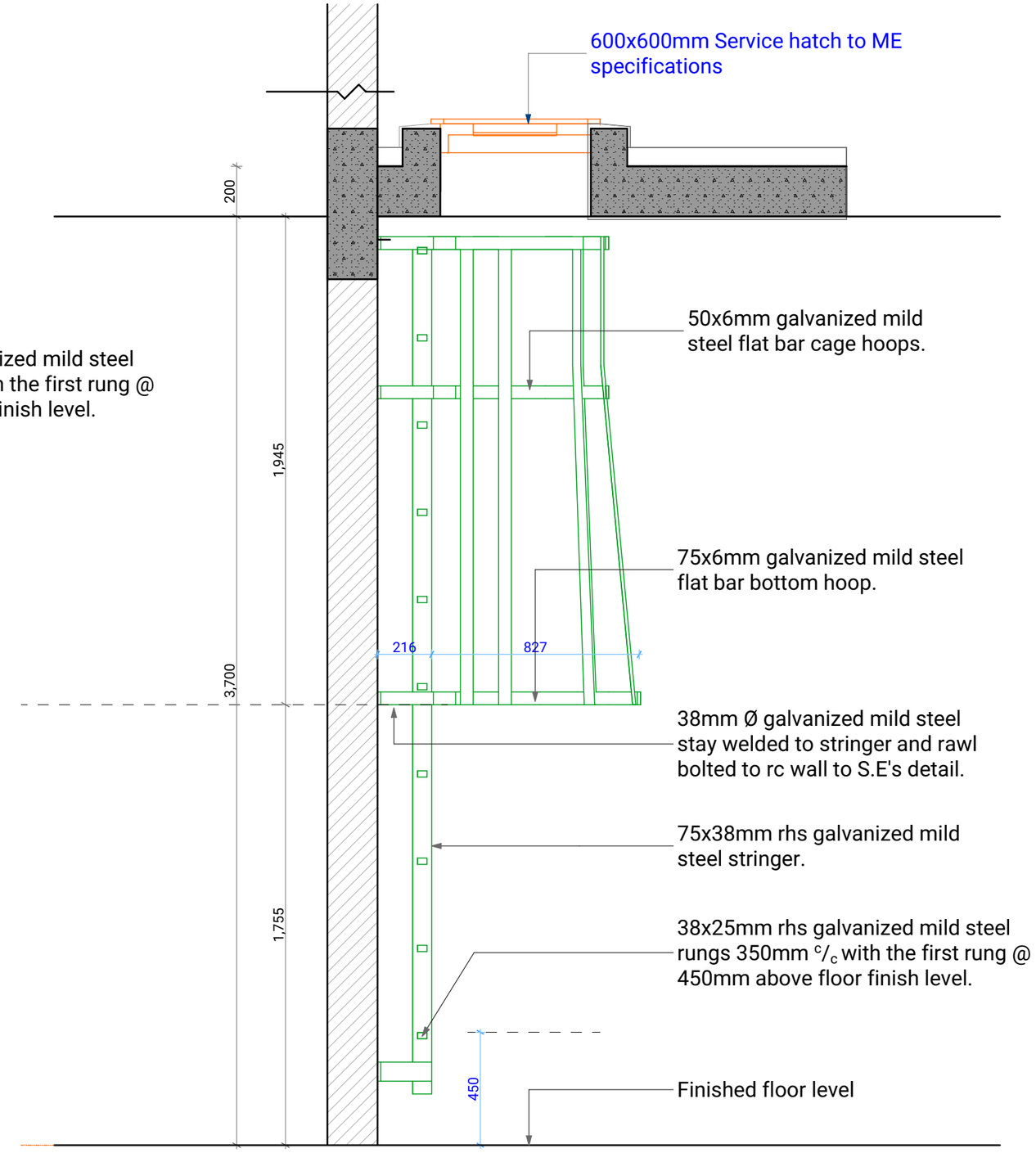

SECTION 01

54402 **Catladder 02** **1:20**

FOR TENDER

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Staircase, Ramp & Catladders

Roof Tank access Catladder.

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:20	00

Sheet No.

2527-SK-XX-DR-A-54402

Job Number

SK-20-2527

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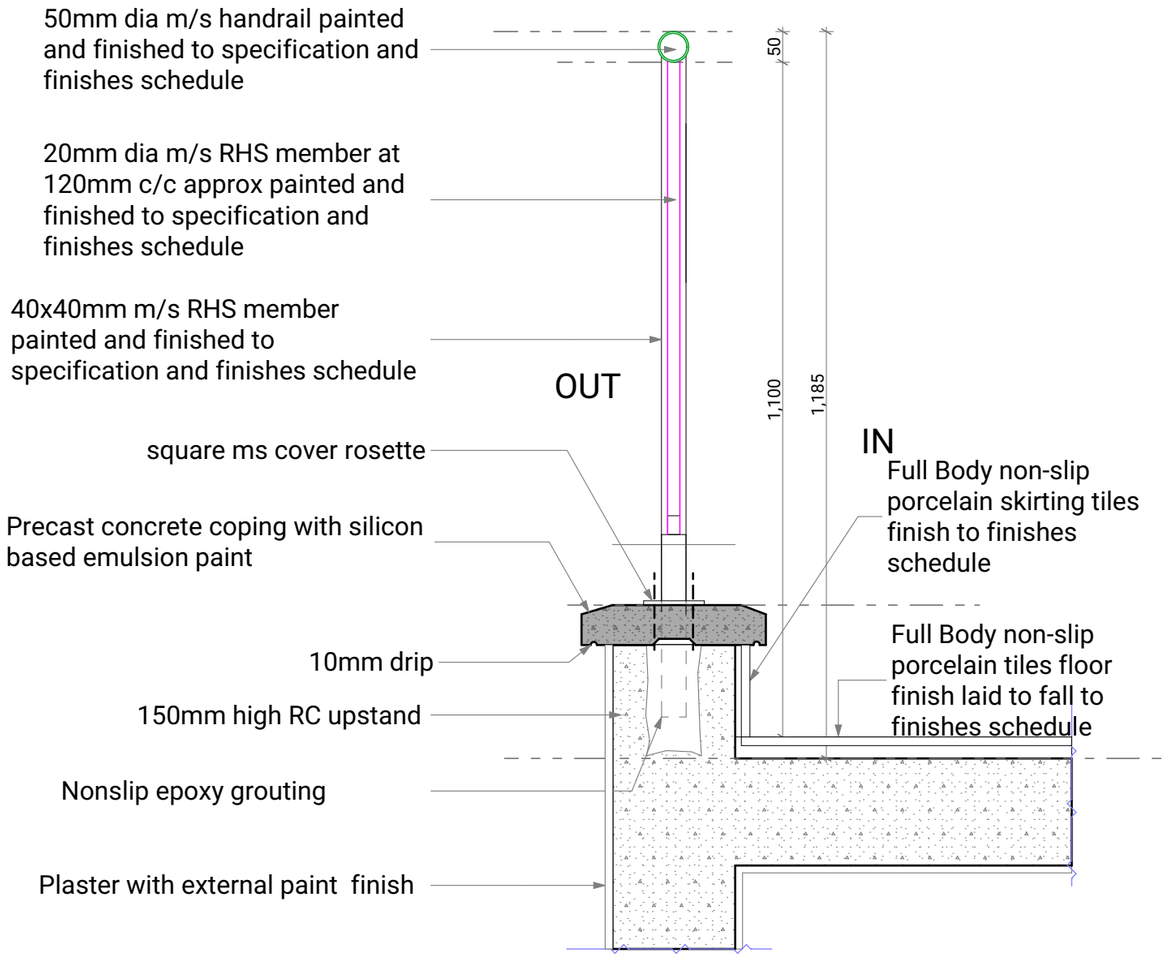

54403 **Ramp Railing - Section** **1:10**

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Sheet Name

Staircase, Ramp & Catladders

Ramp Railing Section Detail.

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GMN	**M.M / P.W**	
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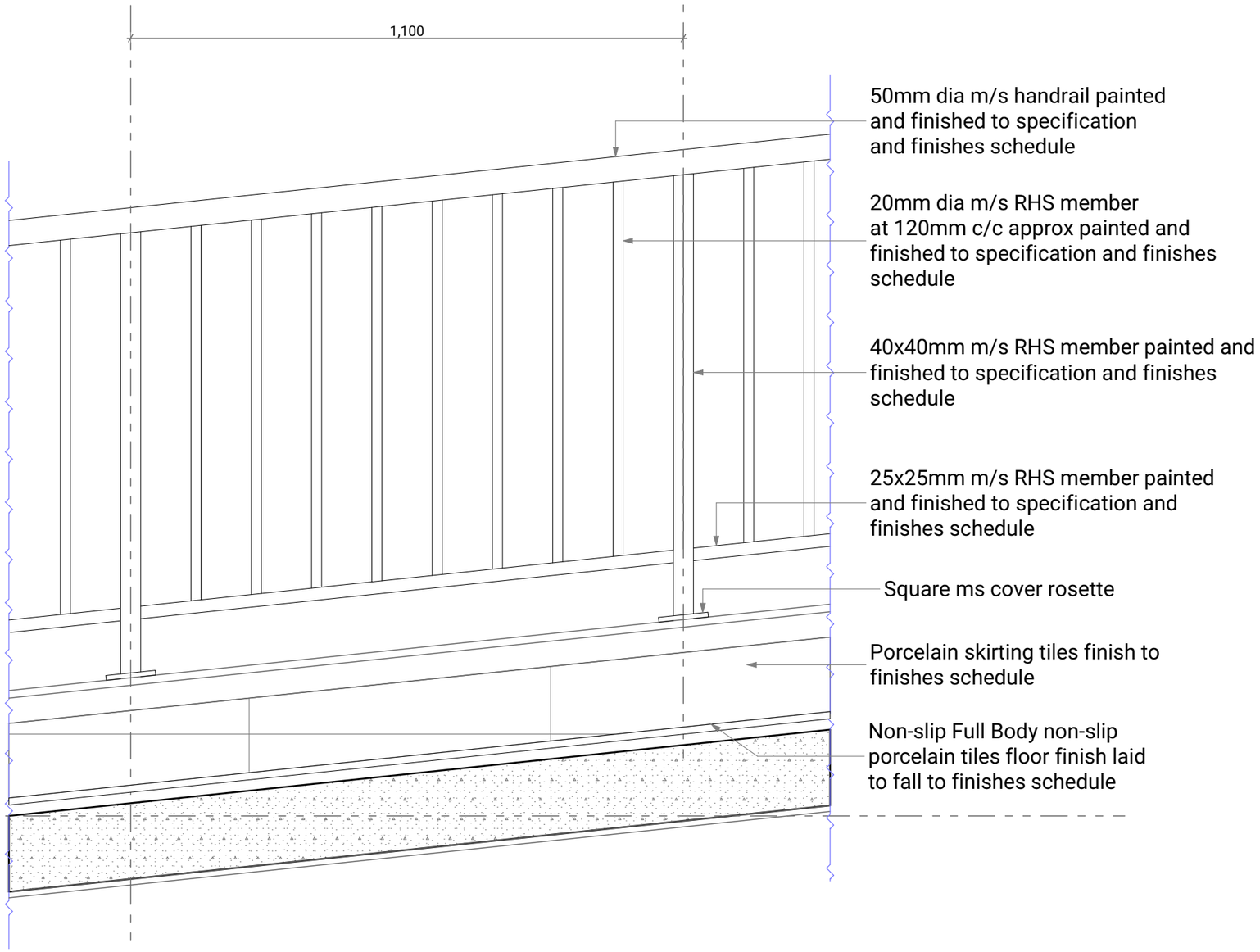

54404 **Ramp Railing- Sectional Elevation** **1:10**

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Sheet Name
Staircase, Ramp & Catladders
Ramp Railing Detail.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.
2527-SK-XX-DR-A-54404

Job Number
SK-20-2527

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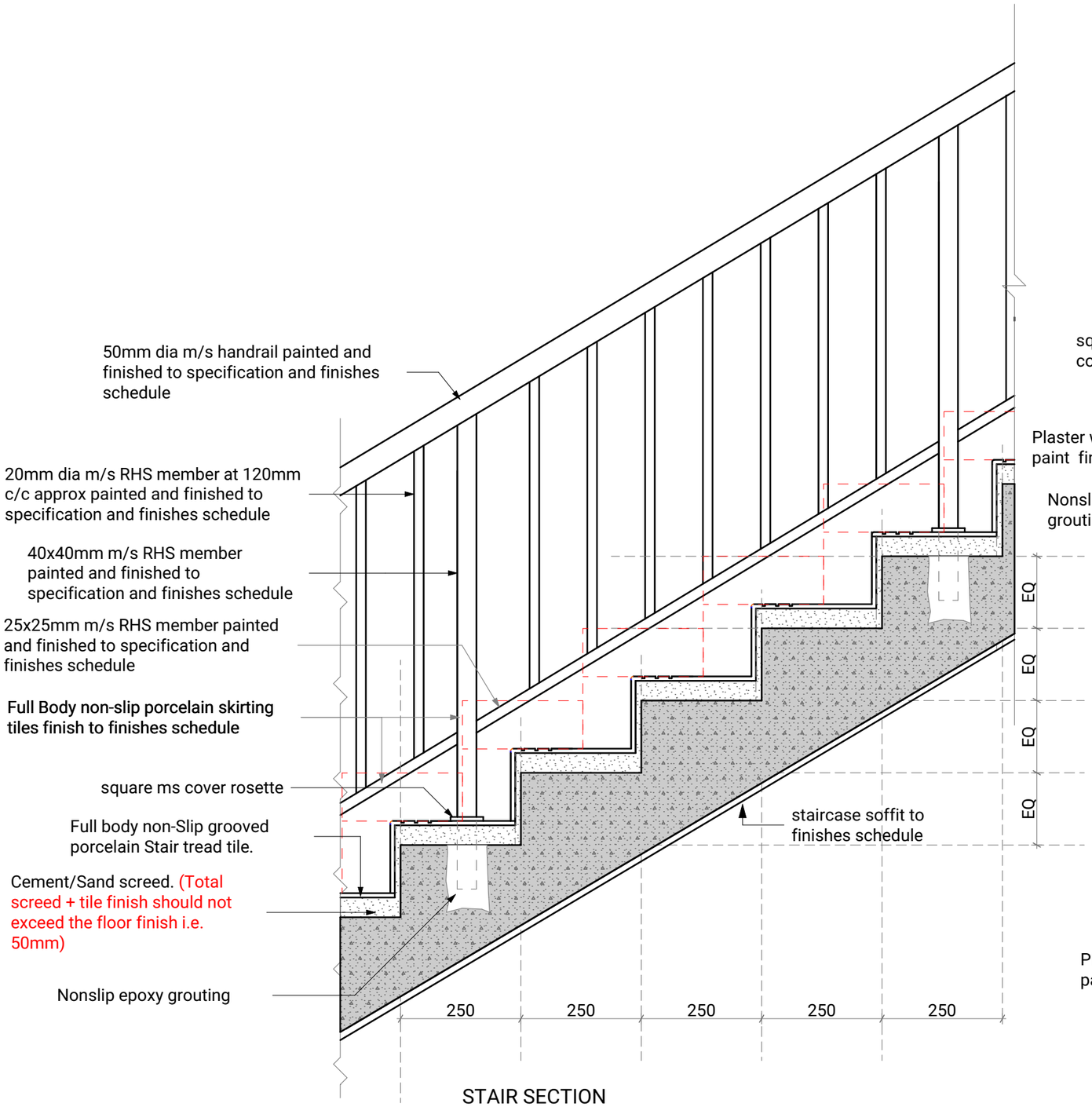

STAIR SECTION
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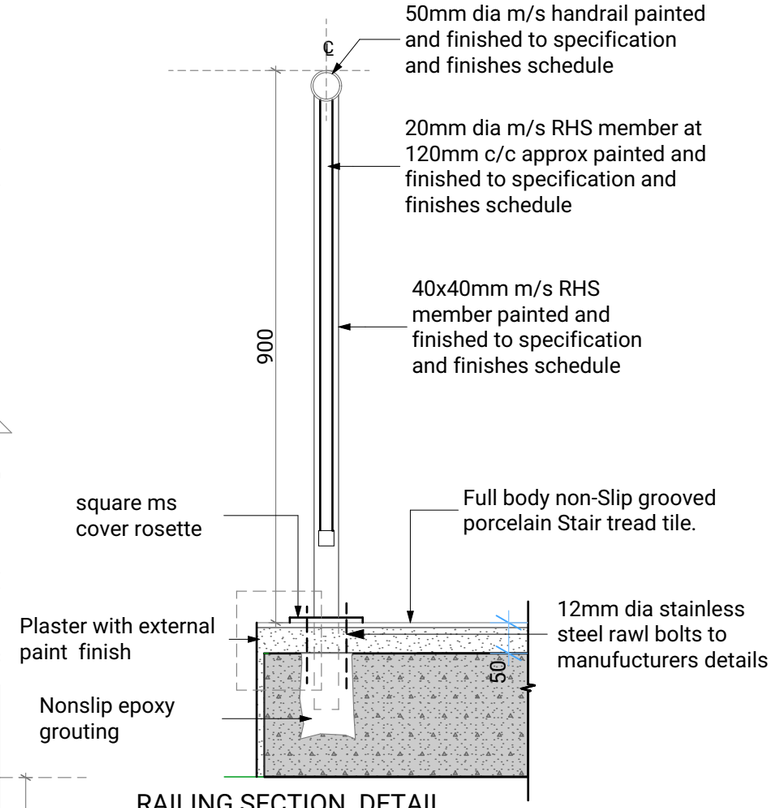

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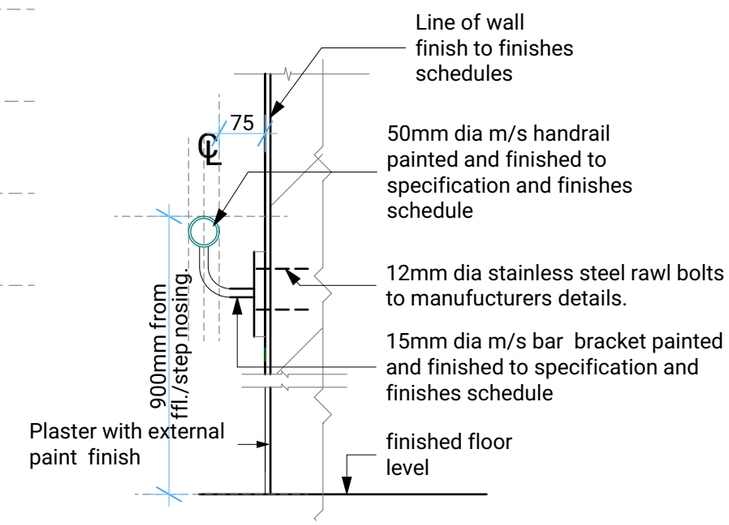

WALL MOUNTED HANDRAIL DETAIL
scale 1:10

54421

Section

1:10

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Client
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Sheet Name
Staircase, Ramp & Catladders
Staircase Railing Detail.

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2527-SK-XX-DR-A-54405

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SK-20-2527

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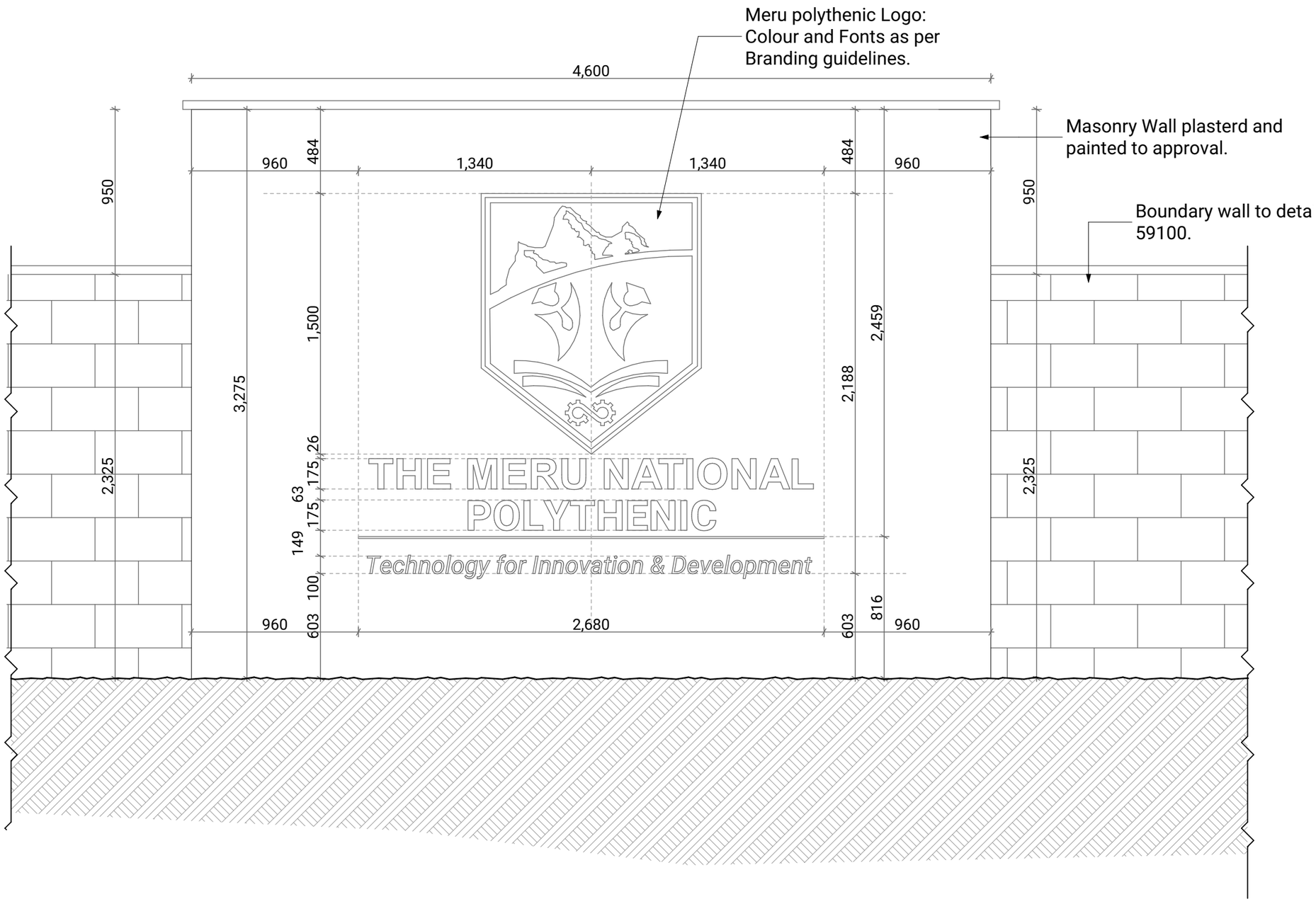

57100 **Meru polythenic Logo Detail** **1:25**

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Sheet Name

Signage

Meru polythenic Logo Detail

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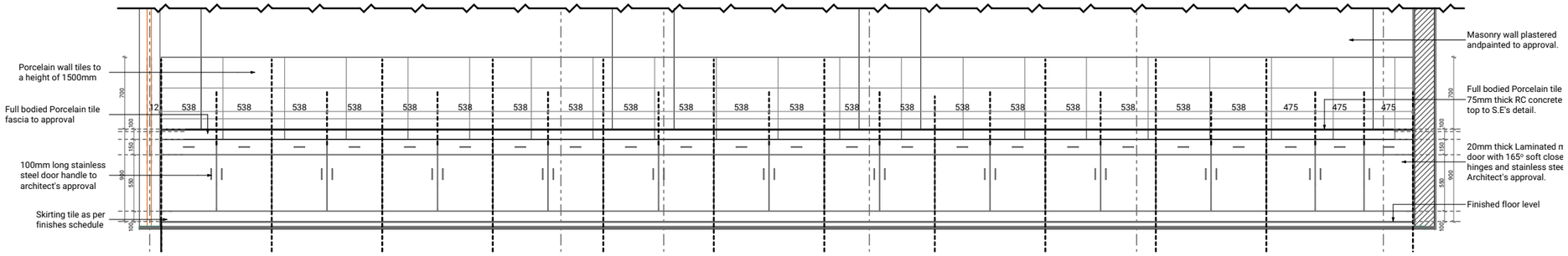
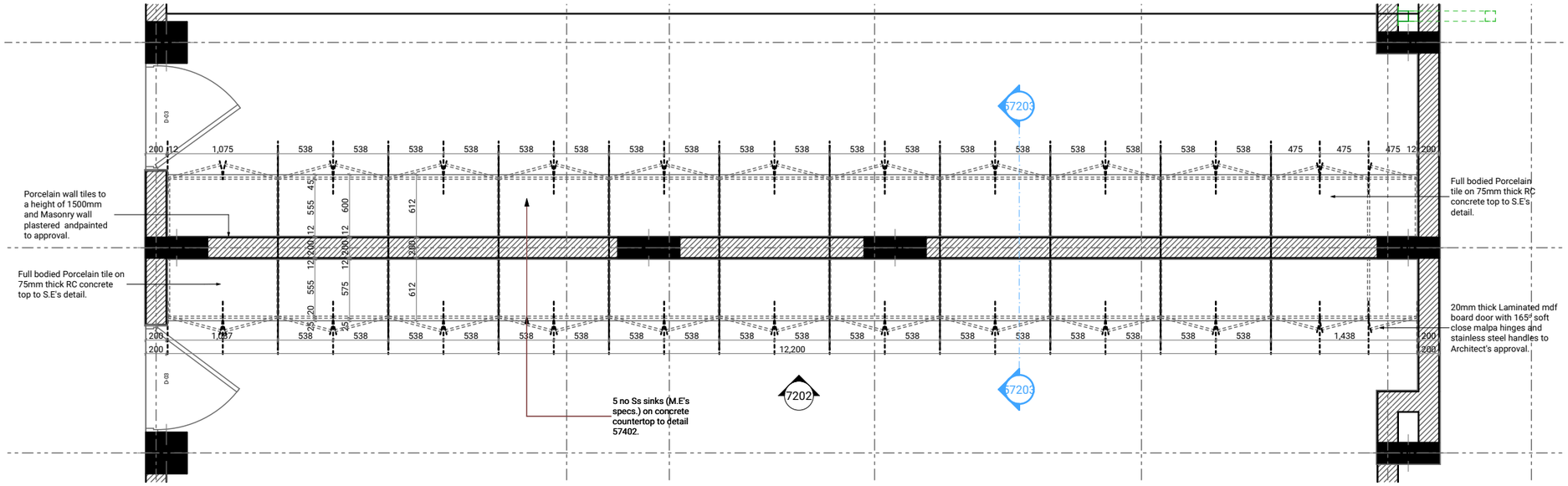


37202 Elevation 1:50



37201 Plan 1:50

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Sheet Name

Worktops

Commercial Laboratory Worktop

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GMN	**M.M / P.W**	
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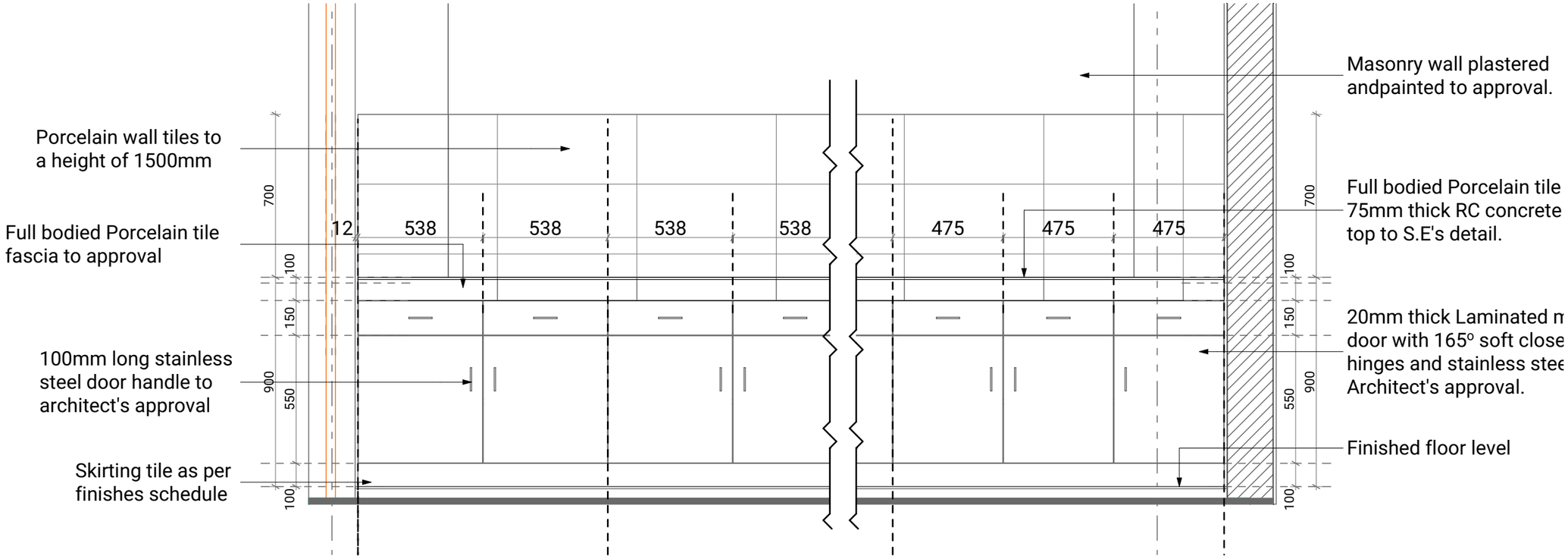
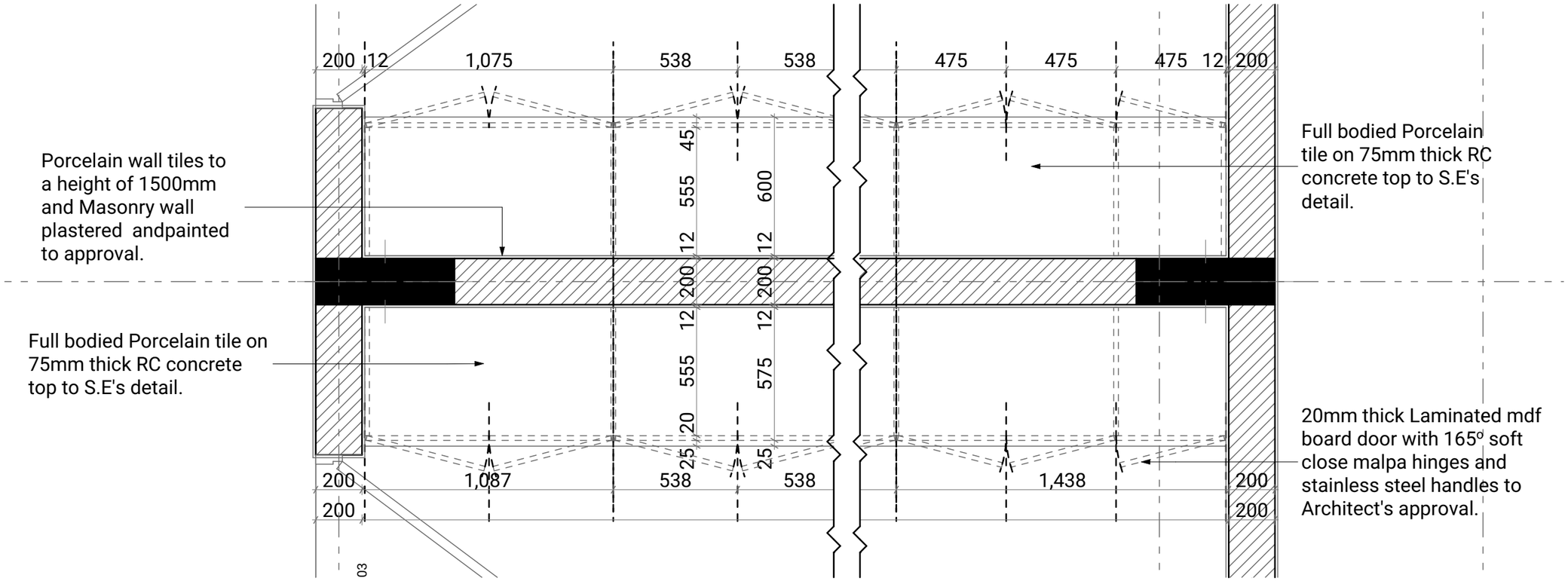


37202 **Elevation** **1:20**



37201 **Plan** **1:20**

FOR TENDER

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Sheet Name

Worktops

Commercial Laboratory Worktop

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13/04/2021	1:20	00

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2527-SK-XX-DR-A-37202

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SK-20-2527

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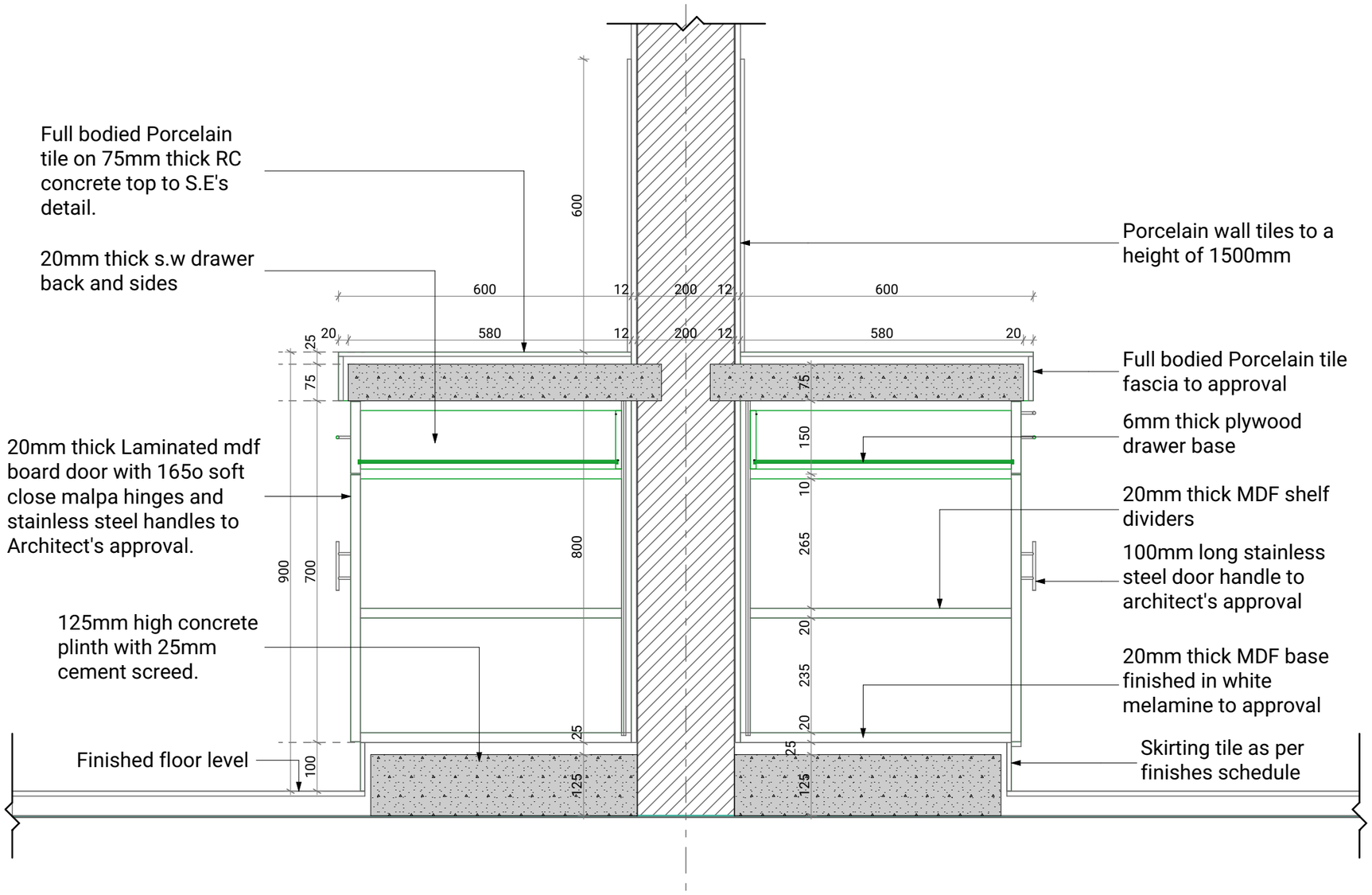

572001 **Worktop detail.** **1:10**

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Worktops
Commercial Laboratory Worktop Detail

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2527-SK-XX-DR-A-57201

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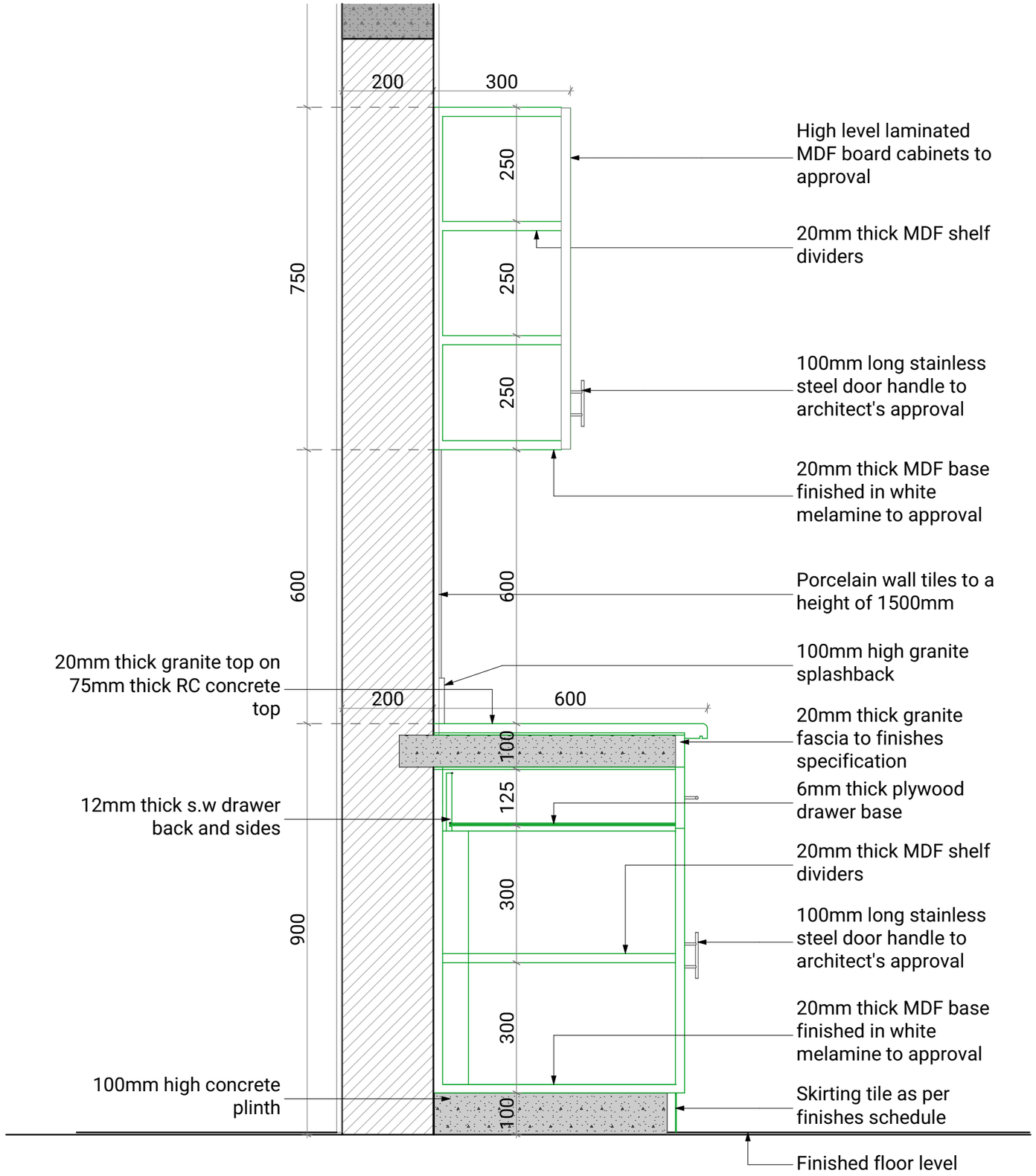

57304 **Cabinet details** **1:10**

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Sheet Name

Kitchen

Kitchen Cabinet details

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-57301

Job Number

SK-20-2527

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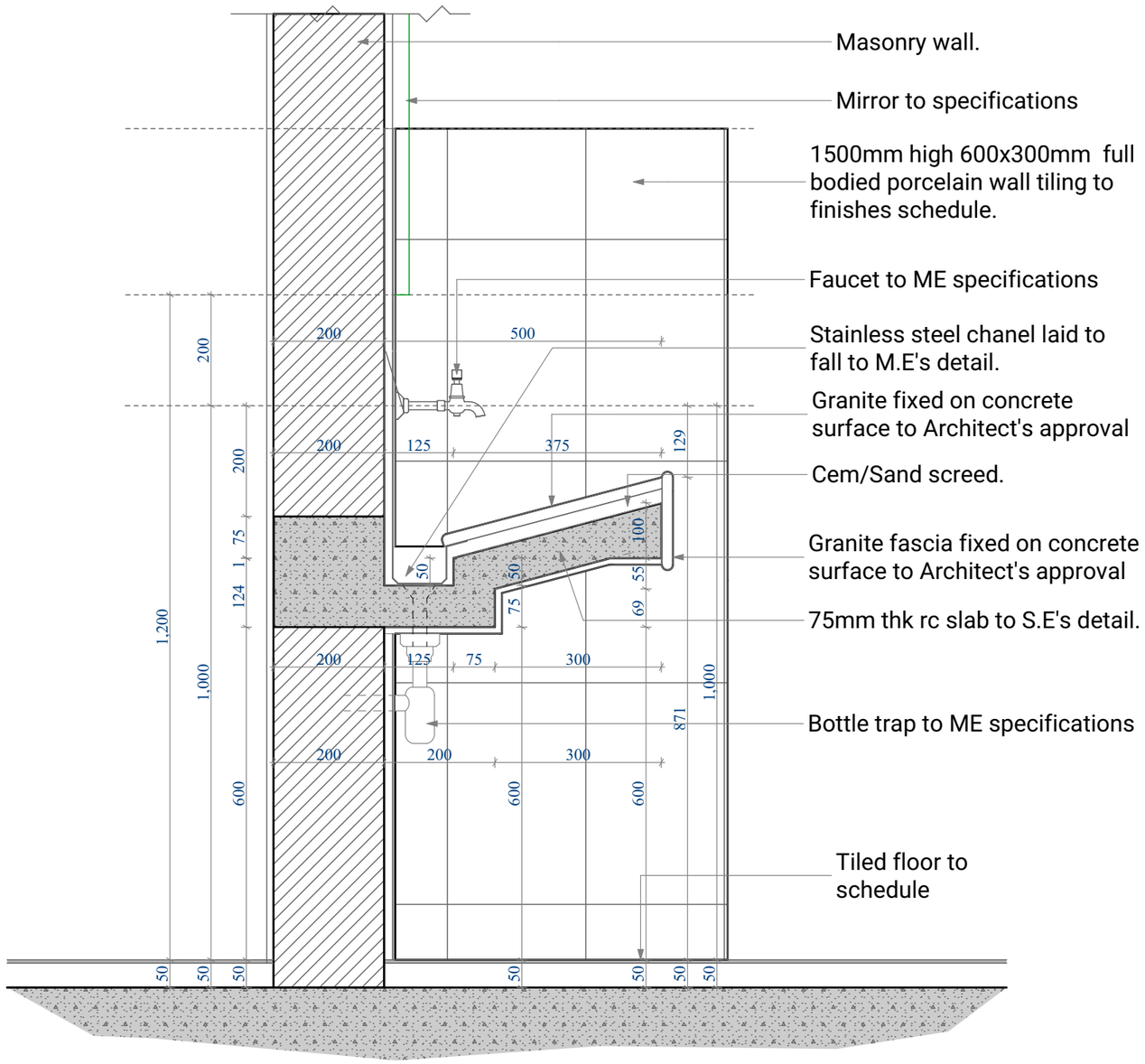

57430 **Main Block Vanity Detail** **1:10**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Details

Main Block Vanity Details

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-57401

Job Number

SK-20-2527

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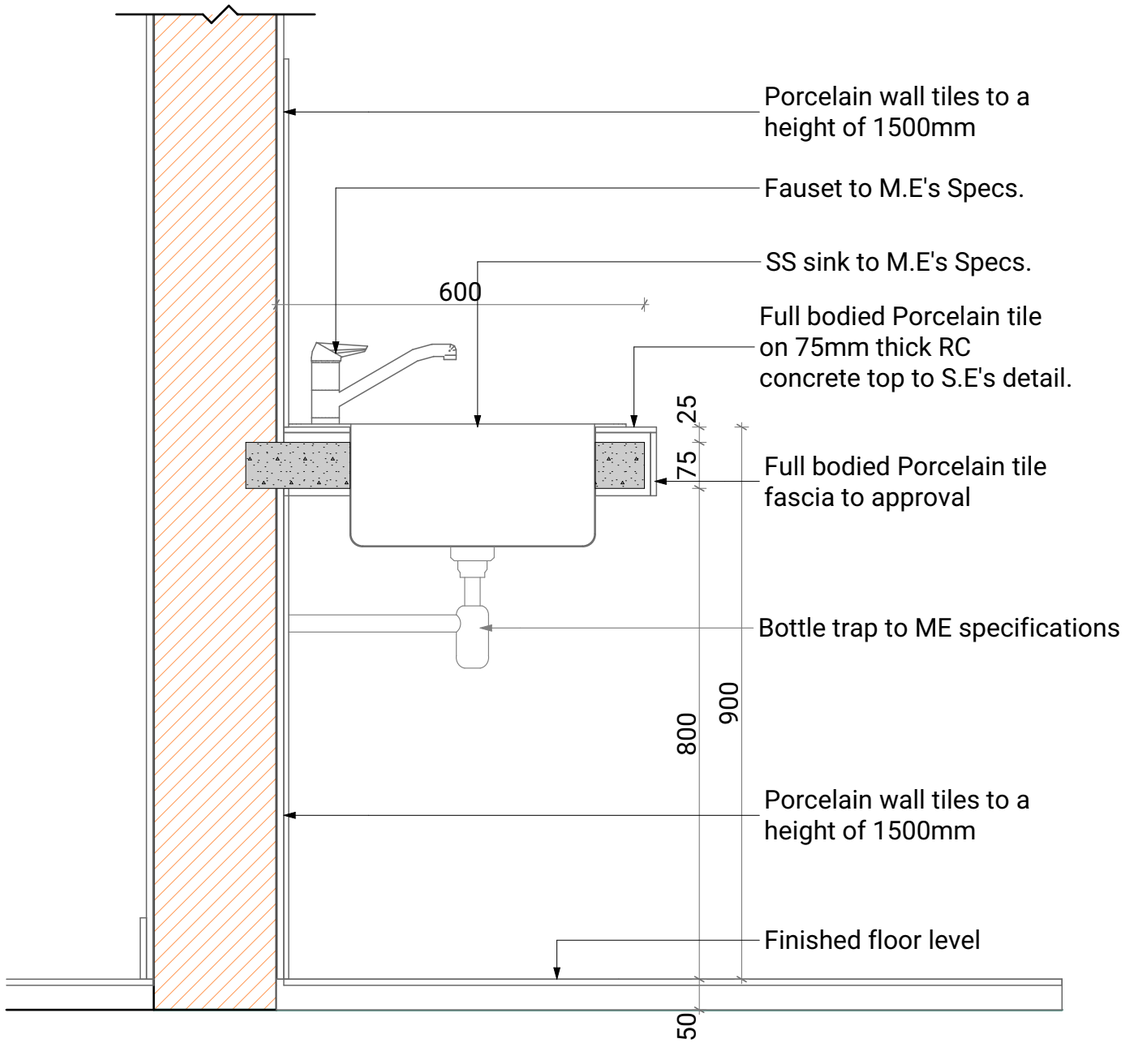

57402 **Workshop Ss Sink and Worktop detail.** **1:10**

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Sheet Name

Washroom Details

Workshop Worktop with Ss Sink Detail.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:10**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-57402

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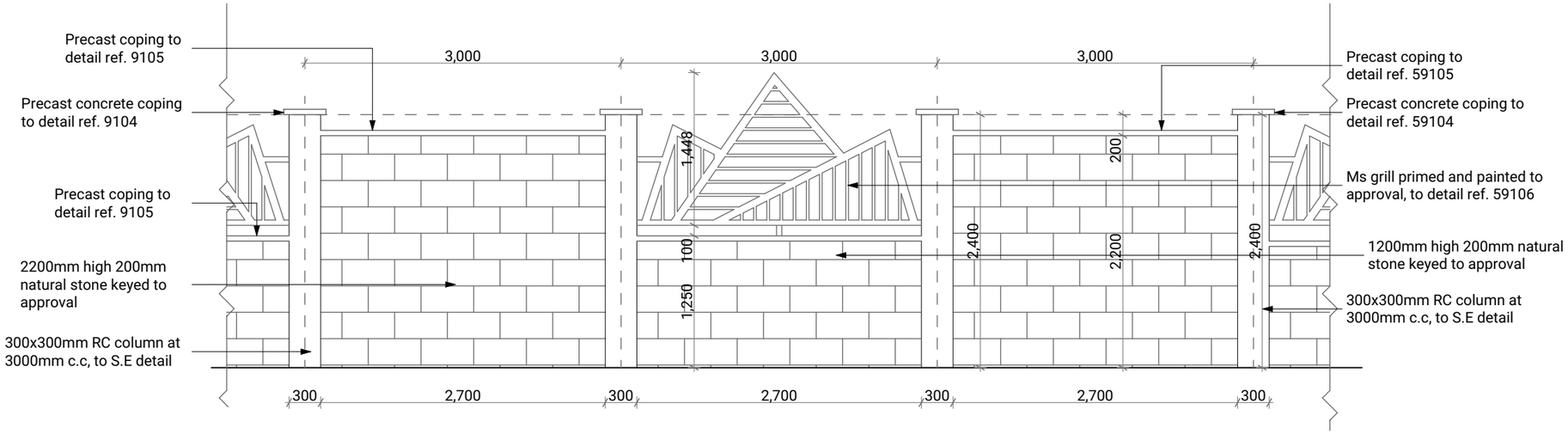
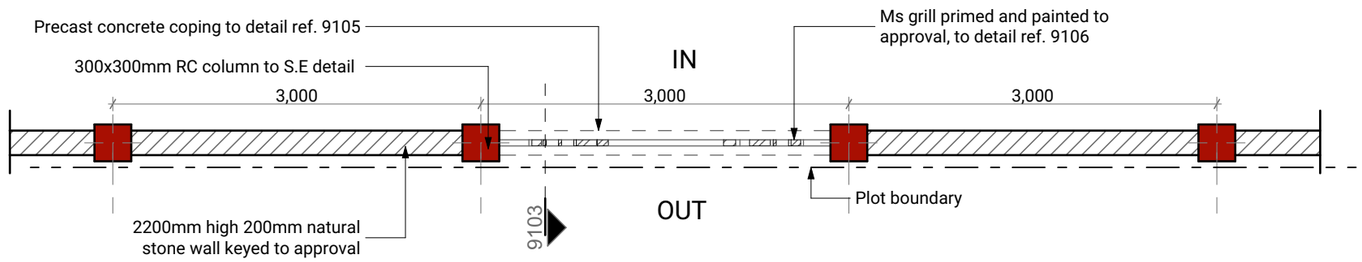


59102 Boundary wall elevation 1:50



59101 Boundary wall plan 1:50

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Sheet Name

Boundary Wall

Boundary Wall Details

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GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-59101

Job Number

SK-20-2527

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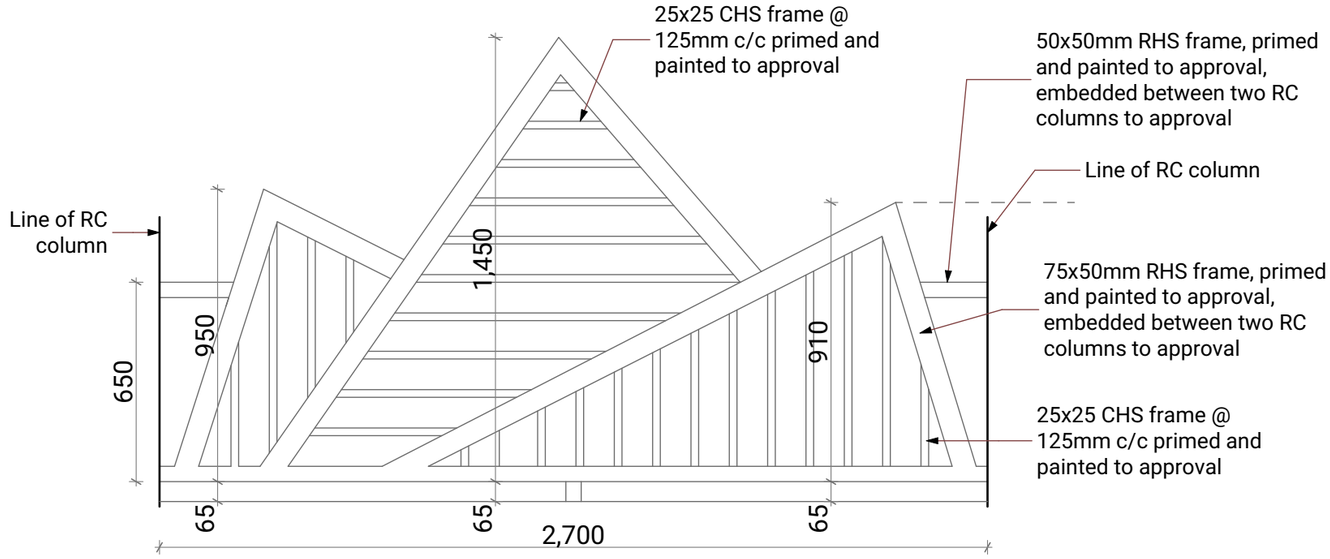
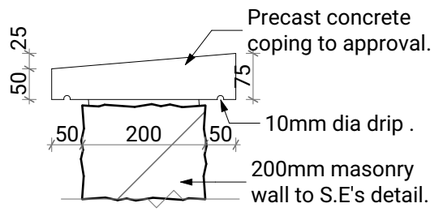
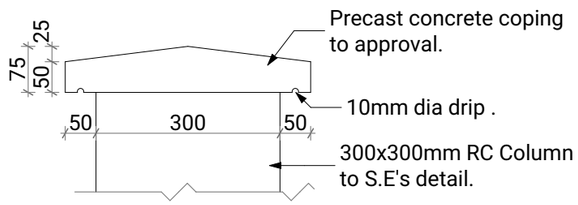


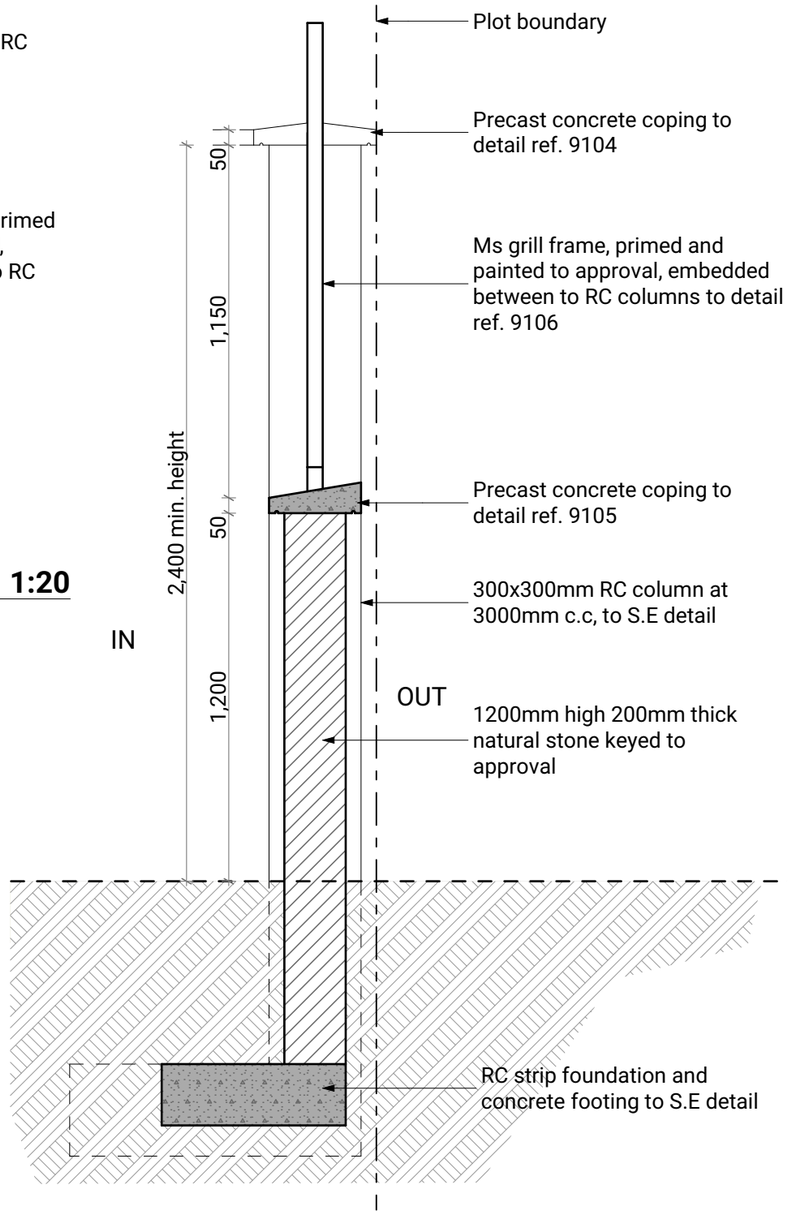
59106 **Ms grill detail** **1:20**



59105 **Wall coping Detail** **1:10**



59104 **Column coping Detail** **1:10**



59103 **Boundary wall section** **1:20**

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Rev ID	Description	Issue Date

Client
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Job Title
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Sheet Name
Boundary Wall
Boundary Wall Details

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GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:20, 1:10	Revision 00

Sheet No.
2527-SK-XX-DR-A-591012

Job Number
SK-20-2527

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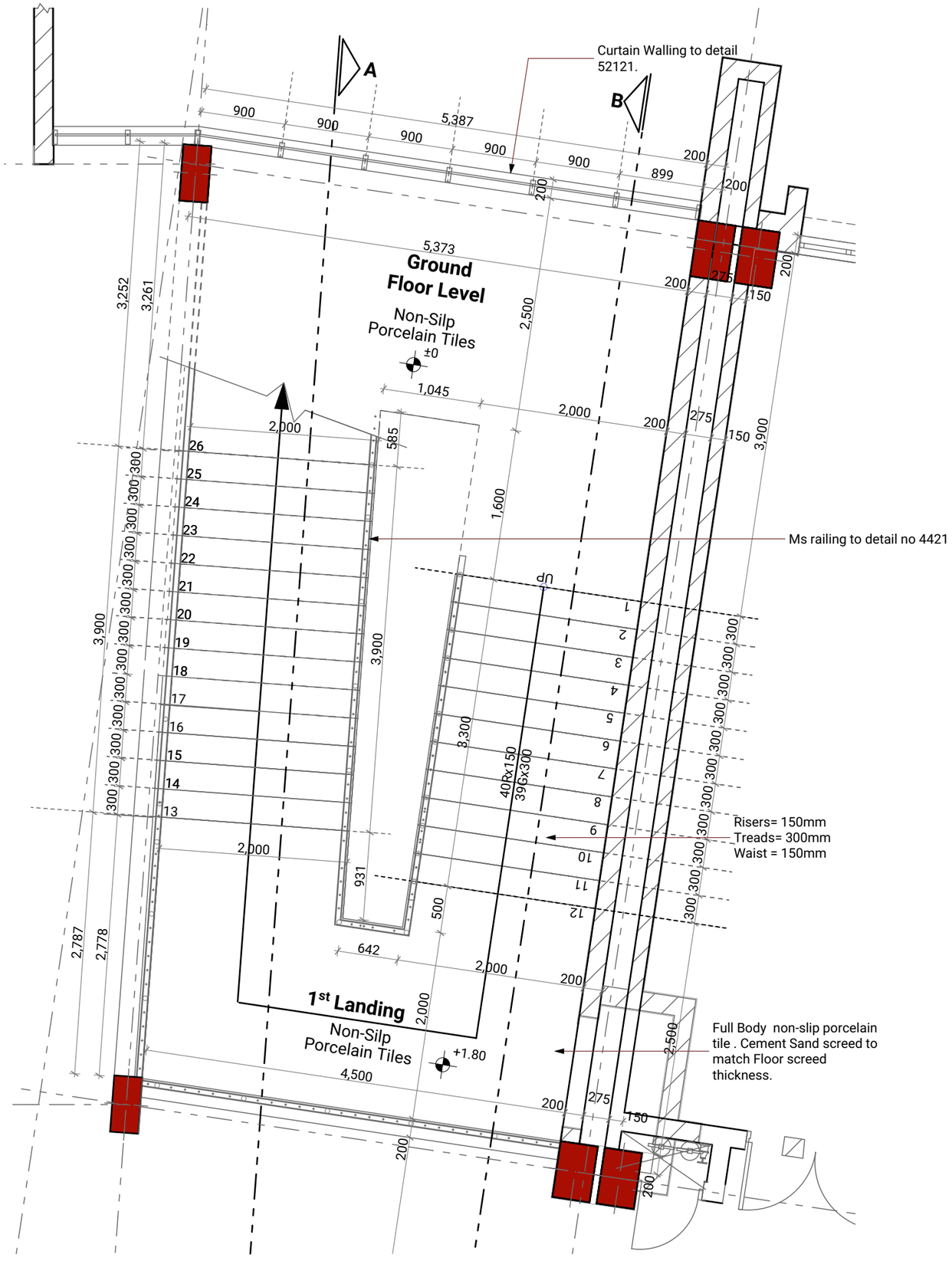

34400 Main Staircse Detail - Ground Floor Plan 1:50

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Rev ID	Description	Issue Date

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Sheet Name

Main Staircase Blow Up

Main Staircse Detail-Ground Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34401

Job Number

SK-20-2527

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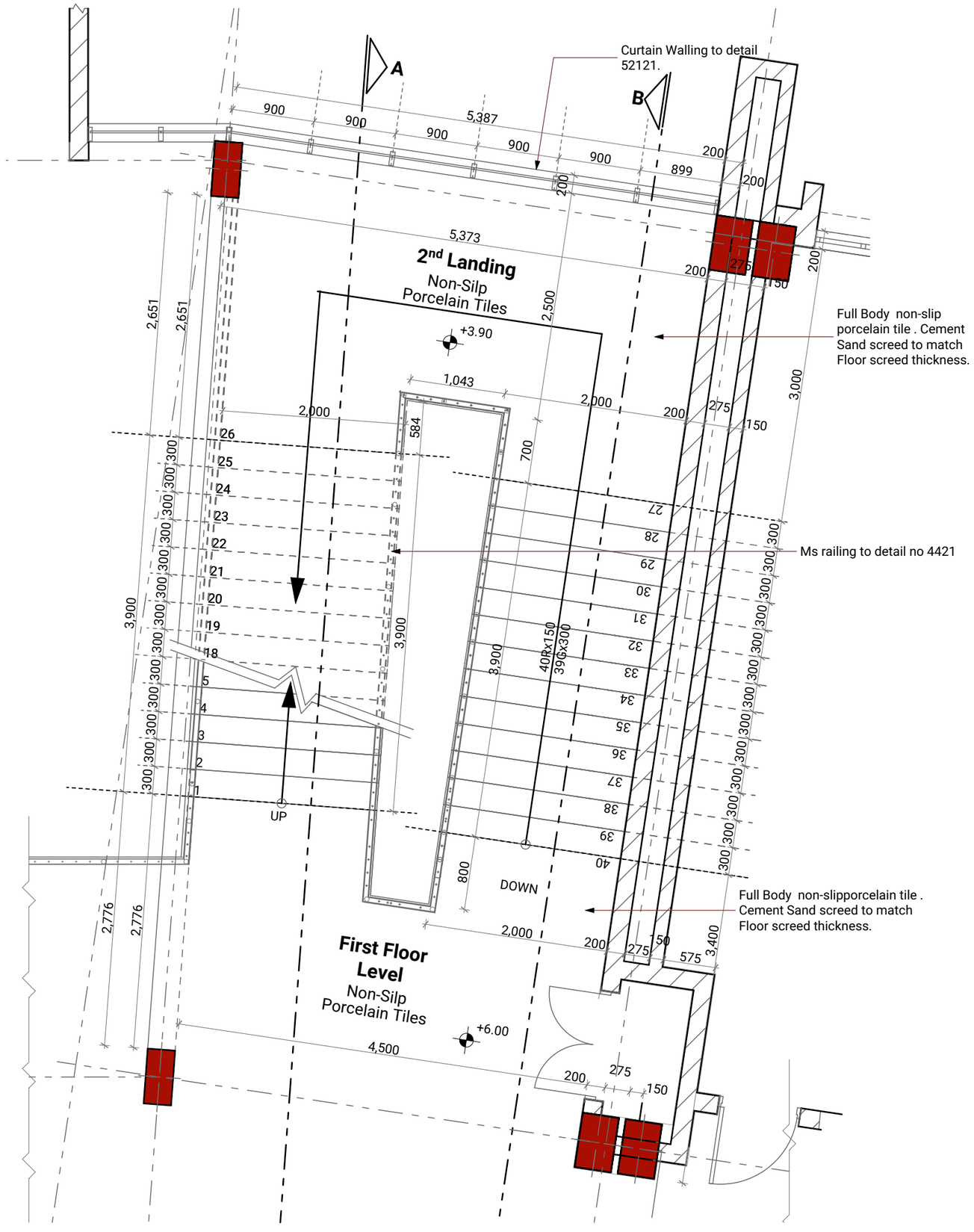

34401 **First Floor Plan** **1:50**

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Rev ID	Description	Issue Date

Client

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Job Title

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Sheet Name

Main Staircase Blow Up

Main Staircse Detail - First Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34402

Job Number

SK-20-2527

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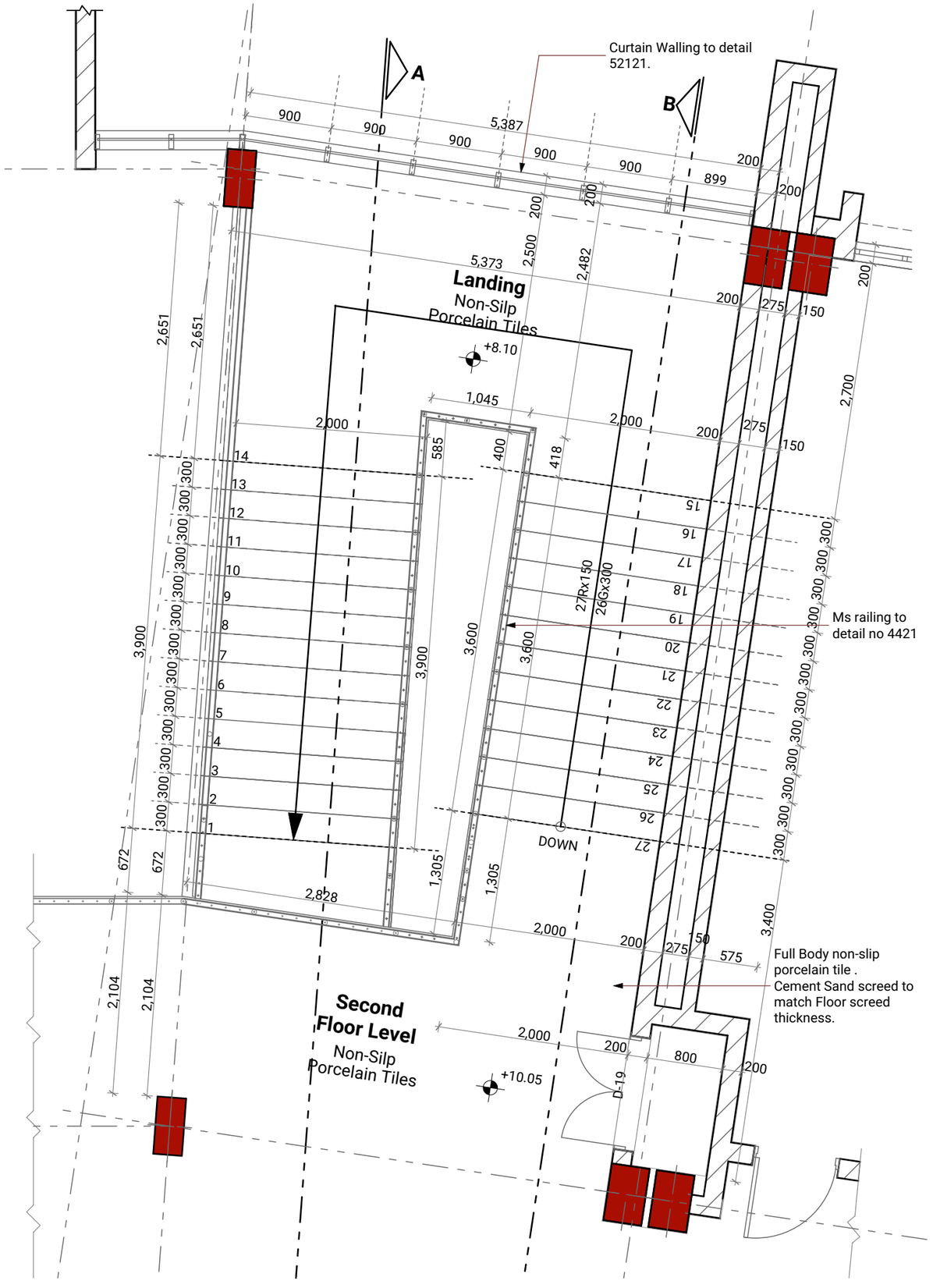

34402 Main Staircse Detail - Second Floor Plan 1:50

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Sheet Name

Main Staircase Blow Up

Main Staircse Detail-Second Floor Plan

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34403

Job Number

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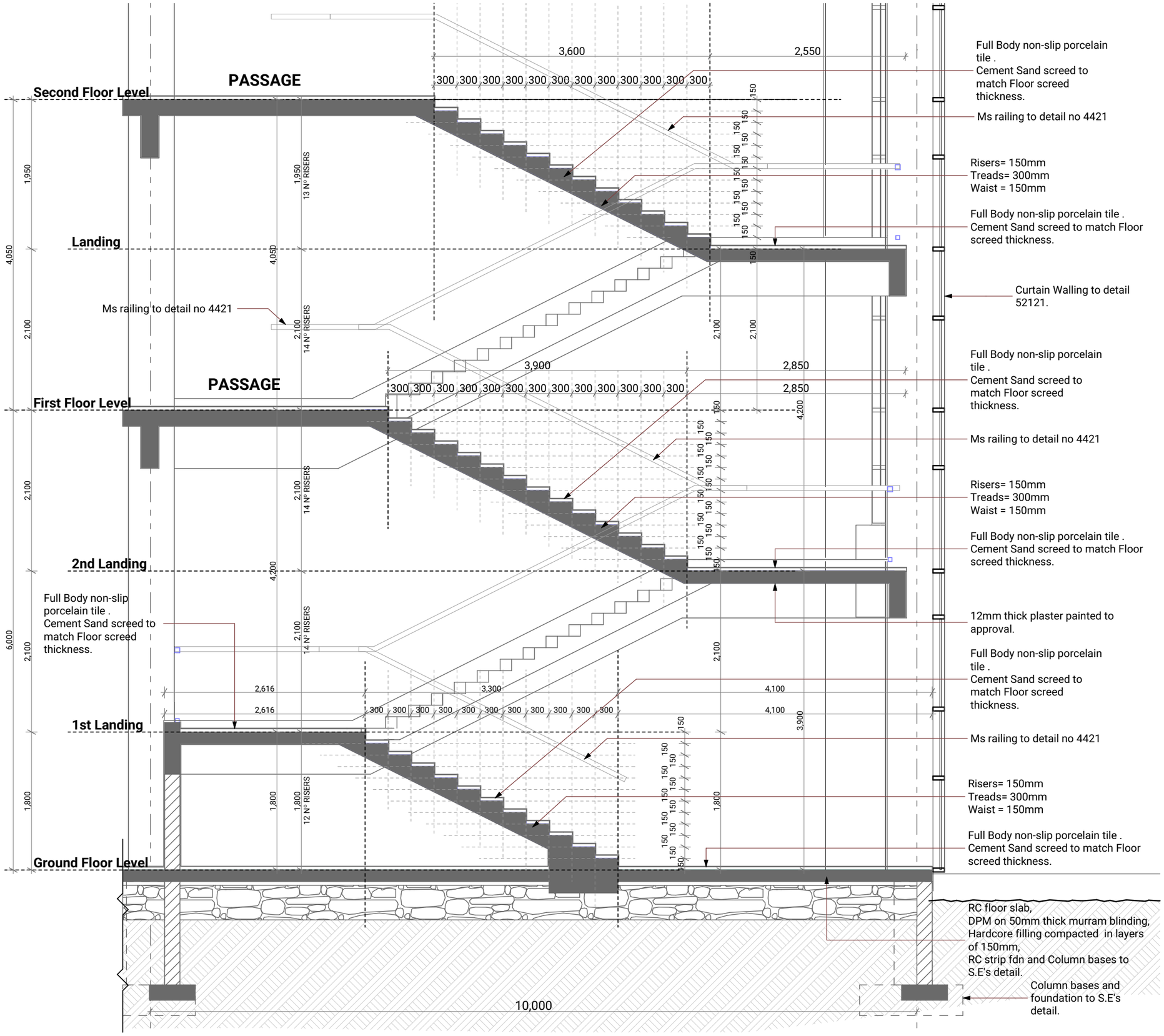

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Sheet Name

Main Staircase Blow Up

Section B

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34404

Job Number

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34403

Main Staircse Detail - Section B

1:50

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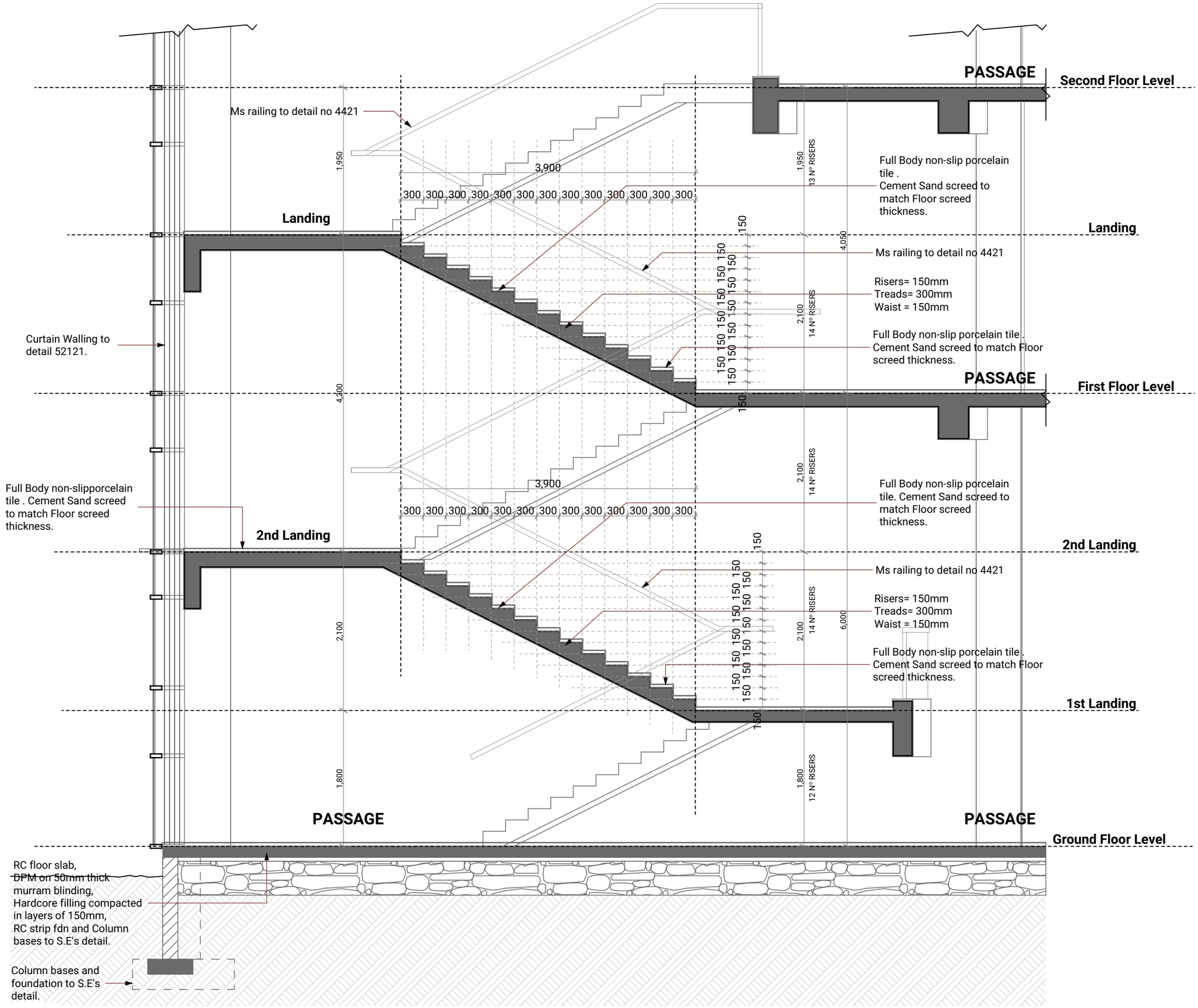

34404

Main Staircse Detail - Section A

1:50

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Sheet Name

Main Staircase Blow Up

Section A

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34405

Job Number

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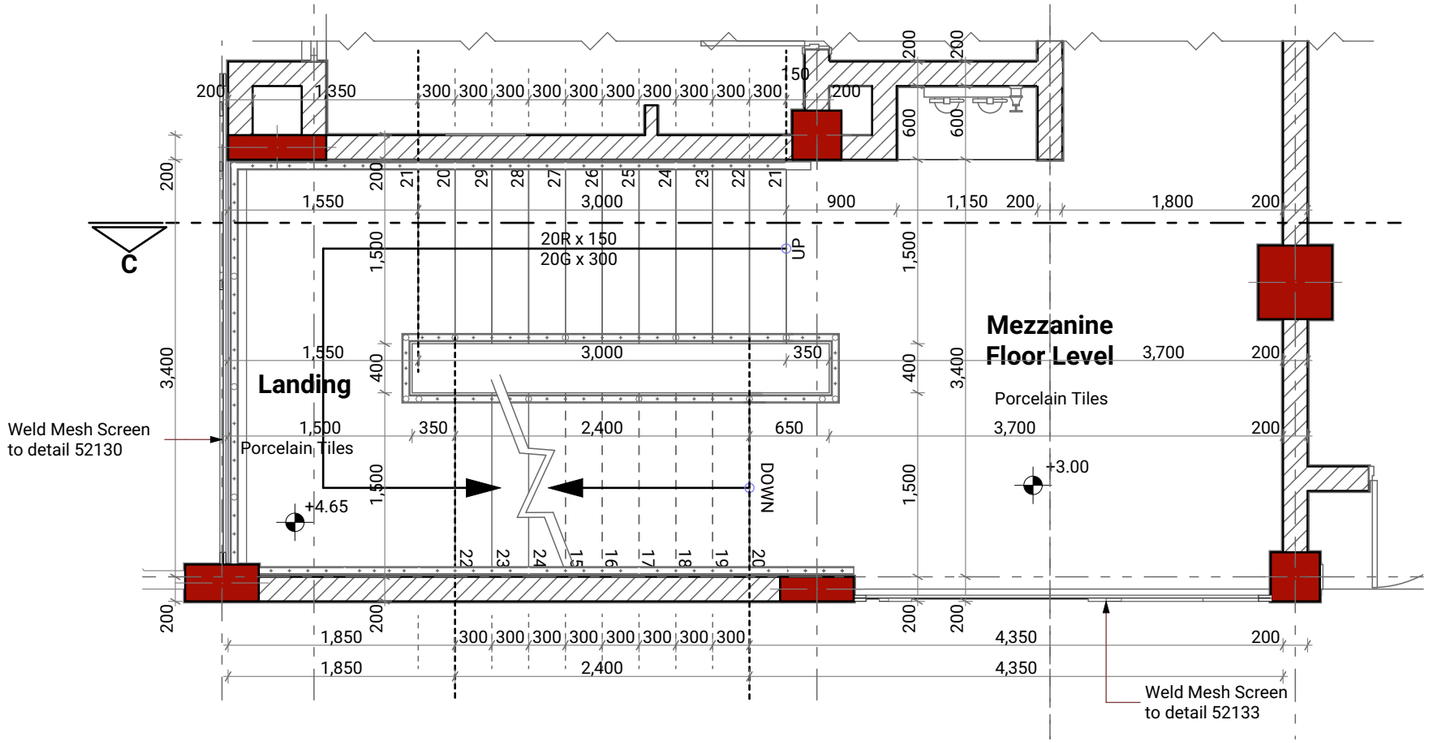
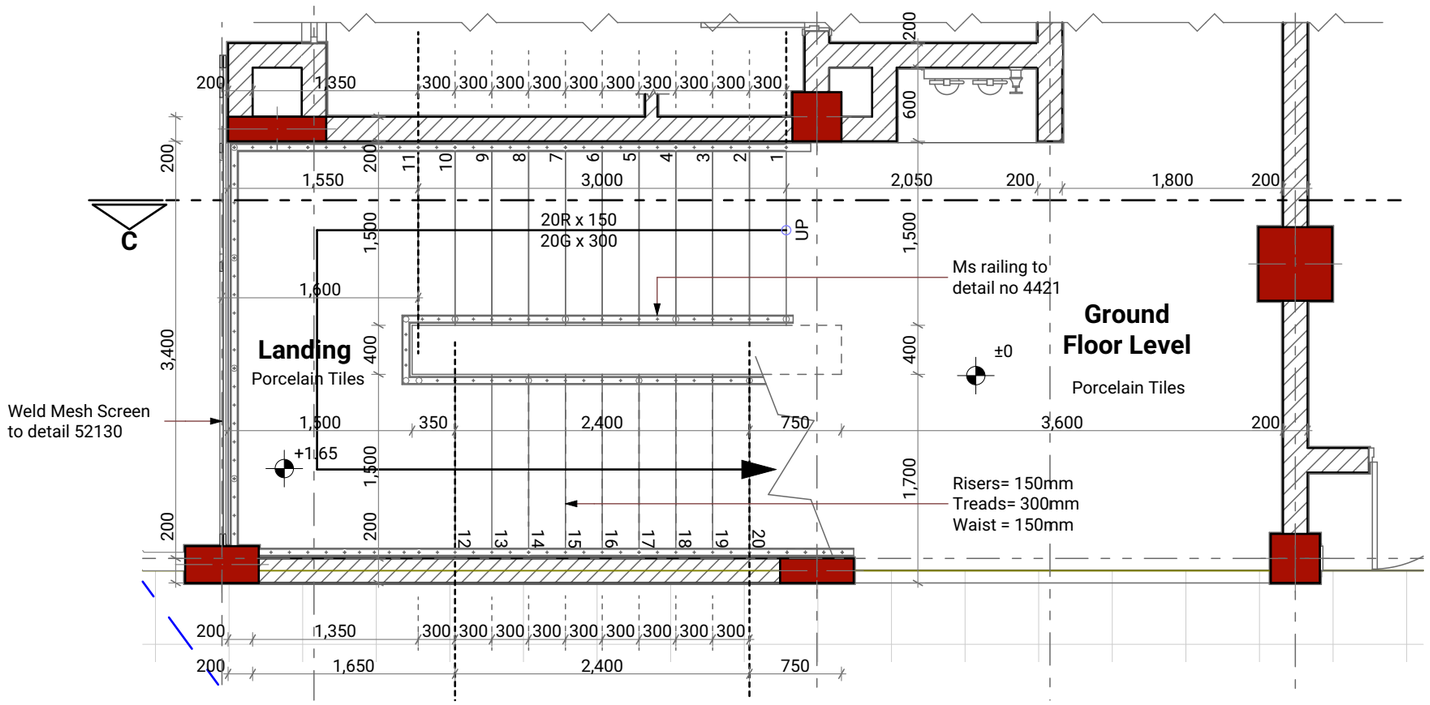


34411 Fire Escape Staircse 01 Detail - Mezzanine Floor Plan 1:50



34410 Fire Escape Staircse 01 Detail - Ground Floor Plan 1:50

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Sheet Name

Fire Escape Staircase 01 Blow Up

Ground & Mezzanine Floor Plans

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:50	Revision 00

Sheet No.

