

TENDER

**UPGRADE & ADDITIONS TO UITENHAGE
PROVINCIAL HOSPITAL IN NELSON MANDELA
BAY METRO TO 72 HOUR ASSESSMENT AREA,
CASUALTY & OPD, ARCHIVING, ROOF
REPLACEMENT AND REMEDIAL WORKS AND
BASEMENT STORES WATERPROOFING
BID NO: SCMU3-23/24-0734-HO**

NAME OF COMPANY:

CSD Nr:

CRS Nr (CIDB):

CLOSING DATE: 19 April 2024

TIME: 11:00 am

Deliver to:

EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,
situated at the following address:

GLOBAL LIFE CENTRE, SCM UNIT, C/O PHALO AVENUE AND R63 (OPPOSITE ENGINE
GARAGE), BHISHO

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THE TENDER

PART T1

TENDERING PROCEDURES

PART T1.1: TENDER NOTICE AND INVITATION TO TENDER

T1.1 Tender Notice and Invitation to Tender

The Eastern Cape Department of Health invites contractors with a CIDB Grading of **CIDB 8GB** or higher in the following Class of works (**CIDB 8GB or higher**) to tender for the “**UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING**” for a **(20) Twenty months** contract. The contract will be based on the JBCC Edition 6.2 of 2018 and **The Eastern Cape Department of Health** will enter a contract with the successful tenderer.

BID DOCUMENTS MAY BE OBTAINED FROM THE ECDOH & TREASURY WEB SITES AT NO COST:

There will be a compulsory briefing meeting on **27 March 2024 @ 11h00, at Uitenhage Provincial Hospital, Uitenhage, Nelson Mandela Bay Health District, Eastern Cape Province**. Prospective bidders to meet outside the Casualty Department entrance of the hospital at **11h00**.

Queries & Technical enquiries relating to the issue of these documents may be addressed in writing to Ms. T Notshe via email: thabisa.notshe@echealth.gov.za or Phone: 040 608 9501

The closing time for receipt of tenders by **The Eastern Cape Department of Health** is **11:00am on 19 April 2024**. Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted. Bids must be submitted in sealed envelopes clearly marked “**UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING**” and must be deposited in the bid/tender box of:

EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,

situated at the following address:

GLOBAL LIFE CENTRE, SCM UNIT, C/O PHALO AVENUE AND R63 (OPPOSITE ENGINE GARAGE), BHISHO.

It is the responsibility of the tenderer/s to ensure that bid documents /proposals are submitted on or before closing time and the correct location as the department will not take responsibility of wrong delivery. Tenderers using courier services for delivery of their bid documents must ensure the delivery is at the correct place / location and time as the department will not be held responsible for wrong delivery. Not delivered to Departmental officials. The Department will not accept responsibility if bids received by officials are not timely deposited in the Bid Box.

Tenders may only be submitted on the tender documentation that is issued. Tenderers must be registered on the National Treasury Central Supplier Data Base and proof of registration must be submitted with the proposal (<https://secure.csd.gov.za>). Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

B. BID EVALUATION:

This bid will be evaluated in Two (2) Stages as follows:

Stage One: Compliance, responsiveness to the bid rules and conditions, thereafter they will be evaluated in terms of Price & Specific Goals

Stage Two: Price & Specific targeted goals in terms of the Preferential procurement regulations of 2022.

PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT (PPPFA) Price & Specific targeted goals POINTS WILL BE AWARDED AS FOLLOWS:

Maximum points on price	-	90 points
Maximum points for Specific targeted goals	-	10 points
Maximum points	-	100 points

C. BID SPECIFICATIONS, CONDITIONS AND RULES

The minimum specifications, bid conditions and rules are detailed in the bid document under Tender Data.

The specifications, rules, special conditions of bid, evaluation criteria, and rules for evaluation for compliance to local content and other bid conditions are detailed in the document.

Tender validity period is **90 days**.

D. TENDER SUBMISSIONS:

Bids must be submitted in sealed envelopes/boxes clearly marked: **“UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING”** must be deposited in the tender / bid box:

EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,

situated at the following address:

GLOBAL LIFE CENTRE, SCM UNIT, C/O PHALO AVENUE AND R63 (OPPOSITE ENGINE GARAGE), BHISHO.

E. ENQUIRIES WITH REGARD TO THIS ADVERT MAY BE DIRECTED TO:

Ms. T. Notshe via email: thabisa.notshe@echealth.gov.za

PART T1.2: TENDER DATA

T1.2 Tender Data

The conditions of tender are the latest edition of SANS 10845-3, *Standard conditions of tender*. SANS 10845-3 makes several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the provisions of SANS 10845-3 *and* as contained in **Annexure C of Standard for Uniformity in Construction Procurement (Board Notice 423 of 2009 Government Gazette No 42622 of August 2019)**. Each item of data given below is cross-referenced to the clause in SANS 10845-3 to which it mainly applies.

Clause number	Tender Data
3.1	The Employer is Health
3.2	<p>The tender documents issued by the employer comprise the following documents:</p> <p>THE TENDER</p> <p>Part T1: Tendering procedures</p> <p>T1.1 - Tender notice and invitation to tender.</p> <p>T1.2 - Tender data</p> <p>Part T2: Returnable documents</p> <p>T2.1 - List of returnable documents</p> <p>T2.2 - Returnable schedules</p> <p>THE CONTRACT</p> <p>Part C1: Agreements and Contract data</p> <p>C1.1 - Form of offer and acceptance</p> <p>C1.2 - Contract data</p> <p>C1.3 - Dispute Resolution Mechanism</p> <p>Part C2: Pricing data</p> <p>C2.1 - Pricing Instructions</p> <p>C2.2 - Bills of Quantities</p> <p>Part C3: Scope of work</p> <p>C3 - Scope of work</p> <p>Part C4: Site information</p> <p>C4 - Site information</p>
3.3	The tender documents issued by the employer comprise the documents listed on the contents page
3.4	<p>The employer's agent is:</p> <p>MDA Architects cc 18 Park Lane Central, Gqeberha</p> <p>Mr. D Angus via email: receptionpe@mdaarch.co.za Phone No. 041 373 0228</p>
3.5	The language for communications is English
3.6	The competitive negotiation procedure shall be applied.
3.7	Procurement Method: Two (2) stage procurement procedure shall be applied.
4	Tender's obligations

4.1	<p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated:</p> <p>a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations, for a CIDB 8GB or Higher class of construction work; and</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> every member of the joint venture is registered with the CIDB; in GB class of works. the combined contractor grading designation calculated in accordance with the Construction industry Development Regulations using the CIDB Joint Venture Calculator is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CIDB 8GB or higher class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations (Three contractors registered in contractor grading designation 7 of which the lead partner must be registered in the class of work under consideration or one grade 8 lead partner within the class of work under consideration plus any grade combination within any class of work.) Joint Venture Agreement. Separate SBD 6.1, Specific Goals Claim form, POPIA act Forms with % split clearly indicated to be submitted for each JV partner.
4.2	<p>The employer will compensate the tender as follows JBCC Edition 6.2 of 2018. The employer will not compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.</p>
4.3	<p>It is the responsibility of the tenderer to check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.</p>
4.4	<p>Confidentiality and copyright of documents Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.</p>
4.5	<p>Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are incorporated into the tender documents by reference.</p>
4.6	<p>Acknowledge receipt of addenda to the tender documents, which the employer may issue, and, if necessary, apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.</p>
4.7	<p>The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list. Tender documents will not be made available at the clarification meeting</p>
4.8	<p>Seek clarification <i>Request clarification of the tender documents, if necessary, by notifying the employer at least 5 (Five) working days before the closing time stated in the tender data.</i></p>
4.9	<p>Tenderers are required to state the rates and currencies in Rands. Include in the rates, prices, and the tendered total of the prices (if any), all duties, taxes which the law requires to be paid [except value added tax (VAT)], and other levies payable by the successful tenderer, that are applicable 14 days before the closing time stated in the tender data. Show the VAT payable by the employer separately as an addition to the tendered total of the prices. Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data. State the rates and prices in monetary value of the contract unless otherwise instructed in the tender data.</p>
4.10	<p>Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer or to correct errors made by the tenderer and ensure that all signatories to the tender offer initial all such alterations. Do not make erasures using masking fluid.</p>

4.11	Main tender offers are not required to be submitted together with alternative tenders.
4.12	No alternative tender offers will be considered
4.13.1	Parts of each tender offer communicated on paper shall be submitted as an original. Submit a) the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with a translation of any documentation in a language other than the language of communication established in 3.5, and b) the parts communicated electronically by the employer of its agents on paper format with the tender.
4.13.2	Sign the original and all copies of the tender offer where required in terms of the tender data. State in the case of a joint venture which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer. NOTE The employer holds all authorized signatories liable on behalf of the tenderer.
4.13.3	A tender security in the amount of N/A is required and shall remain valid for a period not exceeding N/A days after the closing date for tender offers. The form of the tender security shall not differ substantially from the sample provided in Annex D of SANS 10845-3.
4.13.4	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are: EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE, situated at the following address: GLOBAL LIFE CENTRE, SCM UNIT, C/O PHALO AVENUE AND R63 (OPPOSITE ENGINE GARAGE), BHISHO. Tender / Bid identification details: UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING Closing time and date: As per Tender advertisement
4.13.5	The tenderer is required to submit with his tender the following compulsory certificates: 1) a copy of the CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services. <i>In the case of a Joint Venture/Consortium/Sub-contractors each party must submit a separate CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services.</i> 2) CIDB Grading certificate or CRS number. 3) COIDA Letter of Good standing from the Department of Labour and/or FEM
4.13.6	A two-envelope procedure will not be required.
4.13.7	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted. The tenderer accepts that the employer does not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
4.14	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Proof of posting shall not be accepted as proof of delivery. Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of the standard conditions of tender in this part of SANS 10845 apply equally to the extended deadline.

4.15.1	<p>The tender offer validity period is 90 days. Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data. If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period, with or without any conditions attached to such extension. Extend the period of the tender security, if any, to cover any agreed extension requested by the employer.</p>
4.15.2	<p>Placing of contractors under restrictions / withdrawal of tenders If any tenderer who has submitted a tender offer or a contractor who has concluded a contract has, as relevant: withdrawn such tender or quotation after the advertised closing date and time for the receipt of submissions; after having been notified of the acceptance of his tender, failed or refused to commence the contract; had their contract terminated for reasons within their control without reasonable cause; offered, promised or given a bribe in relation to the obtaining or the execution of such contract; acted in a fraudulent, collusive or anti-competitive or improper manner or in bad faith towards the Provincial Government; or, made any incorrect statement in any affidavit or declaration with regard to a preference claimed and is unable to prove to the satisfaction of the Provincial Government that the statement was made in good faith or reasonable steps were taken to confirm the correctness of the statements, such tenderer/s may be placed under restriction from tendering with the state. Procedures are outlined in the EC SCM Policy for Infrastructure procurement and Delivery Management and also on cidb Inform Practice Note #30. Excerpts of the policy can be availed on request of any interested tenderer.</p>
4.16	Access shall be provided for the following inspections, tests and analysis: N/A
4.17	The preferred tenderer will be required to submit an approved insurer undertaking to provide the Performance Bond / Guarantee / Surety / Security to the format and/or standard
5	Employer's undertakings
5.1	<p>The Employer will respond to requests for clarification received up to Five (5) working days before the tender closing time. If, as a result of the issuing of addenda, it is necessary to extend the closing time stated in the tender data, grant such extension and notify all respondents accordingly.</p>
5.2	The employer shall issue addenda until Five (5) working days before tender closing time.
5.3	Tenders will be opened immediately after the closing time for tenders at 11:00am hours .
5.4	Do not disclose to tenderers, or to any person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.
5.5	<p>Determine, after opening and before detailed evaluation, whether each tender offer that was properly received</p> <ul style="list-style-type: none"> a) complies with the requirements of the standard conditions of tender in this part of SANS 10845, b) has been properly and fully completed and signed, and c) is responsive to the other requirements of the tender documents. <p>A responsive tender is one that conforms to all the terms, conditions, and scope of work of the tender documents, without material deviation or qualification. A material deviation or qualification is one which, in the employer's opinion, would</p> <ul style="list-style-type: none"> d) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the scope of work, e) significantly change the employer's or the tenderer's risks and responsibilities under the contract, or f) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. <p>Reject a non-responsive tender offer, and do not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.</p>
5.6	<p>Arithmetical errors, omission and discrepancies Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. For Vat related discrepancies, National and Provincial Treasury prescripts in relation to VAT procedures apply.</p>