2527-SK-XX-DR-A-34406

Job Number

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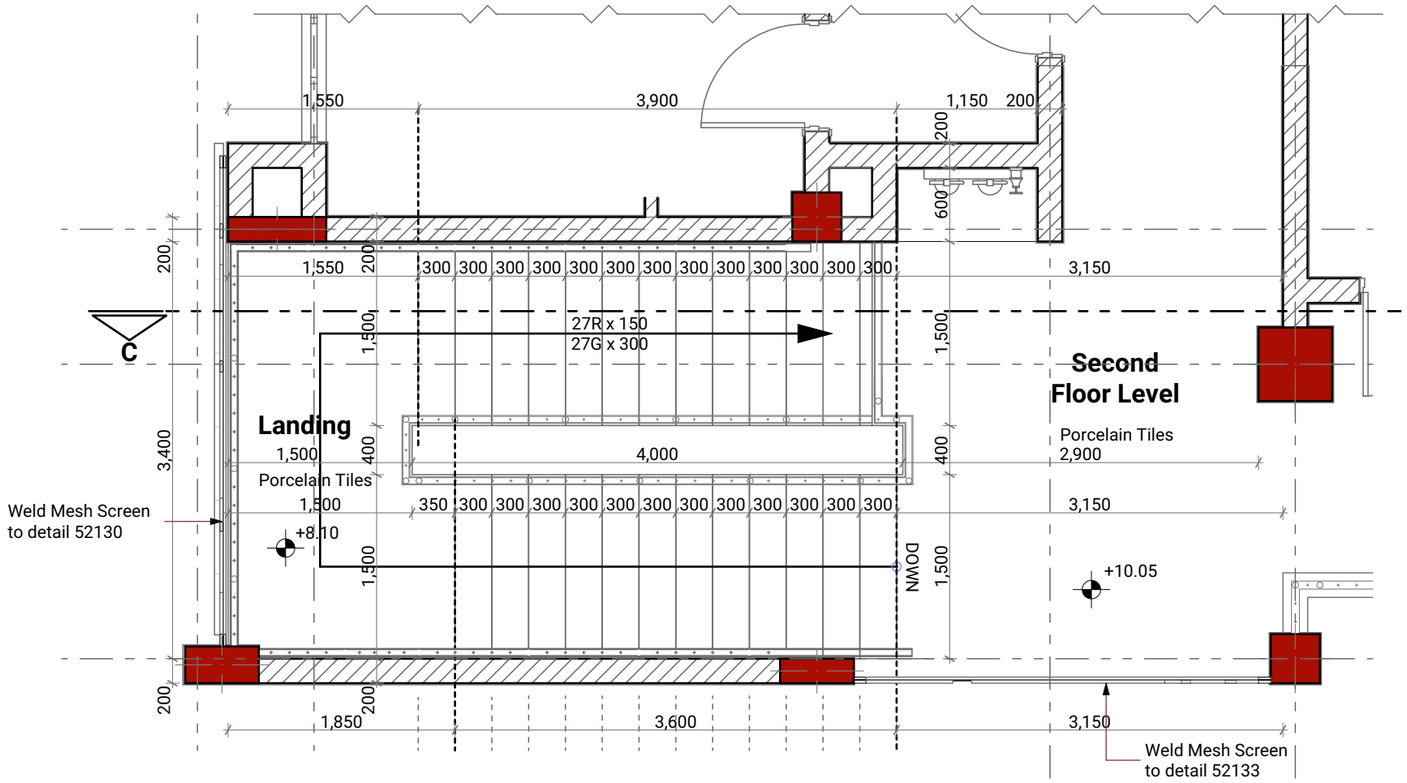
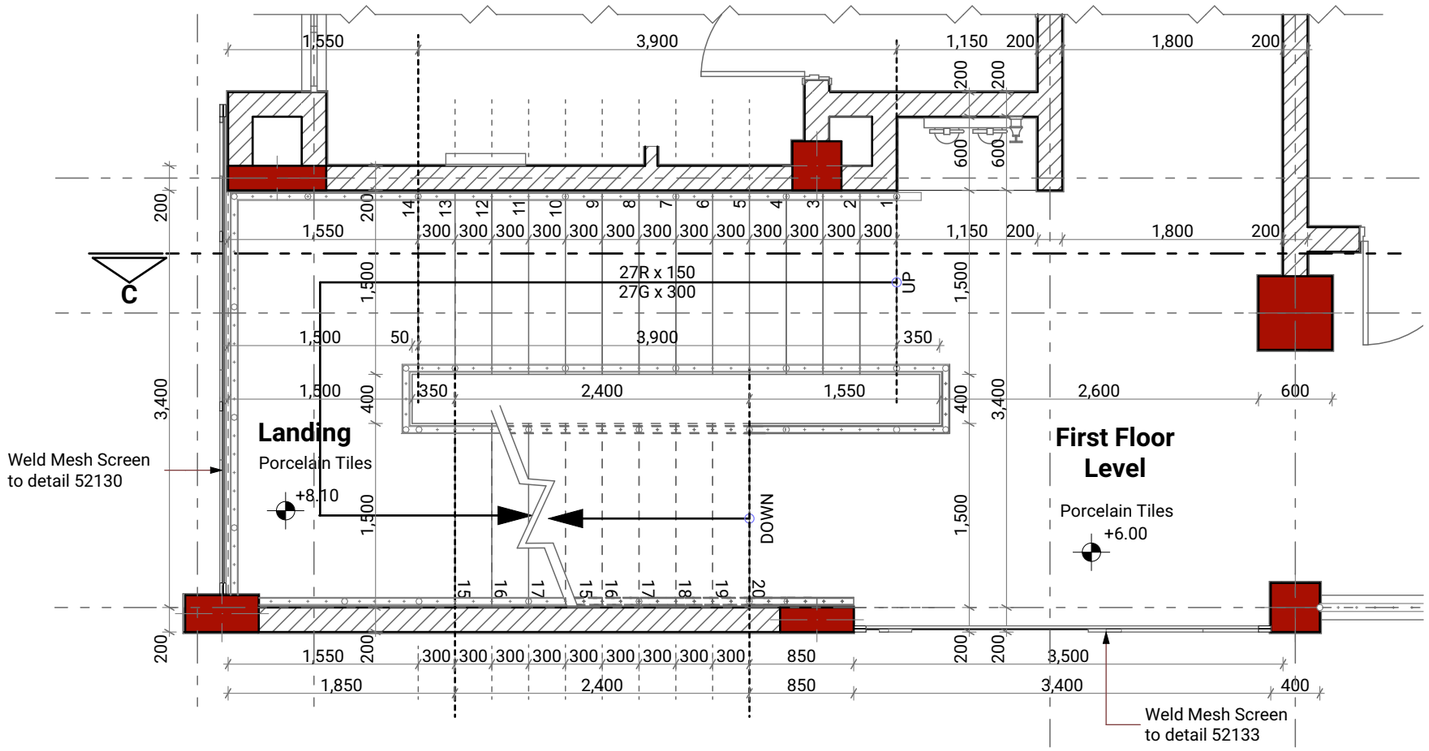


34413 Fire Escape Staircse 01 Detail - Second Floor Plan 1:50



34412 Fire Escape Staircse 01 Detail - First Floor Plan 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Fire Escape Staircase 01 Blow Up

First & Second Floor Plans

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34407

Job Number

SK-20-2527

File Path

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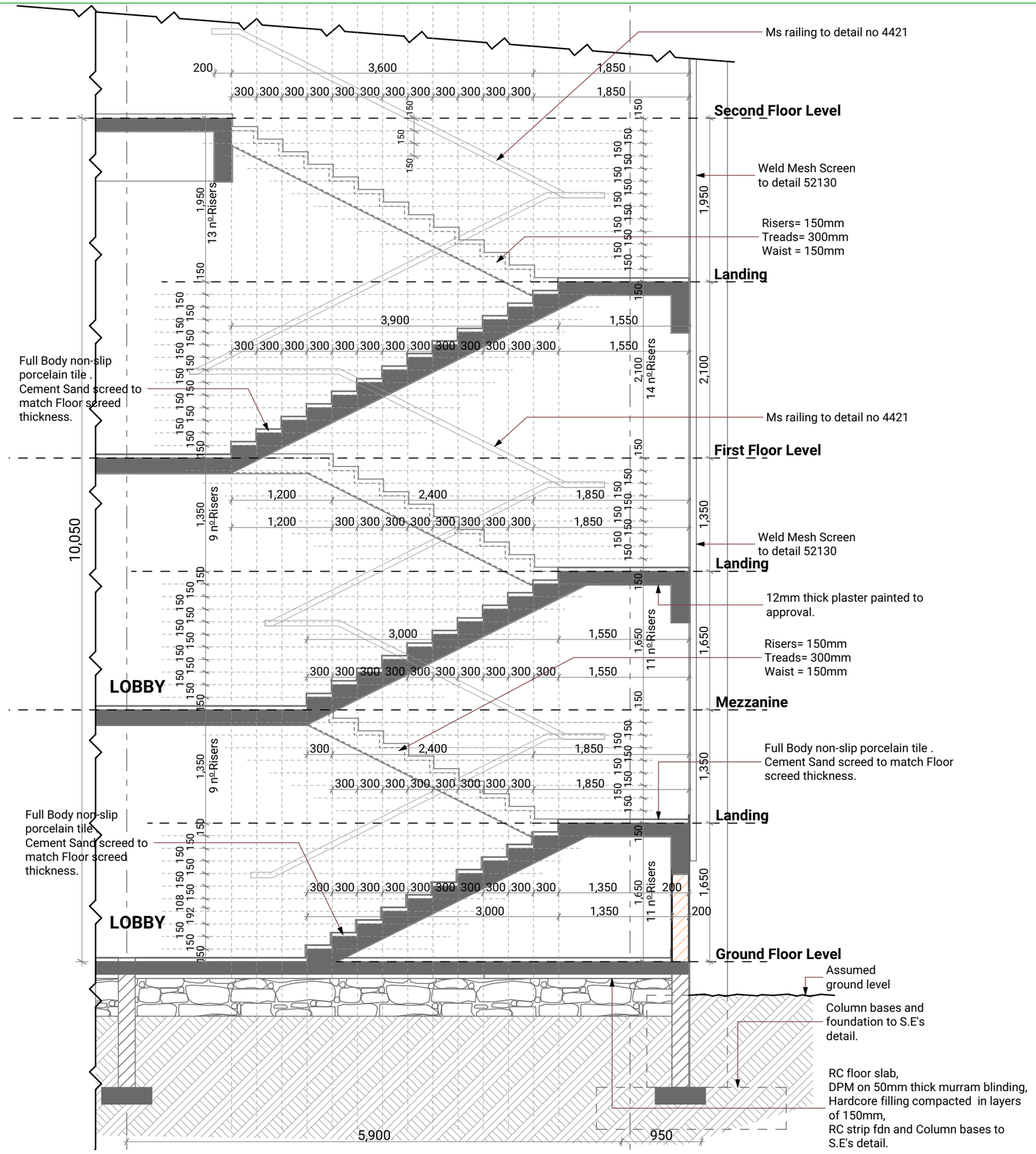

34414 **Fire Escape Staircse 01 Detail - Section C** **1:50**

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Client
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Sheet Name
Fire Escape Staircase 01 Blow Up
Section C

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.
2527-SK-XX-DR-A-34408

Job Number
SK-20-2527

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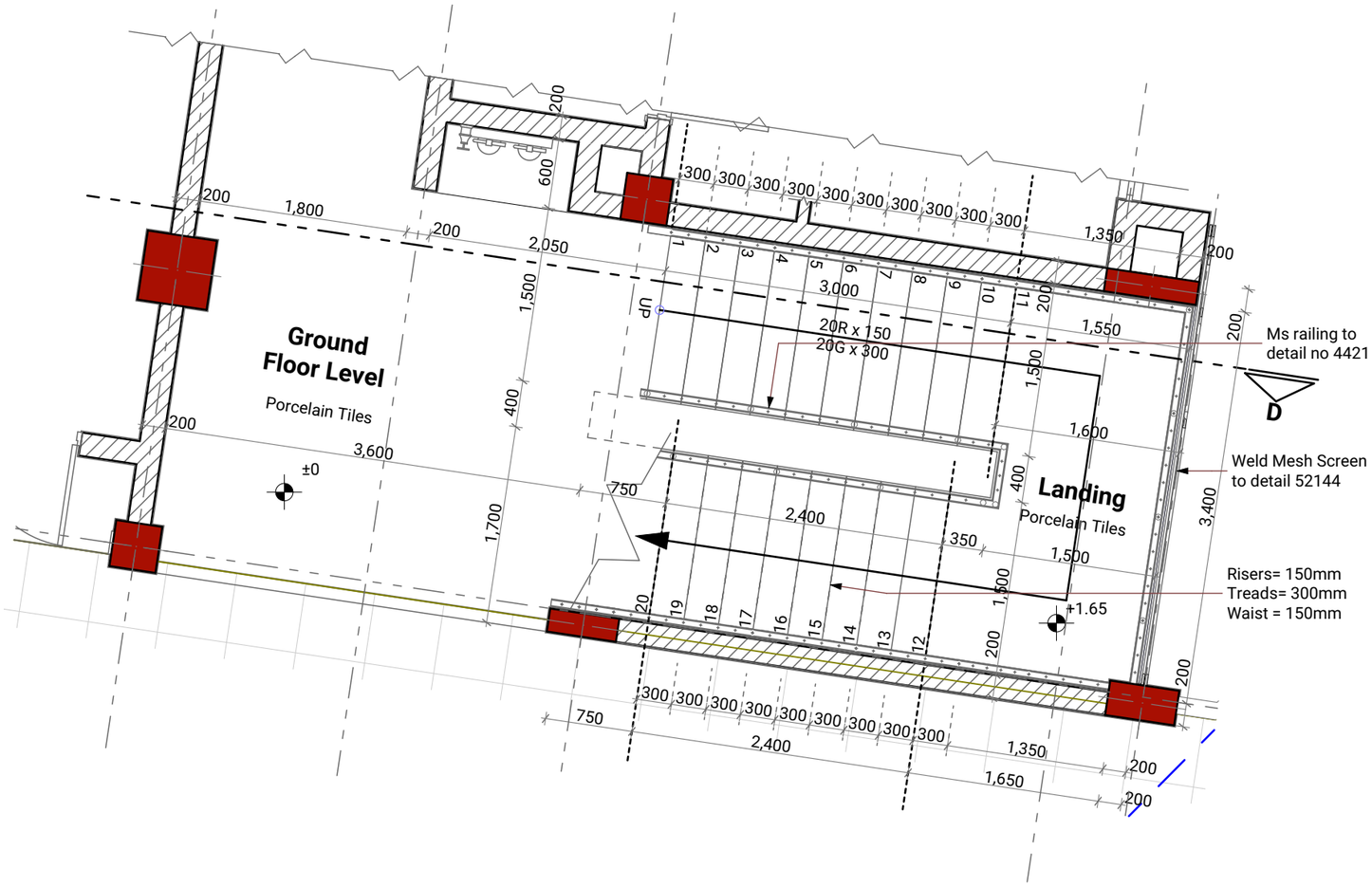
FOR TENDER



34420 Fire Escape Staircse 02 Detail - Ground Floor Plan 1:50

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Sheet Name

Fire Escape Staircase 02 Blow Up

Ground Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34409

Job Number

SK-20-2527

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FOR TENDER

34421 Fire Escape Staircse 02 Detail - Mezzanine Floor Plan 1:50

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Rev ID	Description	Issue Date

Client

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Job Title

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Sheet Name

Fire Escape Staircase 02 Blow Up Mezzanine Floor.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34410

Job Number

SK-20-2527

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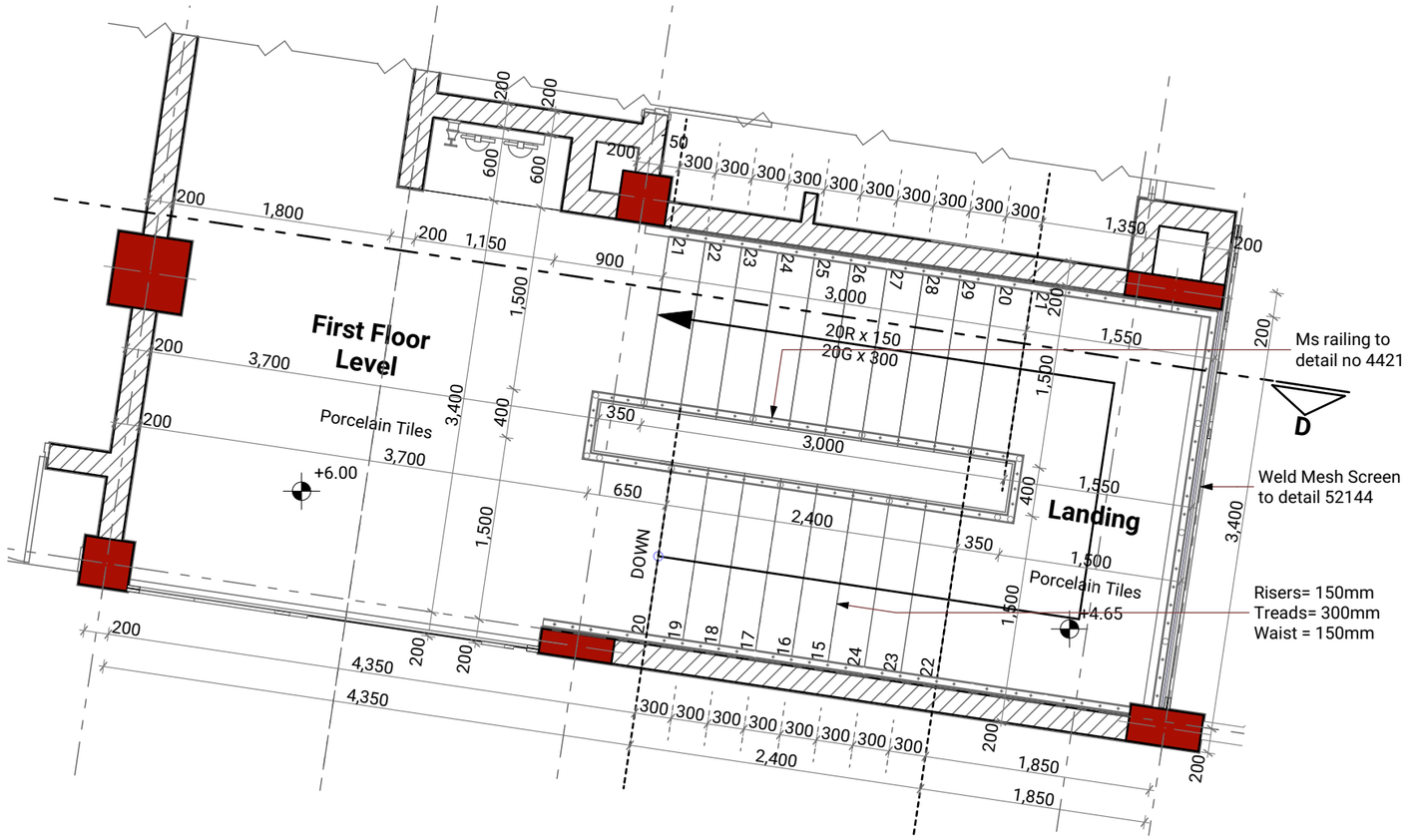

34422 Fire Escape Staircse 02 Detail - First Floor Plan 1:50

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Rev ID	Description	Issue Date

Client

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Sheet Name

Fire Escape Staircase 02 Blow Up

First Floor

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34411

Job Number

SK-20-2527

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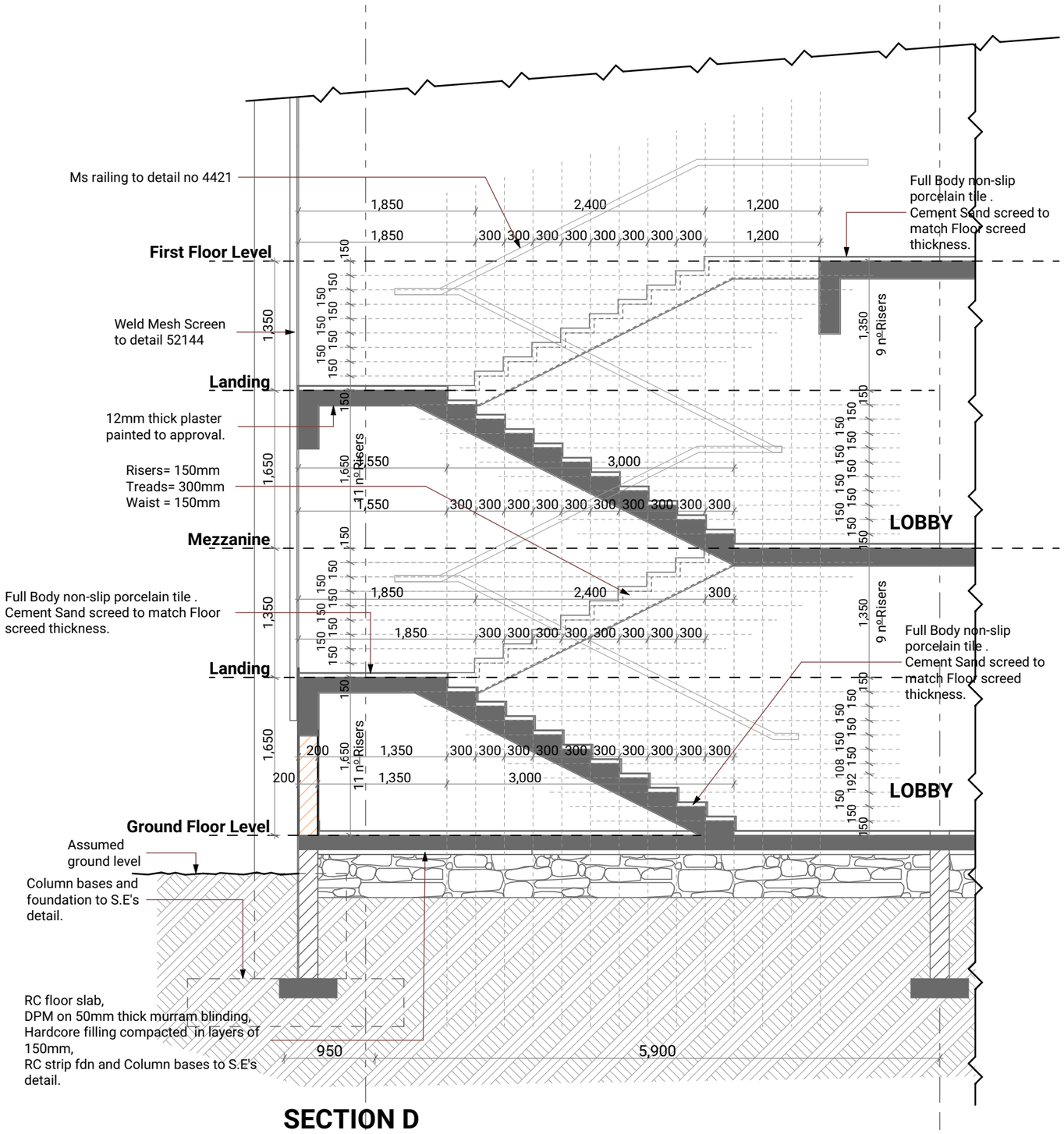

SECTION D

34423 **Fire Escape Staircse 02 Detail - Section D** **1:50**

FOR TENDER

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Rev ID	Description	Issue Date

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Sheet Name
Fire Escape Staircase 02 Blow Up
Section D

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.
2527-SK-XX-DR-A-34412

Job Number
SK-20-2527

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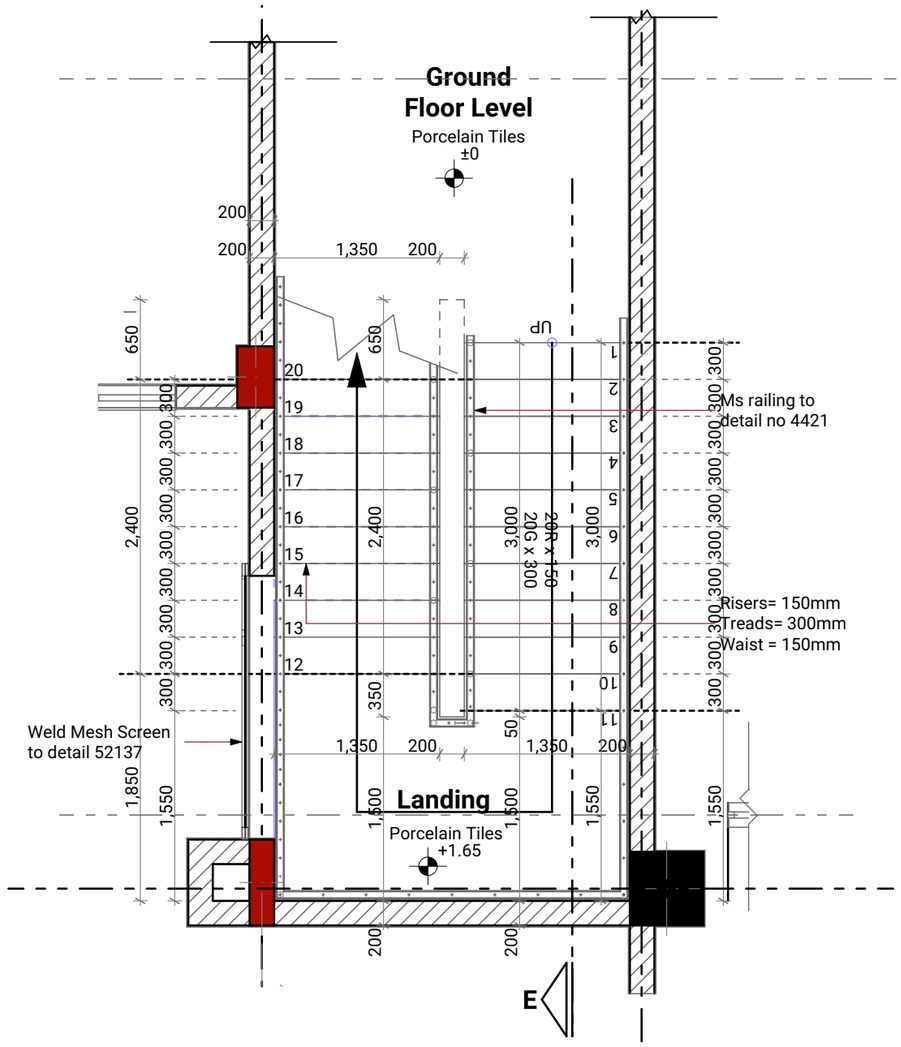

34430 Fire Escape Staircse 03 Detail- Ground Floor Plan 1:50

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Rev ID	Description	Issue Date

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Sheet Name

Fire Escape Staircase 03 Blow Up

Gound Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34413

Job Number

SK-20-2527

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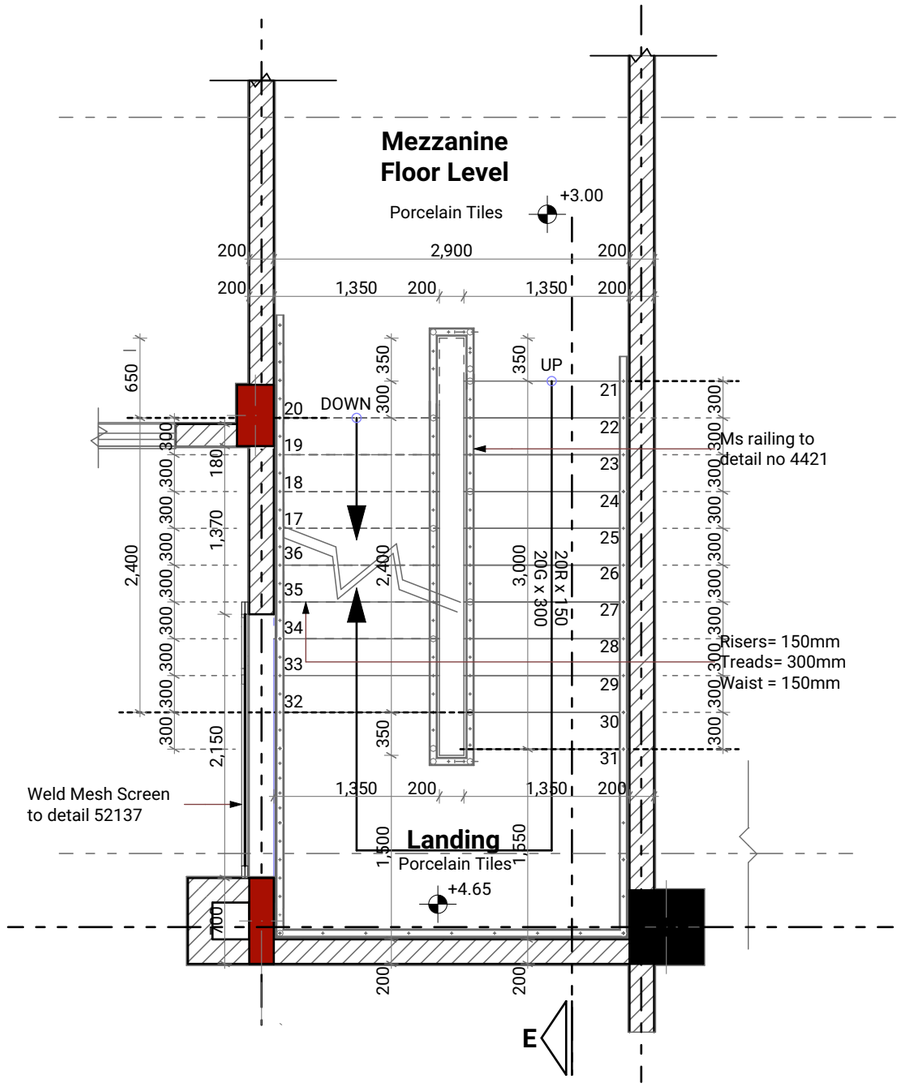
FOR TENDER



34431 Fire Escape Staircse 03 Detail- Mezzanine Floor Plan 1:50

FOR TENDER

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Rev ID	Description	Issue Date

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Sheet Name

Fire Escape Staircase 03 Blow Up

Mezzanine Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34414

Job Number

SK-20-2527

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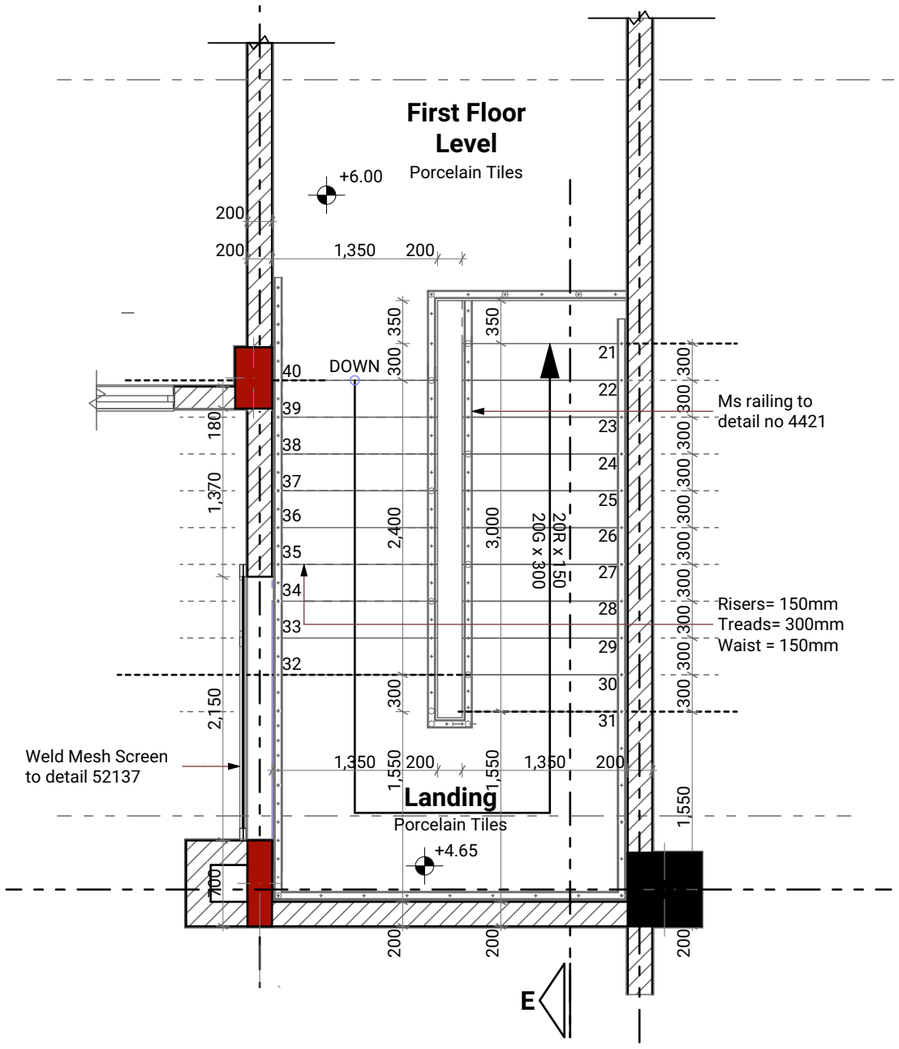

34432 Fire Escape Staircse 03 Detail- First Floor Plan 1:50

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Rev ID	Description	Issue Date

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Sheet Name

Fire Escape Staircase 03 Blow Up

First Floor Plan

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34415

Job Number

SK-20-2527

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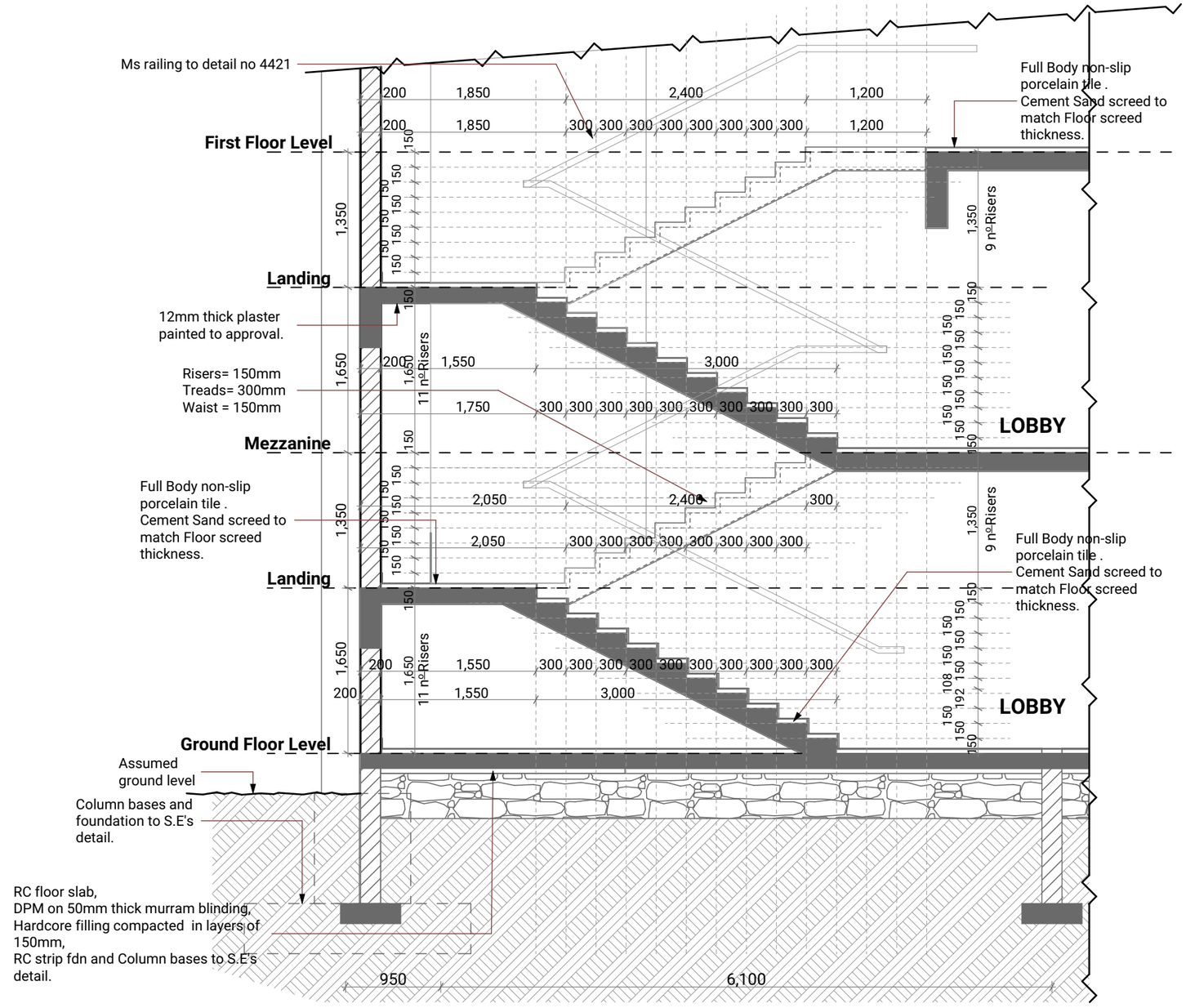

34433 **Fire Escape Staircse 03 Detail-Section E** **1:50**

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Rev ID	Description	Issue Date

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Sheet Name

Fire Escape Staircase 03 Blow Up

Section E

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34416

Job Number

SK-20-2527

File Path

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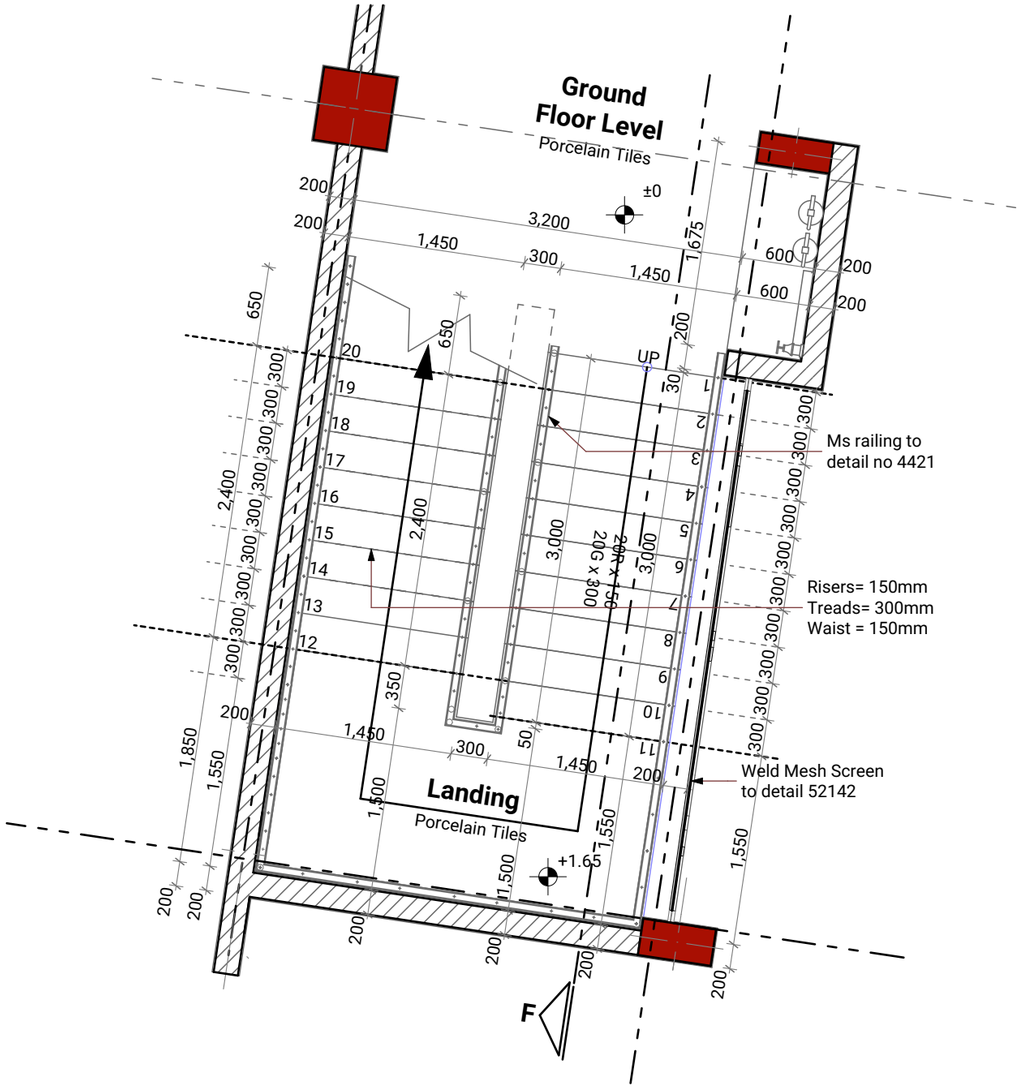

34440 Fire Escape Staircse 04 Detail-Ground Floor Plan 1:50

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client
MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Fire Escape Staircase 04 Blow Up
Ground Floor Plan

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.
2527-SK-XX-DR-A-34417

Job Number
SK-20-2527

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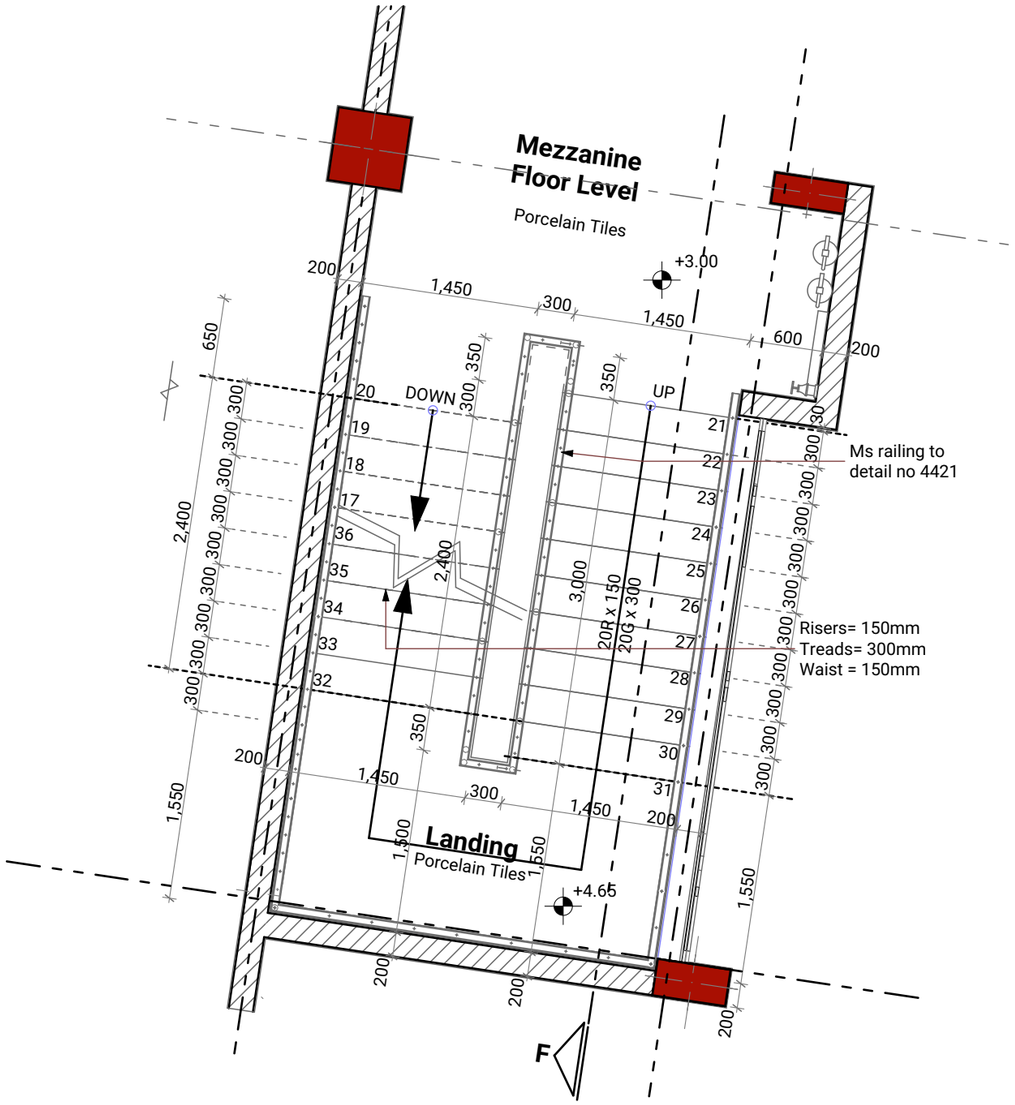

34441 Fire Escape Staircse 04 Detail-Mezzanine Floor Plan 1:50

NOTES

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Client

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Sheet Name

Fire Escape Staircase 04 Blow Up

Mezzanine Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34418

Job Number

SK-20-2527

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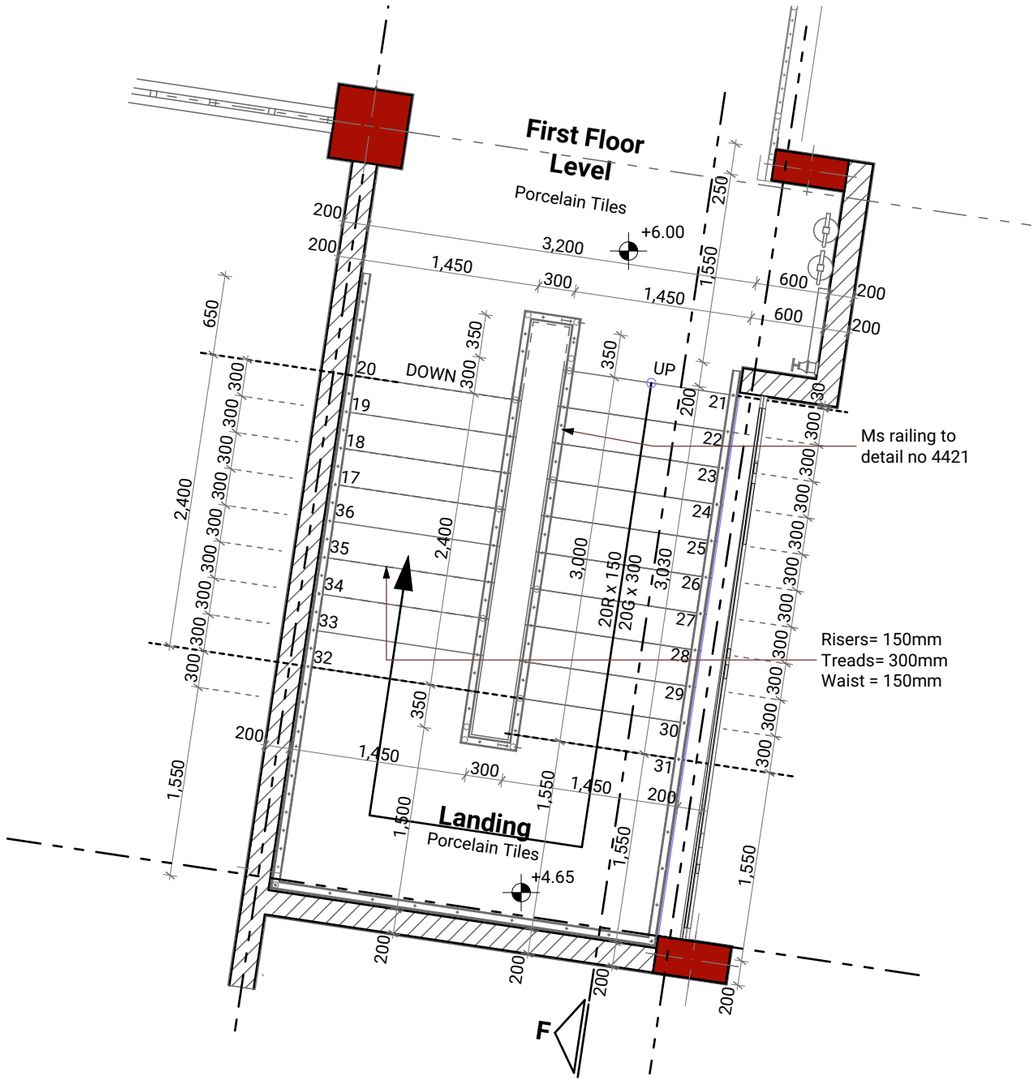

BLOCK D FIRE ESCAPE STAIRCASE PLAN - FIRST FLOOR LEVEL

34442 Fire Escape Staircse 04 Detail-First Floor Plan 1:50

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Sheet Name

Fire Escape Staircase 04 Blow Up

First Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34419

Job Number

SK-20-2527

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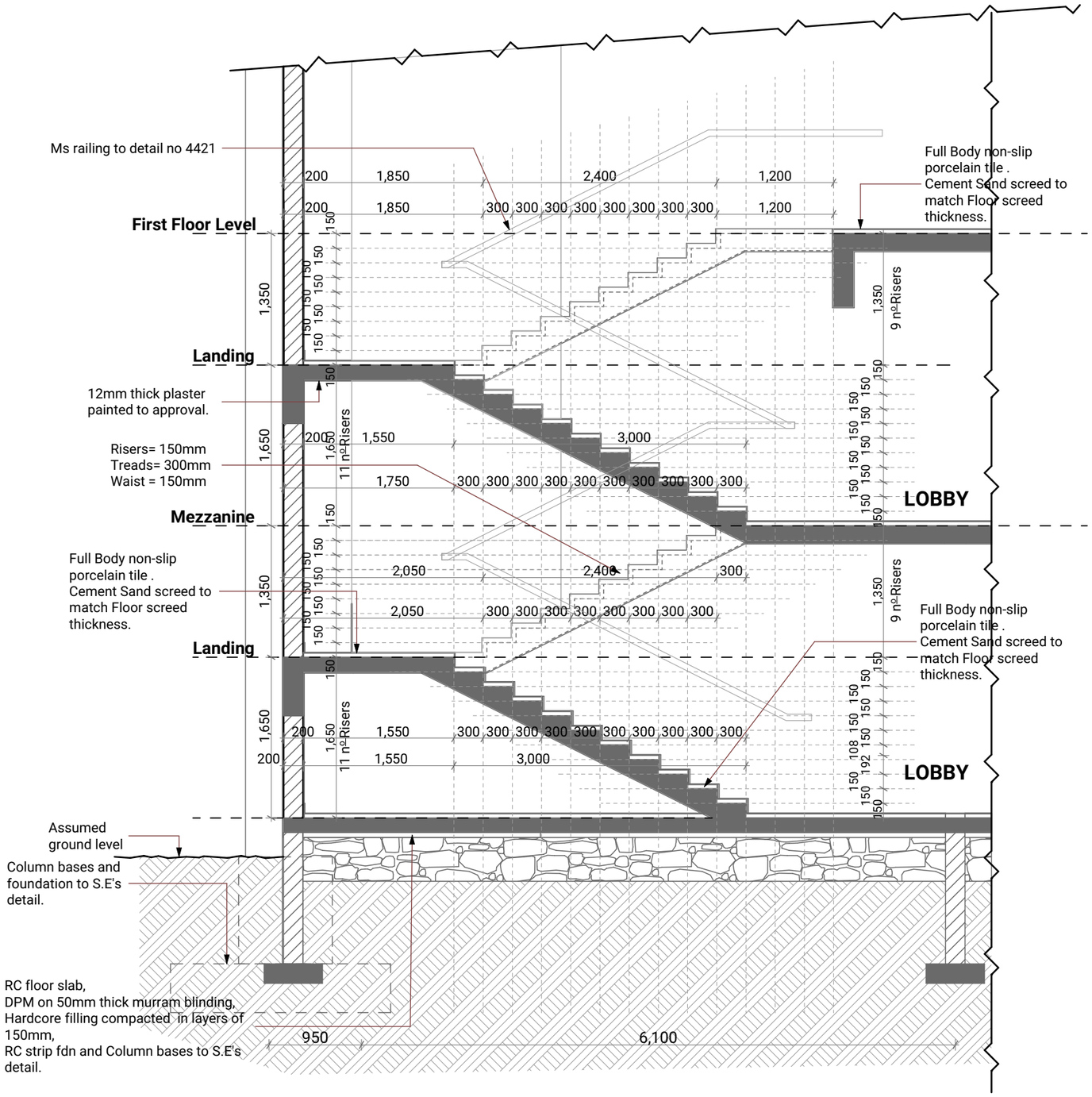

34443 Fire Escape Staircse 04 Detail-Section F 1:50

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Sheet Name

Fire Escape Staircase 04 Blow Up

Section F

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34420

Job Number

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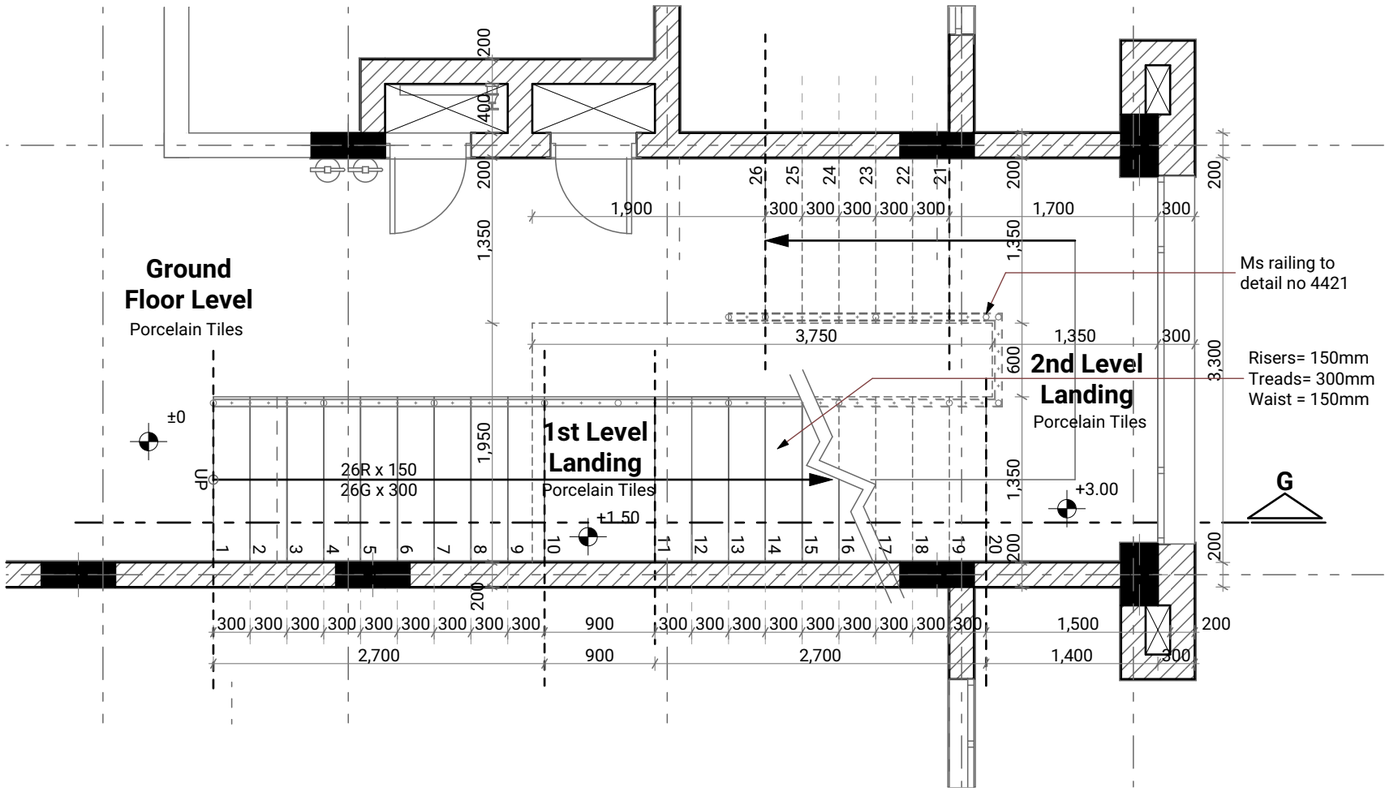

34450 **Admin Main Staircse Detail-Ground Floor Plan** **1:50**

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Rev ID	Description	Issue Date

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Sheet Name

Main Admin Staircase Blow Up

Ground Floor Plan

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GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34421

Job Number

SK-20-2527

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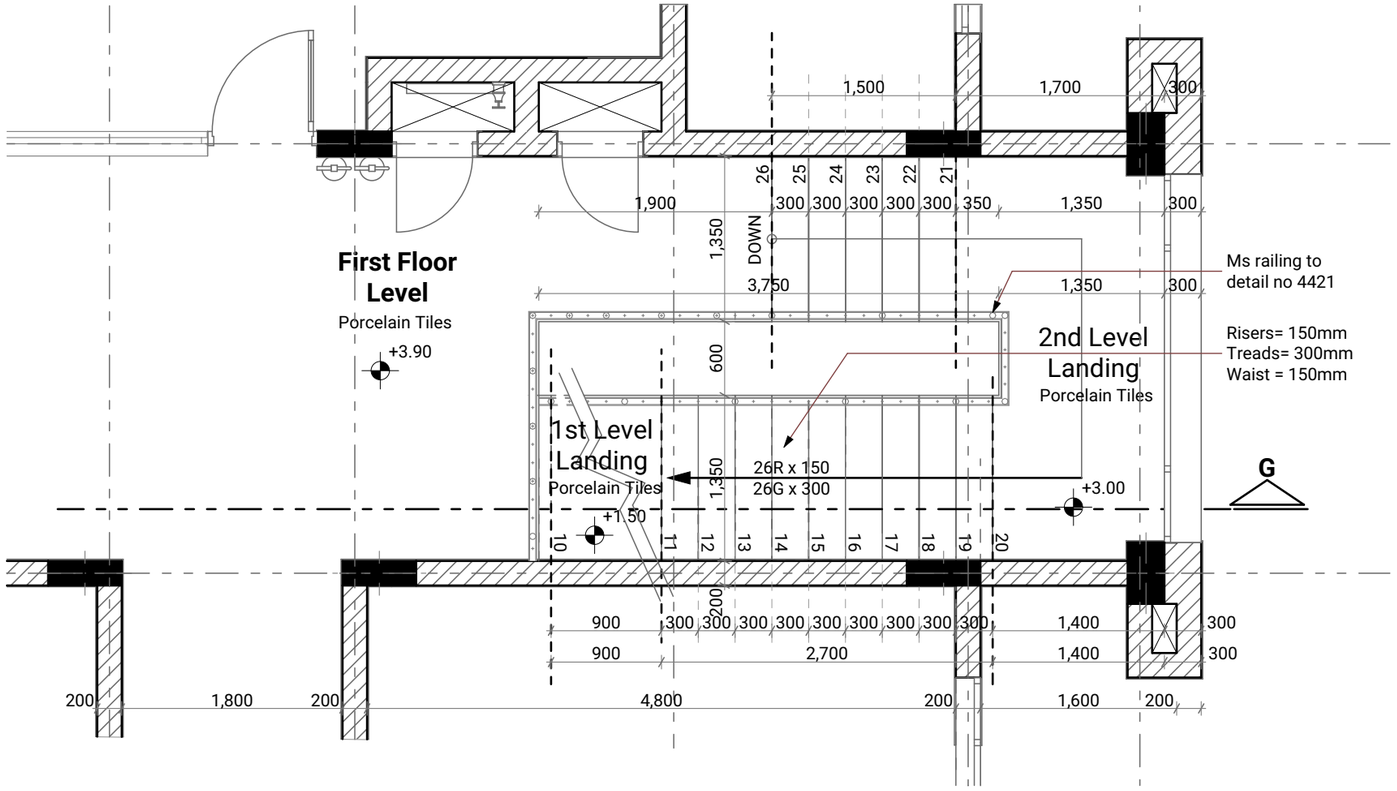

34451 **Admin Main Staircse Detail-First Floor Plan** **1:50**

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Rev ID	Description	Issue Date

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Job Title

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Sheet Name

Main Admin Staircase Blow Up

First Floor Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34422

Job Number

SK-20-2527

File Path

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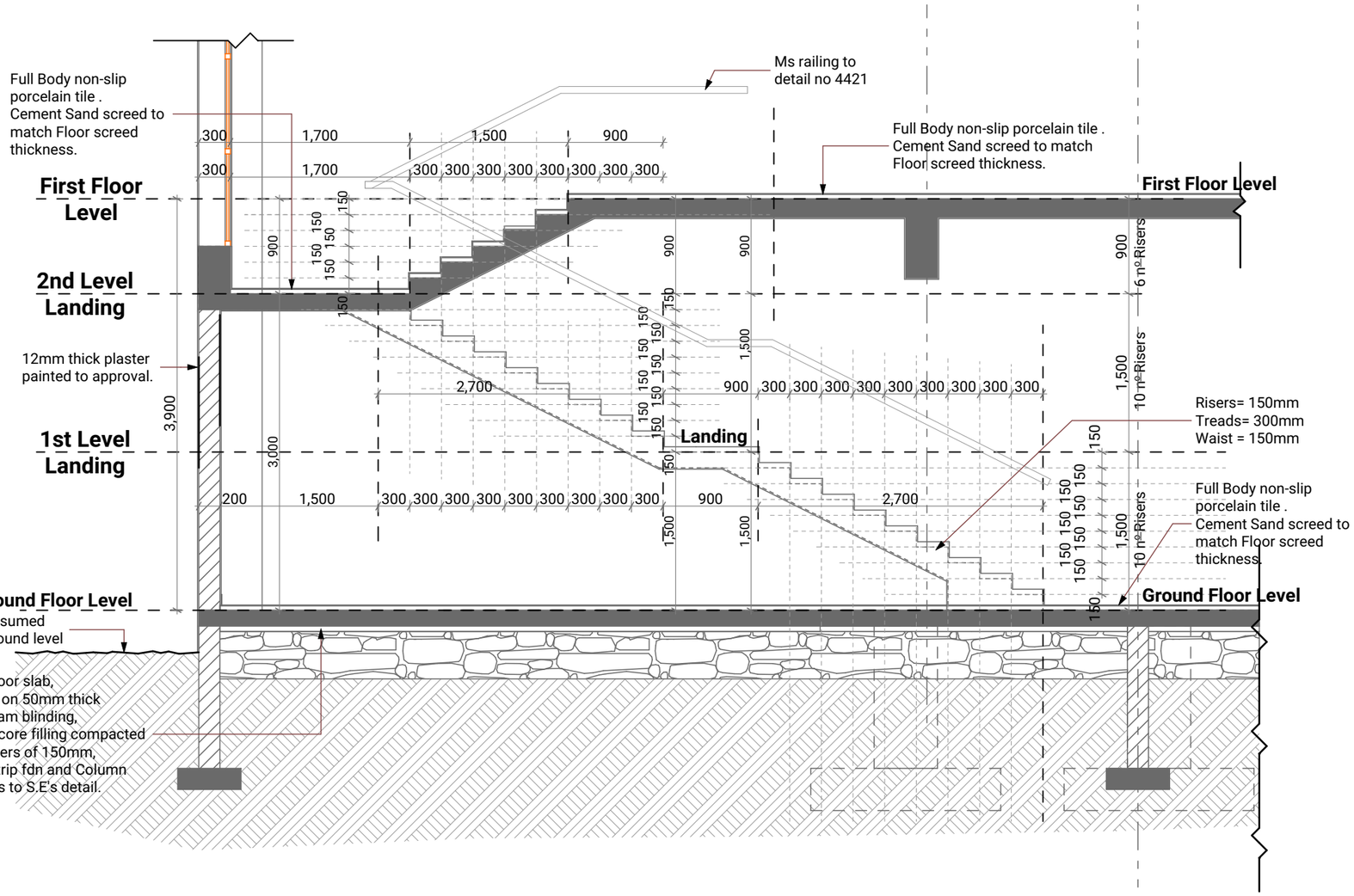

34453 Admin Main Staircse Detail-Section G 1:50

NOTES

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Job Title

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Sheet Name

Main Admin Staircase Blow Up

Section G

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34423

Job Number

SK-20-2527

File Path

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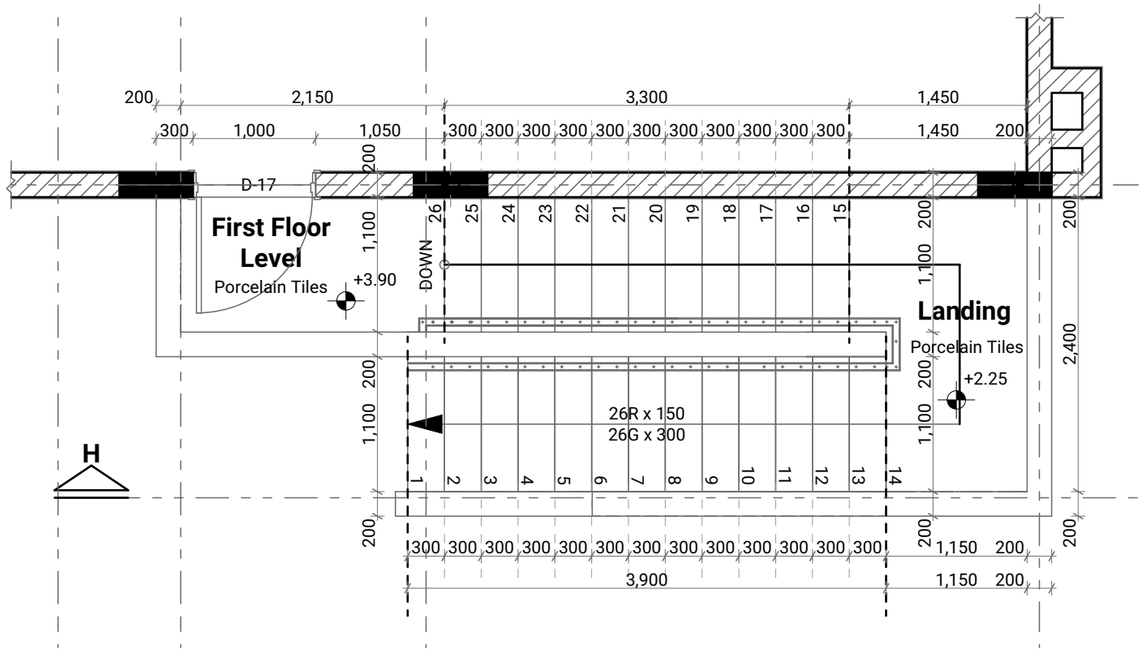
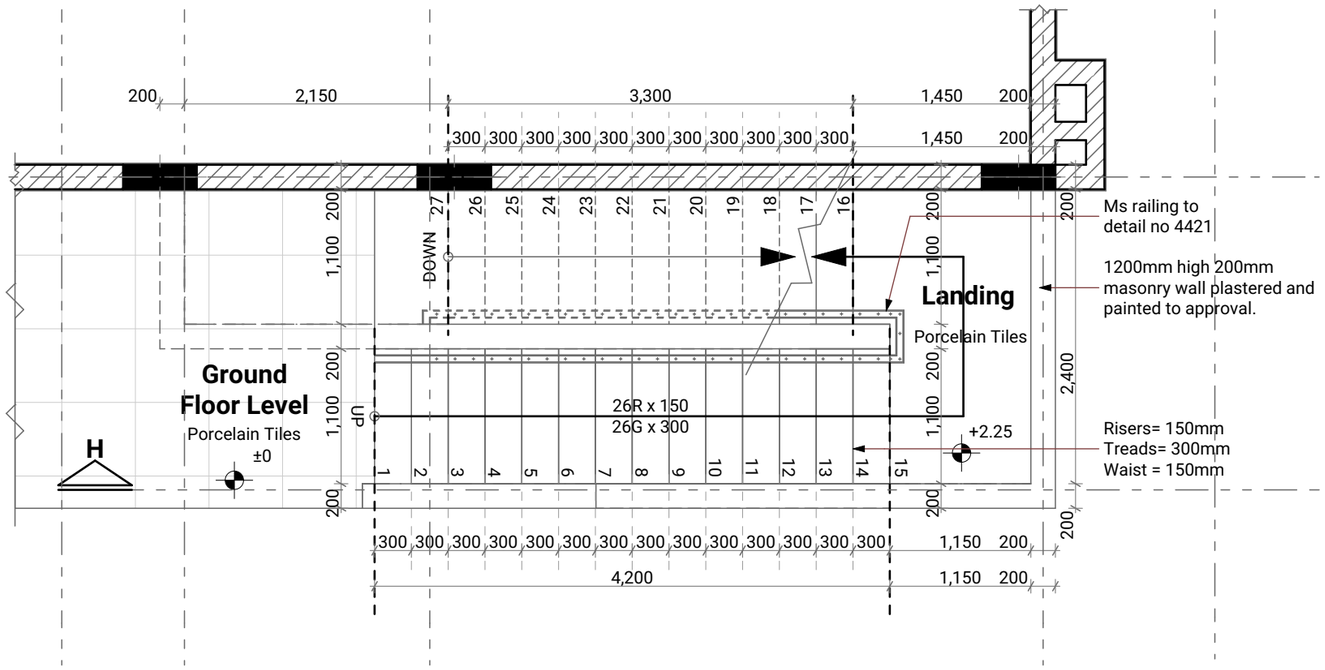


34461 Admin Fire Escape Staircase- First Floor Plan 1:50



34460 Admin Fire Escape Staircase- Ground Floor Plan 1:50

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Rev ID	Description	Issue Date

Client

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Job Title

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Sheet Name

Admin Fire Escape Staircase Blow Up

Ground and First Floor Plan

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GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34424

Job Number

SK-20-2527

File Path

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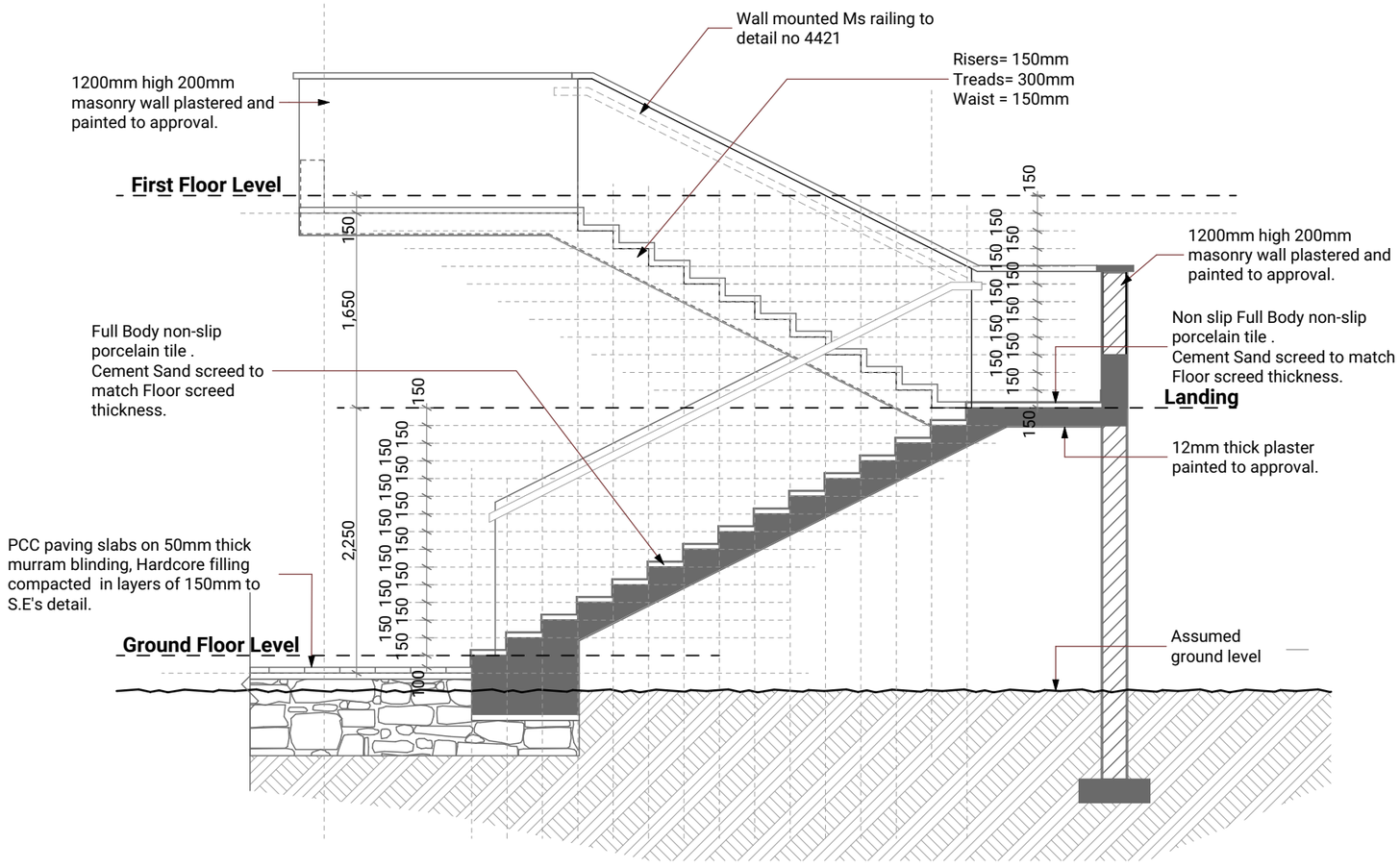

34462 **Admin Fire Escape Staircase- Section H** **1:50**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

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Sheet Name

Admin Fire Escape Staircase Blow Up

Admin Fire Escape Staircase.

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-34425

Job Number

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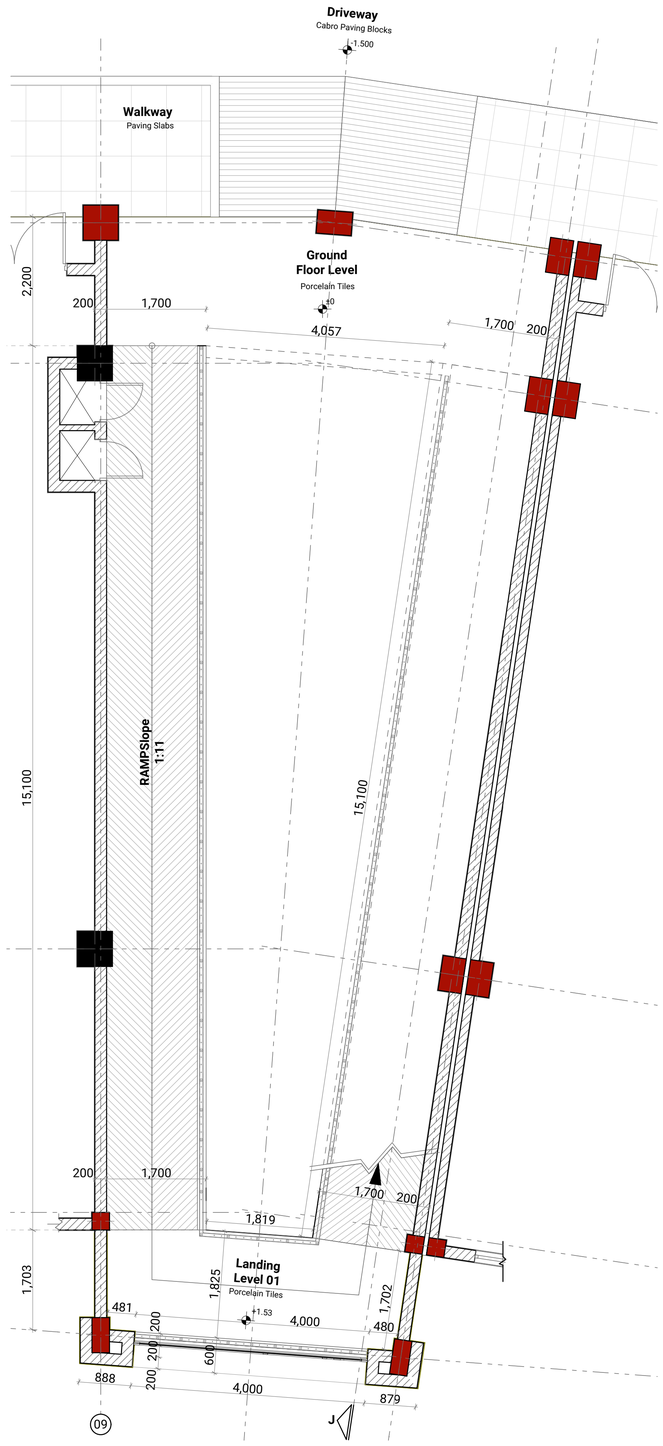
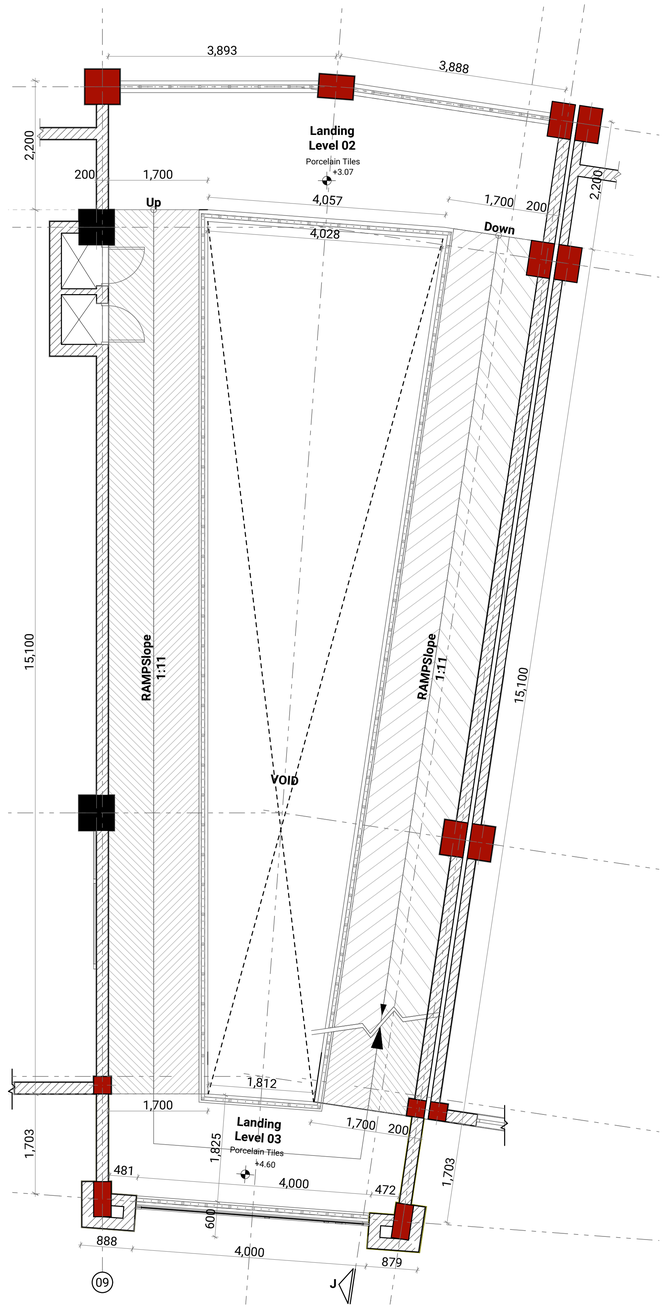
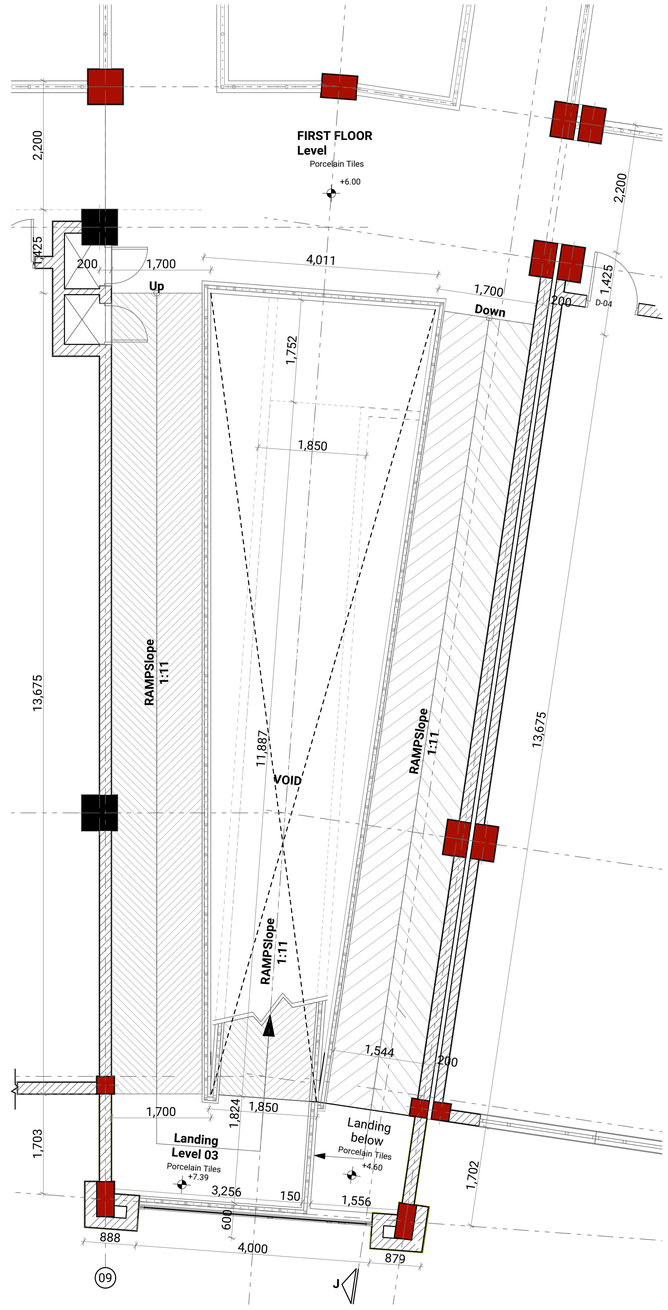


34470 Main Ramp Detail- Ground Floor Plan 1:50



34471 Ramp Detail- Mezzanine Floor Plan 1:50



34472 Ramp Detail- First Floor Plan 1:50

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LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Ramp Blow Up
Main Ramp Plans

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A1)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-34426

Job Number

SK-20-2527

File Path

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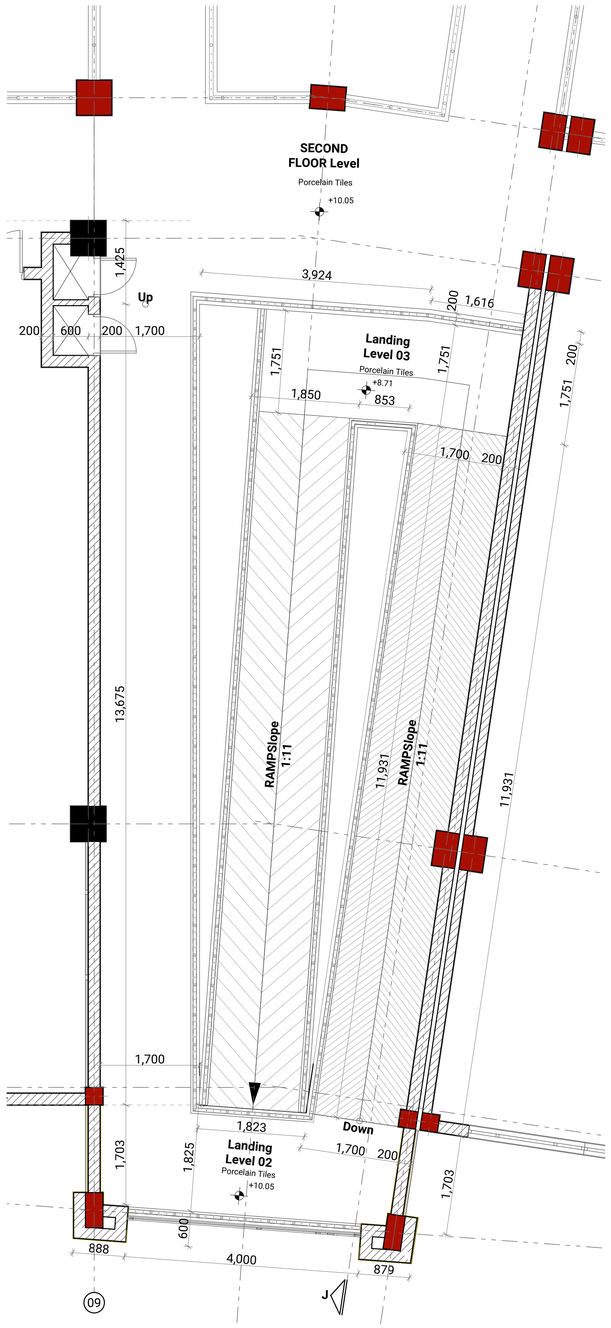
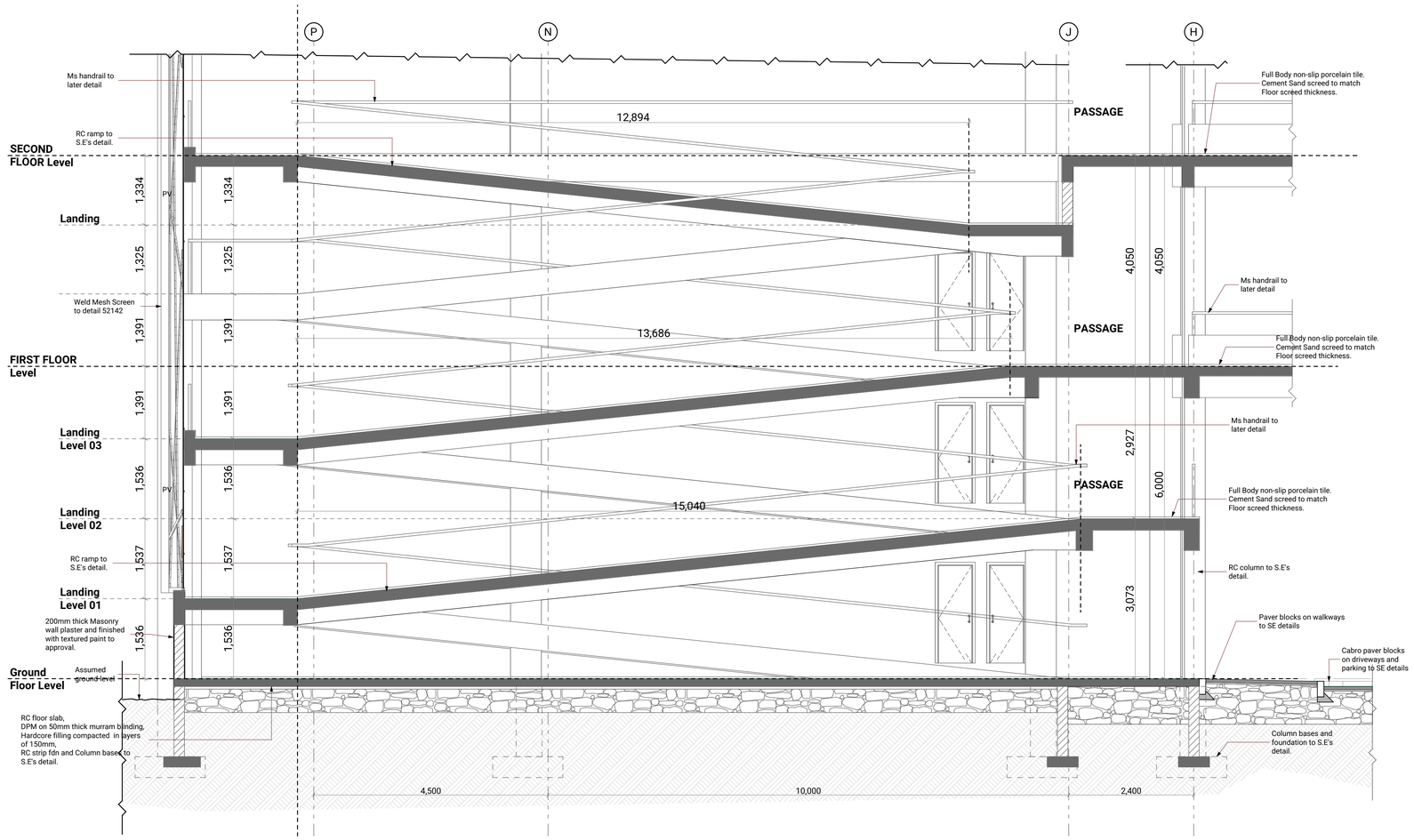


34474 **Ramp Detail- Second Floor Plan** 1:50



34475 **Ramp Detail- Section G** 1:50

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

LOCATION PLAN

Rev ID	Chg ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Ramp Blow Up
Main Ramp Plan & Section

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date	Scale (A1)	Revision
13/04/2021	**1:50**	**00**

Sheet No.

2527-SK-XX-DR-A-34418

Job Number

SK-20-2527

File Path

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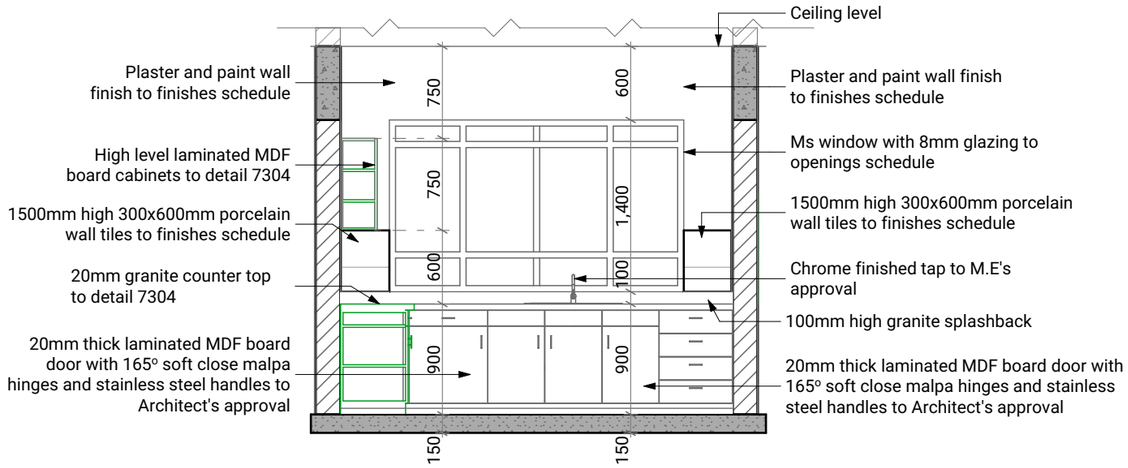
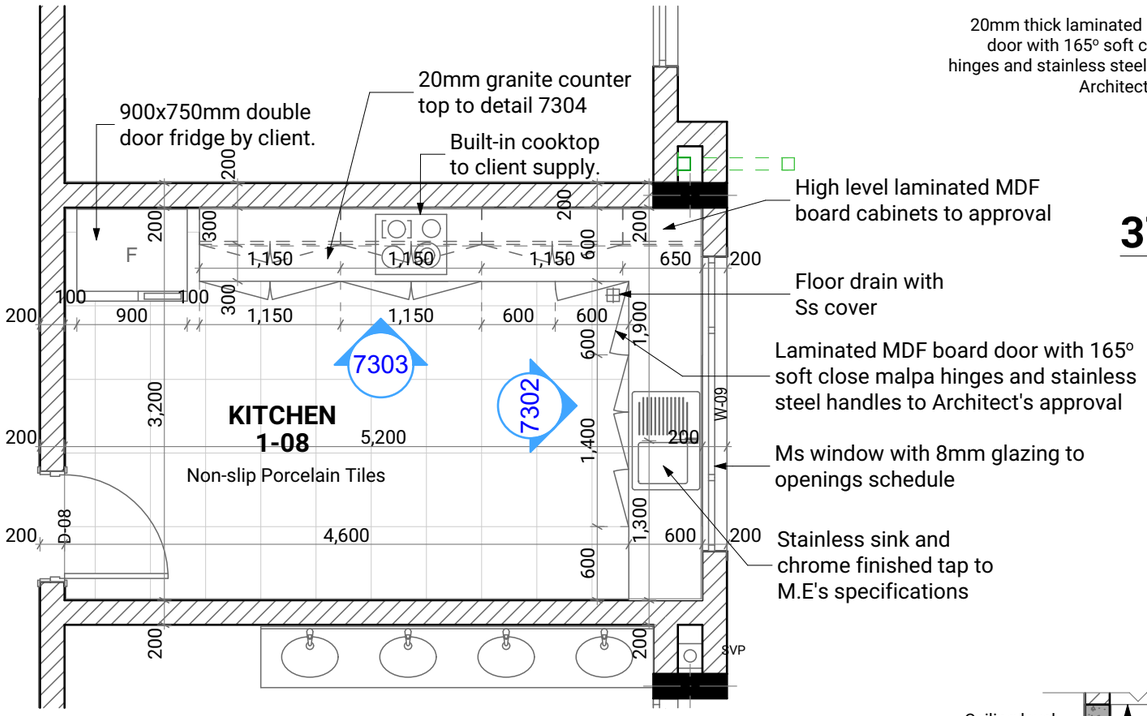
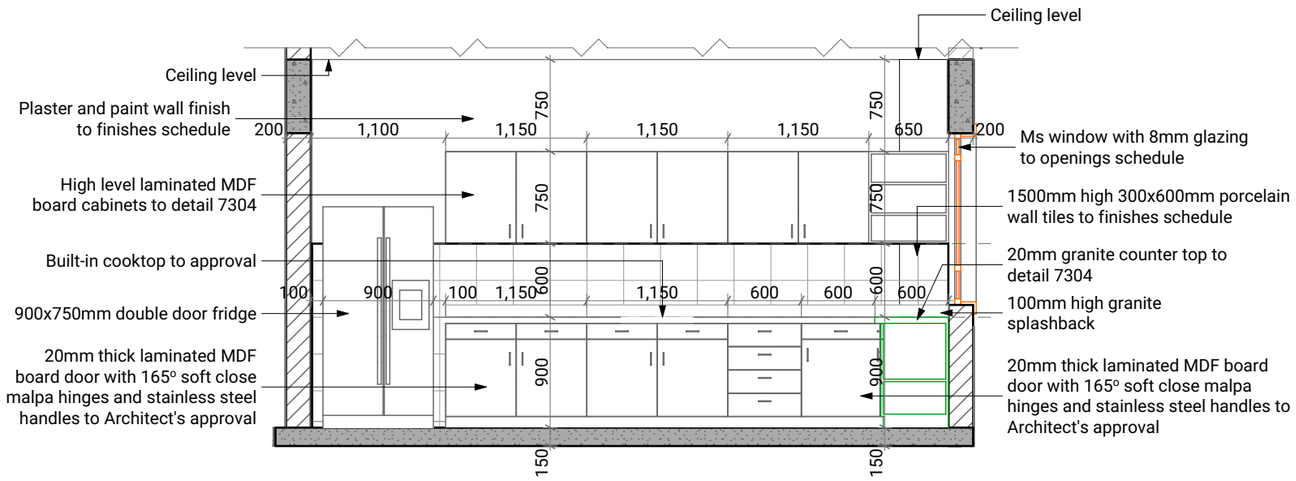
FOR TENDER



37302 Elevation 01 1:50



37301 Kitchen floor plan 1:50



37303 Elevation 02 1:50

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Rev ID	Description	Issue Date

Client

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Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Kitchenette

Plan and Elevations

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-XX-DR-A-37301

Job Number

SK-20-2527

File Path

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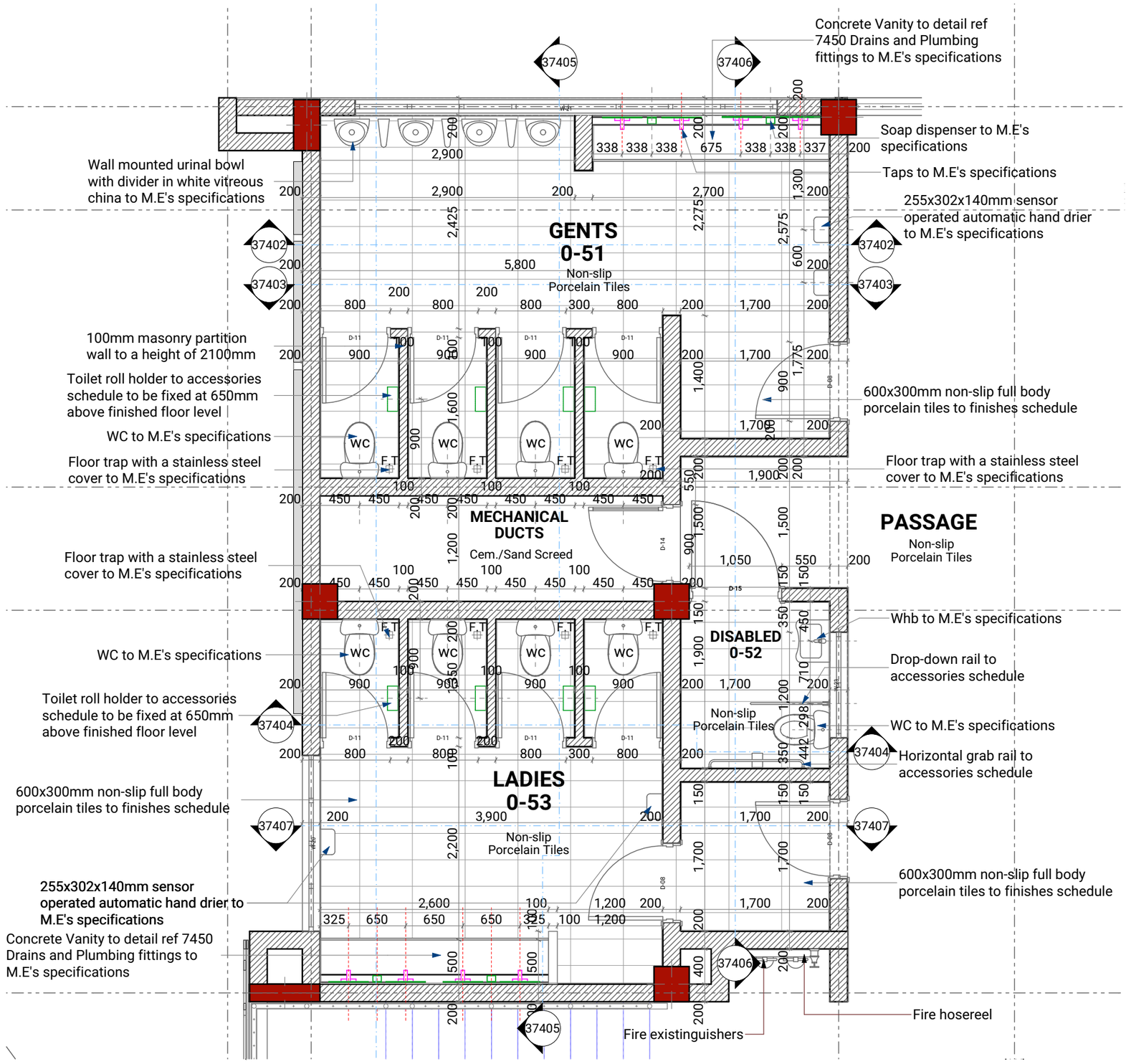

Washroom 01 Plan (3No) 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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Sheet Name

Washroom Blowups

Washroom 01 Plan

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-ZZ-DR-A-37401

Job Number

SK-20-2527

File Path

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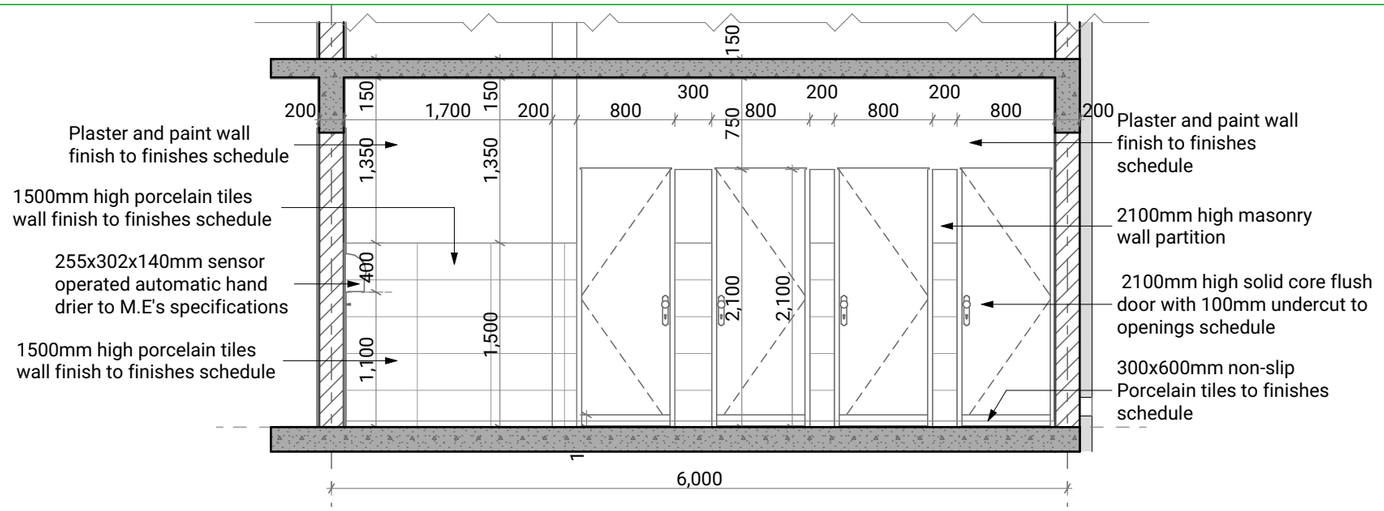
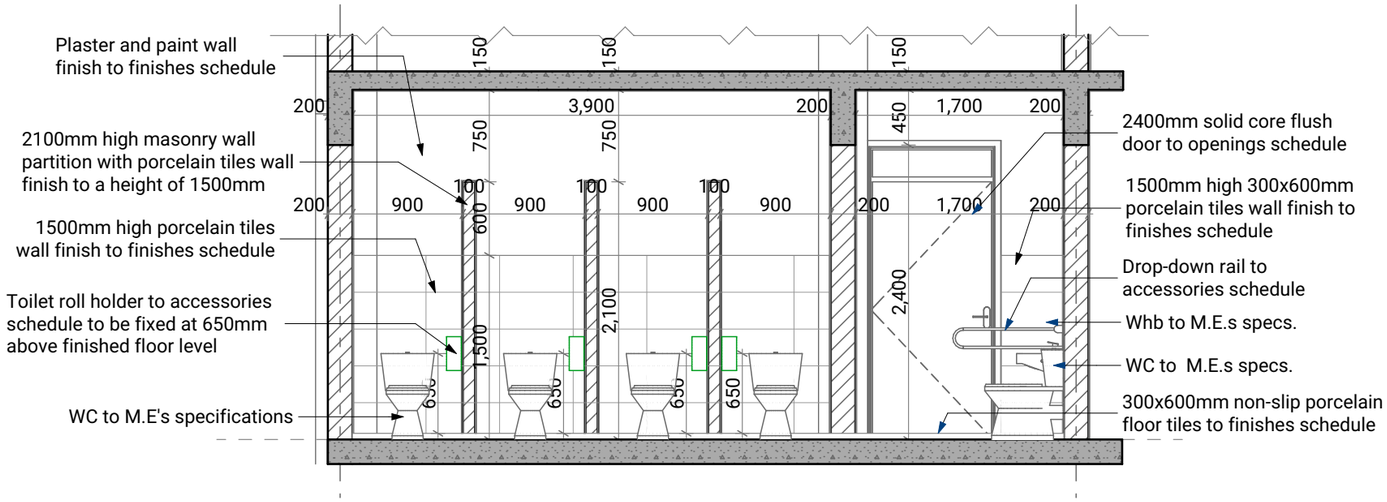
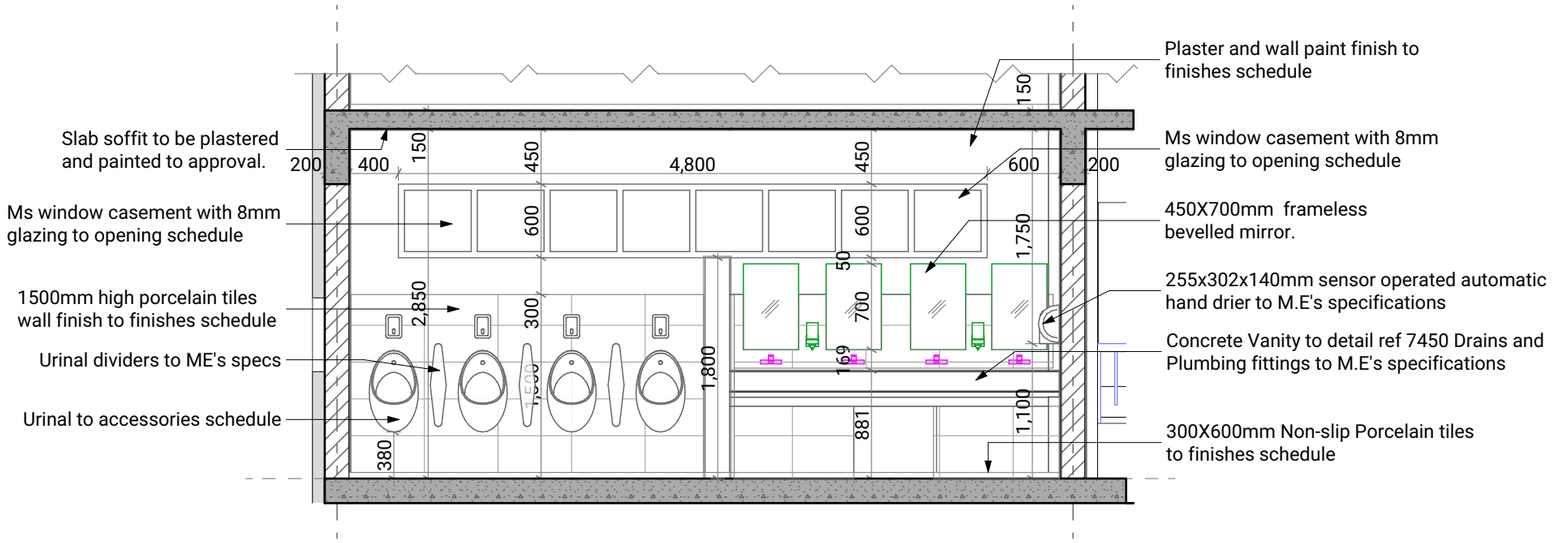


37403 **Washroom 01 Elevation** **1:50**



37404 **Washroom 01 Elevation** **1:50**



37402 **Washroom 01 Elevation** **1:50**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 01 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37402

Job Number

SK-20-2527

File Path

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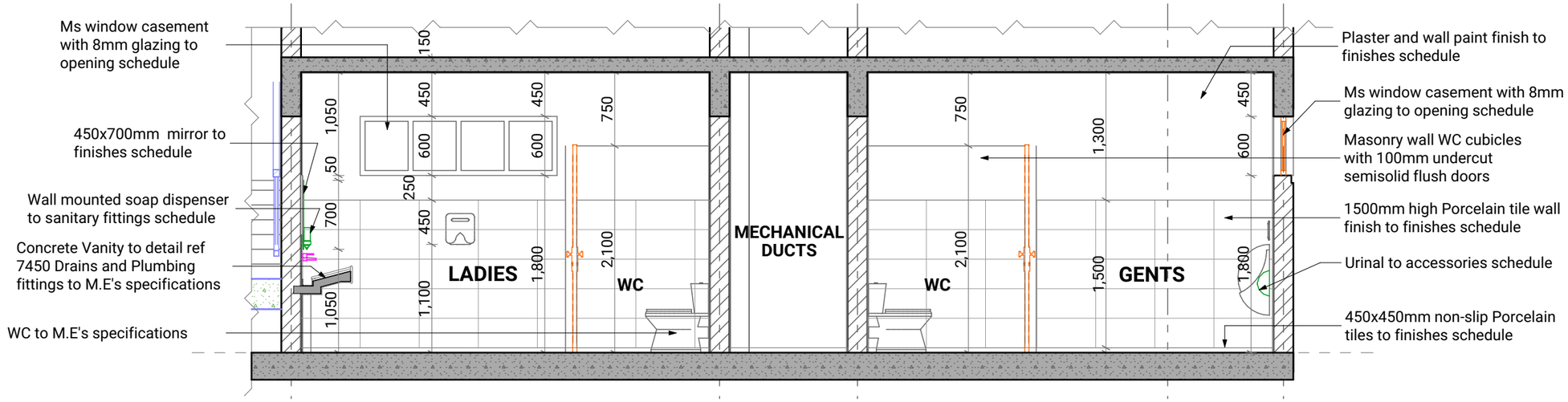
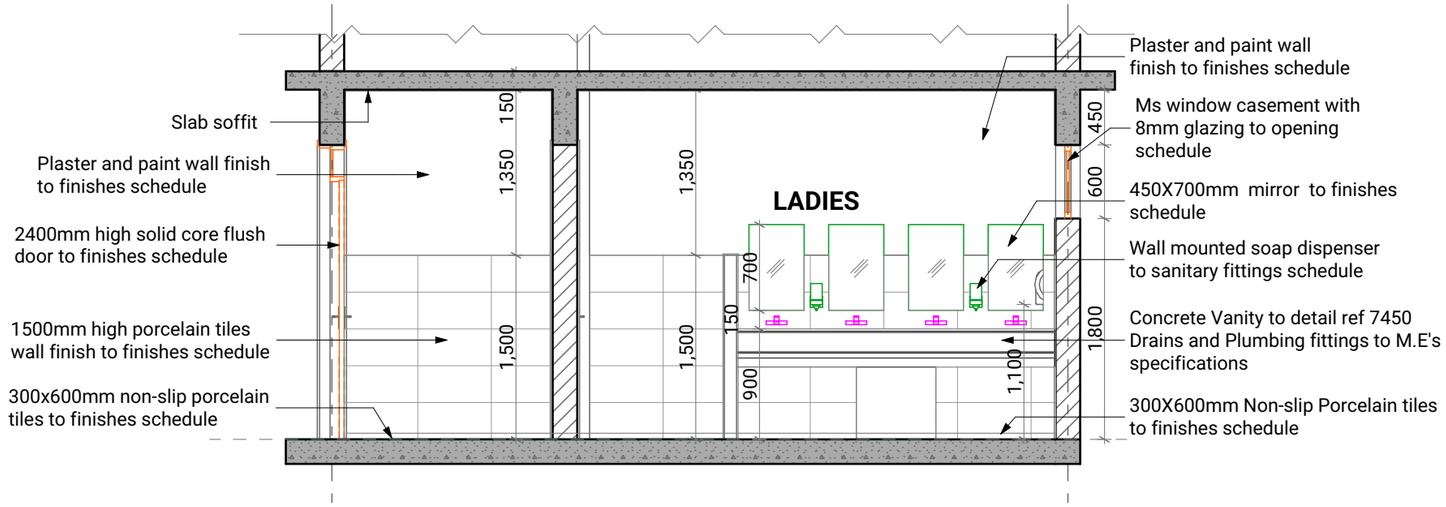
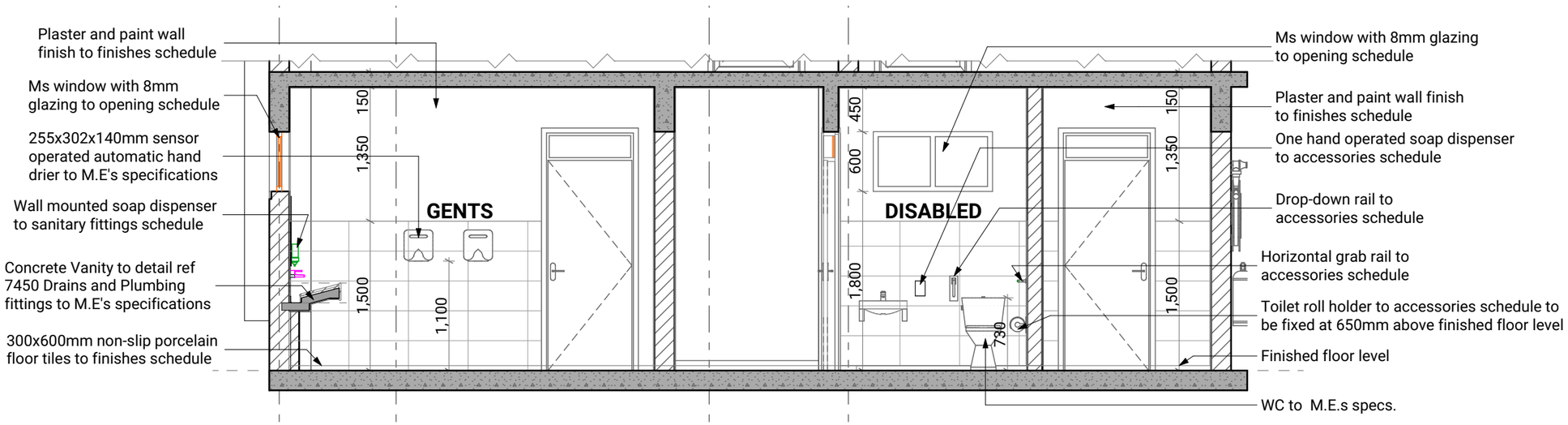


37405 **Washroom 01 Elevation** **1:50**



37407 **Washroom 01 Elevation** **1:50**



37406 **Washroom 01 Elevation** **1:50**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 01 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37403

Job Number

SK-20-2527

File Path

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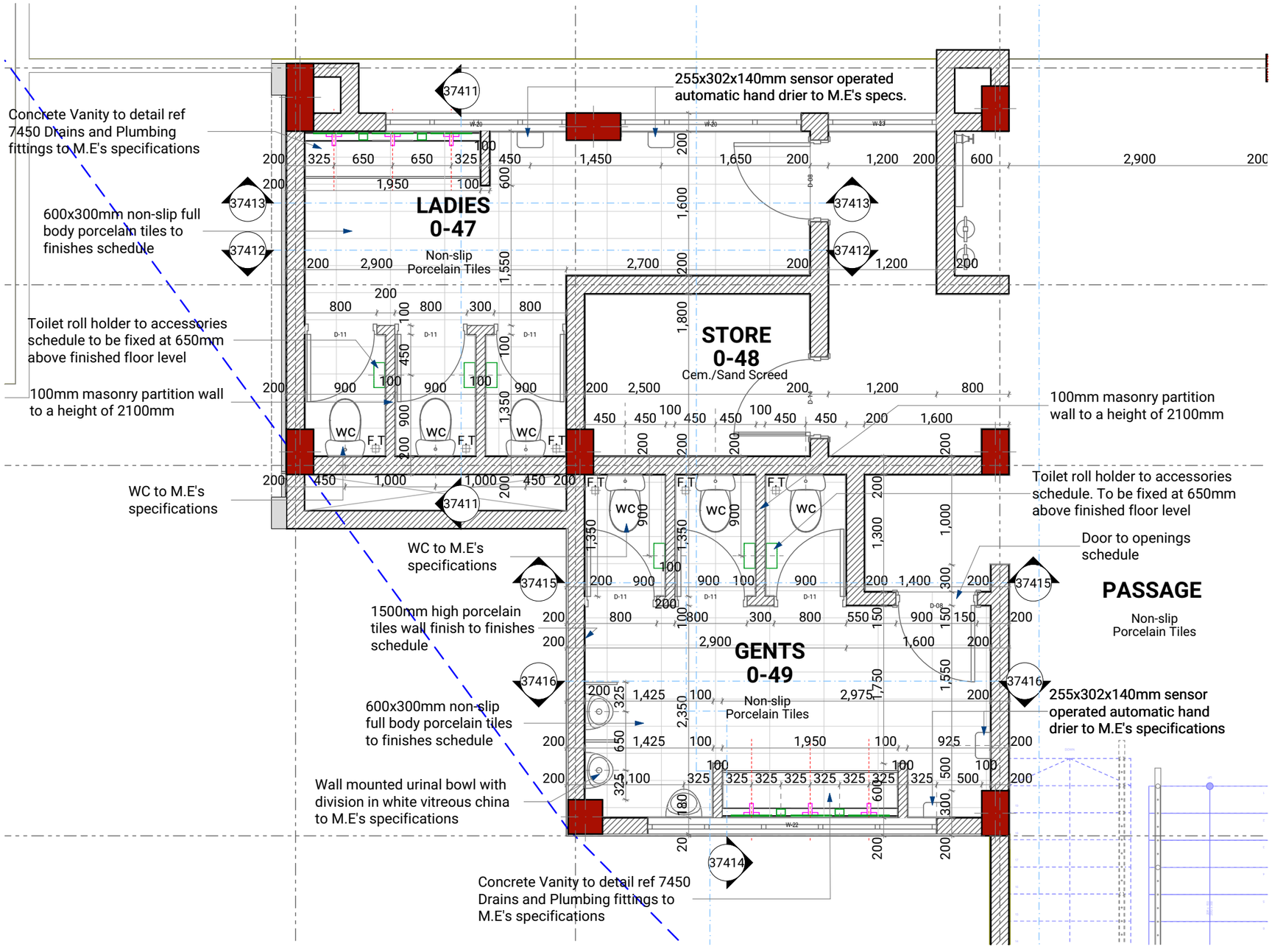

37410 **Washroom 02 Plan (2No)** **1:50**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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Sheet Name

Washroom Blowups

Washroom 02 Plan

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:50	Revision 00

Sheet No.