5.7.1	<p>The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule.</p> <p>Table F.1: Formulae for calculating the value of A</p> <table border="1"> <thead> <tr> <th>Formula</th> <th>Comparison aimed at achieving</th> <th>Option 1^a</th> <th>Option 2^a</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Highest price or discount</td> <td>$A = \left(1 + \frac{(P - P_m)}{P_m}\right)$</td> <td>$A = P/P_m$</td> </tr> <tr> <td>2</td> <td>Lowest price or percentage commission / fee</td> <td>$A = \left(1 - \frac{(P - P_m)}{P_m}\right)$</td> <td>$A = P_m/P$</td> </tr> </tbody> </table> <p>^a P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.</p>	Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a	1	Highest price or discount	$A = \left(1 + \frac{(P - P_m)}{P_m}\right)$	$A = P/P_m$	2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{(P - P_m)}{P_m}\right)$	$A = P_m/P$
Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a										
1	Highest price or discount	$A = \left(1 + \frac{(P - P_m)}{P_m}\right)$	$A = P/P_m$										
2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{(P - P_m)}{P_m}\right)$	$A = P_m/P$										
5.7.2	<p>The procedure for the evaluation of responsive tenders is Method 2: Administrative compliance, Price and Specific Goals</p> <p>Stage 1: Administrative compliance Stage 2: Price and specific goals (90/10 system)</p>												
	<p>1. <u>STAGE ONE: ADMINISTRATIVE REQUIREMENTS AND MANDATORY REQUIREMENTS</u></p>												
	<p>A. Bidders' proposals must meet the following minimum requirements and supporting documents must be submitted with the completed bid document in a sealed envelope in the bid box at the closing date and time. Failure to comply will automatically eliminate the bid for further consideration:</p> <ol style="list-style-type: none"> 1. Bid Document (This Document must be submitted in its original format) 2. Bids which are late, incomplete, unsigned or submitted by facsimile or electronically, will not be accepted. 3. Bidder must be registered with CIDB in the correct grading and class of works as per the tender notice and requirements. And must the status on CIDB be active during award stage. It is the responsibility of the bidder to keep the status on CIDB active throughout bidding process (advert till award stage). 4. Bidders must be a legal entity. 5. Form of offer and Acceptance (fully completed and signed) 6. SBD4 must be duly completed and signed. Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract, such interest must be disclosed on question 2.3.1. 7. Compulsory Enterprise Questionnaire (Completed and signed) (JV partners must complete separate Questionnaire forms and submit) (% split to be indicated for each JV partner) 8. If the offer is "Vat Inclusive", the VAT registration number of service provider must be indicated and if a service provider is not a VAT Vendor but include VAT in its prices, the successful service provider will be given 21 days to register as a VAT Vendor with SARS, after the issuing of an appointment letter. If a bidder is a VAT vendor/registered, the bidder is required to explicitly state the VAT amount. VAT vendors must include VAT at 15% in the bid offer(s). 9. Resolution to Sign 10. Attendance of compulsory briefing meeting 11. This tender will be awarded as a whole. All trades listed in the Bills of Quantities or Pricing schedule must be priced for (except provisional sums and allowances), failure to do so will result increase commercial risk of the bid and may lead to elimination or passing over of the bidder. 12. The tenderer is required to submit with his tender the following compulsory certificates: <ol style="list-style-type: none"> 1) A copy of the CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services. In the case of a Joint Venture/Consortium/Sub-contractors each party must submit a separate CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services. 2) CIDB Grading certificate or CRS number. 												

- 3) COIDA Letter of Good standing from the Department of Labour and/or FEM
13. ECDOH SCM Policy applies.
 14. Returnable Schedule: SBD1-Invitation to bid must be completed and signed
 15. The bidder must be registered on the Central Supplier Database (CSD) before the Tender Closing Date.
 16. All bidders' tax matters must be in order prior award. Bidders' tax matters will be verified through CSD.
 17. Declaration of Employees of the State or other State Institutions.
 18. Due Diligence In-LoCo Inspection of the Bidder / or JV. As part of its due diligence obligations, the Department of Health reserves the right to do an In-LoCo inspection of the offices and premises of the Bidder / or JV to verify the following:
 - 1)The existence of the business enterprise as declared on the SBD1 form.
 - 2)The existence of the resources including plant & equipment, to render the services.
 - 3)The existence of projects completed by the bidder/JV as declared.
 19. In the event where the In-LoCo Inspections find inconsistencies and or misrepresentation in terms of what has been declared in the Bid submission, the Bidder will be notified of such inconsistencies and or misrepresentations in writing and allowed 7 (seven) days to rectify and or clarify such.
 20. As part of the due diligence obligations, a Technical Risk analysis of all bids including the Bills of Quantities will be carried out by the Bid Evaluation Committee with the support of the Built Environment Professional Team, to check for mistakes in the Pricing schedules, BOQ's, and to confirm whether the tender price submitted is market related and does not pose a commercial risk to the Client.
 21. This Technical Risk Analysis includes the analysis of the In-LoCo inspection findings.
 22. In the event where the Technical Risk Analysis of the bidder who scored the highest points, indicates a commercial risk to the Client, the Client reserves the right to award the Bid to the next highest scorer of Bid points.
 23. The Technical Risk Analysis and In-LoCo inspections can be carried out anytime during or after Stages 1&2 evaluation, before award.
 24. The Bidder who complies with the Due Diligence In-LoCo Inspection evaluation criteria, may then be considered for recommendation for award.
 25. In the event where the Bidder has failed to rectify the inconsistencies and or misrepresentations within the 7 (seven) day period, the Health Department shall consider the Bidder who scored the 2nd highest points to be considered for award.
 26. The Department will contract with the successful bidder by signing a formal contract.
 27. Wherever a brand name is specified in this document (i.e. specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
 28. Protection of personal information: Consent (POPIA)
 29. The successful tenderer (after being informed) will be required to bring along an unsigned copy of the form of contract to be signed by parties (e.g. JBCC Edition 6.2 of 2018)
 30. A fixed construction guarantee of 10% must be provided as security, in the event that the considered bidder fails to provide this security, the client will consider the next highest scoring bidder for consideration.

1. STAGE TWO: EVALUATION POINTS ON PRICE AND SPECIFIC GOALS / PPPFA OF 2022

The **90/10 preference point system** shall be applied for the purposes of this bid as per the requirements of the *Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000)* and PPPFA Regulations of 2022

Criteria	Points
POINTS ON PRICE	90
POINTS FOR SPECIFIC TARGETED GOALS	10
TOTAL	100

The 90/10 preference point system for acquisition of services, works or goods exceeding Rand value of R50 million:

	<p>(a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a Rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included):</p> <p>The financial offer will be scored using the following formula:</p> $A = (1 - \frac{P - P_m}{P_m})$ <p>The value of value of W_1 is:</p> <p>1) 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50 000 000 or</p> <p>2) 80 where the financial value inclusive of VAT of one or more responsive tender offers have a value that equals or is less than R 50 000 000.</p>
5.7.3	The procedure for the evaluation of responsive tenders is Method 2 (Administrative, price and preference)
5.7.4	The quality criteria and maximum score in respect of each of the criteria are as follows: N/A
5.7.5	Each evaluation criteria will be assessed in terms of five indicators – N/A
5.7.6	The prompts for judgment and the associated scores used in the evaluation of quality shall be as follows: N/A
5.8	<p>Tender offers will only be accepted if:</p> <p>a) the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity</p> <p>b) the tenderer is in good standing with SARS according to the Central Supplier Database. Bidders must submit a CSD no. or tax status compliance pin.</p> <p>c) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation;</p> <p>d) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.</p> <p>e) the tenderer has not:</p> <p>i) abused the Employer's Supply Chain Management System; or</p> <p>ii) failed to perform on any previous contract and has been given a written notice to this effect.</p> <p>f) the tenderer has completed the Compulsory Declaration and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.</p> <p>g) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract.</p> <p>h) Bids which are late, incomplete, unsigned or submitted by facsimile or electronically will not be accepted.</p> <p>i) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer.</p> <p>j) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. A letter of Good standing from the Labour Department is a compulsory mandatory requirement.</p> <p>k) the tender has offered a market related offer. If the offer is believed not to be market related, the department through its Supply Chain Management bid committees will attempt to negotiate the offer with identified bidder/s to a reasonable amount. Bidders are not allowed to increase their tender offers during this process.</p>

	<p>l) A Resolution of signatory form has been completed and signed by director/s or a letter bearing a letterhead of the tenderer has been attached (specific to this bid) to the bid submission; it must be duly signed by all directors and submitted the bid. Only a duly authorized official can sign the bid.</p> <p>m) Prospective bidders must register on CSD prior submitting bids (open tenders). Any prospective bidder found to have Tax matters not in order with SARS (verified through CSD) during the evaluation process (after being given an opportunity to rectify tax matters) will be eliminated and not be considered further in the process. Preferred bidder/s will be afforded an opportunity to rectify their tax affairs within 7 days. A bidder that fails to rectify its tax matters with SARS will be eliminated.</p> <p>n) NOTE: The amount reflected on the Form of Offer and Acceptance takes precedence over any other total amount indicated elsewhere in bidder's tender submission. If the Form of Offer and Acceptance has no value or figure, the bidder will be regarded as having made no offer.</p> <p>o) The department reserves the right not to award the bid to the most favourable tenderer, if any of the situations occur: if it is not assisting in the advancement of designated groups; risk profile of the favourable firm is too high; the bidder has been awarded a considerable number of projects by the department or provincial government; has performed unsatisfactorily in the past, etc.</p> <p>p) Bids shall not be awarded to Bidders appearing on the Health Department and/or National/Provincial Treasury Defaulters List</p> <p>q) In the event where the Technical Risk Analysis of the bidder who scored the highest points, indicates a commercial risk to the Client, the Client reserves the right to award the Bid to the next highest scorer of Bid points</p> <p>r) In the event where the recommended Bidder has failed to comply with the conditions as set out in the letter of award, the client shall notify the recommended Bidder of his/her failure to comply and recommend for award the next bidder that scored the highest points. The Conditions as set out in the letter of award are as follow:</p> <ol style="list-style-type: none"> 1. Proof of having All risk, public liability and support insurances as stipulated in the contract. 2. Submission of a Construction Safety, Health and Environmental Plan. 3. Contract Guarantee (as selected in the tender document)
5.9	The number of paper copies of the signed contract to be provided by the employer is 1.
	<p>The additional conditions of tender are:</p> <ul style="list-style-type: none"> • Wherever a brand name is specified in this document (i.e., specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
T.2.1	<p>A. List of returnable documents</p>
1	<p>Documentation to demonstrate eligibility to have tenders evaluated i.e. List all documentation to demonstrate eligibility to have a submission evaluated.</p> <ul style="list-style-type: none"> • Appropriate CIDB grading suitable for the works (as stated in 4.1).
2	<p>Returnable Schedules required for tender evaluation purposes.</p> <p>The tenderer must fully and appropriately complete and sign the following returnable schedules as relevant:</p> <ul style="list-style-type: none"> • SBD 1 (mandatory) • SBD 4 (mandatory) • SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 • Proposed amendments and qualifications. (mandatory) • Schedule of Proposed Subcontractors • Protection of personal content: Consent POPIA (mandatory) • Valid CIDB Certificate of Tenderer (mandatory) • Valid Department of Labour COIDA or FEM Letter of Good Standing Certificate. (mandatory)

	<ul style="list-style-type: none"> • Proof of Specific Goals Claimed • Particulars of Fire Detection Installation subcontractor & Schedule of materials offered. • Particulars of Medical Gas installation subcontractor & Schedule of materials offered. • Particulars of HVAC installation subcontractor & Schedule of materials offered. • Part C1.1 Form of Offer and Acceptance (mandatory) • Part C1.2 Contract Data (mandatory) • Part C2.2 Bills of Quantities (Handwritten Priced. Not typed) (mandatory) • Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted). (mandatory) • Record of addenda issued (Only if addenda is issued) (mandatory) • Resolution for Signatory(mandatory) • Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture) (mandatory) • Proof of Registration on the National Treasury Central Supplier Data Base (CSD) A CSD Registration Report (Full report not just the summary) for a contractor with valid and correct information (mandatory)
3	<p>Other documents required for tender evaluation purposes. The tenderer must provide the following returnable documents:</p> <ul style="list-style-type: none"> • List of Projects completed of a similar nature (For Health Departments as end-user) with details of the Clients, Scope, Values, and dates of completion, with copies of Practical, Works and or Final Completion Certificates attached as Portfolio of evidence. (Mandatory) • List of Resources, Plant & Equipment to render the service
4	<p>Only authorized signatories may sign the original and all copies of the tender offer where required. In the case of a ONE-PERSON CONCERN submitting a tender, this shall be clearly stated. In the case of a COMPANY submitting a tender, include a copy of a resolution by its board of directors authorizing a director or other official of the company to sign the documents on behalf of the company. In the case of a CLOSE CORPORATION submitting a tender, include a copy of a resolution by its members authorizing a member or other official of the corporation to sign the documents on each member's behalf.</p> <p>In the case of a PARTNERSHIP submitting a tender, all the partners shall sign the documents, unless one partner or a group of partners has been authorized to sign on behalf of each partner, in which case proof of such authorization shall be included in the Tender. In the case of a JOINT VENTURE/CONSORTIUM submitting a tender, include a resolution of each company of the joint venture together with a resolution by its members authorizing a member of the joint venture to sign the documents on behalf of the joint venture. <u>Accept that failure to submit proof of authorization to sign the tender shall result in the tender offer being regarded as non-responsive.</u></p>
5	<p>Information and data to be completed in all respects Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as nonresponsive.</p>
6	<p>Canvassing and obtaining of additional information by tenderers The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.</p>
7	<p>Prohibitions on awards to persons in service of the state The Employer is prohibited to award a tender to a person -</p> <ol style="list-style-type: none"> a) who is in the service of the state; or b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or c) a person who is an advisor or consultant contracted with the Department or municipal entity. <p>In the service of the state means to be -</p> <ol style="list-style-type: none"> a) a member of:- <ol style="list-style-type: none"> a any municipal council;

	<p><i>b</i> any provincial legislature; or</p> <p><i>c</i> the National Assembly or the National Council of Provinces;</p> <p><i>d)</i> a member of the board of directors of any municipal entity;</p> <p><i>e)</i> an official of any Department or municipal entity;</p> <p><i>f)</i> an employee of any national or provincial department;</p> <p><i>g)</i> provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);</p> <p><i>h)</i> a member of the accounting authority of any national or provincial public entity; or</p> <p><i>i)</i> an employee of Parliament or a provincial legislature.</p> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.</p>
8	<p>Awards to close family members of persons in the service of the state</p> <p>Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child, or parent of a person in the service of the state (defined in clause 8 above), or has been in the service of the state in the previous twelve months, including -</p> <p><i>a)</i> the name of that person;</p> <p><i>b)</i> the capacity in which that person is in the service of the state; and</p> <p><i>c)</i> the amount of the award.</p> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.</p>
9	<p>Respond to requests from the tenderer</p> <p>The employer will respond to requests for clarification up to 5 (five) working days before the tender closing time.</p>
10	<p>Opening of tender submissions</p> <p>Tenders will be opened immediately after the closing time for tenders</p>
11	<p>Scoring quality / functionality: Not applicable to this tender</p>
12	<p>Cancellation and re-invitation of tenders</p> <p>An organ of state may, prior to the award of the tender, cancel the tender if-</p> <p>(a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or</p> <p>(b) funds are no longer available to cover the total envisaged expenditure; or</p> <p>(c) no acceptable tenders are received.</p> <p>(d) Tender validity period has expired.</p> <p>(e) Gross irregularities in the tender processes and/or tender documents.</p> <p>(f) No market related offer received (after attempts of negotiation processes)</p> <p>Where applicable, the decision to cancel the tender will be published in on the Tender Notice Board of the SCM Department and if applicable, on the CIDB website and in the Tender Bulletin or the media in which the original tender invitation as advertised.</p>
13	<p>Dispute resolution mechanism will be done through the SCM Department and thereafter the Adjudication route.</p>
14	<p>The department, when it takes action against the tenderer or person awarded the contract on a fraudulent basis, considers the provisions of Regulation 14:</p>

	The remedies provided for in Preferential Procurement Regulations 2022 do not prevent an institution from instituting remedies arising from any other prescripts or contract.
15	Where the employer terminates the contract due to default of the contractor in whole or in part, the employer may decide to: a) Refer the breach in contract to the CIDB for investigation as a breach of the CIDB Code of Conduct in terms of the CIDB Regulations ; or b) may impose a restriction penalty on the contractor in terms of Section 14 of the Preferential Procurement Regulations. The outcomes of such investigations in terms of both the CIDB Regulations and the Preferential Procurement Regulations may prohibit the contractor from doing business with the public sector for a period not exceeding 10 years.