2527-SK-ZZ-DR-A-37404

Job Number

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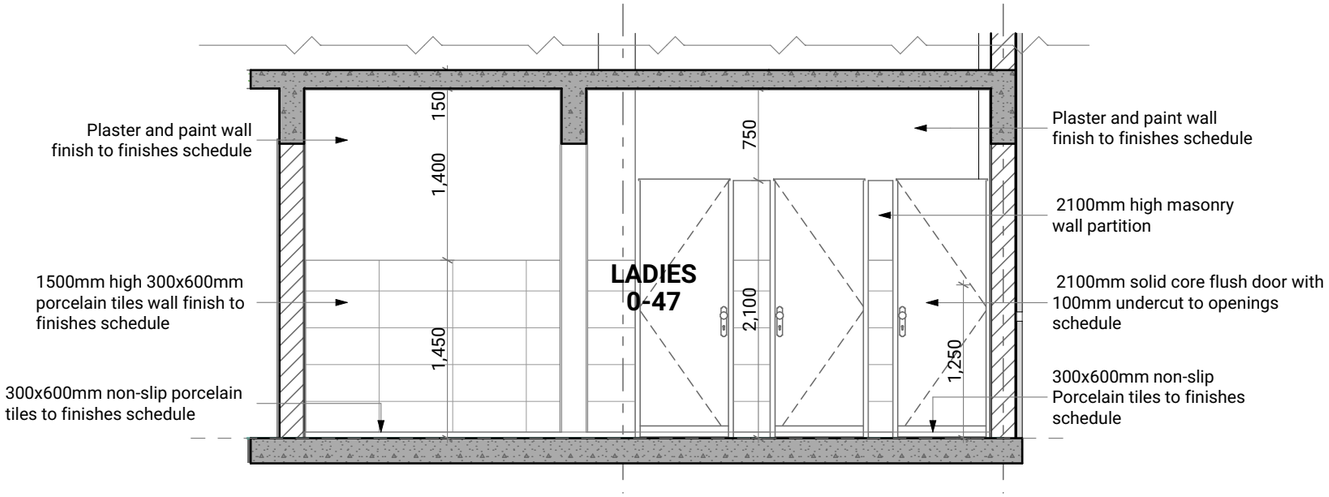
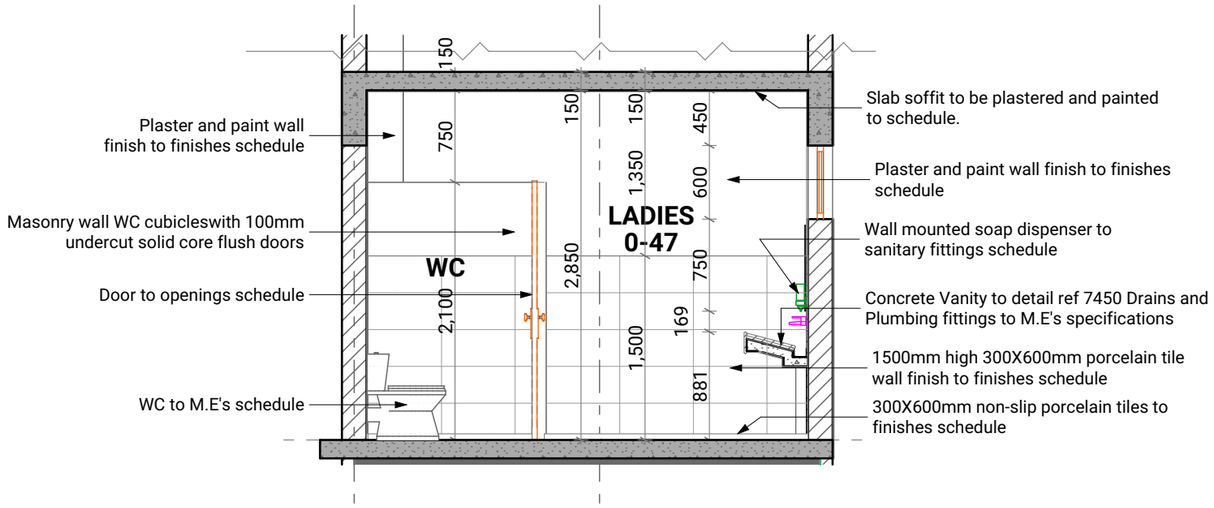
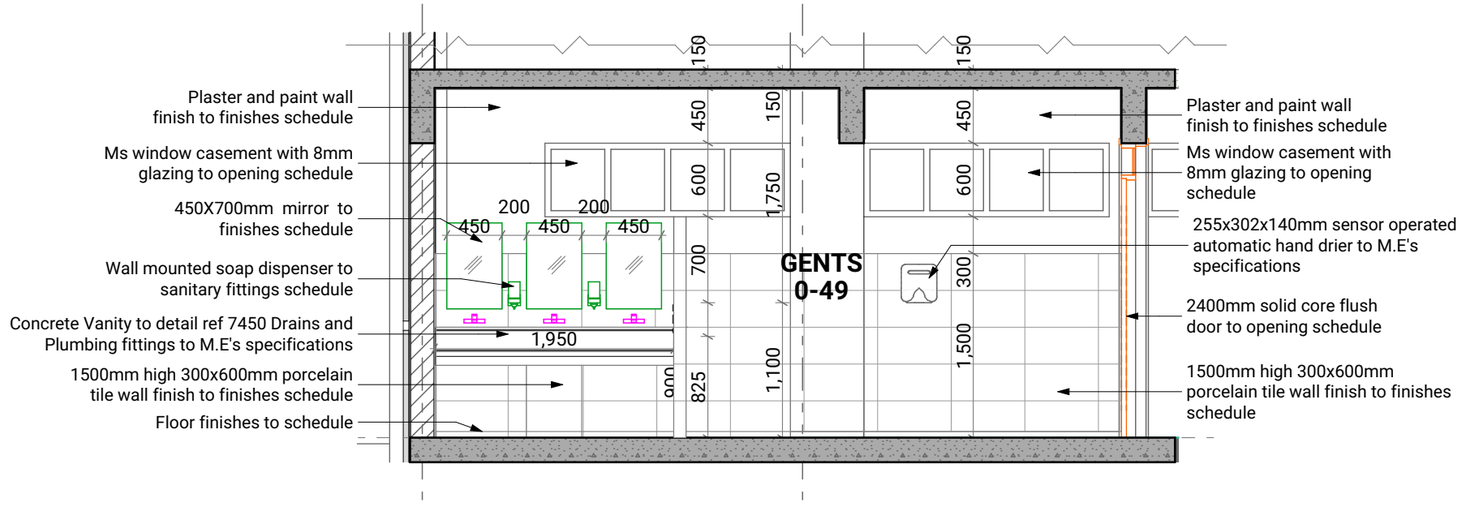


37412 **Washroom 01 Elevation** **1:50**



37411 **Washroom 02 Elevation** **1:50**



37413 **Washroom 01 Elevation** **1:50**

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 02 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37405

Job Number

SK-20-2527

File Path

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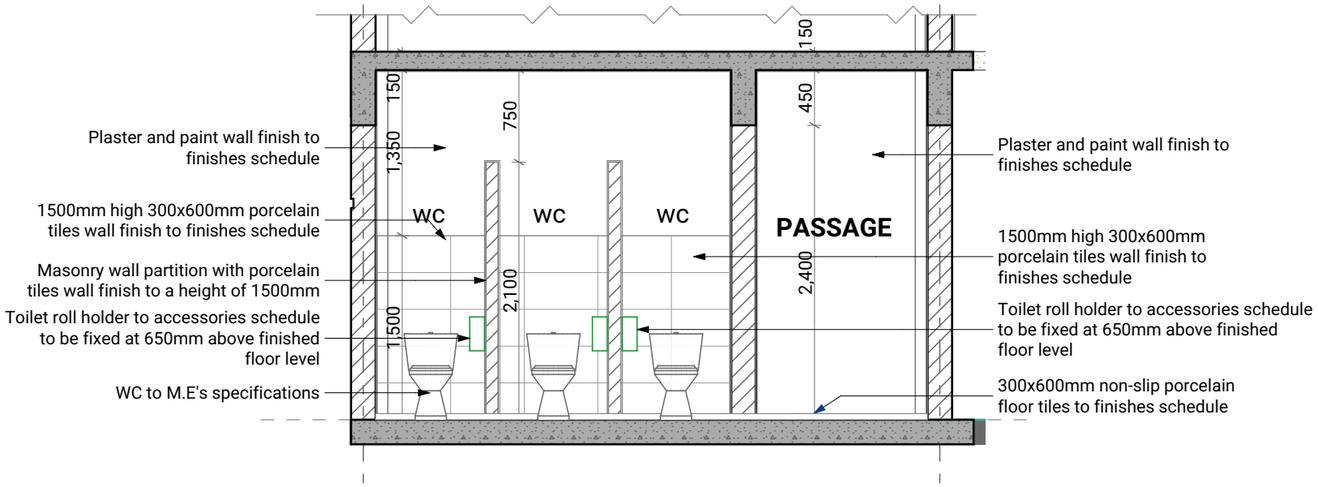
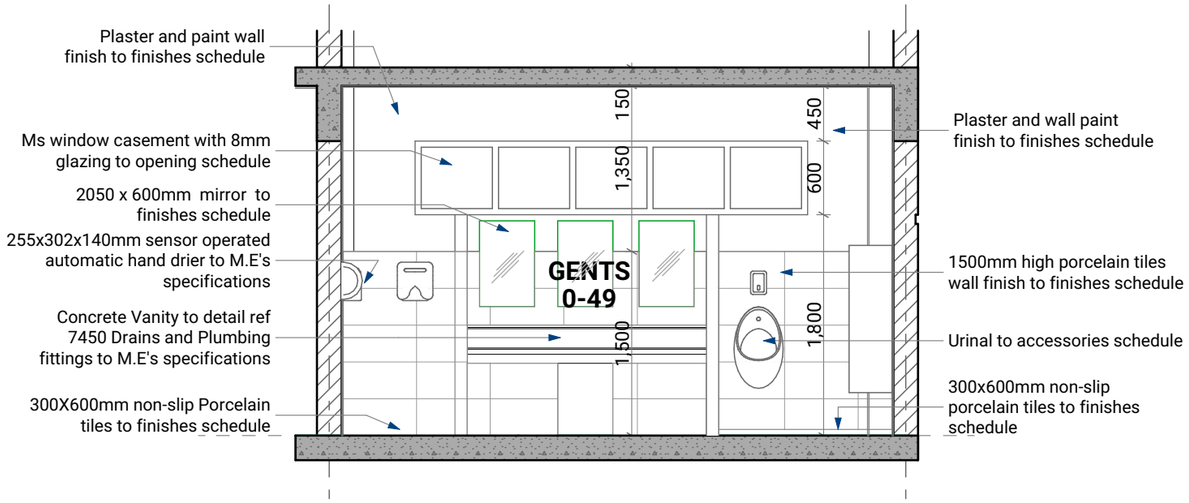
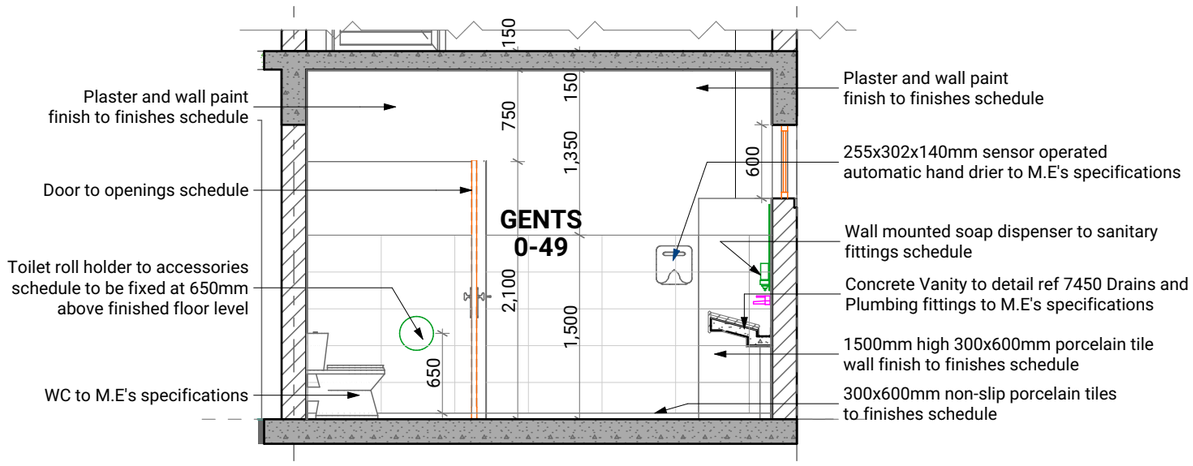


37415 Washroom 01 Elevation 1:50



37416 Washroom 02 Elevation 1:50



37414 Washroom 02 Elevation 1:50

FOR TENDER

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 02 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:50	Revision 00

Sheet No.

2527-SK-XX-DR-A-37406

Job Number

SK-20-2527

File Path

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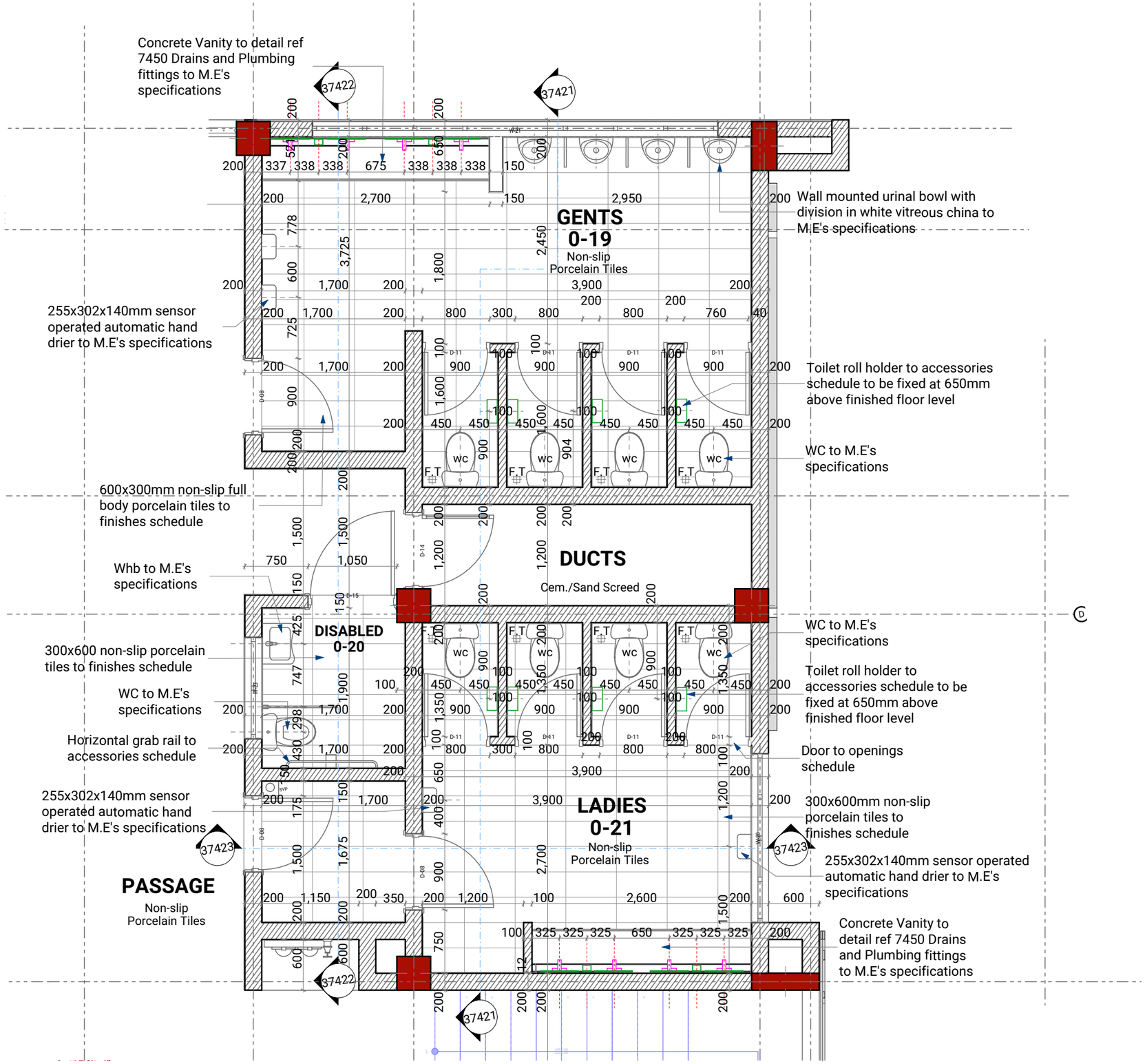

37420 **Washroom 03 Plan (3No)** **1:50**

FOR TENDER

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14. All roads, storm water drainage and foul sewerage to Civil Engineer's drawings

Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 03 Plan

Drawn by	Checked by	
GMN	**M.M / P.W**	
Issue Date **13/04/2021**	Scale (A3) **1:50**	Revision **00**

Sheet No.

2527-SK-ZZ-DR-A-37407

Job Number

SK-20-2527

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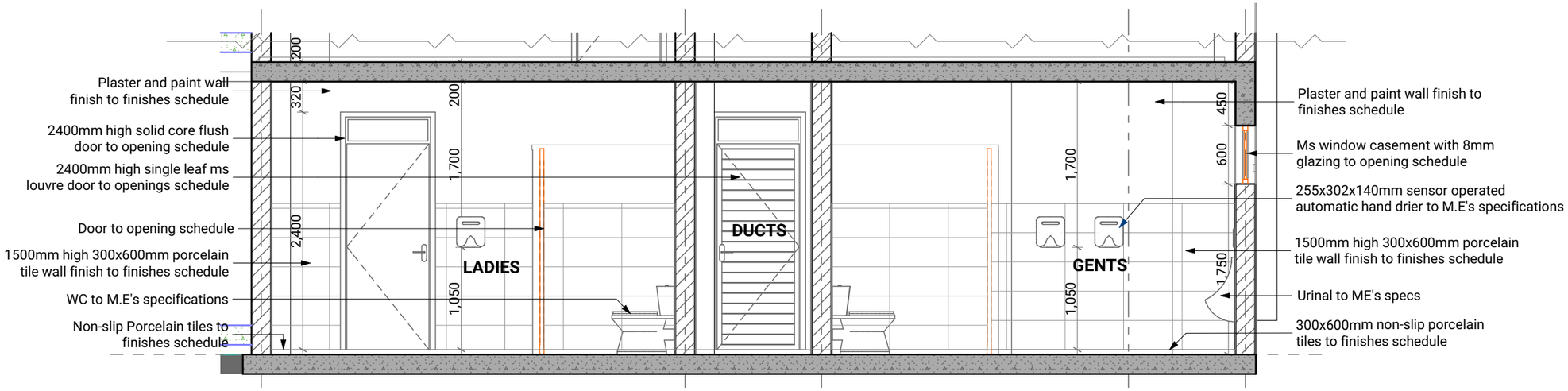
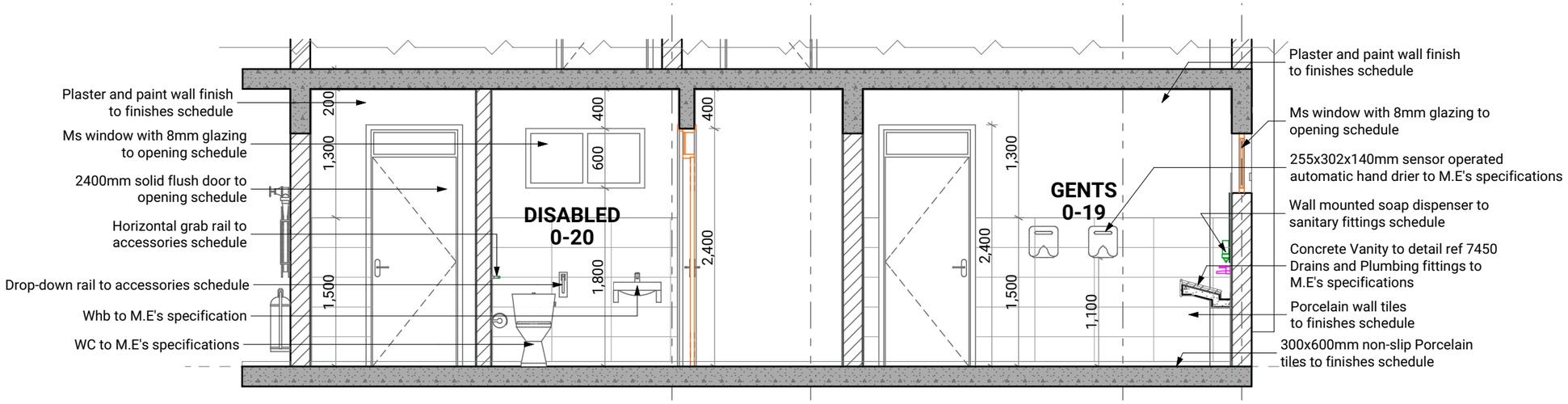
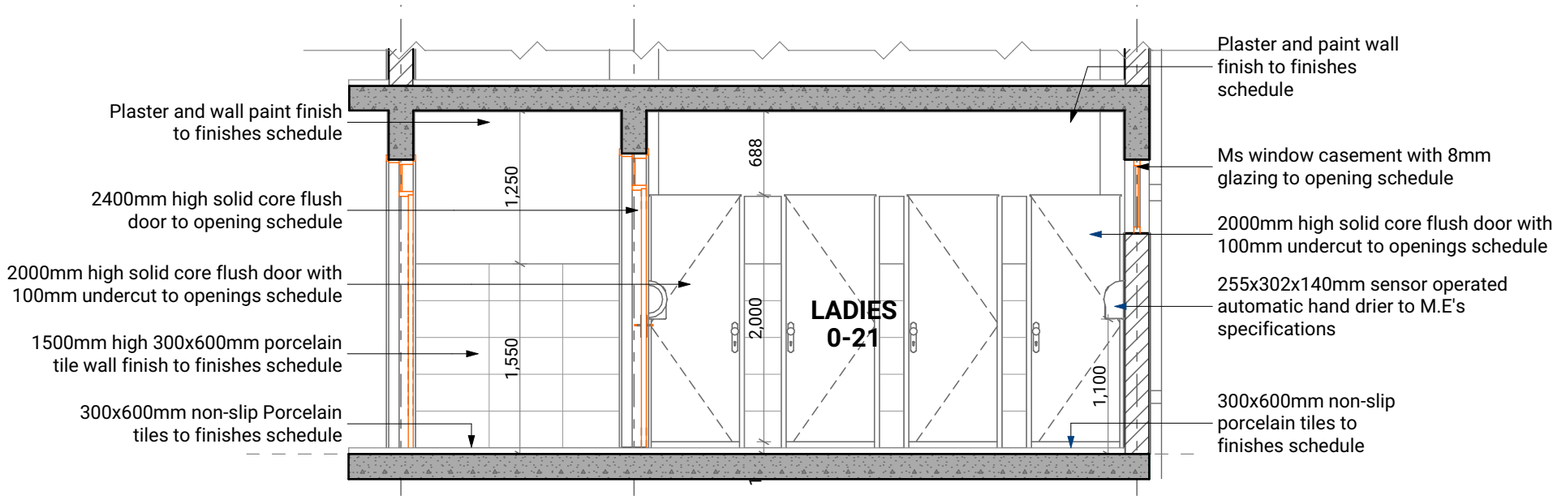


37421 **Washroom 03 Elevation** **1:50**



37422 **Washroom 03 Elevation** **1:50**



37423 **Washroom 03 Elevation** **1:50**

FOR TENDER

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Rev ID	Description	Issue Date

Client
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Job Title
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Sheet Name
Washroom Blowups
Washroom 03 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:50	Revision 00

Sheet No.
2527-SK-XX-DR-A-37408

Job Number
SK-20-2527

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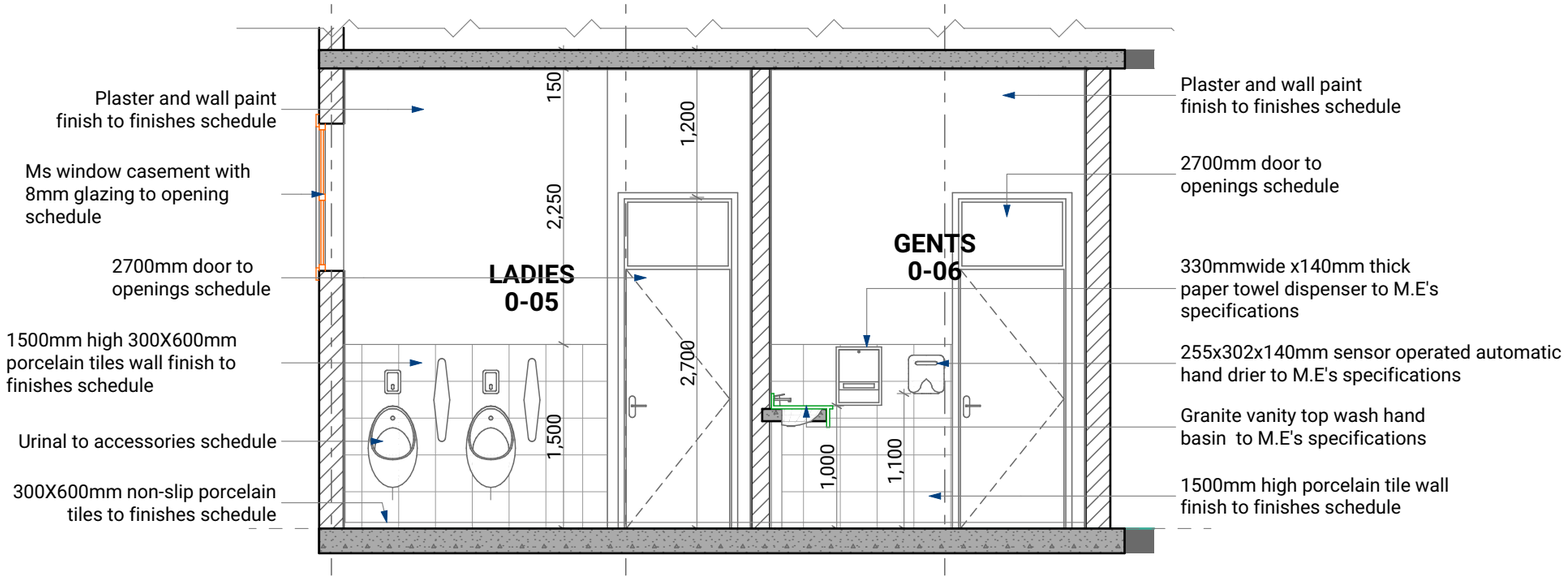
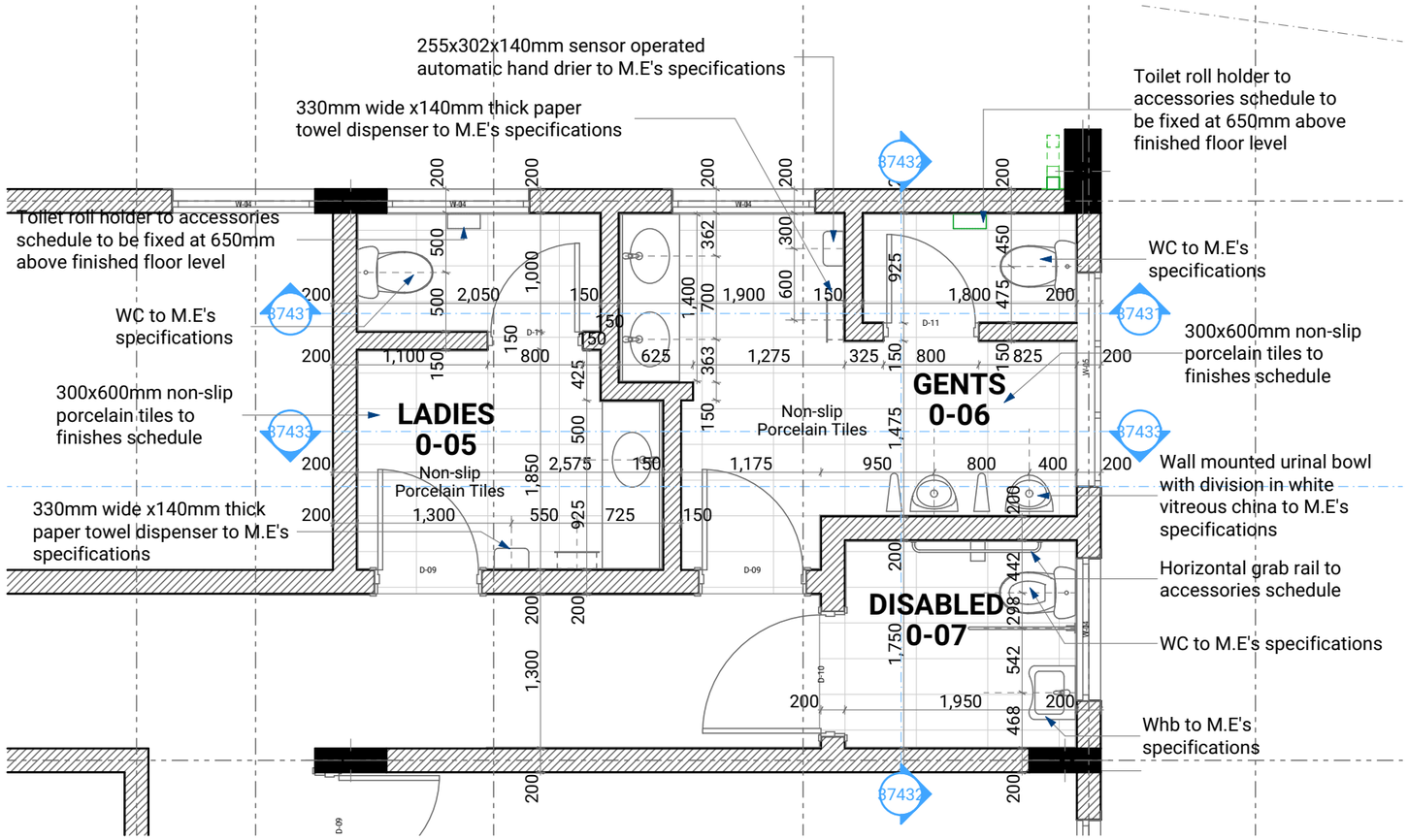


37433 Washroom 04 Elevation 1:50



37430 Washroom 04 Plan (1 No) 1:50

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Rev ID	Description	Issue Date

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Sheet Name
Washroom Blowups
Washroom 04 Plan & Elevation

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:50	Revision 00

Sheet No.
2527-SK-00-DR-A-37409

Job Number
SK-20-2527

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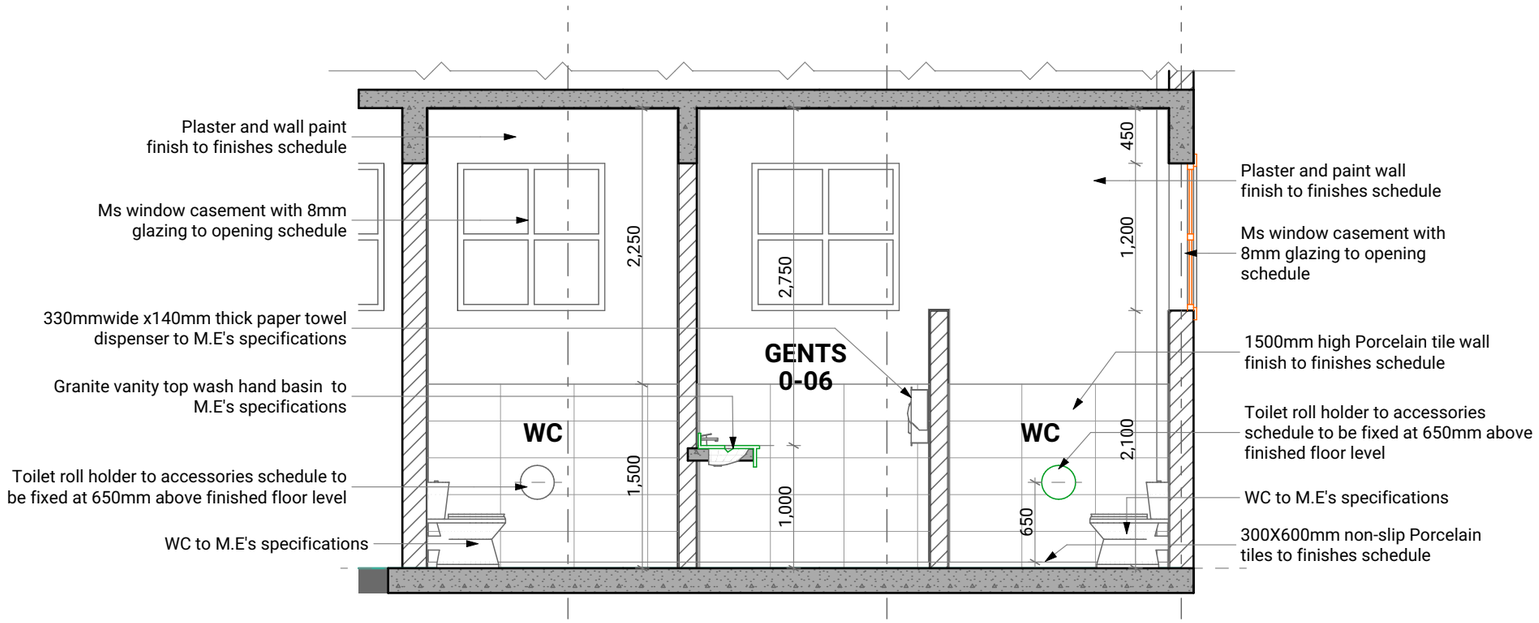
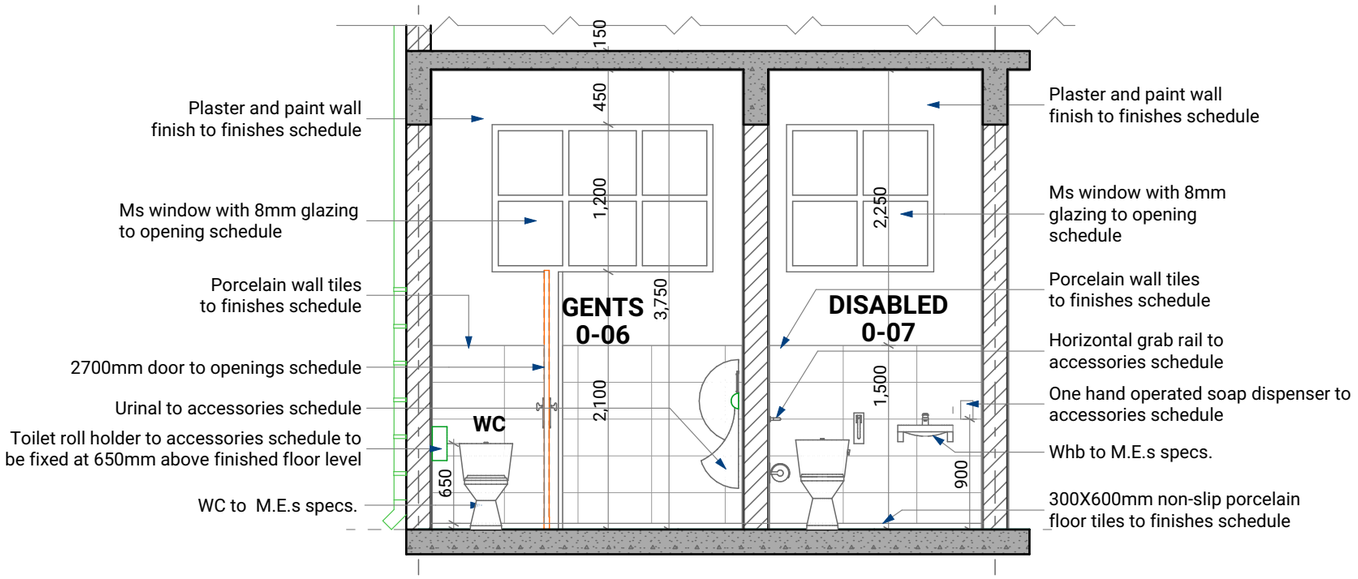


37431 Washroom 04 Elevation 1:50



37432 Washroom 04 Elevation 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 04 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37410

Job Number

SK-20-2527

File Path

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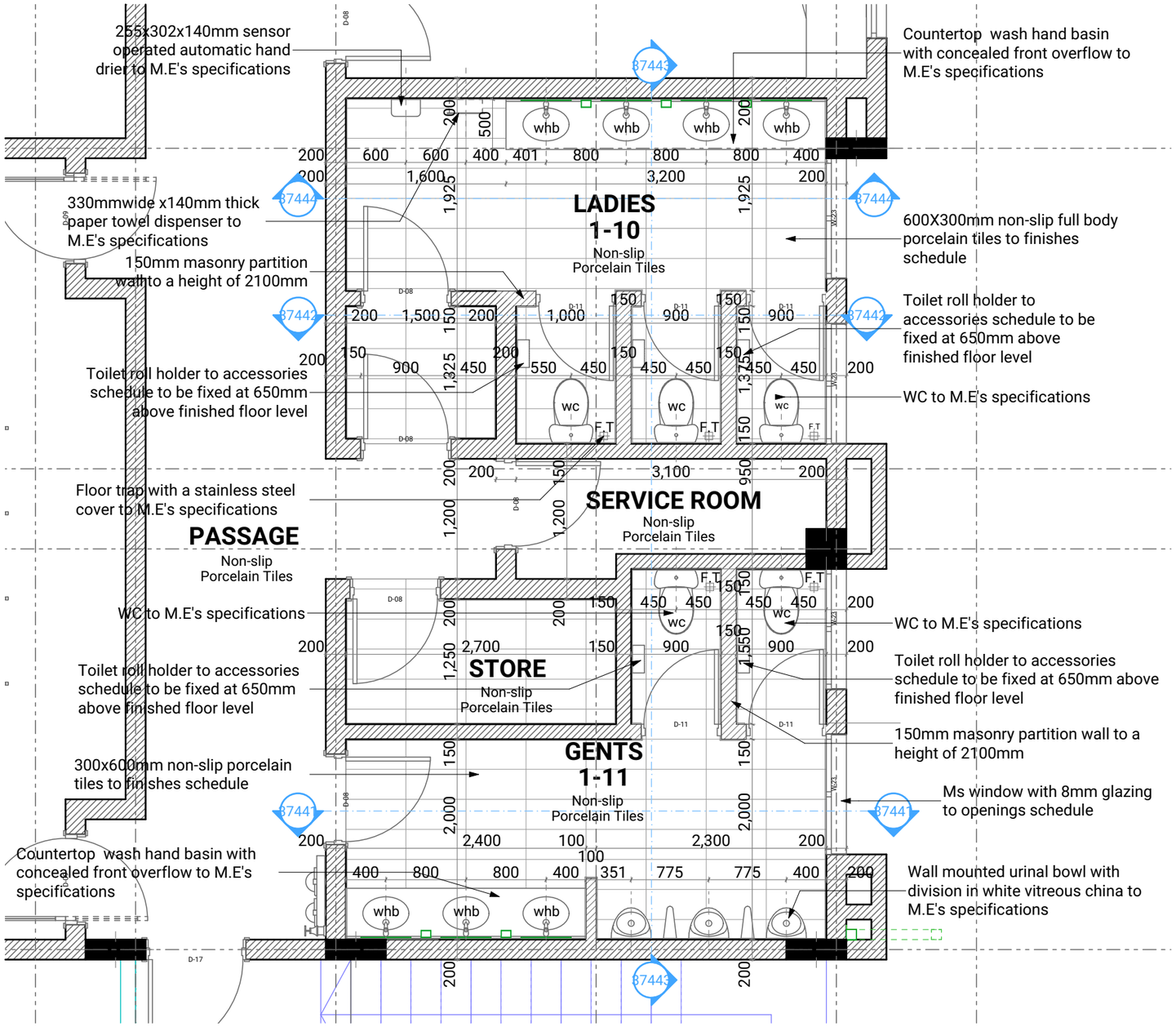
FOR TENDER



37440 **Washroom 05 Plan (1 No)** **1:50**

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Rev ID	Description	Issue Date

Client
MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title
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Sheet Name
Washroom Blowups
Washroom 05 Plans

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.
2527-SK-01-DR-A-37411

Job Number
SK-20-2527

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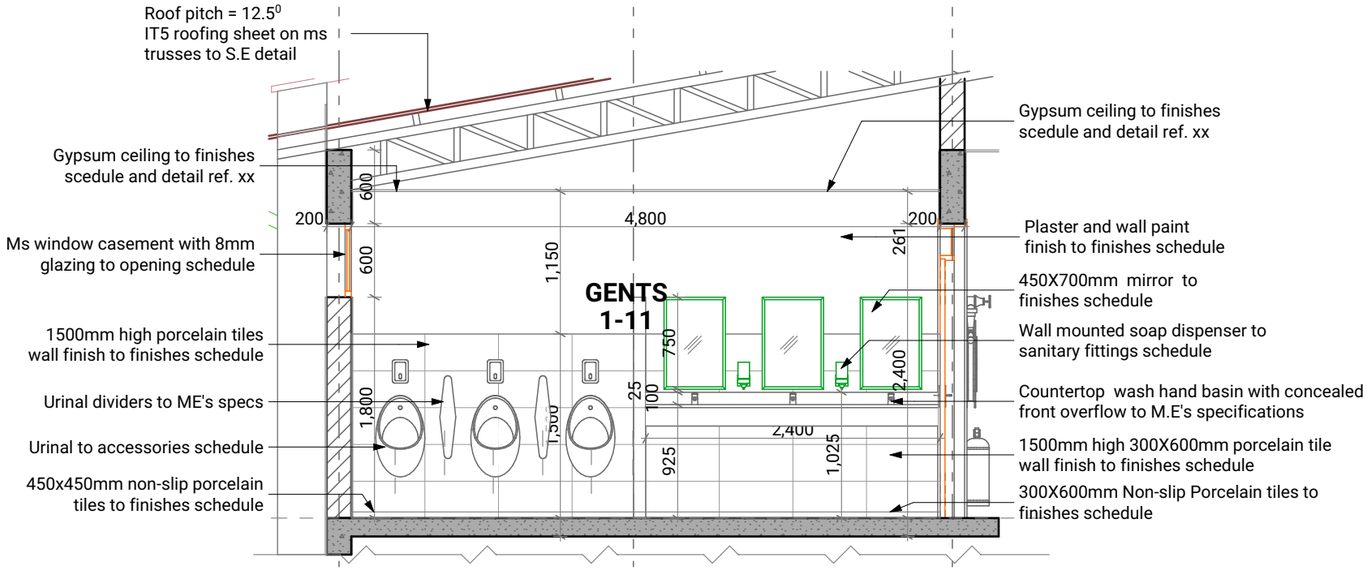
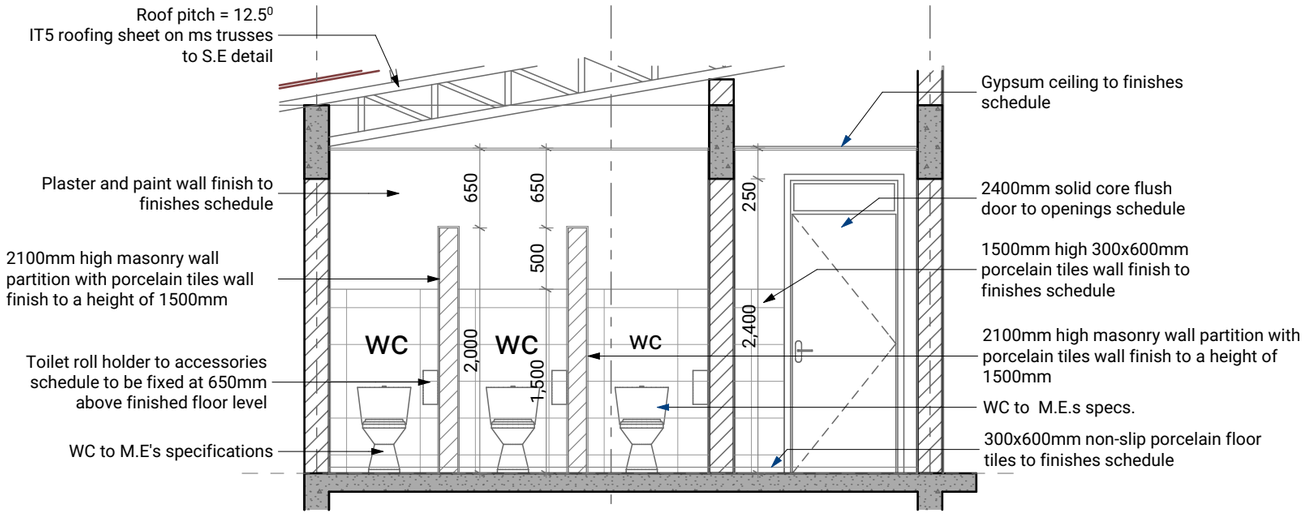


37441 Washroom 05 Elevation 1:50



37442 Washroom 05 Elevation 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 05 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37412

Job Number

SK-20-2527

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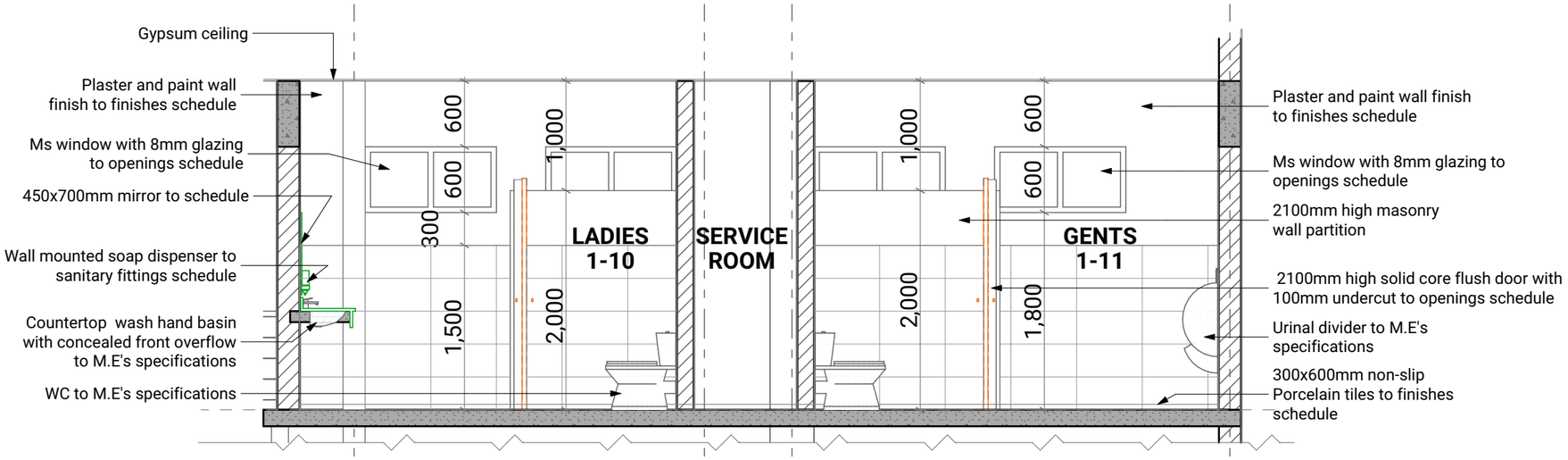

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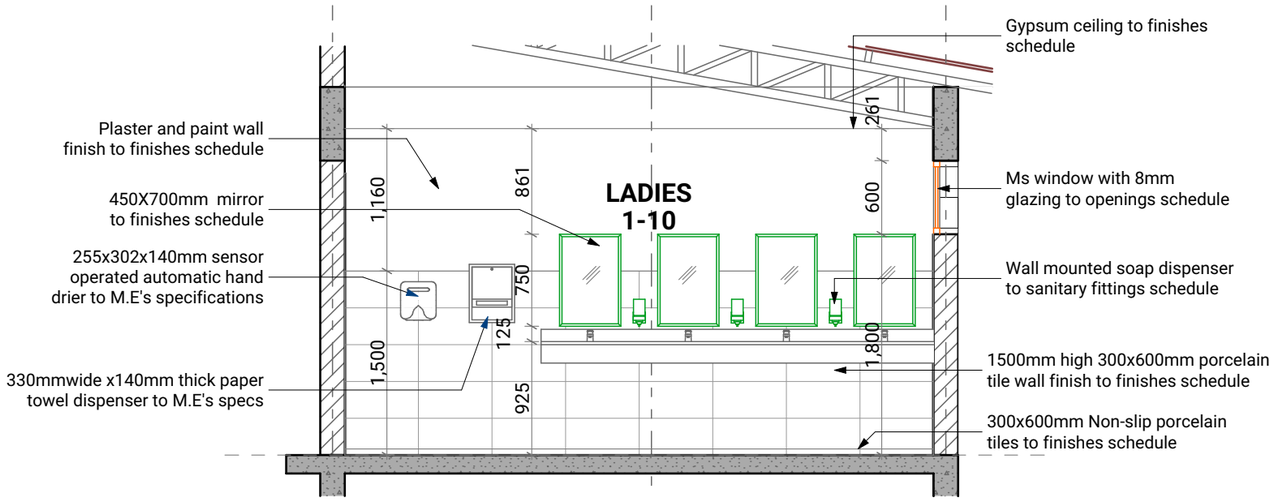

37444 Washroom 05 Elevation 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

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Sheet Name

Washroom Blowups

Washroom 05 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37413

Job Number

SK-20-2527

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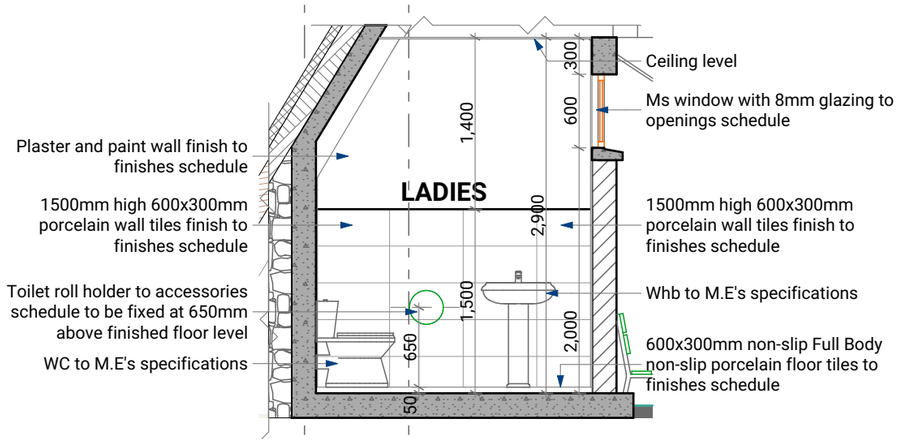
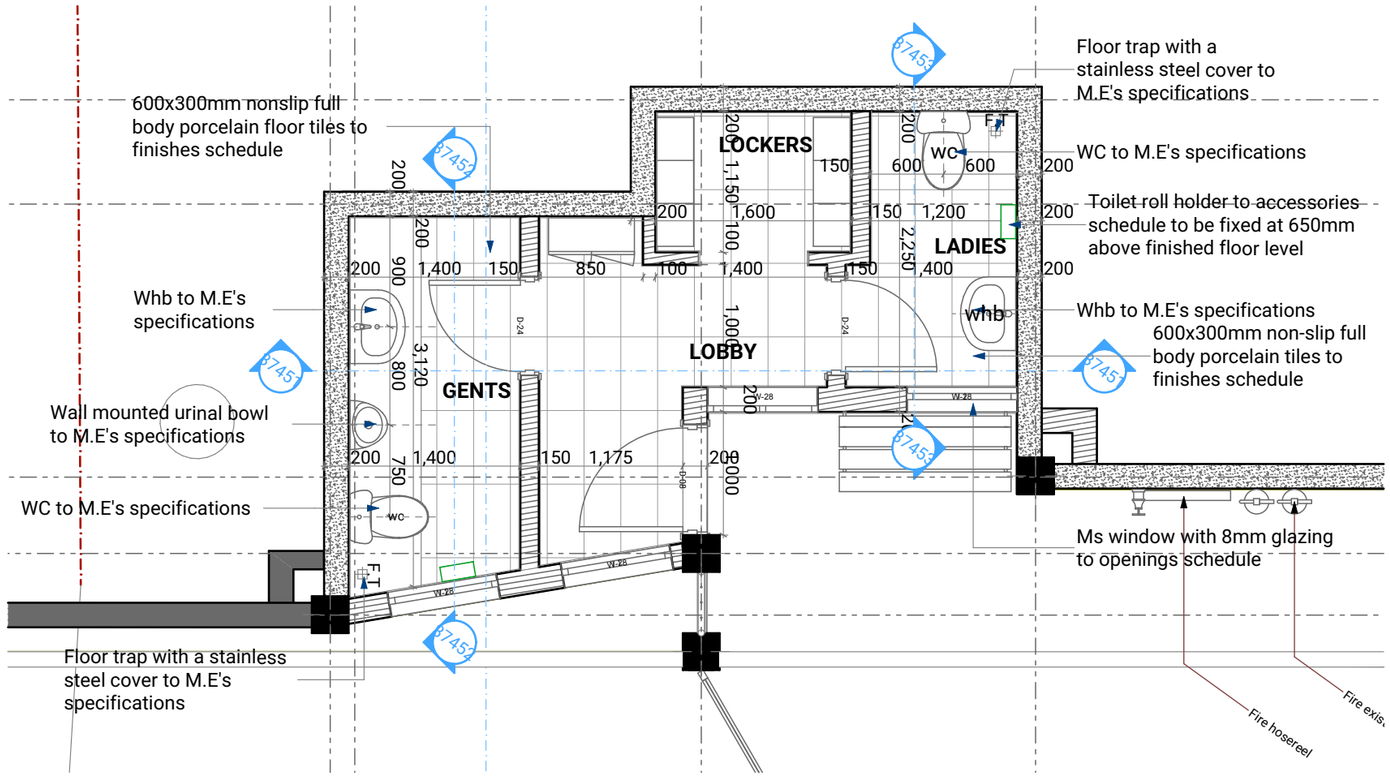


37453 Washroom 06 Elevation 1:50



37450 Washroom 06 Plan 1:50

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Rev ID	Description	Issue Date

Client
MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name
Washroom Blowups
Washroom 06 Plan & Elevation

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date 13/04/2021	Scale (A3) 1:50	Revision 00

Sheet No.
2527-SK-00-DR-A-37414

Job Number
SK-20-2527

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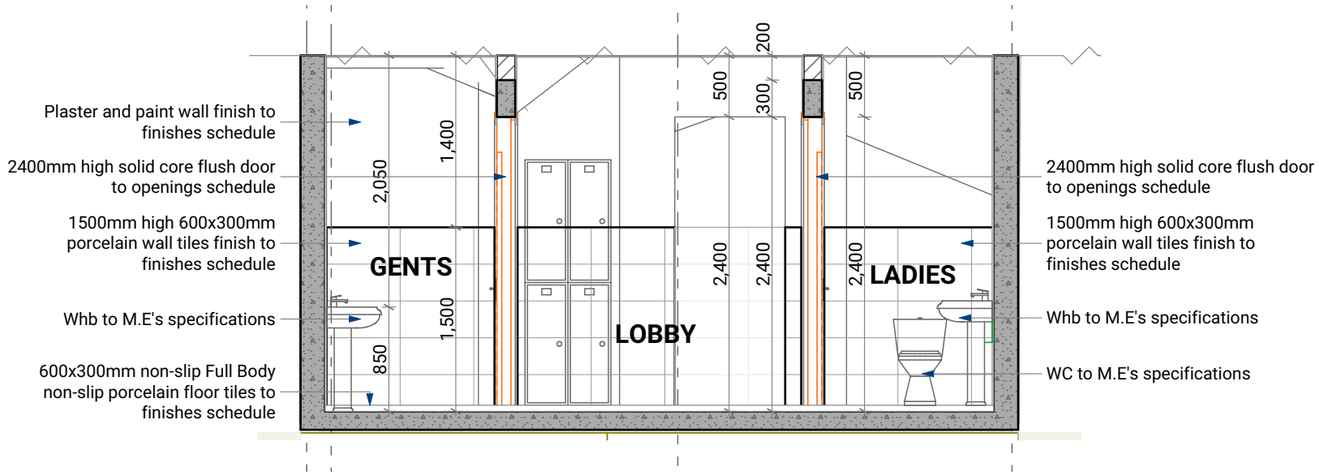
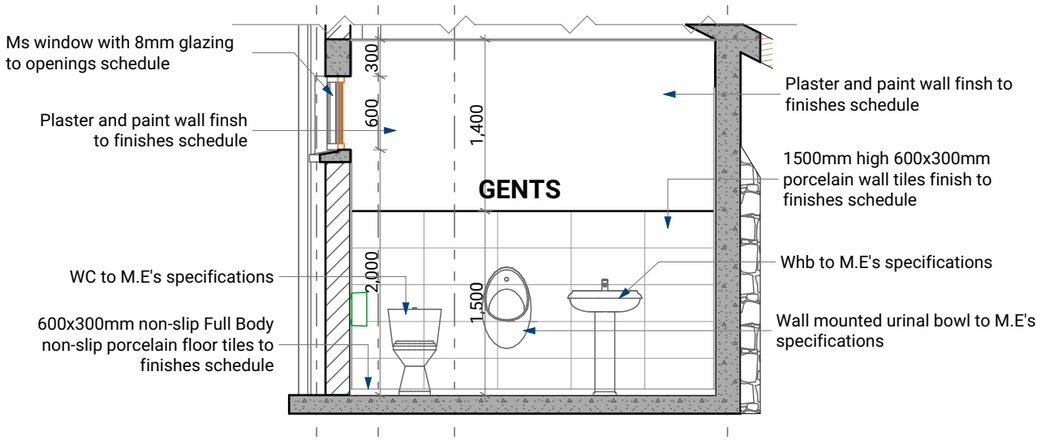


37451 Washroom 06 Elevation 1:50



37452 Washroom 06 Elevation 1:50

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Rev ID	Description	Issue Date

Client

MERU TECHNICAL TRAINING INSTITUTE, P.O. BOX 111-60200 MERU.

Job Title

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT AT MERU NATIONAL POLYTHECNIC PLOT No NTIMA/IGOKI/1759, MERU

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Sheet Name

Washroom Blowups

Washroom 06 Elevations

Drawn by	Checked by	
GMN	M.M / P.W	
Issue Date	Scale (A3)	Revision
13/04/2021	1:50	00

Sheet No.

2527-SK-XX-DR-A-37415

Job Number

SK-20-2527

File Path

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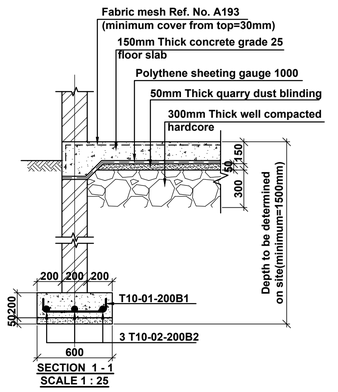
FOR TENDER

STRUCTURAL DRAWINGS



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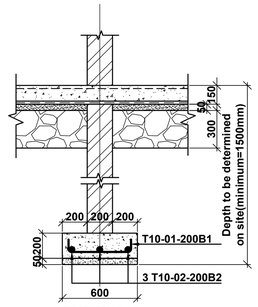
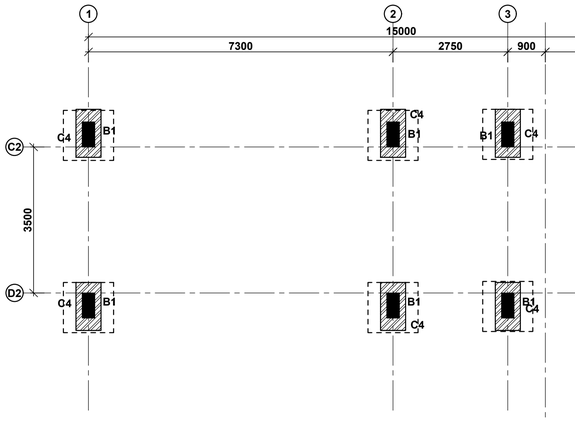


SECTION 2 - 2
SCALE 1 : 25

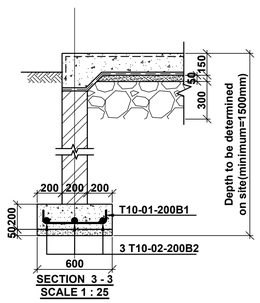


COLUMN SCHEDULE

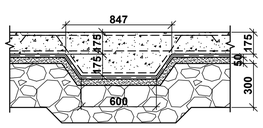
TYPE	SIZE	No.
C1	400 x 400mm	12
C2	400 x 400mm	2
C3	600 x 200mm	6
C4	600 x 300mm	11
C4A	600 x 300mm	2
C5	600 x 300mm	2
C6	600 x 200mm	7
	TOTAL	41

COLUMN BASES SCHEDULE

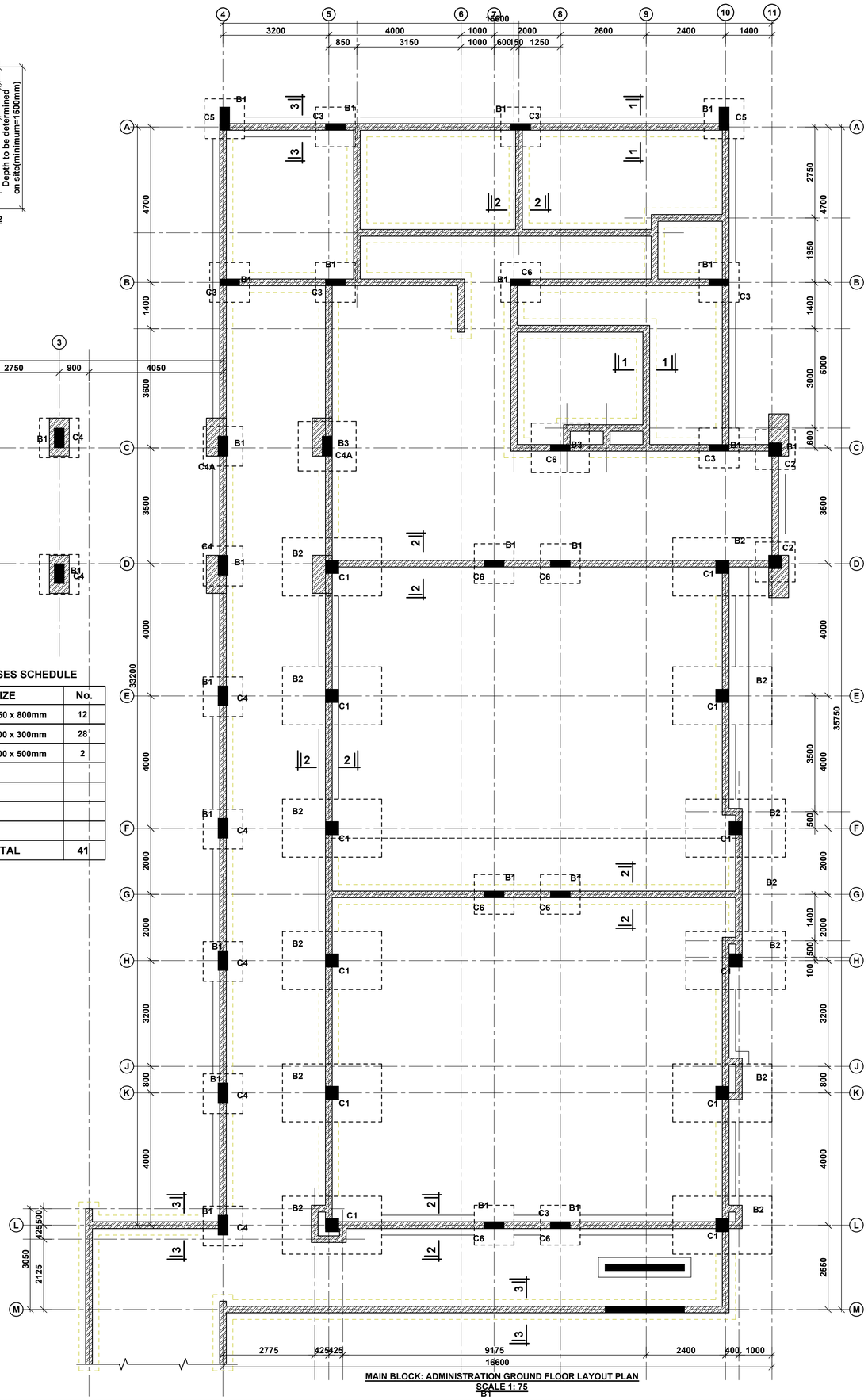
TYPE	SIZE	No.
B2	3000 x 1750 x 800mm	12
B1	1500 x 1500 x 300mm	28
B3	1750 x 1500 x 500mm	2
	TOTAL	41



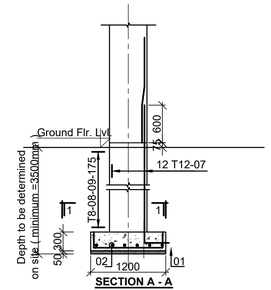
SECTION 3 - 3
SCALE 1 : 25



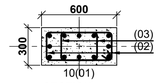
SECTION 2a - 2a
(Slab Thickening Details)
SCALE 1 : 25



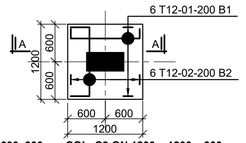
MAIN BLOCK: ADMINISTRATION GROUND FLOOR LAYOUT PLAN
SCALE 1: 75



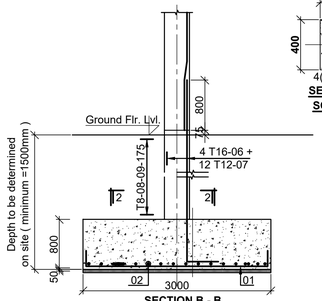
SECTION A - A



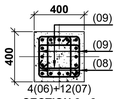
SECTION 4 - 4
SCALE 1: 25



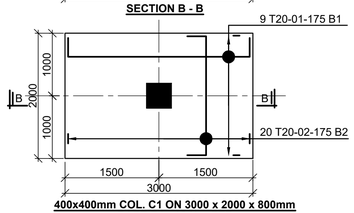
600x300mm COL. C3 ON 1200 x 1200 x 300mm
BASE B2 - 29 No. OFF
(SIMILAR FOR COLS C4,C4a,C5 & C6)
SCALE 1 : 50



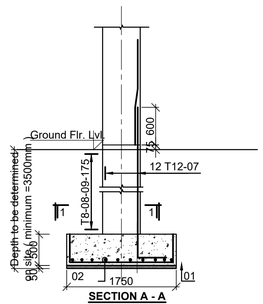
SECTION B - B



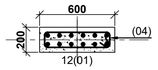
SECTION 2 - 2
SCALE 1: 25



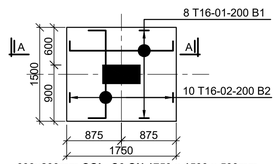
400x400mm COL. C1 ON 3000 x 2000 x 800mm
BASE B1 - 12 No. OFF
SCALE 1 : 50



SECTION A - A



SECTION 6 - 6
SCALE 1: 25



600x200mm COL. C6 ON 1750 x 1500 x 500mm
BASE B3 - 2 No. OFF
SCALE 1 : 50

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

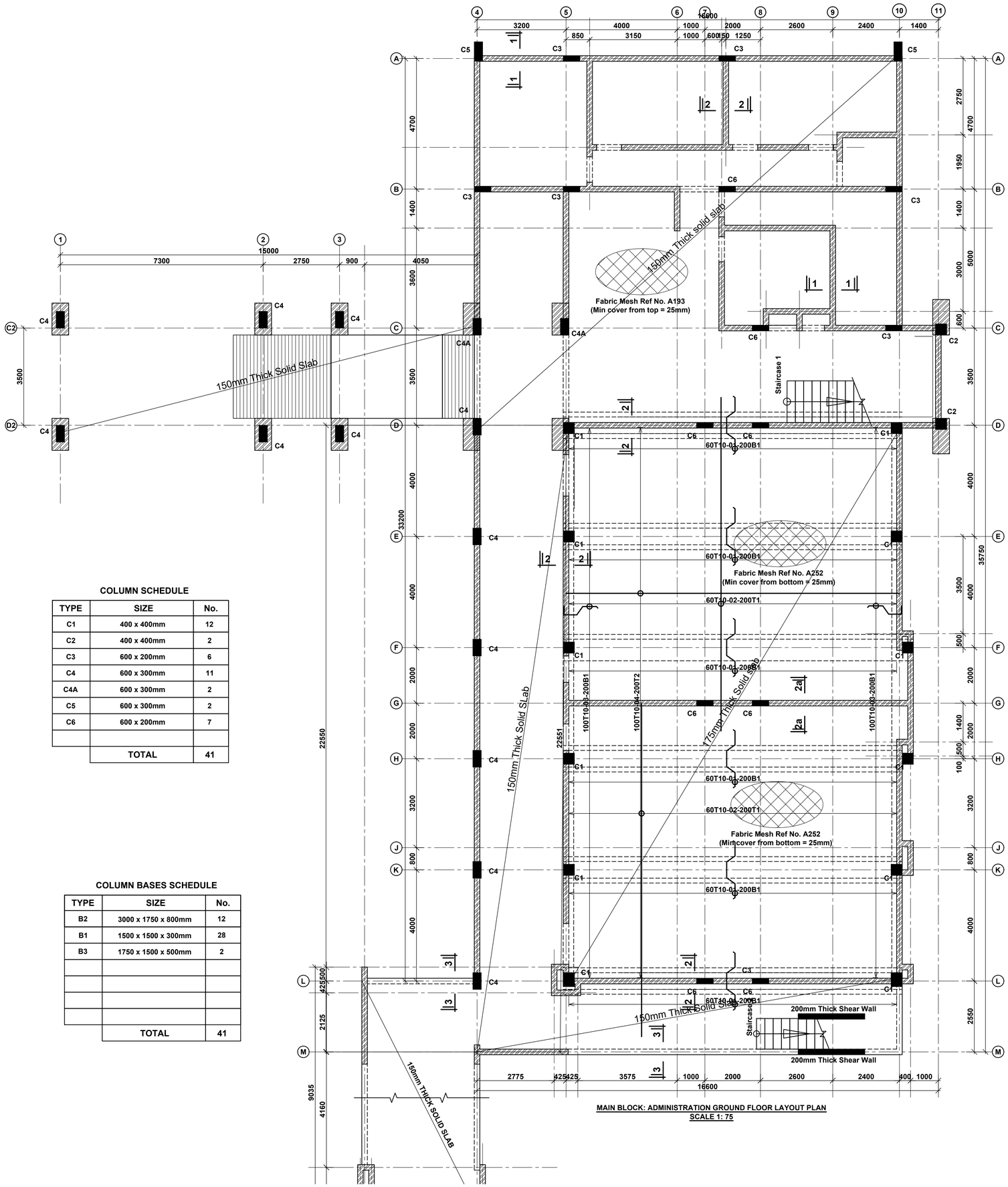
TITLE: Main Block (Administration)

FOUNDATION LAYOUT PLAN AND SECTIONS AND BASE DETAILS

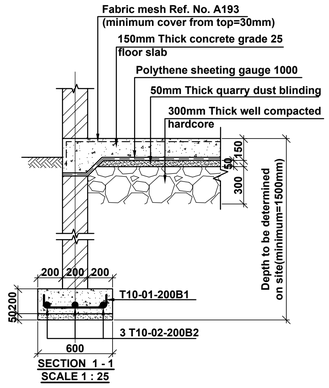
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

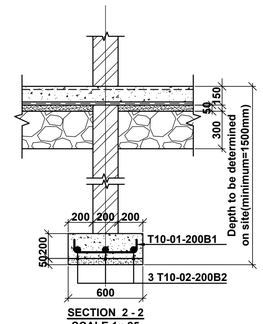
Drawn	A.C.O	Scale(s)	1 : 75, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/001	



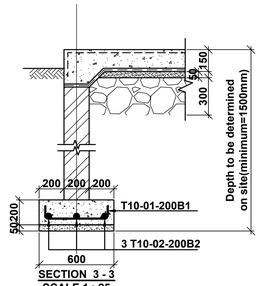
MAIN BLOCK: ADMINISTRATION GROUND FLOOR LAYOUT PLAN
SCALE 1: 75



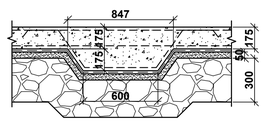
SECTION 1 - 1
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25



SECTION 3 - 3
SCALE 1 : 25



SECTION 2a - 2a
(Slab Thickening Details)
SCALE 1 : 25

COLUMN SCHEDULE

TYPE	SIZE	No.
C1	400 x 400mm	12
C2	400 x 400mm	2
C3	600 x 200mm	6
C4	600 x 300mm	11
C4A	600 x 300mm	2
C5	600 x 300mm	2
C6	600 x 200mm	7
	TOTAL	41

COLUMN BASES SCHEDULE

TYPE	SIZE	No.
B2	3000 x 1750 x 800mm	12
B1	1500 x 1500 x 300mm	28
B3	1750 x 1500 x 500mm	2
	TOTAL	41

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

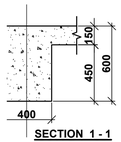
TITLE: Main Block (Administration)

GROUND FLOOR LAYOUT PLAN AND SECTIONS

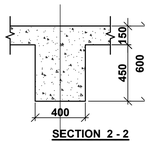
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

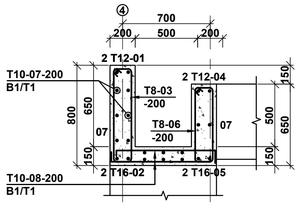
Drawn	A.C.O	Scale(s)	1 : 75, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/002	



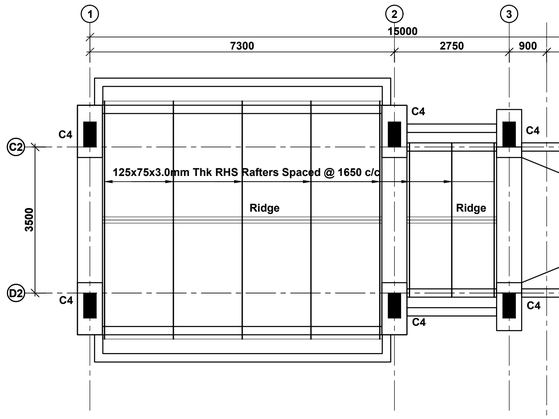
SECTION 1 - 1
SCALE 1 : 25

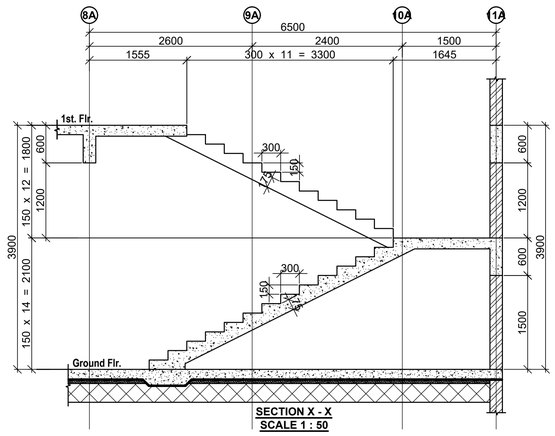


SECTION 2 - 2
SCALE 1 : 25

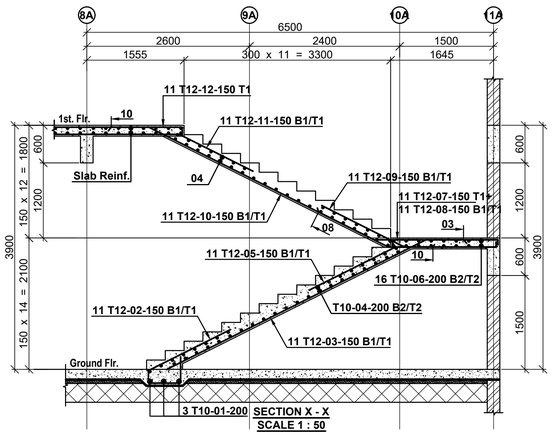


GUTTER R.C DETAILS - SECTION 3 - 3
Scale 1:25





SECTION X - X
SCALE 1 : 50



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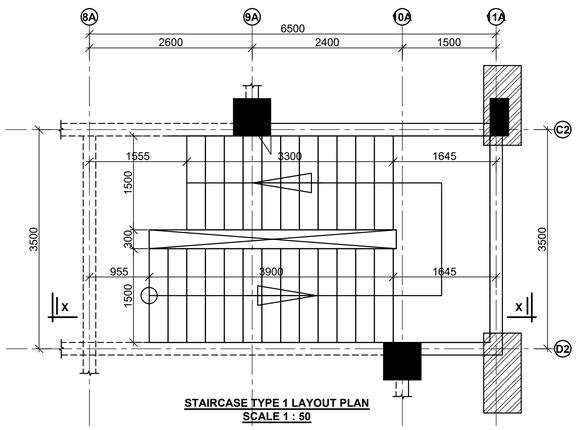
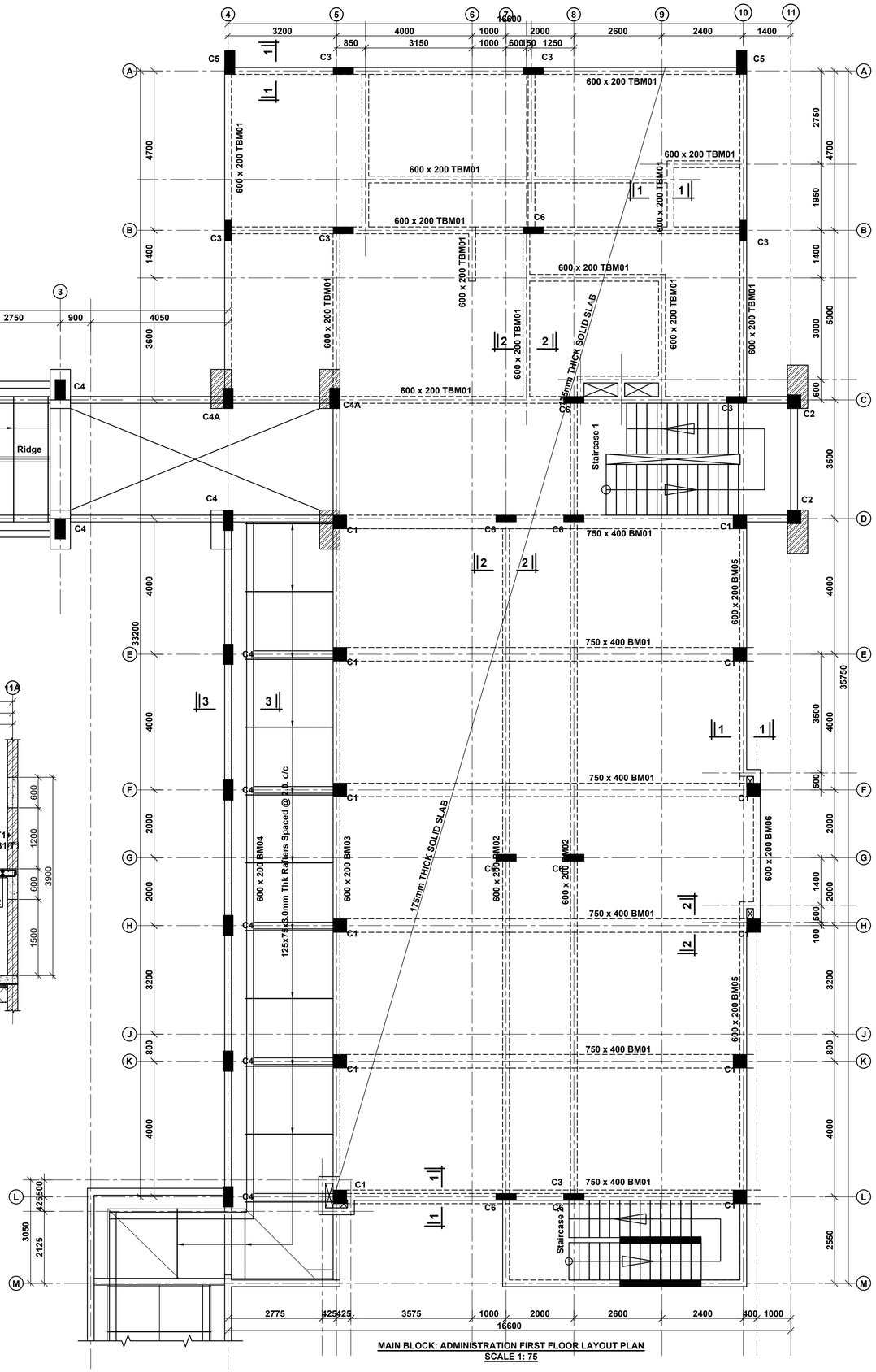


STAIRCASE TYPE 1 LAYOUT PLAN
SCALE 1 : 50



MAIN BLOCK: ADMINISTRATION FIRST FLOOR LAYOUT PLAN
SCALE 1: 75

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

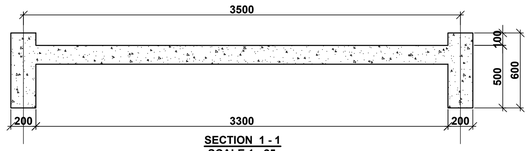
TITLE: Main Block (Administration)

FIRST FLOOR LAYOUT PLAN AND SECTIONS AND STAIRCASE DETAILS

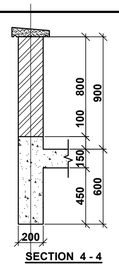
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

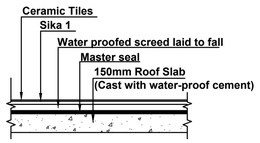
Drawn	A.C.O	Scale(s)	1 : 75, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/003	