PART T2

RETURNABLE DOCUMENTS

ASSESSMENT OF STAGE 1 ADMINISTRATIVE REQUIREMENTS AND MANDATORY REQUIREMENTS:

The bidder shall not proceed to the next stage of evaluation if the bidder fails to submit all the mandatory information as listed here below:

BIDDER TO INDICATE BELOW IF MANDATORY DOCUMENTS WERE SUBMITTED WITH TENDER:

MANDATORY DOCUMENT TO BE SUBMITTED WITH BID:	YES	NO
SBD 1 Part of invitation to bid and terms and conditions for bidding		
SBD 4 Declaration of interest		
SBD 6.1 Preference points claim form in terms of the Preferential procurement regulations 2022		
Proposed amendments and qualifications		
Protection of personal content: Consent		
Valid CIDB Certificate of Tenderer		
Valid Department of Labour COIDA or FEM Letter of Good Standing Certificate		
Part C1.1 Form of Offer and Acceptance (Fully signed and completed)		
Part C1.2 Contract Data		
Part C2.2 Bills of Quantities (Fully priced) (Handwritten Priced. Not typed)		
Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted).		
Record of addenda issued (Only if addenda is issued)		
Resolution for Signatory		
Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture)		
Proof of Registration on the National Treasury Central Supplier Data Base (CSD) Full CSD report)		
List of Projects completed of a similar nature (For Health Departments as end-user) with details of the Clients, Scope, Values, and dates of completion, with copies of Practical, Works and or Final Completion Certificates attached as Portfolio of evidence.		
List of resources, Plant & Equipment to execute the service.		

PART T2.1: LIST OF RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

The tenderer must complete the following returnable documents:

1 Returnable Schedules required for bid/quotation evaluation purposes. (Mandatory Items)

- SBD 1,
- SBD 4
- SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022
- Proposed amendments and qualifications.
- Particulars of Fire Detection Installation subcontractor & Schedule of materials offered
- Particulars of HVAC installation subcontractor & Schedule of materials offered
- Particulars of Medical Gas installation subcontractor & Schedule of materials offered
- Protection of personal content: Consent
- Valid CIDB Certificate of Tenderer
- Valid Department of Labour COIDA or FEM Letter of Good Standing Certificate.
- Proof of Specific Goals Claimed
- Part C1.1 Form of Offer and Acceptance
- Part C1.2 Contract Data
- Part C2.2 Bills of Quantities
- Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted).
- Record of addenda issued (Only if addenda is issued)
- Resolution for Signatory
- Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture)
- Proof of Registration on the National Treasury Central Supplier Data Base (CSD)

2 Other documents required for bid/quotation evaluation purposes.

- List of Projects completed of a similar nature (For Health Departments as end-user) with details of the Clients, Scope, Values, and dates of completion, with copies of Practical, Works and or Final Completion Certificates attached as Portfolio of evidence.
- List of resources, Plant & Equipment to execute the service.

3 Returnable Schedules that will be incorporated into the contract

- SBD 1,
- SBD 4
- SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022
- Proposed amendments and qualifications.
- Schedule of Proposed Subcontractors
- Protection of personal content: Consent
- Valid CIDB Certificate of Tenderer
- Valid Department of Labour COIDA or FEM Letter of Good Standing Certificate.
- Proof of Specific Goals Claimed
- Part C1.1 Form of Offer and Acceptance
- Part C1.2 Contract Data
- Part C2.2 Bills of Quantities

SBD 1 – PART A - INVITATION TO BID

PART A

SBD 1

INVITATION TO BID

CSD registered service providers (CIDB Grading of 8GB Contractor or higher) are hereby invited to bid for the services required by the Eastern Cape Department of Health					
BID NUMBER:	SCMU3-23/24-0734-HO	CLOSING DATE:	19 April 2024	CLOSING TIME:	11:00
DESCRIPTION:	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT					
EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE, situated at the following address: GLOBAL LIFE CENTRE, SCM UNIT, C/O PHALO AVENUE AND R63 (OPPOSITE ENGINE GARAGES), BHISHO					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Ms. T Notshe	CONTACT PERSON	Ms. T Notshe		
TELEPHONE NUMBER	040 608 9501	TELEPHONE NUMBER	040 608 9501		
E-MAIL ADDRESS	thabisa.notshe@echealth.gov.za	E-MAIL ADDRESS	thabisa.notshe@echealth.gov.za		
SUPPLIER INFORMATION					
NAME OF BIDDER (Entity as registered on CSD)					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
An SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 IS TO BE SUBMITTED TO CLAIM DEPARTMENTAL SPECIFIC GOAL POINTS					
a) Service providers must submit proof of its Specific Goals points claimed / status of contributor.					
b) The Specific Goals supporting documents required to verify claimed points are in line with the specified requirements include:					
<ul style="list-style-type: none"> • Historically Disadvantaged Individuals Ownership: Proof of ownership (CIPRO certificate) with id no. • Women Ownership: Ownership: Proof of ownership (CIPRO certificate) with id no. • Youth Ownership: Ownership: Proof of ownership (CIPRO certificate) with id no. • Disability Ownership: Proof of ownership (CIPRO certificate) with valid medical documentary proof. • Military Veterans Ownership: Proof of ownership (CIPRO certificate) with valid proof of veteran status. • Locality Ownership: Proof of business address (municipal account or valid lease agreement) • Updated CSD report 					

NAME OF BIDDER (Entity as registered on CSD)

Ownership Details (as registered on CSD)

<i>Name & Surname</i>	<i>Describe Category of Ownership (HDI, Women, Youth, Disabled, Military Veteran)</i>	<i>ID No.</i>	<i>% Percentage of Ownership</i>
<i>TOTAL OWNERSHIP AS REGISTERED ON CSD</i>			

PART B

TERMS AND CONDITIONS FOR BIDDING

<p>1. BID SUBMISSION:</p> <p>1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.</p> <p>1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</p> <p>1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.</p> <p>1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM.</p>
<p>2. TAX COMPLIANCE REQUIREMENTS</p> <p>2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.</p> <p>2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.</p> <p>2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.</p> <p>2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.</p> <p>2.5 SUBMISSION OF A COIDA or FEM LETTER OF GOOD STANDING FROM DEPARTMENT OF LABOUR IS MANDATORY</p> <p>2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.</p> <p>2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.</p> <p>2.8 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE.”</p>
<p>3. SPECIAL CONDITIONS OF BID</p> <p>3.1 Due Diligence In-LoCo Inspection of the Bidder / or JV. As part of its due diligence obligations, the Department of Health reserves the right to do an In-LoCo inspection of the offices and premises of the Bidder / or JV to verify the following:</p> <ol style="list-style-type: none"> 1) The existence of the business enterprise as declared on the SBD1 form. 2) The existence of the resources including plant & equipment, to render the services. 3) The existence of projects completed by the bidder/JV as declared. <p>3.2. In the event where the In-LoCo Inspections find inconsistencies and or misrepresentation in terms of what has been declared in the Bid submission, the Bidder will be notified of such inconsistencies and or misrepresentations in writing and allowed 7 (seven) days to rectify and or clarify such.</p> <p>3.3. As part of the due diligence obligations, a Technical Risk analysis of all bids including the Bills of Quantities will be carried out by the Bid Evaluation Committee with the support of the Built Environment Professional Team, to check for mistakes in the Pricing schedules, BOQ's, inconsistencies, misrepresentations, and to confirm whether the tender price submitted is market related and does not pose a commercial risk to the Client.</p> <p>3.4. This Technical Risk Analysis includes the analysis of the In-LoCo inspection findings.</p> <p>3.5 In the event where the Technical Risk Analysis of the bidder who scored the highest points, indicates a commercial risk to the Client, the Client reserves the right to award the Bid to the next highest scorer of Bid points.</p> <p>3.6. The Technical Risk Analysis and In-LoCo inspections can be carried out anytime during or after Stages 1&2 evaluation, before award.</p> <p>3.7 In the event where the recommended Bidder has failed to comply with the conditions as set out in the letter of award, the client shall notify the recommended Bidder of his/her failure to comply and recommend for award the next</p>

bidder that scored the highest points. The Conditions as set out in the letter of award are as follow

- i. Proof of having All risk, public liability and support insurances as stipulated in the contract.
- ii. Submission of a Construction Safety, Health and Environmental Plan.
- iii. Contract Guarantee (as selected in the tender document)

3.8. An appointment letter/acceptance letter does not constitute a contract or commencement date of a contract. The recommended Bidder is required to sign an official contract with the Department.

3.9. JBCC 6.2 State Clauses apply to this Bid & Contract.

3.10. Bids shall not be awarded to Bidders appearing on the Health Department and/or National/Provincial Treasury Defaulters List.

3.11. Bids shall not be awarded to Bidders appearing on the Health Department and/or National/Provincial Treasury Defaulters List.

3.12. The following governs the employment of SMME subcontractors:

1. SMME Subcontract

The Contractor shall appoint all SMME subcontractors as domestic subcontractors in terms of an agreement that provides for fair and equitable conditions of contract compatible with the JBCC PBA Edition 6.2 (May 2018). All work and the associated risks related to SMME subcontractors shall be the direct responsibility of the Contractor.

2. SMME Subcontract Target

Thirty Percent (30%) of the Tender Value (excluding Socio Economic Value, CPAP/escalation, Contingency, OHS, Preliminaries, CIDB B.U.I.L.D Program and Value-Added Tax (VAT)) must be executed by SMMEs. It is compulsory for the Principal Contractor to achieve this target as the principal contractors performance against this target will be monitored.

Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.

3. A SMME subcontractor is defined as follows:

- A targeted enterprise;
- A business concern operating in any business sector and which complies with the qualitative and quantitative criteria outlined in the Schedule contained in the National Small Business Act (Act No. 102 of 1996);
- An entity which must have an active registration status with the CIDB, targeted CIDB Grade designations 1 to 6;

4. Procurement and contracting of SMME subcontractors

The Appointed contractor must take note that the P&G main section document allow for the appointment of an SMME Mentor or Mentors if more than one are require.

After the Award of the Contract, the Contractor will have to start the process of procuring and subcontracting SMME subcontractors to achieve the tendered SMME Participation Goal of 30%. This contracting process for subcontracting SMMEs must commence after the commencement of the Contract Period and shall be completed prior to the commencement of the Construction Period. It is a condition that the Employer shall not give the Contractor possession of site until the above process of the appointment of SMME subcontractors is complete. The Contractor shall take due cognisance to also programme this SMME contracting process in its detailed construction programme.

The SMME Subcontractors must be procured as follows:

4.1. The identification of potential SMME's subcontractors to tender for the SMME packages shall be determined by the recognized community representatives/ structures, involving but not be limited by the Local Ward Councilor, the Social Facilitator and the PSC.

4.2. A competitive tender process obtaining at least three tenders from SMME subcontractors for each SMME package.

4.3. The SMME package documents will be prepared by the representative PSP's in conjunction with the Contract. The PSP's will provide the measured works portion of the tender document, to which the Contractor shall include his conditions of subcontract and requirements.

4.4. The tender documents will issued to the SMME subcontractors to tender.

4.5. The Contractor shall facilitate a mandatory briefing session with the invited SMME subcontractors. The briefing session must be attended by the representative PSP's including the OHS Agent and social facilitator.