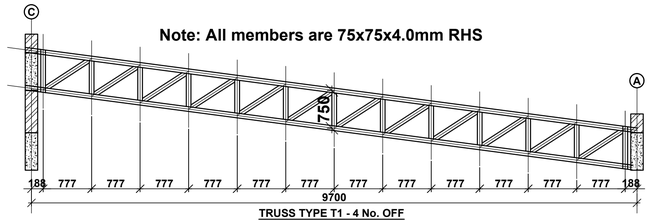
SECTION 1 - 1
SCALE 1 : 25



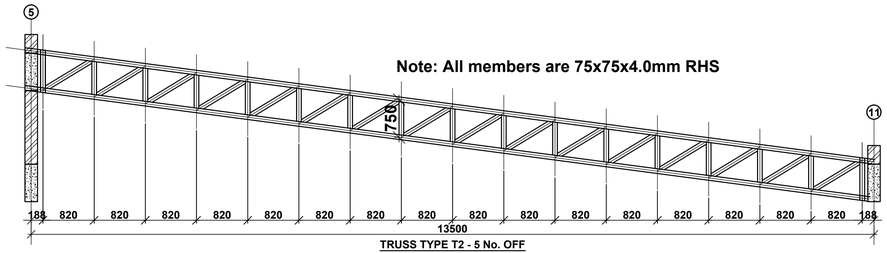
SECTION 4 - 4
SCALE 1 : 25



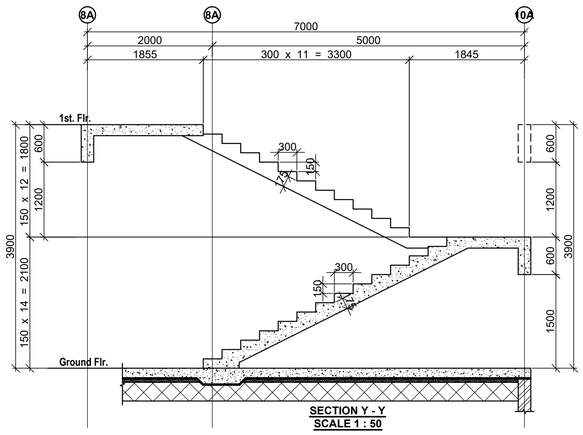
TYPICAL DETAIL FOR ROOF SLAB
AND ALL OPEN AREAS
SCALE 1:25



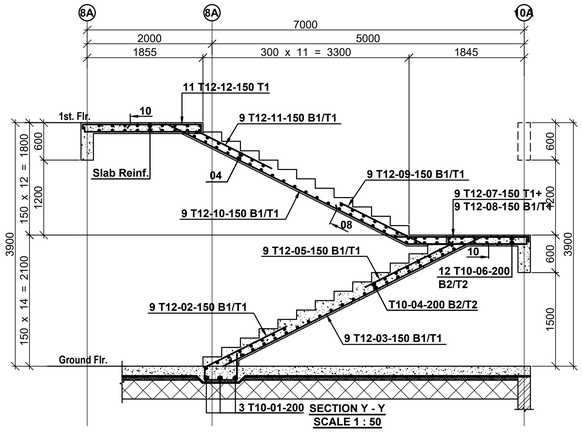
TRUSS TYPE T1 - 4 No. OFF
Scale 1:50



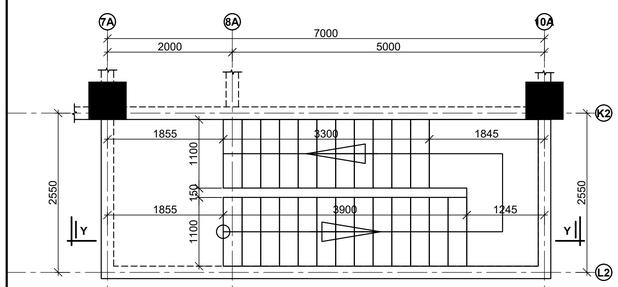
TRUSS TYPE T2 - 5 No. OFF
Scale 1:50



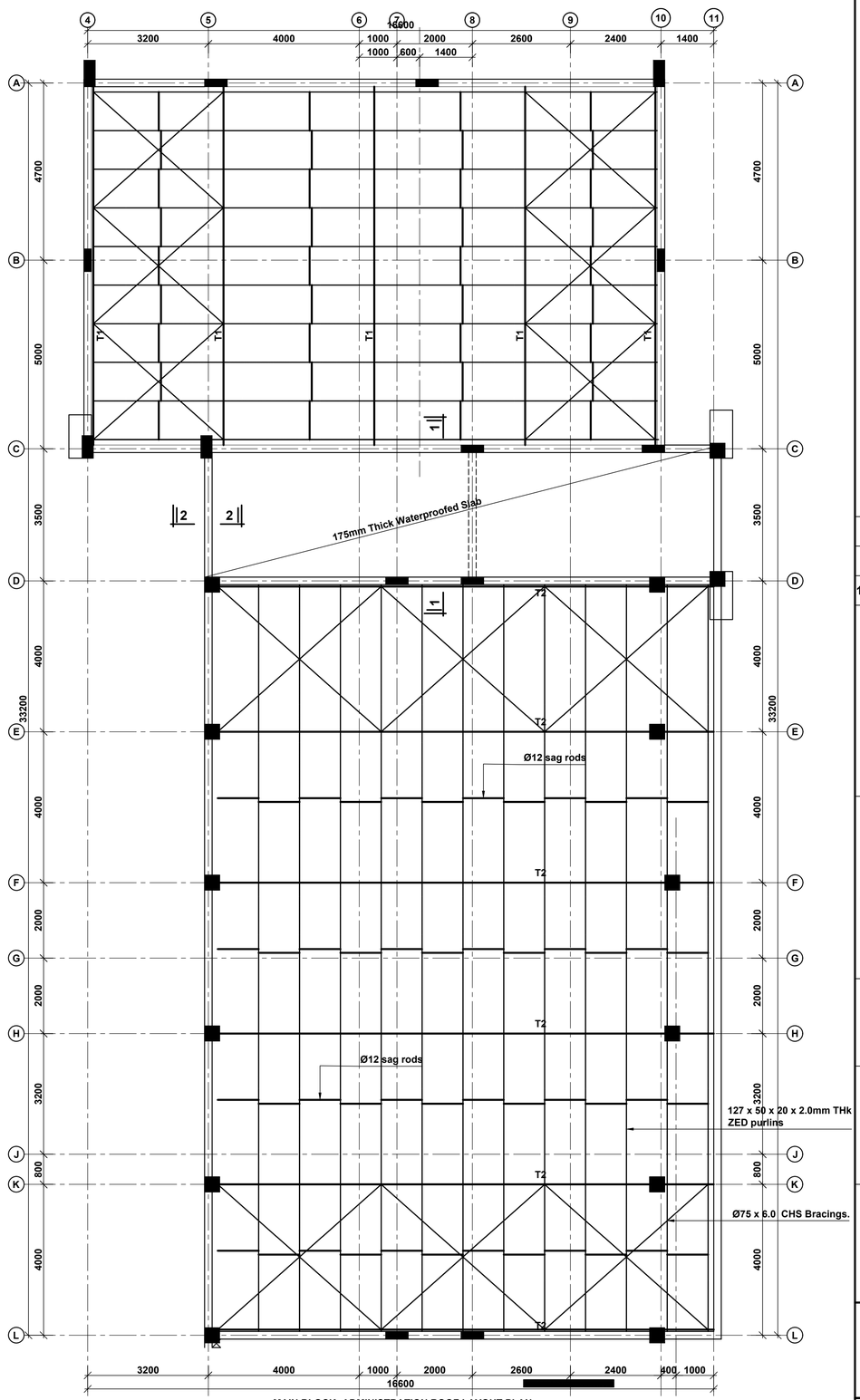
SECTION Y - Y
SCALE 1 : 50



SECTION Y - Y
SCALE 1 : 50



STAIRCASE TYPE 2 LAYOUT PLAN
SCALE 1 : 50



MAIN BLOCK: ADMINISTRATION ROOF LAYOUT PLAN
SCALE 1: 75

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Main Block (Administration)

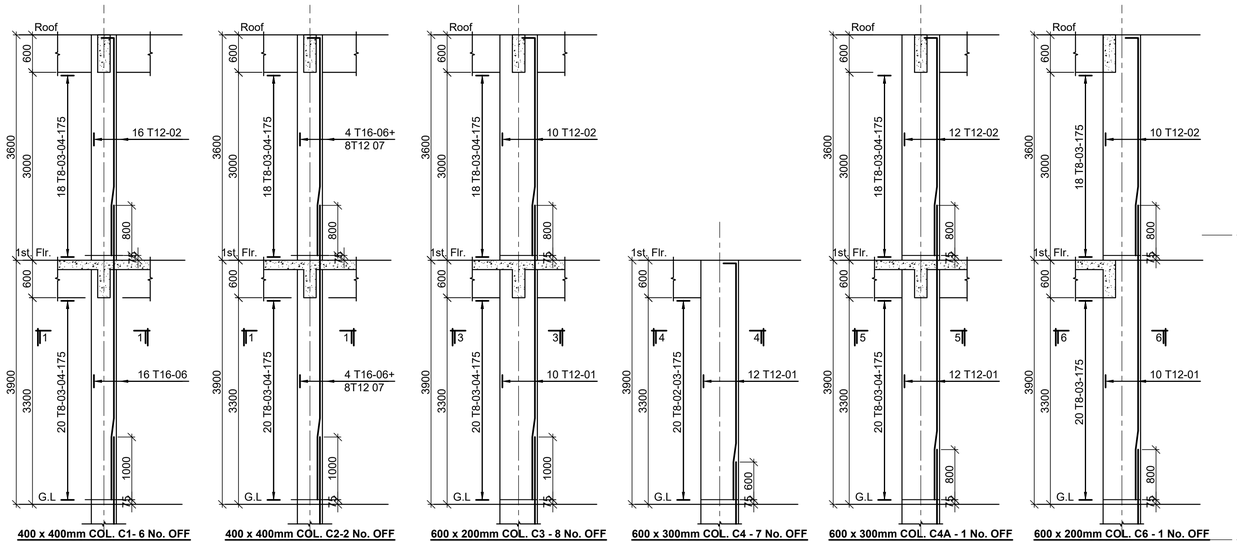
ROOF LAYOUT PLAN, SECTIONS AND TRUSSES ELEVATIONS AND STAIRCASE DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 75, 50, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020

JOB No. 2020 | DRG No. MERK/ST/004



400 x 400mm COL. C1- 6 No. OFF
SCALE 1 : 50

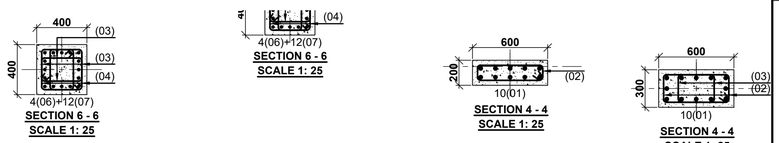
400 x 400mm COL. C2-2 No. OFF
SCALE 1 : 50

600 x 200mm COL. C3 - 8 No. OFF
SCALE 1 : 50

600 x 300mm COL. C4 - 7 No. OFF
SCALE 1 : 50

600 x 300mm COL. C4A - 1 No. OFF
(C5 SIMILAR)
SCALE 1 : 50

600 x 200mm COL. C6 - 1 No. OFF
SCALE 1 : 50



SECTION 6 - 6
SCALE 1: 25

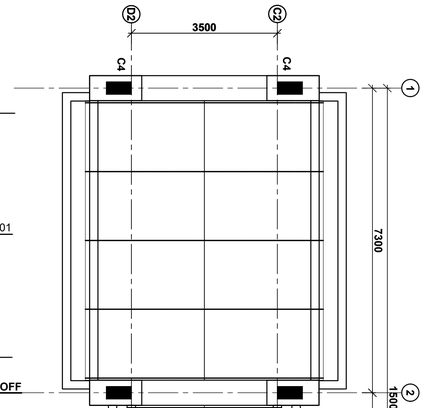
SECTION 6 - 6
SCALE 1: 25

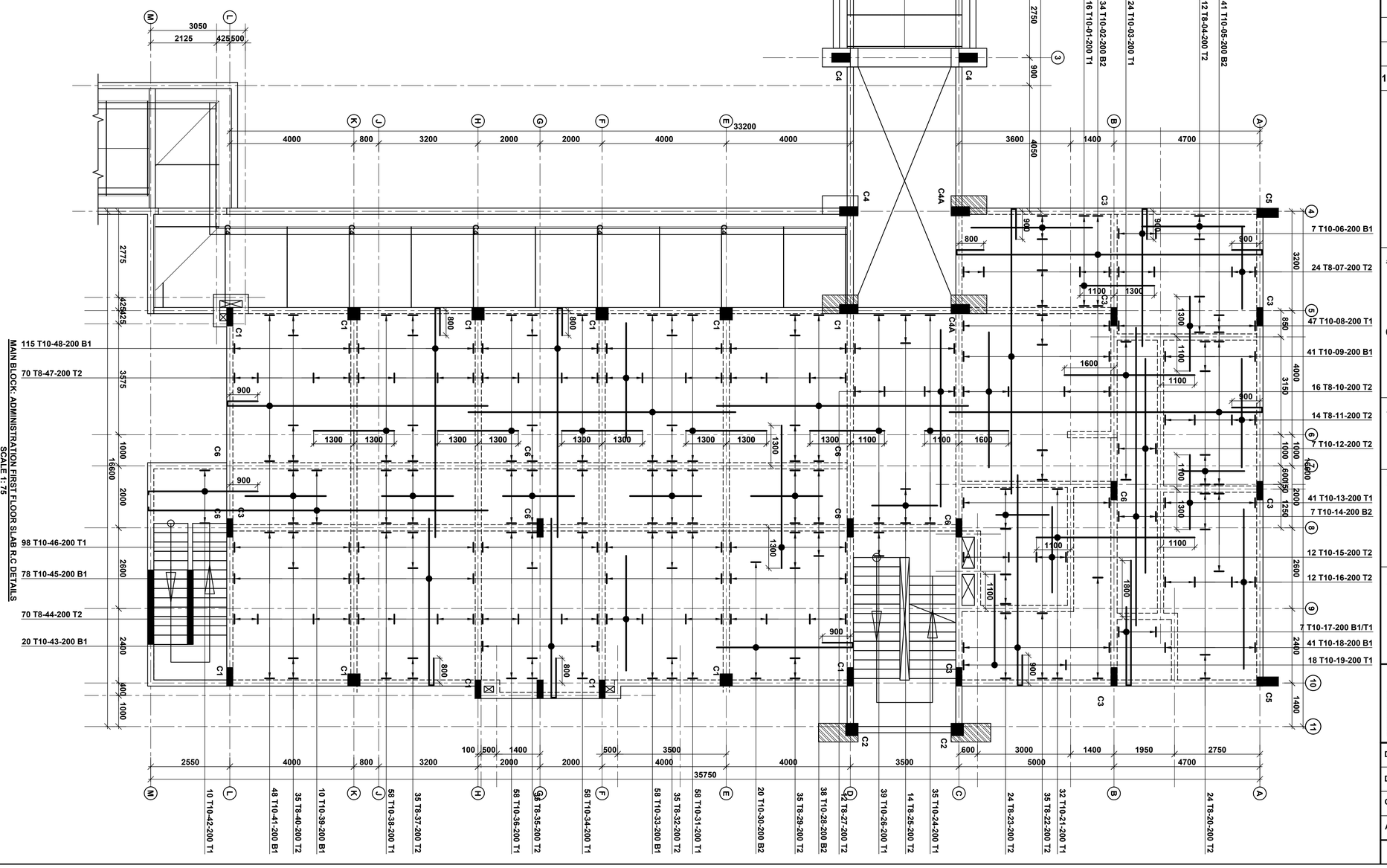
SECTION 4 - 4
SCALE 1: 25

SECTION 4 - 4
SCALE 1: 25

SECTION 5 - 5
SCALE 1: 25

SECTION 6 - 6
SCALE 1: 25





MAIN BLOCK: ADMINISTRATION FIRST FLOOR SLAB R.C DETAILS
SCALE 1:75

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Main Block (Administration)

FIRST FLOOR SLAB R.C AND COLUMN DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

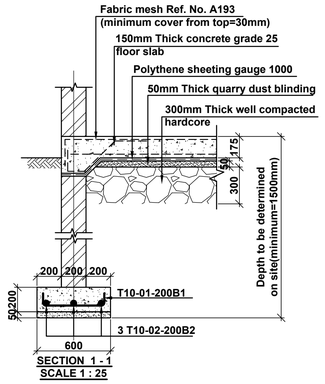
Drawn	A.C.O	Scale(s)	1 : 75, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/005	

COLUMN SCHEDULE

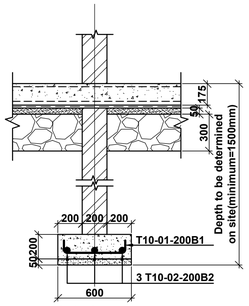
TYPE	SIZE	No.
C1/C1a	600 x 600mm	14
C2/C3/C4	400 x 400mm	12
C5	500 x 300mm	2
C6	800 x 300mm	1
C7	650 x 300mm	1
TC	200 x 200mm	36
	TOTAL	39

COLUMN BASES SCHEDULE

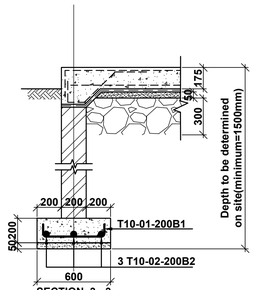
TYPE	SIZE	No.
B1	3250 x 2500 x 800mm	7
B2	4000 x 3100 x 800mm	7
B3	2300 x 1500 x 600mm	8
B4	3000 x 2000 x 800mm	1
	TOTAL	22



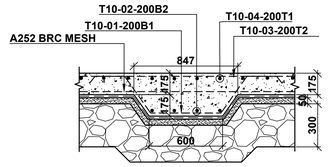
SECTION 1 - 1
SCALE 1 : 25



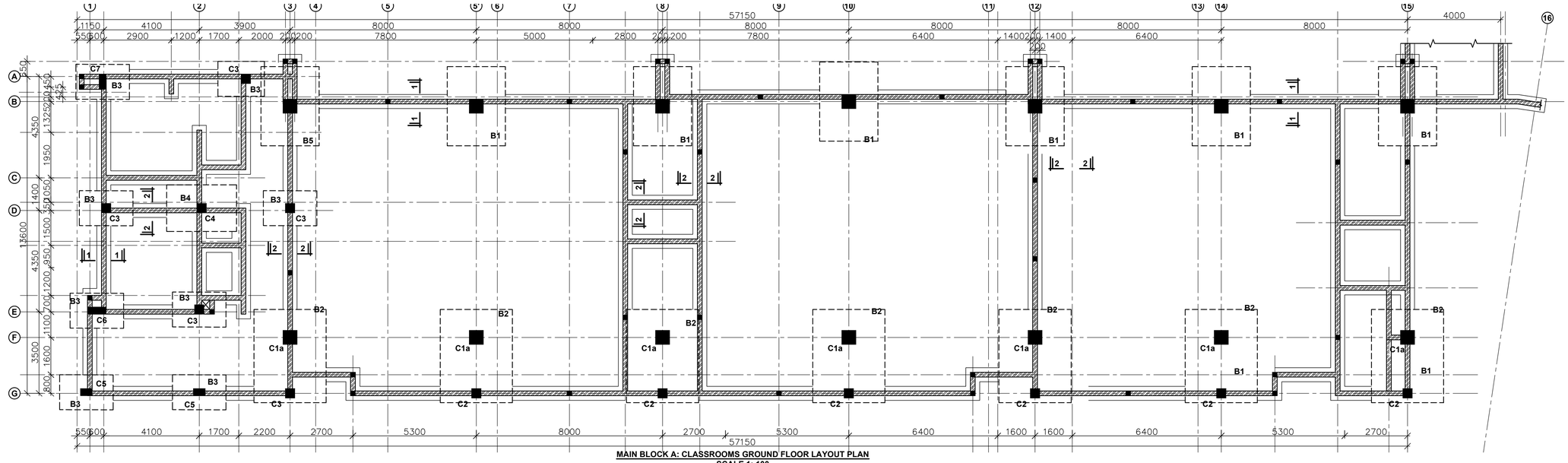
SECTION 2 - 2
SCALE 1 : 25



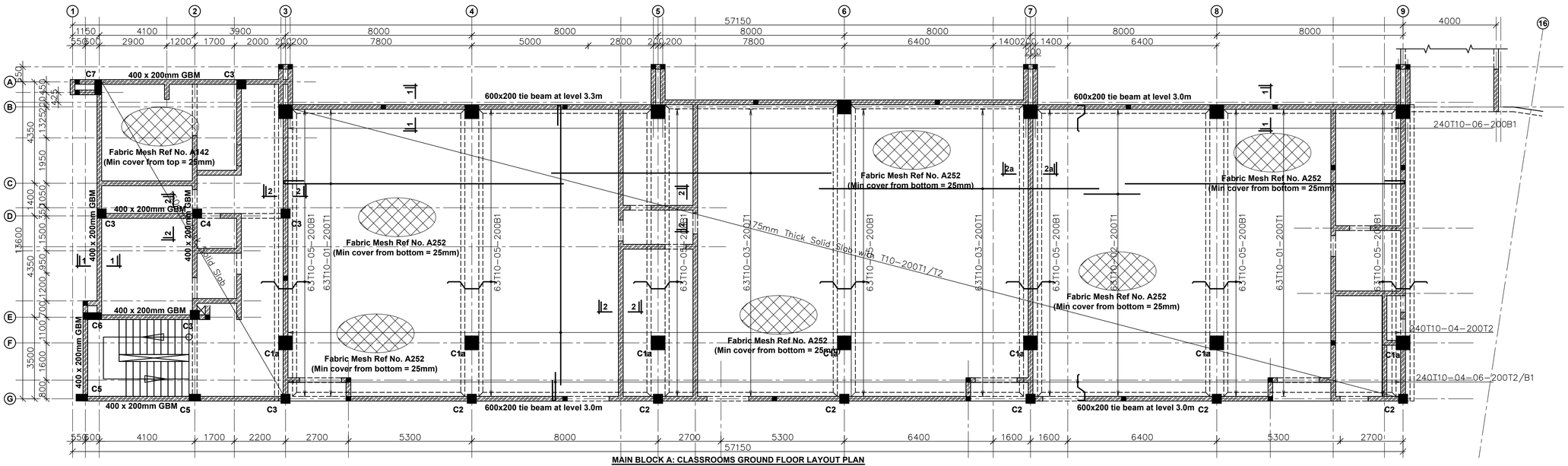
SECTION 3 - 3
SCALE 1 : 25



SECTION 2a - 2a
(Slab Thickening Details)
SCALE 1 : 25



MAIN BLOCK A: CLASSROOMS GROUND FLOOR LAYOUT PLAN
SCALE 1: 100



MAIN BLOCK A: CLASSROOMS GROUND FLOOR LAYOUT PLAN
SCALE 1: 100

NOTES

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2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
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5. Cover to main reinforcement to be as follows:
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   "R" Denotes round mild steel bars to BS 4449.
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9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
14.12.2020	NCC0	COUNTY SUBMISSION

ARCHITECTS:

SYMBION

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WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

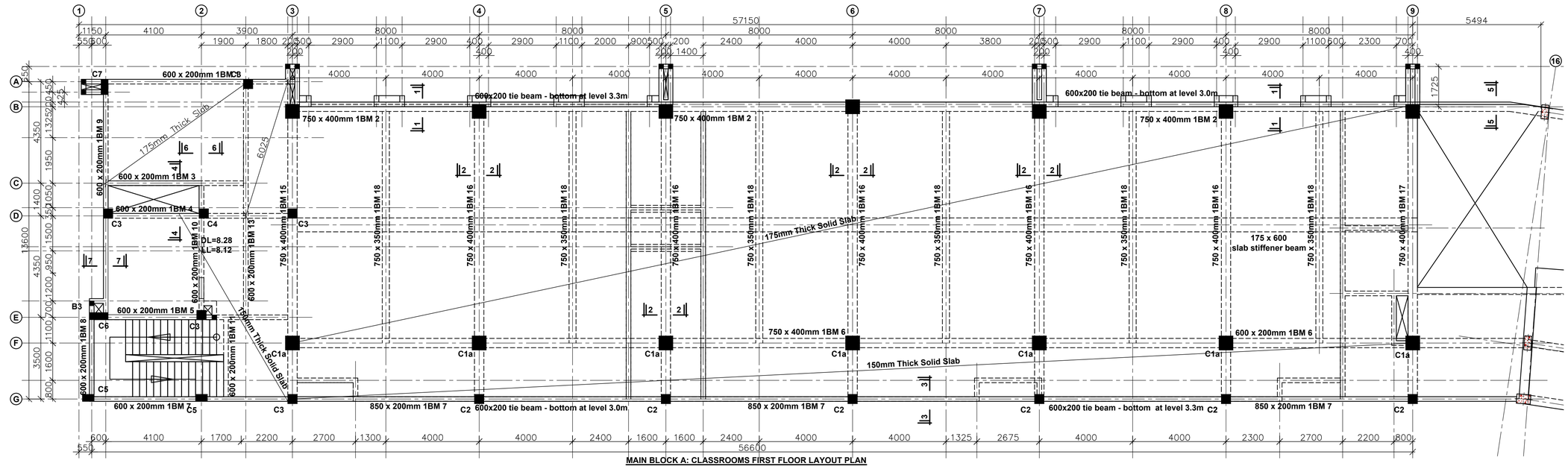
TITLE: Main Block A (Classrooms)

FOUNDATION, GROUND FLOOR LAYOUT PLANS AND SECTIONS

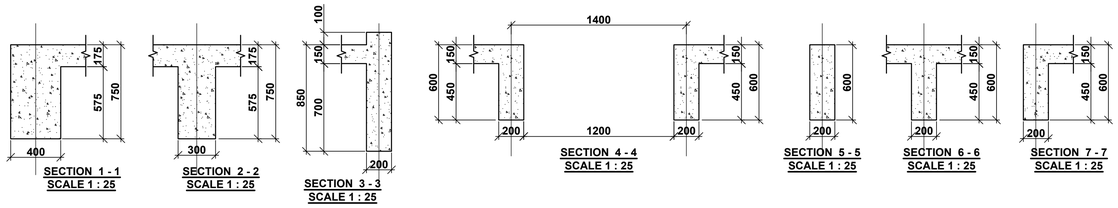
CIVIL & STRUCTURAL ENGINEER:

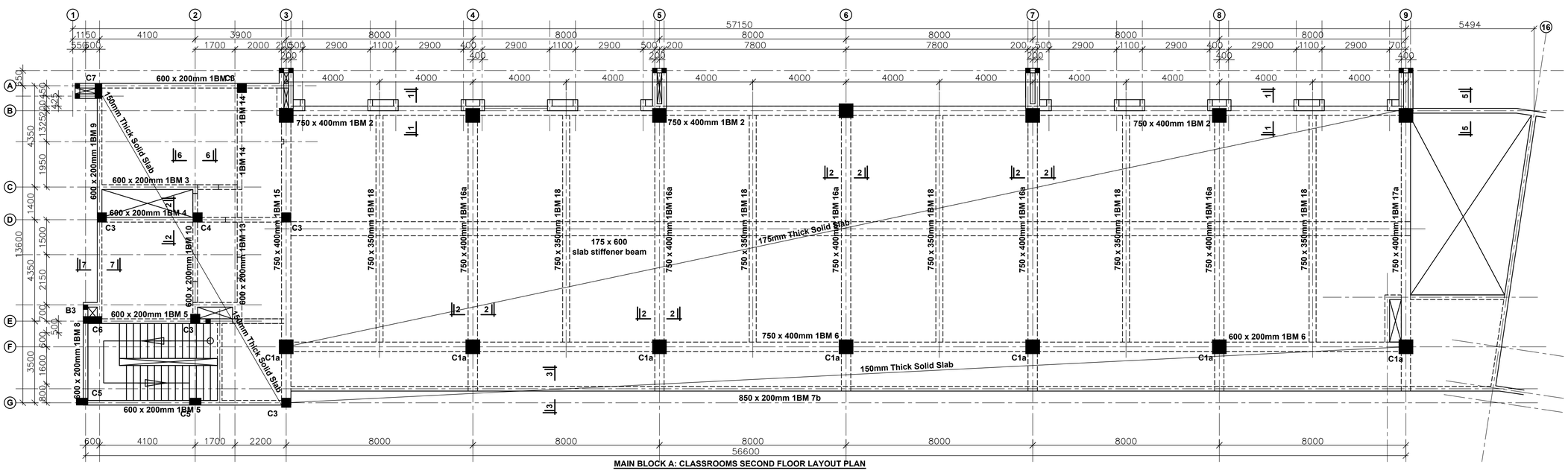
MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/001	



MAIN BLOCK A: CLASSROOMS FIRST FLOOR LAYOUT PLAN
SCALE 1: 100





MAIN BLOCK A: CLASSROOMS SECOND FLOOR LAYOUT PLAN
SCALE 1: 100

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
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6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
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9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
11.02.2021	T0	TENDER DOCUMENTATION

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

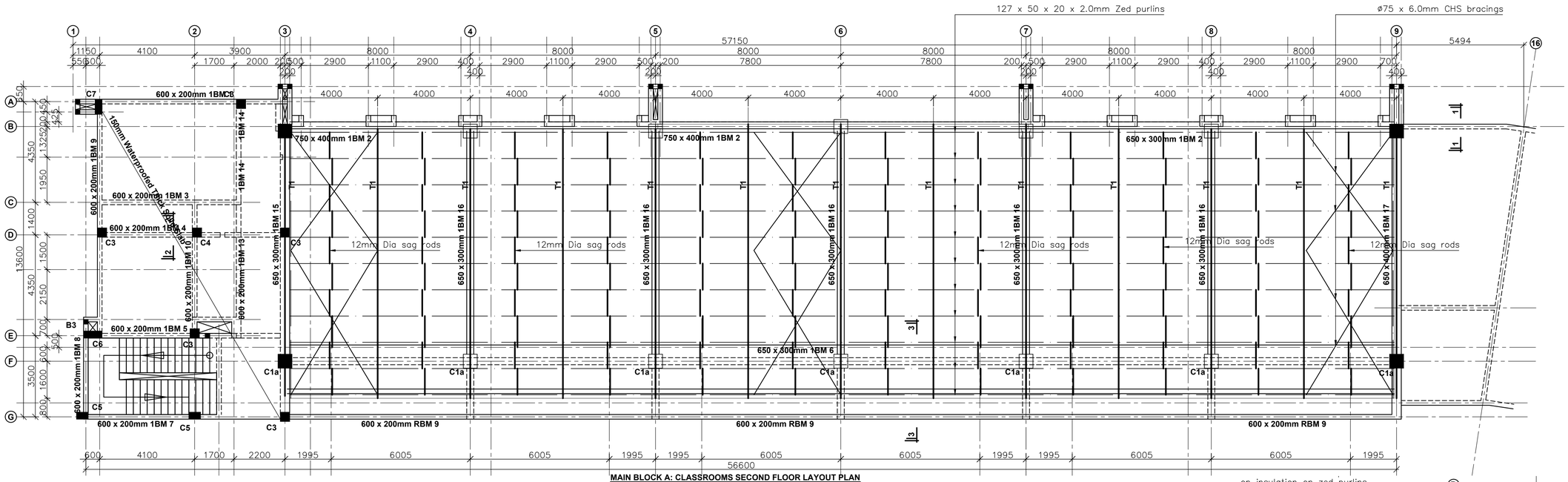
TITLE: Main Block A (Classrooms)

FIRST, SECOND FLOOR SLABS LAYOUT PLANS AND SECTIONS

CIVIL & STRUCTURAL ENGINEER:

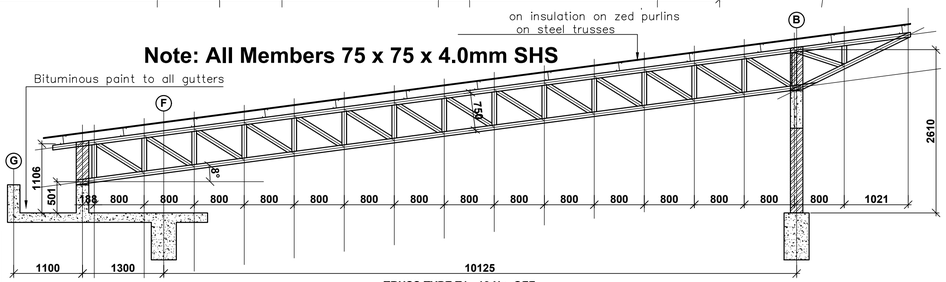
MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/002	

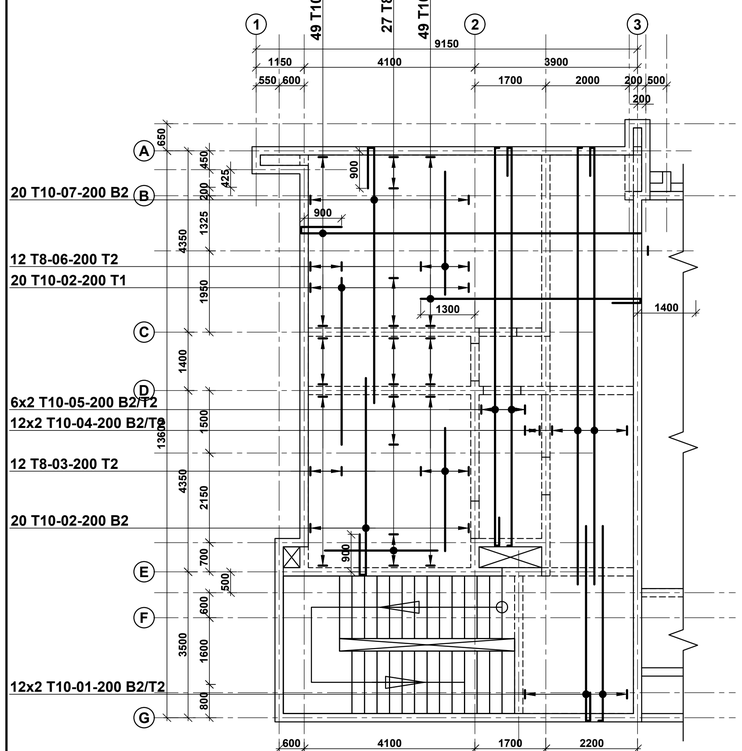


MAIN BLOCK A: CLASSROOMS SECOND FLOOR LAYOUT PLAN
SCALE 1: 100

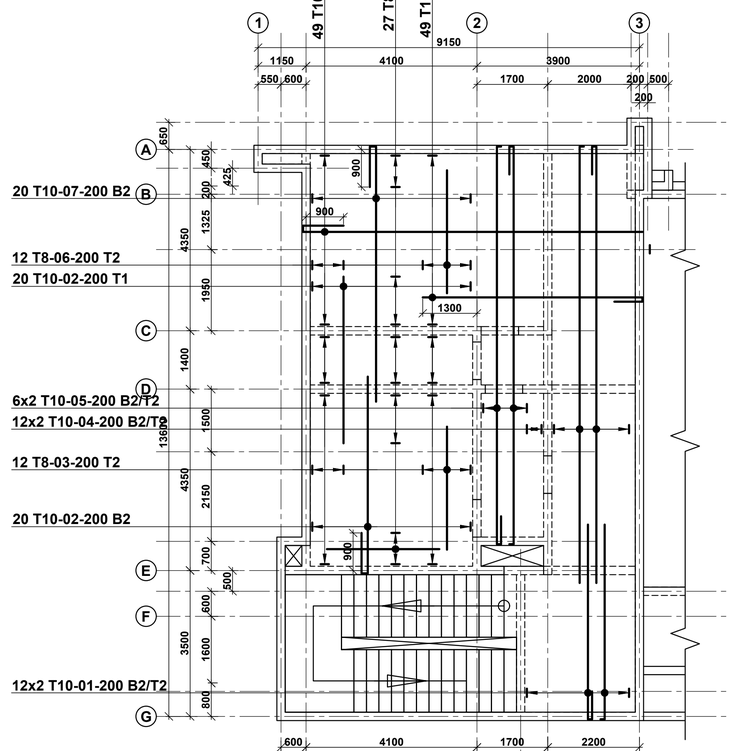
Note: All Members 75 x 75 x 4.0mm SHS



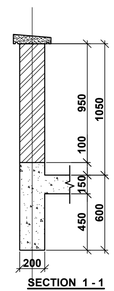
TRUSS TYPE T1 - 12 No. OFF
Scale 1:50



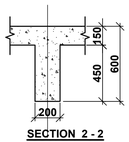
MAIN BLOCK A: CLASSROOMS ROOF SLAB SLAB R.C DETAILS
SCALE 1: 75



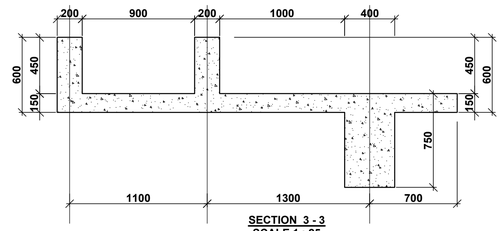
MAIN BLOCK A: CLASSROOMS MEZZANINE SLAB R.C DETAILS
SCALE 1: 75



SECTION 1 - 1
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25



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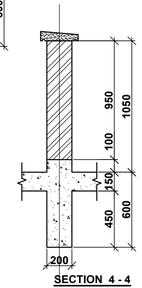
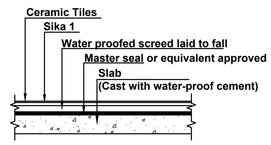
SCALE 1 : 25



SECTION 4 - 4
SCALE 1 : 25



TYPICAL DETAIL FOR ROOF SLAB AND ALL OPEN AREAS
SCALE 1:25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
11.02.2021	T0	TENDER DOCUMENTATION

ARCHITECTS:

SYMBION

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Email: symbionkenya@symbion-int.com
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CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

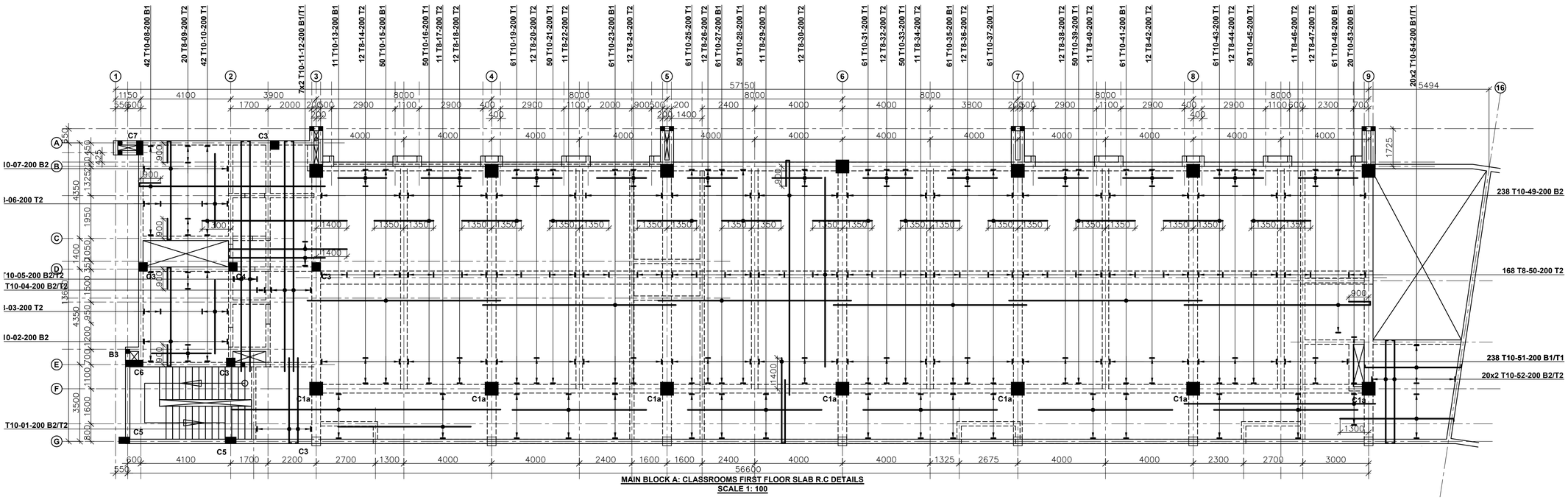
TITLE: Main Block A (Classrooms)

ROOF LAYOUT PLAN, SECTIONS AND ROOF SLAB R.C DETAILS

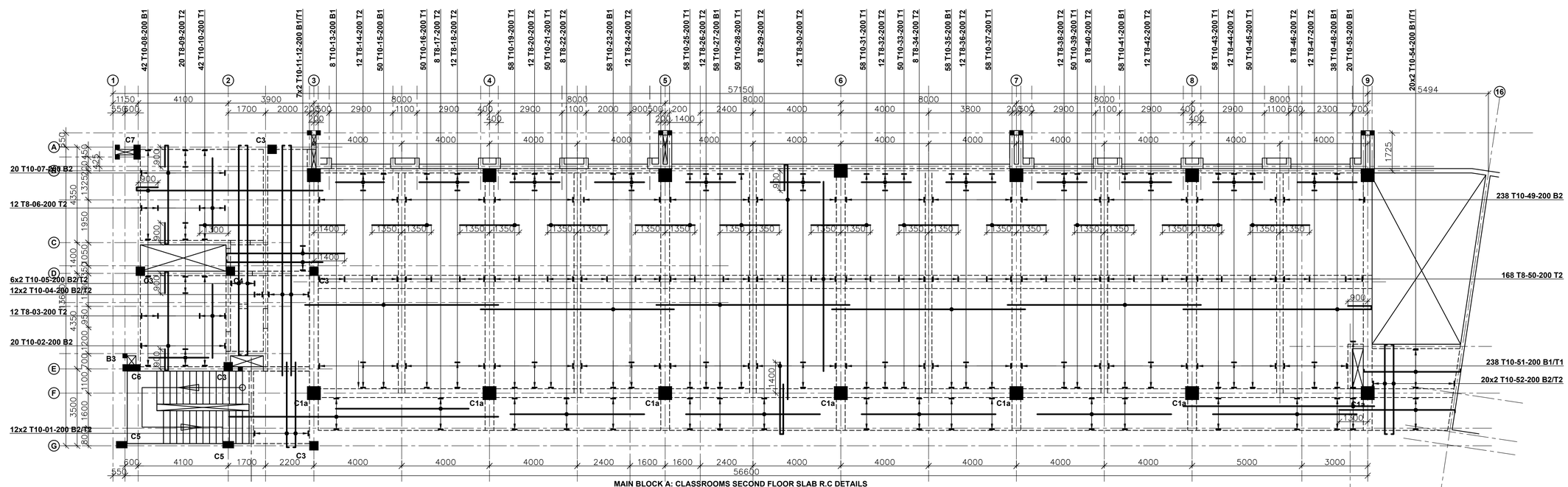
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 75, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/003	



MAIN BLOCK A: CLASSROOMS FIRST FLOOR SLAB R.C DETAILS
SCALE 1: 100



MAIN BLOCK A: CLASSROOMS SECOND FLOOR SLAB R.C DETAILS
SCALE 1: 100

NOTES

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2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
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11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
11.02.2021	T0	TENDER DOCUMENTATION

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
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CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

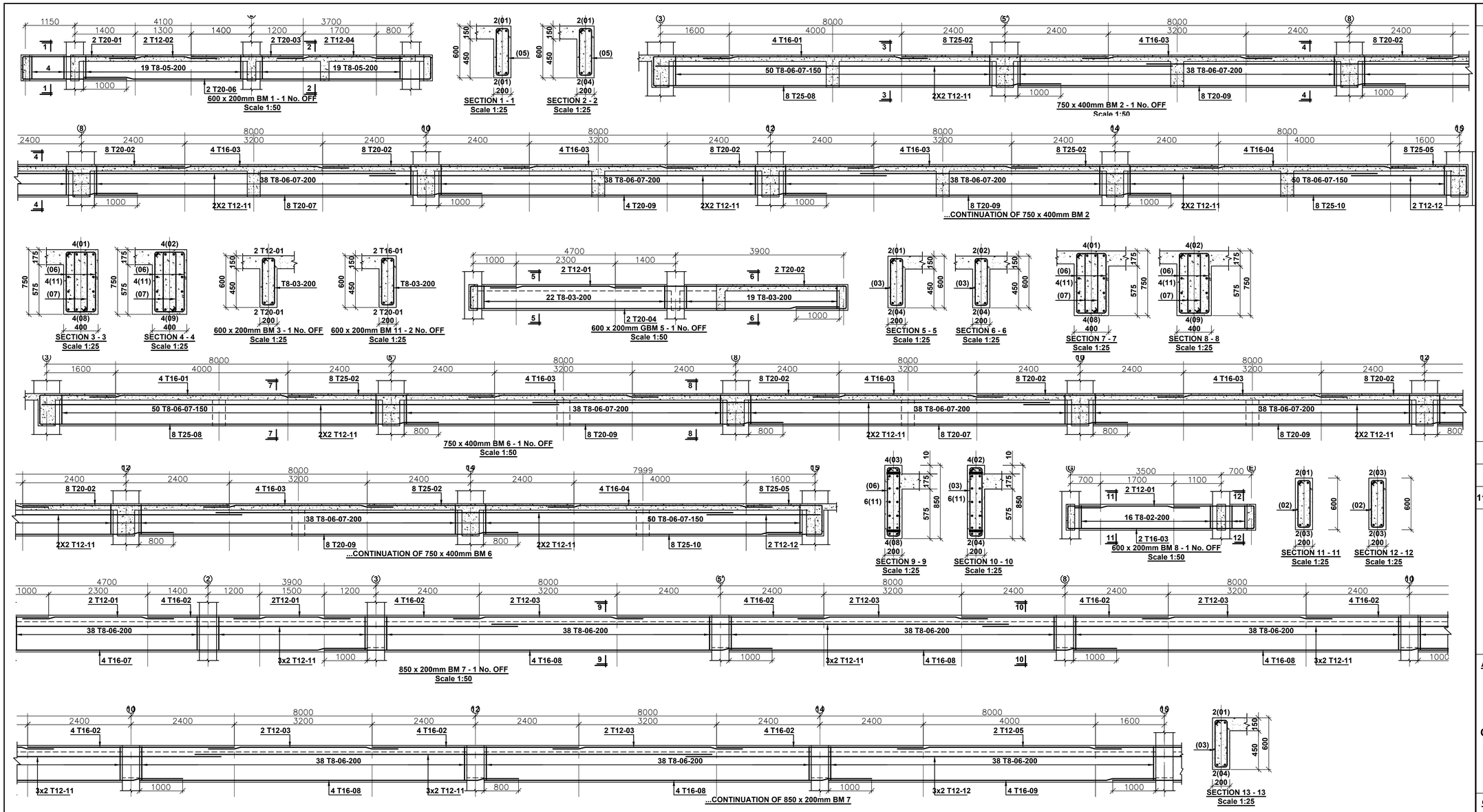
TITLE: Main Block A (Classrooms)

FIRST, SECOND FLOOR SLABS
R.C DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/004	



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9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
11.02.2021	T0	TENDER DOCUMENTATION

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9

Email: symbionkenya@symbion-int.com

WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

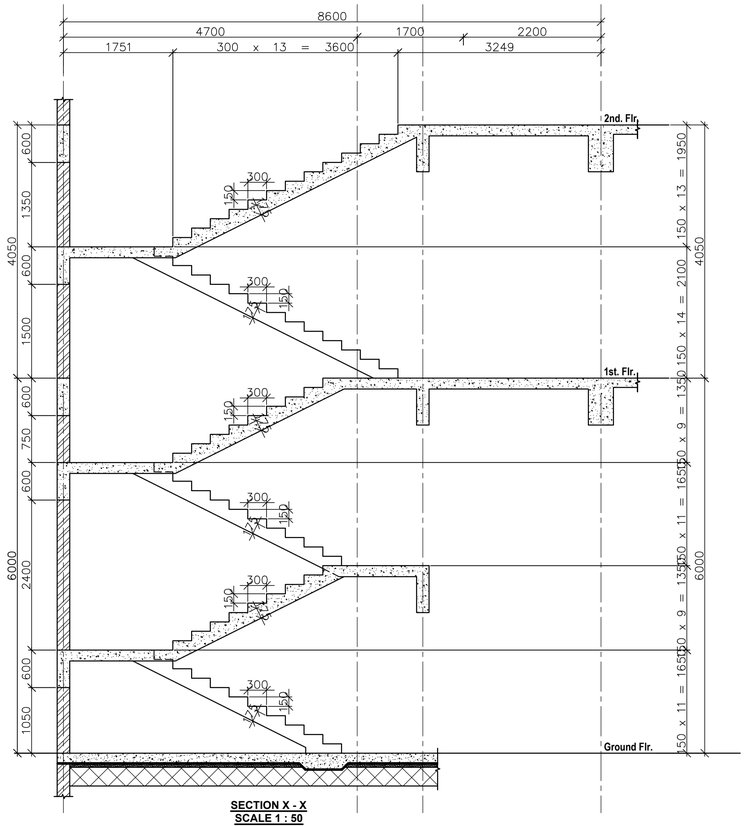
TITLE: Main Block A (Classrooms)

BEAMS R.C DETAILS

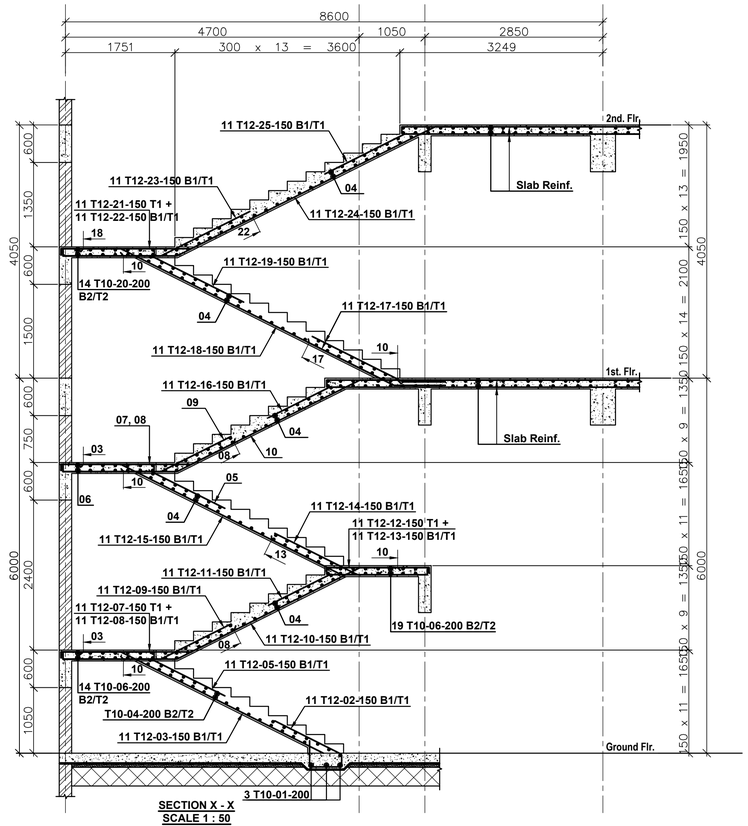
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

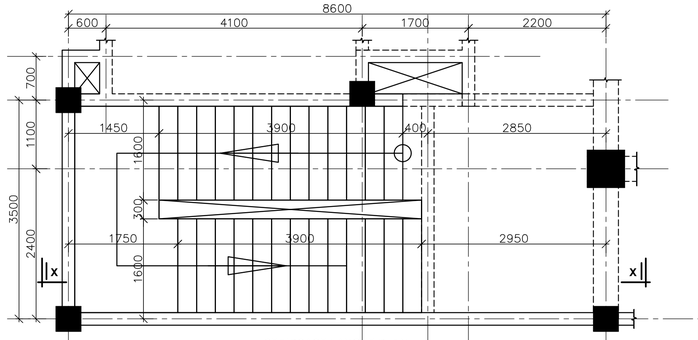
Drawn	A.C.O	Scale(s)	1 : 50, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/005	



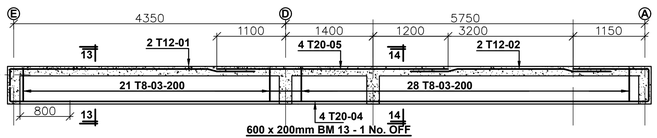
SECTION X - X
SCALE 1 : 50



SECTION X - X
SCALE 1 : 50



STAIRCASE LAYOUT PLAN
SCALE 1 : 50



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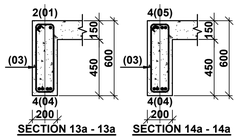
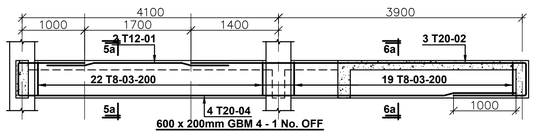


SECTION 13a - 13a
Scale 1:25

SECTION 14a - 14a
Scale 1:25



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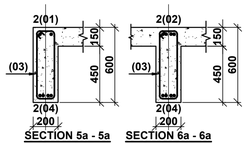
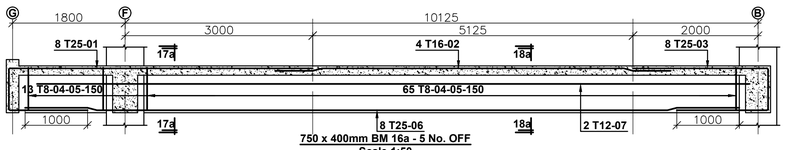


SECTION 5a - 5a
Scale 1:25

SECTION 6a - 6a
Scale 1:25



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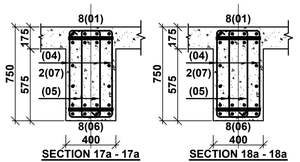
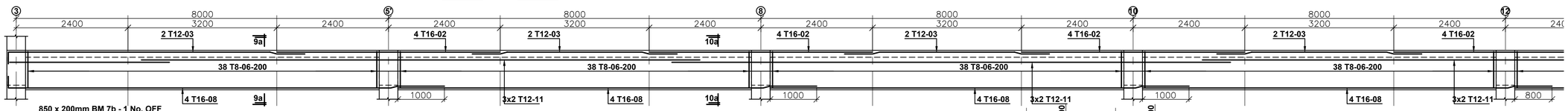
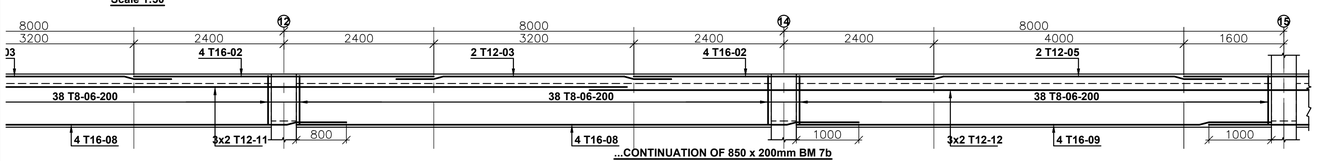


SECTION 17a - 17a
Scale 1:25

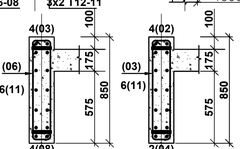
SECTION 18a - 18a
Scale 1:25



850 x 200mm BM 7b - 1 No. OFF
Scale 1:50



...CONTINUATION OF 850 x 200mm BM 7b



SECTION 9a - 9a
Scale 1:25

SECTION 10a - 10a
Scale 1:25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
11.02.2021	T0	TENDER DOCUMENTATION

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

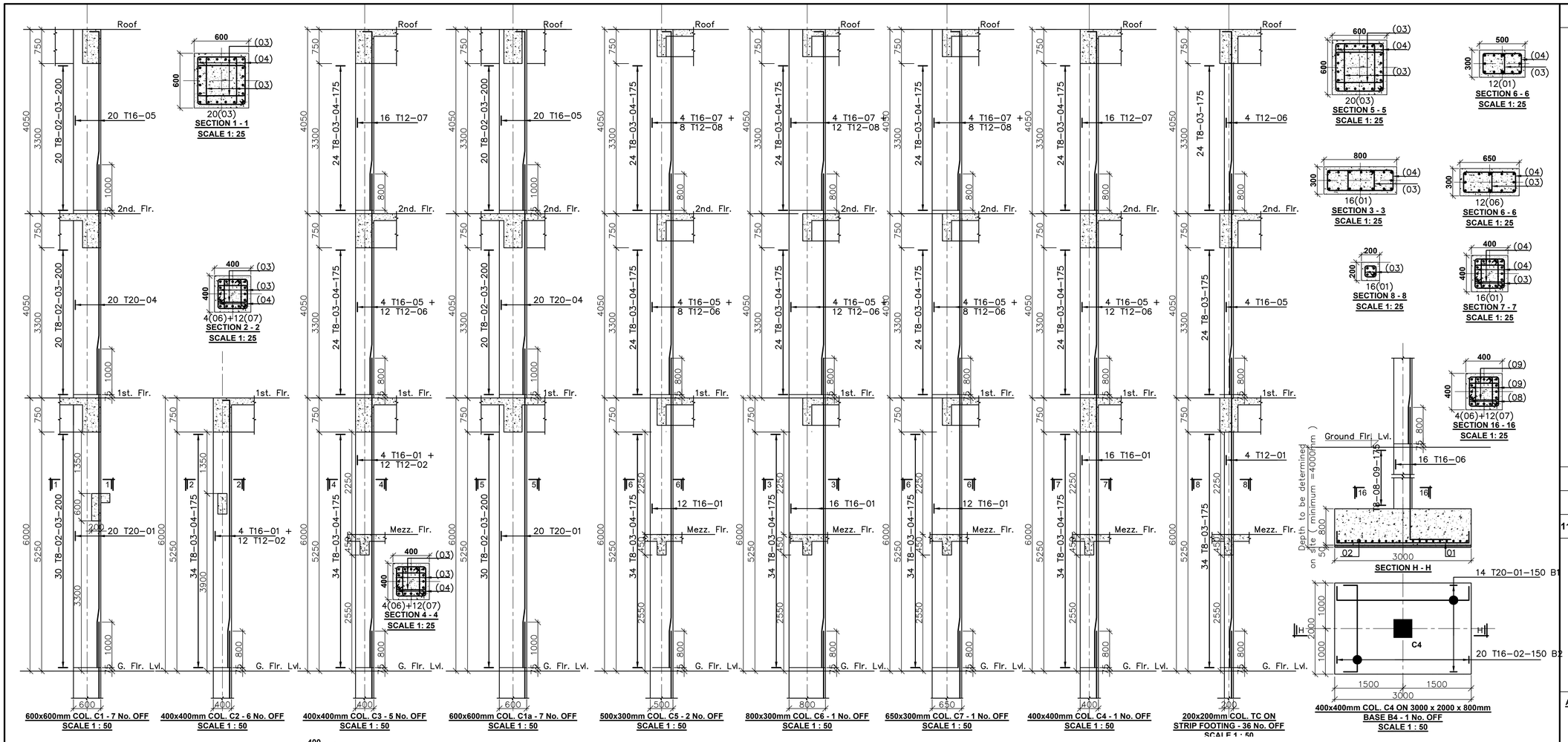
TITLE: Main Block A (Classrooms)

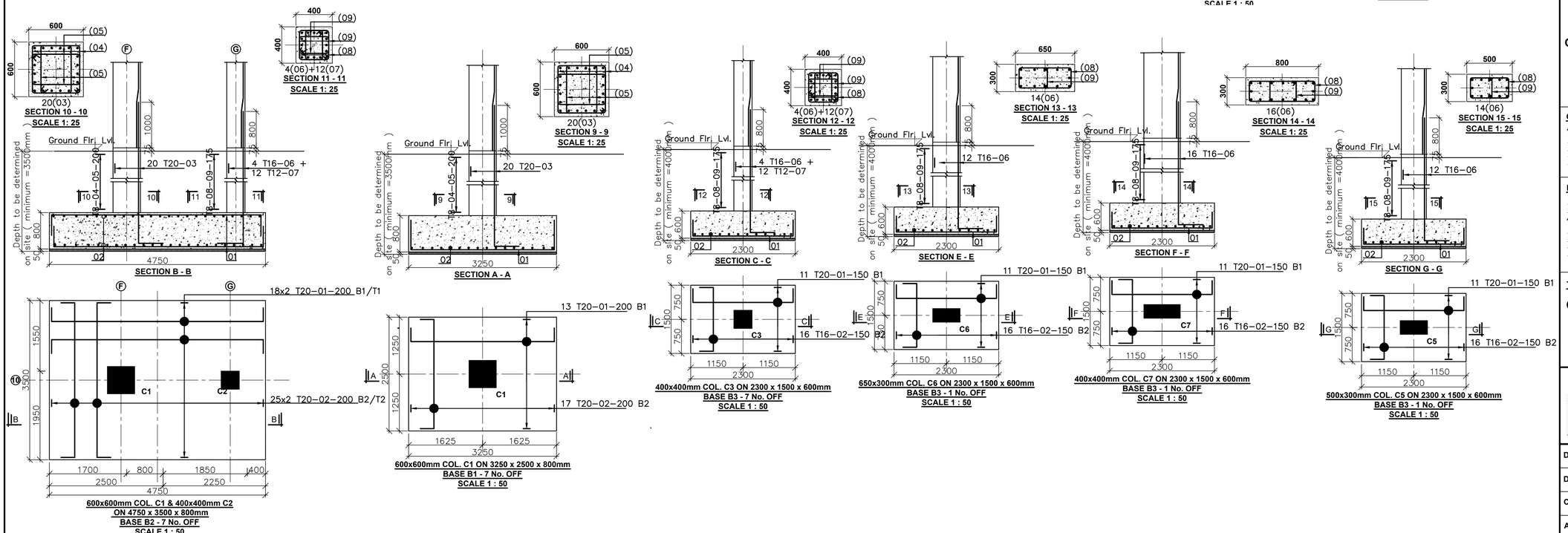
STAIRCASE LAYOUT PLAN, SECTIONS AND R.C DETAILS AND BEAM RC DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/006	





NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
11.02.2021	T0	TENDER DOCUMENTATION

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9

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WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Main Block A (Classrooms)

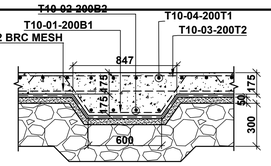
COLUMNS AND BASES R.C DETAILS

CIVIL & STRUCTURAL ENGINEER:

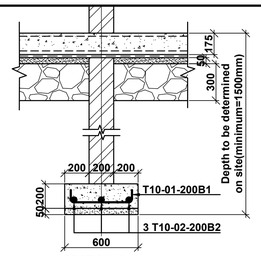
MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020

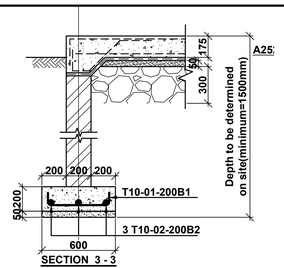
JOB No. 2020 | DRG No. MERK/ST/007



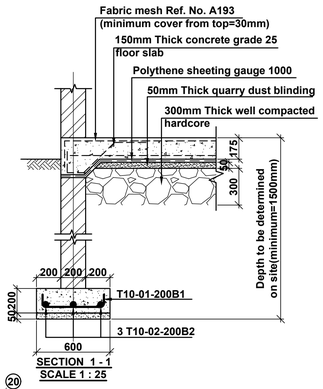
SECTION 2a - 2a
(Slab Thickening Details)
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25



SECTION 3 - 3
SCALE 1 : 25



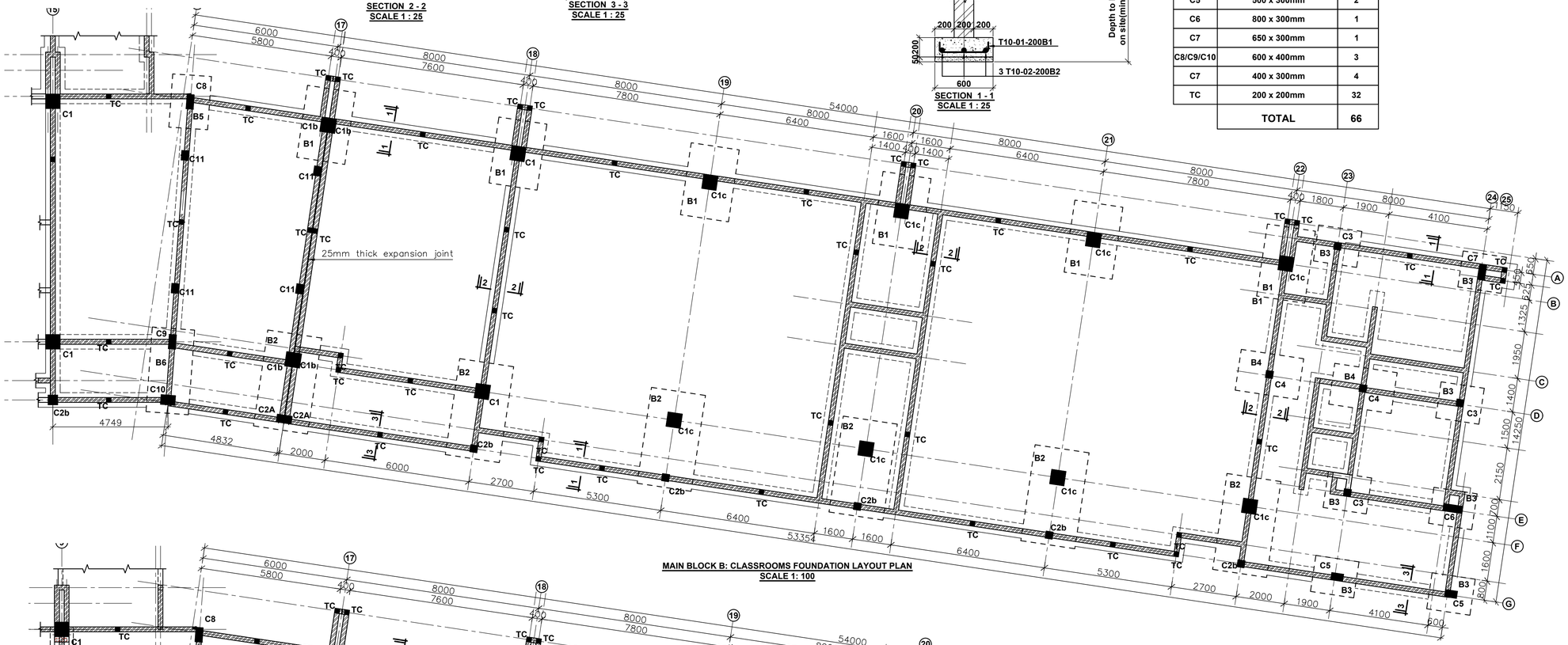
SECTION 1 - 1
SCALE 1 : 25

COLUMN SCHEDULE

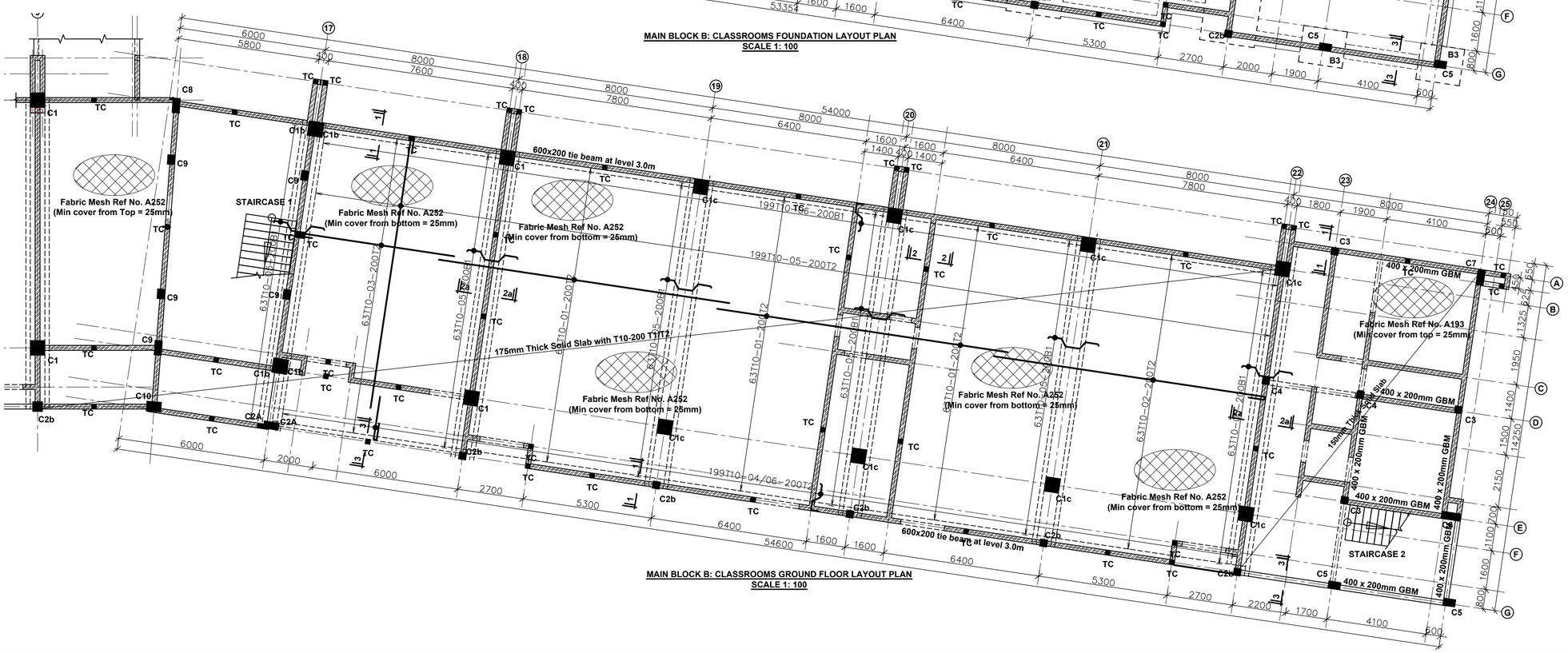
TYPE	SIZE	No.
C1	600 x 600mm	2
C1b	600 x 400mm	4
C1c	600 x 600mm	8
C2bb	300 x 300mm	5
C2bA	300 x 300mm	2
C3	300 x 300mm	3
C4	300 x 300mm	2
C5	500 x 300mm	2
C6	800 x 300mm	1
C7	650 x 300mm	1
C8/C9/C10	600 x 400mm	3
C7	400 x 300mm	4
TC	200 x 200mm	32
	TOTAL	66

COLUMN BASES SCHEDULE

TYPE	SIZE	No.
B1	2750 x 2000 x 700mm	7
B2	4000 x 2250 x 500mm	7
B3	1800 x 1500 x 600mm	7
B4	2600 x 1700 x 700mm	2
B5	3500 x 1750 x 700mm	2
B6	2200 x 1600 x 700mm	2
	TOTAL	23



MAIN BLOCK B: CLASSROOMS FOUNDATION LAYOUT PLAN
SCALE 1: 100



MAIN BLOCK B: CLASSROOMS GROUND FLOOR LAYOUT PLAN
SCALE 1: 100

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

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CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

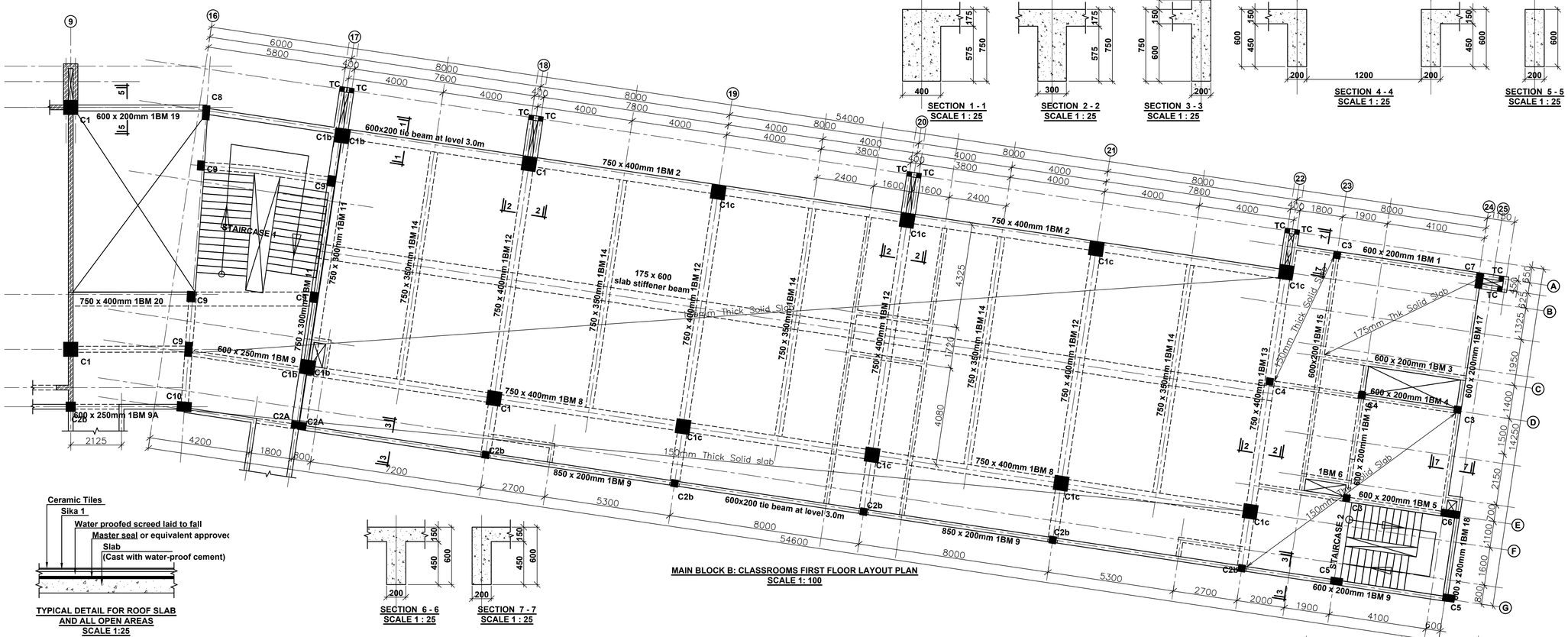
TITLE: Main Block B (Classrooms)

FOUNDATION, GROUND FLOOR LAYOUT PLAN AND SECTIONS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/001	

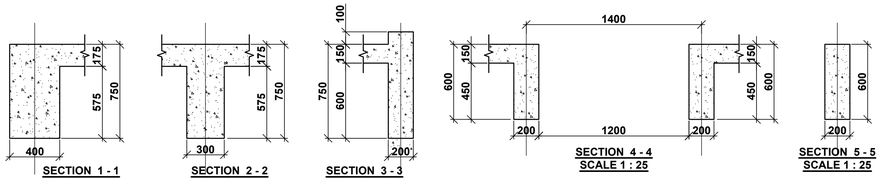


MAIN BLOCK B: CLASSROOMS FIRST FLOOR LAYOUT PLAN
SCALE 1: 100

TYPICAL DETAIL FOR ROOF SLAB AND ALL OPEN AREAS
SCALE 1:25

SECTION 6 - 6
SCALE 1 : 25

SECTION 7 - 7
SCALE 1 : 25



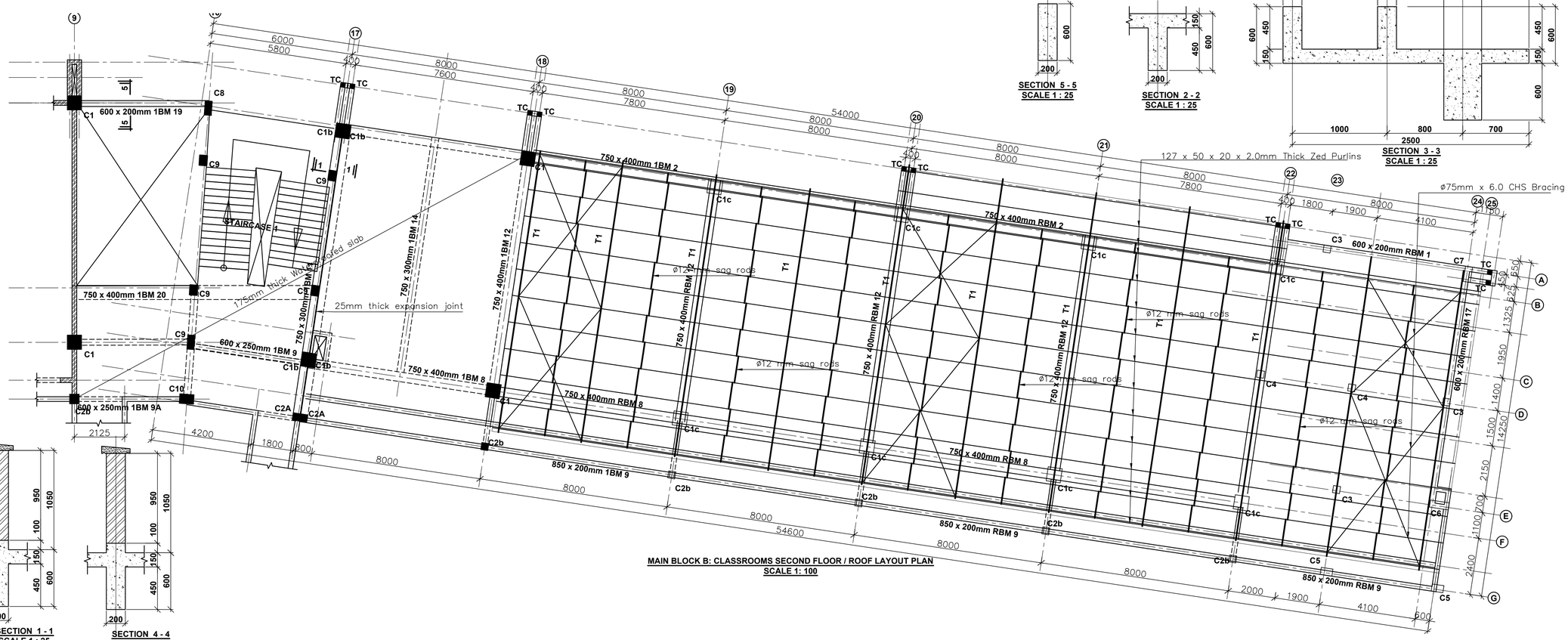
SECTION 1 - 1
SCALE 1 : 25

SECTION 2 - 2
SCALE 1 : 25

SECTION 3 - 3
SCALE 1 : 25

SECTION 4 - 4
SCALE 1 : 25

SECTION 5 - 5
SCALE 1 : 25



MAIN BLOCK B: CLASSROOMS SECOND FLOOR / ROOF LAYOUT PLAN
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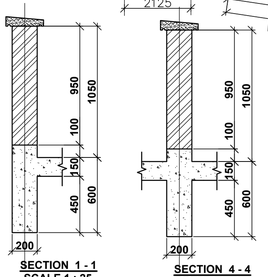

SECTION 1 - 1
SCALE 1 : 25

SECTION 4 - 4
SCALE 1 : 25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

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WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

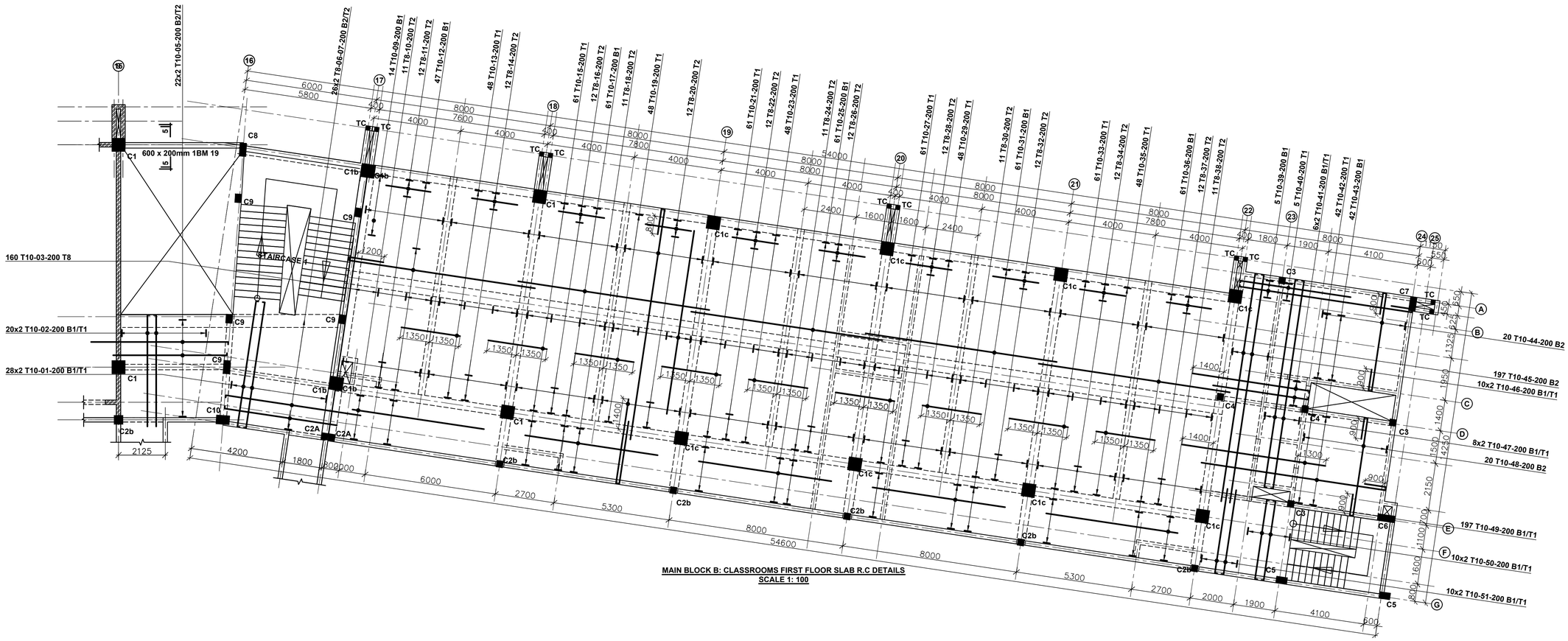
TITLE: Main Block B (Classrooms)

FIRST FLOOR, ROOF LAYOUT PLAN AND SECTIONS

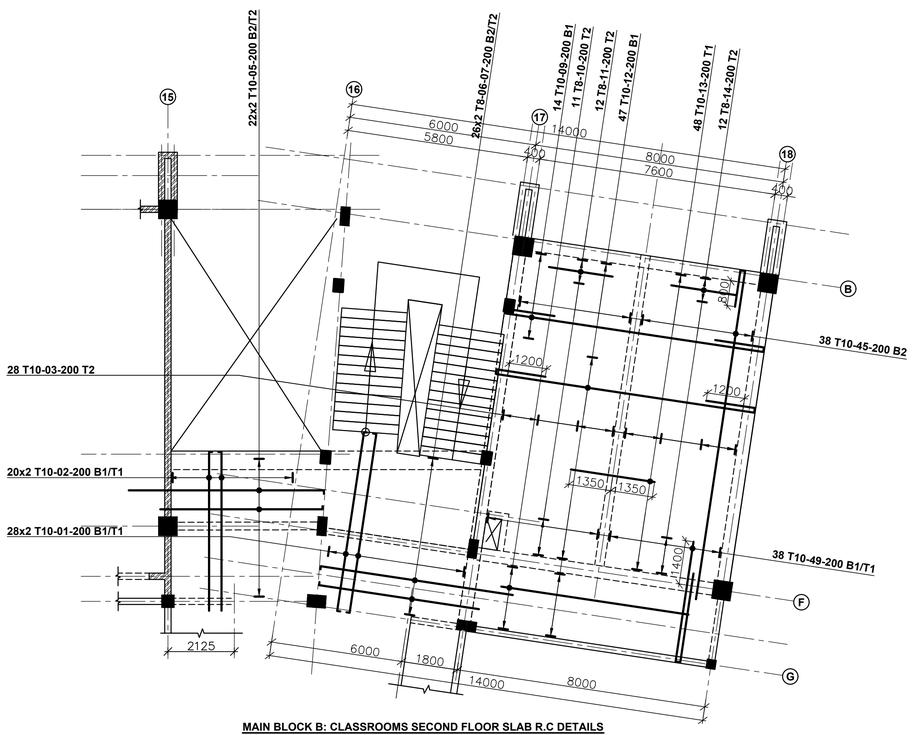
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

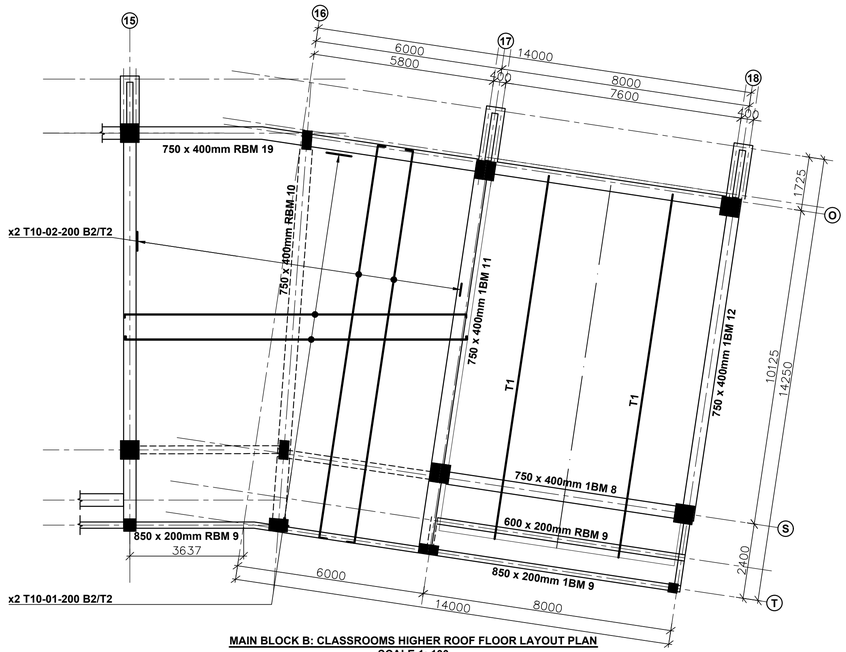
Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/002	



MAIN BLOCK B: CLASSROOMS FIRST FLOOR SLAB R.C DETAILS
SCALE 1: 100



MAIN BLOCK B: CLASSROOMS SECOND FLOOR SLAB R.C DETAILS
SCALE 1: 100



MAIN BLOCK B: CLASSROOMS HIGHER ROOF FLOOR LAYOUT PLAN
SCALE 1: 100

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

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CLIENT:

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P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

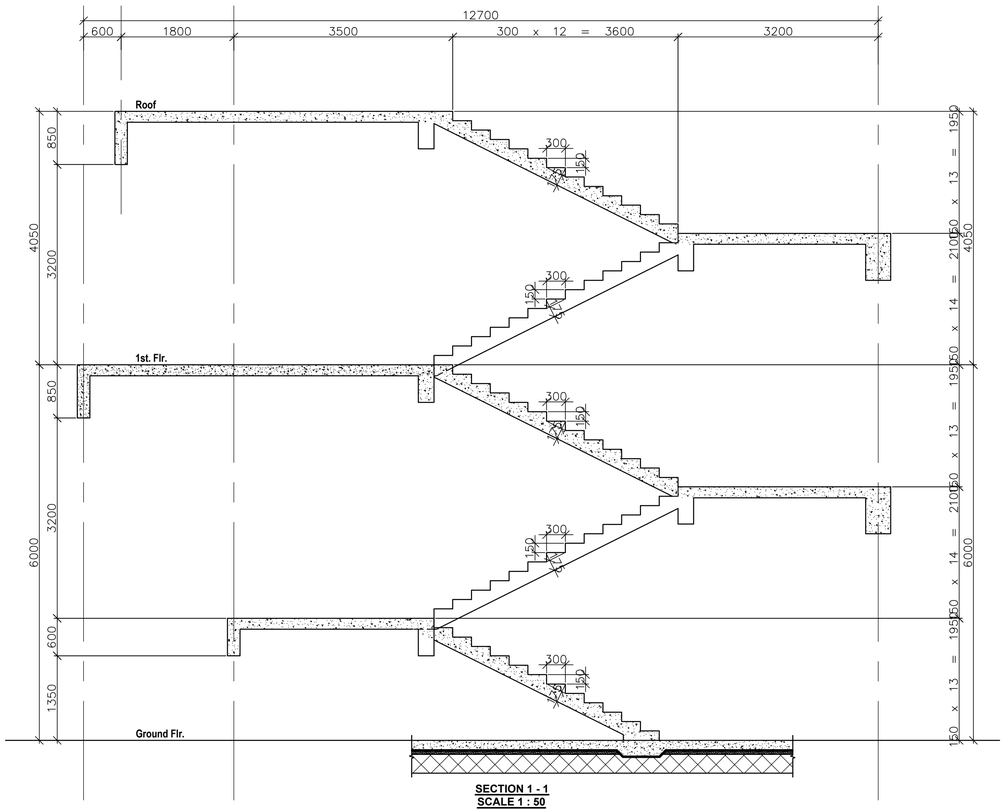
TITLE: Main Block B (Classrooms)

SLABS R.C DETAILS

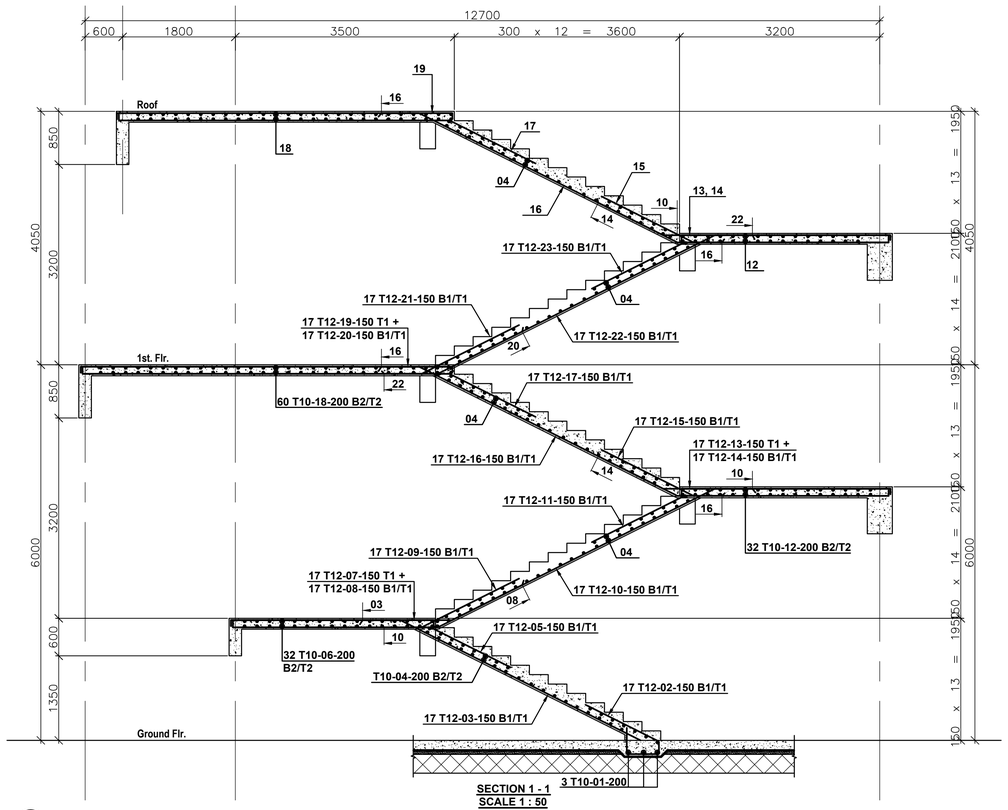
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

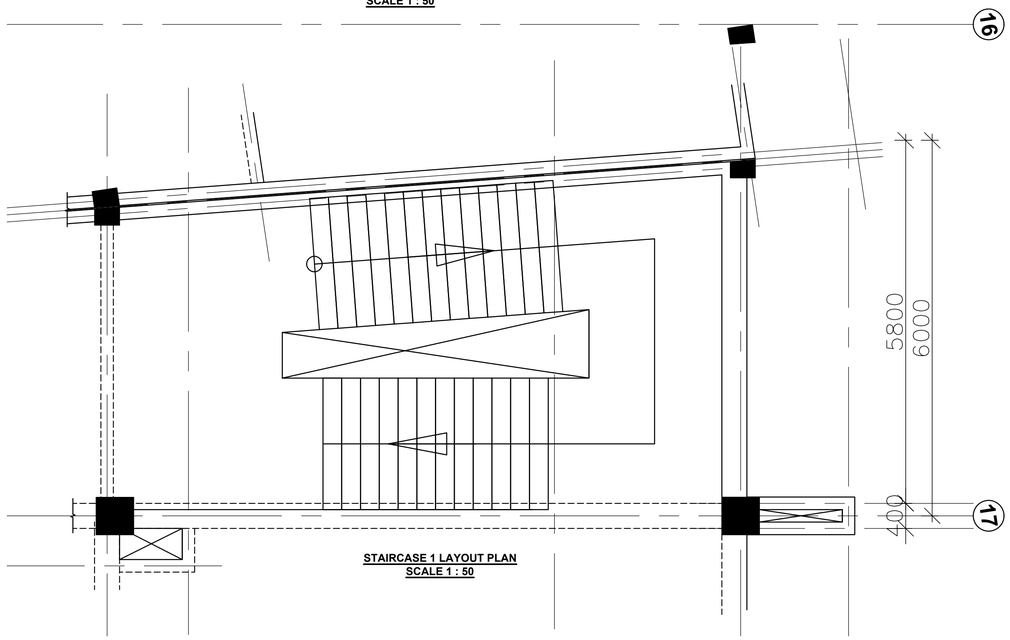
Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/003	



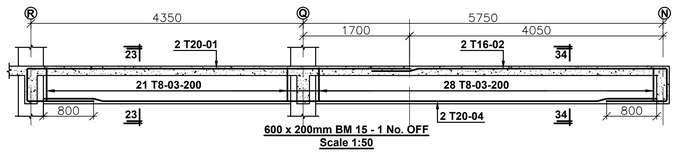
SECTION 1 - 1
SCALE 1 : 50



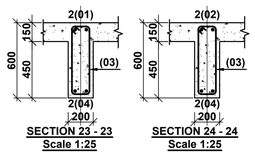
SECTION 1 - 1
SCALE 1 : 50



STAIRCASE 1 LAYOUT PLAN
SCALE 1 : 50

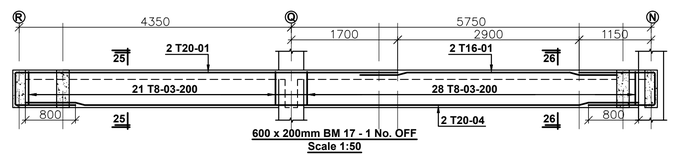


600 x 200mm BM 15 - 1 No. OFF
Scale 1:50

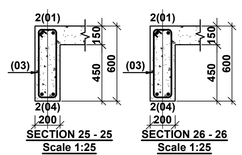


SECTION 23 - 23
Scale 1:25

SECTION 24 - 24
Scale 1:25

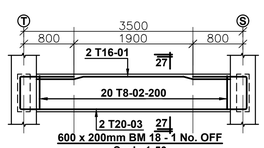


600 x 200mm BM 17 - 1 No. OFF
Scale 1:50

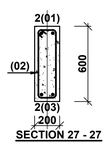


SECTION 25 - 25
Scale 1:25

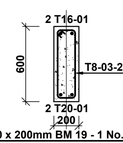
SECTION 26 - 26
Scale 1:25



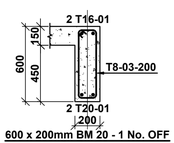
600 x 200mm BM 18 - 1 No. OFF
Scale 1:50



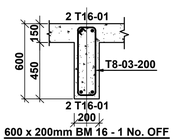
SECTION 27 - 27
Scale 1:25



600 x 200mm BM 19 - 1 No. OFF
Scale 1:25



600 x 200mm BM 20 - 1 No. OFF
Scale 1:25



600 x 200mm BM 16 - 1 No. OFF
Scale 1:25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

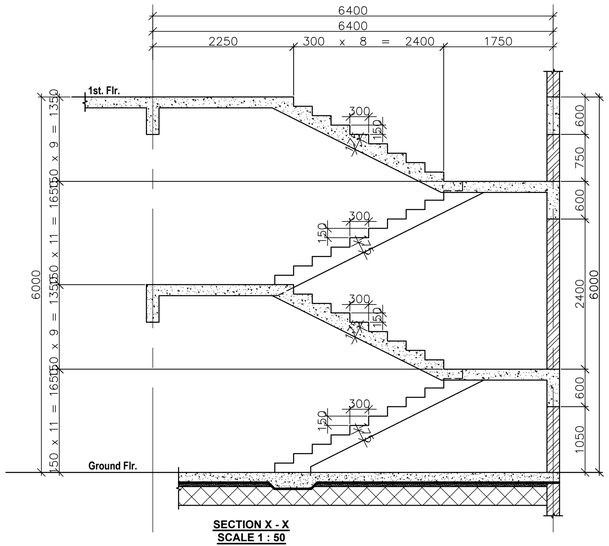
TITLE: Main Block B (Classrooms)

STAIRCASE 1 LAYOUT PLAN, SECTIONS & 1ST. FLR. SLAB BEAMS R.C DETAILS

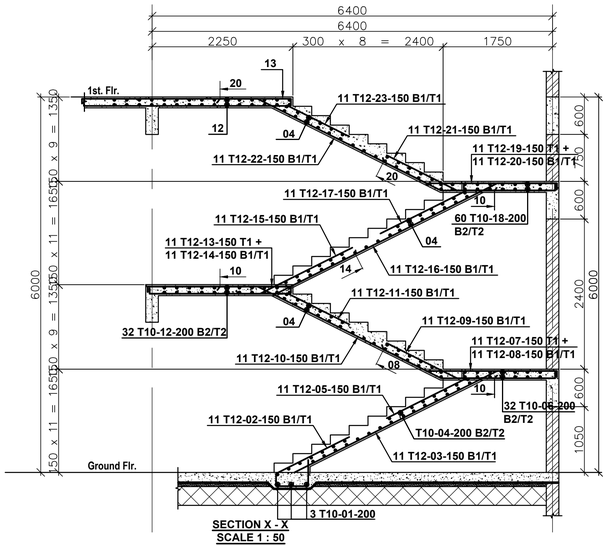
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