4.6. The Contractor shall provide assistance to the prospective SMMES and ensure;

4.6.1. They understand the liabilities and responsibilities of the subcontract.

- 4.6.2. Scope of the SMME package
 - 4.6.3. Procedures for submitting tenders.
 - 4.6.4. Understanding the pricing and implications of the tendered rates.
 - 4.6.5. Procedures and basis of tender adjudication.
 - 4.6.6. Subcontract conditions and implications when awarded.
 - 4.7. Adjudication
 - 4.7.1. Contractor to receive all tenders at a specific location, in sealed tender submissions, placed in a tender box provided by the Contractor prior to the closing date and time. Late tenders will not be considered.
 - 4.7.2. Contractor to maintain a tender submission register, recording tender receipt.
 - 4.7.3. Tenders to be evaluated by the Contractor in terms of the tender conditions and submit a draft tender evaluation to the PA within 5 working days of the closing of tenders.
 - 4.7.4. The PA will have the right to
 - 4.7.4.1. Interview the tenderer
 - 4.7.4.2. Clarify any aspect of the tender
 - 4.7.4.3. Verify the eligibility of the tenderer
 - 4.7.4.4. Conduct a rate analysis to clarify rates and prices.
 - 4.7.5. The Contractor shall provide reasonable opportunity to tenderers, to correct patent errors, without altering the total tendered sum.
 - 4.8. Award of tender

The Contractor shall

 - 4.8.1. Notify unsuccessful tenderers
 - 4.8.2. Award/ appoint the SMME subcontractor
 - 4.8.3. Compile and sign the SMME subcontract agreements.
- 3.11 . The information contained in this tender document is available on computer software and can be supplied via E-mail after the compulsory pre-tender site meeting via DoH Supply Chain Unit; it is the responsibility of the tenderer to ensure that the information received via these media is correct and consistent with the actual printed documents or addendum(s) issued to each tenderer. In the event of any differences between the printed tender documents or faxed addendum(s) issued to tenderers and similar information provided by E-mail the former will always be regarded as correct. It is the tenderers responsibility to check all formulae and extensions etc. in the excel Bills of Quantities (Main and M&E).

SIGNATURE OF BIDDER:

DATE:

.....

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g., company resolution)

Compulsory Enterprise Questionnaire

Compulsory Enterprise questionnaire

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

** Complete only if sole proprietor or partnership and attach separate page if more than 3 partners*

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number Tax reference number

Section 6: The attached SBD 4 must be completed for each tender and be attached as a tender requirement.

Section 7: The attached SBD 6.1 must be completed for each tender and be attached as a requirement.

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004; iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
- iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:
.....
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

¹ *the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.*

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

I, the undersigned, (name).....
in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

² **Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.**

.....
Position

.....
Name of bidder

RECORD OF ADDENDA TO BID DOCUMENTS

BID DESCRIPTION		UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING	
SCMU NUMBER		SCMU3-23/24-0734-HO	
I / We confirm that the following communications received from the Department of Health before the submission of this tender offer, amending the tender documents, have been taken into account in this bid offer: (Attach additional pages if more space is required)			
Item	Date	Title or Details	No. of Pages
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Attach additional pages if more space is required.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

PROPOSED AMENDMENTS AND QUALIFICATIONS

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

BID DESCRIPTION	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
SCMU NUMBER	SCMU3-23/24-0734-HO

Page	Clause /Item	Proposal

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct

Signed

Date

Name

Position

Enterprise name

RESOLUTION FOR SIGNATORY

BID DESCRIPTION	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
SCMU NUMBER	SCMU3-23/24-0734-HO

A: CERTIFICATE OF AUTHORITY FOR SIGNATORY

Signatory for companies shall confirm their authority hereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors to this form or on company letter head.

An example is given below:

“By resolution of the board of directors passed at a meeting held on _____

Mr/Ms _____, whose signature appears below, has been duly authorised to

sign all documents in connection with the tender for Contract No. _____

and any Contract which may arise there from on behalf of (Block Capitals) _____

SIGNED ON BEHALF OF THE COMPANY: _____

IN HIS/HER CAPACITY AS: _____

DATE: _____

SIGNATURE OF SIGNATORY: _____

WITNESSES:

DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	

If you cannot complete this form, attach a separate sheet (in a company letter head, project specific and signed by all directors):

CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms, authorized signatory of the company , acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

BID DESCRIPTION	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
SCMU NUMBER	SCMU3-23/24-0734-HO

NAME OF FIRM	PERCENTAGE SPLIT IN CONSORTIA/JV AS PER CONSORTIA/JV AGREEMENT AND SPECIFIC GOAL POINTS CLAIMED	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner:%		Signature. Name Designation.....
.....%		Signature. Name Designation.....
.....%		Signature. Name Designation.....
.....%		Signature. Name Designation.....

SCHEDULE OF PROPOSED SUBCONTRACTORS

BID DESCRIPTION	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
SCMU NUMBER	SCMU3-23/24-0734-HO
<p>We notify you that it is our intention to employ the following Subcontractors for work in this contract. The Subcontractors will all be CIDB registered and their CIDB Registration number shall be submitted below. This should also be declared on SBD 6.1 form.</p> <p>If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.</p> <p>We confirm that all subcontractors who are or to be contracted are registered on Central Supplier Database (CSD).</p>	

No.	Name and address of proposed Subcontractor	Sub-Contractor CIDB Grading	Sub-Contractor CIDB No.	Nature, extent of work, Year completed, Value of sub-contract	Contact details: Name of person and phone No.
1					
2					

3					
4					

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct

Signed

Date

Name

Position

Enterprise name

PARTICULARS OF HVAC INSTALLATION CONTRACTOR

Project Name:	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
Tender No:	SCMU3-23/24-0734-HO

Name of HVAC Contractor:	
Address:	
HVAC Contractor registration number:	
Registration body:	

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed

Date

Name

Position

Tenderer.....

...

PARTICULARS OF MEDICAL GAS INSTALLATION CONTRACTOR

Project Name:	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
Tender No:	SCMU3-23/24-0734-HO

Name of Medical Gas Contractor:	
Address:	
Medical Gas Contractor registration number:	
Registration body:	

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed Date

Name Position

Tenderer.....

...

PARTICULARS OF WET SERVICES INSTALLATION CONTRACTOR

Project Name:	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
Tender No:	SCMU3-23/24-0734-HO

Name of Wet Services Contractor:	
Address:	
Wet Services Contractor registration number:	
Registration body:	

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed Date

Name Position

Tenderer.....

SBD 6.1

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

BID DESCRIPTION	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
SCMU NUMBER	SCMU3-23/24-0734-HO

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

The applicable preference point system for this tender is the 90/10 preference point system.

The lowest/ ~~highest~~ acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	90
SPECIFIC GOALS	10
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

- 1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

90/10

$$Ps = 90 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 90 points is allocated for price on the following basis:

90/10

$$Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 preference point system is applicable, corresponding points must also be indicated as such.)

(Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)
Historically Disadvantaged Individuals Ownership	20% (2)	
Women Ownership	20% (2)	
Youth Ownership	20% (2)	
Disability Ownership	20% (2)	
Military Veterans Ownership	10% (1)	
Locality	10% (1)	
TOTAL	100% (10)	

CONSORTIA / JOINT VENTURES

* In the event that Specific Goal Points are claimed for members by **Consortia / Joint Ventures** refer to SPECIFIC GOALS POINT – GUIDING WORKING PAPERS TO ASSIST THE BIDDER

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

<p>.....</p> <p>SIGNATURE(S) OF BIDDER(S)</p>	
SURNAME AND NAME:
DATE:
ADDRESS:

SPECIFIC GOALS POINT - GUIDING WORKING PAPERS TO ASSIST THE BIDDER

Table 1: Consortia/Joint Venture Percentage Split

In the event that Specific Goal Points are claimed for members by consortia / joint ventures, the following information must be furnished in order to be entitled to the points claimed in respect of the member: (If more than 3 Members the Bidder can submit a comprehensive table for all Members as per below example)

	Consortia/JV Member 1 Company Name:	Consortia/JV Member 2 Company Name:	Consortia/JV Member 3 Company Name:	TOTAL
Percentage Split in Consortia/JV as per Consortia/JV Agreement and Certificate of authority%%%	100%

Table 2: Consortia/Joint Venture Specific Goal Points Claim

In the event that Specific Goal Points are claimed for members by consortia / joint ventures, the following information must be furnished in order to be entitled to the points claimed in respect of the member: (If more than 3 Members the Bidder can submit a comprehensive table for all Members as per below example)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	JV/Consortia Member 1 Company Name: Number of points claimed (90/10 system)	JV/Consortia Member 2 Company Name: Number of points claimed (90/10 system)	JV/Consortia Member 3 Company Name: Number of points claimed (90/10 system)	Total number of points claimed by JV/Consortia
Historically Disadvantaged Individuals Ownership	20% (2)				
Women Ownership	20% (2)				
Youth Ownership	20% (2)				
Disability Ownership	20% (2)				
Military Veterans Ownership	10% (1)				
Locality	10% (1)				
TOTAL	100% (10)				

Table 3: Detailed description and definition of various categories of the specific goal points that can be claimed.

No.	Detailed description and definition of various categories of	Portfolio of Evidence as part of the returnables
1	<p>Historically Disadvantaged Individuals Ownership: [Historically Disadvantaged Individual (HDI). Means a South African citizen who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1983 (Act No. 110 of 1983) or the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993) (“The Interim Constitution”) and /orWho is a female; and/orWho has a disability]. A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ.</p> <ul style="list-style-type: none"> • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999. • The next digit (C) shows if you're an SA citizen status with 0 denoting that you were born a SA citizen and 1 denoting that you're a permanent resident. 	<p>1)Proof of ownership (CIPRO certificate) with id no.</p> <p>2)Proof of ownership (CSD report) with id no.</p> <p>3)Certified copy of ID of all owners.</p>
2	<p>Women Ownership: A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ.</p> <ul style="list-style-type: none"> • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999. 	<p>1)Proof of ownership (CIPRO certificate) with id no.</p> <p>2)Proof of ownership (CSD report) with id no.</p> <p>3)Certified copy of ID of all owners.</p>
3	<p>Military Veterans Ownership: According to the 2011 Military Veterans act, a military veteran is any South African who rendered military service to any of the military organisations, former statutory and liberation armies, which were involved on all sides of South Africa's liberation war from 1960 to 1993; served in the then Union Defence Force.</p>	<p>1)Proof of ownership (CIPRO certificate) with id no. with valid proof of veteran status.</p> <p>2)Proof of ownership (CSD report) with id no. with valid proof of veteran status.</p> <p>3)Certified copy of ID of all owners.</p>

4	<p>Disability Ownership: The CRPD (Convention on the Rights of Persons with Disabilities) defines persons with disabilities to include those who have long term physical, mental, intellectual or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in society on an equal basis.</p>	<p>1)Proof of ownership (CIPRO certificate) with id no. with valid medical documentary proof.</p> <p>2)Proof of ownership (CSD report) with id no. with valid medical documentary proof.</p> <p>3)Certified copy of ID of all owners.</p>
5	<p>Youth Ownership: Who are Youth in South Africa? The national Youth Policy defines youth as any persons between the ages of 14 and 35 years.</p>	<p>1)Proof of ownership (CIPRO certificate) with id no.</p> <p>2)Proof of ownership (CSD report) with id no.</p> <p>3)Certified copy of ID of all owners.</p>
6	<p>Locality Ownership: Proof of business address (municipal account or valid lease agreement) (Eastern Cape Contractors can claim 2 points)</p>	<p>1) Copy of Muncial billing account with an address in the Eastern Cape Province.</p> <p>2)Copy of a Lease Agreement with an addrss in the Eastern Cape Province.</p>

***PROOF OF REGISTRATION ON THE NATIONAL
TREASURY CENTRAL SUPPLIER DATABASE (CSD
REPORT)***

(ATTACH HERE)

VALID CIDB CERTIFICATE OF A TENDERER
(ATTACH HERE)

***VALID DEPARTMENT OF LABOUR COIDA LETTER
OF GOOD STANDING CERTIFICATE AND/OR FEM
(ATTACH HERE)***

***PROOF OF SPECIFIC GOALS POINTS CLAIMED
(ATTACH HERE)***

Table 2: Detailed description and definition of various categories of the specific goal points that can be claimed.

No.	Detailed description and definition of various categories of	Portfolio of Evidence as part of the returnables
1	<p>Historically Disadvantaged Individuals Ownership: [Historically Disadvantaged Individual (HDI). Means a South African citizen who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1983 (Act No. 110 of 1983) or the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993) (“The Interim Constitution”) and /orWho is a female; and/orWho has a disability]. A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ.</p> <ul style="list-style-type: none"> • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999. • The next digit (C) shows if you're an SA citizen status with 0 denoting that you were born a SA citizen and 1 denoting that you're a permanent resident. 	<p>1)Proof of ownership (CIPRO certificate) with id no.</p> <hr/> <p>2)Proof of ownership (CSD report) with id no.</p> <hr/> <p>3)Certified copy of ID of all owners.</p>
2	<p>Women Ownership: A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ.</p> <ul style="list-style-type: none"> • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999. 	<p>1)Proof of ownership (CIPRO certificate) with id no.</p> <hr/> <p>2)Proof of ownership (CSD report) with id no.</p> <hr/> <p>3)Certified copy of ID of all owners.</p>
3	<p>Military Veterans Ownership: According to the 2011 Military Veterans act, a military veteran is any South African who rendered military service to any of the military organisations, former statutory and liberation armies, which were involved on all sides of South Africa's liberation war from 1960 to 1993; served in the then Union Defence Force.</p>	<p>1)Proof of ownership (CIPRO certificate) with id no. with valid proof of veteran status.</p> <hr/> <p>2)Proof of ownership (CSD report) with id no. with valid proof of veteran status.</p> <hr/> <p>3)Certified copy of ID of all owners.</p>

4	<p>Disability Ownership: The CRPD (Convention on the Rights of Persons with Disabilities) defines persons with disabilities to include those who have long term physical, mental, intellectual or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in society on an equal basis.</p>	1)Proof of ownership (CIPRO certificate) with id no. with valid medical documentary proof.
		2)Proof of ownership (CSD report) with id no. with valid medical documentary proof.
		3)Certified copy of ID of all owners.
5	<p>Youth Ownership: Who are Youth in South Africa? The national Youth Policy defines youth as any persons between the ages of 14 and 35 years.</p>	1)Proof of ownership (CIPRO certificate) with id no.
		2)Proof of ownership (CSD report) with id no.
		3)Certified copy of ID of all owners.
6	<p>Locality Ownership: Proof of business address (municipal account or valid lease agreement) (Eastern Cape Contractors can claim 1 point)</p>	1) Copy of Municipal billing account with an address in the Eastern Cape Province.
		2)Copy of a Lease Agreement with an address in the Eastern Cape Province.