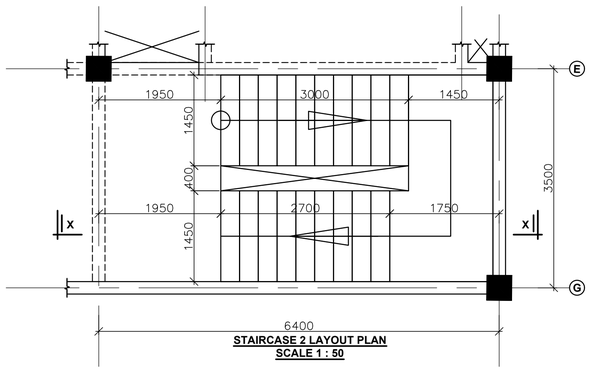
Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/005	



SECTION X - X
SCALE 1 : 50

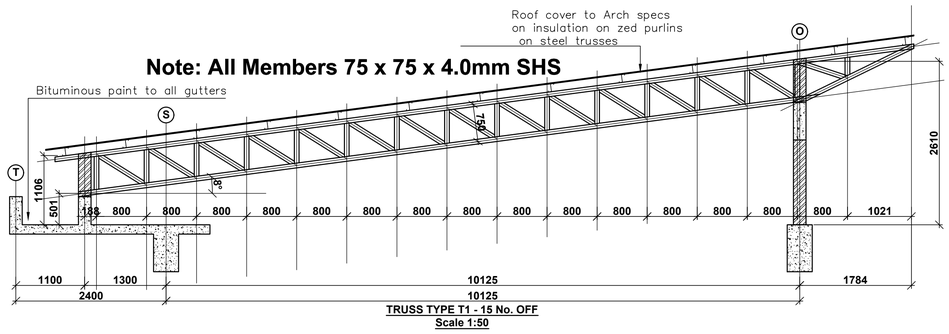


SECTION X - X
SCALE 1 : 50



STAIRCASE 2 LAYOUT PLAN
SCALE 1 : 50

Note: All Members 75 x 75 x 4.0mm SHS



TRUSS TYPE T1 - 15 No. OFF
Scale 1:50

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

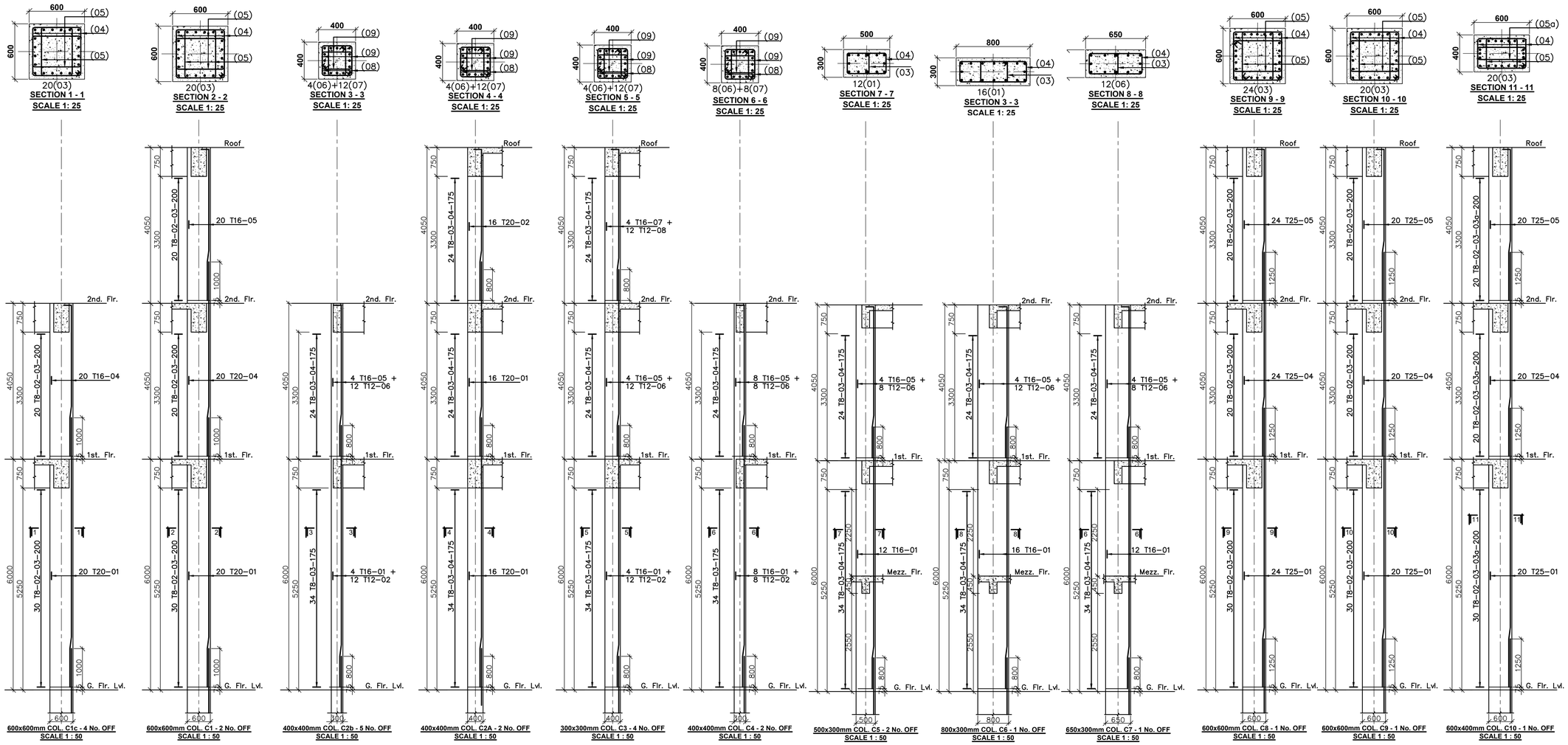
TITLE: Main Block B (Classrooms)

STAIRCASE 2 LAYOUT PLAN, SECTIONS, R.C DETAILS AND TRUSS ELEVATION

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/006	



NOTES

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11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9

Email: symbionkenya@symbion-int.com

WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

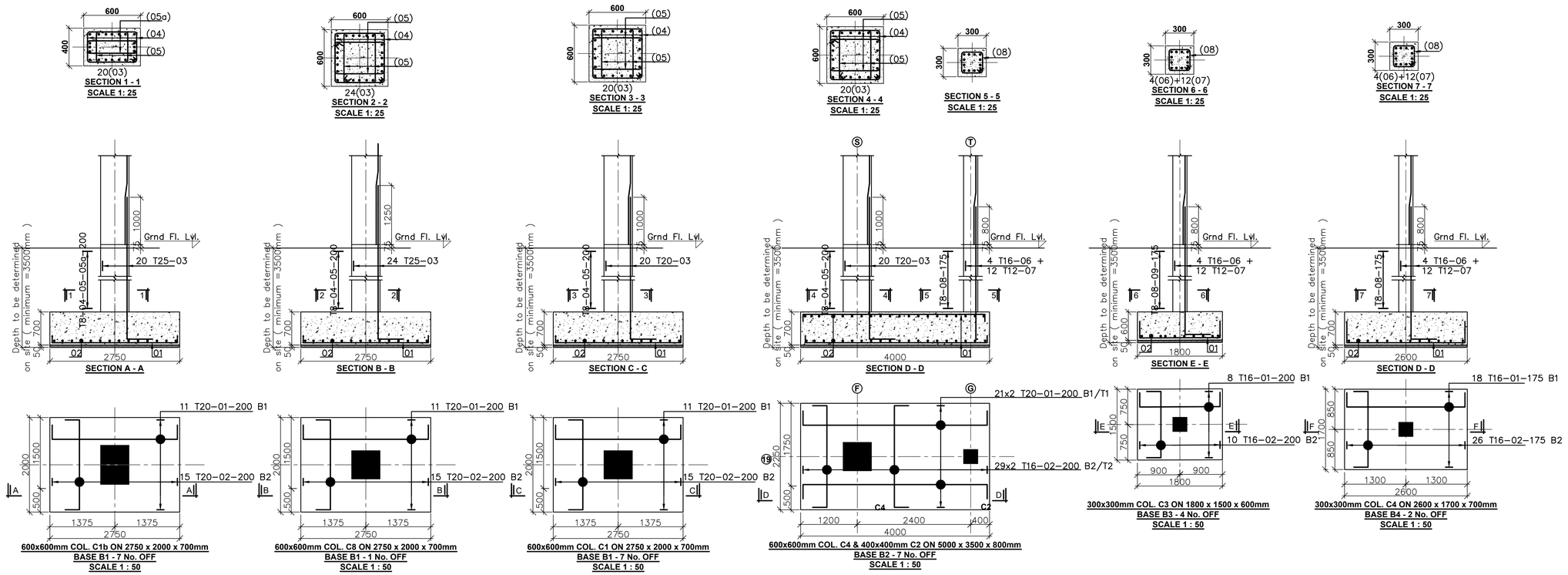
TITLE: Main Block B (Classrooms)

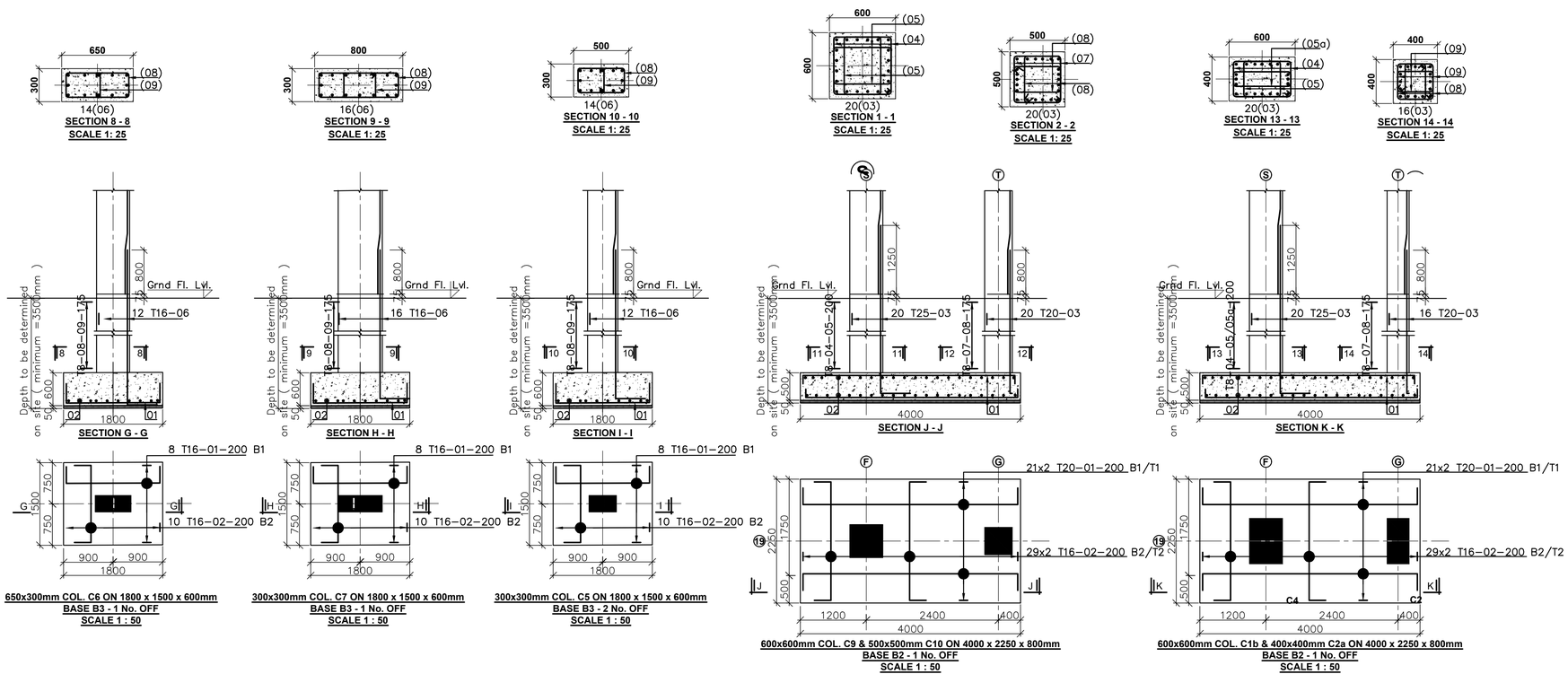
COLUMNS R.C DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/007	





NOTES

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2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
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10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.01.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

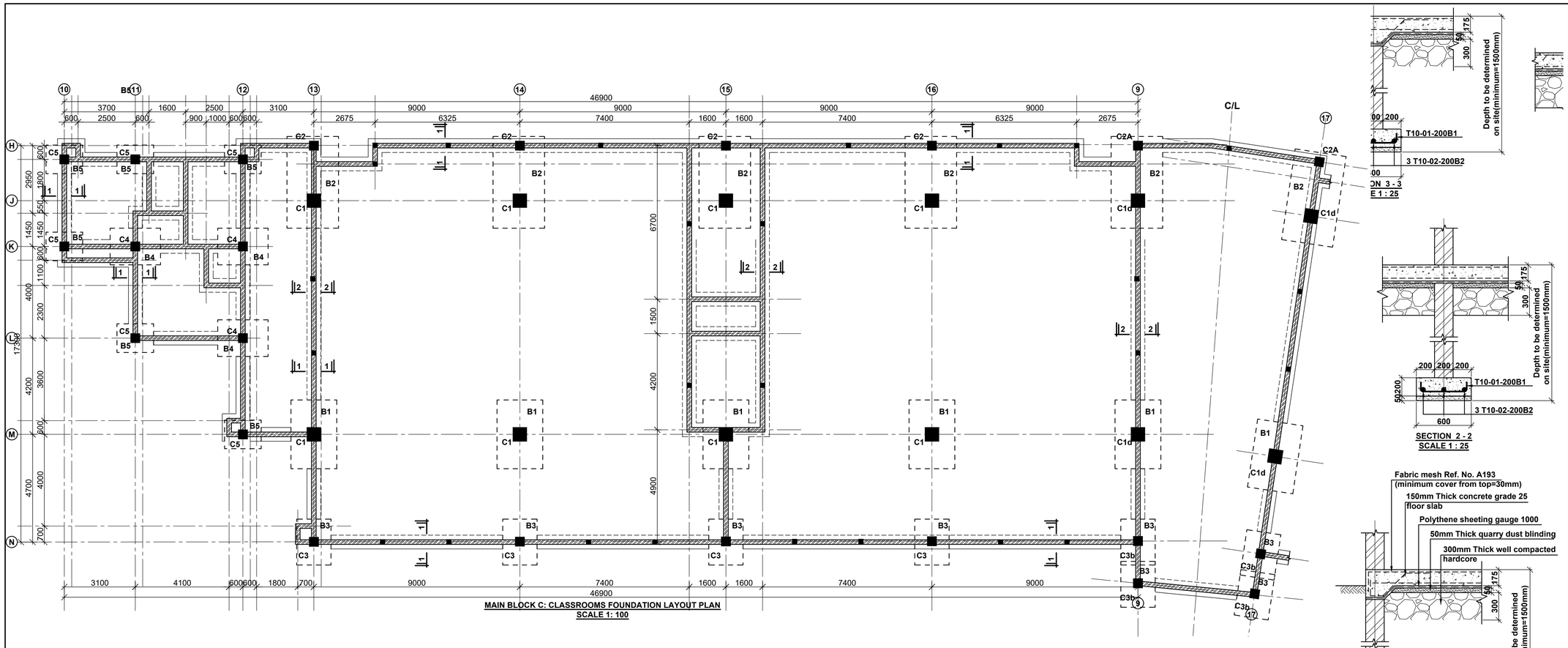
TITLE: Main Block B (Classrooms)

BASES R.C DETAILS

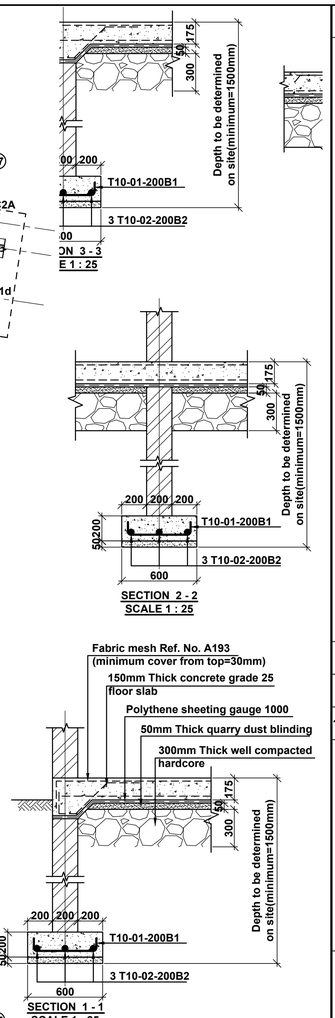
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/008	

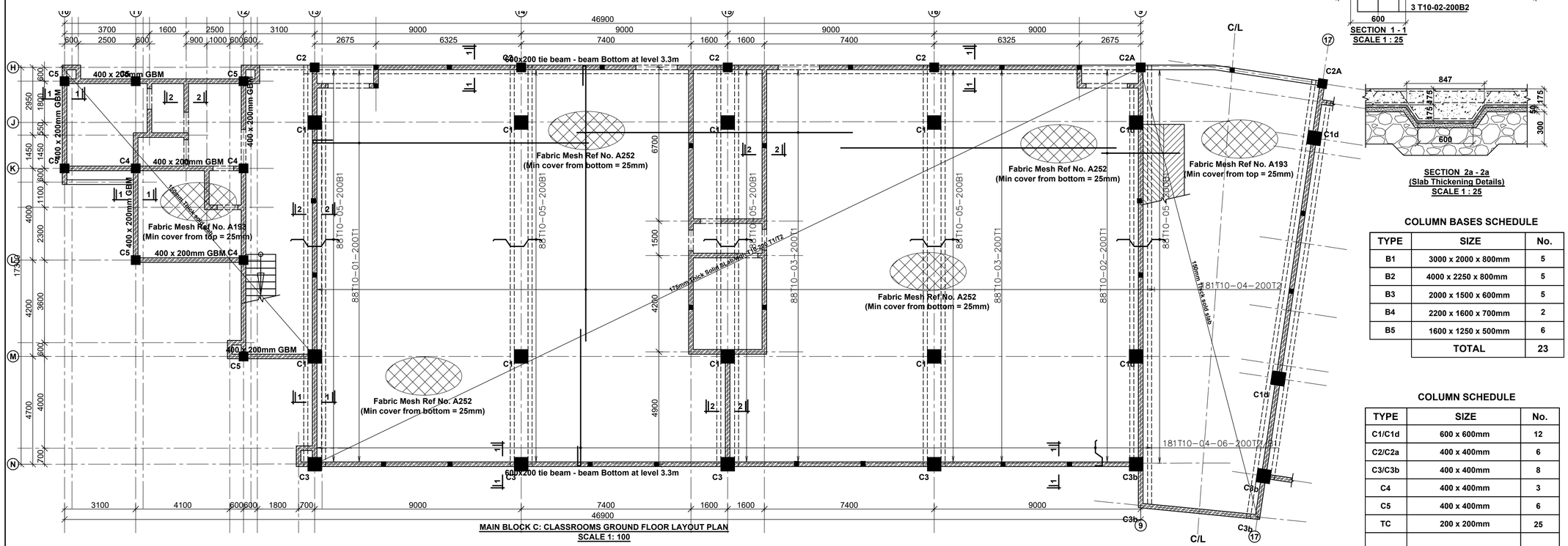


MAIN BLOCK C: CLASSROOMS FOUNDATION LAYOUT PLAN
SCALE 1: 100



SECTION 2 - 2
SCALE 1 : 25

SECTION 1 - 1
SCALE 1 : 25



MAIN BLOCK C: CLASSROOMS GROUND FLOOR LAYOUT PLAN
SCALE 1: 100

SECTION 2a - 2a
(Slab Thickening Details)
SCALE 1 : 25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
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   (d) Slabs = 20mm
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11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

COLUMN BASES SCHEDULE

TYPE	SIZE	No.
B1	3000 x 2000 x 800mm	5
B2	4000 x 2250 x 800mm	5
B3	2000 x 1500 x 600mm	5
B4	2200 x 1600 x 700mm	2
B5	1600 x 1250 x 500mm	6
	TOTAL	23

COLUMN SCHEDULE

TYPE	SIZE	No.
C1/C1d	600 x 600mm	12
C2/C2a	400 x 400mm	6
C3/C3b	400 x 400mm	8
C4	400 x 400mm	3
C5	400 x 400mm	6
TC	200 x 200mm	25
	TOTAL	60

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Main Block C (Classrooms)

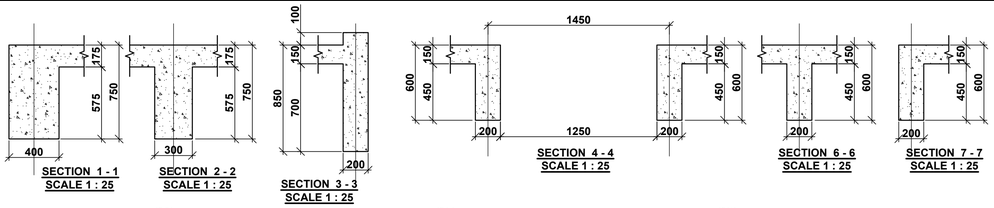
FOUNDATION, GROUND FLOOR LAYOUT PLAN AND SECTIONS

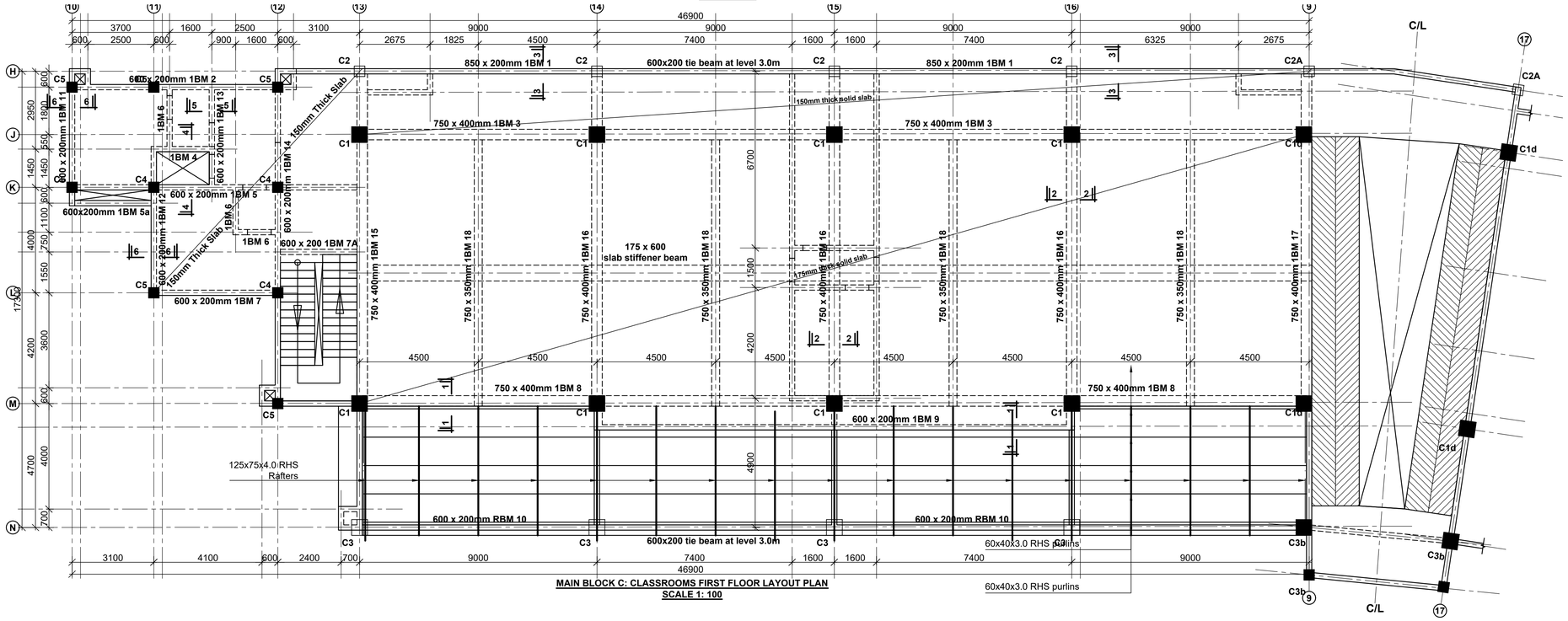
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

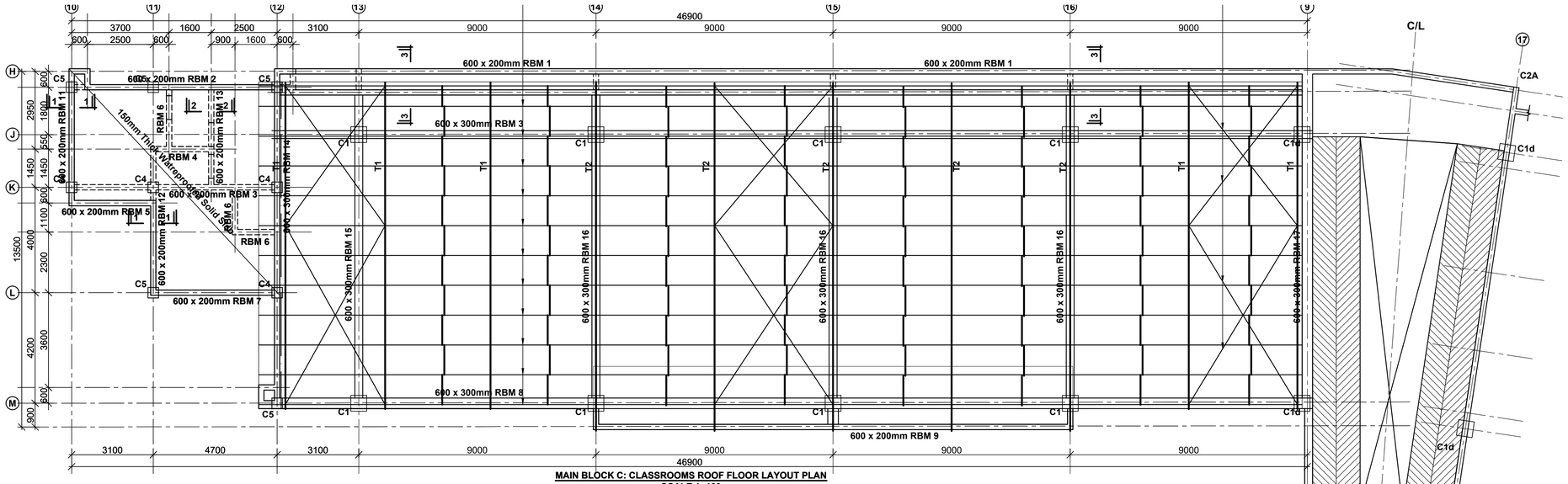
Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020

JOB No. 2020 | DRG No. MERK/ST/001

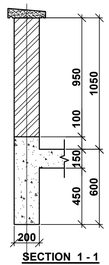




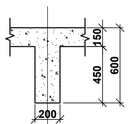
MAIN BLOCK C: CLASSROOMS FIRST FLOOR LAYOUT PLAN
SCALE 1: 100



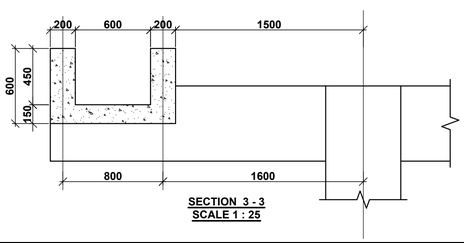
MAIN BLOCK C: CLASSROOMS ROOF FLOOR LAYOUT PLAN
SCALE 1: 100



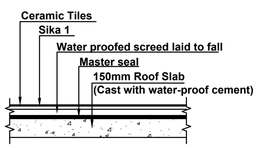
SECTION 1 - 1
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25



SECTION 3 - 3
SCALE 1 : 25



TYPICAL DETAIL FOR ROOF SLAB
AND ALL OPEN AREAS
SCALE 1:25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

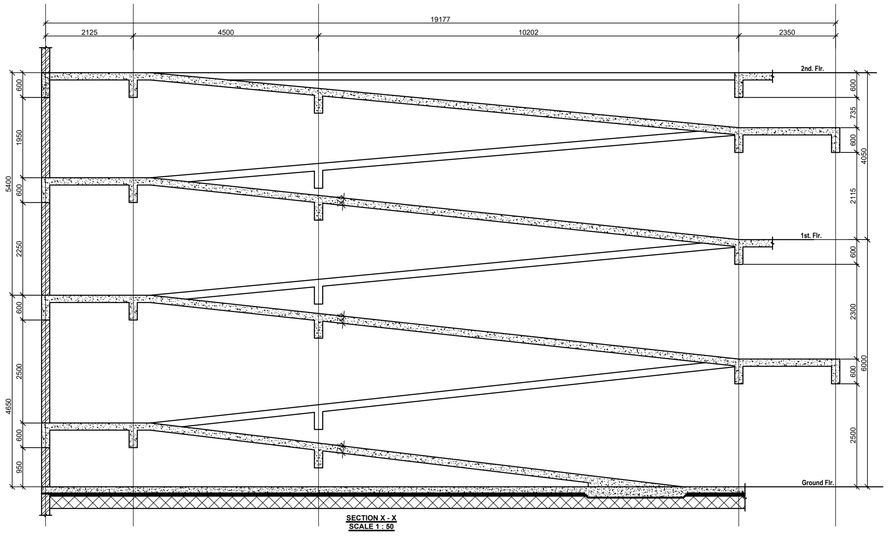
TITLE: Main Block C (Classrooms)

FIRST FLOOR, ROOF LAYOUT PLAN & SECTIONS

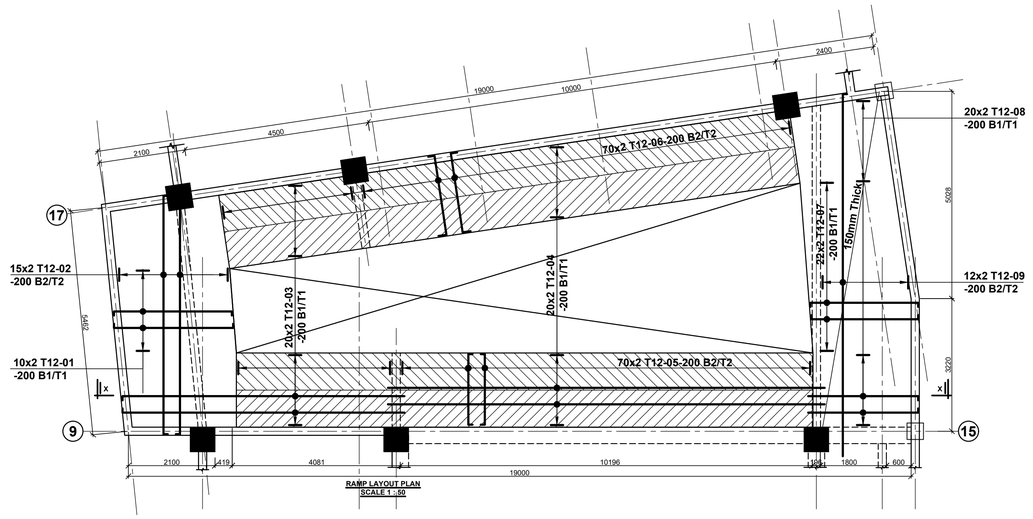
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

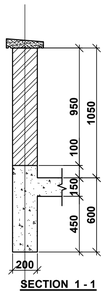
Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/002	



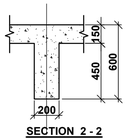
SECTION X - X
SCALE 1 : 50



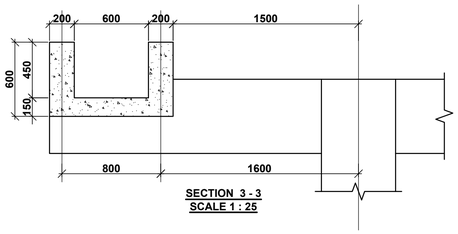
RAMP LAYOUT PLAN
SCALE 1 : 50



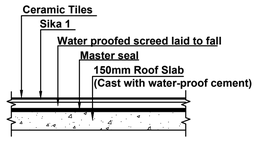
SECTION 1 - 1
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25

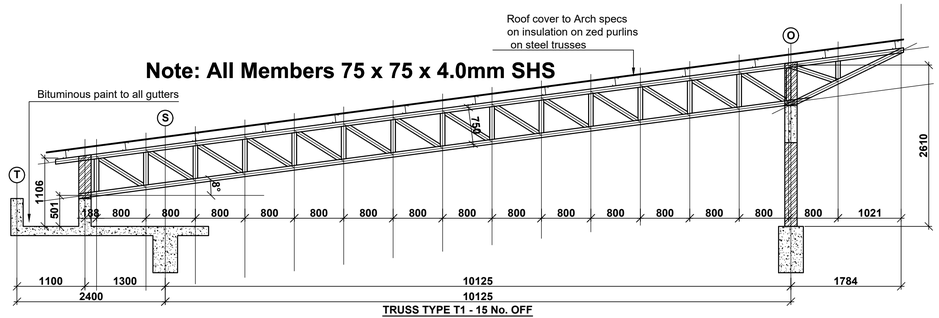


SECTION 3 - 3
SCALE 1 : 25

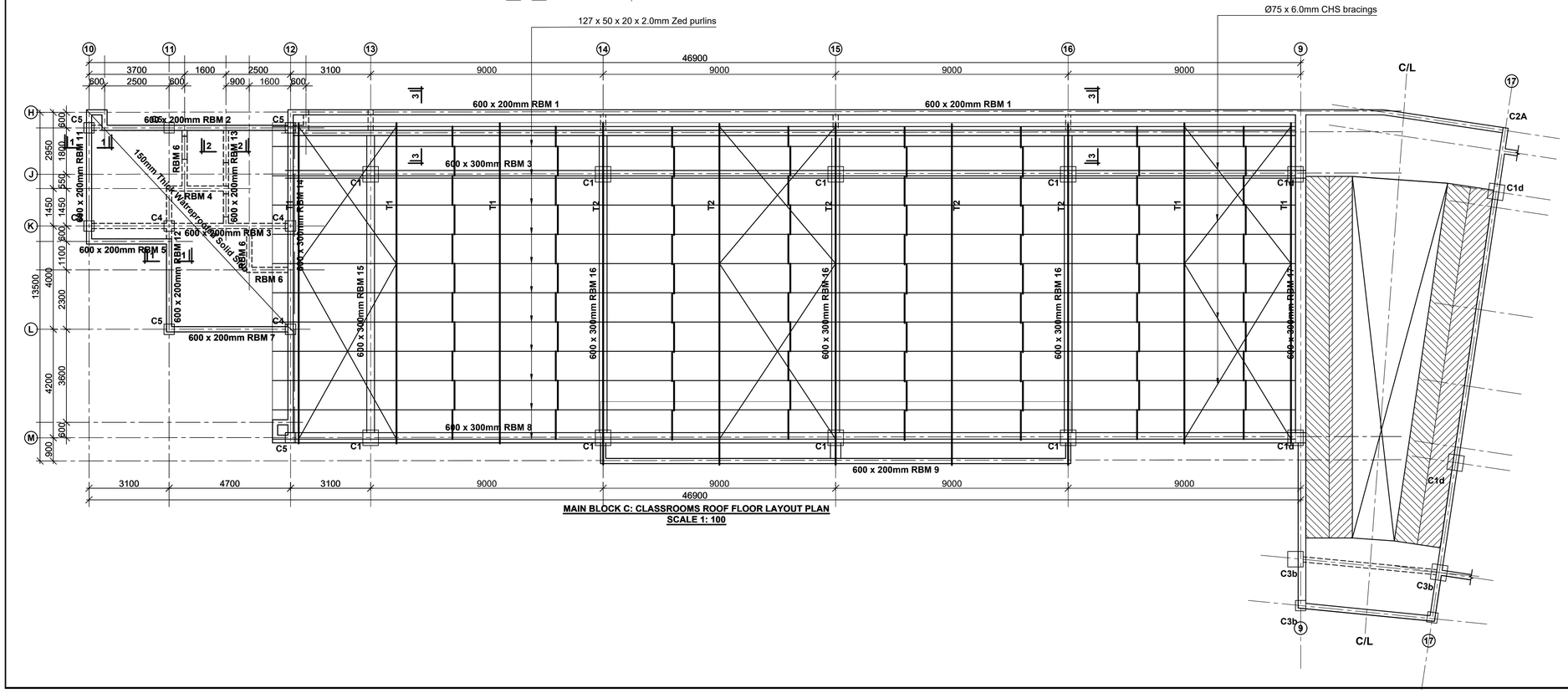


TYPICAL DETAIL FOR ROOF SLAB
AND ALL OPEN AREAS
SCALE 1:25

Note: All Members 75 x 75 x 4.0mm SHS



TRUSS TYPE T1 - 15 No. OFF
Scale 1:50



MAIN BLOCK C: CLASSROOMS ROOF FLOOR LAYOUT PLAN
SCALE 1: 100

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:
THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

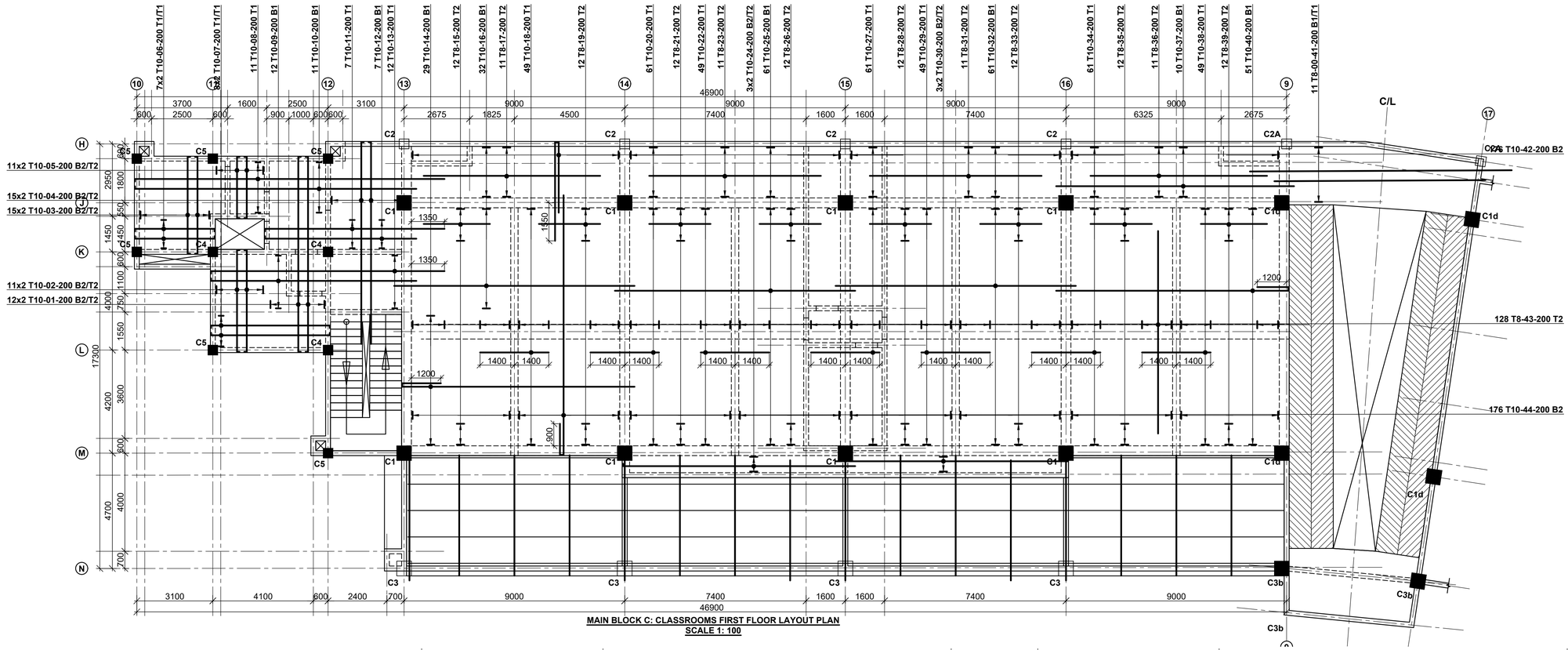
TITLE: Main Block C (Classrooms)

RAMP LAYOUT PLAN, SECTION AND R.C DETAILS AND ROOF DETAILS

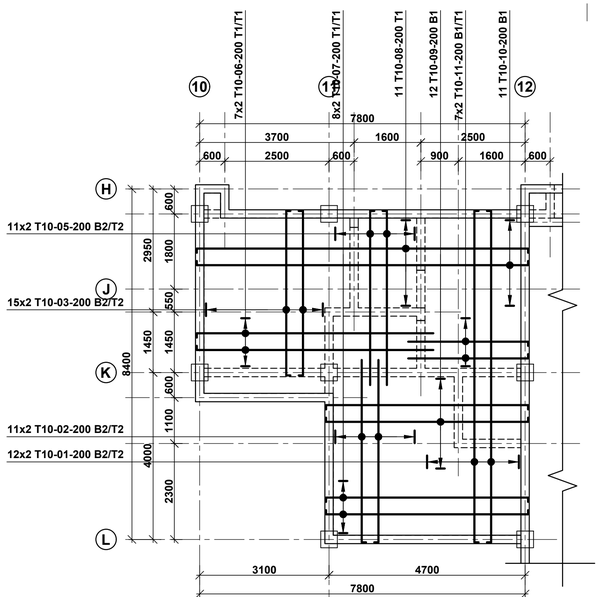
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

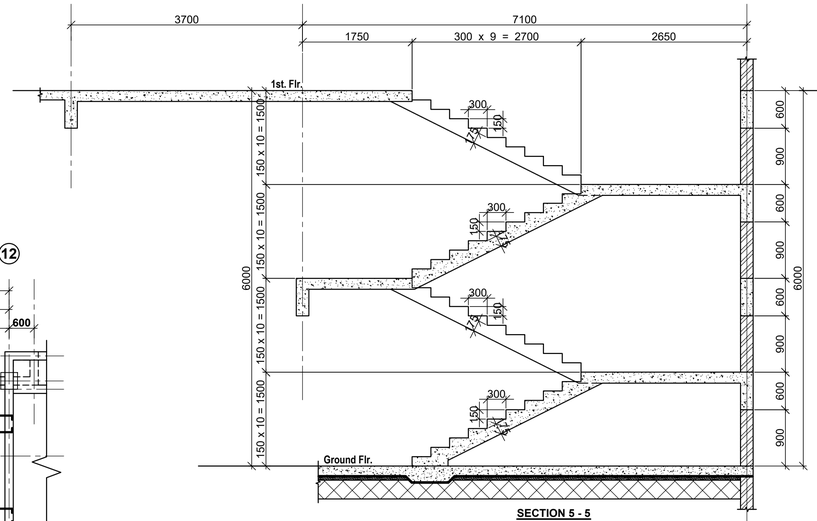
Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/003	



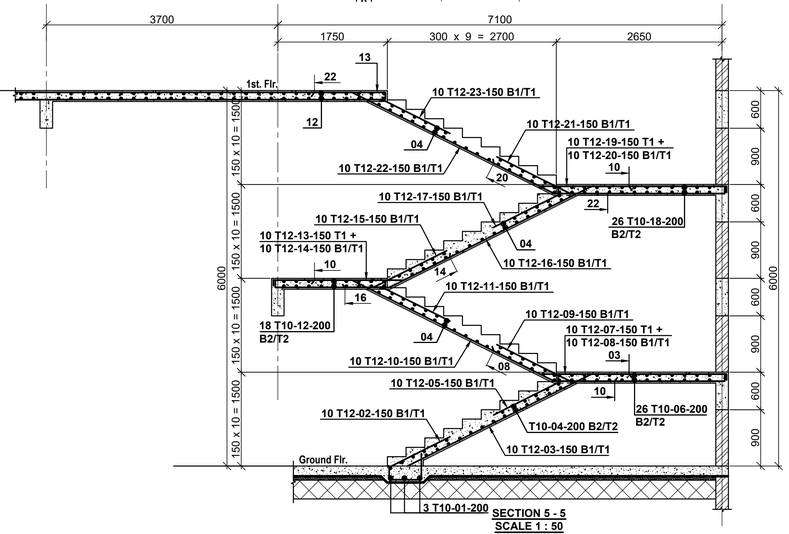
MAIN BLOCK C: CLASSROOMS FIRST FLOOR LAYOUT PLAN
SCALE 1: 100



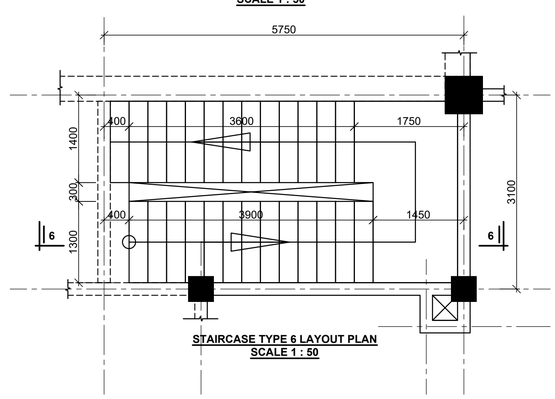
MAIN BLOCK C: CLASSROOMS ROOF SLAB R.C DETAILS
SCALE 1: 75



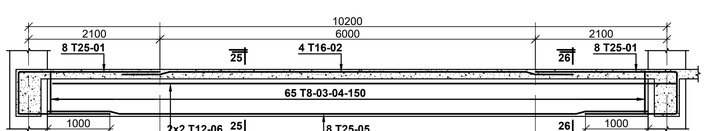
SECTION 5 - 5
SCALE 1 : 50



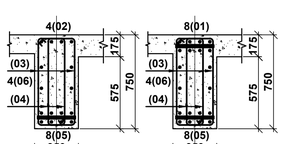
SECTION 5 - 5
SCALE 1 : 50



STAIRCASE TYPE 6 LAYOUT PLAN
SCALE 1 : 50



750 x 350mm BM 18 - 4 No. OFF
Scale 1:50



SECTION 25 - 25
Scale 1:25

SECTION 26 - 26
Scale 1:25

NOTES

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2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

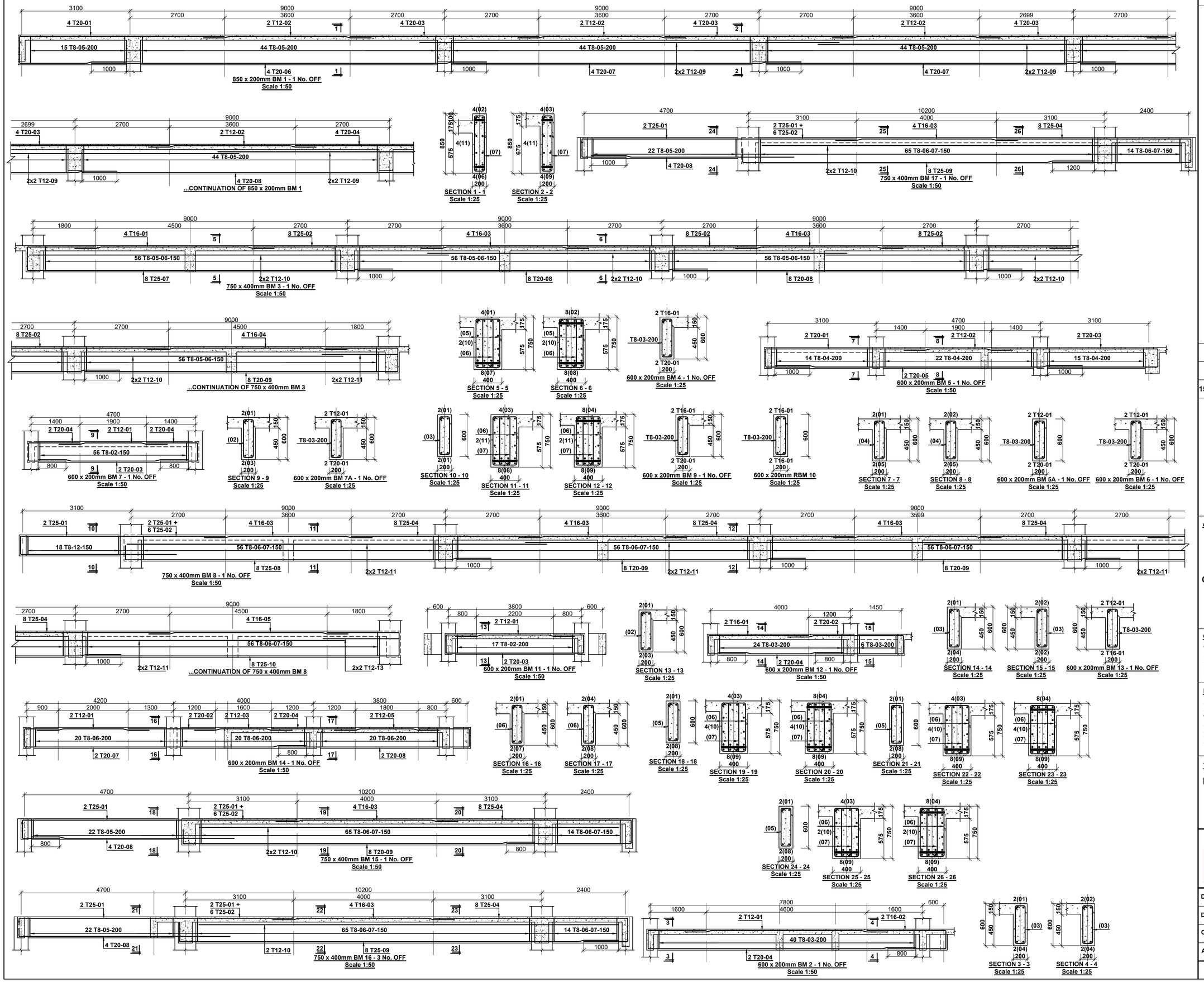
TITLE: Main Block C (Classrooms)

FIRST FLOOR AND ROOF SLAB
R.C DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 75, 50, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/004	



NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9

Email: symbionkenya@symbion-int.com

WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Main Block C (Classrooms)

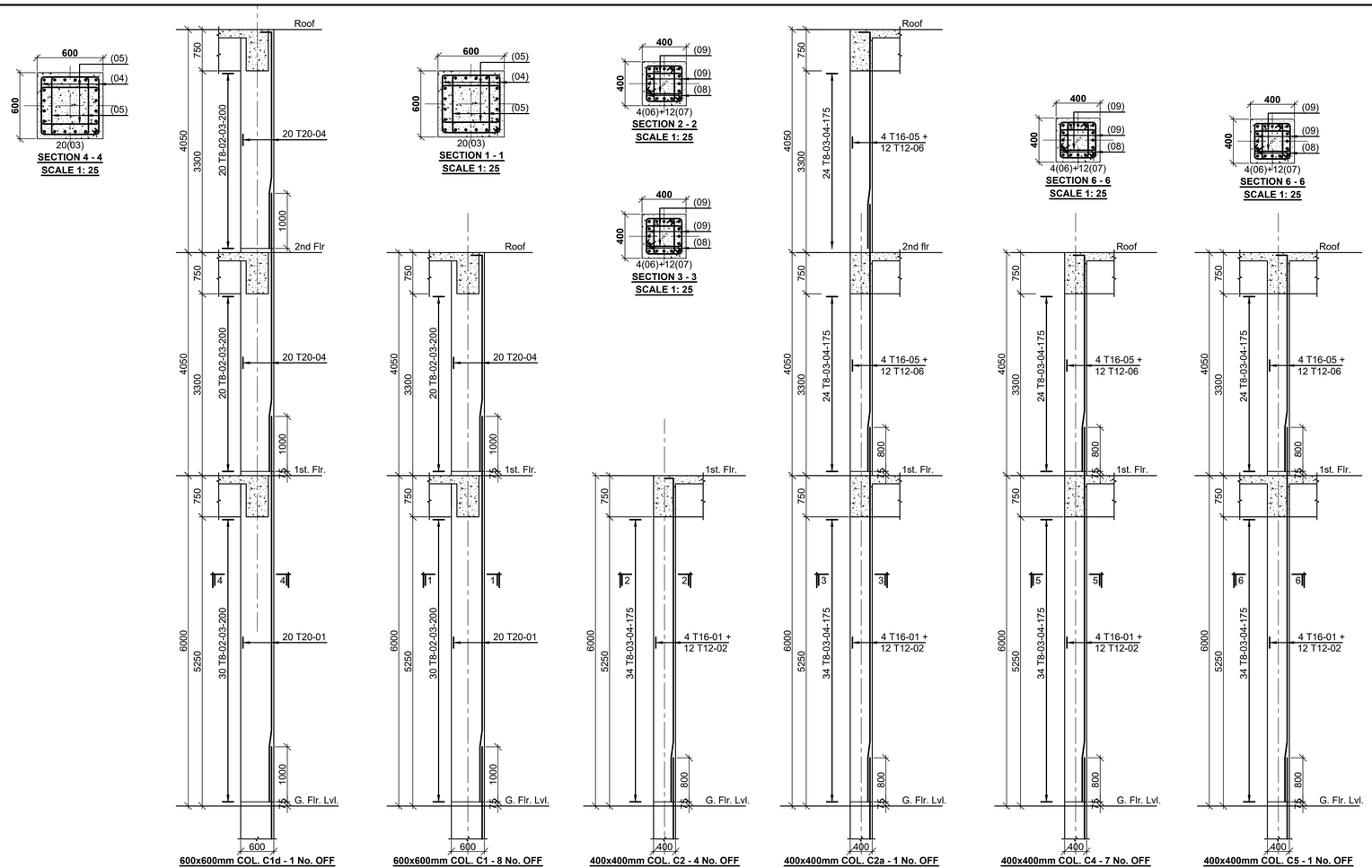
BEAMS R.C DETAILS

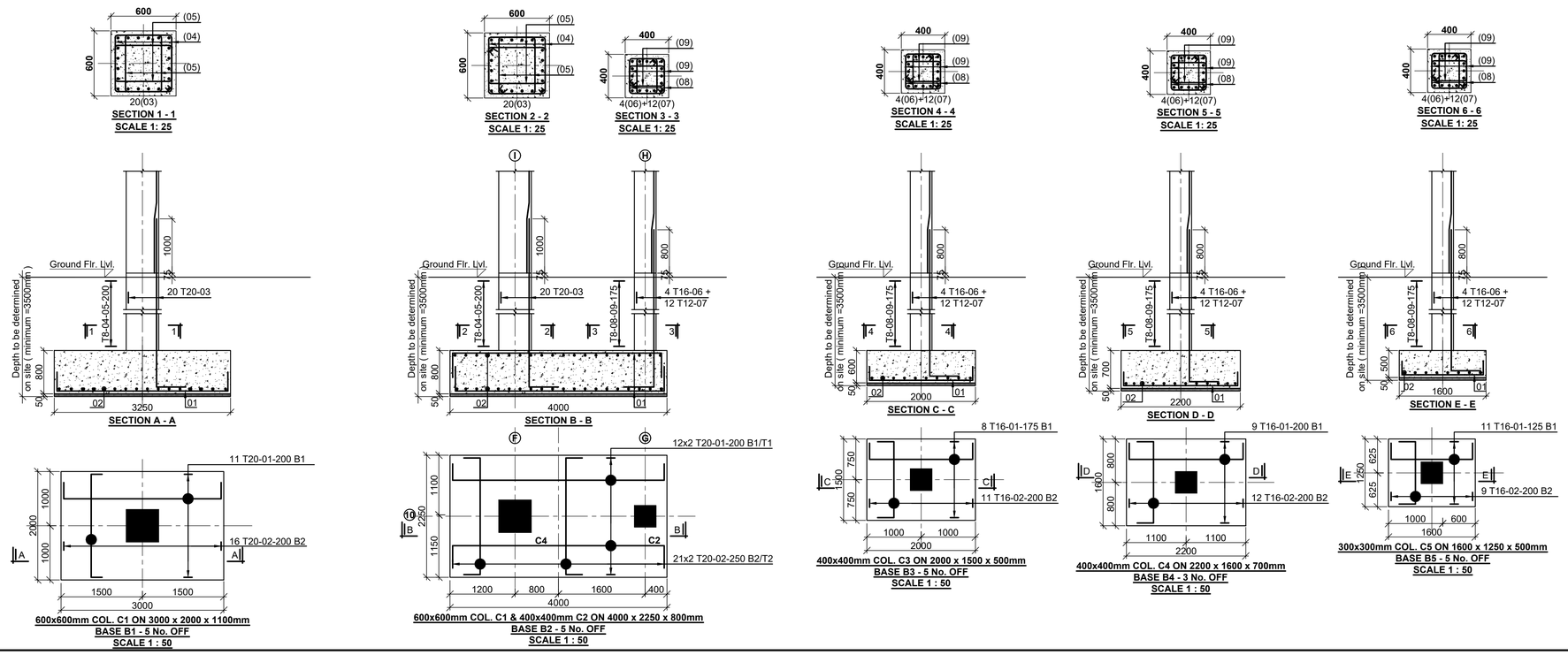
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020

JOB No. 2020 | DRG No. MERK/ST/005





NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9

Email: symbionkenya@symbion-int.com

WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

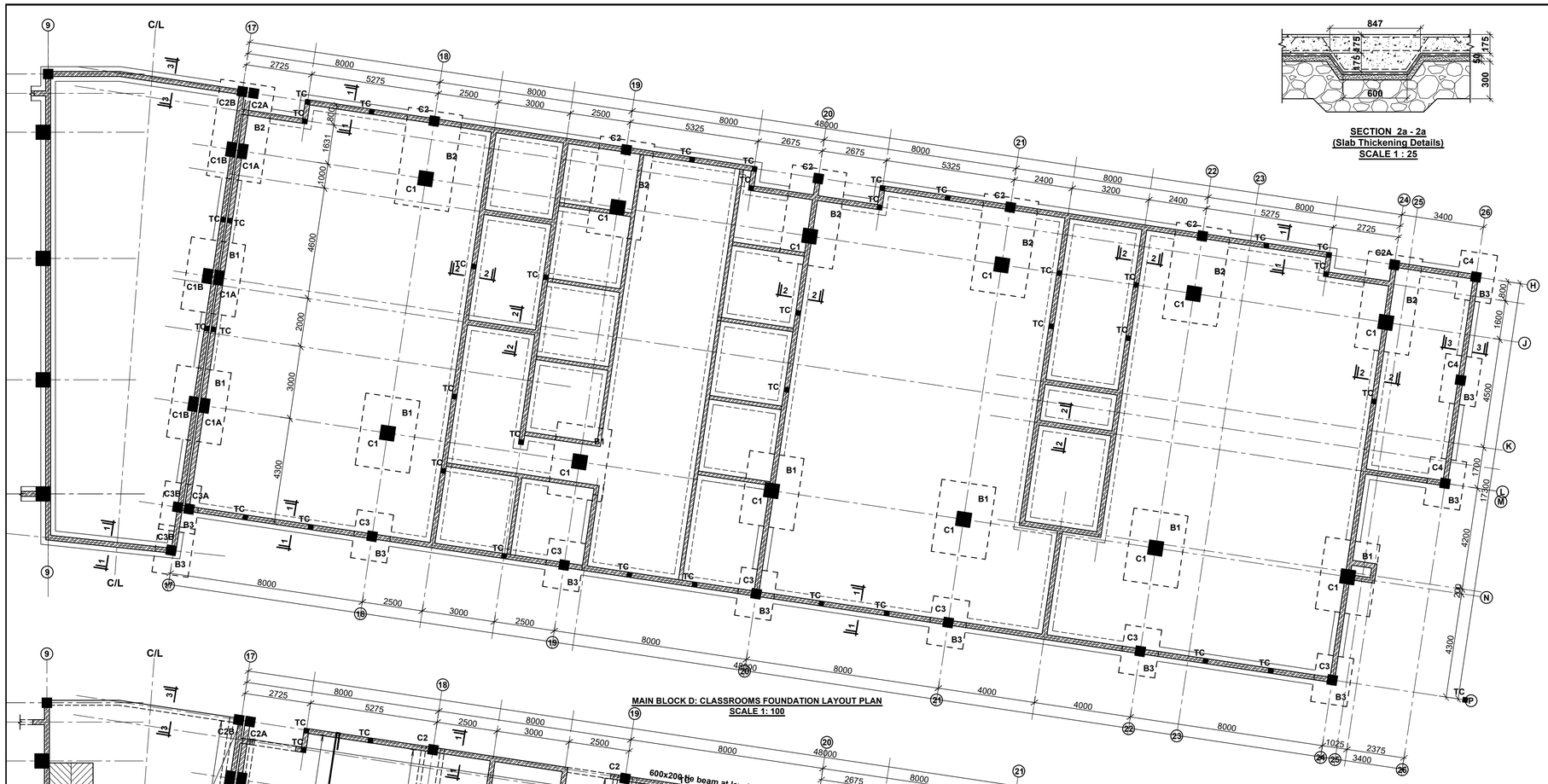
TITLE: Main Block C (Classrooms)

COLUMNS AND BASES R.C DETAILS

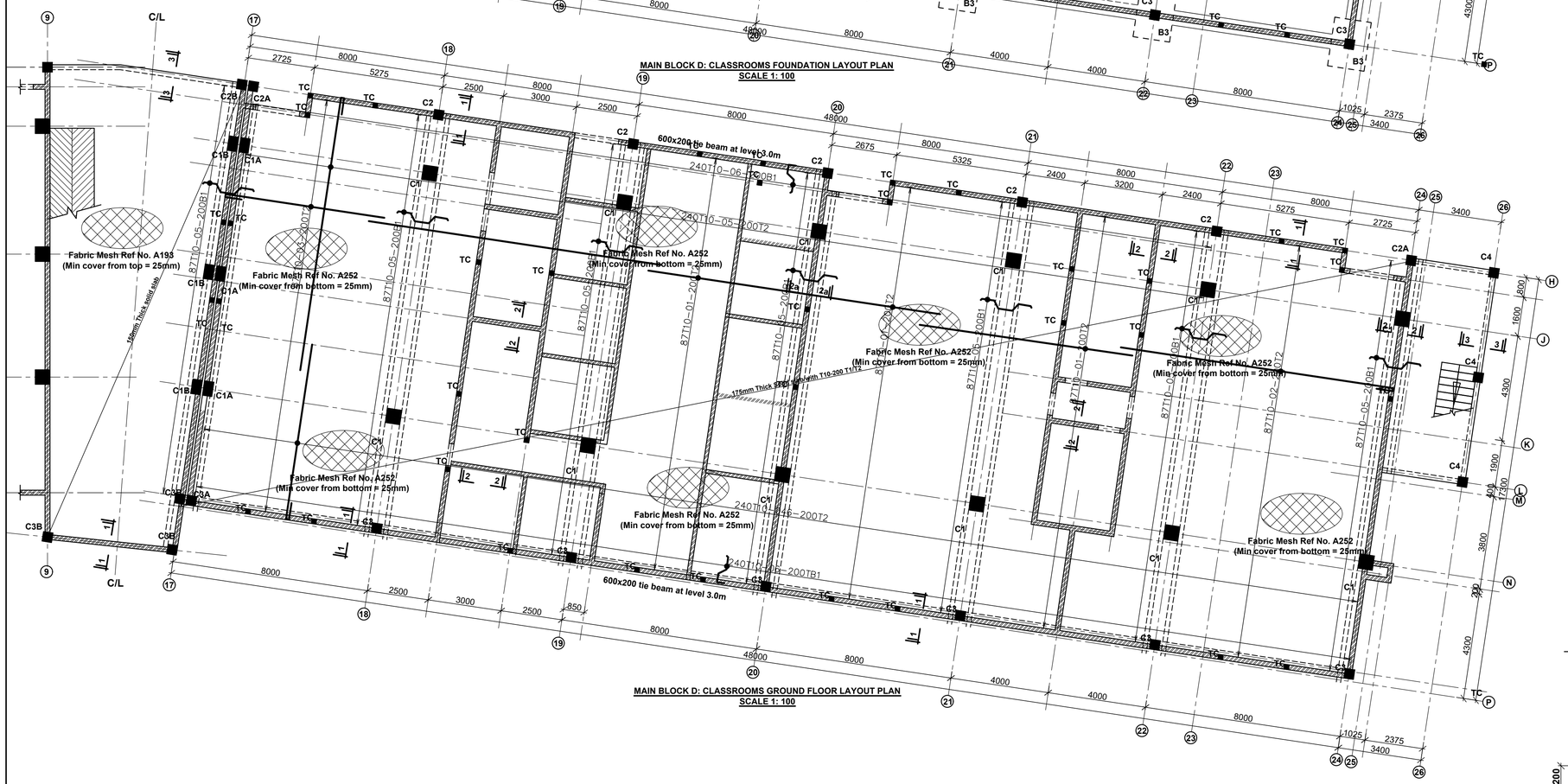
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 50, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/06	



MAIN BLOCK D: CLASSROOMS FOUNDATION LAYOUT PLAN
SCALE 1: 100



MAIN BLOCK D: CLASSROOMS GROUND FLOOR LAYOUT PLAN
SCALE 1: 100

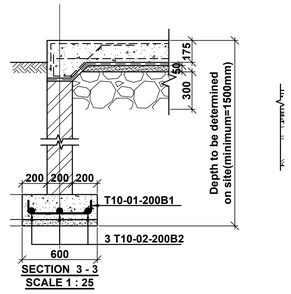
SECTION 2a - 2a
(Slab Thickening Details)
SCALE 1 : 25

COLUMN SCHEDULE

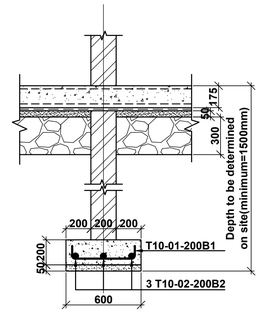
TYPE	SIZE	No.
C1	600 x 600mm	12
C2/C2a	400 x 400mm	7
C3/C3a	400 x 400mm	7
C3b/C2b	400 x 400mm	4
C4	400 x 400mm	3
C1B	600 x 400mm	2
TC	200 x 200mm	37
	TOTAL	72

COLUMN BASES SCHEDULE

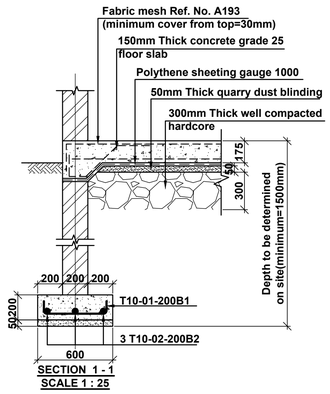
TYPE	SIZE	No.
B1	4500 x 3000 x 1100mm	7
B2	5000 x 3500 x 800mm	7
B3	2000 x 1500 x 500mm	11
	TOTAL	25



SECTION 3 - 3
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25



SECTION 1 - 1
SCALE 1 : 25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

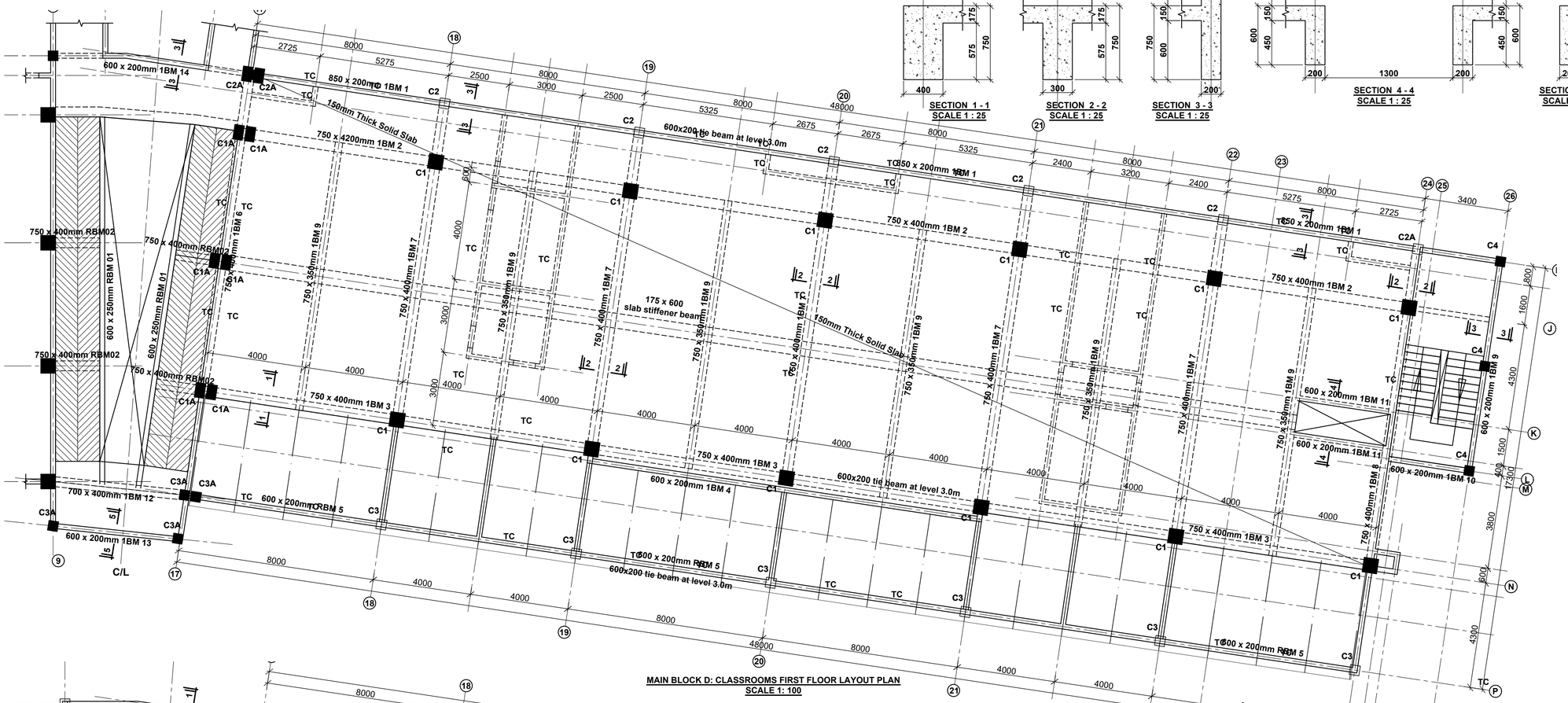
TITLE: Main Block D (Classrooms)

FOUNDATION AND GROUND LAYOUT PLAN AND SECTIONS

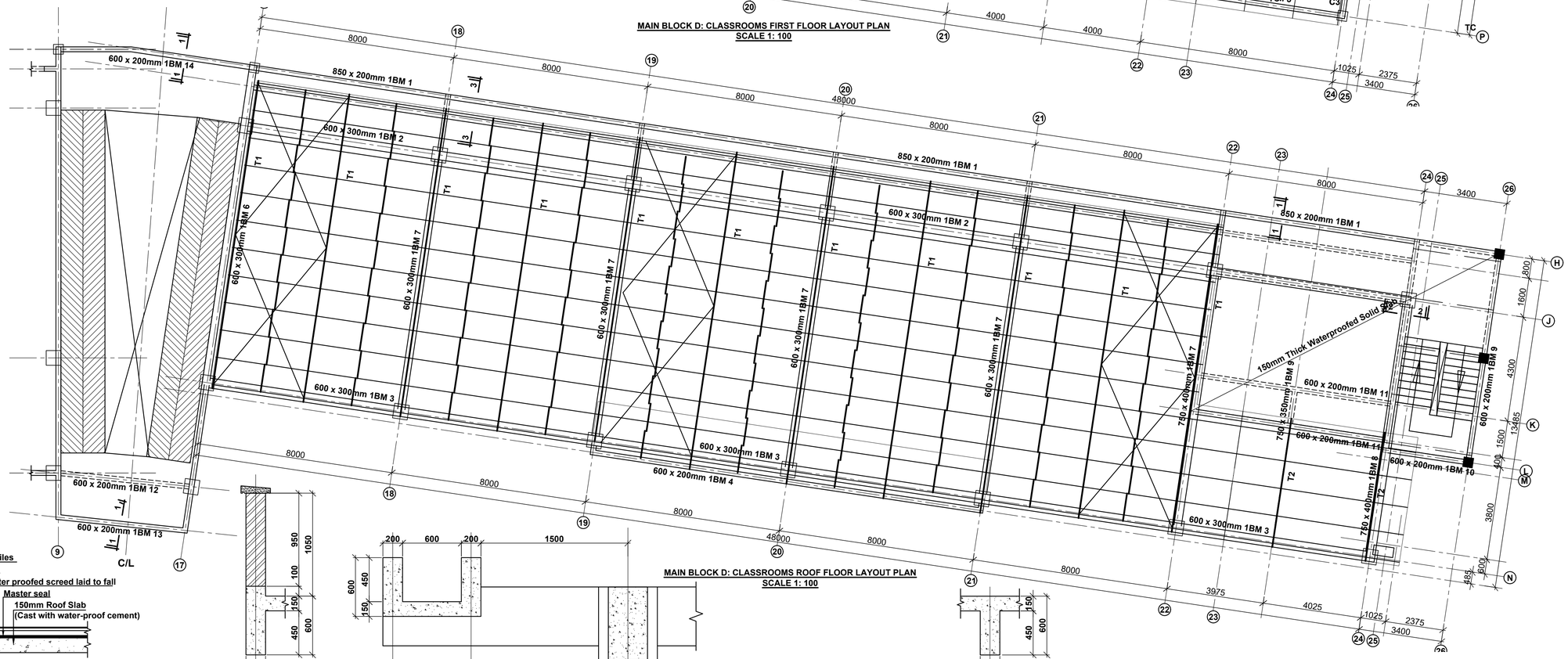
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

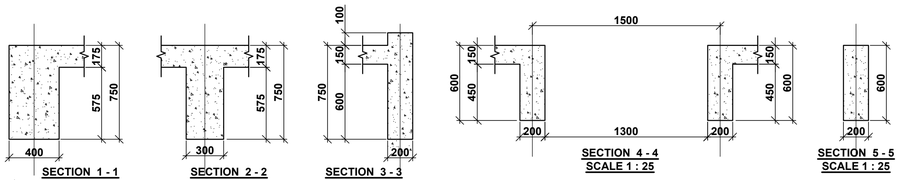
Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/001	

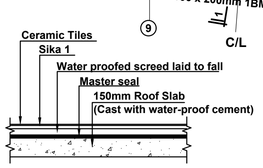


MAIN BLOCK D: CLASSROOMS FIRST FLOOR LAYOUT PLAN
SCALE 1: 100



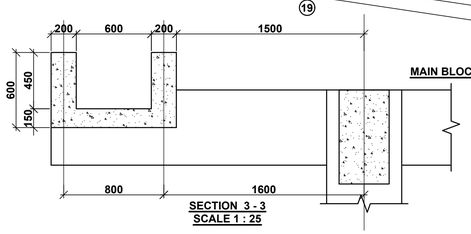
MAIN BLOCK D: CLASSROOMS ROOF FLOOR LAYOUT PLAN
SCALE 1: 100



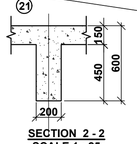


TYPICAL DETAIL FOR ROOF SLAB
AND ALL OPEN AREAS
SCALE 1:25

SECTION 1 - 1
SCALE 1 : 25



SECTION 3 - 3
SCALE 1 : 25



SECTION 2 - 2
SCALE 1 : 25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Main Block D (Classrooms)

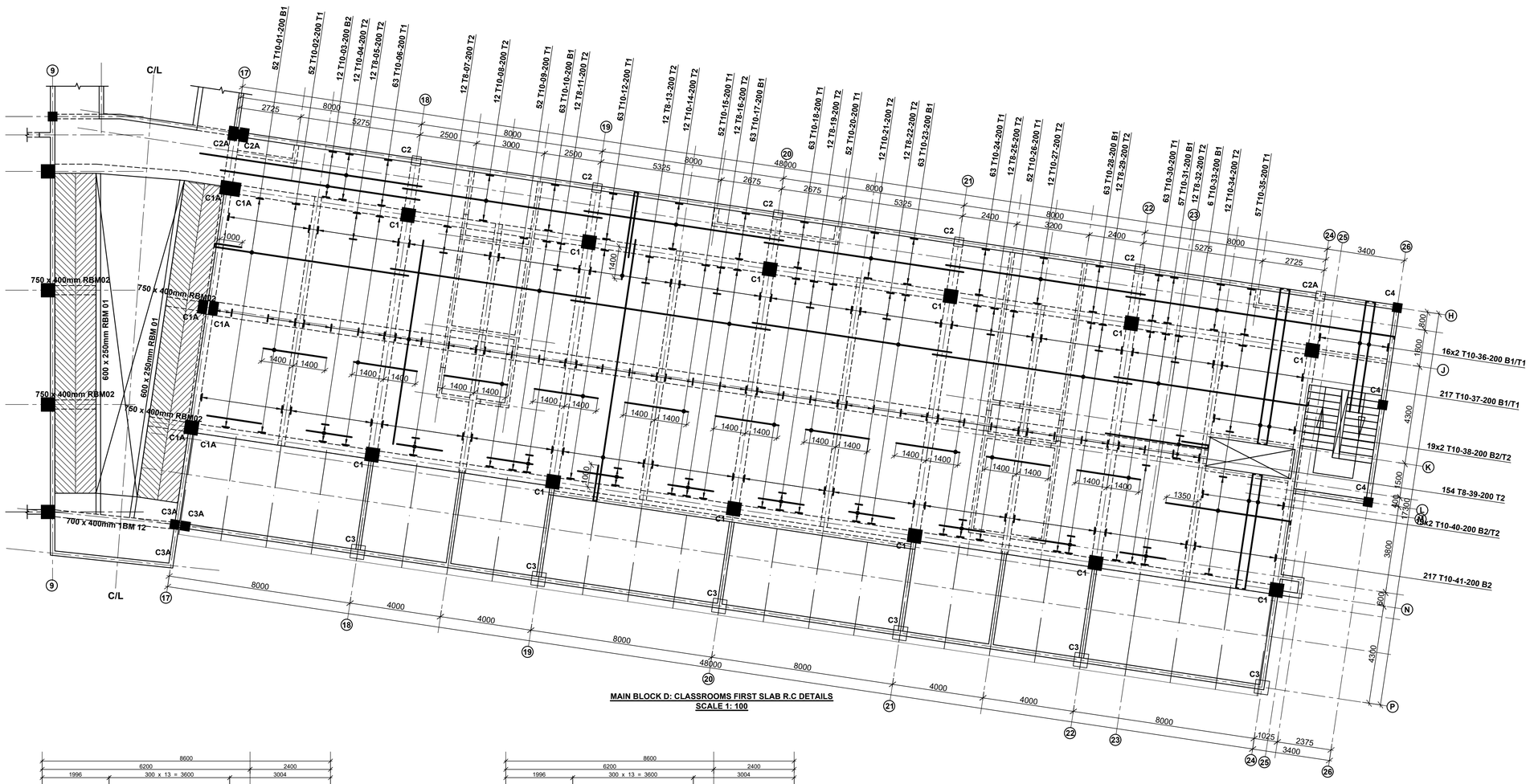
FIRST FLOOR, ROOF LAYOUT PLAN & SECTIONS

CIVIL & STRUCTURAL ENGINEER:

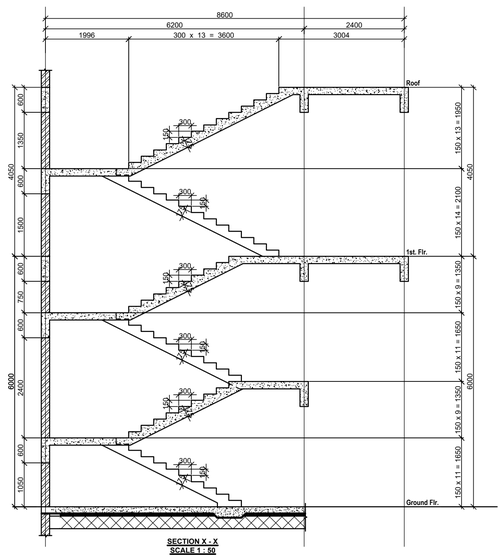
MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020

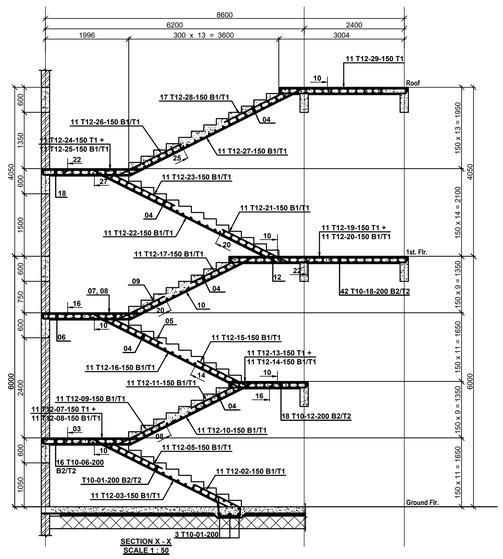
JOB No. 2020 | DRG No. MERK/ST/002



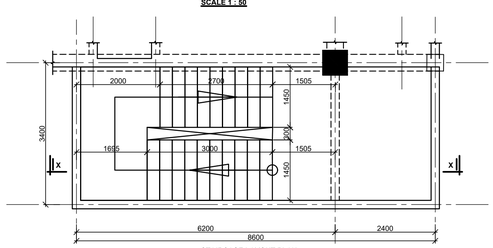
MAIN BLOCK D: CLASSROOMS FIRST SLAB R.C DETAILS
SCALE 1: 100



SECTION X - X
SCALE 1 : 50



SECTION X - X
SCALE 1 : 50



STAIRCASE LAYOUT PLAN
SCALE 1 : 50

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:
THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

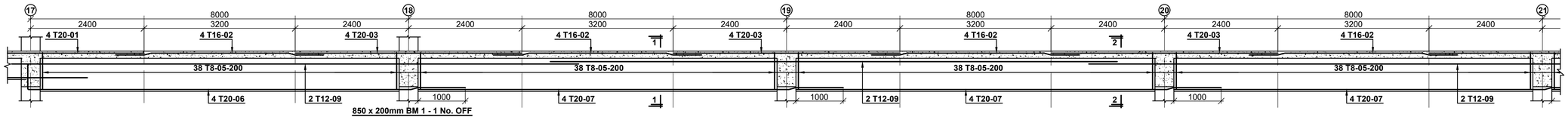
TITLE: Main Block D (Classrooms)

FIRST FLOOR SLAB AND STAIRCASE R.C DETAILS

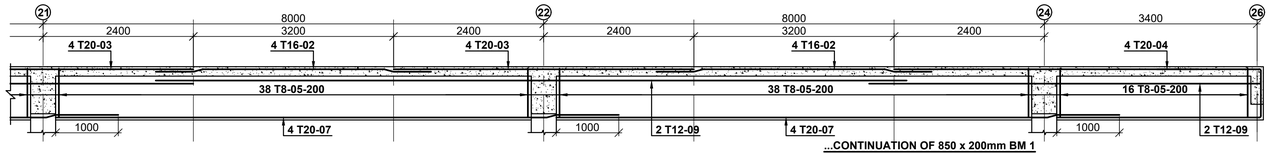
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

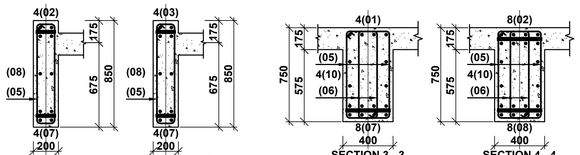
Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/003	



850 x 200mm BM 1 - 1 No. OFF
Scale 1:50



...CONTINUATION OF 850 x 200mm BM 1

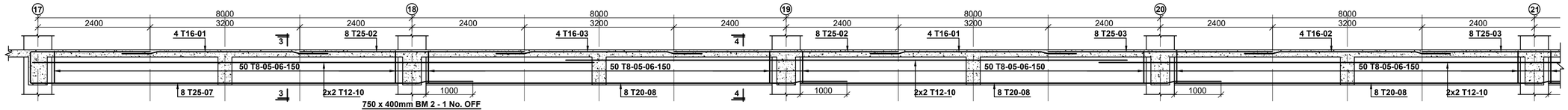


SECTION 1 - 1
Scale 1:25

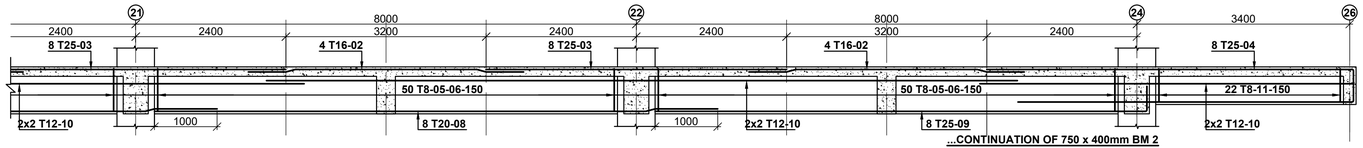
SECTION 2 - 2
Scale 1:25

SECTION 3 - 3
Scale 1:25

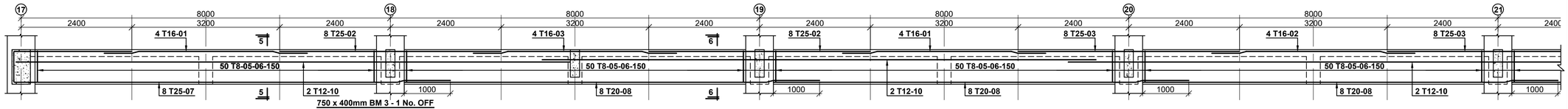
SECTION 4 - 4
Scale 1:25



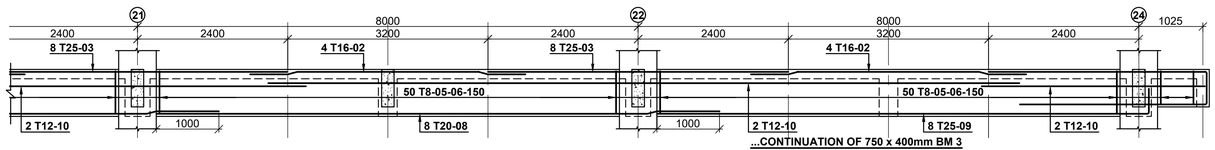
750 x 400mm BM 2 - 1 No. OFF
Scale 1:50



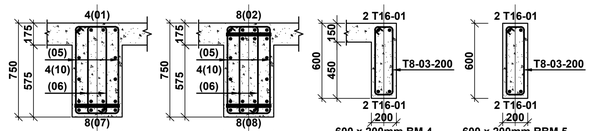
...CONTINUATION OF 750 x 400mm BM 2



750 x 400mm BM 3 - 1 No. OFF
Scale 1:50



...CONTINUATION OF 750 x 400mm BM 3

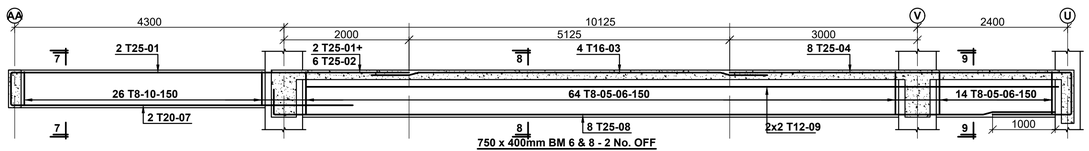


SECTION 5 - 5
Scale 1:25

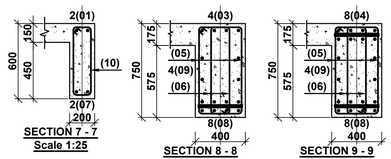
SECTION 6 - 6
Scale 1:25

600 x 200mm BM 4
Scale 1:25

600 x 200mm RBM 5
Scale 1:25



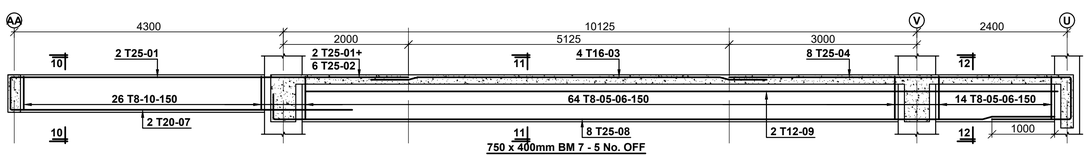
750 x 400mm BM 6 & 8 - 2 No. OFF
Scale 1:50



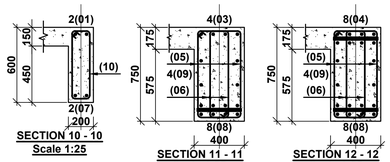
SECTION 7 - 7
Scale 1:25

SECTION 8 - 8
Scale 1:25

SECTION 9 - 9
Scale 1:25



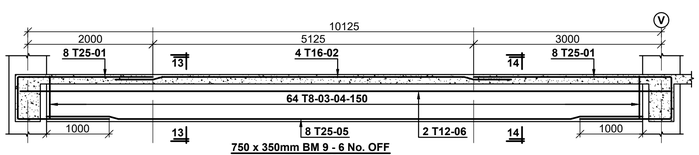
750 x 400mm BM 7 - 5 No. OFF
Scale 1:50



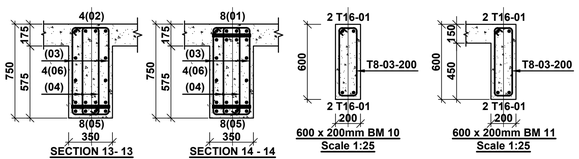
SECTION 10 - 10
Scale 1:25

SECTION 11 - 11
Scale 1:25

SECTION 12 - 12
Scale 1:25



750 x 350mm BM 9 - 6 No. OFF
Scale 1:50



SECTION 13- 13
Scale 1:25

SECTION 14 - 14
Scale 1:25

600 x 200mm BM 10
Scale 1:25

600 x 200mm BM 11
Scale 1:25

NOTES

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3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

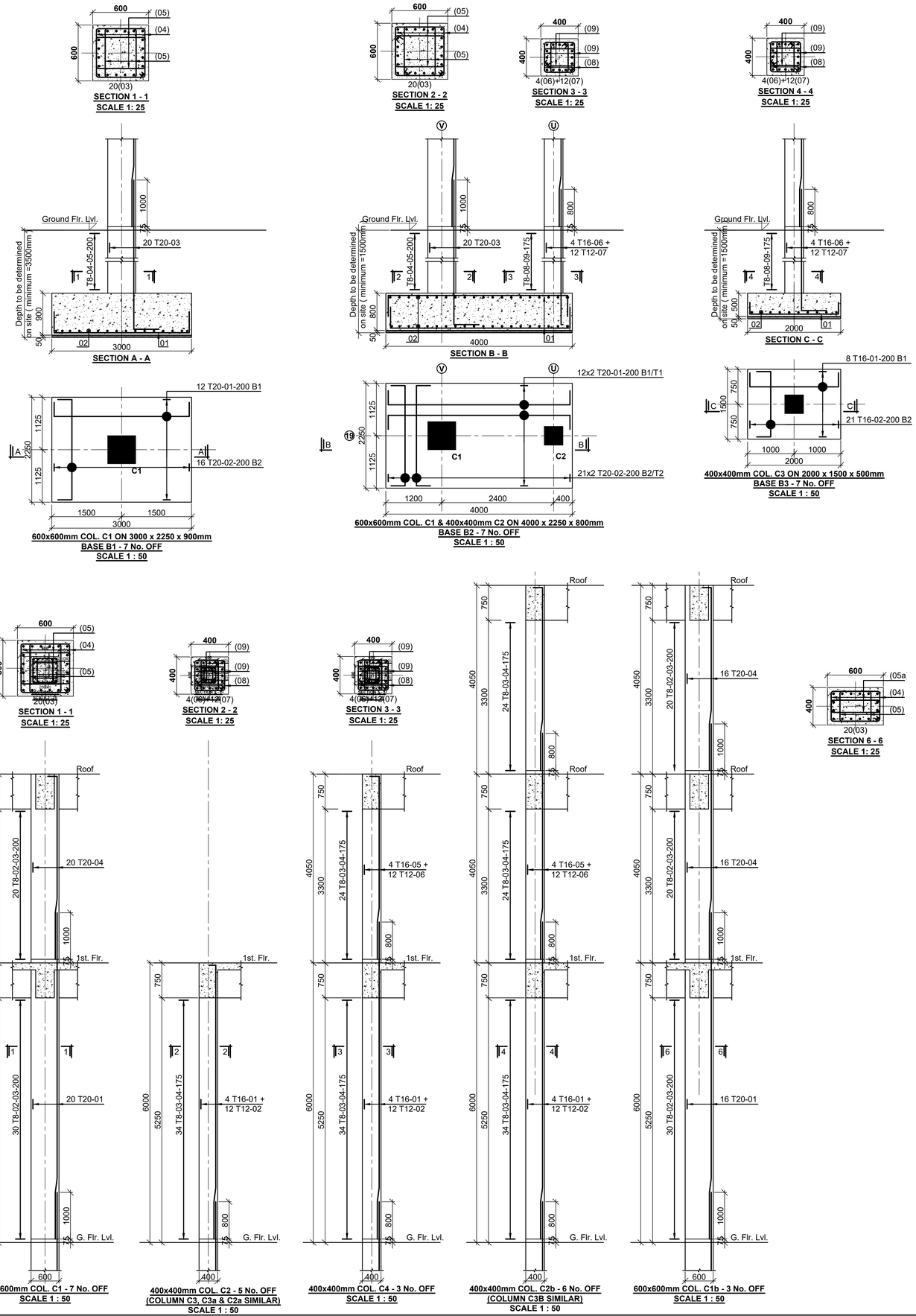
TITLE: Main Block D (Classrooms)

BEAMS R.C DETAILS

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/004	



NOTES

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2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
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   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
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10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9

Email: symbionkenya@symbion-int.com

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CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

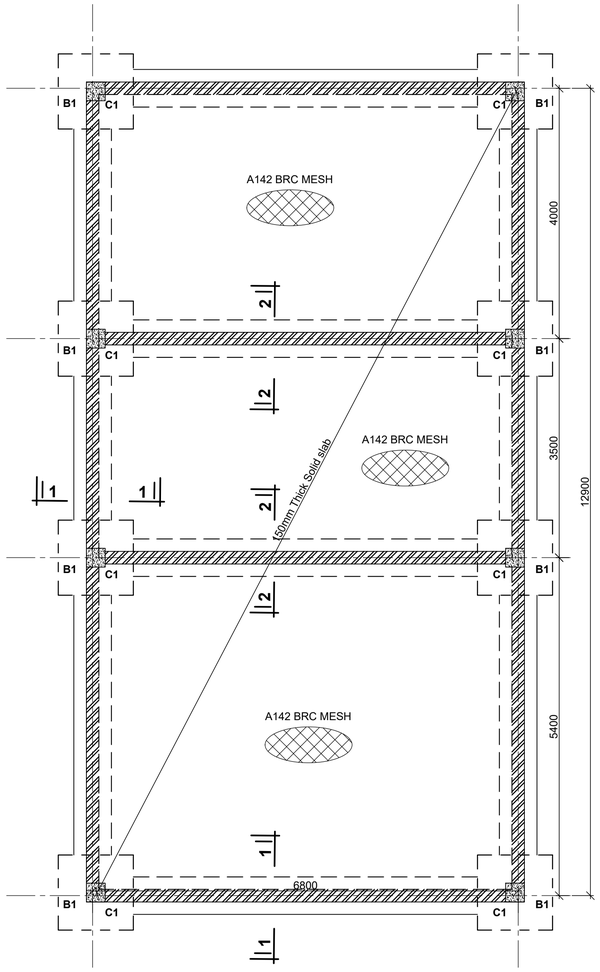
TITLE: Main Block D (Classrooms)