POPIA

PROTECTION OF PERSONAL INFORMATION: CONSENT (POPIA)

The introduction of The Protection of Personal Information Act (POPIA) ensures the regulation of personal information through its entire life cycle of collection, transfer, storing and deletion. As part of its business activities, the Department of Health obtains and requires access to personal data from a wide range of internal and external parties, including without limitation bidders who respond to requests for proposals that are published by the Department of Health from time to time. The Department of Health confirms that it shall process the information disclosed by Bidders for the purpose of evaluating and subsequently awarding/appointing a successful Bidder.

The Department of Health hereby states that it does not and will never modify, amend, or alter any personal information submitted to it by a Bidder. Not unless directed to do so by an order of court, the Department of Health does not disclose or permit the disclosure of any personal information to any Third Party without the prior written consent of the owner of the information.

Similarly, Bidders will from time-to-time access and be seized with information of a personal nature pertaining to the Department of Health. Some of the information may because of legislative compliances be available in the public domain, whilst some is uniquely provided to bidders in pursuit of procurement or other business-related activities. In this regard, the Department of Health requires that Bidders which receive or have access to its personal information, process any such information in a manner compliant with the requirements of the POPIA.

AGREEMENT

1. The Department of Health and the Bidder (the Parties) agree and undertake that upon obtaining and having access to personal information relating to either of them, they shall always ensure that:
 - a) They process the information only for the express purpose for which it was obtained.
 - b) Information is provided only to designated and authorized personnel who require the personal information to carry out the Parties' respective obligations in terms of the Procurement processes.
 - c) They will introduce, and implement all reasonable measures ensure the protection of all personal information from unauthorized access and/or use.
 - d) They have taken appropriate measures to safeguard the security, integrity, and authenticity of all personal information in its possession or under its control.
 - e) The Parties agree that if personal information will be processed for any other purpose other than the one for which the accessing of the information was intended, explicit written consent will be obtained prior to the execution of such reason.
 - f) The Parties shall carry out regular assessments to identify all reasonably foreseeable internal and external risks to the interception of personal information in its possession or under its control and shall implement and maintain appropriate controls in mitigation of such risks.

2. The Parties agree that they will promptly return or destroy any personal data in their possession or control which belongs to the other Party once it no longer serves the purpose for which it was collected, subject to any legal retention requirements. The information will be destroyed in such a manner that it cannot be reconstructed to its original form, linking it to any individual or organization.

3. Bidder's Obligations

- a) The Bidder is required to notify the Information Officer of Department of Health, in writing as soon as possible after it becomes aware of or suspects any loss, unauthorized access or unlawful use of any of the Department of Health's personal information.
- b) The Bidder shall, at its own cost, promptly and without delay take all necessary steps to mitigate the extent of the loss or compromise of personal data.
- c) The Bidder shall be required to provide the Department of Health with details of the persons affected by the compromise and the nature and extent of the compromise, including details of the identity (if known) of the unauthorized person who may have accessed or acquired the personal data.
- d) The Bidder undertakes to co-operate with any investigation relating to security breach which is carried out by or on behalf of Department of Health.

On behalf of the Bidder:

..... Signature Date
..... Position Name of the Bidder

On behalf of the Client:

..... Signature Date
..... Position Name of Client Representative

LIST OF PROJECTS PREVIOUSLY COMPLETED

BID DESCRIPTION	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING					
SCMU NUMBER	SCMU3-23/24-0734-HO					
<p>I / We confirm that the following projects (technically complex, health facility related projects of a similar scope and value) were completed by the Bidder and or JV Partner which serves as portfolio of evidence that I/we have the relevant experience to complete this technically complex, health facility project. (additional pages may be added if more space is required)</p>						
Item	Name of Implementing Agent and Health Department, Name of contactable person & phone number	Name of Bidder and or JV Partner	Project Description (as described on the Practical/ Works/ Final Completion Certificate attached)	Value of Project (Including VAT)	Copy of Practical/ Works/ Final Completion Certificate attached) YES / NO	
1						
2						
3						

Attach additional pages if more space is required.

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct and noted and agreed that:

This information is required as part of the MANDATORY returnable schedules, which shall not be used as part of elimination evaluation criterion during Stage 1 Admin Compliance, but this information will be checked and verified as part of due diligence Technical Risk Analysis and during the In-Loco inspections, before Adjudication and award, and should the findings indicate a commercial risk to the Client, the bid shall not be awarded to the highest scorer bidder.

Signed

Date

.....

.....

Name

Position

.....

.....

Name of Bidder & Names of JV Partners

.....

**COPIES OF PRACTICAL / WORKS / FINAL COMPLETION
CERTIFICATES OF LIST OF PROJECTS PREVIOUSLY
COMPLETED (ATTACH HERE)**

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct and noted and agreed that:

This information is required as part of the MANDATORY returnable schedules, which shall not be used as part of elimination evaluation criterion during Stage 1 Admin Compliance, but this information will be checked and verified as part of due diligence Technical Risk Analysis and during the In-LoCo inspections, before Adjudication and award, and should the findings indicate a commercial risk to the Client, the bid shall not be awarded to the highest scoring bidder.

Signed	_____	Date	_____
Name	_____	Position	_____
Name of Bidder & Names of JV Partners	_____		

DETAILS OF ALL RESOURCES, PLANT AND EQUIPMENT TO EXECUTE THIS SERVICE (ATTACH HERE)

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct and noted and agreed that:

This information is required as part of the MANDATORY returnable schedules, which shall not be used as part of elimination evaluation criterion during Stage 1 Admin Compliance, but this information will be checked and verified as part of due diligence Technical Risk Analysis and during the In-LoCo inspections, before Adjudication and award, and should the findings indicate a commercial risk to the Client, the bid shall not be awarded to the highest scoring bidder.

Signed	Date
Name	Position
Name of Bidder & Names of JV Partners	

THE CONTRACT

PART C1

AGREEMENTS AND CONTRACT DATA

PART C1.1: FORM OF OFFER AND ACCEPTANCE

FORM OF OFFER AND ACCEPTANCE

Bid Description	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
SCMU number	SCMU3-23/24-0734-HO

OFFER

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

“UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.”

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS

.....

Rand (in words);

R(in figures) (or other suitable wording)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature

Name

Capacity

for the tenderer

(Name and address of organization)

Name and signature

of witness Date

ACCEPTANCE

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer’s offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer’s offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1 Agreements and contract data, (which includes this agreement)
- Part C2 Pricing data
- Part C3 Scope of work.
- Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within 3 weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.¹

Signature

.....
Name **Ms. S. Gede**

Capacity:
Acting Head of the Eastern Cape Department of Health

for the Employer

Eastern Cape Department of Health
Dukumbana Building, Independence Avenue
BHISHO

(Name and address of organization)

Name and signature
of witness Date

Schedule of Deviations

1 Subject _____
Details _____

2 Subject _____
Details _____

3 Subject _____
Details _____

4 Subject _____
Details _____

By the duly authorized representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents

listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification, or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender/ quotation documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

¹ *As an alternative, the following wording may be used:*

Notwithstanding anything contained herein, this agreement comes into effect two working days after the submission by the employer of one fully completed original copy of this document including the schedule of deviations (if any), to a courier-to-counter delivery / counter-to-counter delivery / door-to-counter delivery /door-to-door delivery /courier service (delete that which is not applicable), provided that the employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now contractor) within seven working days of the date of such submission notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties

PART C1.2: CONTRACT DATA

<p>The Joint Building Contracts Committee® - NPC CONTRACT DATA For use by ORGANS OF STATE and other PUBLIC SECTOR BODIES Principal Building Agreement Edition 6.2 - May 2018</p>
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A PROJECT INFORMATION

A1.0 Works [1.1]

Project name	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
Reference number	SCMU3-23/24-0734-HO
Works description	Refer to document C3 – Scope of Work

A2.0 Site [1.1]

Erf / stand number	Refer to document C4 – Site Information
Township / Suburb	Uitenhage
Site address	Refer to document C4 – Site Information
Local authority	Nelson Mandela Bay Municipality

A3.0 Employer [1.1]

Official Name of Organ of State / Public Sector Body	Eastern Cape Department of Health
Business registration number	N/A
VAT/ number	N/A
Country	South Africa
Employer's representative: Name	Ms. S. Gede Acting Head of Department Eastern Cape Department of Health
Telephone number	040 608 9501

Physical address	EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE, GLOBAL LIFE CENTRE, SCM UNIT, C/O PHALO AVENUE AND R63 BHISHO.
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A4.0 Principal Agent [1.1]

Name	MDA Architects		
Legal entity of above	MDA Architects cc	Contact person	Duncan Angus
Practice number		Telephone number	041 373 0228
		Mobile number	082 373 4264
Country	South Africa	E-mail	receptionpe@mdaarch.co.za
Postal address	PO Box 6132 Walmer, Gqeberha	Postal Code	6070
Physical address	18 Park Lane Central, Gqeberha	Postal Code	N/A

A5.0 Agent [1.1]

Discipline	Architect		
Name	MDA Architects		
Legal entity of above	MDA Architects cc	Contact person	Duncan Angus
Practice number		Telephone number	041 373 0228
		Mobile number	082 373 4264
Country	South Africa	E-mail	receptionpe@mdaarch.co.za
Postal address	PO Box 6132 Walmer, Gqeberha	Postal Code	6070
Physical address	18 Park Lane Central, Gqeberha	Postal Code	N/A

A6.0 Agent [1.1]

Discipline	Quantity Surveyor		
Name	Imvelo Quantity Surveyors CC		
Legal entity of above	Imvelo Quantity Surveyors CC	Contact person	Mike Rooney
Practice number	2002/002451/23	Telephone number	043 748 5209
		Mobile number	082 376 3213

Country	South Africa	E-mail	mike@imveloqs.co.za	
Postal address	PO Box 710, Gonubie		Postal Code	5256
Physical address	81 Beaconsbury Drive, Beacon Bay		Postal Code	5241

A7.0 Agent [1.1]

Discipline	Civil Engineer			
Name	Lukhozi Consulting Engineers (Pty) Ltd			
Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Conrad Bezuidenhout	
Practice number	2000/006344/07	Telephone number	041 363 1984	
		Mobile number	081 264 8063	
Country	South Africa	E-mail	c.bezuidenhout@lukhozi.co.za	
Postal address	Same as physical		Postal Code	
Physical address	36 Pickering Street, Newton Park, Gqeberha		Postal Code	6045

A8.0 Agent [1.1]

Discipline	Structural Engineer			
Name	Lukhozi Consulting Engineers (Pty) Ltd			
Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Louis Coetzer	
Practice number	2000/006344/07	Telephone number	043 721 1321	
		Mobile number	082 894 0816	
Country	South Africa	E-mail	l.coetzer@lukhozi.co.za	
Postal address	Same as physical		Postal Code	
Physical address	36 Pickering Street, Newton Park, Gqeberha		Postal Code	6045

A9.0 Agent [1.1]

Discipline	Electrical Engineer			
Name	Lukhozi Consulting Engineers (Pty) Ltd			
Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Bernard Oosthuizen	
Practice number	2000/006344/07	Telephone number	021 686 2550	
		Mobile number	082 410 9577	
Country	South Africa	E-mail	b.oosthuizen@lukhozi.co.za	
Postal address	Same as physical		Postal Code	
Physical address	36 Pickering Street, Newton Park, Gqeberha		Postal Code	6045

A10.0 Agent [1.1]

Discipline	Mechanical Engineer		
Name	Lukhozi Consulting Engineers (Pty) Ltd		
Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Bruce Maliti
Practice number	2000/006344/07	Telephone number	043 721 1321
		Mobile number	073 796 9069
Country	South Africa	E-mail	b.maliti@lukhozi.co.za
Postal address	Same as physical		Postal Code
Physical address	36 Pickering Street, Newton Park, Gqeberha		Postal Code 6045

A11.0 Agent [1.1]

Discipline	Occupational Health and Safety Agent		
Name	Safe Working Practice		
Legal entity of above	Safe Working Practice	Contact person	Jay Bhana
Practice number		Telephone number	043 735 1774
		Mobile number	084 479 2294
Country	South Africa	E-mail	buffalo@safeppractice.co.za
Postal address	Same as physical		Postal Code
Physical address	4 Essex Road, Vincent, East London		Postal Code 5217

A12.0 Agent [1.1]

Discipline			
Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			Postal Code
Physical address			Postal Code

B CONTRACT INFORMATION

B 1.0 Definitions [1.1]

Bills of quantities: System/Method of measurement	Standard System of Measuring Building Work (Sixth Edition) as amended
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B 2.0 Law, regulations, and notices [2.0]

Law applicable to the works , state country [2.1]	Republic of South Africa
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B 3.0 Offer and acceptance [3.0]

Currency applicable to this agreement [3.2]	South African Rand
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B 4.0 Documents [5.0]

The original signed agreement is to be held by the principal agent [5.2], if not, indicate by whom	Employer
Number of copies of construction information issued to the contractor at no cost [5.6]	Three (3)

Documents comprising the agreement	Page numbers
The JBCC® Principal Building Agreement, Edition 6.2 May 2018	1 to 30
The JBCC® Principal Building Agreement - Contract Data for Organs of State and other Public Sector Bodies, Edition 6.2 May 2018	1 to 14
The JBCC® General Preliminaries for use with the JBCC® Principal Building Agreement, Edition 6.2 May 2018	1 to 7

Contract drawings – description	Number	Revision	Date
As per Drawings listed C3.13			

B 5.0 Employer's Agents [6.0]

Authority is delegated to the following **agents** to issue **contract instructions** and perform duties for specific aspects of the **works** [6.2]

Principal Agent

Principal agent's and **agents'** interest or involvement in the **works** other than a professional interest [6.3]

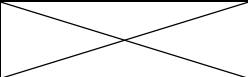
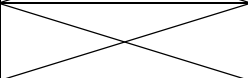
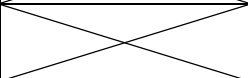
None

B 6.0 Insurances [10.0]

Insurances by employer			Amount including tax	Deductible amount including tax
Yes / No:	No			
Contract works insurance:				
	New works [10.1.1] (Contract sum or amount)			
or	Works with practical completion in sections [10.2] (contract sum or amount			
or	Works with alterations and additions [10.3] (reinstatement value of existing structures with or including new works)			
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance			
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance			
	Escalation, professional fees and reinstatement costs if not included above			
Total of the above contract works insurance amount				
Supplementary insurance [10.1.2; 10.2]				
Public liability insurance [10.1.3; 10.2]				
Removal of lateral support insurance [10.1.4; 10.2]				
Other insurances [10.1.5]				
Yes/ No?	No	If yes, description 1		
Yes/ No?	No	If yes, description 2		

and/or

Insurances by Contractor			Amount including tax	Deductible amount including tax
Yes / No:	Yes			
	New works [10.1.1] (Contract sum or amount)		N/A	N/A
or	Works with practical completion in sections [10.2] (contract sum or amount)		To the minimum value of the contract sum + 10%	With a deductible not exceeding 5% of each and every claim

or	Works with alterations and additions [10.3] (reinstatement value of existing structures with or including new works)	To the minimum value of the contract sum + 10%	With a deductible not exceeding 5% of each and every claim
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance	N/A	
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance	N/A	
	Escalation, professional fees and reinstatement costs if not included above	N/A	
Total of the above contract works insurance amount		To the minimum value of the contract sum + 10%	
Supplementary insurance [10.1.2; 10.2]		No	
Public liability insurance [10.1.3; 10.2]		R5 million	
Removal of lateral support insurance [10.1.4; 10.2]		No	
Other insurances [10.1.5]			
Yes/ No?	No	If yes, description 1	
Yes/ No?	No	If yes, description 2	

B 7.0 Obligations of the employer [12.1]

Existing premises will be in use and occupied [12.1.2]	Yes / No?	Yes
If yes, description	<p>The Contractor will, throughout the entire period of the works, be responsible for the proper and adequate protection of property and the public and ECDOHs personnel from damage or injury resultant from the works and for the proper security of the site at all times during the course of the works. Further, the Contractor must allow for all temporary hoardings, walkways, etc. required by the Local Authorities, National Building Regulations. OHS Act and or demanded by his own requirements.</p> <p>All allowances for the safe removal and disposal of asbestos material are deemed to be priced in the removal of existing roofing and other asbestos containing material.</p> <p>Allowance must further be made for periodic adjustment of any hoardings/ temporary fencing and for their eventual removal and for making good. All other temporary fencing hoardings etc. Required must be priced for in the Preliminaries of these Bills of Quantities. Allowance must be made for periodic adjustment of any hoardings aligned to the project phasing and for their eventual removal and for making good.</p> <p>The contractor shall keep the site, structures, etc. well-watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent.</p>	
Restriction of working hours [12.1.2]	Yes / No?	Yes

If yes, description	07h30 to 17h00 Weekdays only. Work required to be executed outside of these hours must be arranged with the Facilities Manager and the management of the hospital, in advance. No costs shall be claimable connected thereto.		
Natural features and known services to be preserved by the contractor [12.1.3]		Yes / No?	Yes
If yes, description	Existing services that are to be preserved are indicated in the existing service layout plan.		
Restrictions to the site or areas that the contractor may not occupy [12.1.4]		Yes / No?	Yes
If yes, description	Work areas and restricted areas are defined on the drawing specifying the site establishment.		
Supply of free issue [12.1.10]		Yes / No?	No
If yes, description			

B 8.0 Nominated subcontractors [14.0]

Yes / No?	No	If yes, description of specialisation
Specialisation 1		
Specialisation 2		
Specialisation 3		
Specialisation 4		
Specialisation 5		
Specialisation 6		
Specialisation 7		
Specialisation 8		
Specialisation 9		

B 9.0 Selected subcontractors [15.0]

Yes / No?	No	If yes, description of specialisation
Specialisation 1		
Specialisation 2		
Specialisation 3		
Specialization 4		
Specialization 5		
Specialisation 6		
Specialisation 7		
Specialisation 8		
Specialisation 9		
Specialisation 10		

B 10.0 Direct contractors [16.0]

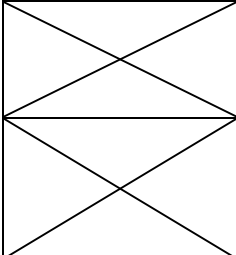
Yes / No?	No	If yes, description of extent of work
Extent of work [12.1.11]		
Extent of work [12.1.11]		
Extent of work [12.1.11]		
Extent of work [12.1.11]		
Extent of work [12.1.11]		

B 11.0 Description of sections [20.1]

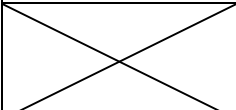
Section 1	<p>Commences at site handover and encompasses the following works:</p> <ul style="list-style-type: none"> • 6th floor roof replacement: Phase 1 East wing. • Roof remedial commencement. • Archive extension. • Trauma refurbishment. Phase 1 • 72-hour unit: Phase 1 Ward renovation: East wing. • Basement stores remedial waterproofing. <p>Allow for period of inspection, commissioning and hand over.</p>
Section 2	<p>To commence 4 weeks after sectional practical completion has been taken for section 1. The contractor is to note the hospital staff and equipment will need to move into section 1 before contractor can commence with section 2. The contractor must include four weeks in their program for the hospital to move from the existing to the newly constructed facilities. The four weeks are deemed to be included in the contract period for section 2.</p> <ul style="list-style-type: none"> • 6th floor roof replacement: Phase 2 West wing. • Roof remedial completion. • 72 Hour Unit Phase 2: New ward expansion: West wing and new service facilities: West wing and new service facilities. <p>Allow for period of inspection, commissioning and hand over.</p>
Section 3	<p>To commence 4 weeks after sectional practical completion has been taken for section 2. The contractor is to note the hospital staff and equipment will need to move into section 2 before contractor can commence with section 3. The contractor must include four weeks in their program for the hospital to move from the existing to the newly constructed facilities. The four weeks are deemed to be included in the contract period for section 3.</p> <ul style="list-style-type: none"> • 72-hour unit Phase 3: reconfiguration of existing building and construction new entrance <p>Allow for period of inspection, commissioning and hand over.</p>

Section 4	<p>To commence 4 weeks after sectional practical completion has been taken for section 1 The contractor is to note the hospital staff and equipment will need to move into section 1 before the contractor can commence with section 4. The contractor must include four weeks in their program for the hospital to move from the existing to the newly constructed facilities. The four weeks are deemed to be included in the contract period for section 4.</p> <ul style="list-style-type: none"> • Trauma extensions and refurbishment ph II. <p>Allow for period of inspection, commissioning and hand over.</p>
Section 5	<p>To commence 4 weeks after sectional practical completion has been taken for section 4. The contractor must include four weeks in their program for the hospital to move from the existing to the newly constructed facilities. The four weeks are deemed to be included in the contract period for section 4.</p> <ul style="list-style-type: none"> • Trauma unit: reconfiguration of ph I area to suite final detail design <p>Allow for period of inspection, commissioning and hand over.</p>
Section 6	N/A

B 12.0 Possession of site [12.1.5], practical completion [19.0; 20.0] and penalty [24.0]

Practical completion for the works as a whole	Intended date of possession of the site Refer B17.0 [12.1.5; 12.2.22]	Period for inspection by the principal agent [19.3]	The date for practical completion shall be the period as indicated below from the date of possession of the site by the contractor [12.2.7; 24.1]	Penalty for late completion [24.1]
		working days	Period in months	Penalty amount per calendar day (excl. tax)

or where **sections** are applicable

Practical completion of a section of the works	Intended date of possession of the site Refer B16.0 [B4.1]	Period for inspection by the principal agent [19.3]	The date for practical completion shall be the period as indicated below from the date of possession of the site by the contractor [12.2.7; 24.1]	Penalty for late completion [24.1]
		Working days	Period in months	Penalty amount per calendar day (excl. tax)



Section 1	X	10 working days	5 Months	1.5cents/R100 of contract amount
Section 2	X	10 working days	6 Months which includes a 4-week decanting period	1.5cents/R100 of contract amount
Section 3	X	10 working days	9 Months which includes a 4-week decanting period	1.5cents/R100 of contract amount
Section 4	X	10 working days	9 Months which starts and runs concurrently with section 2 and three months into section 3 which includes a 4-week decanting period	1.5cents/R100 of contract amount
Section 5	X	10 working days	3 Months which includes a 4-week decanting period starting on the completion of section 4 and running concurrently with section 3	1.5cents/R100 of contract amount
Section 6	X			
Section 7	X			
Section 8	X			
Remainder of the	X			

Criteria to achieve practical completion not covered in the definition of practical completion
No further Criteria

B 13.0 Defects liability period [21.0]

Extended defects liability period: Refer B17.0 [21.13]	Yes / No?	Yes
If yes, description of applicable elements	The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect to all works.	

B 14.0 Payments [25.0]

Date of month for issue of regular payment certificates [25.2]	30th		
Contract price adjustment / Cost fluctuations [25.3.4; 26.9.5]	Yes / No?	Yes	Base Month: Month of tender closing
If yes, method to calculate	CPAP calculated with Haylett formulae based on indices as provided by Stats SA		
Employer shall pay the contractor within: [25.10]	Thirty (30) calendar days		

B 15.0 Dispute resolution [30.0]

Adjudication [30.6.1; 30.10] Name of nominating body	Refer to Part C1.3 Dispute Resolution Mechanism		
Applicable rules for adjudication [30.6.2]	Adjudication in accordance with the CIDB adjudication process		
Arbitration [30.7.4; 30.10]	Yes / No?	No	
If Yes, name of nominating body *If No, then dispute will be referred to litigation			
Applicable rules for arbitration [30.7.5]	N/A		

B 16.0 JBCC® General Preliminaries – selections

Provisional bills of quantities [B2.2]	Yes / No?	Yes
Availability of construction information – is the construction information complete? [B2.3]	Yes / No?	No
Previous work - dimensional accuracy - details of previous contract(s) [B3.1]	N/A	
Previous work - defects - details of previous contract(s) [B3.2]	N/A	
Inspection of adjoining properties - details [B3.3]	N/A	
Handover of site in stages - specific requirements [B4.1]	<p>Yes, section 2 shall commence 4 weeks after the completion of section 1 to allow for decanting of hospital staff.</p> <p>Section 3 will commence 4 weeks after the completion of section 2 to allow for decanting of hospital staff.</p> <p>Section 4 will commence 4 weeks after the completion of section 1 to allow for decanting of hospital staff.</p> <p>Section 5 will commence 4 weeks after the completion of section 4 to allow for decanting of hospital staff.</p>	
Enclosure of the works - specific requirements [B4.2]	<p>The contractor will be restricted to work only within the area demarcated for that specific project work section as per site establishment drawings. The contractor is to note that the project is being constructed in sections as set out in B11, which might result in the contractor having to de-establish and re-establish the site office on site to suite their own requirements. The contractor must take cognisance of the above restrictions and sectional completion of the project and price the above in the preliminaries section of the BoQ. No claims in this regard will be considered.</p>	
Geotechnical and other investigations - specific requirements [B4.3]	Refer to attached Geotechnical report attached in Part C4	

Existing premises occupied - details [B4.5]		Working areas will be occupied. The project is to be constructed in five sections as described in B11. Temporary works and hoarding have been measured in section No 6 of the BoQ. Any other hoardings etc. to comply with the Construction Regulations 2014 and any other legal requirements or legislation must be priced in the Preliminaries section of the bills of Quantities. The contractor must allow in their preliminaries section, for the periodic adjustment of any hoardings and their eventual removal and making good. No claims for additional hoardings etc will be entertained. The contractor must ensure minimal disruption to the operation of the hospital and keep dust and noise to a minimum.	
Services - known - specific requirements [B4.6]		Yes, refer to survey diagram and Engineers Drawing 1746-6-GEN-000 which are annexed to this bid document	
Water [B8.1]	By contractor	Yes / No?	Yes
	By employer	Yes / No?	No
	By employer – metered	Yes / No?	No
Electricity [B8.2]	By contractor	Yes / No?	Yes
	By employer	Yes / No?	No
	By employer – metered	Yes / No?	No
Ablution and welfare facilities [B8.3]	By contractor	Yes / No?	Yes
	By employer	Yes / No?	No
Communication facilities - specific requirements [B8.4]		No specific requirements	
Protection of the works - specific requirements [B11.1]		Yes. Refer to decanting plan and Scope of Works and Health and Safety Plan which are annexed to this bid document	
Protection / isolation of existing works and works occupied in sections - specific requirements [B11.2]		Yes. Refer to decanting plan and Scope of Works and Health and Safety Plan which are annexed to this bid document	
Disturbance - specific requirements [B11.5]		Yes. Refer to decanting plan and Scope of Works and Health and Safety Plan which are annexed to this bid document	
Environmental disturbance - specific requirements [B11.6]		Yes, refer to asbestos report attached.	