COLUMNS AND BASES R.C DETAILS

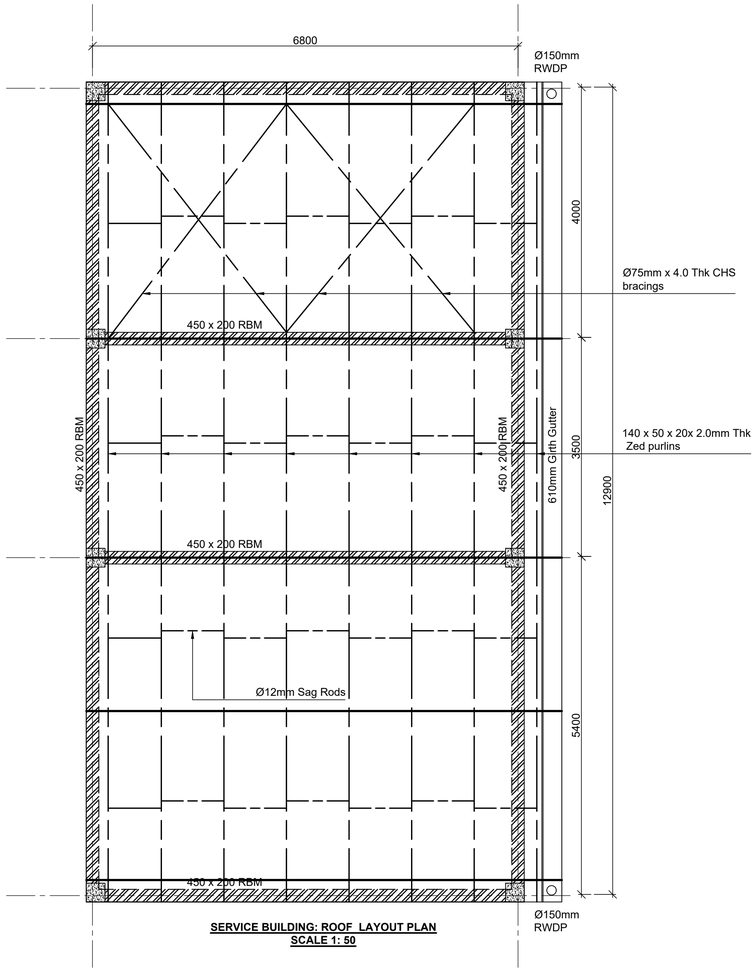
CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

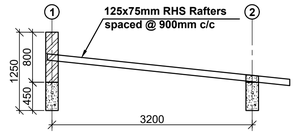
Drawn	A.C.O	Scale(s)	1 : 50
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/005	



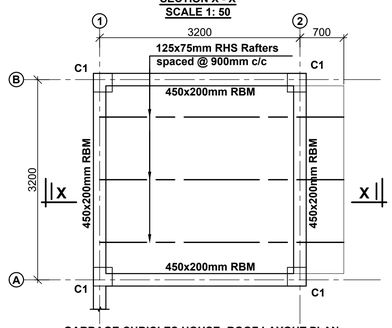
SERVICE BUILDING: FOUNDATION LAYOUT PLAN
SCALE 1: 50



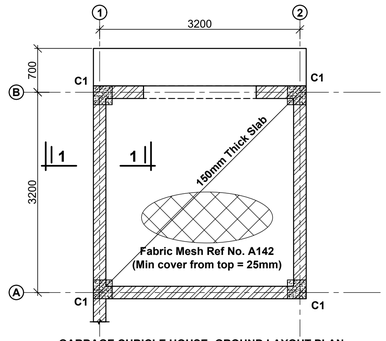
SERVICE BUILDING: ROOF LAYOUT PLAN
SCALE 1: 50



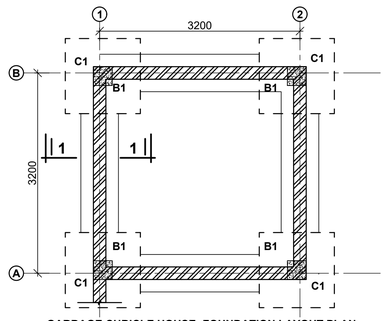
SECTION X - X
SCALE 1: 50



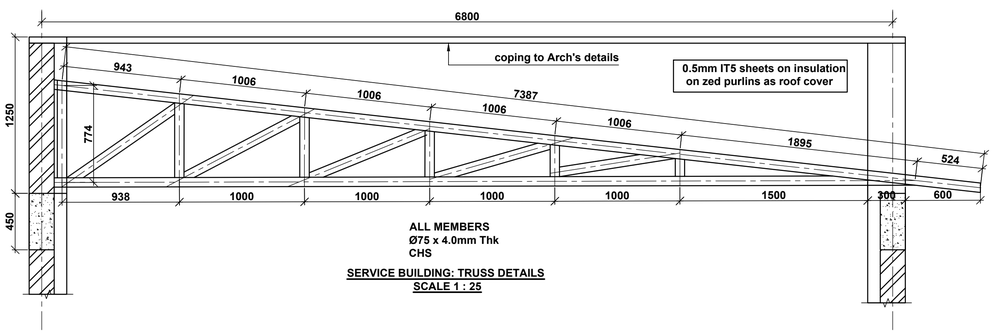
GARBAGE CUBICLES HOUSE: ROOF LAYOUT PLAN
SCALE 1: 50



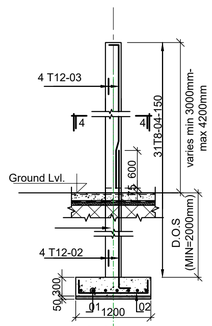
GARBAGE CUBICLE HOUSE: GROUND LAYOUT PLAN
SCALE 1: 50



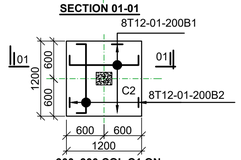
GARBAGE CUBICLE HOUSE: FOUNDATION LAYOUT PLAN
SCALE 1: 50



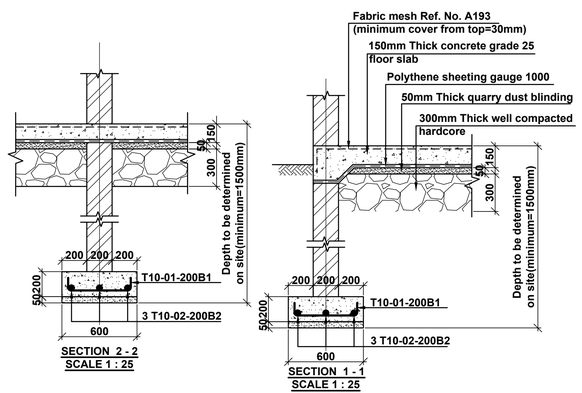
SERVICE BUILDING: TRUSS DETAILS
SCALE 1 : 25



SECTION 01-01



300x300 COL.C1 ON 1200x1200x300mm BASE B1-12 No. OFF
SCALE 1 : 50



SECTION 2 - 2
SCALE 1 : 25

SECTION 1 - 1
SCALE 1 : 25

COLUMN BASES SCHEDULE

TYPE	SIZE	No.
B1	1200 x 1200 x 300mm	12

COLUMN SCHEDULE

TYPE	SIZE	No.
C1	300 x 300mm	12

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449. "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:
THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

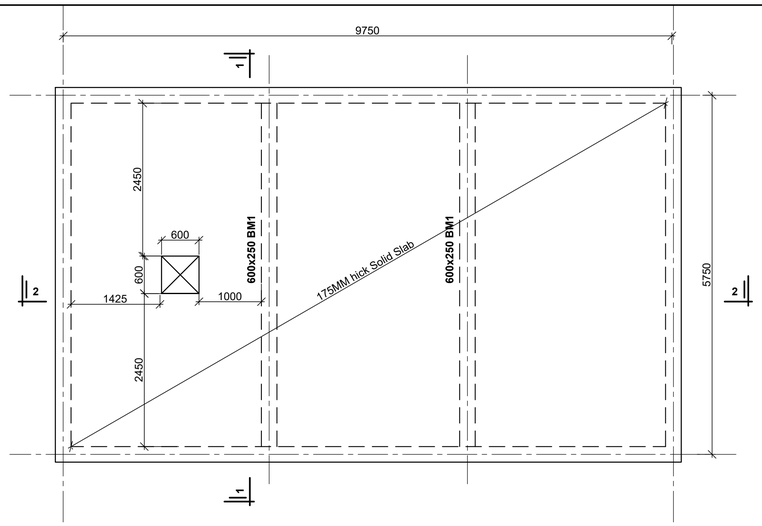
PROJECT:
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Water Tank
GARBAGE CUBICLE & SERVICE BUILDING DETAILS

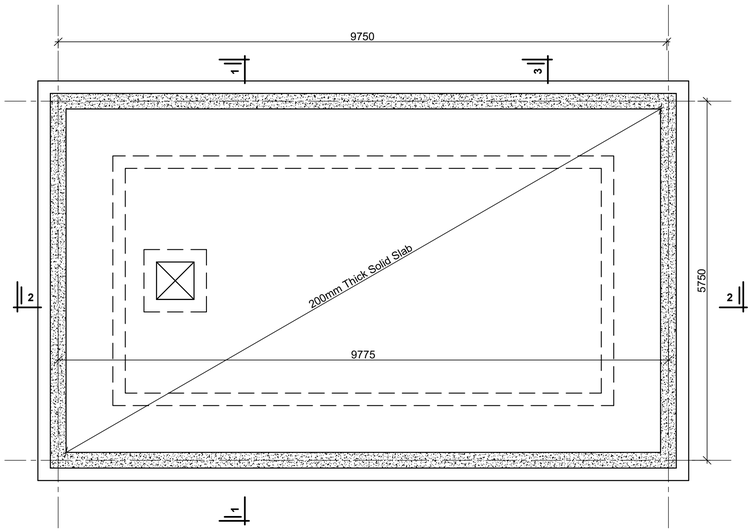
CIVIL & STRUCTURAL ENGINEER:
MERK ASSOCIATES LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020

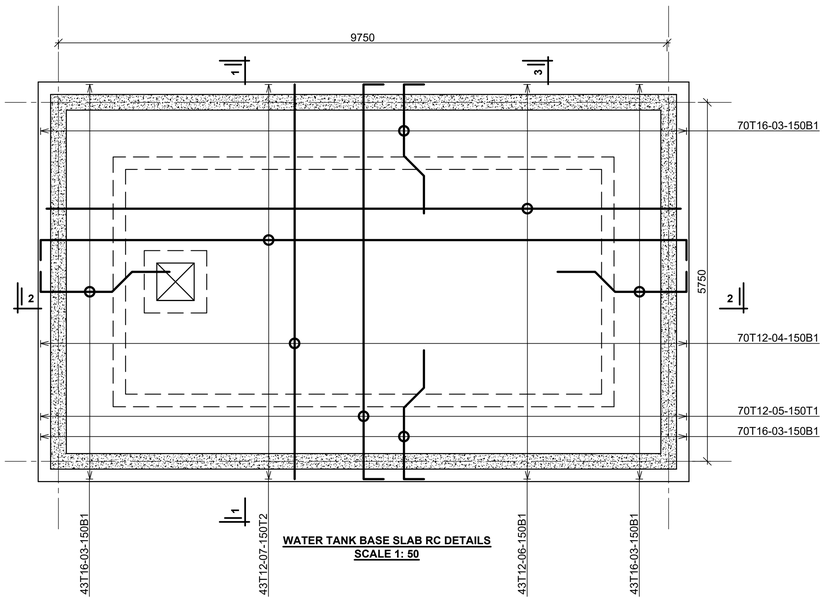
JOB No. 2020 | DRG No. MERK/ST/001



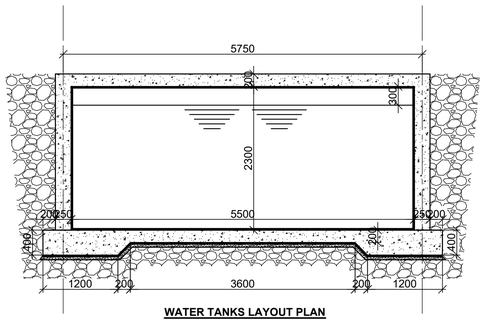
WATER TANKS LAYOUT PLAN
SCALE 1: 50



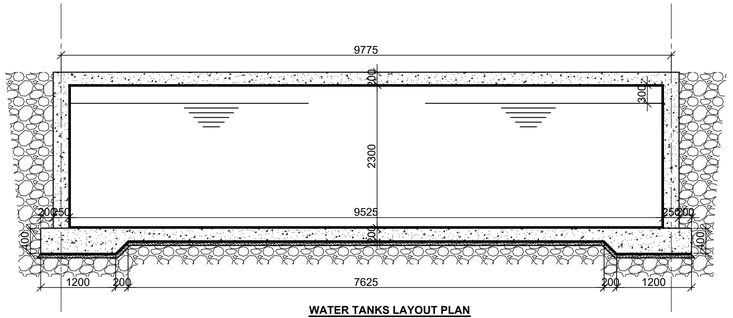
WATER TANKS LAYOUT PLAN
SCALE 1: 50



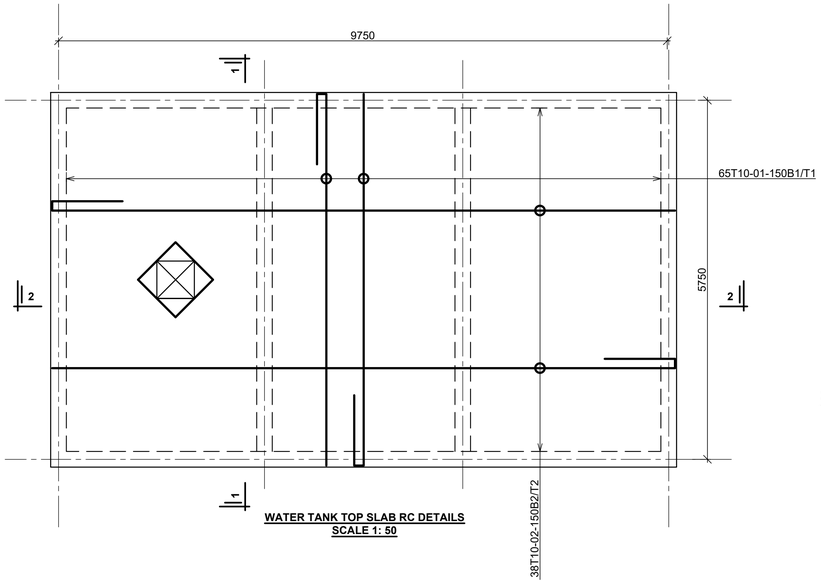
WATER TANK BASE SLAB RC DETAILS
SCALE 1: 50



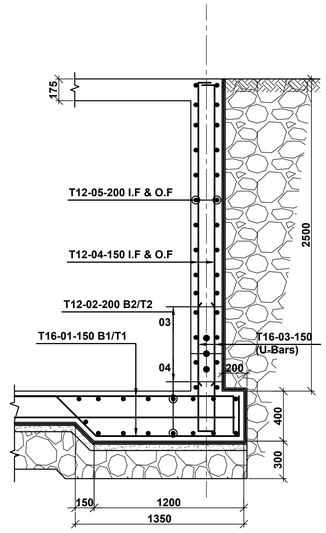
WATER TANKS LAYOUT PLAN
SCALE 1: 50



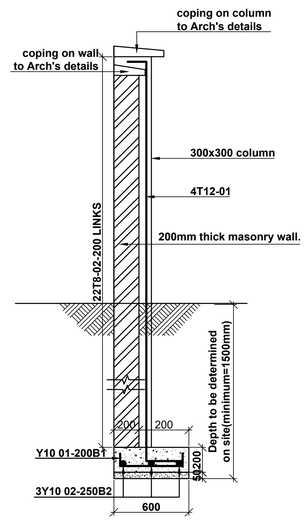
WATER TANKS LAYOUT PLAN
SCALE 1: 50



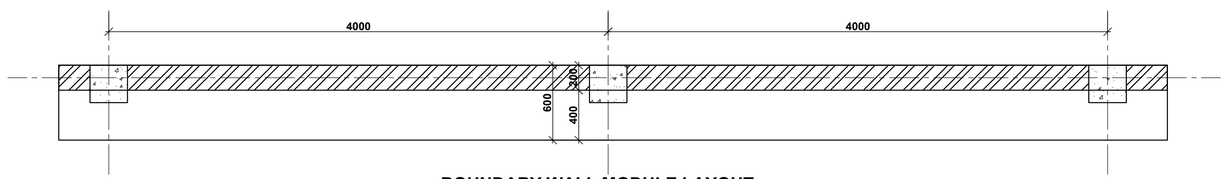
WATER TANK TOP SLAB RC DETAILS
SCALE 1: 50



SECTION 1 - 1 THRU' WATER TANK WALL
R.C DETAILS
SCALE 1 : 25



SECTIONAL BOUNDARY WALL DETAILS
SCALE 1 : 25



BOUNDARY WALL MODULE LAYOUT
SCALE 1 : 25

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled, only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete to be grade 30/20 to BS 8110.
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 20mm
6. "T" Denotes Ribbed high yield bars to BS 4449.
   "R" Denotes round mild steel bars to BS 4449.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in the formwork.
9. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through th column sections.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 5.0N/mm2 average compressive strength of masonry in accordance with BS5390 should be used for all wall sections.
12. Mass concrete to be grade 15

REVISIONS

Date	Suffix	Descriptions
15.02.2021	T0	FOR TENDER

ARCHITECTS:

SYMBION

Office: 254-0202610691, 2455071, 2688045/9
Email: symbionkenya@symbion-int.com
WEB SITE: www.symbion-int.com

CLIENT:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

PROJECT:

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT for MERU NATIONAL POLYTECHNIC

TITLE: Water Tank and Boundary Wall

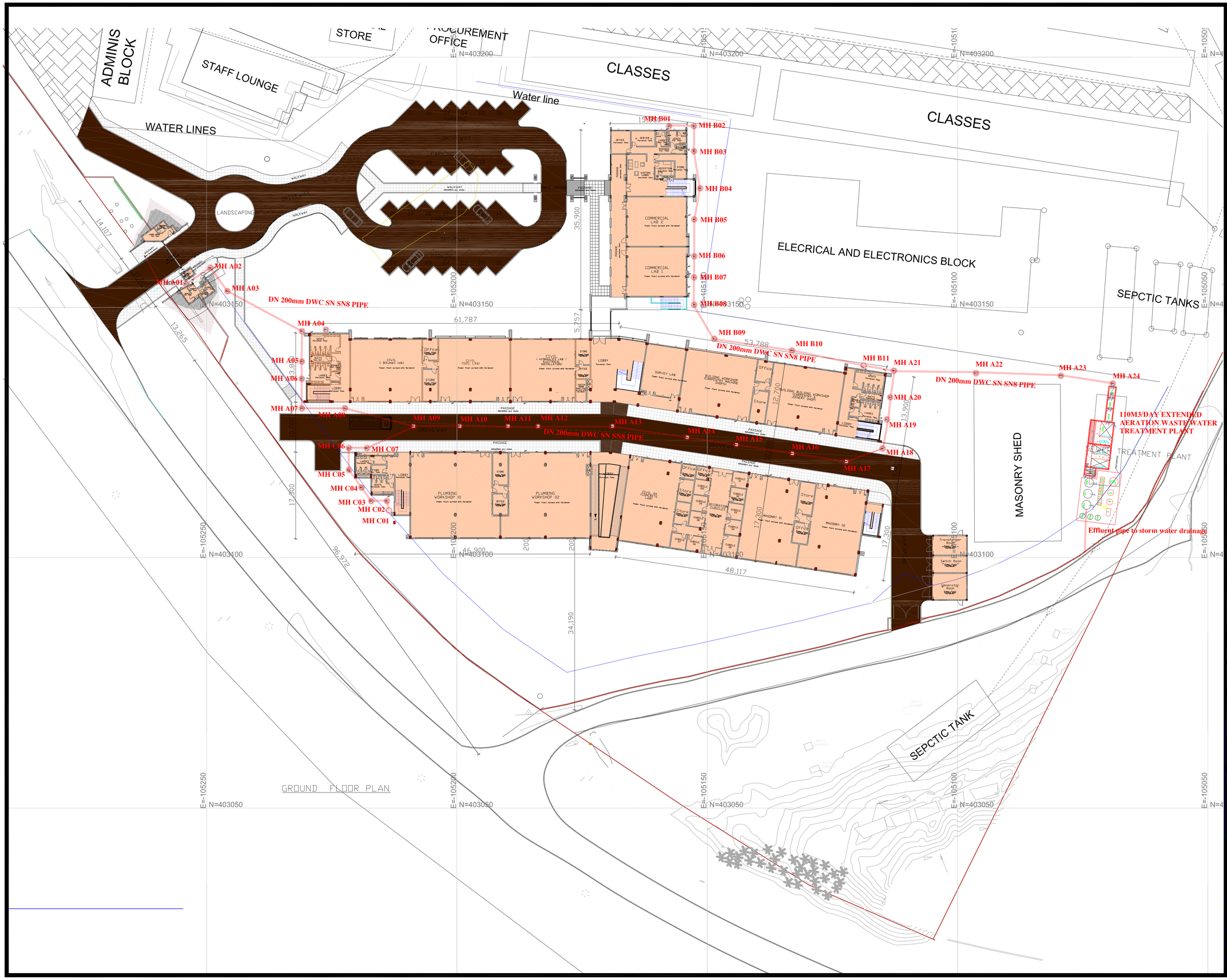
LAYOUTS, SECTIONS AND RC DETAILS.

CIVIL & STRUCTURAL ENGINEER:

MERK ASSOCIATES
LIMITED
P.o. Box 103409-00101 Nairobi

Drawn	A.C.O	Scale(s)	1 : 100, 25
Designed	U.K.M	Date	DECEMBER, 2020
Checked	U.K.M	Date	DECEMBER, 2020
Approved	R.K.M	Date	DECEMBER, 2020
JOB No. 2020		DRG No. MERK/ST/001	

CIVIL DRAWINGS



NOTES

1. Setting out levels & excavations of all structures must be checked & approved by the Engineer prior to any construction.
2. Excavations should be excavated to the line or depth as shown on the drawing or as directed by the Engineer
3. Only figured dimensions to be taken from this drawing.
4. This drawing is to be read in conjunction with other drawings.
5. Selected materials should be filled in layers not exceeding 150mm compacted thickness, mixed properly & compacted to a min. dry density of 95% MDD

REV	REVISIONS		SIGN	DATE	APPROVED
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
		CHECKED			

Client:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

Lead Architect:

SYMBION

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Office +254733801386|+254722808000
E-mail:symbionkenya@symbion-int.com
WEBSITE: www.symbion-int.com

Civil & Structural Engineers:

MERK ASSOCIATES LTD
P.O. BOX 103409-00101, NAIROBI
TEL:+254721726497/+254721368090
EMAIL:info@merkassociates.co.ke
www.merkassociates.co.ke

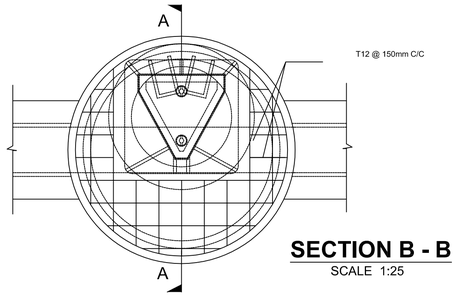
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

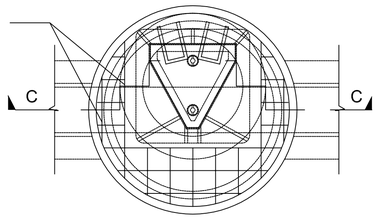
Drawing Title:

WASTE WATER MANAGEMENT SITE LAYOUT DETAILS

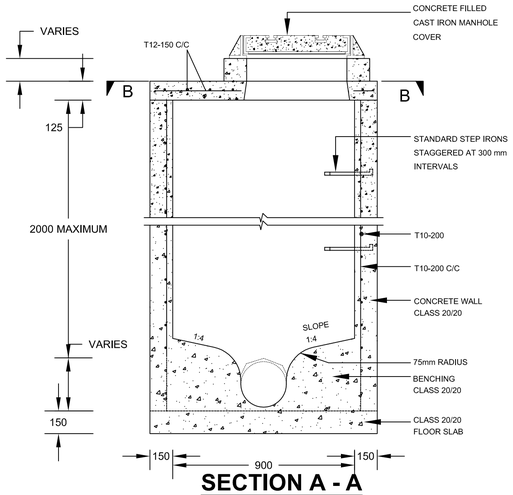
Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale:	1:350	Date:	DECEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WWT-001		R1 REV



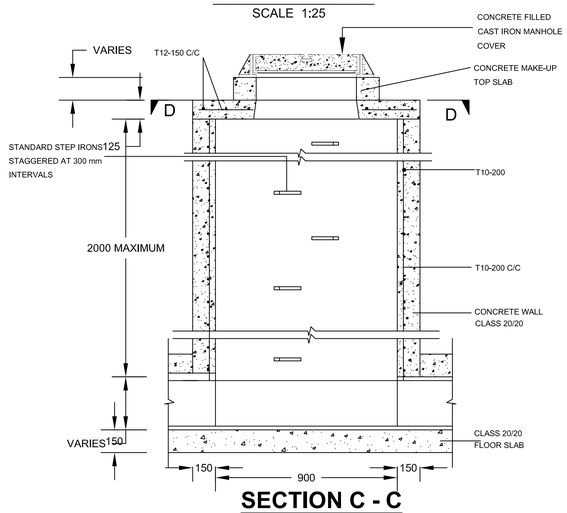
SECTION B - B
SCALE 1:25



SECTION D - D
SCALE 1:25



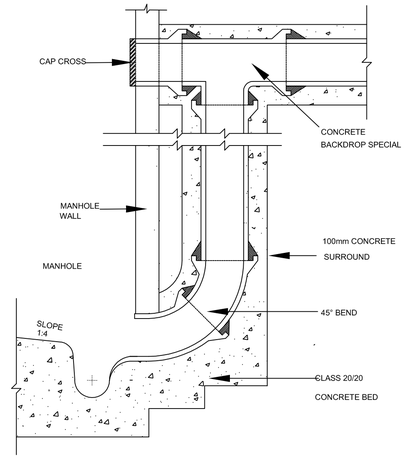
SECTION A - A
SCALE 1:25



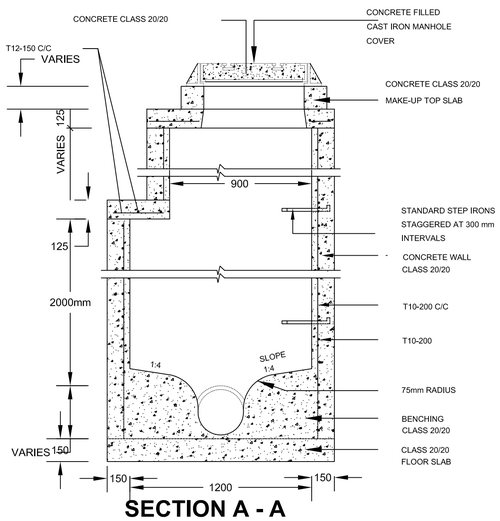
SECTION C - C
SCALE 1:25

REINFORCED CONCRETE CIRCULAR MANHOLE & COVER
DEPTH n.e. 2.0m

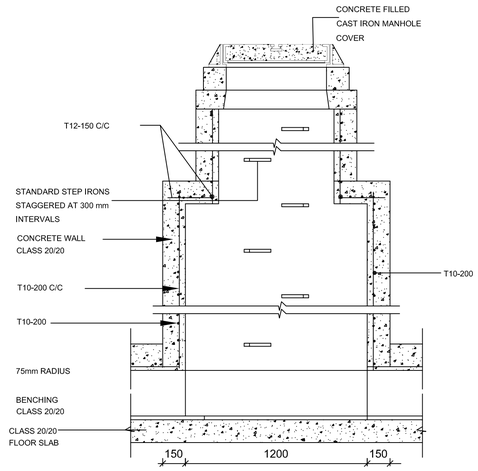
DETAILS FOR MANHOLES BACKDROPS



SIDE ENTRANCE BACKDROP
SCALE 1:25

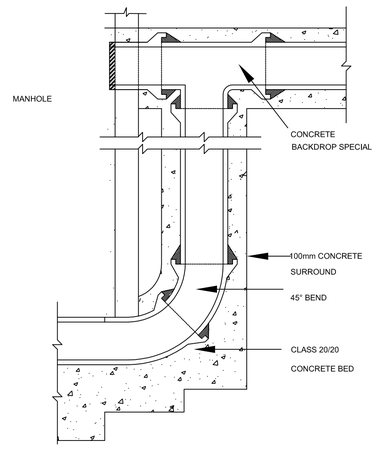


SECTION A - A
SCALE 1:25



SECTION C - C
SCALE 1:25

REINFORCED CONCRETE MANHOLE DEPTH > 2.0m



END ENTRANCE BACKDROP
SCALE 1:25

NOTES

1. Setting out levels & excavations of all structures must be checked & approved by the Engineer prior to any construction.
2. Excavations should be excavated to the line or depth as shown on the drawing or as directed by the Engineer
3. Only figured dimensions to be taken from this drawing.
4. This drawing is to be read in conjunction with other drawings.
5. Selected materials should be filled in layers not exceeding 150mm compacted thickness, mixed properly & compacted to a min. dry density of 95% MDD

REV	REVISIONS		SIGN	DATE	APPROVED
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
		CHECKED			

Client:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

Lead Architect:

SYMBION

Office: +254-0202610691,2455071,2688045/9
Office +254733801386|+254722808000
E-mail:symbionkenya@symbion-int.com
WEBSITE: www.symbion-int.com

Civil & Structural Engineers:

MERK ASSOCIATES LTD
P.O. BOX 103409-00101, NAIROBI
TEL:+254721726497/+254721368090
EMAIL:info@merkassociates.co.ke
www.merkassociates.co.ke

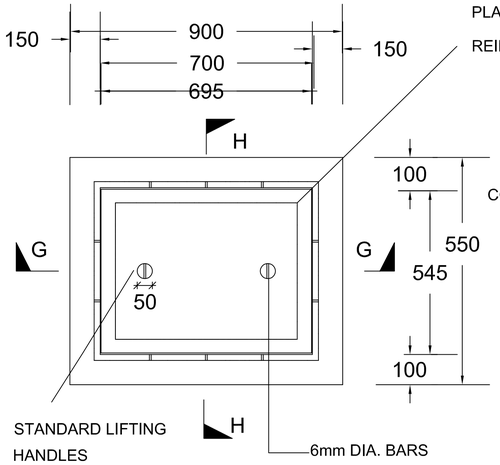
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

Drawing Title:

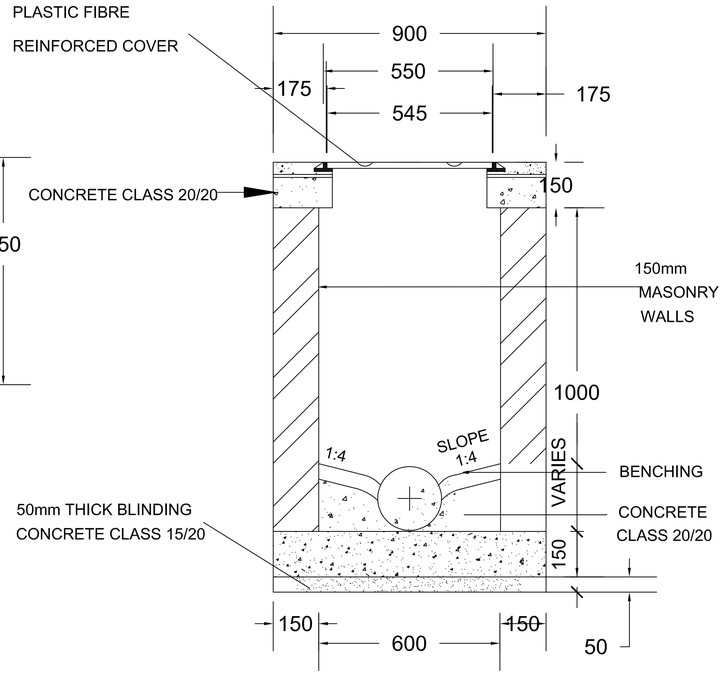
STANDARD MANHOLE DETAILS

Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale: 1:25		Date:	DECEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WW-002		R1 REV

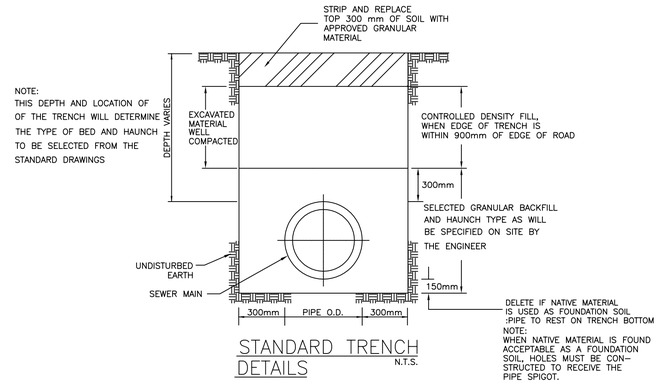


PLAN

SCALE 1:20



INSPECTION CHAMBER DETAILS



STANDARD TRENCH DETAILS

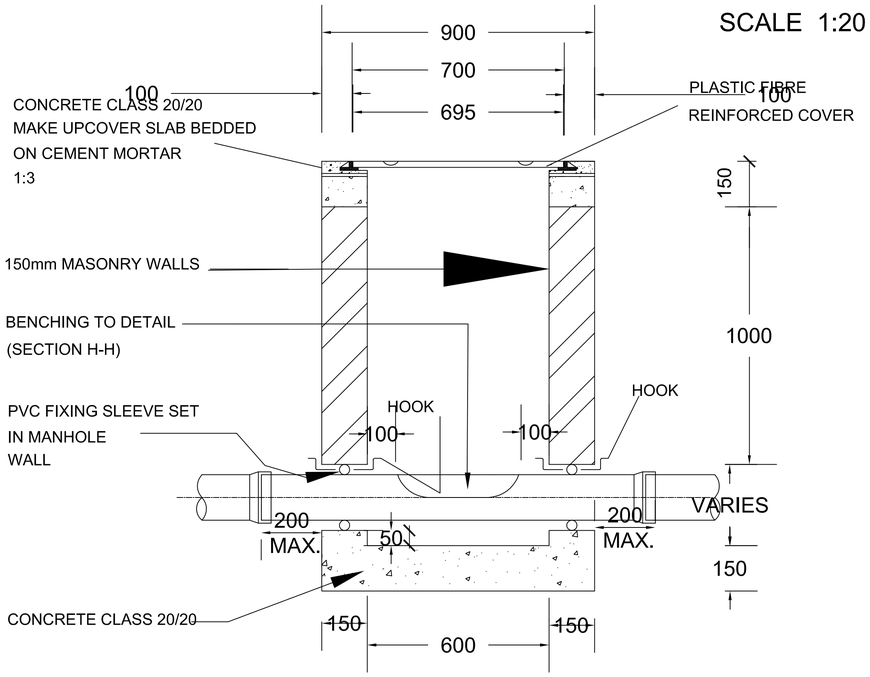
N.T.S.

SECTION H - H

SCALE 1:20

PIPE DIAMETER mm	PIPE WALL THICKNESS mm	HAUNCH TYPE							
		`A'		`B'		`C'		`D'	
		100mmBED	150mmBED	100mmBED	150mmBED	100mmBED	150mmBED	100mmBED	150mmBED
100	25.4	0.0556	0.0791	0.0799	0.1034	0.1431	0.1666	0.1653	0.1888
150	25.4	0.0642	0.0904	0.0845	0.1107	0.1706	0.1968	0.1981	0.2242
225	28.57	0.0783	0.1053	0.1262	0.1557	0.2155	0.2450	0.2525	0.2821
300	31.75	0.0929	0.1277	0.1557	0.1905	0.2617	0.2965	0.3100	0.3448
375	34.92	0.1080	0.1470	0.1864	0.2255	0.3094	0.3485	0.3702	0.4093
450	38.10	0.1253	0.1689	0.2208	0.2644	0.3623	0.4059	0.4382	0.4818
525	44.45	0.1433	0.1916	0.2564	0.3046	0.4169	0.4652	0.5052	0.5536
600	50.80	0.1619	0.2147	0.2943	0.3471	0.4731	0.5259	0.5844	0.6372
675	53.98	0.1804	0.2375	0.3310	0.3880	0.5270	0.5841	0.6570	0.7141
750	57.15	0.1986	0.2600	0.3582	0.4295	0.5823	0.6436	0.7325	0.7938
900	63.50	0.2378	0.3077	0.4479	0.5161	0.6973	0.7672	0.8922	0.9620
1050	69.85	0.2810	0.3605	0.4945	0.5741	0.8181	0.8977	1.0635	1.1431
1200	76.20	0.3291	0.4161	0.6230	0.7101	0.9448	1.0318	1.2466	1.3336

CONCRETE QUANTITIES IN BED AND SURROUNDS FOR CONCRETE PIPES (CU.M.PER LIN. METER)



SECTION G - G

SCALE 1:50

DEPTH TO THE TOP OF PIPE	PIPE DIAMETER IN mm									
	150	225	300	375	450	525	600	675	750	(>750)
<1.25M IN ROADS <1.00M ELSEWHERE	TYPE `C'									AS SPECIFIED BY ENGINEER
<4.00M	TYPE `A' (CONCRETE BED) MAY BE DELETED AT THE DISCRETION OF THE ENGINEER				TYPE `B'					
>4.00M	TYPE `B'									
>6.00M OR IN HEADING	TYPE `C' OR `D' AS DIRECTED									

TYPE OF BED AND HAUNCH TO BE USED

NOTES

1. Setting out levels & excavations of all structures must be checked & approved by the Engineer prior to any construction.
2. Excavations should be excavated to the line or depth as shown on the drawing or as directed by the Engineer
3. Only figured dimensions to be taken from this drawing.
4. This drawing is to be read in conjunction with other drawings.
5. Selected materials should be filled in layers not exceeding 150mm compacted thickness, mixed properly & compacted to a min. dry density of 95% MDD

REV	REVISIONS		SIGN	DATE	APPROVED
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
		CHECKED			

Client:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

Lead Architect:

SYMBION

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Civil & Structural Engineers:

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TEL:+254721726497/+254721368090
EMAIL:info@merkassociates.co.ke
www.merkassociates.co.ke

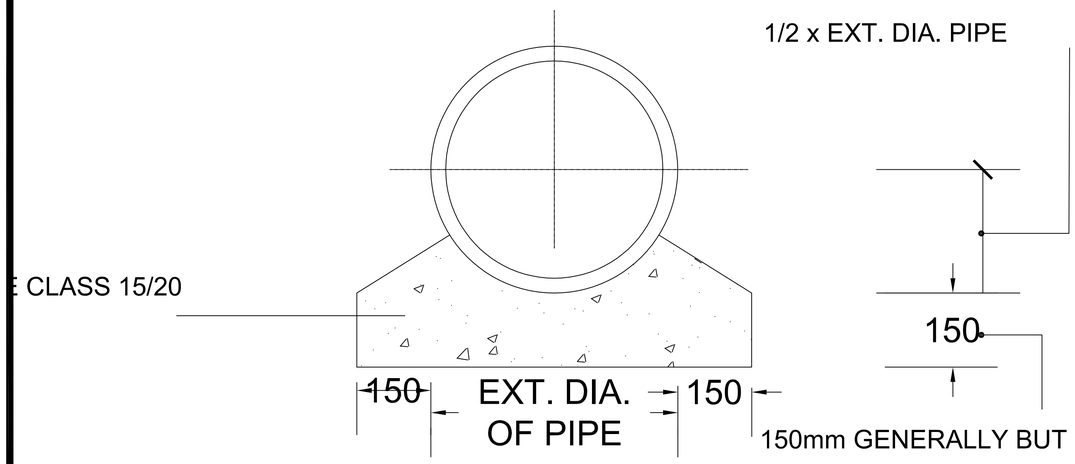
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

Drawing Title:

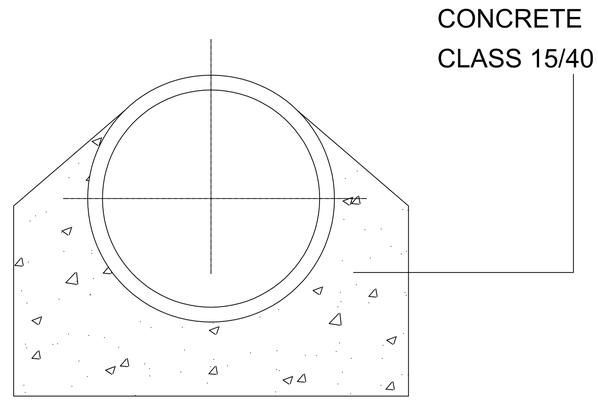
STANDARD INSPECTION CHAMBER
& PIPE TRENCH DETAILS

Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale:	1:20	Date:	DECEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WW-003		R1 REV



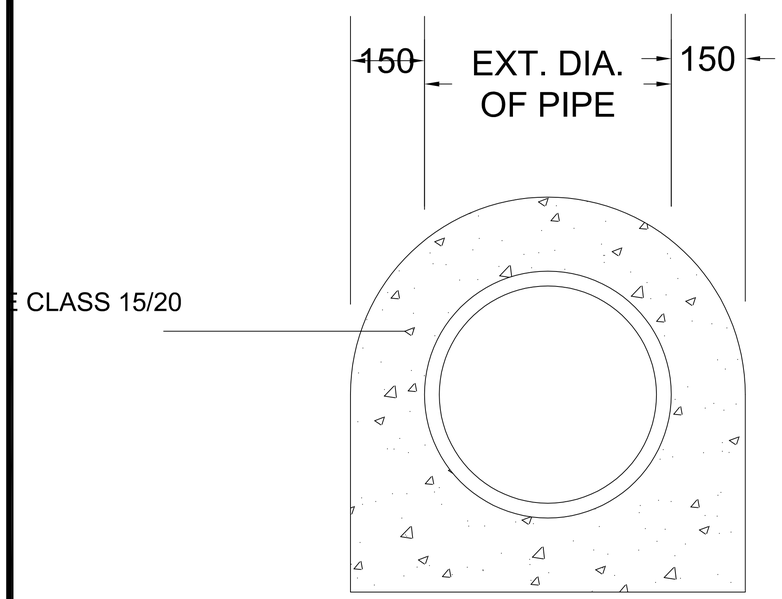
TYPE 'A'

SCALE 1: 8



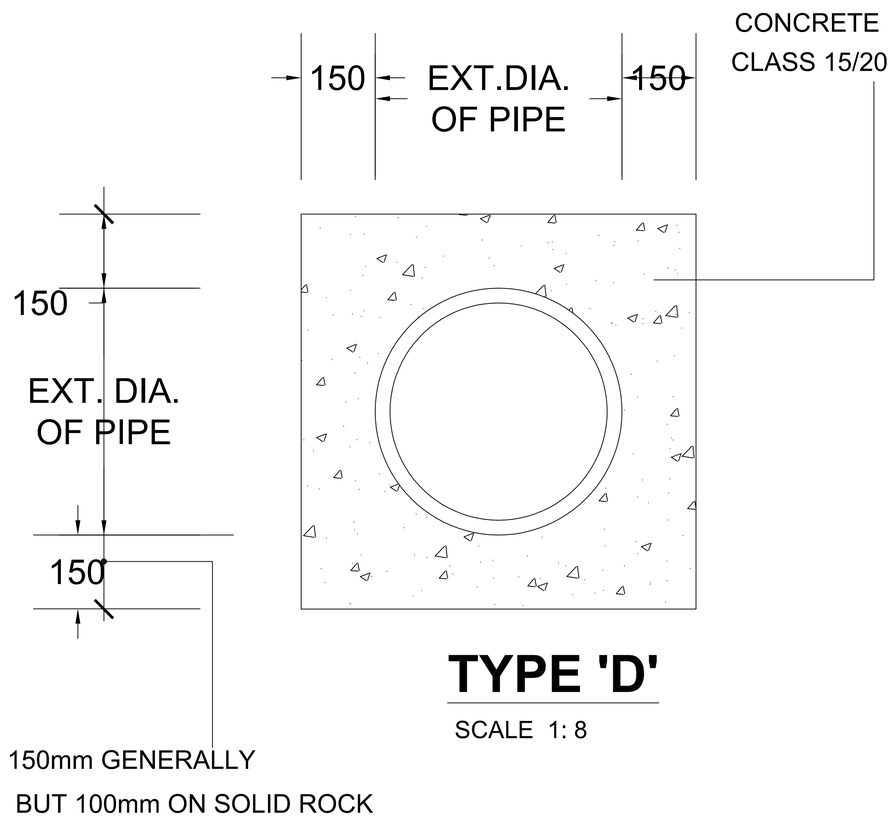
TYPE 'B'

SCALE 1: 8



TYPE 'C'

SCALE 1: 8



TYPE 'D'

SCALE 1: 8

NOTES

1. Setting out levels & excavations of all structures must be checked & approved by the Engineer prior to any construction.
2. Excavations should be excavated to the line or depth as shown on the drawing or as directed by the Engineer
3. Only figured dimensions to be taken from this drawing.
4. This drawing is to be read in conjunction with other drawings.
5. Selected materials should be filled in layers not exceeding 150mm compacted thickness, mixed properly & compacted to a min. dry density of 95% MDD

REV	REVISIONS		SIGN	DATE	APPROVED
		BY			
		CHECKED			
		BY			
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Client:

THE MERU NATIONAL POLYTECHNIC,
P.O. BOX 111-60200
MERU.

Lead Architect:

SYMBION

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Civil & Structural Engineers:

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TEL:+254721726497/+254721368090
EMAIL:info@merkassociates.co.ke
www.merkassociates.co.ke

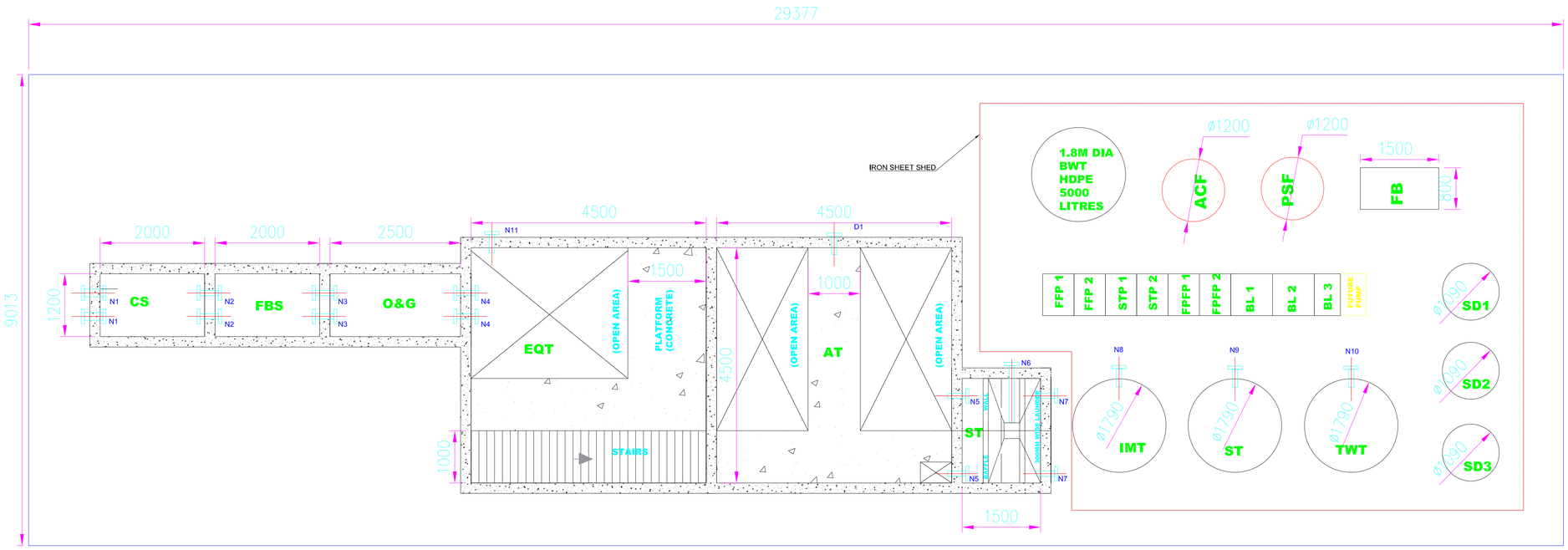
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

Drawing Title:

STANDARD PIPE HAUNCH AND SURROUND DETAILS

Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale: 1:8		Date:	DECEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WW-004		R1 REV



SR NO	ABBR.	DESC.	MOC	SIZE
1	CS	COARSE SCREEN	RCC	1.2m Width X 2.0m Length X 1.0m Side Water Depth
2	FBS	FINE BAR SCREEN	RCC	1.2m Width X 2.0m Length X 1.0m Side Water Depth
3	O&G	OIL&GREESE TANK	RCC	1.2m Width X 2.5m Length X 1.0m Side Water Depth
4	EQT	EQUILISATION TANK	RCC	4.5m WIdth X 4.5m Length X 2.0m SIde Water Depth
5	AT	AERATION TANK	RCC	4.5m Width X 4.5m Length X 3.5m Side Water Depth
6	ST	SETTLING TANK	RCC	1.5m Width X 2.0m Length X 2.8m Side Water Depth
7	IMT	INTERMEDIATE TANK	HDPE	1.79m Width X 2.07m height
8	ST	SLUDGE TANK	HDPE	1.79m WIdth X 2.07m height
9	TWT	TREATED WATER TANK	HDPE	1.79m Width X 2.07m height
10	SD	SLUDGE DRYING BED	HDPE	1.09m Width X 1.1m height

SR NO	ABBR.	DESC.	MOC	SIZE
11	FFP	FILTER FEED PUMP	-	
12	PSF	PRESSURE SAND FILTER	FRP	
13	ACF	ACTIVATED CARBON FILTER	FRP	
14	STP	SLUDGE TRANSFER PUMP	-	
15	BL	BLOWER	-	
16	FB	FILTER BAG	-	
17	FPFP	FILTER PRESS FEED PUMP	-	
18	BWT	BACK WASH TANK	HDPE	

1: 150 mm High Pedestal for All Equipment wherever required (client scope)
2: Shed is required to cover all the equipment/electrical equipments (client scope)
3: All the water levels for nozzles as indicated in Nozzle schedule must be maintained (VERY CRITICAL)
4: Railing will be provided wherever required (client scope)

NOTES

1. Setting out levels & excavations of all structures must be checked & approved by the Engineer prior to any construction.
2. Excavations should be excavated to the line or depth as shown on the drawing or as directed by the Engineer
3. Only figured dimensions to be taken from this drawing.
4. This drawing is to be read in conjunction with other drawings.
5. Selected materials should be filled in layers not exceeding 150mm compacted thickness, mixed properly & compacted to a min. dry density of 95% MDD

REV	REVISIONS		SIGN	DATE	APPROVED
		BY			
		CHECKED			
		BY			
		CHECKED			
		BY			
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		BY			
		CHECKED			

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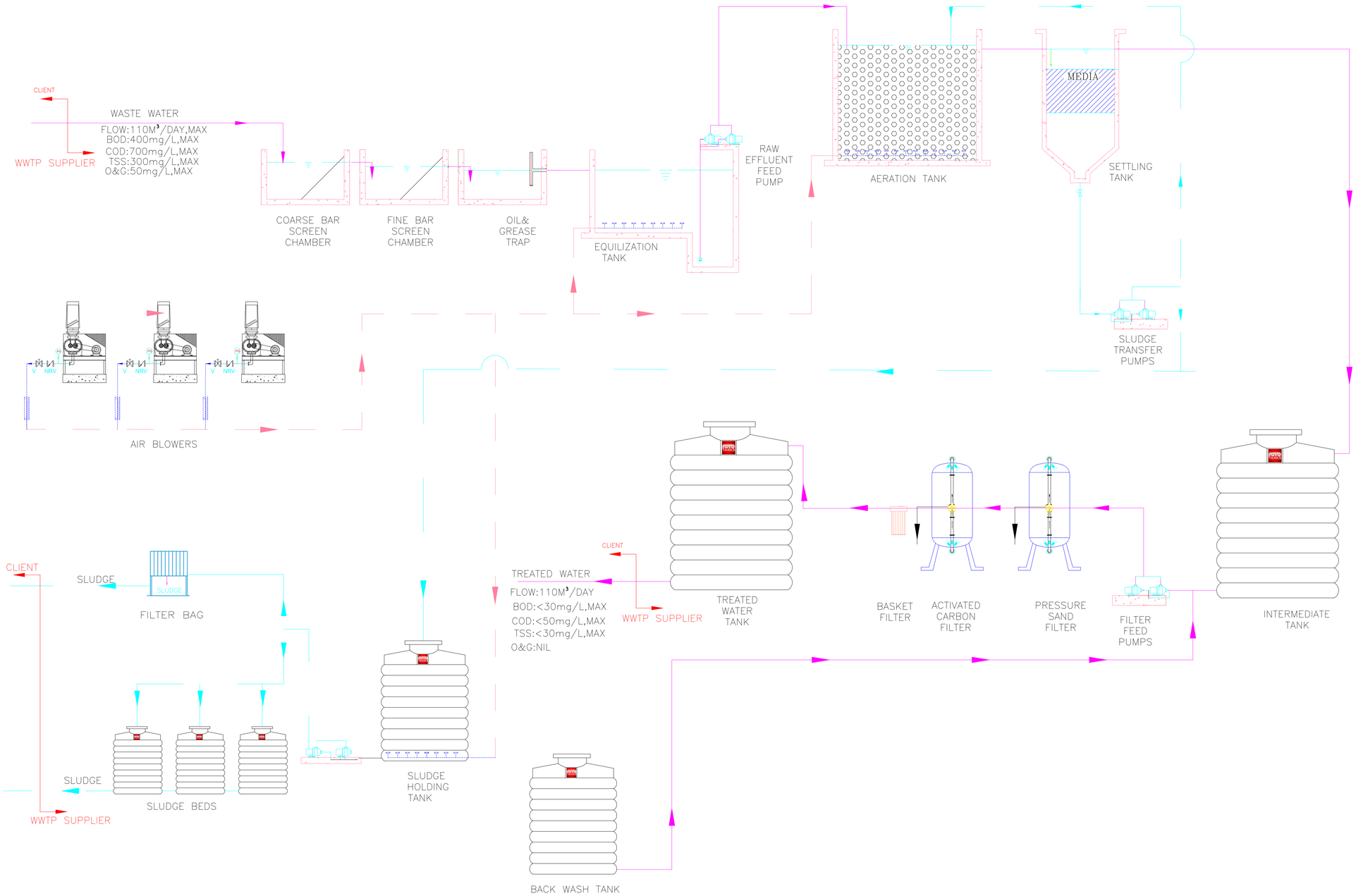
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

Drawing Title:

110M3/DAY WASTE WATER TREATMENT LAYOUT DETAILS

Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale:	1:50	Date:	NOVEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WWT-005		R0 REV



NOTES

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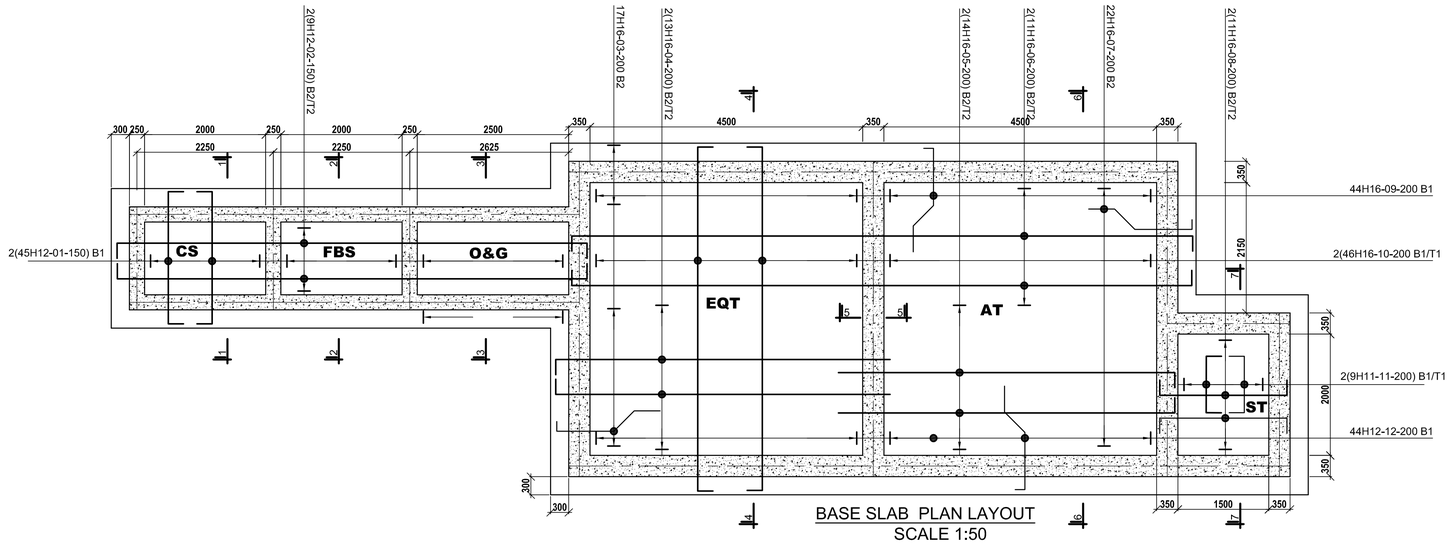
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

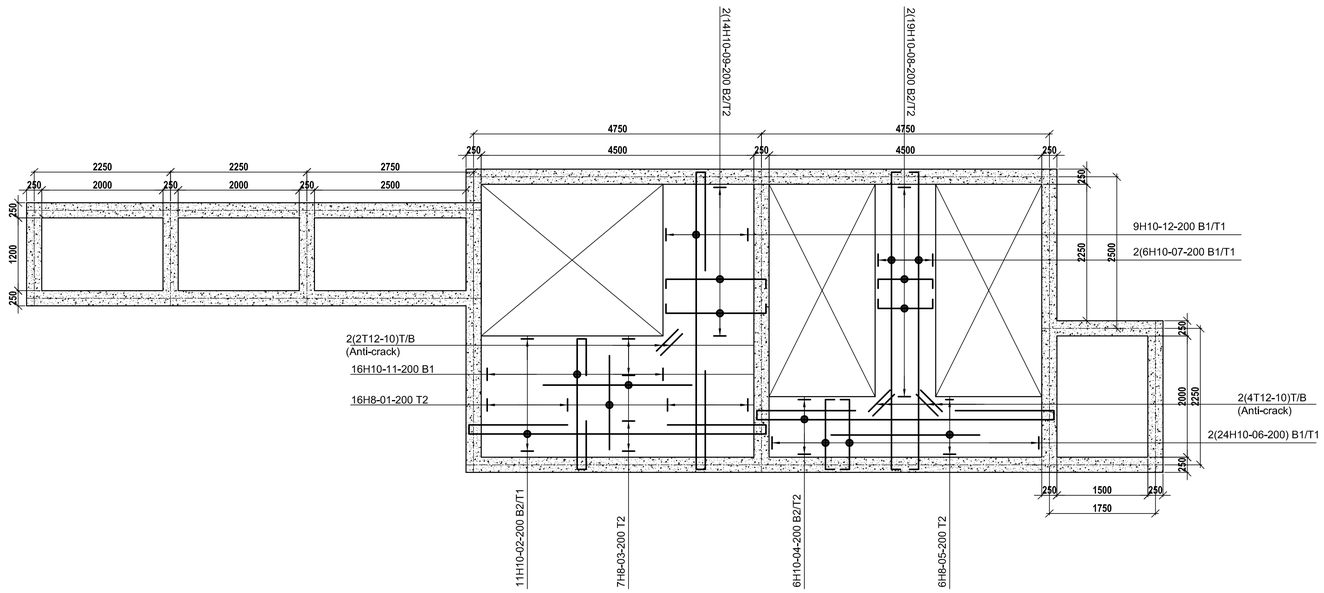
Drawing Title:

110M3/DAY WASTE WATER TREATMENT PLANT FLOW DIAGRAM

Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale:	NTS	Date:	NOVEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WWT-006		R0 REV



BASE SLAB PLAN LAYOUT
SCALE 1:50



COVER SLAB PLAN LAYOUT
SCALE 1:50

NOTES

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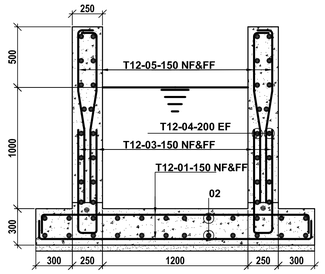
Project:

PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

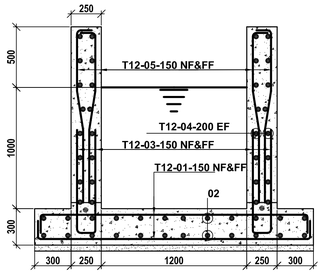
Drawing Title:

110M3/DAY WWT LAYOUT REINFORCEMENT DETAILS

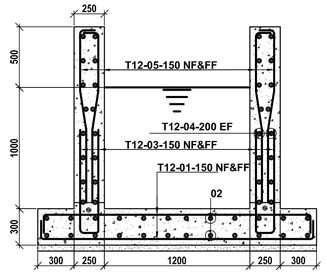
Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale:	1:50	Date:	NOVEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WWT-007		R0 REV.



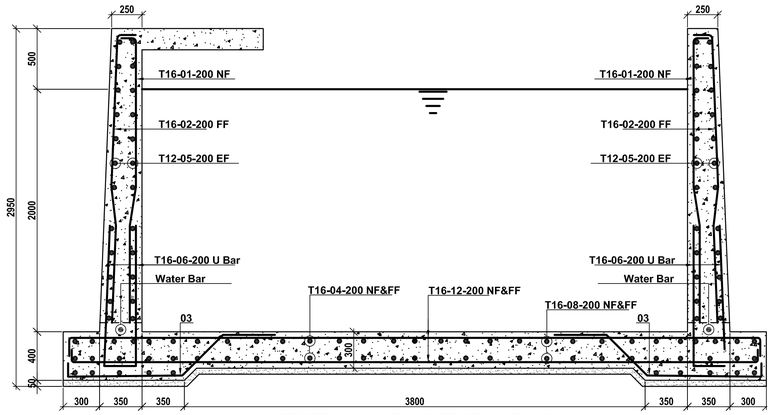
SECTION1-1:COARSE BAR SCREEN CHAMBER
SCALE 1:25



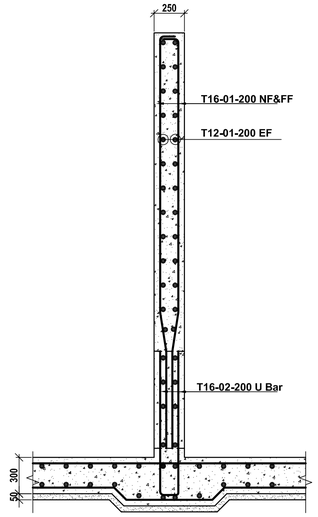
SECTION 2-2:FINE BAR SCREEN CHAMBER
SCALE 1:25



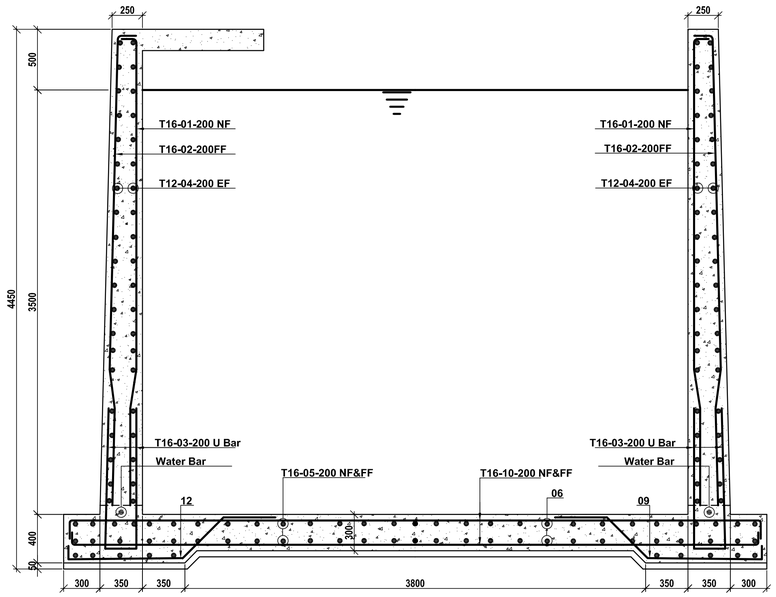
SECTION 3-3:OIL & GREASE TRAP
SCALE 1:25



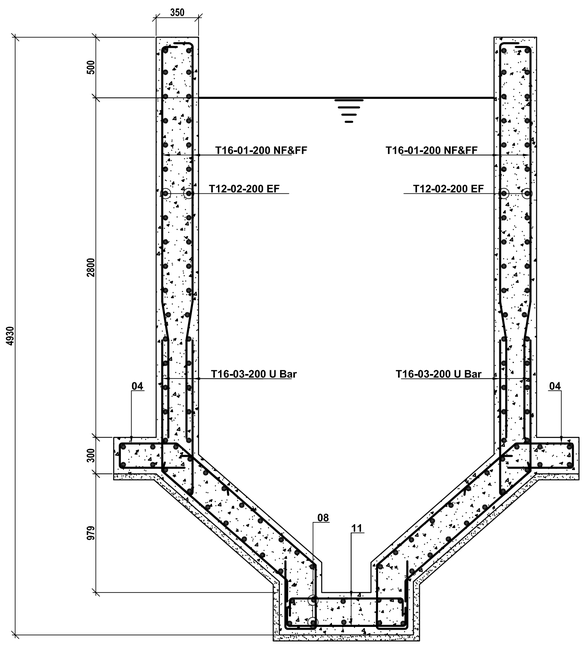
SECTION 4-4:EQUILIZATION TANK
SCALE 1:25



SECTION 5-5
SCALE 1:25



SECTION 6-6: AERATION TANK
SCALE 1:25



SECTION 7-7: SETTLING TANK
SCALE 1:25

NOTES

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		BY			
		CHECKED			
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Client:

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Lead Architect:

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Project:

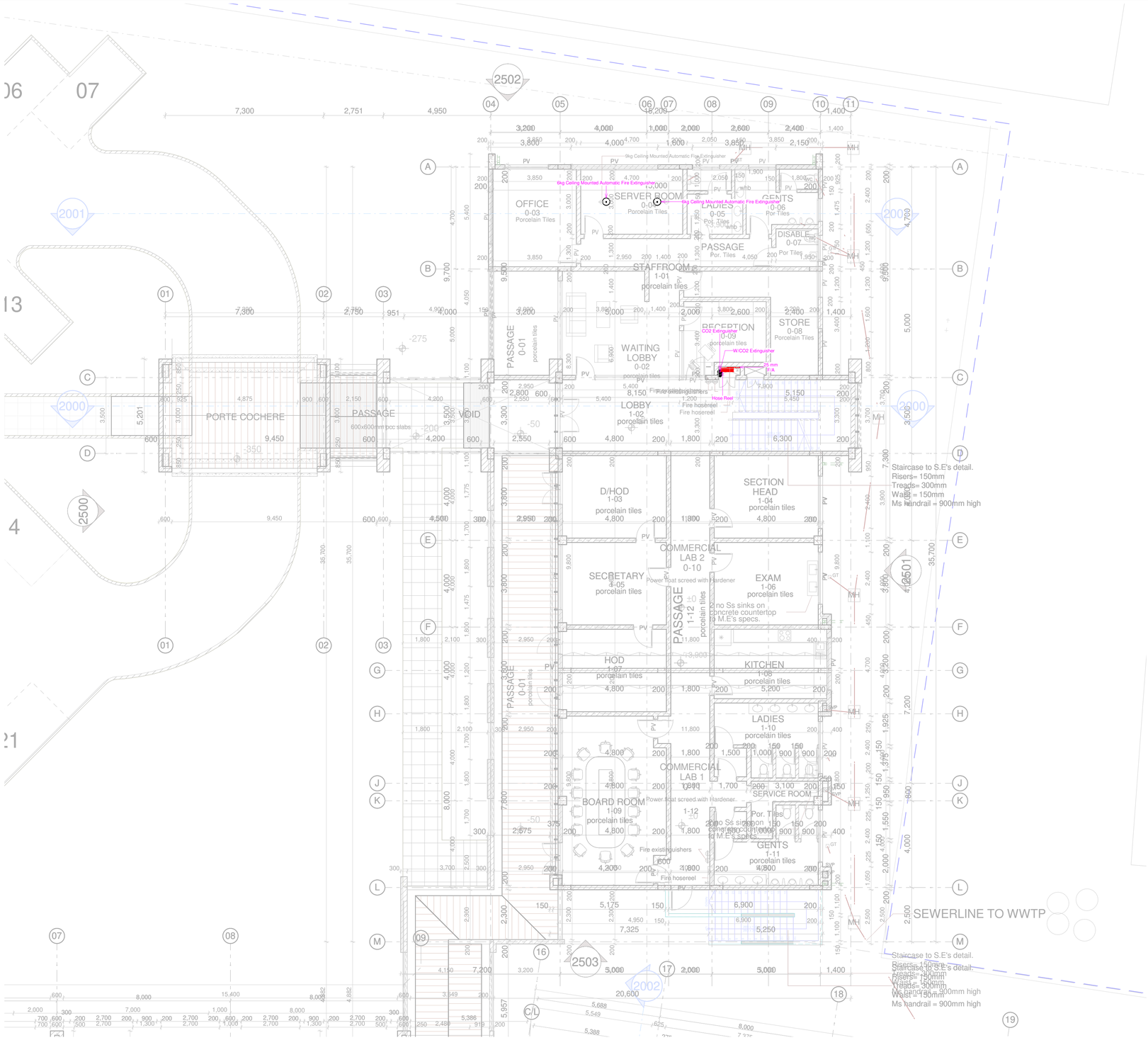
PROPOSED BUILDING TECHNOLOGY CENTRE OF EXCELLENCE – THE MERU NATIONAL POLYTECHNIC

Drawing Title:

110M3/DAY WWT SECTIONS REINFORCEMENT DETAILS

Designed by:	S.W.M	Drawn by:	S.W.M
Checked by:	R.K.M.	Approved by:	R.K.M.
Scale:	1:50	Date:	NOVEMBER 2020
Job No.		ACAD File:	CW/MNP/001
P0 STATUS	DRG No. MNP-CW-WWT-008		R0 REV

MECHANICAL DRAWINGS



GENERAL NOTES:

INTERNAL PLUMBING

1. ALL DIMENSIONS SHALL BE IN MILLEMETRES UNLESS OTHERWISE STATED.
2. ALL GATE AND NON-RETURN VALVES SHALL CONFORM TO BS 5154
3. THE SUB-CONTRACTORS SHALL PROVIDE ALL THE SLEEVES, GRADIENTS, SUPPORTS, JOINTING MATERIALS etc AS NECESSARY.
4. ALL PIPES CHASED IN WALL OR SLAB SHALL BE TESTED TO 1.5 TIMES THEIR WORKING PRESSURE BEFORE THEY ARE COVERED.
5. THE SUB-CONTRACTORS SHALL PRODUCE WORKING DRAWINGS BEFORE COMMENCEMENT OF THE INSTALLATION.

1 Ground Floor Level - Admin

1 : 100

M & A
DETAIL DESIGN

MAITERI & ASSOCIATES
Building Services Consulting Engineers
Vihiga Road, Kileleshwa. P.O Box 75437-00200, Nairobi
Phone: 020 2187531/40, 020 2187653, E-mail: maiteri@maiteri.com

ARCHITECT
SYMBION

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THE MERU NATIONAL POLYTECHNIC

Structural/Civil Engineers
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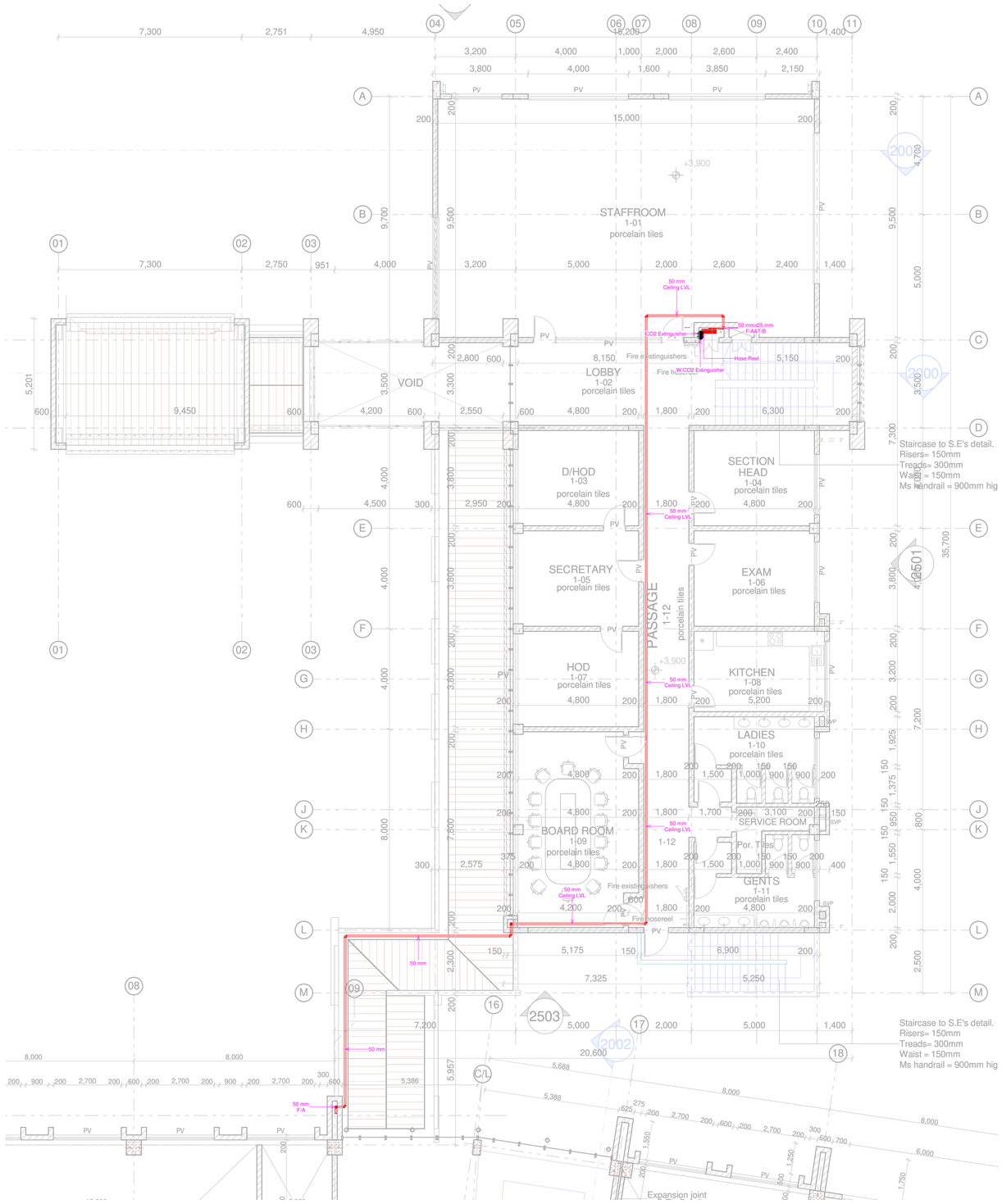
PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

PUBLIC HEALTH INSTALLATION
Ground Floor
Drawing No. 323/01/FH001

Status: CO
Date 11/10/20
Scale 1 : 100

Drawn OL
Checked

2/12/2021 12:55:06 PM



1 Admin - 1st Floor Level - 01

1 : 100

GENERAL NOTES:

INTERNAL PLUMBING

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M & A

DETAIL DESIGN

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Phone: 020 2187531/40, 020 2187653, E-mail: maiteri@maiteri.com

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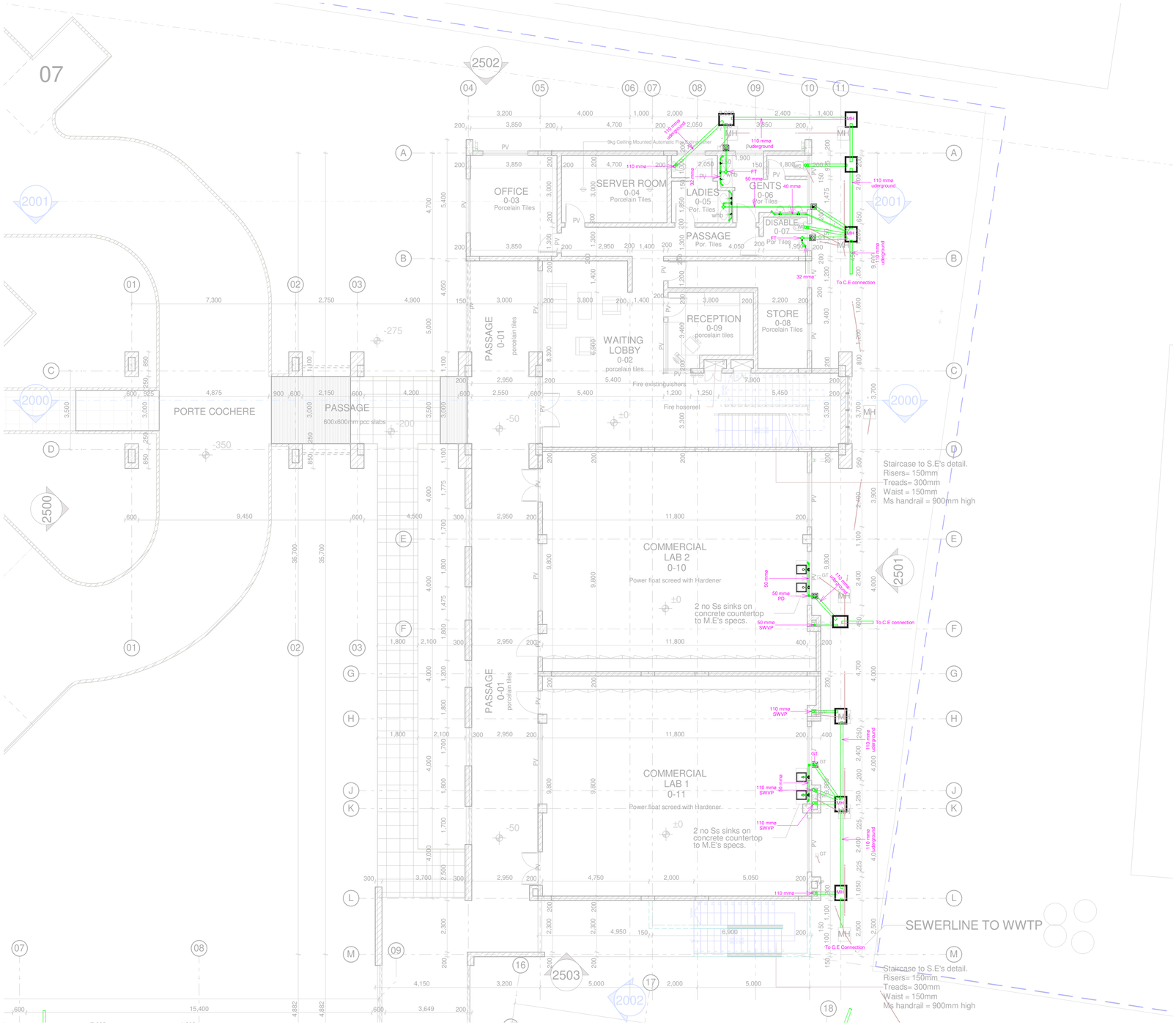
PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

PUBLIC HEALTH INSTALLATION
1st Floor
Drawing No. 323/01/FH002

Status: CO
Date 11/10/20
Scale 1 : 100

Drawn Author
Checked

2/12/2021 12:55:07 PM



GENERAL NOTES:

SANITARY FITTINGS

1. ALL SANITARY FITTINGS SHALL BE MANUFACTURED TO THE RELEVANT BRITISH STANDARD OR TO THE KENYA BUREAU OF STANDARDS.
2. ALL TRAPS MUST BE MANUFACTURED TO BS 3943 AND PROVIDED FOR SO AS TO CONFORM TO BS 5572 AND THE BUILDING REGULATIONS.
3. THE SANITARY FITTINGS SHALL BE WHITE UNLSESS OTHERWISE STATED.
4. THE SUB-CONTRACTOR SHALL FIX THE ITEMS WITH ALL THE NECESSARY SUPPORTS, BRACKETS, SCREWS, CRADLES, etc AS NECESSARY.

INTERNAL PLUMBING

1. ALL DIMENSIONS SHALL BE IN MILLEMETRES UNLESS OTHERWISE STATED.
2. ALL PLUMBING PIPES SHALL BE PPRC PIPES.
3. ALL GATE AND NON-RETURN VALVES SHALL CONFORM TO BS 5154
4. ONLYL BENDS SHLL BE USED FOR THE HOT WATER SYSTEM AND THEY SHALL HAVE THE NECESSART RADIUS, ELBOWS SHALL NOT BE ALLOWED.
5. THE SUB-CONTRACTORS SHALL PROVIDE ALL THE SLEEVES, GRADIENTS, SUPPORTS, JOINTING MATERIALS etc AS NECESSARY.
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1 Ground Floor Level - Admin

1 : 100

M & A
DETAIL DESIGN

MAITERI & ASSOCIATES
Building Services Consulting Engineers
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Phone: 020 2187531/40, 020 2187653, E-mail: maiteri@maiteri.com

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PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

PUBLIC HEALTH INSTALLATION
Ground Floor
Drawing No. 323/01/FD/001

Status: CO
Date 11/03/20
Scale 1 : 100

Drawn OL
Checked

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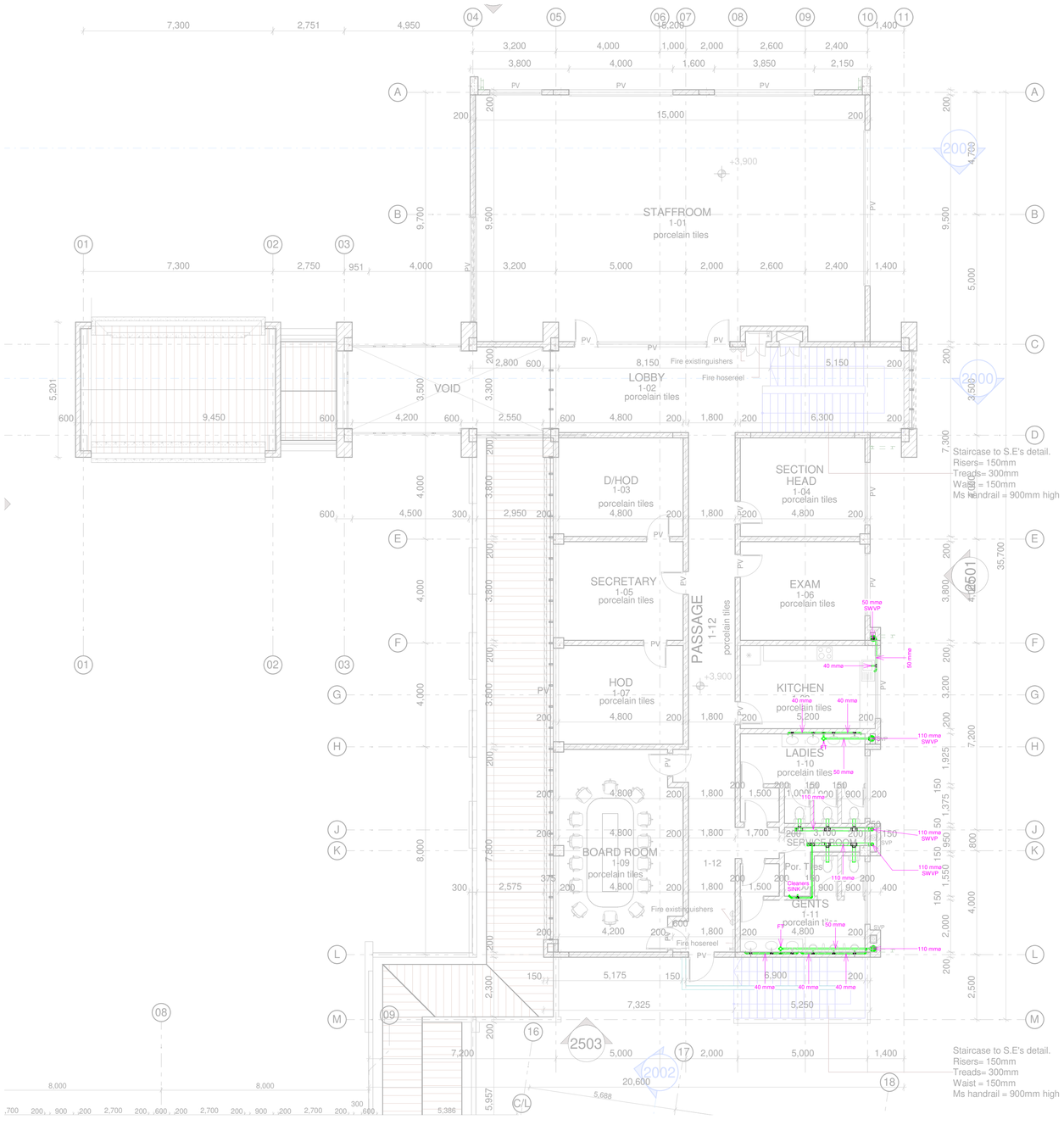

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1 Admin - 1st Floor Level - Callout 1
1 : 100

M & A
DETAIL DESIGN

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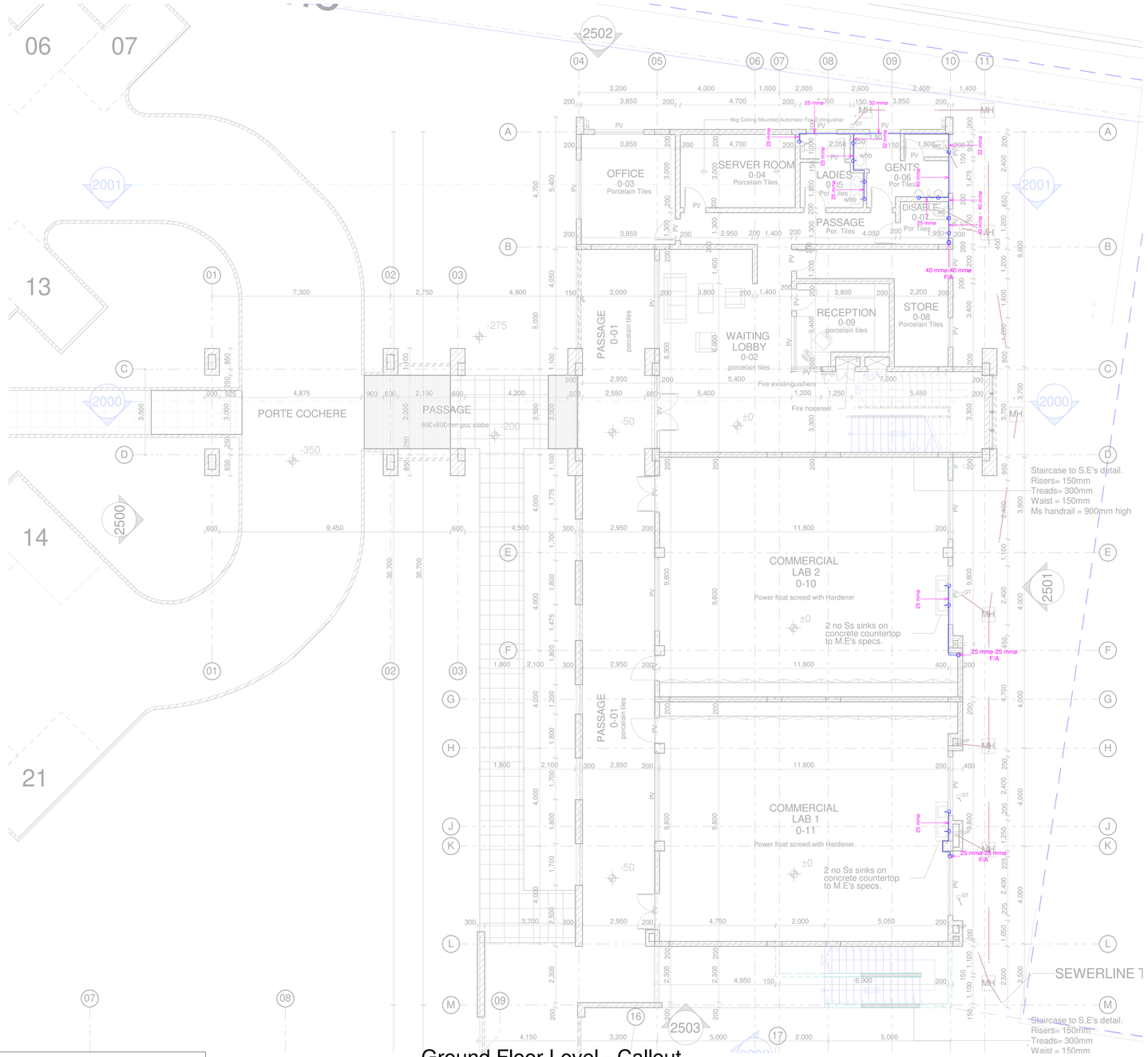
PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

PUBLIC HEALTH INSTALLATION
1st Floor
Drawing No. 323/01/FD/002

Status: CO
Date 11/03/20
Scale 1 : 100

Drawn OL
Checked

2/12/2021 11:07:47 AM



Ground Floor Level - Callout

1 1 : 100

GENERAL NOTES:

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7. THE SUB-CONTRACTORS SHALL PRODUCE WORKING DRAWINGS BEFORE COMMENCEMENT OF THE INSTALLATION.

M & A

DETAILED DESIGN

MAITERI & ASSOCIATES
Building Services Consulting Engineers
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Phone: 020 2187531/40, 020 2187653, E-mail: maiteri@maiteri.com

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THE MERU NATIONAL POLYTECHNIC

Structural/Civil Engineers
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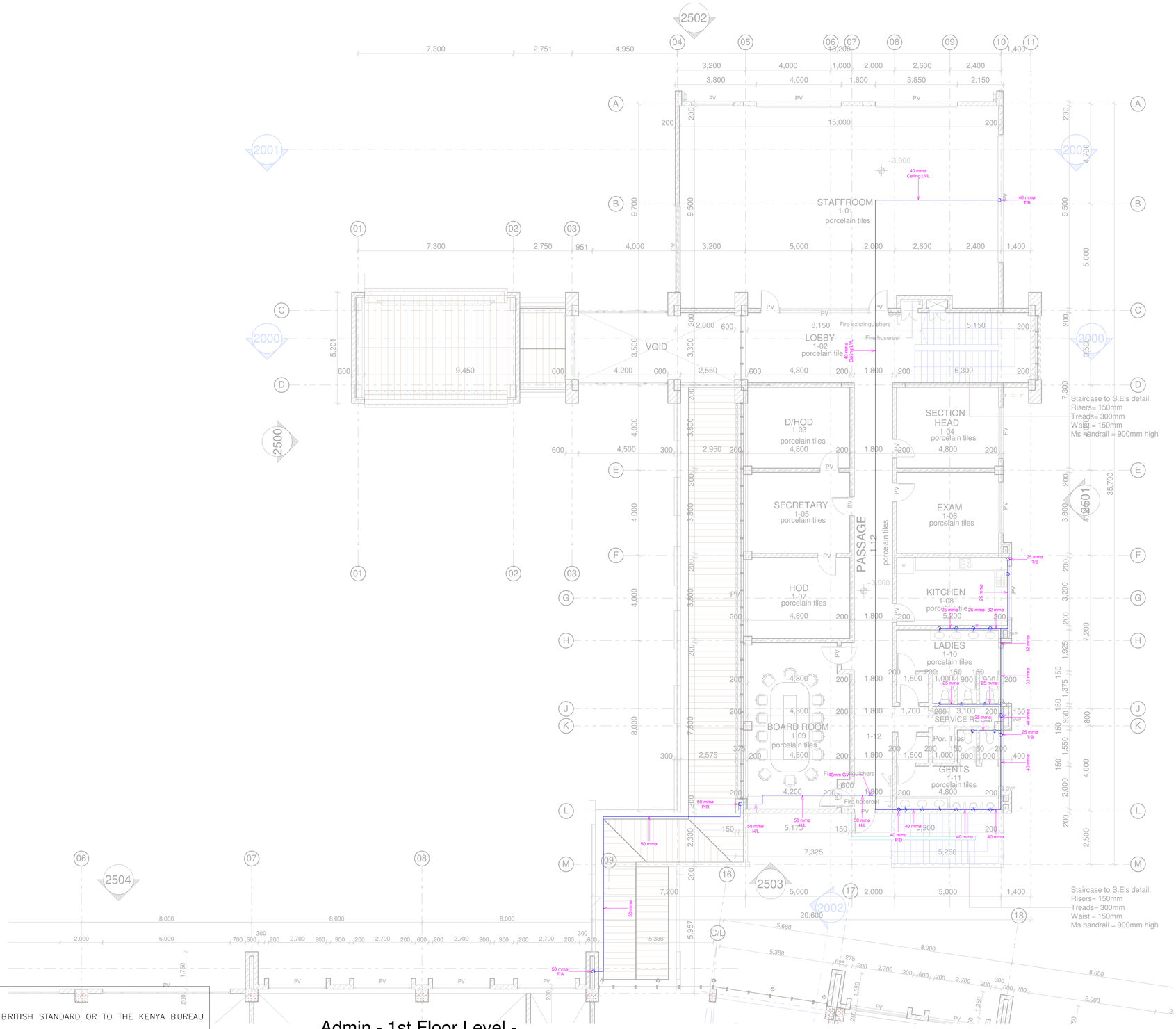
PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

PUBLIC HEALTH INSTALLATION
Ground Floor
Drawing No. MA/323/01/P001

Status: CO
Date 12/03/20
Scale 1 : 100

Drawn Author
Checked

2/12/2021 1:30:03 PM



1 Admin - 1st Floor Level - Callout 1
1 : 100

GENERAL NOTES:

SANITARY FITTINGS

1. ALL SANITARY FITTINGS SHALL BE MANUFACTURED TO THE RELEVANT BRITISH STANDARD OR TO THE KENYA BUREAU OF STANDARDS.
2. ALL TRAPS MUST BE MANUFACTURED TO BS 3943 AND PROVIDED FOR SO AS TO CONFORM TO BS 5572 AND THE BUILDING REGULATIONS.
3. THE SANITARY FITTINGS SHALL BE WHITE UNLSESS OTHERWISE STATED.
4. THE SUB-CONTRACTOR SHALL FIX THE ITEMS WITH ALL THE NECESSARY SUPPORTS, BRACKETS, SCREWS, CRADLES, etc AS NECESSARY.

INTERNAL PLUMBING

1. ALL DIMENSIONS SHALL BE IN MILLEMETRES UNLESS OTHERWISE STATED.
2. ALL PLUMBING PIPES SHALL BE PPRC PIPES.
3. ALL GATE AND NON-RETURN VALVES SHALL CONFORM TO BS 5154
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PUBLIC HEALTH INSTALLATION
First Floor
Drawing No. MA/323/01/P002

Status: CO
Date 12/03/20
Scale 1 : 100

Drawn Author
Checked

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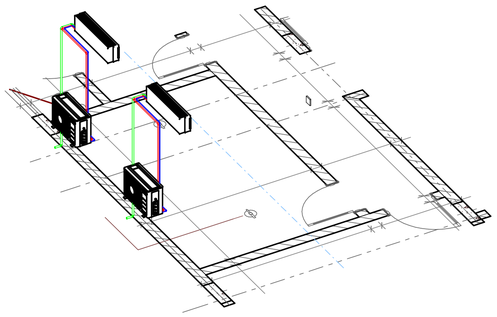
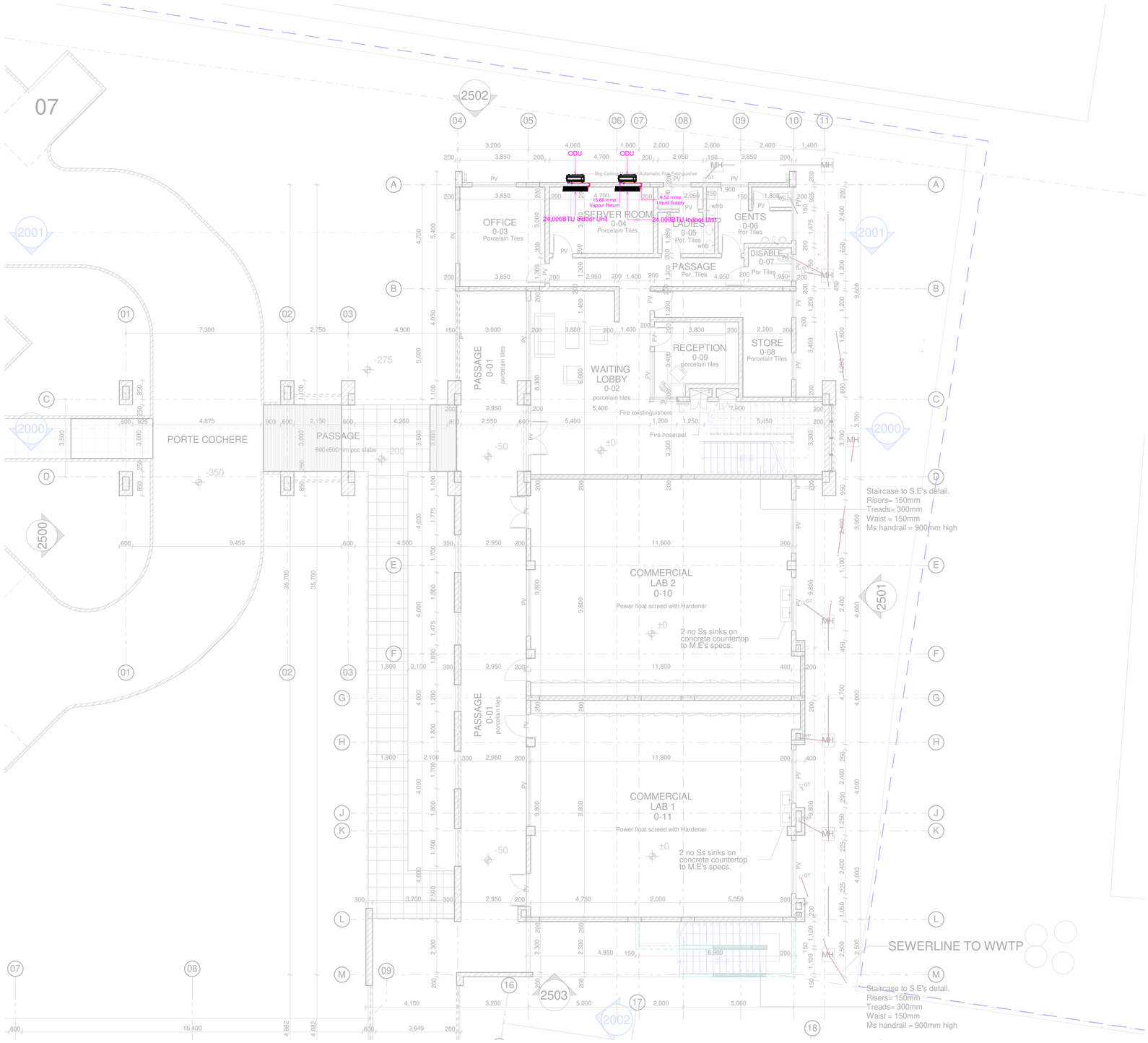


2 3D Server Room



1 Ground Floor Level - Admin

1 : 100

1. THIS DRAWING MUST BE READ IN CONJUCTION WITH CIVIL, STRUCTURAL, ARCHITECTURAL STARNDARD DETAILS AND ELECTRO-MECHANICAL DRAWINGS.
2. FOR MISCELLANEOUS DETAILS REFER TO DRAWINGS NUMBER -----
3. FOR BMS DRAWINGS REFER TO THE DRAWINGS PROVIDED.
4. ALL DIMENTIONS ARE IN MILIMETERS UNLESS OTHERWISE NOTED.
5. PIPE SIZES SHOWN IN DRAWING ARE NOMINAL DIAMETERS.
6. DUCTWORK CROSSING FIRE RATED WALLS 2 HOURS OR MORE FIRE RATING SHOULD BE EQUIPPED WITH FIRE DAMPERS.
7. ALL RETURN/FRESH AIR DUCT OPENINGS SHOULD BE COMPLETE WITH VOLUME DAMPER & ALUMINIUM WIRE MESH SCREEN.
8. DUCT BRANCHES TO BE PROVIDED WITH VD & FD AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT.
9. EACH HVAC TERMINAL UNIT TO BE PROVIDED THERMOSTAT WHETHER SHOWN ON THE DRAWINGS OR NOT. EXACT LOCATION OF THE THERMOSTAT TO BE OBTAINED FROM THE SHOP DRAWING PLANS.
10. ALL TERMINAL UNITS (VAV) TO BE PROVIDED WITH THERMOSTAT.
11. ALL MECHANICAL SHAFTS AND SERVICES TO BE PROVIDED WITH MAINTENANCE ACCESS.
12. MOTORIZED VOLUME DAMPERS TO BE PROVIDED AT SUPPLY, RETURN AND FRESH AIR DUCTS OF AHUs
13. EXECUTION OF WORK ON SITE SHOULD BE BASED ON FINAL DESIGN/SHOP DRAWINGS.
14. ISOLATION VALVE AND DRAIN VALVE TO BE PROVIDED AT END OF EACH RISER.
15. ALL AHUs CONDENSATE DRAIN SHOULD BE CONNECTED TO NEAREST DRAIN POINT.
16. TURNING VANES INSIDE ELBOW SHALL BE INSTALLED AS PER BS STANDARDS FOR SMOOTH AIR FLOW.
17. PIPES AND DUCTWORK, WHICH PASSES THROUGH NOISE SENSITIVE AREAS (SLEEPING ROOMS, CONFERENCE ROOM, THEATRES, OFFICES...ETC.) SHALL BE WRAPPED WITH AN ACOUSTICAL LAGGING MATERIAL.
18. FLEXIBLE CONNECTION SHALL BE INSTALLED AT ALL CROSSINGS OF EXPANSION JOINTS.

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HVAC INSTALLATION
Ground Floor
Drawing No. 323/01/AC/001

Status: CO
Date 11/16/20
Scale 1 : 100

Drawn OL
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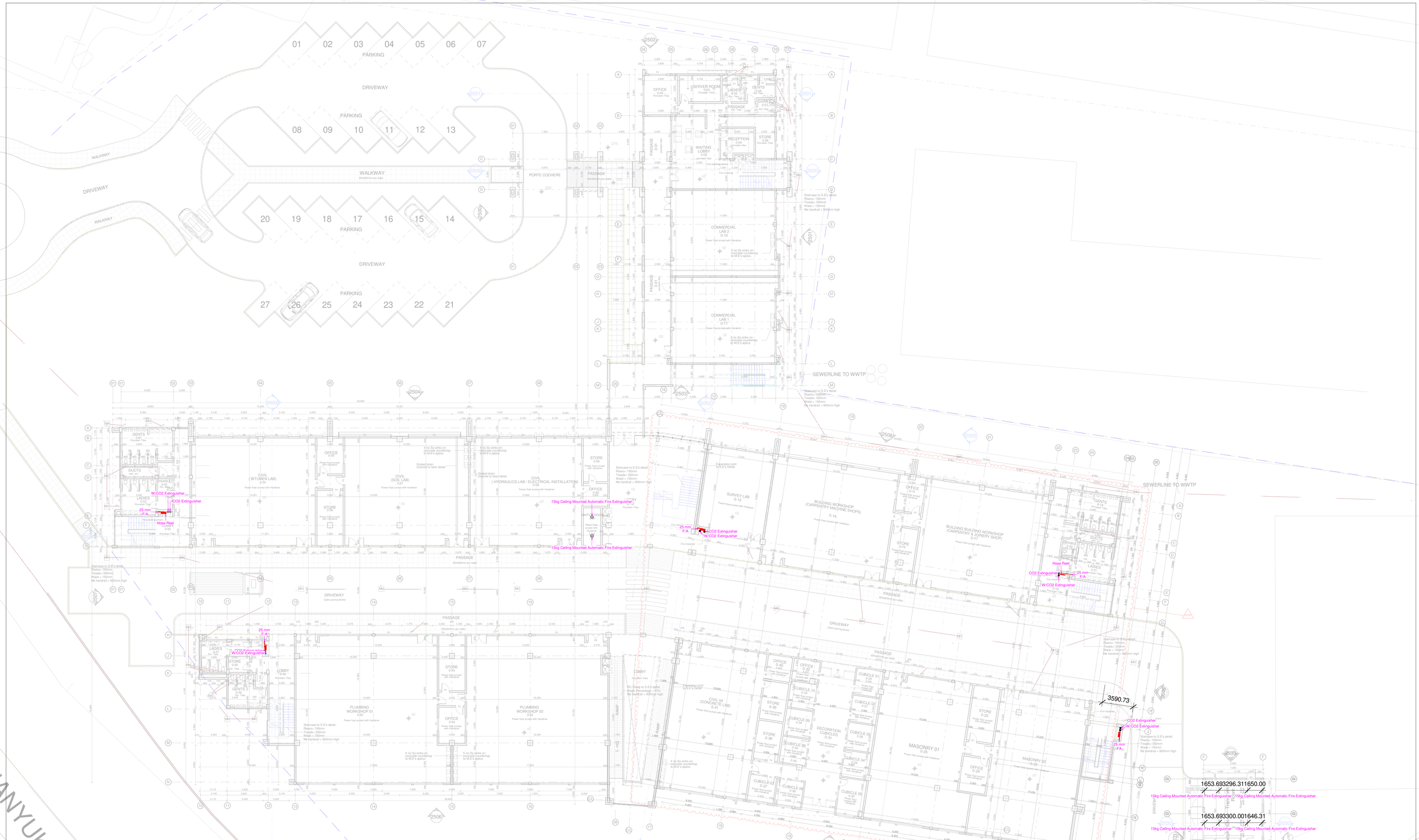

1 Ground Floor Level

1 : 200

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PROJECT: **PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE**

PUBLIC HEALTH INSTALLATION

Ground Floor

Drawing No. 323/01/FH/001

Status: CO

Date 11/10/20

Scale 1 : 200

Drawn OL

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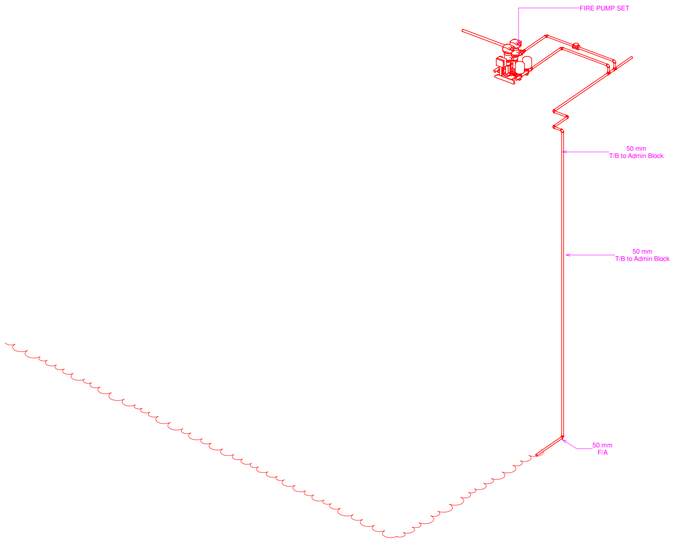

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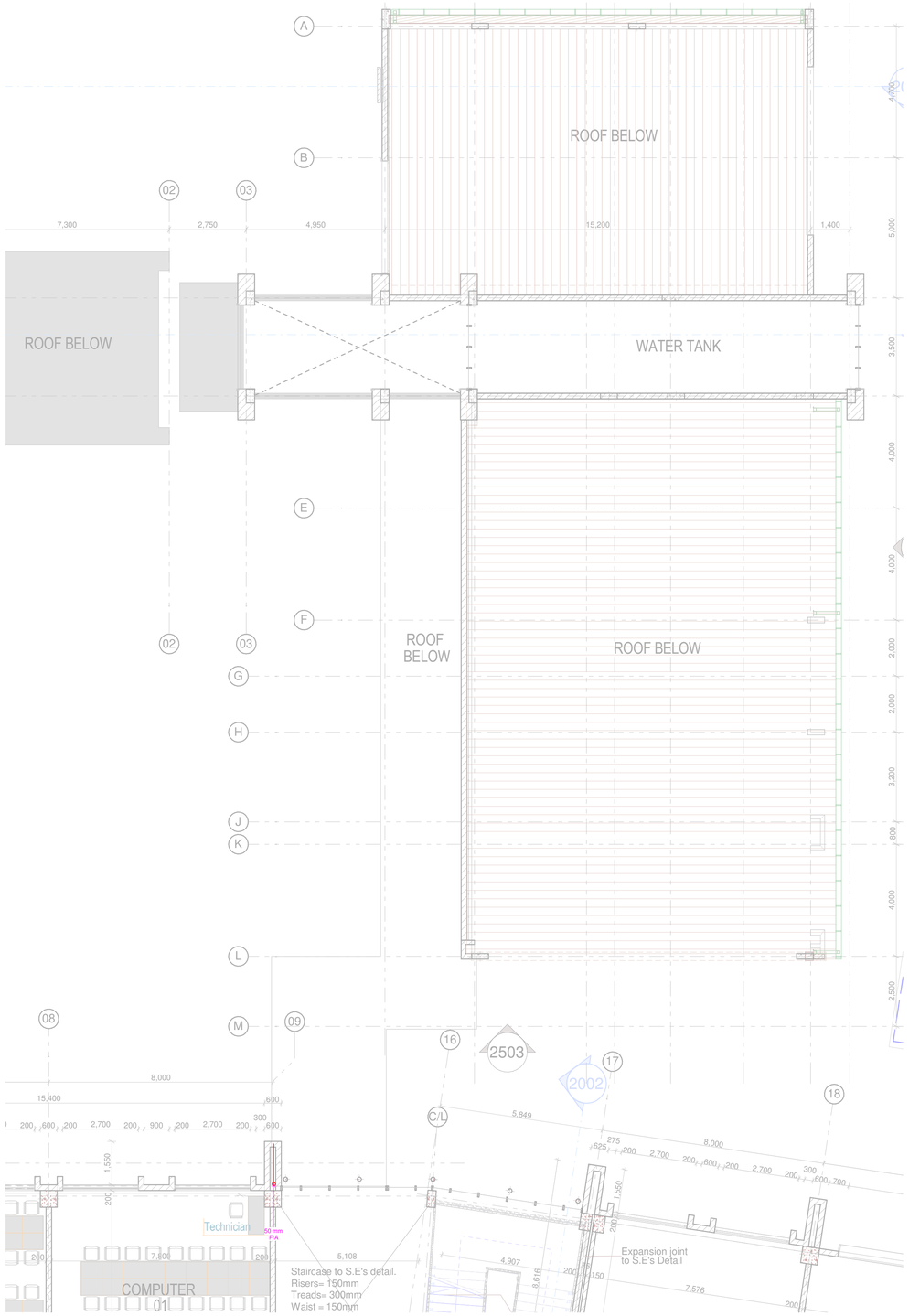

1 Admin - 1st Floor Level -1

1 : 100

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PUBLIC HEALTH INSTALLATION
Admin-1st Floor
Drawing No. 323/01/FH/002

Status: CO
Date 11/10/20
Scale 1 : 100

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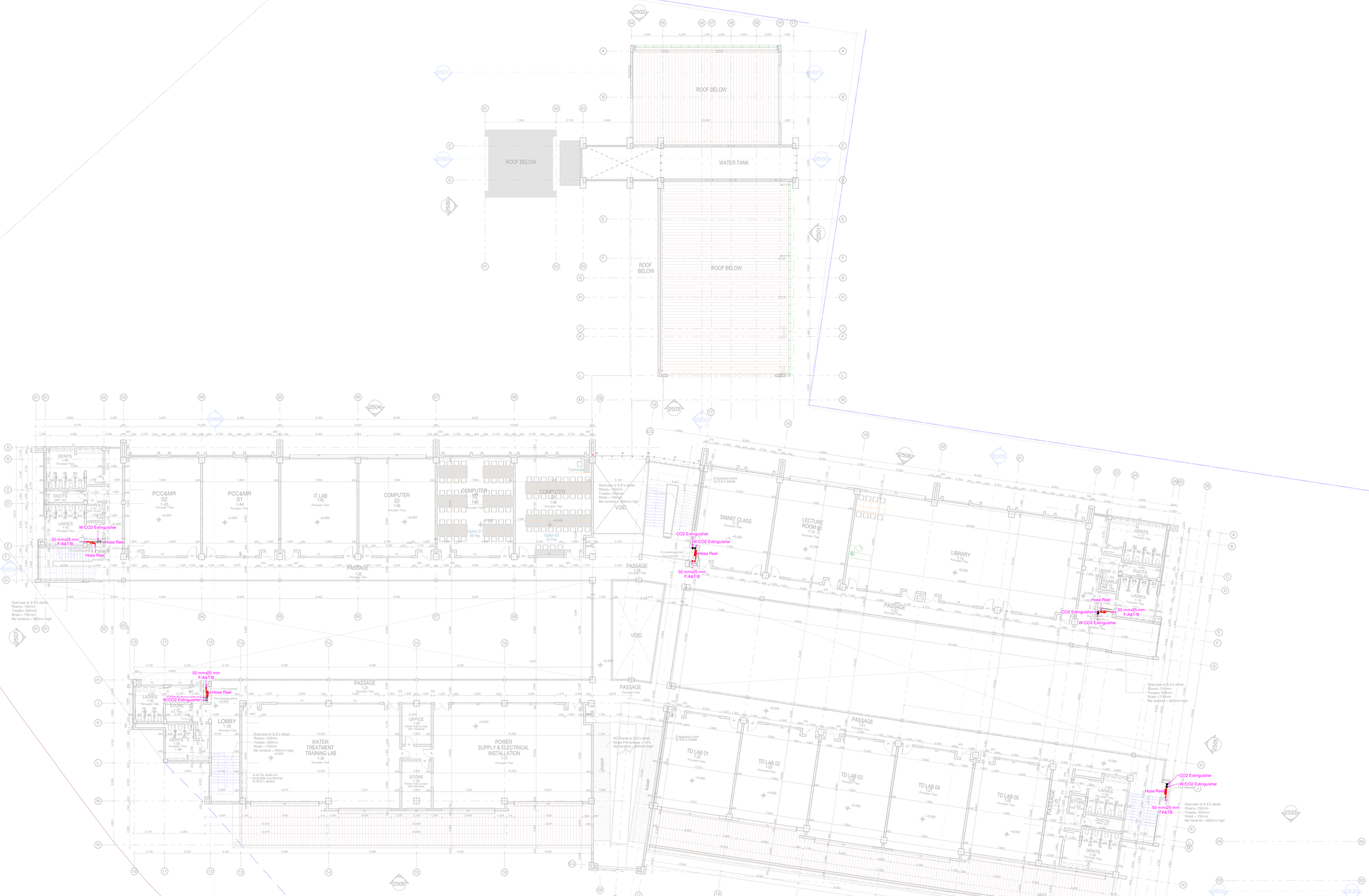

1 Classrooms - 1st Floor Level

1 : 200

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PUBLIC HEALTH INSTALLATION
1st Floor
Drawing No. 323/01/FH/003

Status: CO
Date 11/10/20
Scale 1 : 200

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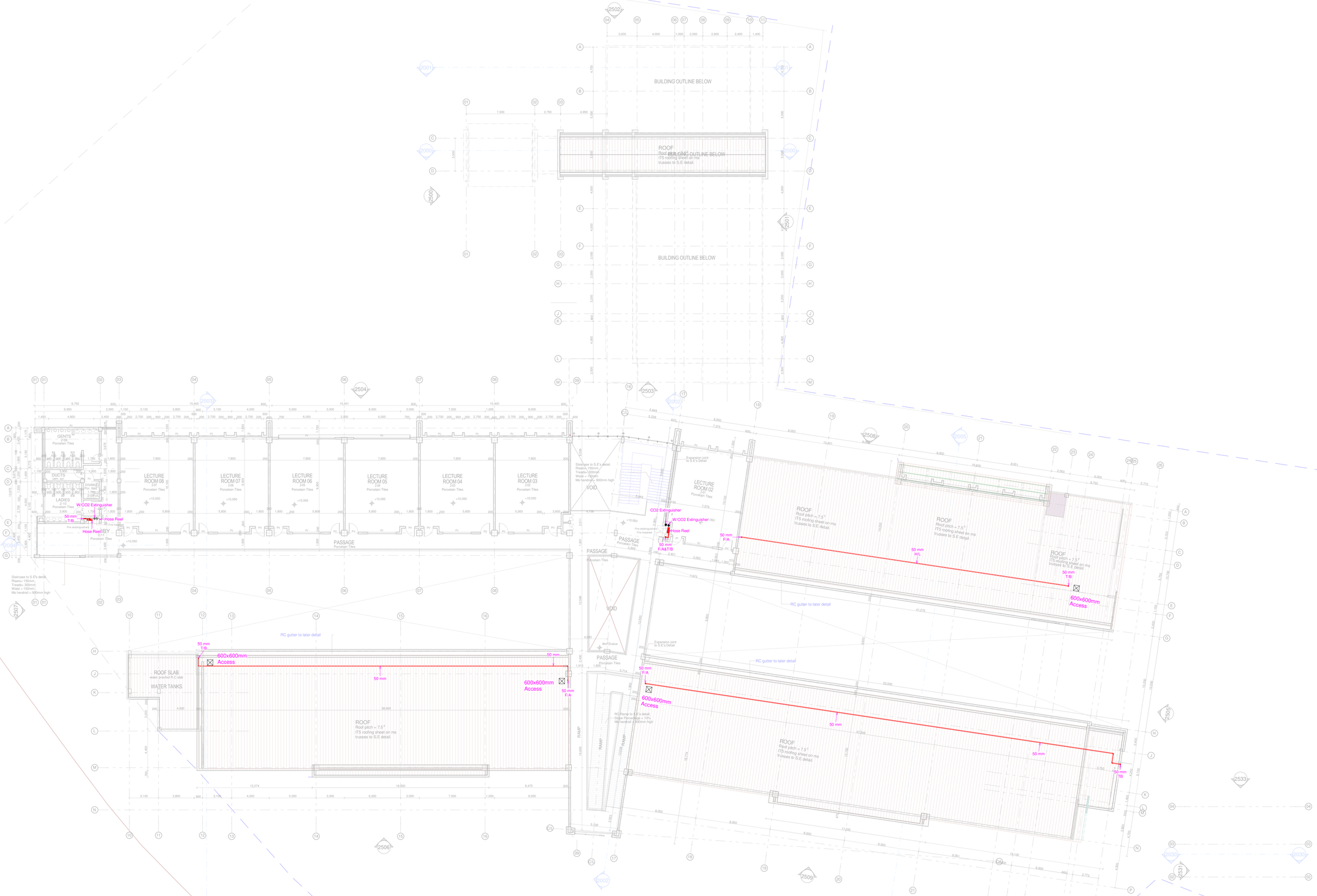

1 Classrooms - 2nd Floor Level
1 : 200

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PUBLIC HEALTH INSTALLATION
2nd Floor
Drawing No. 323/01/FH/004

Status: CO
Date 11/10/20
Scale 1 : 200

Drawn OL
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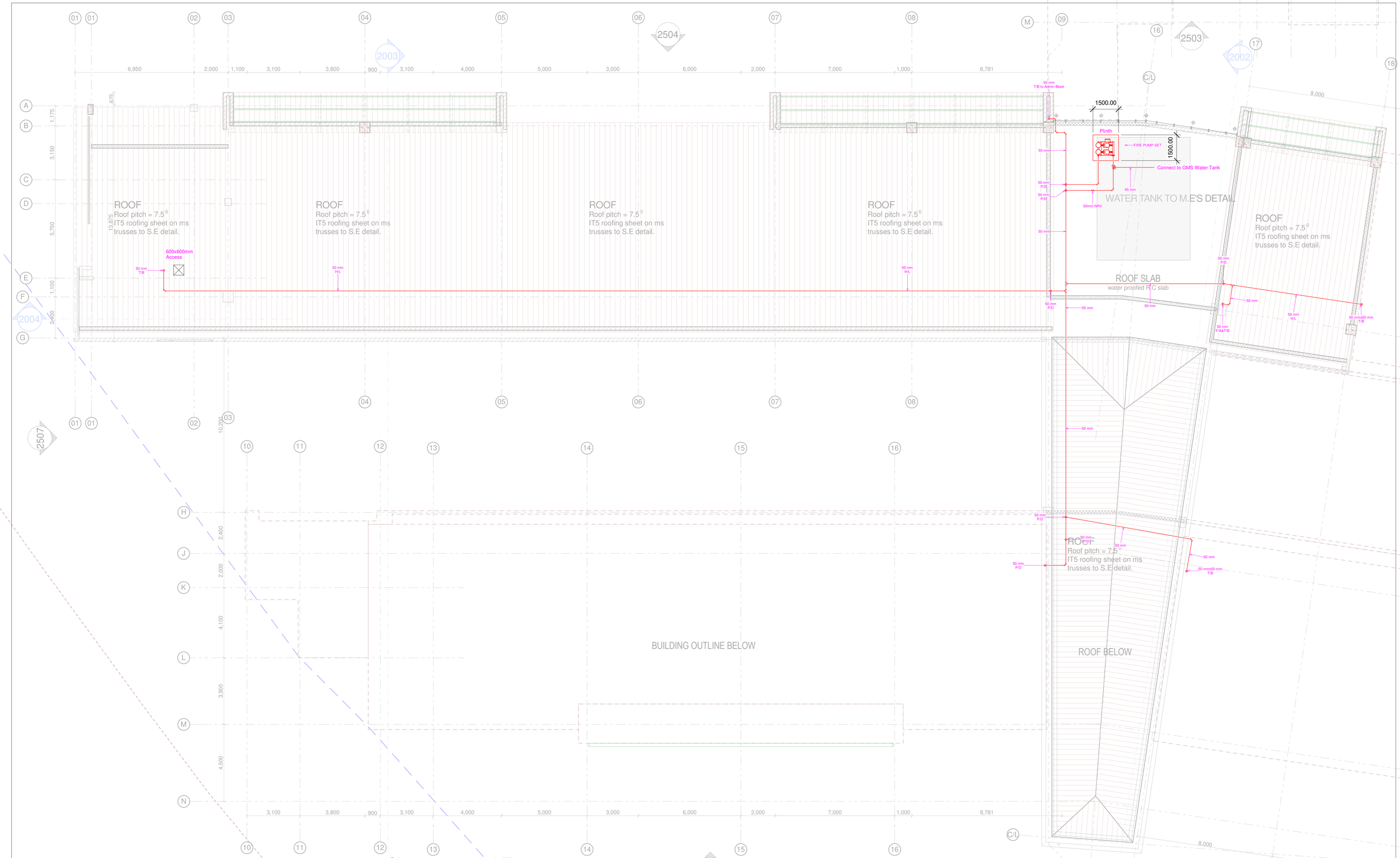

1 Classrooms - 3rd Floor
1 : 100

GENERAL NOTES:

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PUBLIC HEALTH INSTALLATION
3rd Floor
Drawing No. 323/01/FH/005

Status: CO
Date 11/10/20
Scale 1 : 100

Drawn OL
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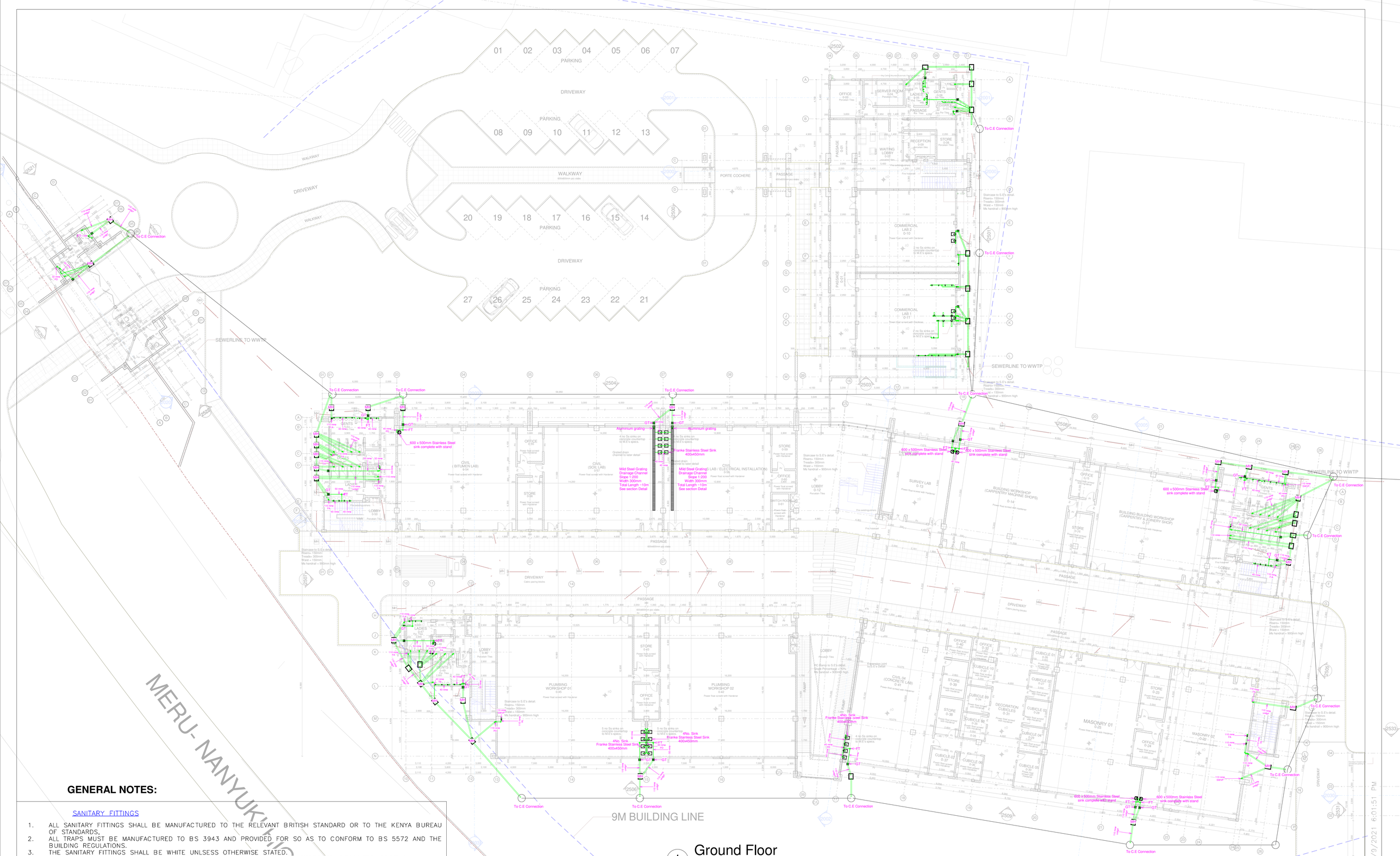

1 Ground Floor
1 : 200

GENERAL NOTES:

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PUBLIC HEALTH D INSTALLATION
Ground Floor
Drawing No. 323/01/FD/001

Status: C0
Date 11/03/20
Scale 1 : 200
Drawn OL
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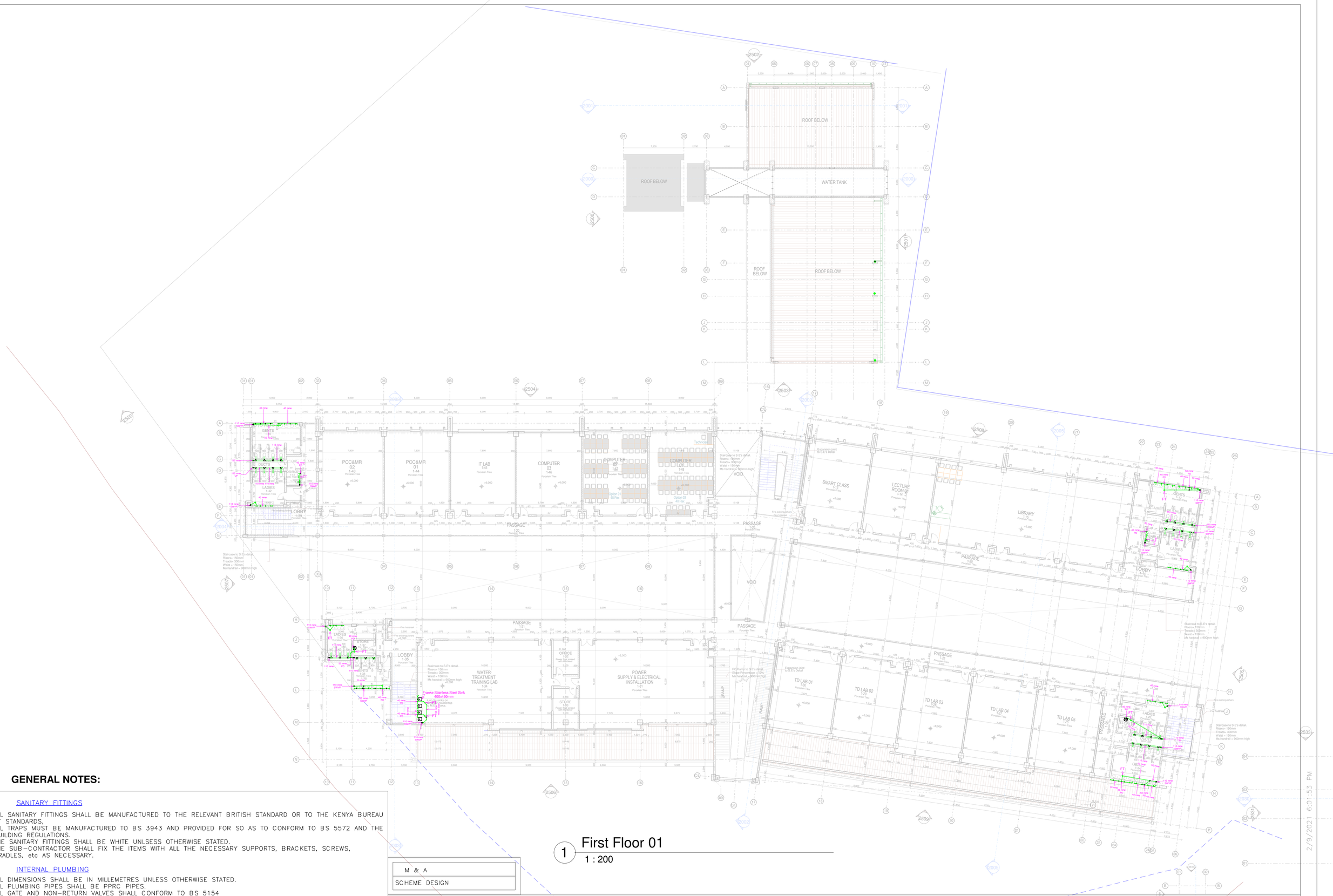

1 First Floor 01

1 : 200

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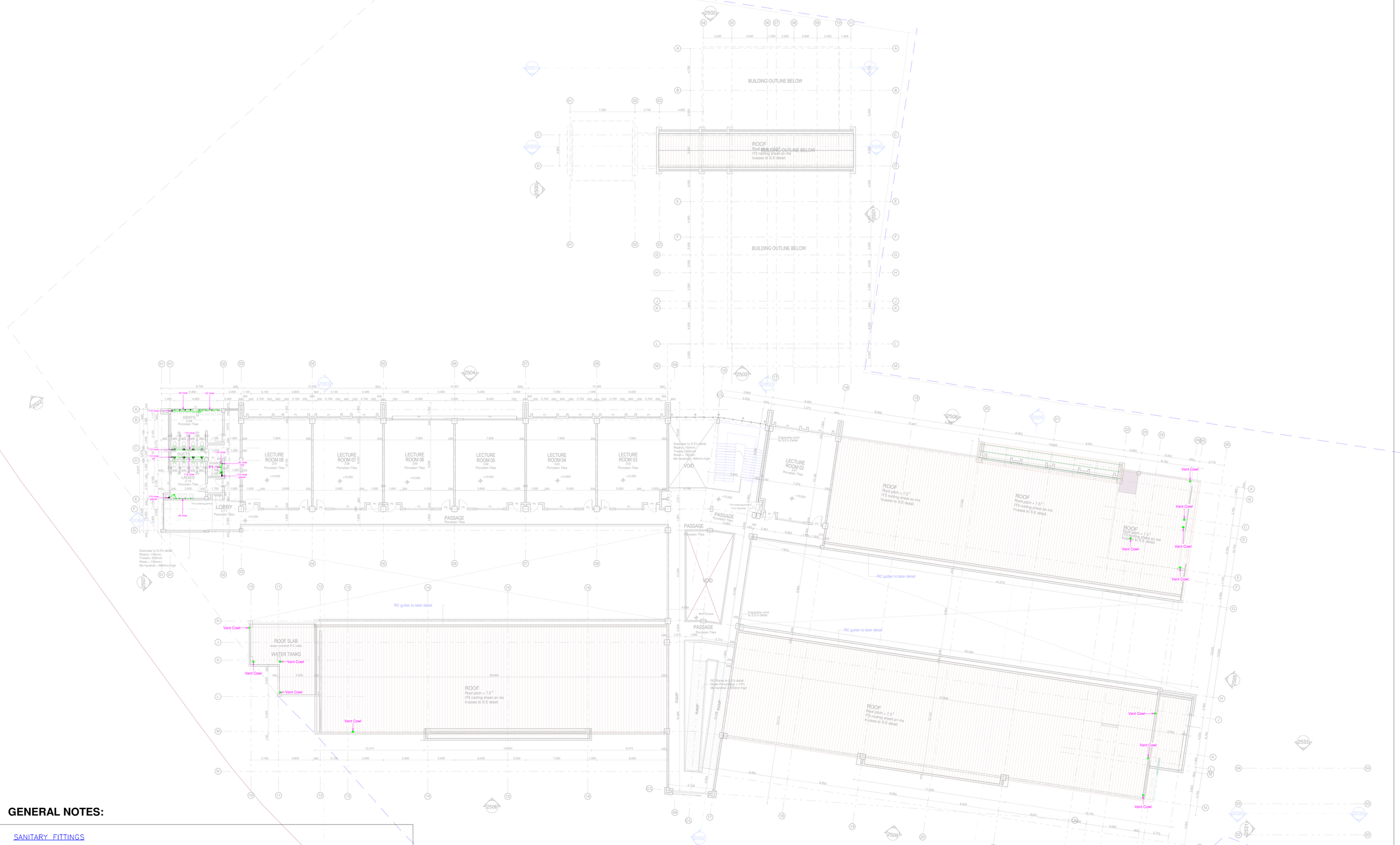
PUBLIC HEALTH INSTALLATION
1st Floor

Drawing No. 323/01/FD/002

Status: CO
Date 11/03/20
Scale 1 : 200

Drawn Author
Checked

2/9/2021 6:01:53 PM



1 Second Floor

1 : 200

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PUBLIC HEALTH INSTALLATION
2nd Floor

Drawing No. 323/01/FD/003

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Drawn Author
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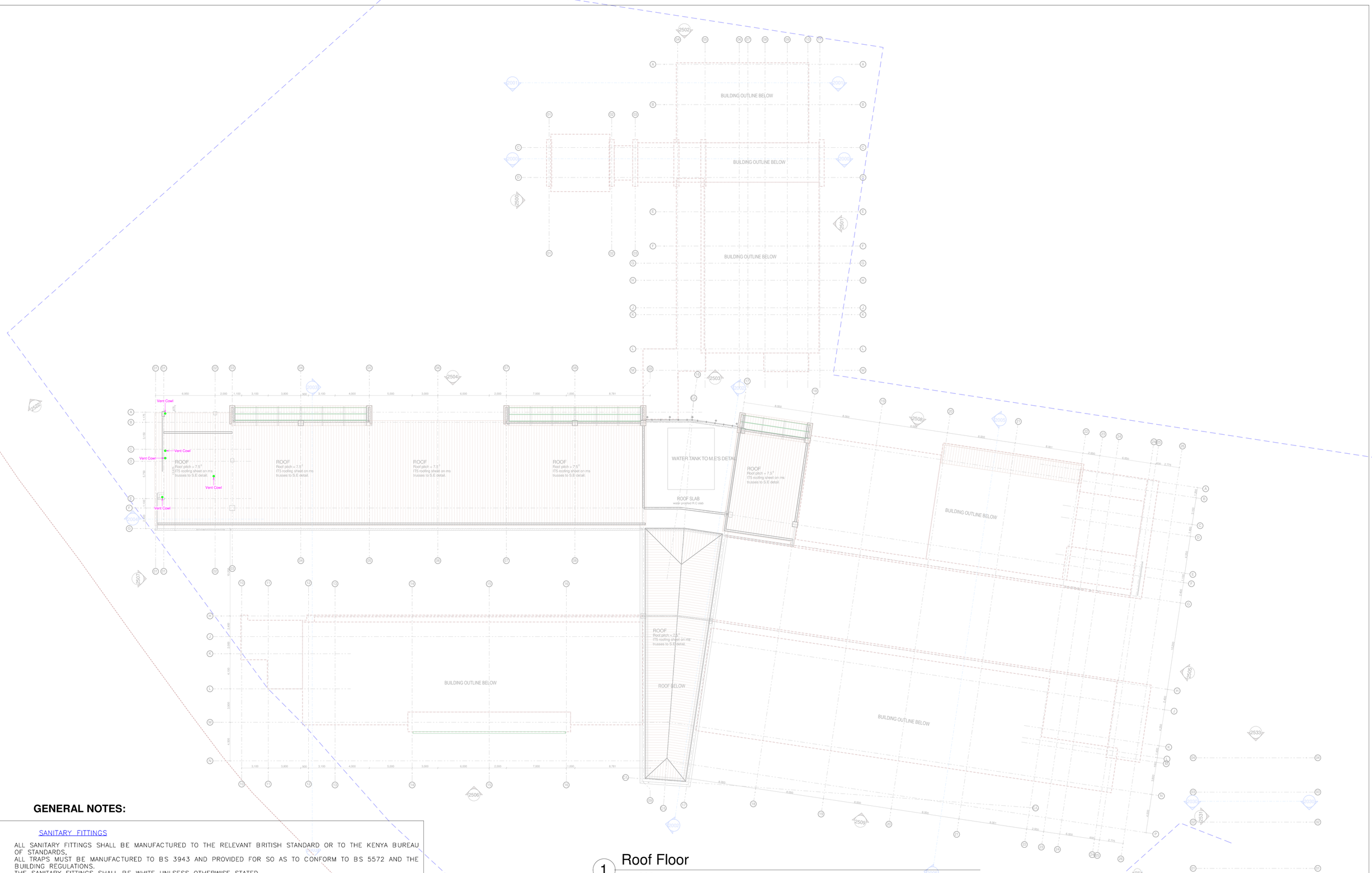

1 Roof Floor

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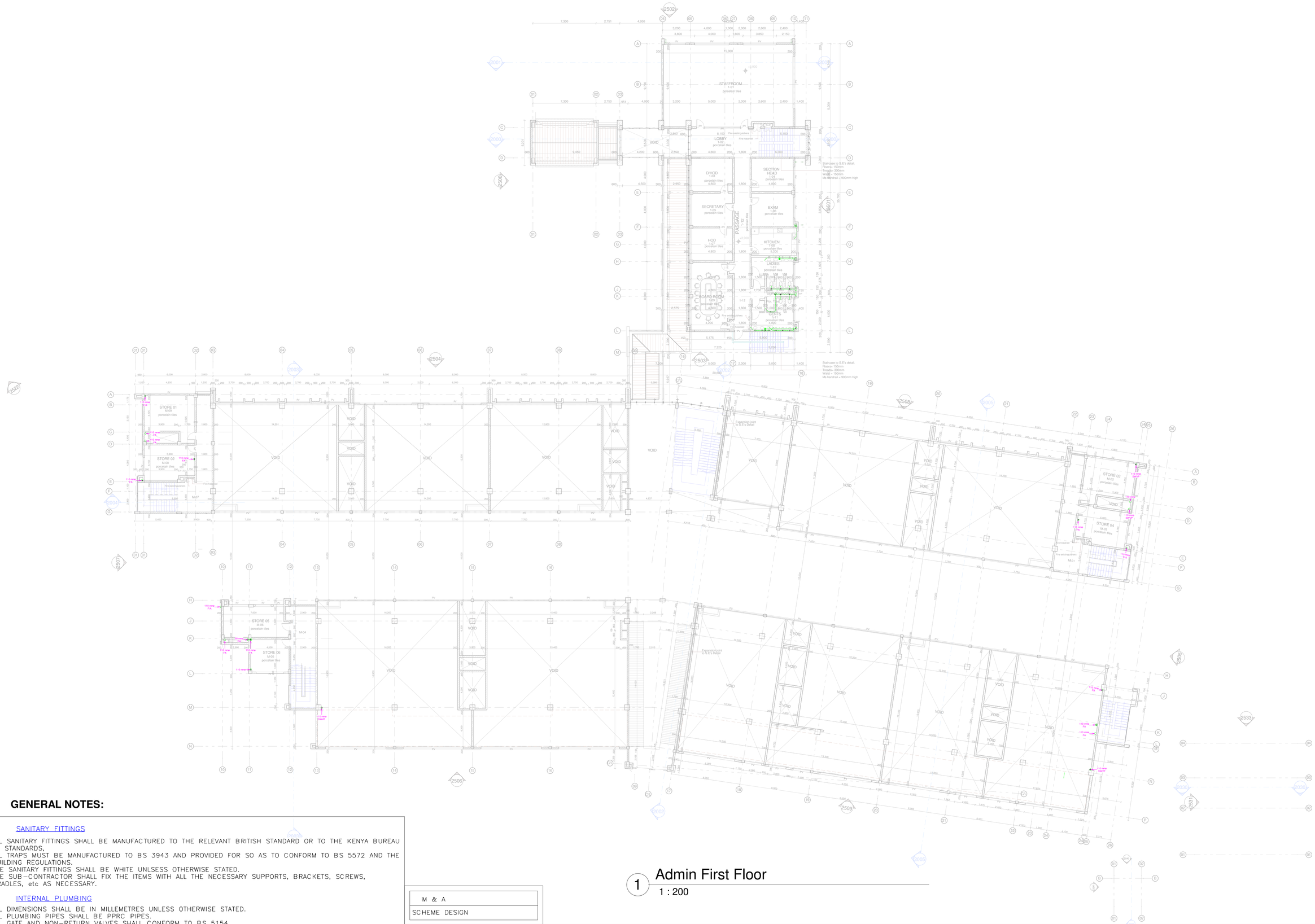
PUBLIC HEALTH INSTALLATION
Roof Floor
Drawing No. 323/01/FD/004

Status: CO
Date 11/03/20
Scale 1 : 200

Drawn Author
Checked

2/9/2021 6:01:58 PM



GENERAL NOTES:

SANITARY FITTINGS

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3. THE SANITARY FITTINGS SHALL BE WHITE UNLSESS OTHERWISE STATED.
4. THE SUB-CONTRACTOR SHALL FIX THE ITEMS WITH ALL THE NECESSARY SUPPORTS, BRACKETS, SCREWS, CRADLES, etc AS NECESSARY.

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1 Admin First Floor
1 : 200

M & A
SCHEME DESIGN

MAITERI & ASSOCIATES
Building Services Consulting Engineers
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ARCHITECT
SYMBION

CLIENT
THE MERU NATIONAL POLYTECHNIC

Structural/Civil Engineers
MERK ASSOCIATES LIMITED
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PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

PUBLIC HEALTH INSTALLATION
Mezzanine Floor
Drawing No. 323/01/FD/005

Status: C0
Date 02/09/21
Scale 1 : 200

Drawn OL
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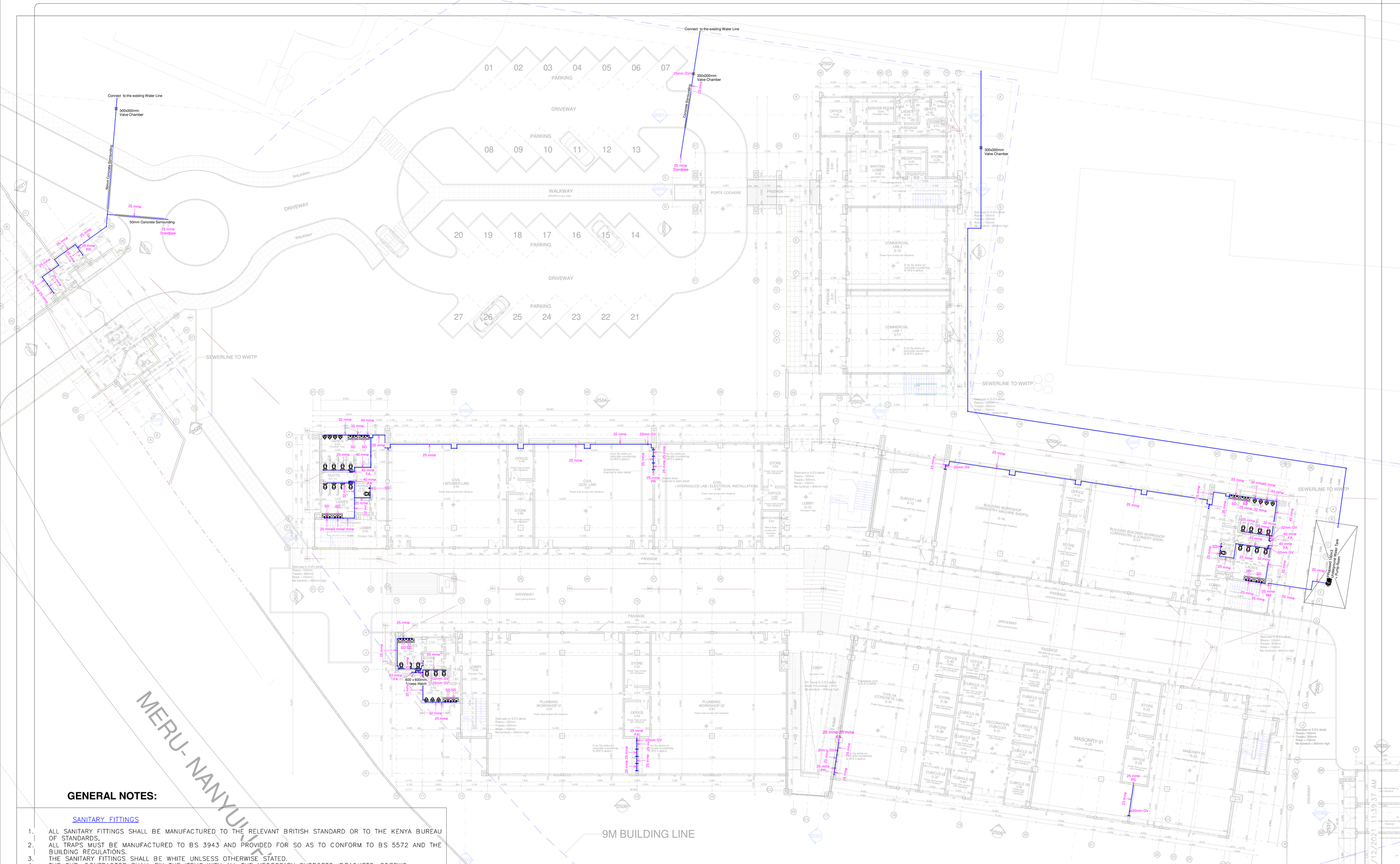

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1 Ground Floor Level
1 : 200

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ARCHITECT: SYMBION

CLIENT: THE MERU NATIONAL POLYTECHNIC

Structural/Civil Engineers: MERK ASSOCIATES LIMITED — More Than Just Engineering!

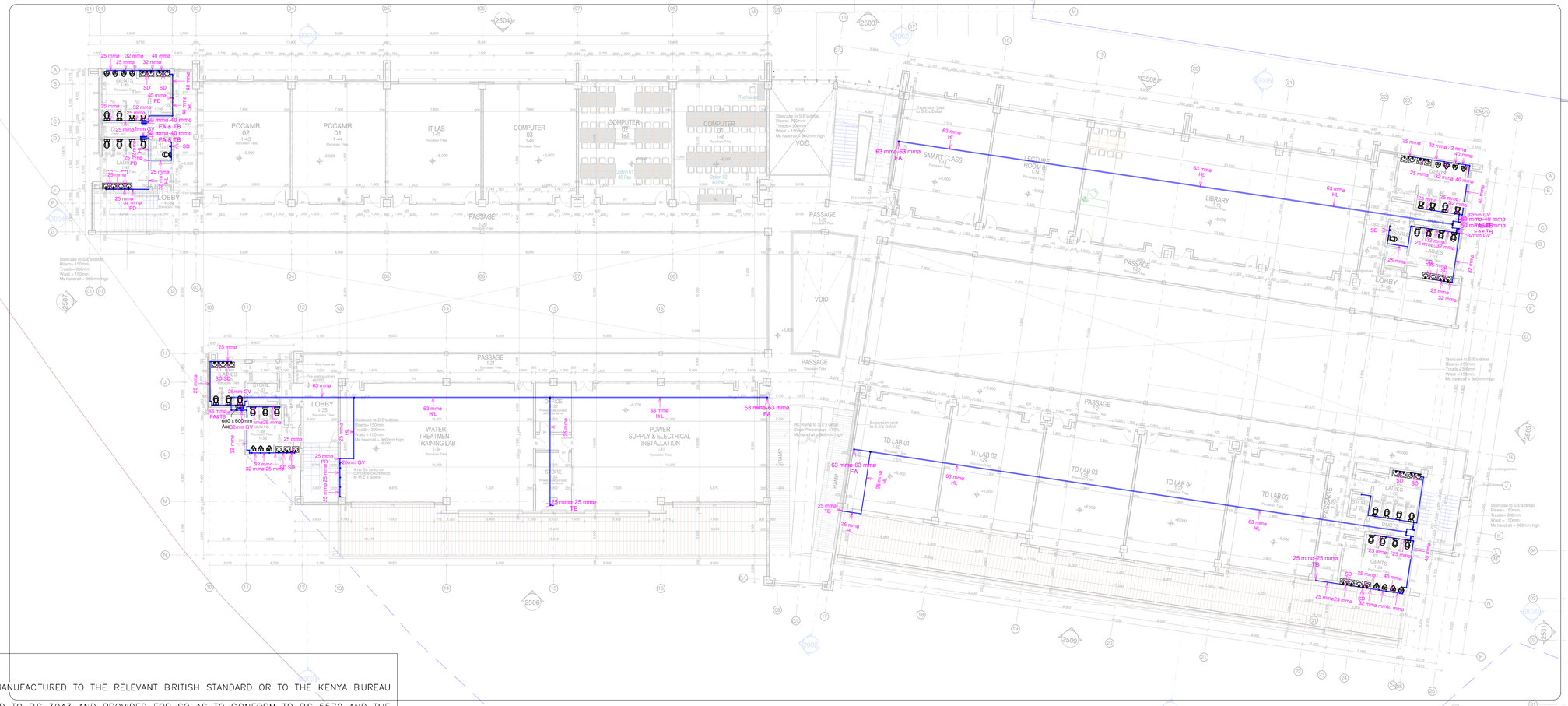
PROJECT: EAST AFRICA SKILLS FOR TRANSFORMATIONAL & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

Ground Floor

Drawing No. 323/01/CW/001

Status: CO
Date 11/03/20
Scale 1 : 200

Drawn Author
Checked



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M & A

DETAIL DESIGN

1 Classrooms - 1st Floor Level

1 : 200

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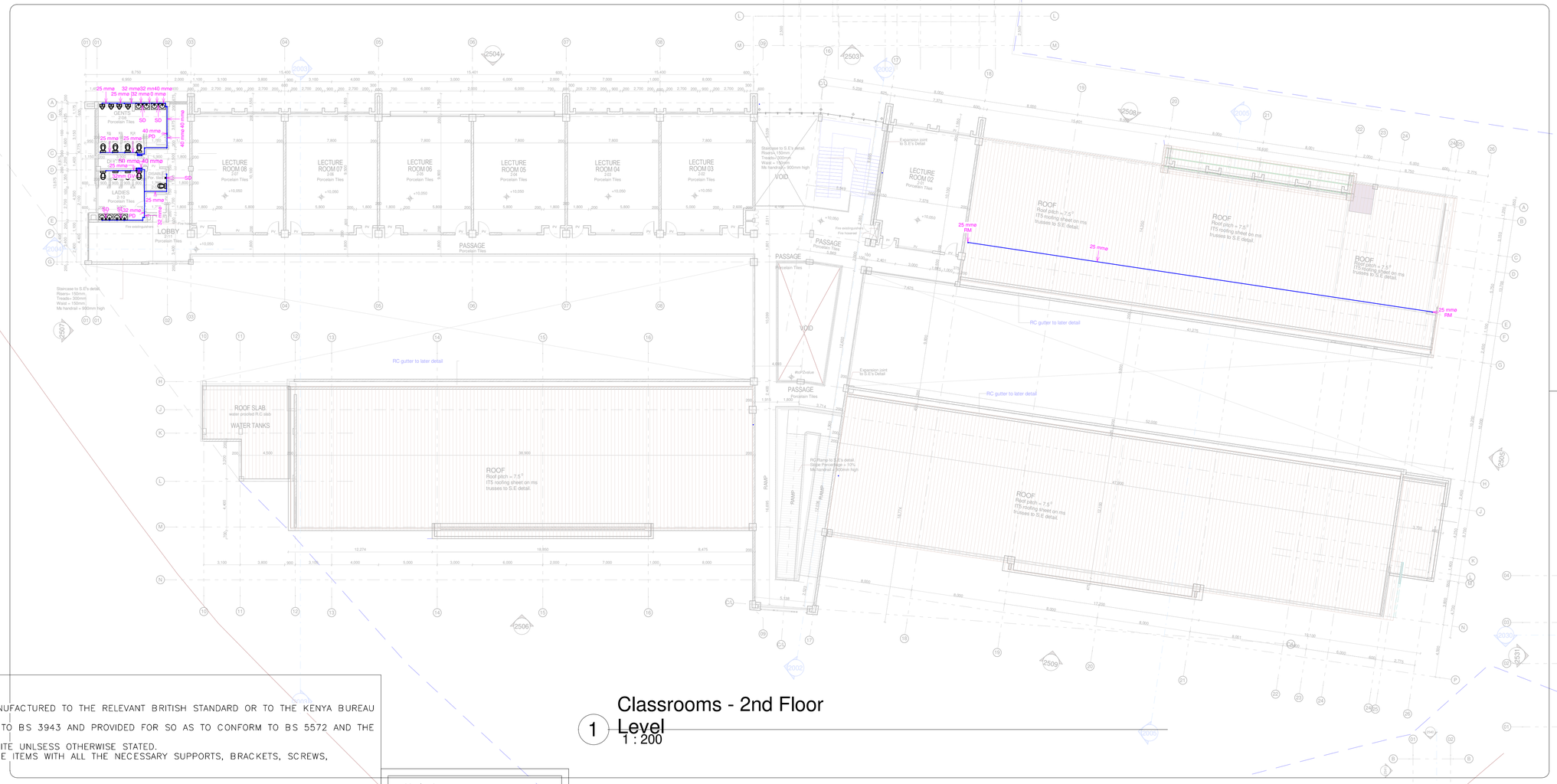
PUBLIC HEALTH INSTALLATION
1st Floor
Drawing No. 323/01/CW/002

Status: CO
Date 11/03/20
Scale 1 : 200

Drawn Author
Checked

2/12/2021 11:39:39 AM



1 Classrooms - 2nd Floor Level
1 : 200

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PUBLIC HEALTH INSTALLATION
2nd Floor
Drawing No. 323/01/CW/003

Status: C0
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Scale 1 : 200

Drawn Author
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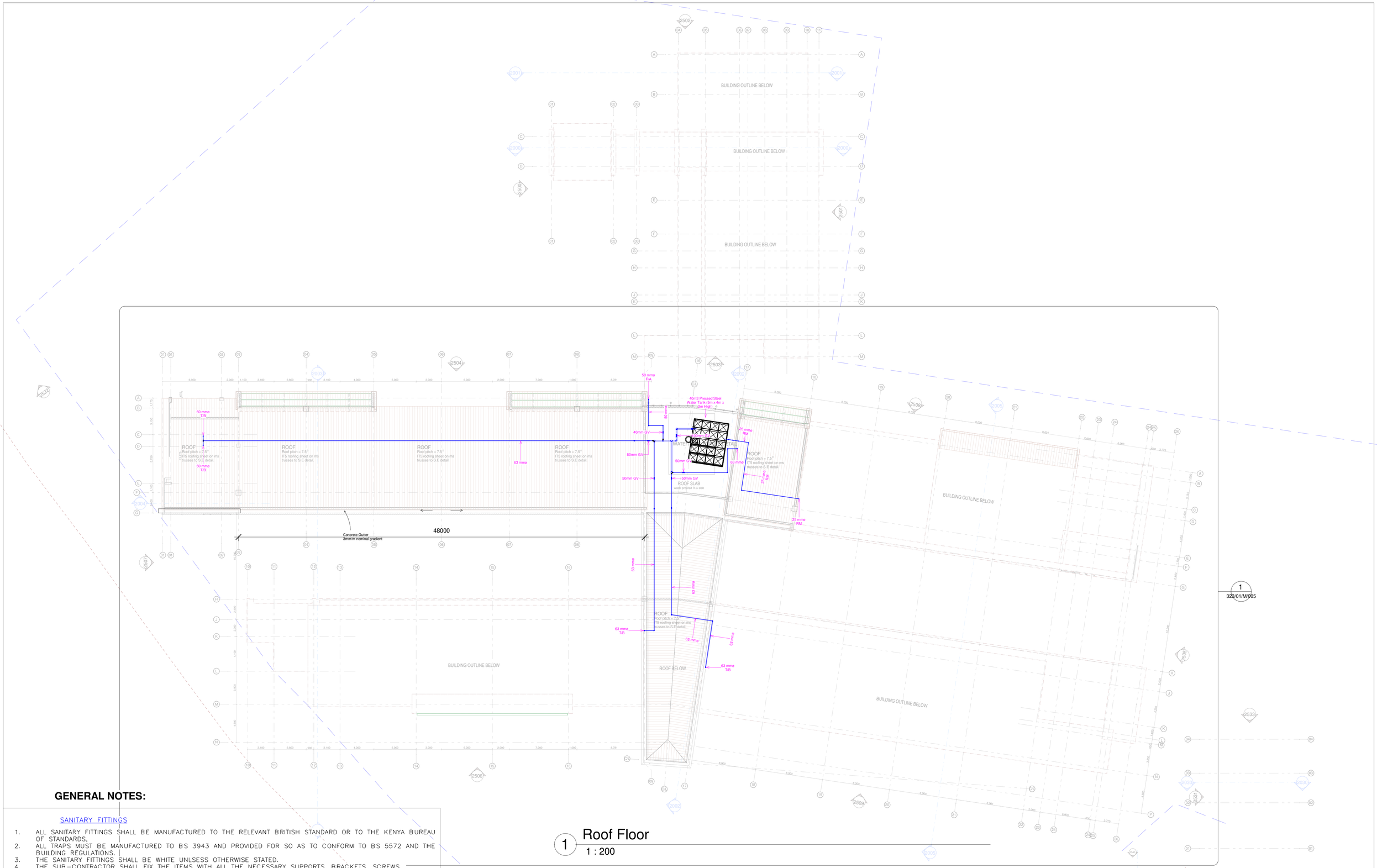

1 Roof Floor

1 : 200

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PUBLIC HEALTH INSTALLATION
3rd Floor
Drawing No. 323/01/CW/004

Status: C0
Date 11/03/20
Scale 1 : 200

Drawn Author
Checked

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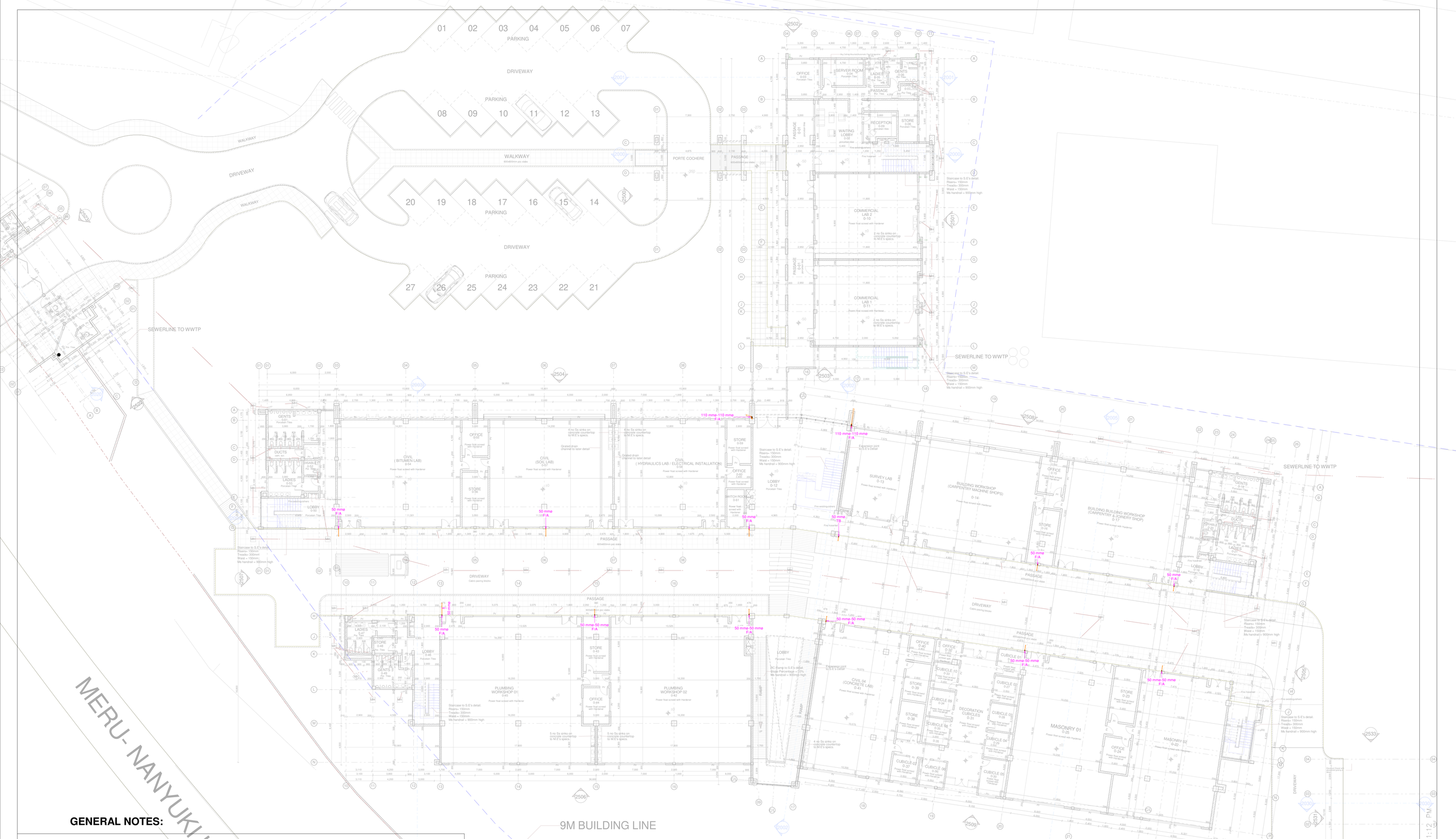

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PUBLIC HEALTH INSTALLATION
Ground Floor
Drawing No. 323/01/RW/001

Status: C0
Date 12/01/20
Scale 1 : 200

Drawn Author
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1 First Floor 01

1 : 200

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PROJECT: EAST AFRICA SKILLS FOR TRANSFORMATIONAL & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic

PUBLIC HEALTH INSTALLATION
1st Floor
Drawing No. 323/01/RW/002

Status: CO
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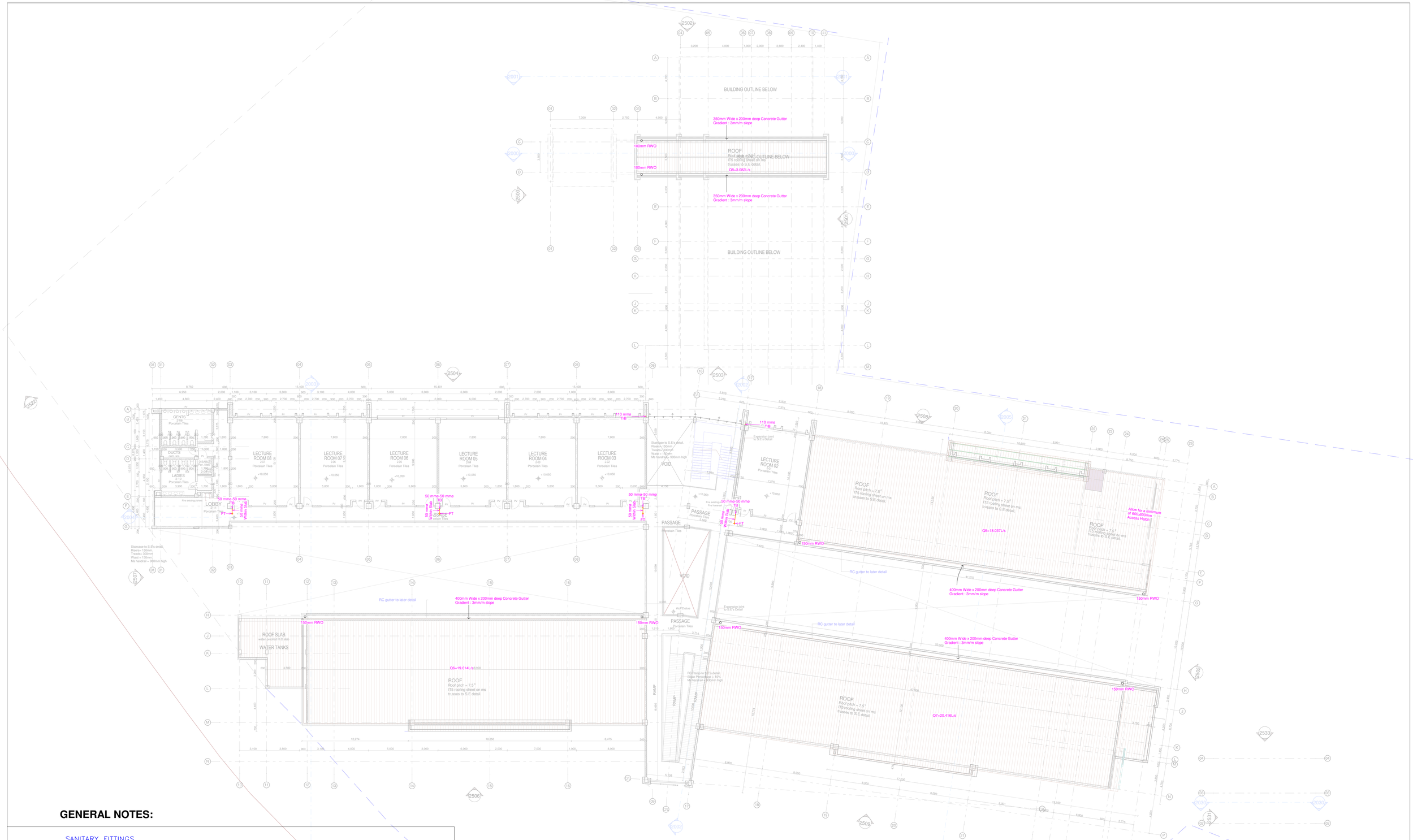

1 Second Floor

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PUBLIC HEALTH INSTALLATION

2nd Floor

Drawing No. 323/01/RW/003

Status: C0

Date 12/01/20

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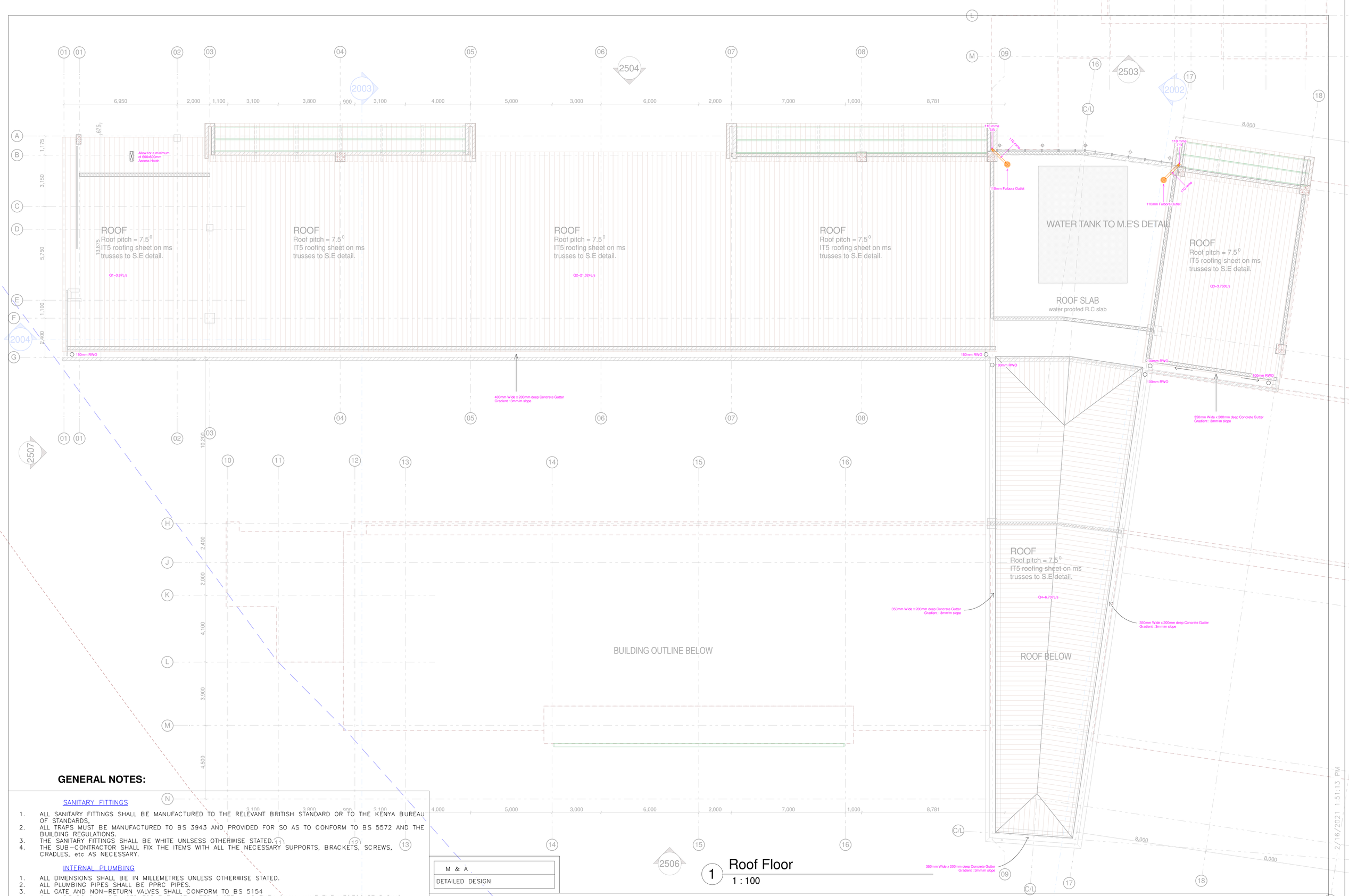

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M & A

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1 Roof Floor

1 : 100

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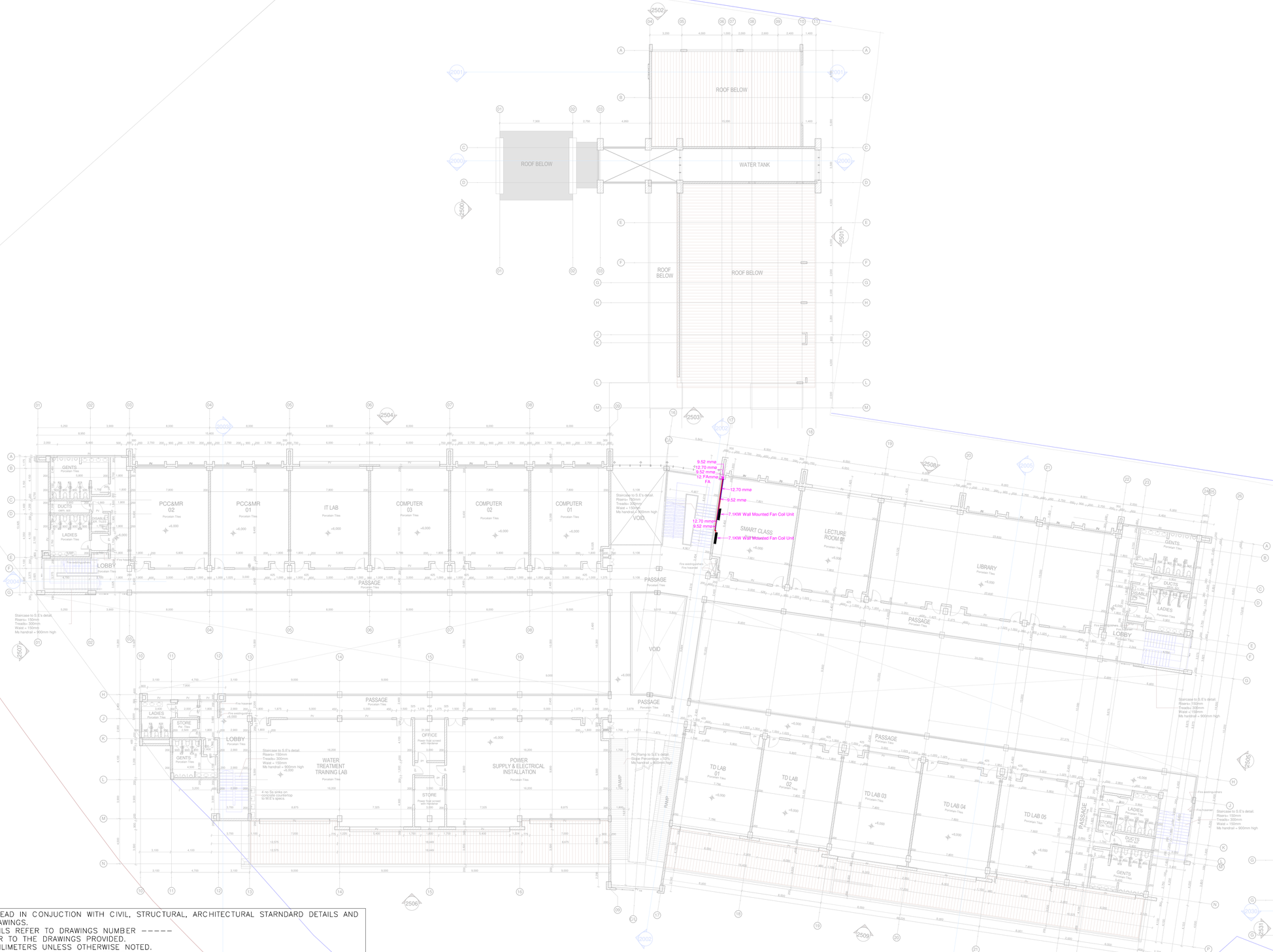

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2. FOR MISCELLANEOUS DETAILS REFER TO DRAWINGS NUMBER -----
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5. PIPE SIZES SHOWN IN DRAWING ARE NOMINAL DIAMETERS.
6. DUCTWORK CROSSING FIRE RATED WALLS 2 HOURS OR MORE FIRE RATING SHOULD BE EQUIPPED WITH FIRE DAMPERS.
7. ALL RETURN/FRESH AIR DUCT OPENINGS SHOULD BE COMPLETE WITH VOLUME DAMPER & ALUMINIUM WIRE MESH SCREEN.
8. DUCT BRANCHES TO BE PROVIDED WITH VD & FD AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT.
9. EACH HVAC TERMINAL UNIT TO BE PROVIDED THERMOSTAT WHETHER SHOWN ON THE DRAWINGS OR NOT. EXACT LOCATION OF THE THERMOSTAT TO BE OBTAINED FROM THE SHOP DRAWING PLANS.
10. ALL TERMINAL UNITS (VAV) TO BE PROVIDED WITH THERMOSTAT.
11. ALL MECHANICAL SHAFTS AND SERVICES TO BE PROVIDED WITH MAINTENANCE ACCESS.
12. MOTORIZED VOLUME DAMPERS TO BE PROVIDED AT SUPPLY, RETURN AND FRESH AIR DUCTS OF AHUs
13. EXECUTION OF WORK ON SITE SHOULD BE BASED ON FINAL DESIGN/SHOP DRAWINGS.
14. ISOLATION VALVE AND DRAIN VALVE TO BE PROVIDED AT END OF EACH RISER.
15. ALL AHUs CONDENSATE DRAIN SHOULD BE CONNECTED TO NEAREST DRAIN POINT.
16. TURNING VANES INSIDE ELBOW SHALL BE INSTALLED AS PER BS STANDARDS FOR SMOOTH AIR FLOW.
17. PIPES AND DUCTWORK, WHICH PASSES THROUGH NOISE SENSITIVE AREAS (SLEEPING ROOMS, CONFERENCE ROOM, THEATRES, OFFICES...ETC.) SHALL BE WRAPPED WITH AN ACOUSTICAL LAGGING MATERIAL.
18. FLEXIBLE CONNECTION SHALL BE INSTALLED AT ALL CROSSINGS OF EXPANSION JOINTS.

1 Classrooms - 1st Floor Level

1 : 200

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HVAC INSTALLATION
First Floor
Drawing No. 323/01/AC/002

Status: CO
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5. PIPE SIZES SHOWN IN DRAWING ARE NOMINAL DIAMETERS.
6. DUCTWORK CROSSING FIRE RATED WALLS 2 HOURS OR MORE FIRE RATING SHOULD BE EQUIPPED WITH FIRE DAMPERS.
7. ALL RETURN/FRESH AIR DUCT OPENINGS SHOULD BE COMPLETE WITH VOLUME DAMPER & ALUMINIUM WIRE MESH SCREEN.
8. DUCT BRANCHES TO BE PROVIDED WITH VD & FD AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT.
9. EACH HVAC TERMINAL UNIT TO BE PROVIDED THERMOSTAT WHETHER SHOWN ON THE DRAWINGS OR NOT. EXACT LOCATION OF THE THERMOSTAT TO BE OBTAINED FROM THE SHOP DRAWING PLANS.
10. ALL TERMINAL UNITS (VAV) TO BE PROVIDED WITH THERMOSTAT.
11. ALL MECHANICAL SHAFTS AND SERVICES TO BE PROVIDED WITH MAINTENANCE ACCESS.
12. MOTORIZED VOLUME DAMPERS TO BE PROVIDED AT SUPPLY, RETURN AND FRESH AIR DUCTS OF AHUs
13. EXECUTION OF WORK ON SITE SHOULD BE BASED ON FINAL DESIGN/SHOP DRAWINGS.
14. ISOLATION VALVE AND DRAIN VALVE TO BE PROVIDED AT END OF EACH RISER.
15. ALL AHUs CONDENSATE DRAIN SHOULD BE CONNECTED TO NEAREST DRAIN POINT.
16. TURNING VANES INSIDE ELBOW SHALL BE INSTALLED AS PER BS STANDARDS FOR SMOOTH AIR FLOW.
17. PIPES AND DUCTWORK, WHICH PASSES THROUGH NOISE SENSITIVE AREAS (SLEEPING ROOMS, CONFERENCE ROOM, THEATRES, OFFICES...ETC.) SHALL BE WRAPPED WITH AN ACOUSTICAL LAGGING MATERIAL.
18. FLEXIBLE CONNECTION SHALL BE INSTALLED AT ALL CROSSINGS OF EXPANSION JOINTS.