B 17.0 Changes made to JBCC® documentation

Reference may be made to other documents forming part of this **agreement**

1.1 Definitions

AGREEMENT: The completed Form of Offer and Acceptance, the completed **JBCC®** Principal Building Agreement and **JBCC® contract data for organs of state and other public sector bodies, the contract drawings, the priced document** and any other documents reduced to writing and signed by the authorised representatives of the **parties**

CONSTRUCTION PERIOD: The period commencing on the date of possession of the **site** by the **contractor** and ending on the date of **practical completion**

CONTRACT PERIOD: The period commencing on the date of the Employer accepting the offer by signing the Form of Offer and Acceptance and ending on the date of final completion

COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule

DEFAULT INTEREST: No Clause

GUARANTEE FOR CONSTRUCTION: A security in terms of the ECDOH's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD]

CONTRACT DATA FOR ORGANS OF STATE AND OTHER PUBLIC SECTOR BODIES: The document listing the Organs of State and other Public Sector Bodies' requirements and the project specific information

INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999), calculated as simple interest, in respect of debts owing to the State, and will be the rate as determined by the Minister of Justice and Constitutional Development from time to time 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999), calculated as simple interest, in respect of debts owing by the State

LETTER OF ACCEPTANCE: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer

PAYMENT CERTIFICATE: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of Clause 25.3

PRINCIPAL AGENT: The person or entity appointed by the **employer** and named in the **contract data for organs of state and other public sector bodies**. In the event of a principal agent not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by the employer's representative as named in the **contract data for organs of state and other public sector bodies**

3.0 Offer and Acceptance

Amend 3.3 to read as follows:

This **agreement** shall come into force on the date as stated on the Form of Offer and Acceptance and continue to be of force and effect until the end of the **latent defects** liability period [22.0] notwithstanding termination [29.0] or the certification of **final completion** [21.0] and final payment [25.0]

4.0 Cession and Assignment

Replace Clause 4.3 with the following:

Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained

5.0 Documents

Replace Clause 5.4 with the following:

The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference

Replace Clause 5.5 with the following:

The parties may publish or disclose on any platform only the contract scope and contract amount

6.0 Employer's Agents

Replace Clause 6.5 with the following:

Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer shall appoint another principal agent and/or an agent

Add the following as 6.7:

In terms of the clauses listed hereunder, the **employer** has retained its authority and has not given a mandate to the **principal agent**. The **employer** shall sign all documents in relation to clauses 4.2, 14.1.2, 14.1.4, 14.4.1, 14.6, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12 and 28.4

8.0 Works Risk

Replace Clause 8.4 with the following:

The **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary

9.0 Indemnities

9.2.7: Add the following to the end of the first sentence: "... due to no fault of the **contractor**"

9.2.9 No Clause

9.2.10 No Clause

Add the following as clause 9.3:

The employer's rights to claim damages for the contractor's omissions and actions will not be affected.

10.0 Insurances

Add the following as 10.1.5.1:

Hi risk Insurance

In the event of the project being executed in a geological area classified as a “High Risk Area”, that is an area which is subject to highly unstable sub-surface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:

10.1.5.1.1 Damage to **the works**

The contractor shall, from the date of possession of the **site** until the date of the **certificate of practical completion**, bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor** shall take such precautions and security measures and other steps for the protection of the **works** as he may deem necessary

When so instructed to do so by the **principal agent**, the **contractor** shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**, at the **contractor’s** own costs

10.1.5.1.2 Injury **to persons or loss of or damage to property**

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above

The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property, or personal property, or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract

10.1.5.1.3

It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the **contractor’s** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the date of possession of the site, but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.1.5.1.4

The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor’s** default of his obligations as set out in 10.1.5.1.1; 10.1.5.1.2 and 10.1.5.1.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

11.0 Securities

Replace Clauses 11.1, 11.1.1, 11.1.2, 11.2.1 and 11.2.2 with the following:

The security to be provided by the contractor to the employer will be a fixed construction guarantee of 10% of the contract value.

- 11.3 No Clause
- 11.4 No Clause
- 11.5 No Clause
- 11.6 No Clause
- 11.6 No Clause
- 11.7 No Clause
- 11.8 No Clause
- 11.9 No Clause
- 11.10 No Clause

12.0 Obligations of the Parties

- 12.1.1 No Clause

Replace Clause 12.1.5 with the following:

Give possession of the site to the contractor within ten (10) working days after the appointment of all SMME contractor packages, approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22

- 12.1.6 No Clause

- 12.1.8 No Clause

Replace Clause 12.2.2 with the following:

The priced Bills must be submitted as part of the returnable documents. Where the priced document contains errors or discrepancies and/or prices considered by the employer or principal agent to be imbalanced or unreasonable the employer or principal agent and the contractor shall adjust such prices without any change to the contract sum

Replace Clause 12.2.5 with the following:

Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0] [CD]

Replace Clause 12.2.13 with the following:

Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor

Add the following as Clause 12.2.22:

Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993)

Add the following as Clause 12.2.23:

The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0]

19.0 Practical Completion

Replace Clause 19.5 with the following:

On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section.

21.0 Defects Liability Period and Final Completion

Clause 21.0

Replace Clause 21.1 with the following:

The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6), whichever is the later (if we use works completion)

Replace Clause 21.6 with the following:

On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent

And/or

On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall:

- (1) inspect the works and within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or
- (2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired

21.6.1 Omit Clause

21.6.2 Omit Clause

Add the following as Clause 21.13:

The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14

Add the following as Clause 21.14:

Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have being added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied.[B12.0

23.0 Latent Defects Liability Period

22.3.2 No Clause

24.0 Penalty for Late and Non-completion

Replace Clause 24.1 with the following:

Where the contractor fails to bring the works, or a section thereof, to practical or final- completion by the applicable completion date [CD], or the revised applicable completion date, the contractor shall be liable to the employer for the penalty [CD]

Replace Clause 24.2 with the following:

Where the employer elects to levy such penalty the employer, or the principal agent on instruction from the employer, shall give notice thereof to the contractor. The principal agent shall determine the penalty due from the later of the date for practical- works-, or final- completion [CD], or the revised date for practical- works-, or final- completion, up to and including the earlier of:

Replace Clause 24.2.1 with the following:

The actual or deemed date of practical or final- completion, of the works, or a section thereof [23.7.1]

25.0 Payment

Replace Clause 25.2 with the following:

The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount

Add the following to Clause 25.3:

25.3.12 Tax Invoice

25.5 No Clause

Replace Clause 25.6 with the following:

Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer.

25.7.5 No clause.

Replace Clause 25.10 with the following:

The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate, invoice and all other substantiating documentation for items certified in the payment certificate

25.10: Delete the words “and/or **compensatory interest**”

Replace Clauses 25.12 to 25.12.3 with the following:

Clause 25.12

The value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

25.12.1 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion

25.12.2 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion

25.12.3 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26

25.12.4 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.

25.14.2: Not applicable

26.0 Adjustment of the Contract Value and Final Account

Ref Clause 6.7 [CD] – Clause 26.1

Omit Clause 26.4.3

Ref Clause 6.7 [CD] – Clause 26.7

Replace Clause 26.10 with the following:

The principal agent shall prepare the final account in consultation with the employer and issue the final account, to the contractor within sixty (60) working days of the date of practical completion

27.0 Recovery of Expense and/or Loss

Clause 27.0

Replace Clause 27.1.2 with the following:
Interest due to late payment only

Replace Clause 27.1.4 with the following:
Interest due to late payment only

27.1.5 No Clause

Replace Clause 27.5 with the following:

Where the employer decides to recover an amount due in terms of 27.2 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security

29.0 Termination

Clause 29.0

Add the following as Clause 29.1.4:

The contractor's estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

Add the following as Clause 29.1.5:

The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

Add the following as Clause 29.1.6:

Honour his obligations in terms of Clauses 10.1.5.1.3, 11.4.1 and 12.2. sub-Clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22.

Replace Clause 29.7 with the following:

The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3]

Replace Clause 29.9 with the following:

The employer has the right of recovery against the contractor, where applicable, [CD] from:

The payment reduction until the final payment is made;

29.14.1 No Clause

29.14.3 No Clause

29.14.4 No Clause

29.14.5 No Clause

29.14.6 No Clause

29.14.7 No Clause

29.15 No Clause

29.16 No Clause

29.17.3 No Clause

29.17.6 No Clause

29.21.5 No Clause

29.22 No Clause

29.23 No Clause

29.25.3 No Clause

29.25.4 No Clause

29.27 No Clause

30.0 Dispute Resolution

Replace Clause 30.2 with the following:

Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation

30.3 to 30.7.7 No Clauses

Replace Clause 30.8 with the following:

The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:

30.8.1 No Clause

Replace Clause 30.8.2 with the following:

The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties

Replace Clause 30.8.3 with the following:

Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses.

Replace Clause 30.9 with the following:

Institution of Litigation shall be commenced, and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse

30.10 No Clause

30.12 No Clause

Add the following additional Clause.

It is a condition of contract that:

The contractor shall achieve in the performance of the contract the Contract Skills Development Goal (CSDG) established in the CIDB Standard for Developing Skills through Infrastructure Contracts, published in Gazette Notice No.48491 of 28 April 2023.

The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the cidb Standard for Indirect Targeting for Enterprise Development through Construction works Contracts, published in Gazette Notice No.36190 of 25 February 2013.

The main contractor shall provide a minimum Contract Participation Goal (CPG) of 5% of the total project value and develop targeted enterprises in two agreed developmental areas as per clause 3.2.1 of the Indirect Targeting Standard (Gazette Notice No.36190 of 25 February 2013).

C TENDERER'S SELECTIONS

C 1.0 Security [11.0]

Guarantee for construction: Select Option A or B		Option:	A
Option A	Fixed construction guarantee of 10% of the contract		
Guarantee for payment by employer [11.5.1; 11.10]		Not Applicable	
Advance payment, subject to a guarantee for advance payment [11.2.2; 11.3]		Not Applicable	

C 2.0 Contractor's annual holiday periods during the construction period

Year 1 contractor's annual holiday period	start date		end date	
Year 2 contractor's annual holiday period	start date		end date	
Year 3 contractor's annual holiday period	start date		end date	

C 3.0 Payment of preliminaries [25.0]

Contractor's selection: Select Option A or B	Option:	
Where the contractor does not select an option, Option A shall apply		

Payment methods

Option A	The preliminaries shall be paid in accordance with an amount prorated to the value of the works executed in the same ratio as the amount of the preliminaries to the contract sum , which contract sum shall exclude the amount of preliminaries . Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio
Option B	The preliminaries shall be paid in accordance with an amount agreed by the principal agent and the contractor in terms of the priced document to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the principal agent and adjusted from time to time as may be necessary to take into account the rate of progress of the works

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

C 4.0 Adjustment of preliminaries [26.9.4]

Contractor's selection: Select Option A or B	Option:	
---	----------------	--

Where the contractor does not select an option, Option A shall apply

Provision of particulars

The **contractor** shall provide the particulars for the purpose of the adjustment of **preliminaries** in terms of his selection. Where completion in sections **is** required, the **contractor** shall provide an apportionment of **preliminaries** per **section**

Option A	An allocation of the preliminaries amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) working days of the date of acceptance of the tender
Option B	A detailed breakdown of the preliminaries amounts within fifteen (15) working days of possession of the site. Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of construction equipment , establishment and dis-establishment charges, insurances and guarantees, all in terms of the programme

Adjustment Methods

The amount of **preliminaries** shall be adjusted to take account of the effect which changes in time and/or value have on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**

Option A	<p>The preliminaries shall be adjusted in accordance with the allocation of preliminaries amounts provided by the contractor, apportioned to sections where completion in sections is required</p> <p>Fixed - An amount which shall not be varied</p> <p>Value-related - An amount varied in proportion to the contract value as compared to the contract sum. Both the contract sum and the contract value shall exclude the amount of preliminaries, contingency sum(s) and any provision for cost fluctuations</p> <p>Time-related - An amount varied in proportion to the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]</p>
Option B	<p>The adjustment of preliminaries shall be based on the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]</p> <p>The adjustment shall take into account the resources as set out in the detailed breakdown of the preliminaries for the period of construction during which the delay occurred</p>

Failure to provide particulars within the period stated

Option A	<p>Where the allocation of preliminaries amounts for Option A is not provided, the following allocation of preliminaries amounts shall apply:</p> <p>Fixed - Ten per cent (10%) Value-related - Fifteen per cent (15%) Time-related - Seventy-five per cent (75%)</p> <p>Where the apportionment of the preliminaries per section is not provided, the categorized amounts shall be prorated to the cost of each section within the contract sum as determined by the principal agent</p>
Option B	<p>Where the detailed breakdown of preliminaries amounts for Option B is not provided, Option A shall apply</p>

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) Of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations



GUARANTEE FOR CONSTRUCTION (PRO-FORMA)



Guarantee for Construction

For use with the JBCC® Principal Building Agreement edition /date

GUARANTOR DETAILS AND DEFINITIONS

Guarantor:

Physical Address:

Guarantor's signatory 1: Capacity

Guarantor's signatory 2: Capacity

Employer:

Contractor:

Principal Agent:

Works:

Site:

Contract Sum: Accepted amount inclusive of tax Currency

Amount in words:

Guaranteed Sum: The maximum aggregate amount Currency

Amount in words:

Guarantee for Construction: (Insert Variable or Fixed)

Expiry Date:

AGREEMENT DETAILS

Sections: Total number / not applicable Last Section

Principal Agent issues JBCC® format Recovery Statement, Interim Payment Certificates, the Final Payment Certificate, the Certificate of Practical Completion and the Certificate of Final Completion

1.0 GUARANTEE FOR CONSTRUCTION (Variable)

1.1 Where a Guarantee for Construction (Variable) in terms of the Agreement has been selected this clause 1.0 and 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the diminishing amounts of the Guaranteed Sum as follows:-

GUARANTOR'S LIABILITY

1.1.1 Maximum Guaranteed Sum (not exceeding 10.0% of the contract sum) in the amount of:

Amount in words:

PERIOD OF LIABILITY

From and including the date of issue of this Guarantee for Construction and up to and including the date of issue of the Interim Payment Certificate certifying in excess of 50% of the contract sum



1.1.2 Reducing to the Guaranteed Sum (not exceeding 8.0% of the contract sum) in the amount of:

From and including the day after the date of the aforesaid Interim Payment Certificate and up to and including the date of issue of the only Certificate of Practical Completion or last Certificate of Practical Completion where there are sections

Amount in words:

1.1.3 Reducing to the Guaranteed Sum (not exceeding 4.0% of the contract sum) in the amount of:

From and including the day after the date of the applicable Certificate of Practical Completion and up to and including the date of issue of the only Certificate of Final Completion or the last Certificate of Final Completion where there are sections

Amount in words:

1.1.4 Reducing to the Guaranteed Sum (not exceeding 2.0% of the contract sum) in the amount of:

From and including the day after the date of the applicable Certificate of Final Completion and up to and including the date of issue of the Final Payment Certificate where payment is due to the Contractor, whereafter this Guarantee for Construction shall expire. Where the Final Payment Certificate reflects payment due to the Employer, this Guarantee for Construction shall expire upon payment of the full amount certified

Amount in words:

1.2 The Guarantor's liability limits set out in 1.1.1 to 1.1.4 shall apply in respect of any claim received by the Guarantor during the guarantee validity period

2.0 GUARANTEE FOR CONSTRUCTION (Fixed)

2.1 Where a Guarantee for Construction (fixed) in terms of the Agreement has been selected this clause 2.0 and 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum as follows:

GUARANTOR'S LIABILITY

Maximum Guaranteed Sum (not exceeding 5.0% of the contract sum) in the amount of:

PERIOD OF LIABILITY

From and including the date of issue of this Guarantee for Construction and up to and including the date of the only Certificate of Practical Completion or the last Certificate of Practical Completion where there are sections, whereafter this Guarantee for Construction shall expire

Amount in words:

3.0 The Guarantor acknowledges that:

3.1 Any reference in this Guarantee for Construction to the Agreement is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention to create a suretyship;

3.2 Its obligation under this Guarantee for Construction is restricted to the payment of money; and

3.3 Reference to a Recovery Statement or an Interim or Final Payment Certificate, or a Certificate(s) of Practical or Final Completion shall mean such certificate issued by the Principal Agent.