M & A
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Structural/Civil Engineers
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PROJECT
PROPOSED MNP REGIONAL CENTRE OF EXCELLENCE

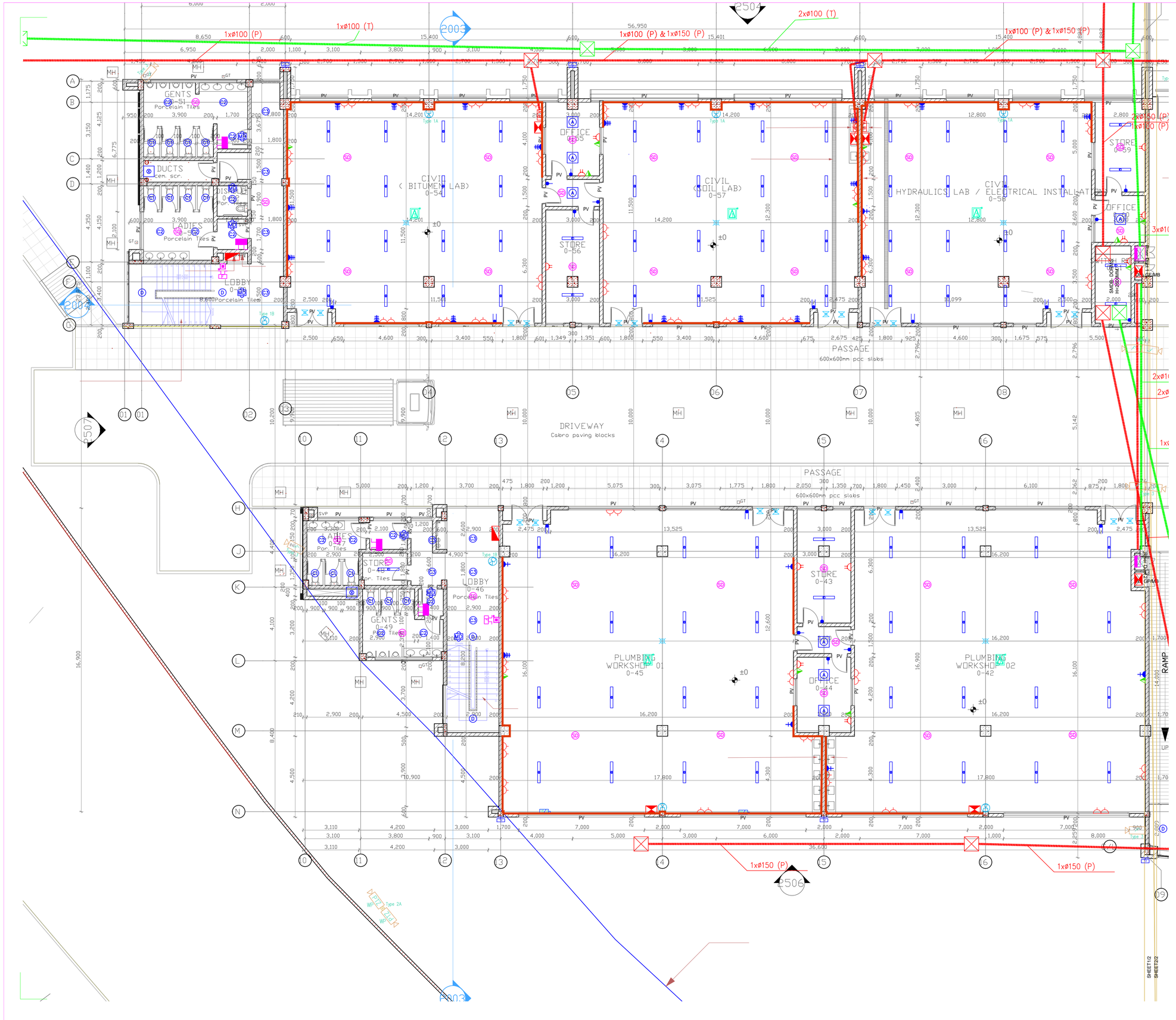
HVAC INSTALLATION
Roof
Drawing No. 323/01/AC/003

Status: CO
Date 02/12/21
Scale 1 : 200

Drawn OL
Checked

2/12/2021 12:32:19 PM

ELECTRICAL DRAWINGS



GENERAL NOTES:

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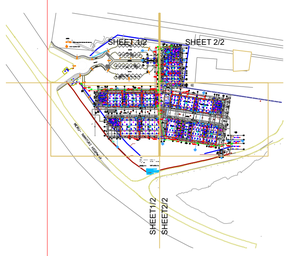

REV	DATE	DESCRIPTION

REVISIONS

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MAIN BLOCK & ADMINISTRATION BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - GROUND FLOOR

Drawing No.	Status
MA / 323/01/ E-1-1	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T

GENERAL NOTES:

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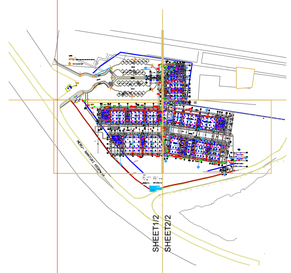

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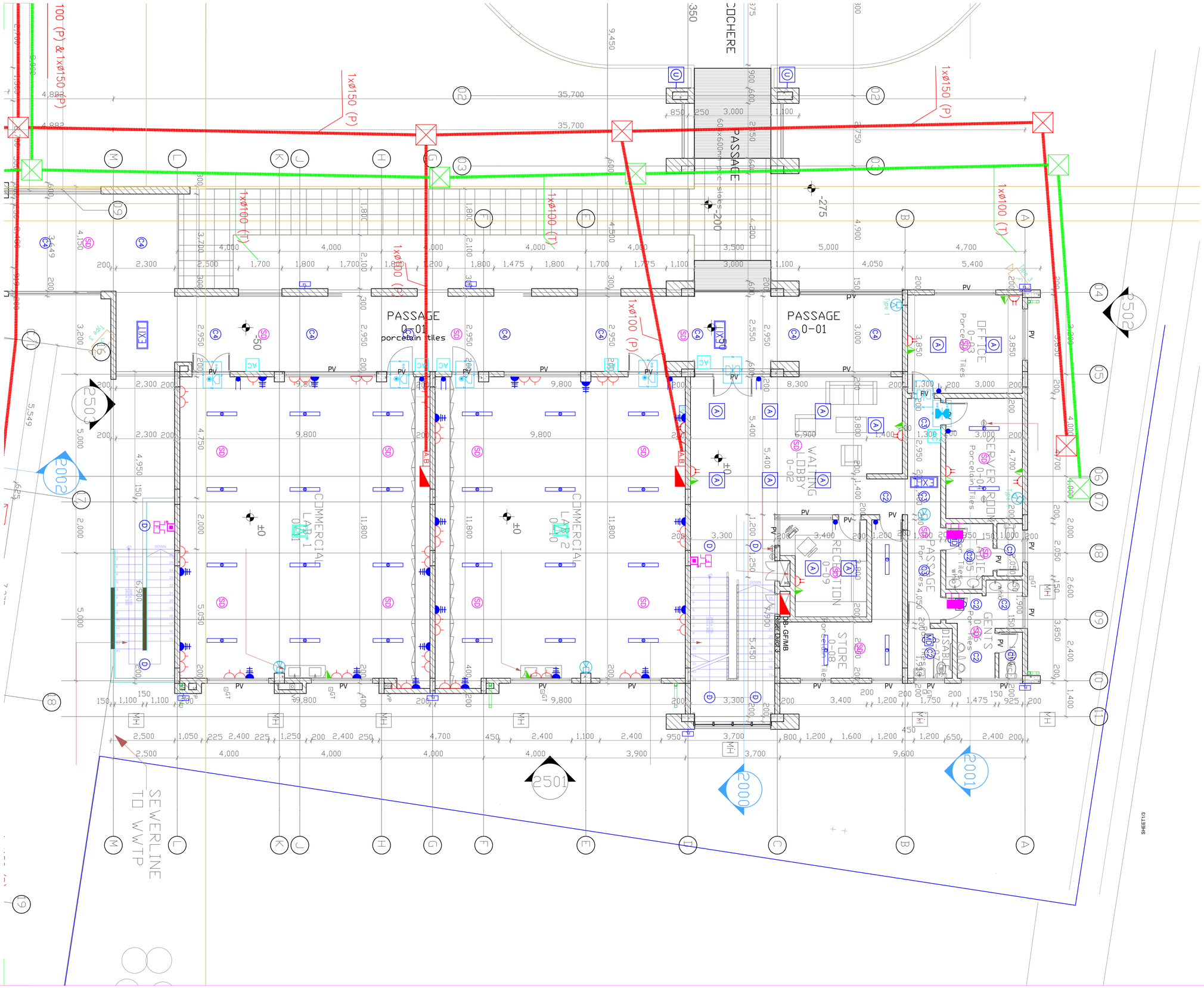
MAIN BLOCK & ADMINISTRATION BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - GROUND FLOOR

Drawing No.			Status
MA / 323/01/ E-1-2			TO
Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T



GENERAL NOTES:

REV	DATE	DESCRIPTION

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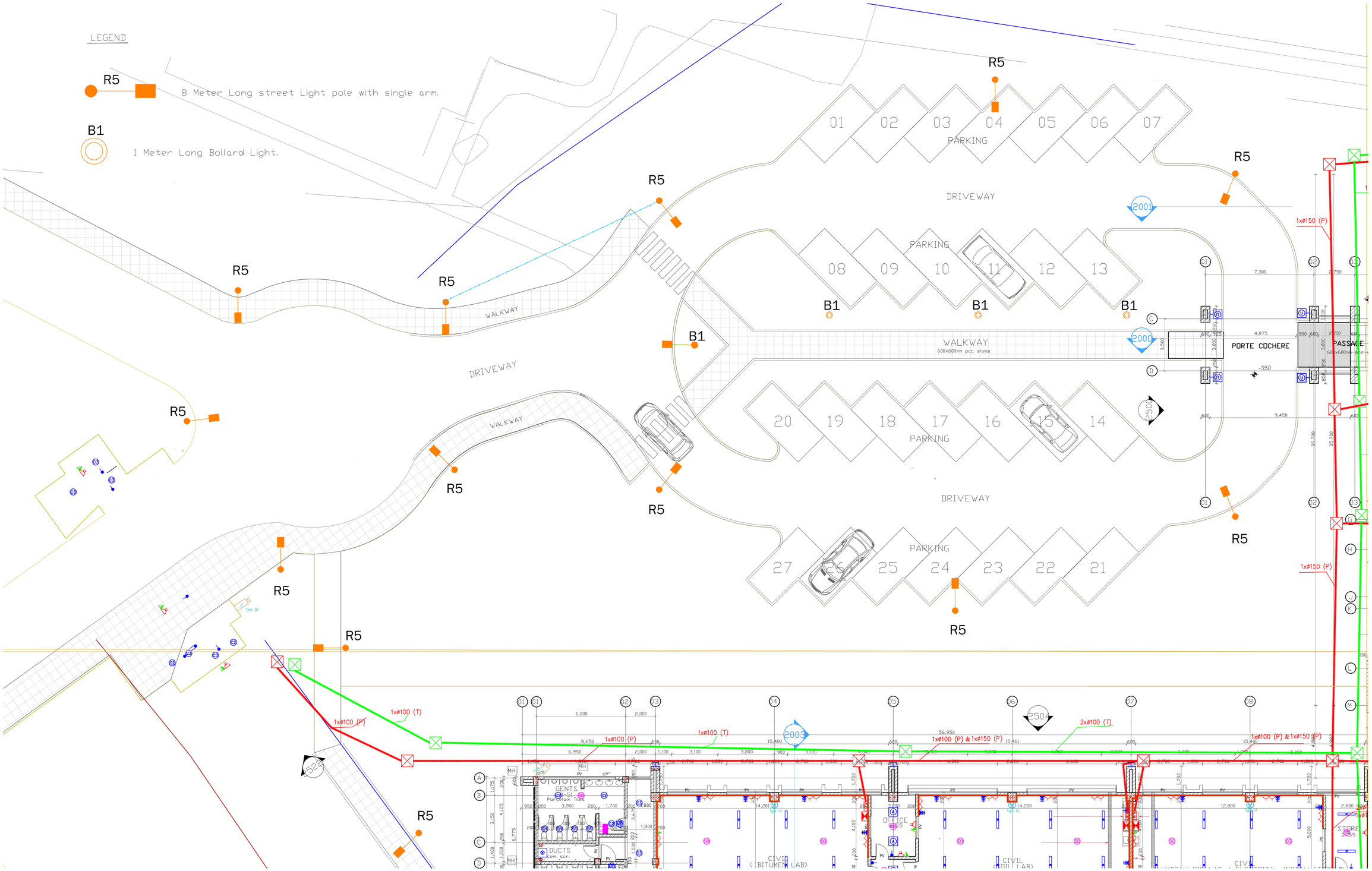
ADMINISTRATION BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - GROUND FLOOR

Drawing No.	Status
MA / 323/01/ E-1-3	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T

SHEET1/3



GENERAL NOTES:

REV | DATE | DESCRIPTION

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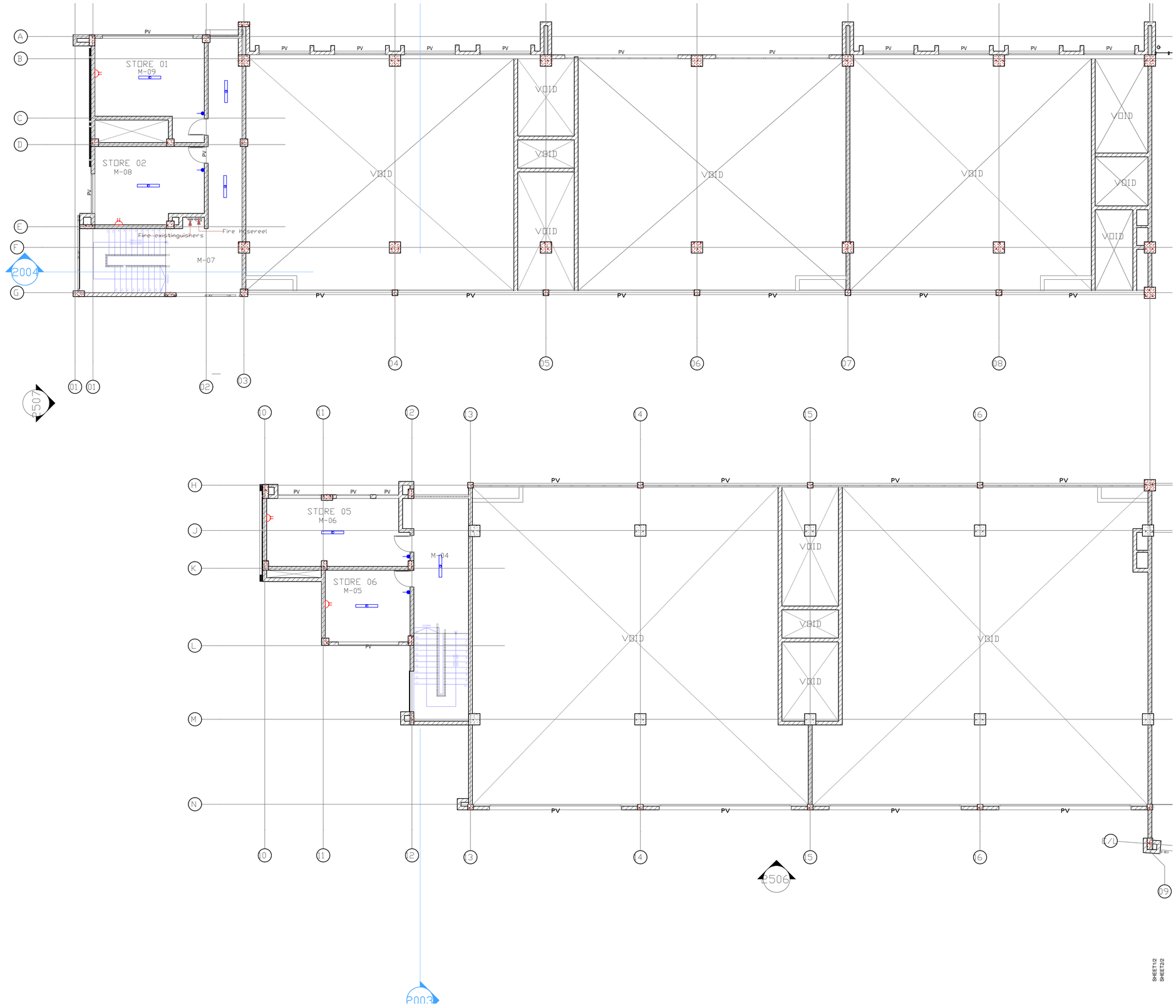
EXTERNAL DRAWING
ELECTRICAL STREET LIGHTING LAYOUT
DRAWING - GROUND FLOOR

Drawing No.	Status
MA / 323/01/E-1-4	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T



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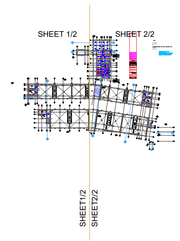

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Project Structural/Civil Engineers

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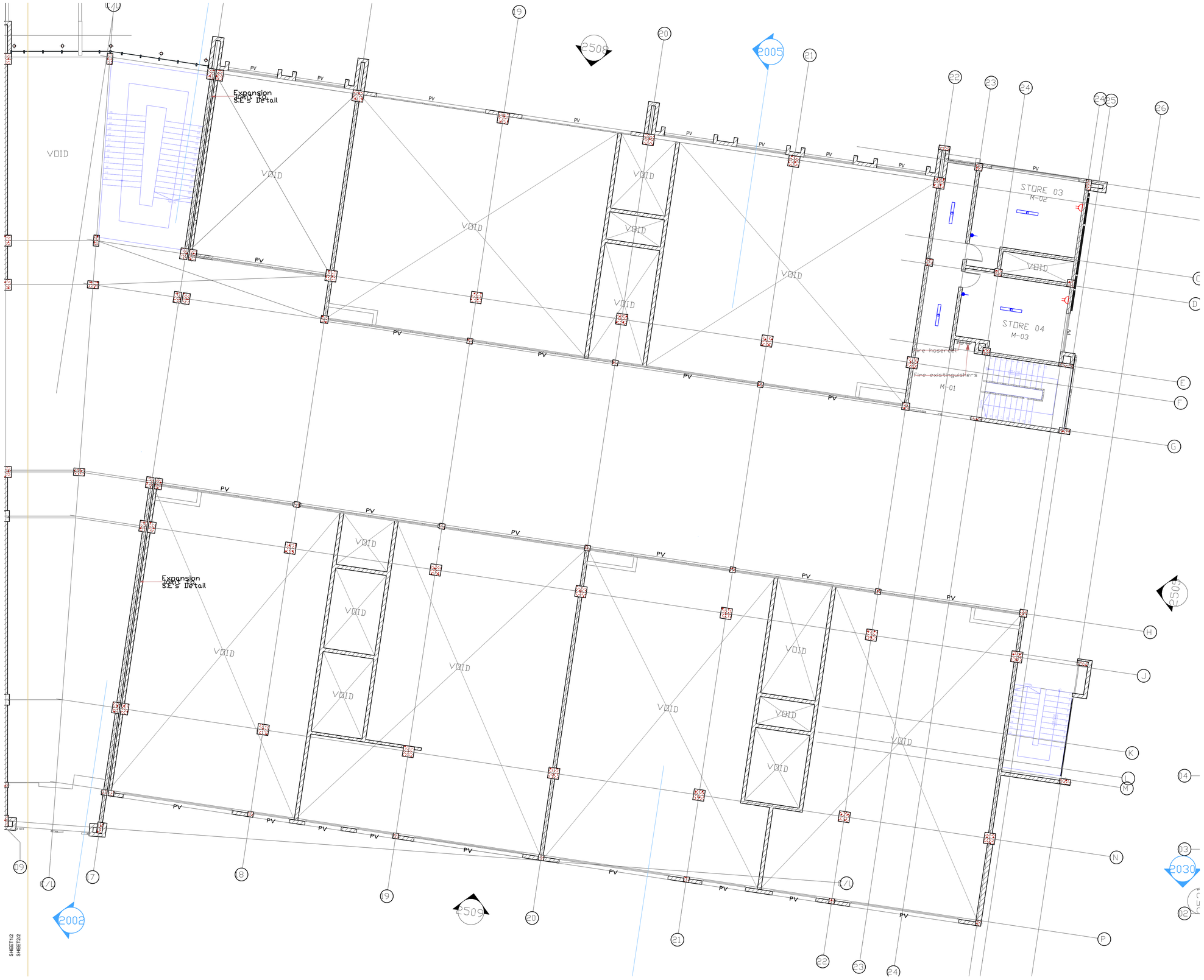
MAIN BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - MEZZANINE FLOOR

Drawing No.	Status
MA / 323/01/ E-2-M1	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T



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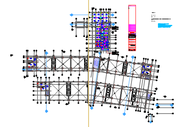

SHEET1/2
SHEET2/2

REV	DATE	DESCRIPTION

REVISIONS

DETAILED DESIGN

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MAIN BLOCK & ADMINISTRATION BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - MEZZANINE FLOOR

Drawing No.	Status
MA / 323/01/ E-2-M2	TO

Date	Scale	Drawn	Checked
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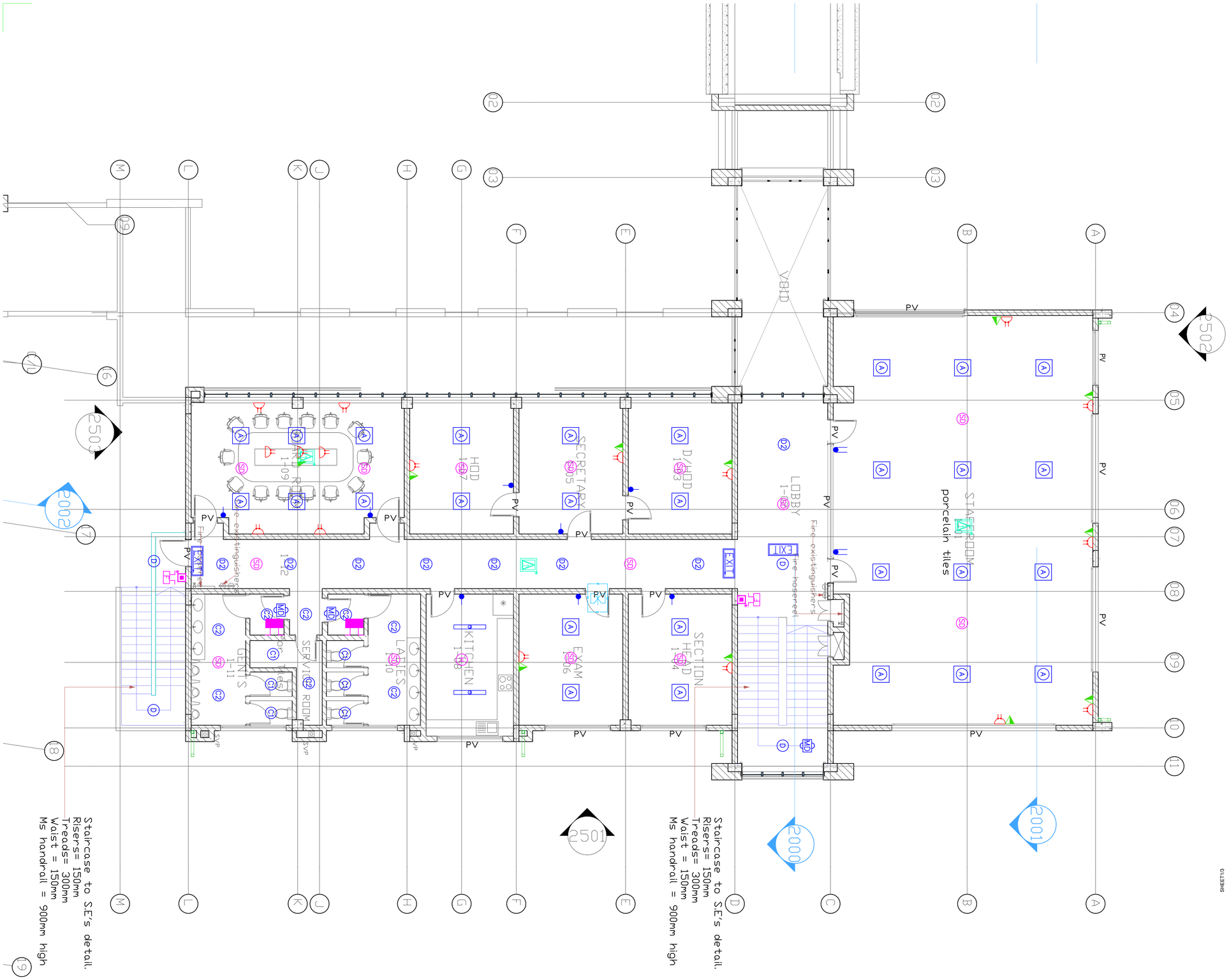

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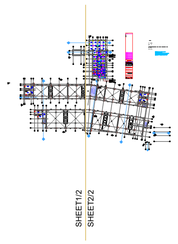

REV	DATE	DESCRIPTION

REVISIONS

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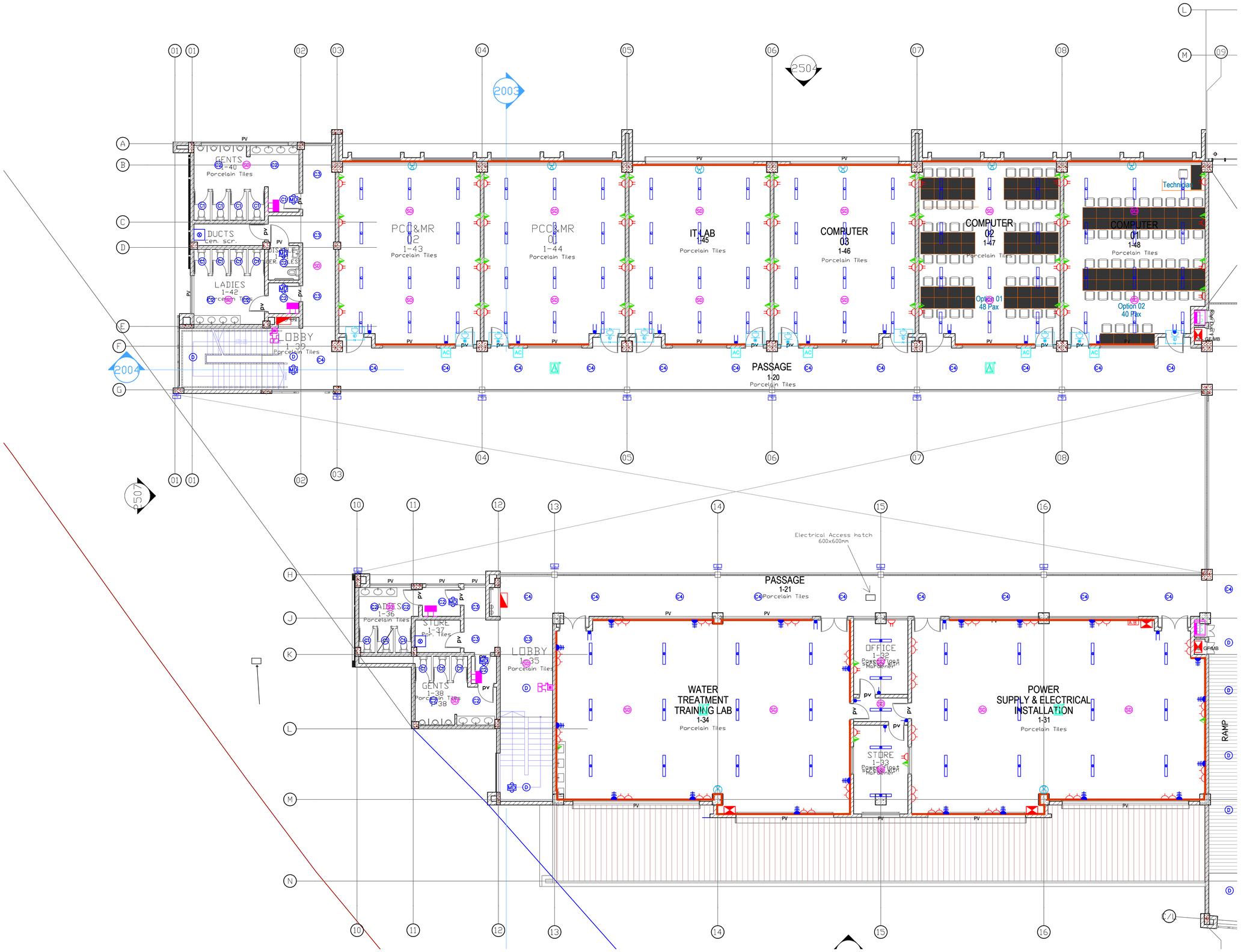
ADMINISTRATION BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - FIRST FLOOR

Drawing No.			Status
MA / 323/01/ E-2-3			TO
Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T

SHEET13



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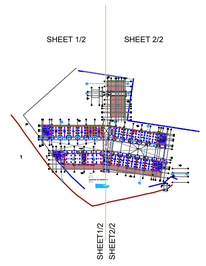

REV	DATE	DESCRIPTION

REVISIONS

DETAILED DESIGN

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PROJECT

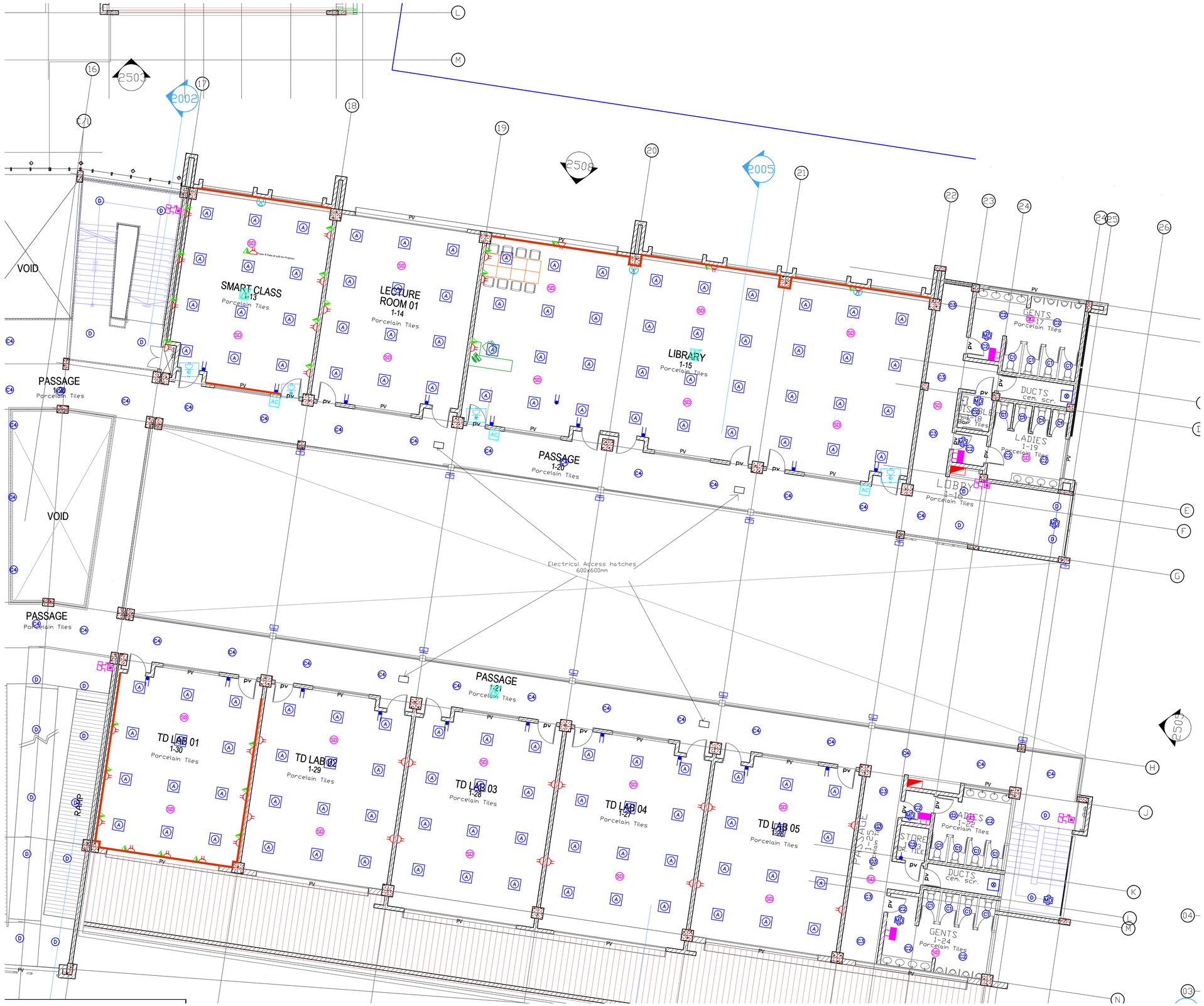
Project Structural/Civil Engineers

MERK ASSOCIATES LIMITED

MAIN BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - FIRST FLOOR MAIN BLOCK

Drawing No.	Status
MA / 323/01/ E-2-1	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T



GENERAL NOTES:

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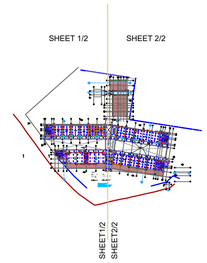

REV	DATE	DESCRIPTION

REVISIONS

DETAILED DESIGN

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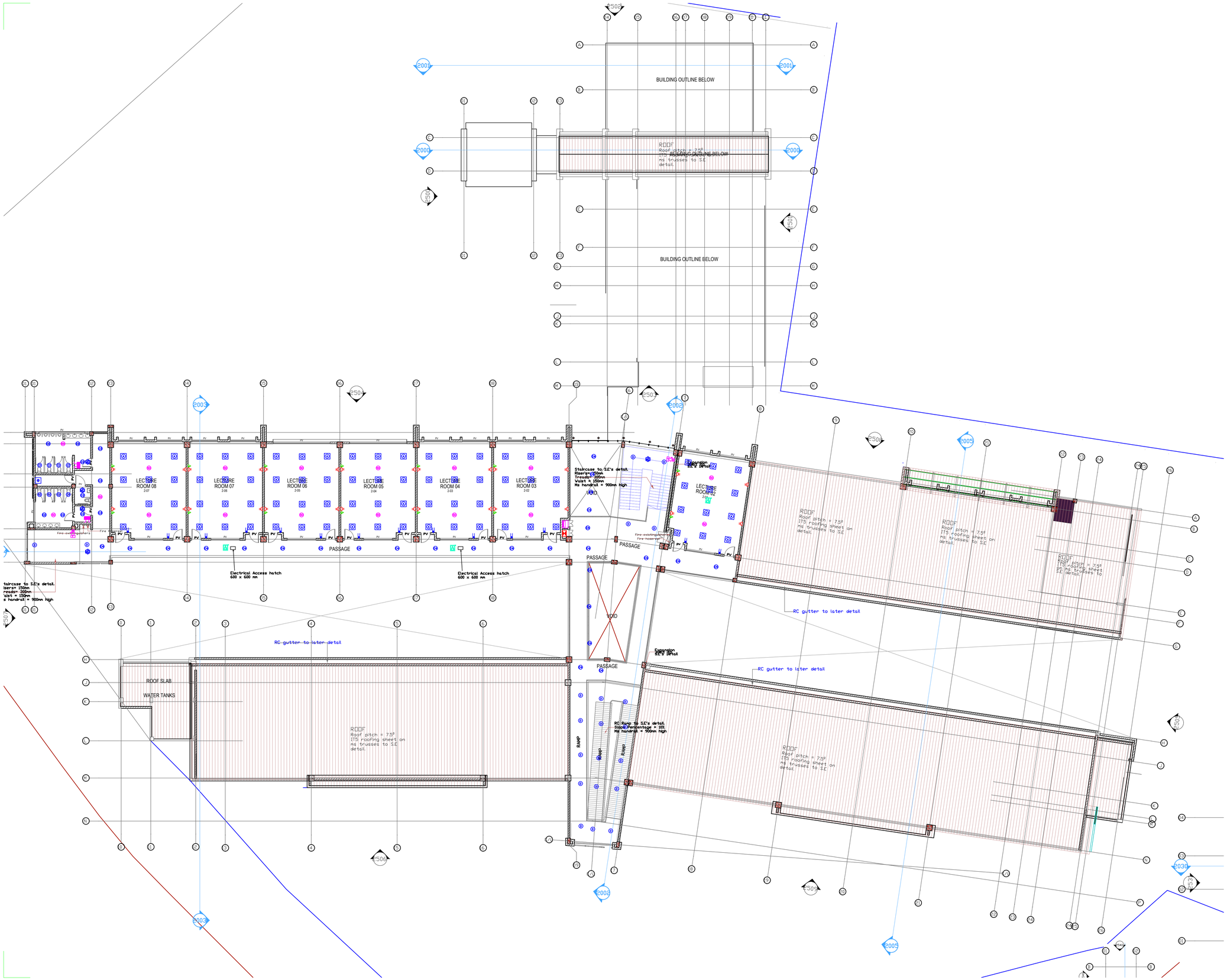
MAIN BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - FIRST FLOOR MAIN BLOCK

Drawing No.			Status
MA / 323/01/ E-2-2			TO
Date	Scale	Drawn	Checked
FEB. 2020	1:100	L.C.T	L.C.T



GENERAL NOTES:

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REV	DATE	DESCRIPTION

REVISIONS

DETAILED ISSUE

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Project Structural/Civil Engineers

MERK ASSOCIATES LIMITED

MAIN BLOCK
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - SECOND FLOOR MAIN BLOCK

Drawing No.			Status
MA / 323/01/ E-3			TO
Date	Scale	Drawn	Checked
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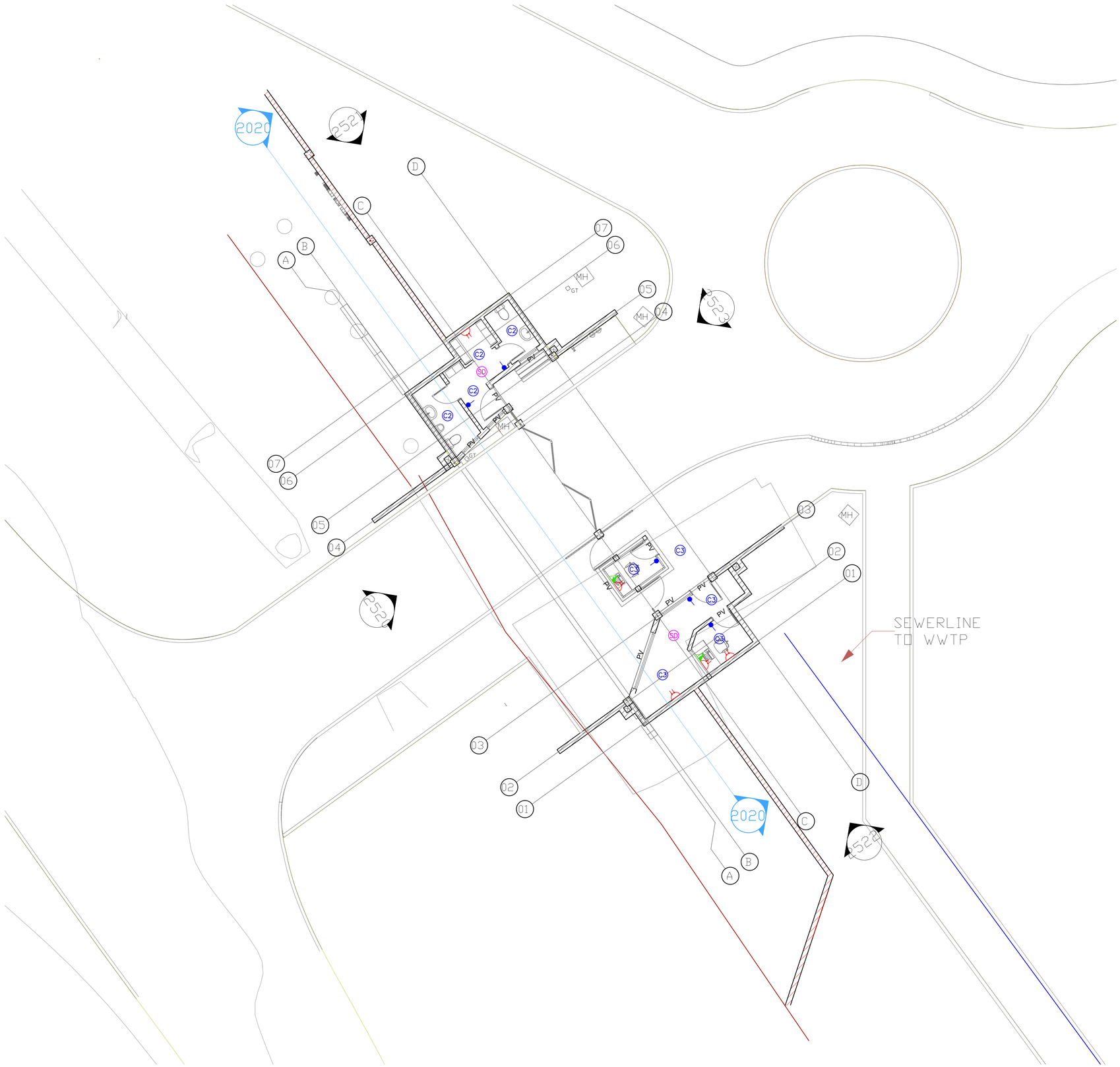

GENERAL NOTES:

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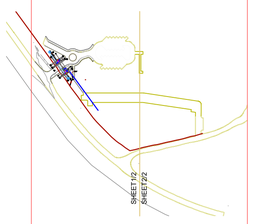

REV	DATE	DESCRIPTION

REVISIONS

DETAILED DESIGN

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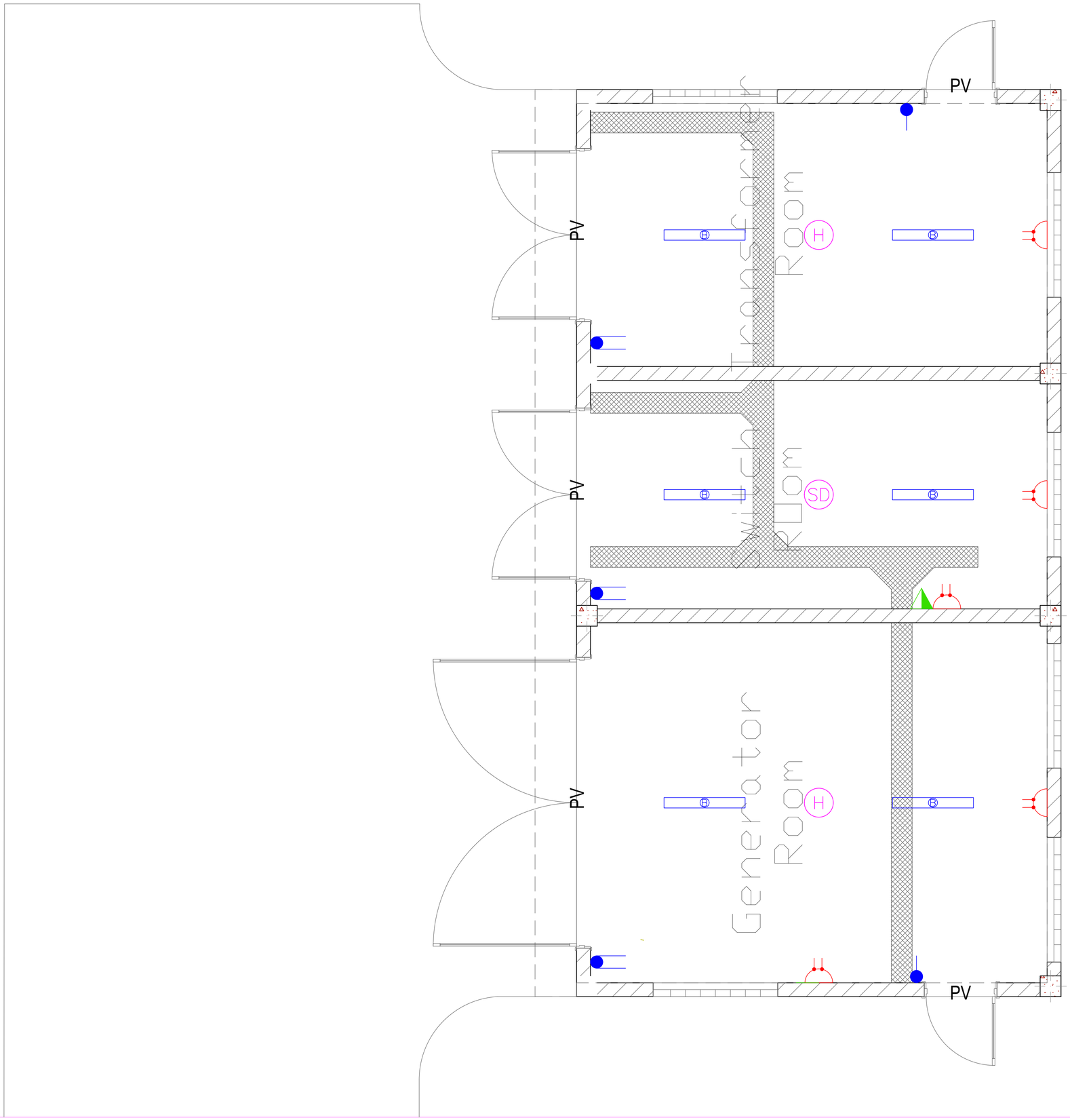
Project Structural/Civil Engineers

MERK ASSOCIATES LIMITED

GUARD HOUSE & GARBAGE CUBICLE
CO-ORDINATED ELECTRICAL LAYOUT
DRAWING - GROUND FLOOR

Drawing No.	Status
MA / 323/01/E-1-6	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T



GENERAL NOTES:

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REV	DATE	DESCRIPTION

REVISIONS

DETAILED DESIGN

MAITERI & ASSOCIATES
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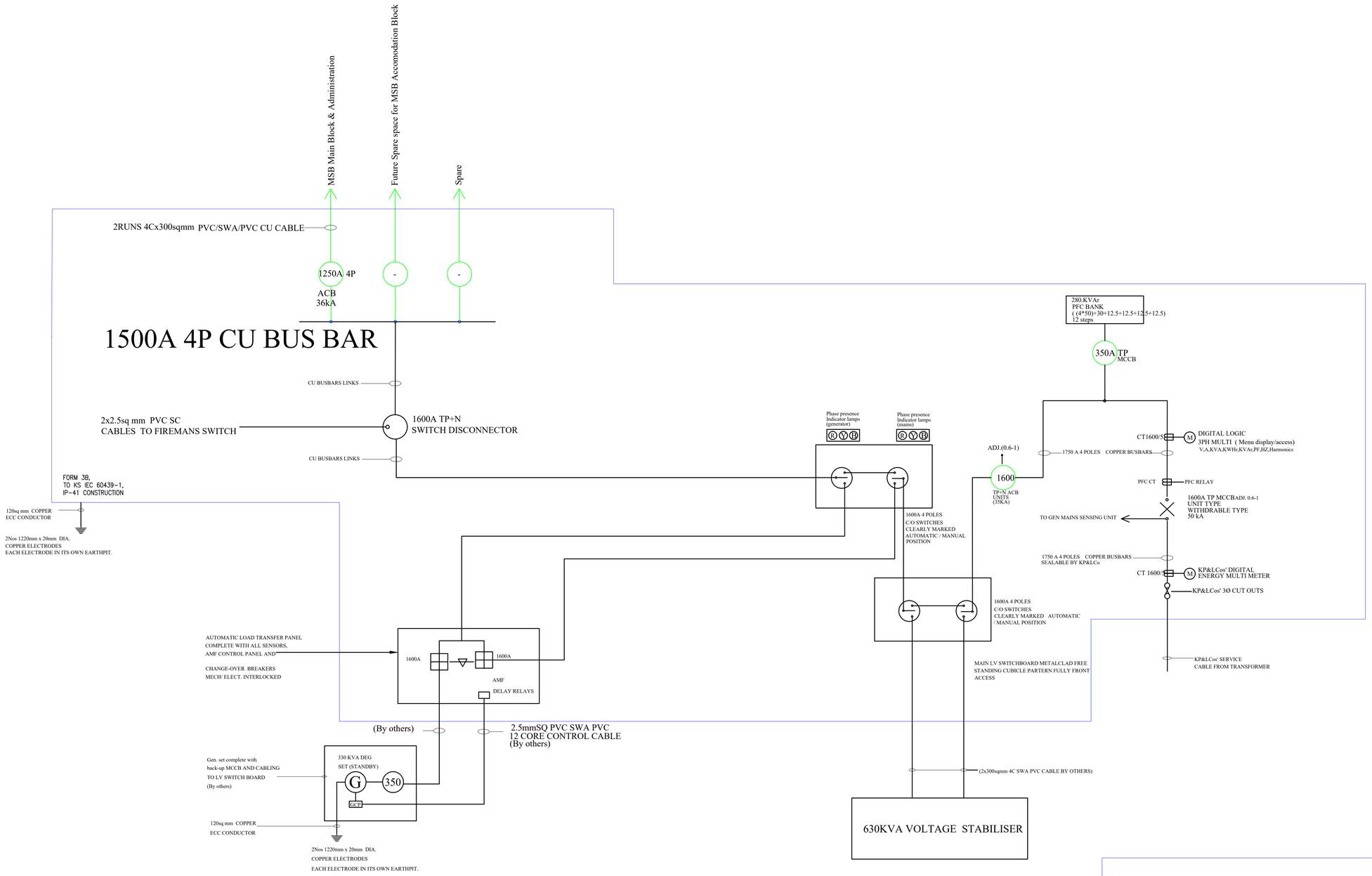
MERK ASSOCIATES LIMITED

SERVICE BUILDING
CO-ORDINATED ELECTRICAL LATOUT
DRAWING - GROUND FLOOR .

Drawing No.	Status
MA / 323/ 01/E-1-5	TO

Date	Scale	Drawn	Checked
FEB. 2021	1:100	L.C.T	L.C.T



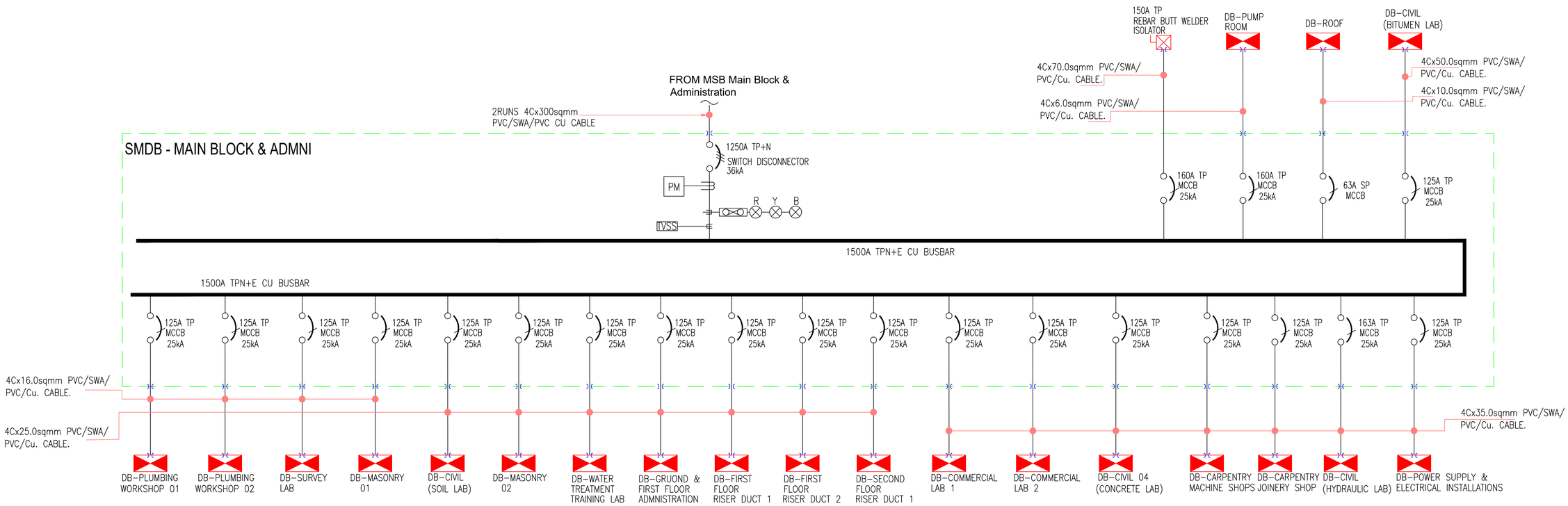
EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

ELECTRICAL INSTALLATIONS

MAIN LV SWITCH BOARD

MAITERI & ASSOCIATES

TENDER ISSUE



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

ELECTRICAL INSTALLATIONS

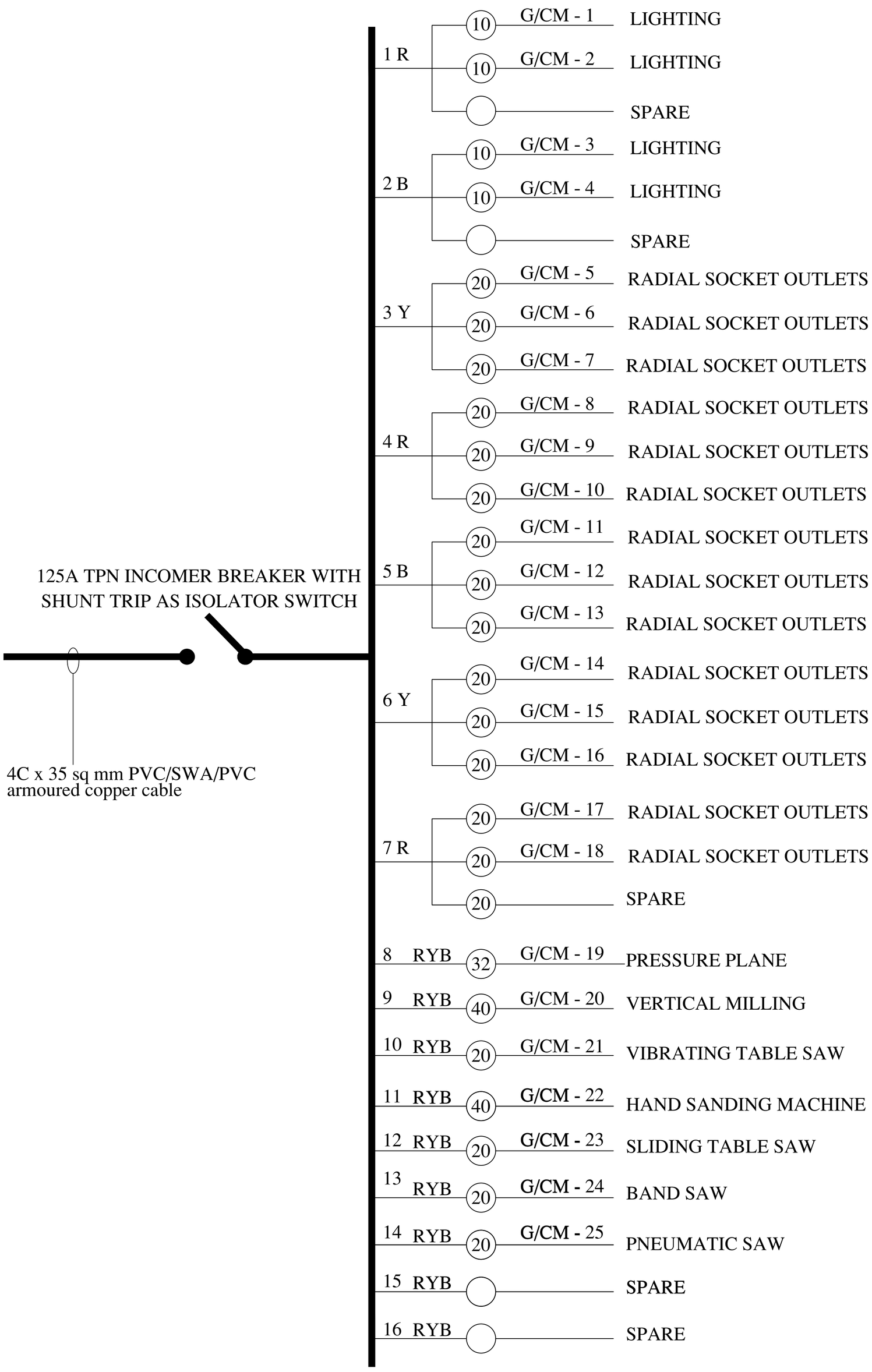
LV SUB - BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

FORM 3B,
TO KS IEC 60439-1,
IP-41 CONSTRUCTION

MAIN BLOCK - CLASSROOMS CARPENTRY MACHINE SHOPS DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

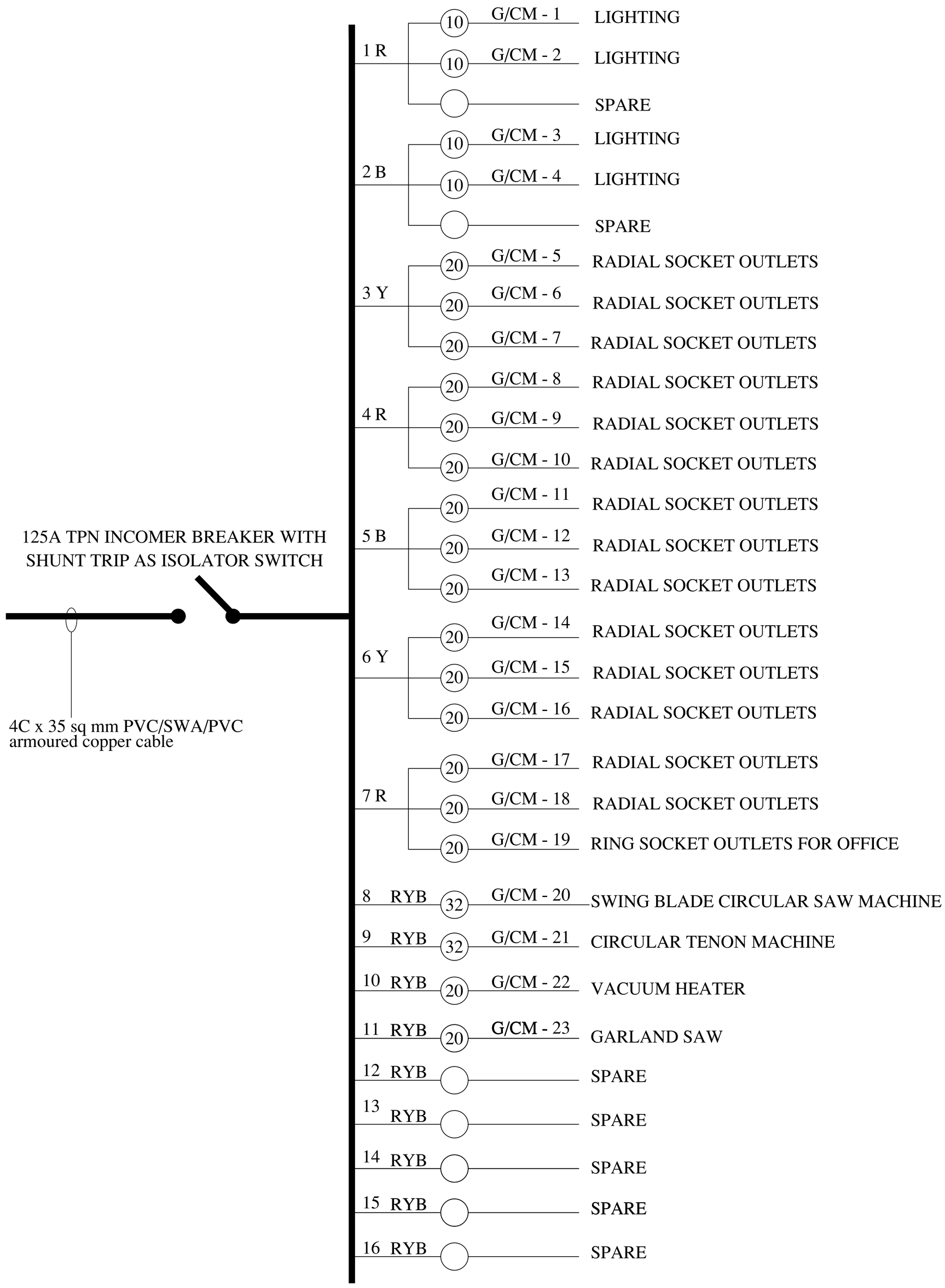
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
CARPENTRY JOINERY SHOP
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

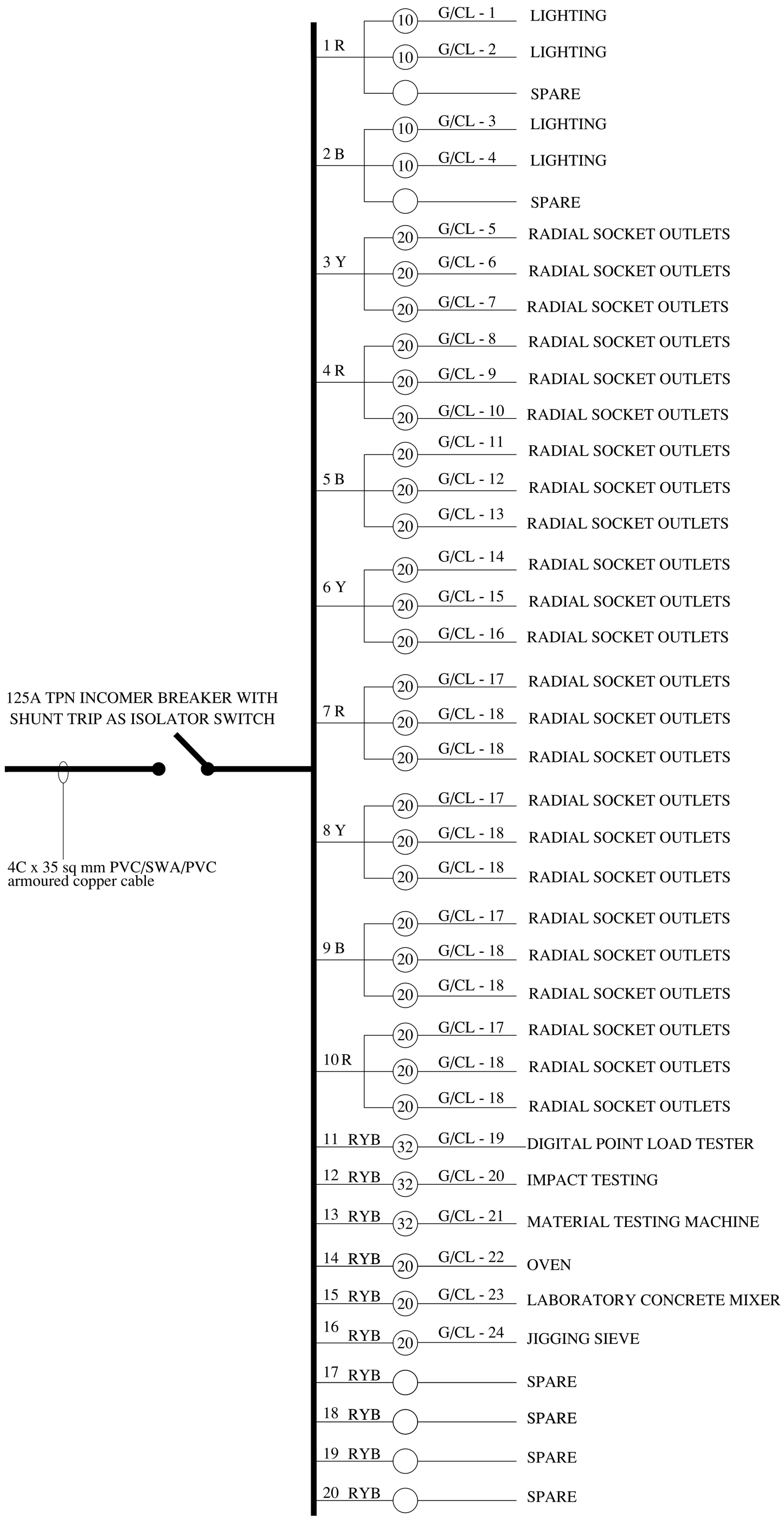
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
COMMERCIAL LAB 1
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

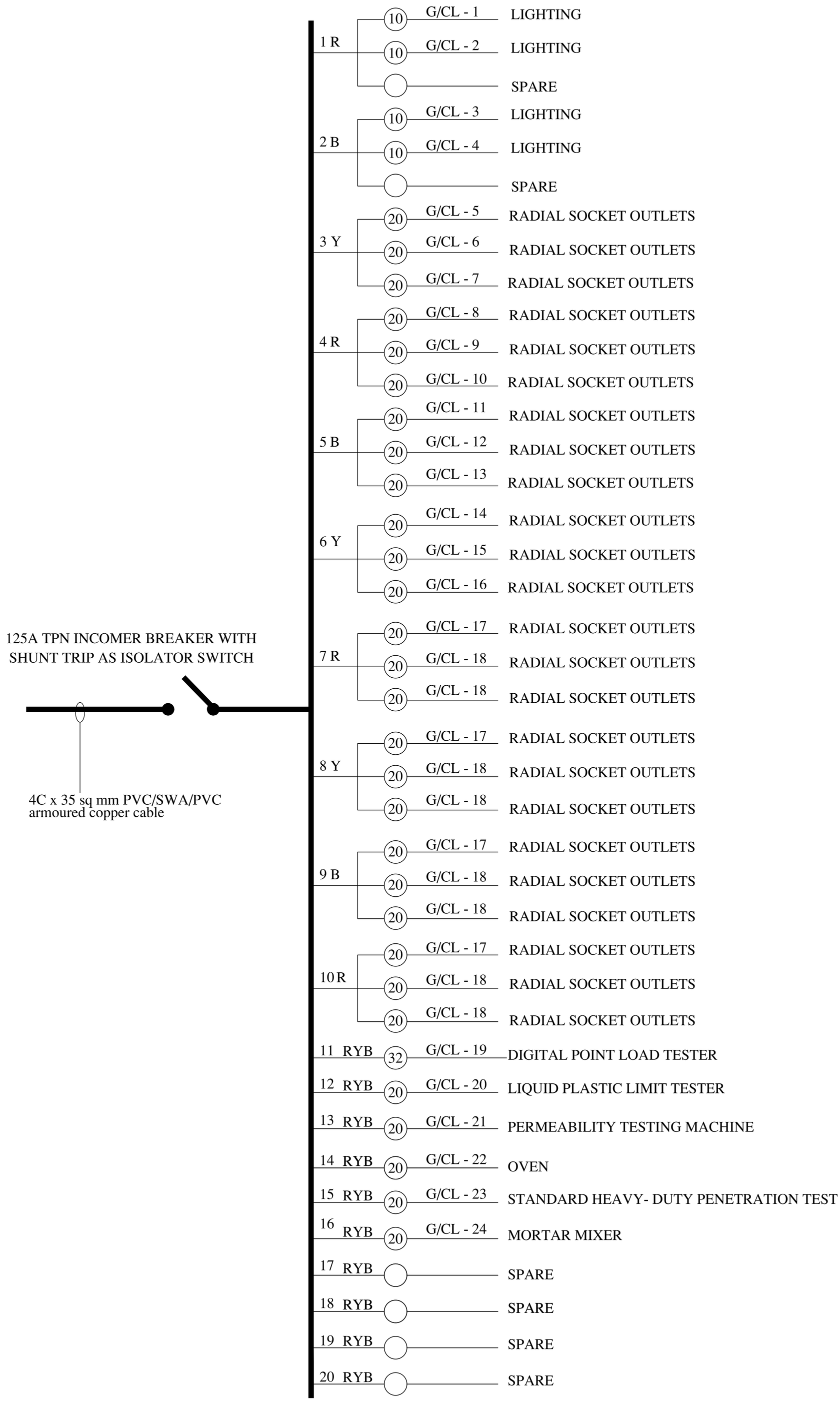
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
COMMERCIAL LAB 2
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

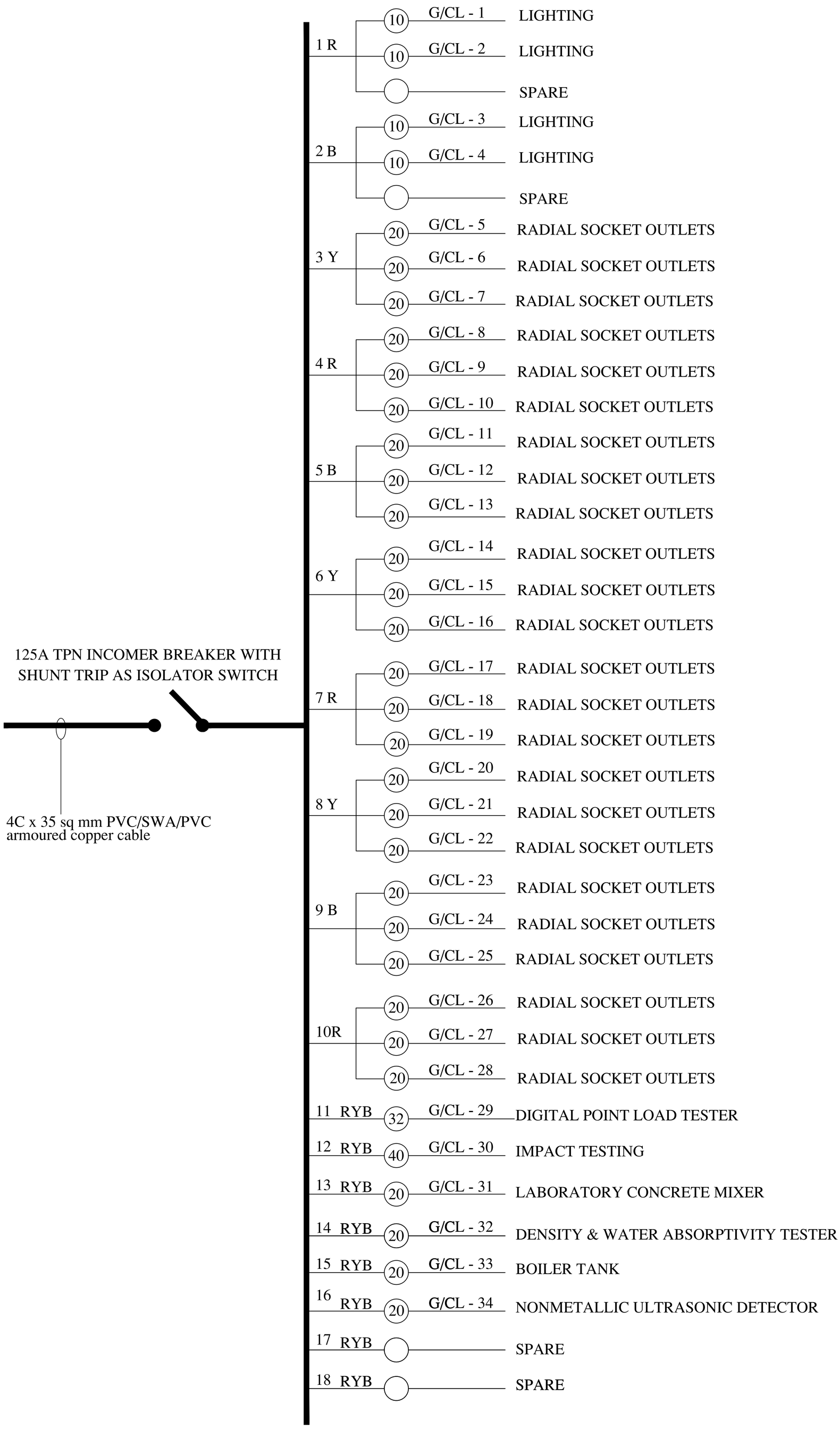
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
CIVIL 04 (CONCRETE LAB)
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

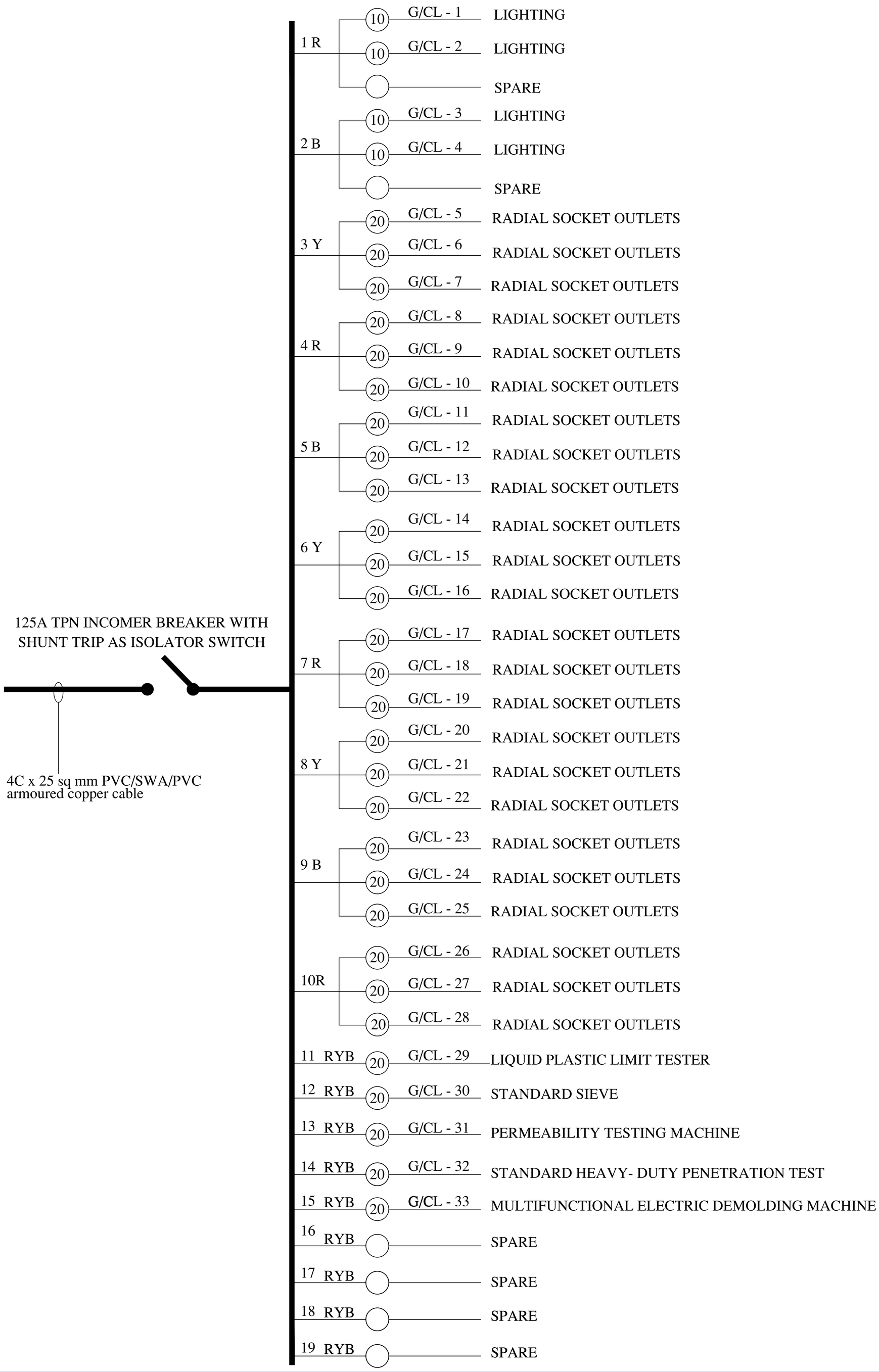
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
CIVIL (SOIL LAB)
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

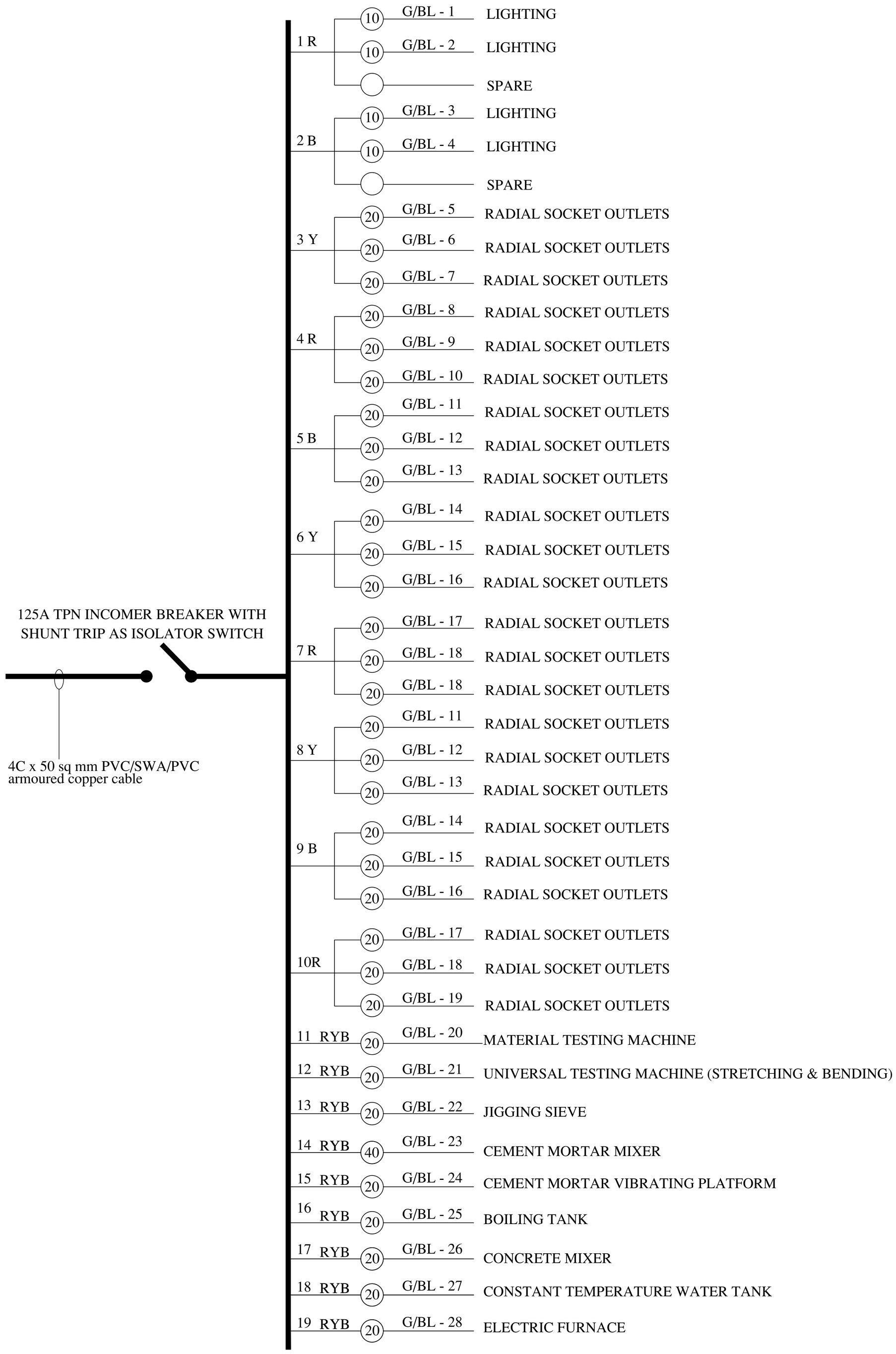
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
CIVIL (BITUMEN LAB)
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

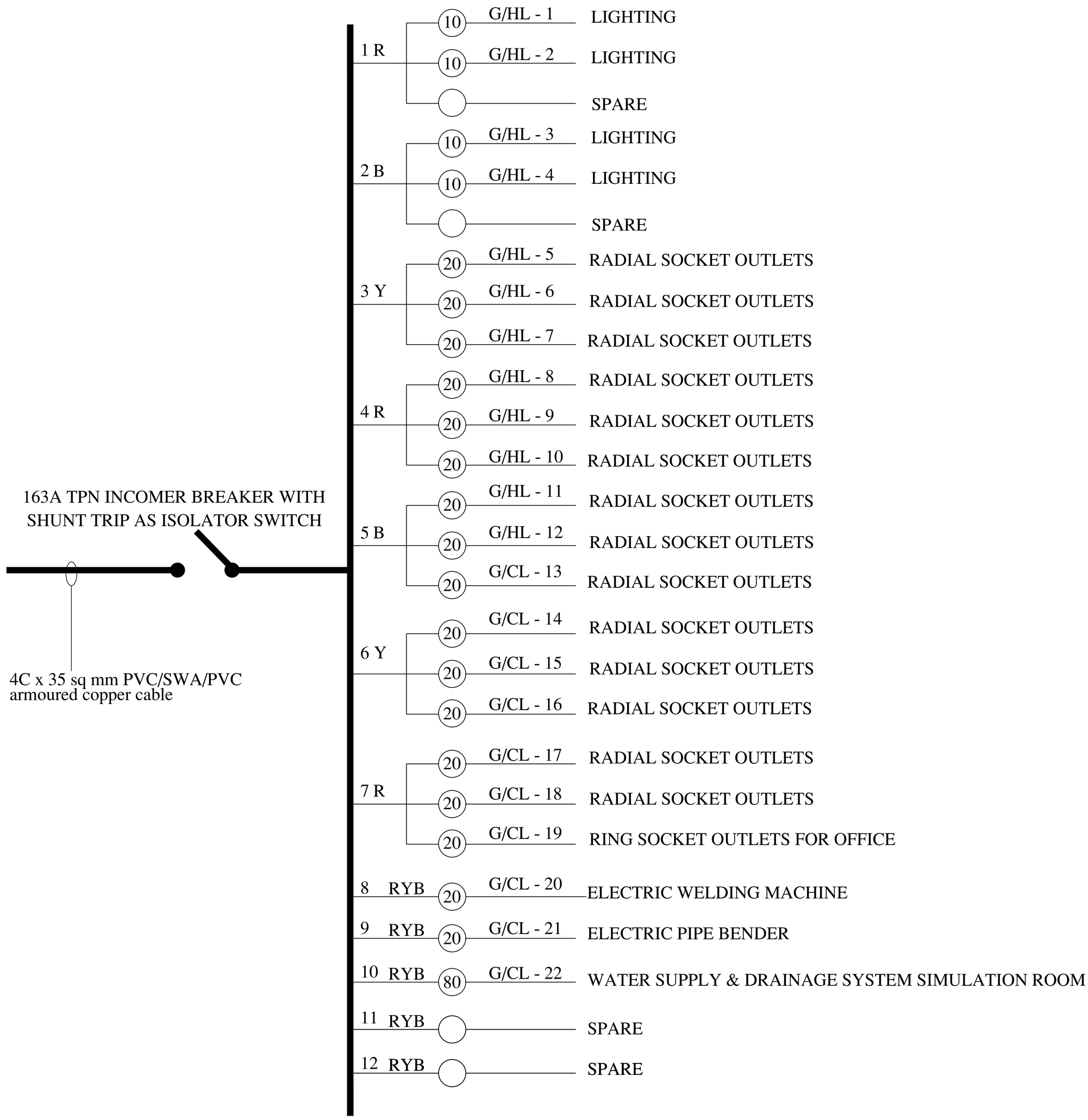
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
CIVIL (HYDRAULIC LAB)
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

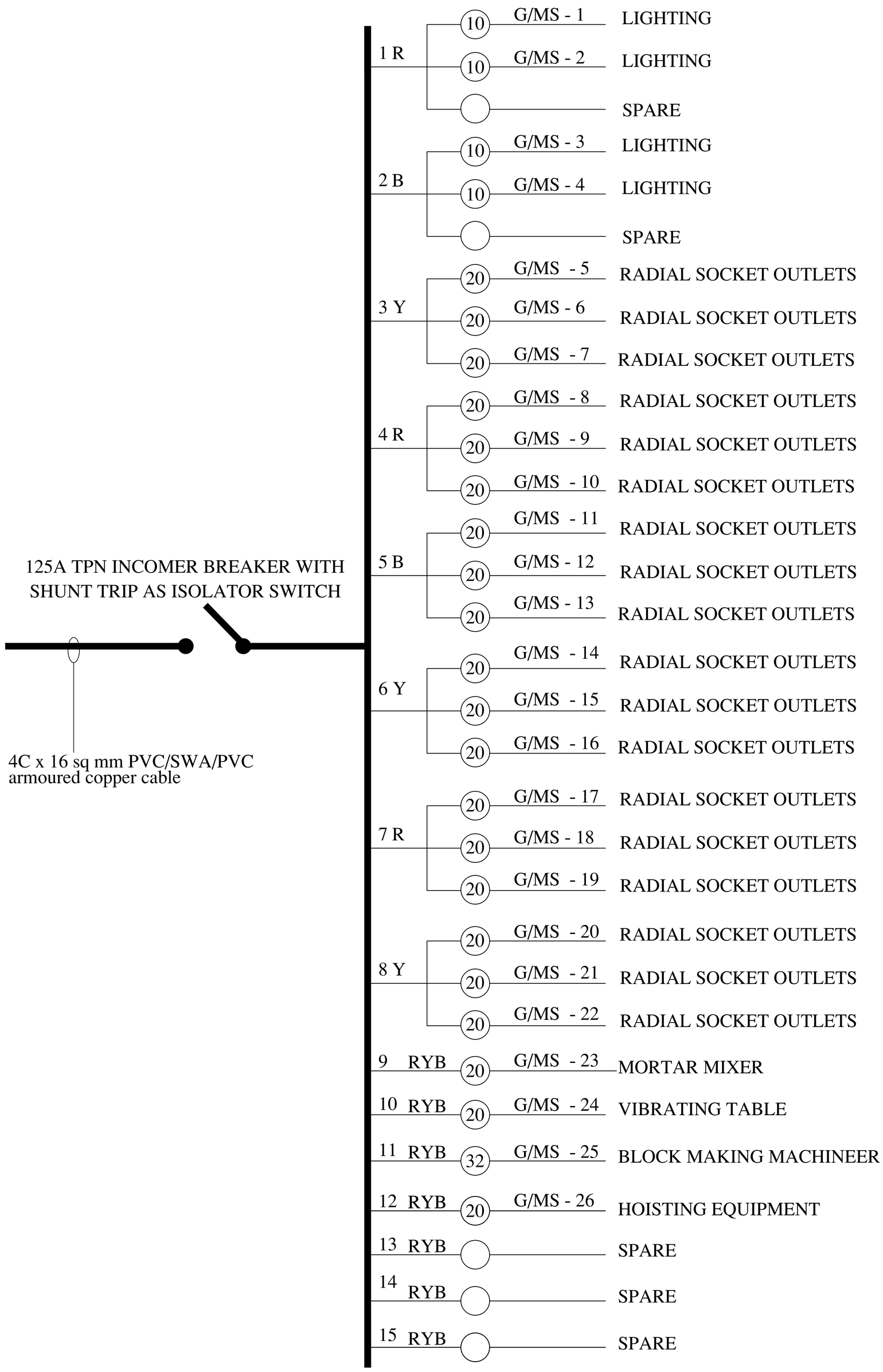
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
MASONRY 01(STEEL BUILDING PLASTER TRAINING ROOM
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

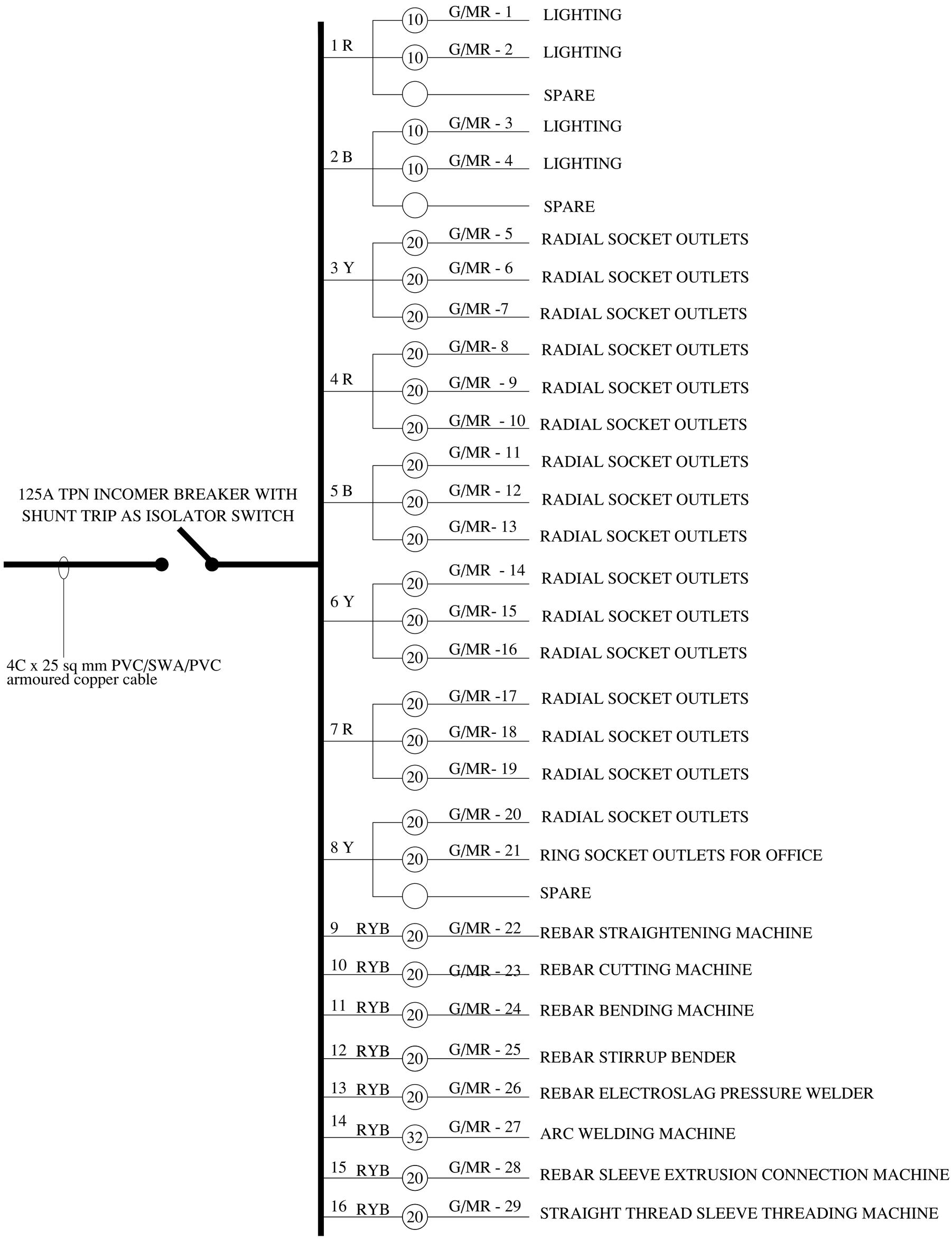
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
MASONRY 02 (REBAR TRAINING ROOM)
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

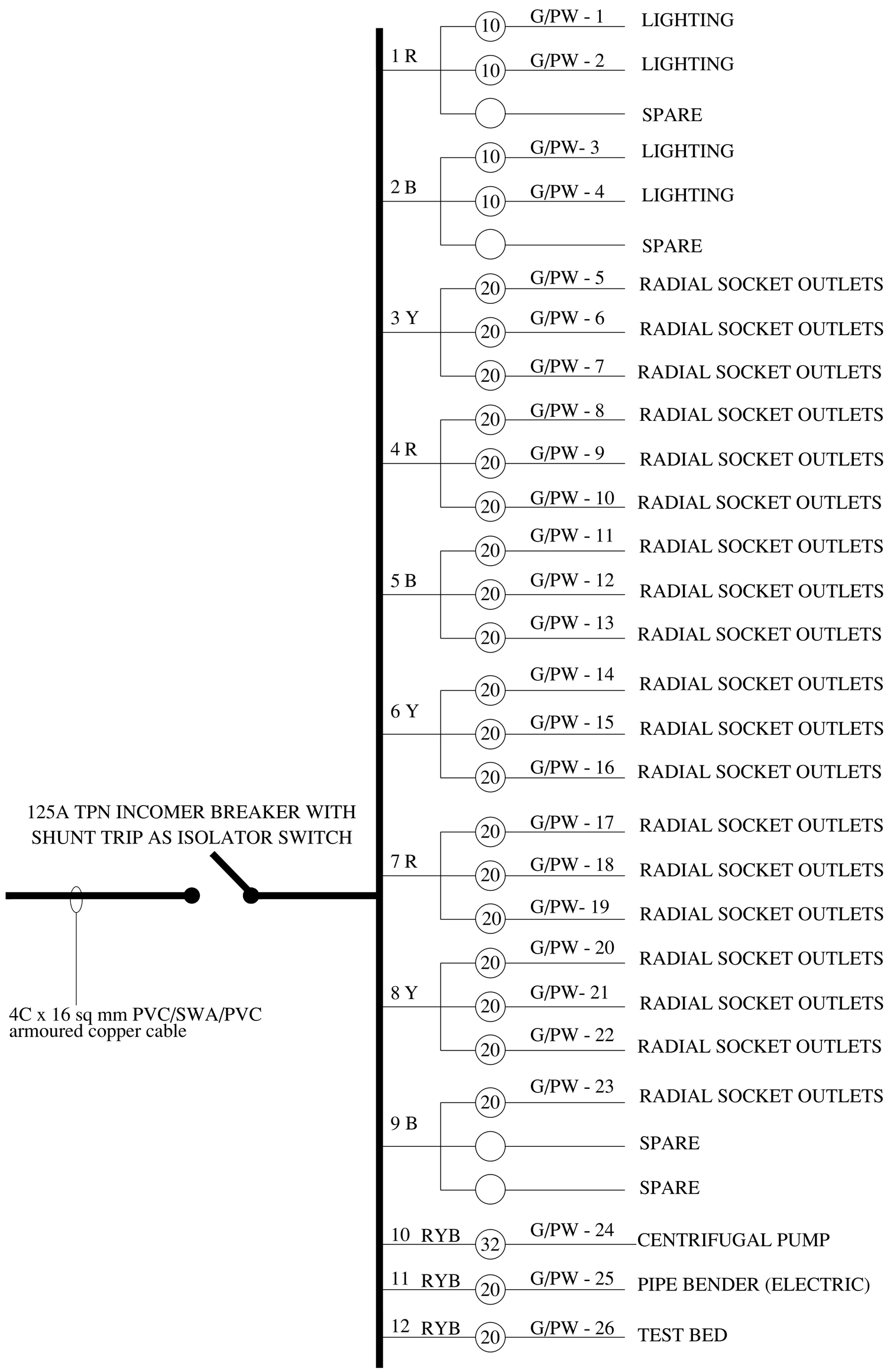
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
PLUMBING WORKSHOP 01
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

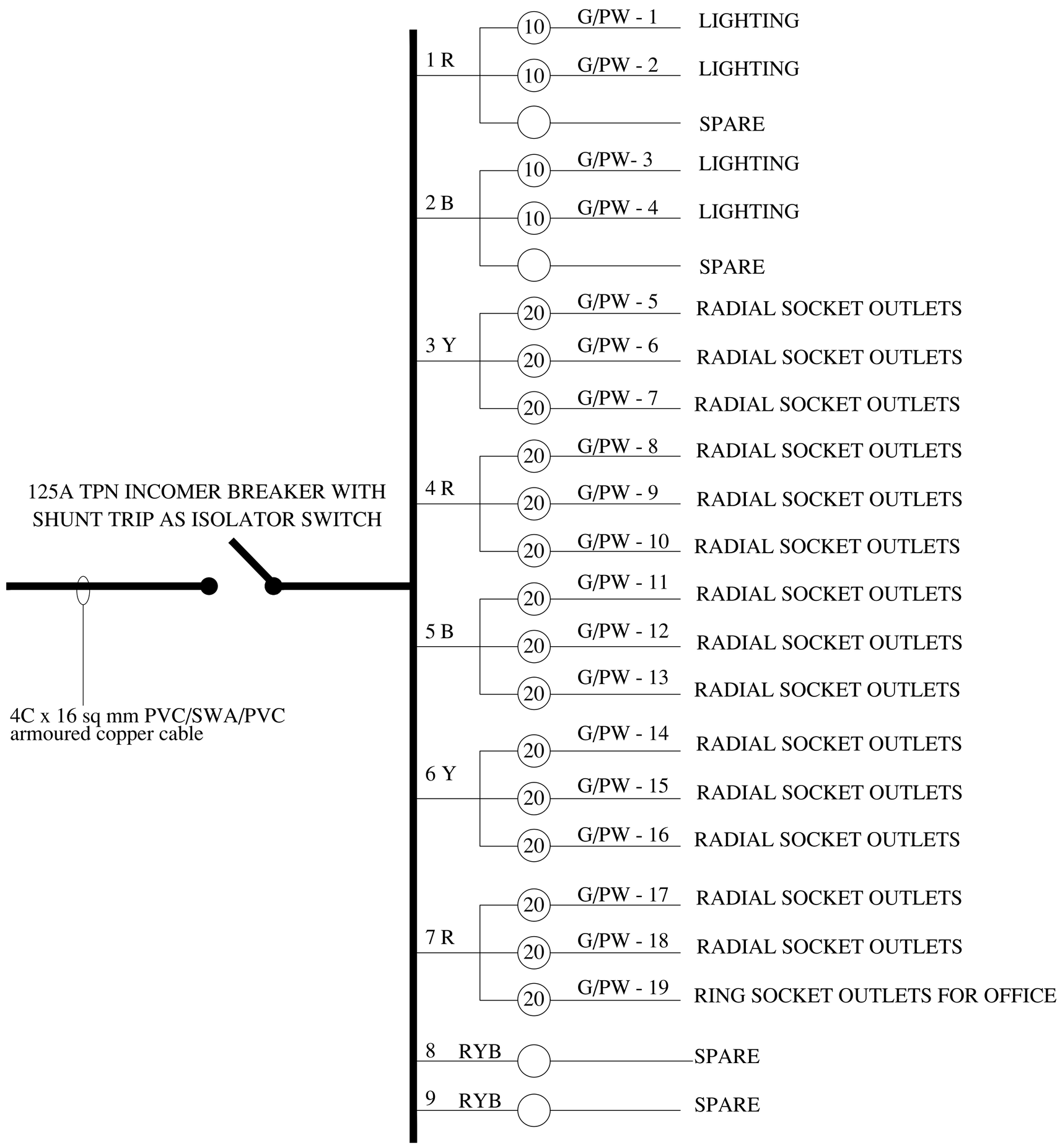
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
PLUMBING WORKSHOP 02
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

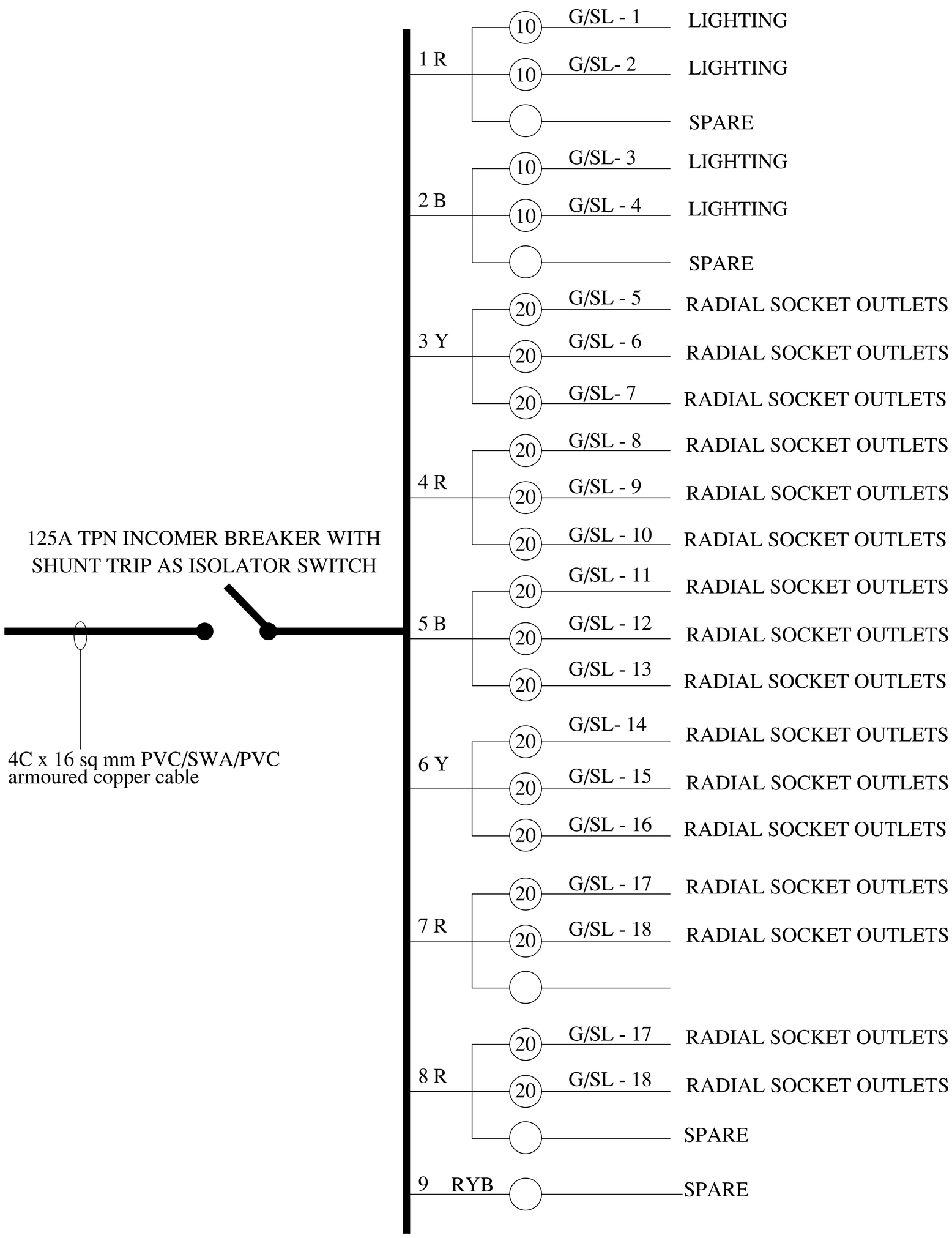
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
SURVEY LAB
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

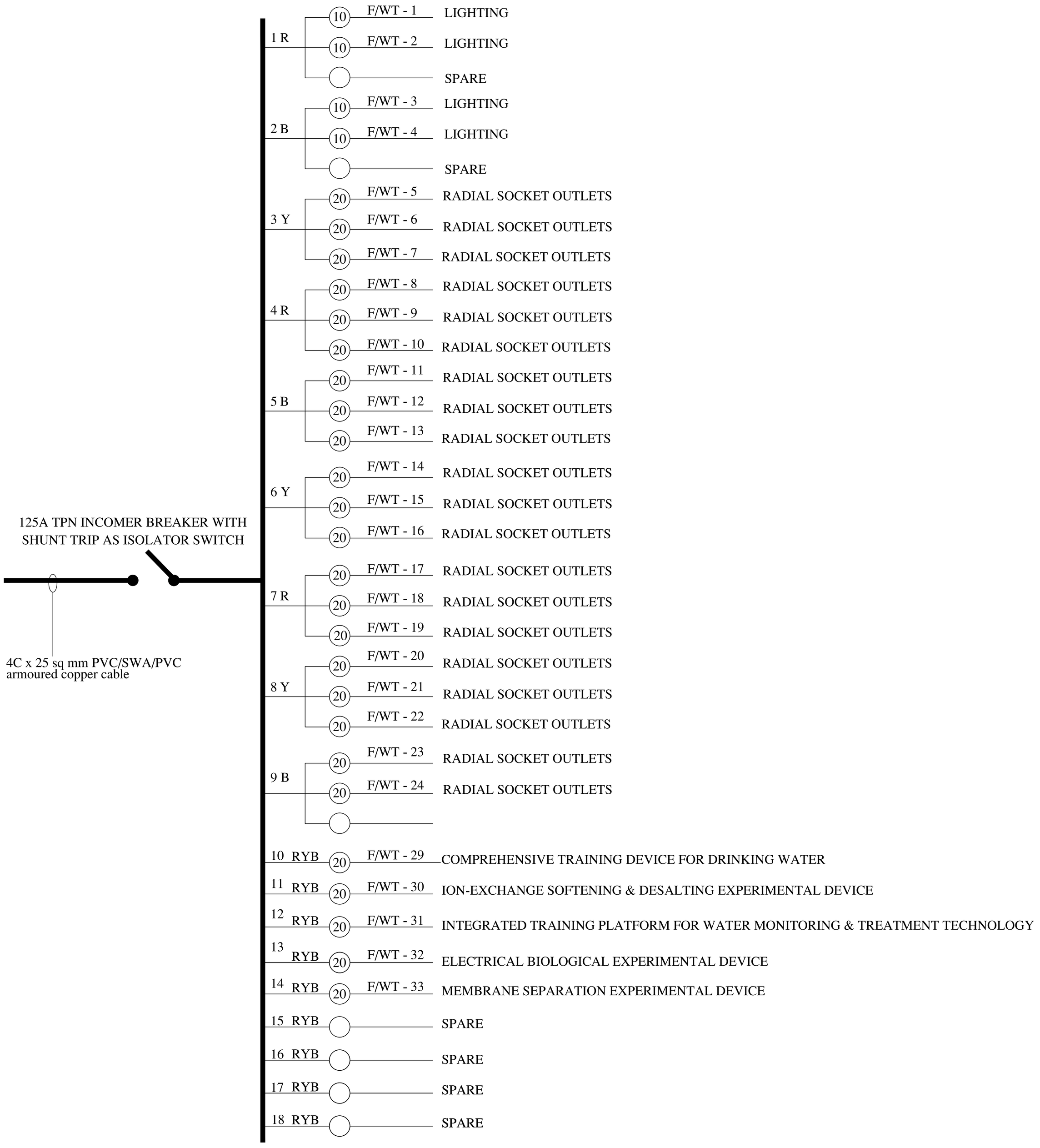
ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
WATER TREATMENT TRAINING LAB
DISTRIBUTION BOARD



EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE

MAIN BLOCK - CLASSROOMS
POWER SUPPLY & ELECTRICAL INSTALLATONS
DISTRIBUTION BOARD

EAST AFRICA SKILLS FOR TRANSFORMATION & REGIONAL INTEGRATION PROJECT at Meru National Polytechnic.

ELECTRICAL INSTALLATIONS

DISTRIBUTION BOARD

MAITERI & ASSOCIATES

TENDER ISSUE