4.0 Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

PART C1.3: DISPUTE RESOLUTION MECHANISM

C1.3 CIDB ADJUDICATOR'S AGREEMENT

C1.3 CIDB ADJUDICATOR'S AGREEMENT

This agreement is made on the day of between:.....
 (name of company / organization) of
 (address) and.....
 (name of company / organization) of
 (address) (the Parties) and..... (name) of
 (address) (the Adjudicator).

Disputes or differences may arise/have arisen* between the Parties under a Contract dated
 ... and known as.....
 and these disputes or differences shall be/have been* referred to adjudication in accordance
 with the CIDB Adjudication Procedure, (hereinafter called "the Procedure") and the Adjudicator may
 be or has been requested to act.

* Delete as necessary

IT IS NOW AGREED as follows:

- 1 The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
- 2 The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
- 3 The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
- 4 The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
- 5 The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by: _____
 Name: _____
 who warrants that he / she is
 duly authorized to sign for and
 on behalf of the first Party in the
 presence of

SIGNED by: _____
 Name: _____
 who warrants that he / she is
 duly authorized to sign for and
 behalf of the second Party in
 the presence of

SIGNED by: _____
 Name: _____
 the Adjudicator in the presence
 of

Witness _____
 Name: _____
 Address: _____

Witness: _____
 Name _____
 Address: _____

Witness: _____
 Name: _____
 Address: _____

Date: _____

Date: _____

Date: _____

Contract Data

1	The Adjudicator shall be paid at the hourly rate of R. in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
2	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. (b) Telegrams, telex, faxes, and telephone calls. € Postage and similar delivery charges. (d) Travelling, hotel expenses and other similar disbursements. € Room charges. (f) Charges for legal or technical advice obtained in accordance with the Procedure.
3	The Adjudicator shall be paid an appointment fee of R This fee shall become payable in equal amounts by each Party within days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
4	The Adjudicator is/is not* currently registered for VAT.
5	Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6	All payments, other than the appointment fee (item 3) shall become due in 30 days after receipt of invoice, thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

* Delete as necessary

PART C2 PRICING DATA

PART C2.1: PRICING INSTRUCTIONS

C2.1 Pricing Instructions

- 1 The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work as amended) published and issued by the Association of South African Quantity Surveyors (Sixth Edition (Revised)), 1999. Where applicable the:
 - a) Civil engineering work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardised Specifications for Civil Engineering Works.
 - b) Mechanical work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardised Specifications for Mechanical Engineering Works.
 - c) Electrical work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardised Specifications for Electrical Engineering Works.
- 2 The agreement is based on the JBCC Edition 6.2 of 2018, prepared by the Joint Building Contracts Committee, The additions, deletions and alterations to the JBCC Principal Building Agreement as well as the contract specific variables are as stated in the Contract Data. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.
- 3 Preliminary and general requirements are based on the [preliminaries for the use of JBCC Edition 6.2– May 2018](#). Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.
- 4 It will be assumed that prices included in the Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).
- 5 The drawings listed in the Scope of Works used for the setting up of these Bills of Quantities are kept by the Principal Agent or Engineer and can be viewed at any time during office hours up until the completion of the works.
- 6 Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted by approval of the Principal Agent.
- 7 The bills of quantities forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, The Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings, The document “Construction Works: Specifications: General Specification (PW371-A) Edition 2.0” is obtainable on the Department’s website (<http://www.publicworks.gov.za/> under “Consultants Guidelines”), and shall be read in conjunction with the **bills of quantities** / lump sum document and be referred to for the full descriptions of work to be done and materials to be used The document “Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.0” is issued together with the drawings and shall be read in conjunction with the drawings and the **bills of quantities** / lump sum document
- 8 Where any item is not relevant to this specific contract, such item is marked N/A (signifying “not applicable”)
- 9 The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminaries) of the Bills of Quantities

- 10 The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor's risk.
- 11 The amount of the Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract.
- 12 Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in 11 but taking into account the revised period for completing the works.
- 13 The amount or items of the Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities:
 - a) an amount which is not to be varied, namely Fixed (F)
 - b) an amount which is to be varied in proportion to the contract value, namely Value Related (V); and
 - c) an amount which is to be varied in proportion to the contract period as compared to the initial construction period excluding revisions to the construction period for which no adjustment to the contractor is not entitled to in terms of the contract, namely Time Related (T).
- 14 Where no provision is made in the Bills of Quantities to indicate which of the three categories in 13 apply or where no selection is made, the adjustments shall be based on the following breakdown:
 - a) 10 percent is Fixed
 - b) 15 percent is Value Related
 - c) 75 percent is Time Related
- 15 The adjustment of the Preliminaries shall apply notwithstanding the actual employment of resources in the execution of the works. The contract value used for the adjustment of the Preliminaries shall exclude any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract. Adjustments in respect of any staged or sectional completion shall be prorated to the value of each section.
- 16 The tender price must include Value Added Tax (VAT). All rates, provisional sums, etc. in the bills of quantities must however be net (exclusive of VAT) with VAT calculated and added to the Total Value thereof in the Final Summary.
17. The Contractor shall adhere to "The national minimum wage determined by the Minister in accordance with the National Minimum Wage Act (NMWA)", and yearly pronounced increases for duration of contract.
18. Voting day / Election Day 2024 will be a statutory public holiday and contractor must make provision in his bid. No further claims will be entertained in this regard.
19. The contractor shall determine the Contract Skills Development Goals (CSDG), expressed in Rand, which shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works.
20. The requirements of the CIDB B.U.I.L.D. Programme with respect to Indirect Targeting for Enterprise Development is set at a minimum contribution of 30% of the project's contract value towards development support. This is the support that the successful tenderer must provide on this contract. (As per CIDB Standard for Indirect Targeting for Enterprise Development through Construction works Contracts, published in Gazette Notice No.36190 of 25 February 2013).

21. The requirements of the CIDB B.U.I.L.D. Programme with respect to the Standard for Skills Development is set at a minimum development support of 0.50% of the project's subtotal. (As per CIDB Standard for Developing Skills through Infrastructure Contracts, published in Gazette Notice No.48491 of 28 April 2023).
22. The contractor shall determine the contract skills participation goals, expressed in Rand, which shall not be less than the sub-total multiplied by a percentage factor given in Table 2 in the Standard for the applicable class of construction works. This is indicated by the percentage factor in the Final Tender Summary section. Minimum Contract Skills Development Goal (CSDG) sum = General Building GB (0.50%) x Subtotal of the tender amount.
23. The Employer shall determine the amount to be paid to the Enterprise Development Co-Ordinator for the Contract Participation Goal (CPG) on the contract and this amount shall be stated under the section Enterprise Development as a Provisional Sum in the Preliminaries and Generals (P&G's).
24. The contractor shall be paid as follows: These are recommended rates, client may change depending on the location of the project, complexity etc.). These rates must be stated by the client in the P&Gs so that all tenderers have the same rate and not result in a tenderer being disadvantaged.
 - 24.1. Needs analysis and enterprise development plan per Targeted Enterprise - R5000.00 (five thousand rands) per targeted enterprise.
 - 24.2. Mentoring and interim reporting per Targeted Enterprise - R20 000.00 (twenty thousand rands) per quarter; and
 - 24.3. Project completion report per Targeted Enterprise - R5000.00 (five thousand rands) per targeted enterprise.

PART C2.2 – BILLS OF QUANTITIES

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SECTION NO. 1
PRELIMINARIES

Item	Amount
<p><u>SECTION NO. 1</u></p>	
<p><u>PRELIMINARIES</u></p>	
<p><u>PRELIMINARIES</u></p>	
<p><u>MEANING OF TERMS "TENDER / TENDERER"</u></p>	
<p>Any reference to the words "Tender" or "Tenderer" herein and/or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder"</p>	
<p><u>BUILDING AGREEMENT AND PRELIMINARIES</u></p>	
<p>The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described to be read in conjunction with the Contract Data issued with the tender.</p>	
<p>The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities / lump sum document, amended as hereinafter described.</p>	
<p>The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause.</p>	
<p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p>	
<p>Where any item is not relevant to this agreement such item is marked N/A signifying 'not applicable'</p>	
<p>Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents.</p>	
<p><u>TENDERER'S SELECTIONS</u></p>	
<p>Before submission of his tender the contractor is to complete the tenderer's selections in the contract data for organs of state and other public sector bodies</p>	
<p><u>PREAMBLES FOR TRADES</u></p>	
<p>The Specification of Materials and Methods (PW371-A) as published by the Department of Public Works shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained.</p>	
<p>Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the Model Preambles.</p>	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	<p>R</p>
<p>Section No. 1 Bill No. 1 Preliminaries</p>	

Item	Amount
<p>The contractor's prices for all items throughout these bills of quantities shall take account of and include for all of the obligations, requirements and specifications given in the Model Preambles and in any supplementary preambles and/or specifications.</p>	
<p><u>STRUCTURE OF THIS PRELIMINARIES BILL</u></p>	
<p>Section A: A recital of the headings of the individual clauses in the aforementioned JBCC Principal Building Agreement</p>	
<p>Section B: A recital of the headings of the individual clauses in the aforementioned JBCC General Preliminaries</p>	
<p>Section C : Any special clauses to meet the particular circumstances of the project</p>	
<p><u>PRICING OF PRELIMINARIES</u></p>	
<p>Should the contractor select Option A in the contract data for the adjustment of preliminaries, the amounts entered against the relevant items in these preliminaries are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T) }</p>	
<p>The contractor is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this agreement.</p>	
<p>Items left unpriced will be deemed to be covered in prices against other items throughout these bills of quantities and no claim for any extras arising out of the contractor's omission to price any item will be entertained.</p>	
<p>Prices for all construction equipment, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary.</p>	
<p><u>VALUE ADDED TAX</u></p>	
<p>Provision is made in the summary page of these bills of quantities / lump sum document for the inclusion of Value Added Tax (VAT).</p>	
<p><u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u></p>	
<p>Interpretation (A1-A7)</p>	
<p>1 Clause 1.0 - Definitions and interpretation</p>	Item
<p>F: V: T:</p>	
<p>The following definitions replace corresponding definitions or are added to the definitions in the JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), whatever the case may be .</p>	
<p>AGREEMENT: The completed Form of Offer and Acceptance, the completed JBCC® Principal Building Agreement and contract data for organs of state and other public sector bodies, the contract drawings, the priced document and any other documents reduced to writing and signed by the authorised representative or representatives of the parties.</p>	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	R
<p>Section No. 1 Bill No. 1 Preliminaries</p>	

Item	Amount
<p>CONSTRUCTION PERIOD: The period commencing on the date of possession of the site by the contractor and ending on the date of practical completion.</p> <p>CONTRACT PERIOD: The period commencing on the date of the Employer accepting the offer by signing the Form of Offer and Acceptance and ending on the date of final completion</p> <p>COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule.</p> <p>DEFAULT INTEREST: No Clause.</p> <p>GUARANTEE FOR CONSTRUCTION: A security in terms of the ECDOH's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD].</p> <p>INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State.</p> <p>LETTER OF ACCEPTANCE: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer.</p> <p>PAYMENT CERTIFICATE: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of Clause 25.3.</p> <p>PRINCIPAL AGENT: The person or entity appointed by the employer and named in the contract data for organs of state and other public sector bodies. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by the employer's representative as named in the contract data for organs of state and other public sector bodies.</p>	
<p>2 Clause 2.0 - Laws, regulations and notices F: V: T:</p>	Item
<p>3 Clause 3.0 - Offer and acceptance F: V: T:</p> <p>Replace Clause 3.3 with the following:</p> <p>This agreement shall come into force on the date of letter of acceptance and continue to be of force and effect until the end of the latent defects liability period [22.0] notwithstanding termination [29.0] or the certification of final completion [21.0] and final payment [25.0].</p>	Item
<p>4 Clause 4.0 - Cession and assignment F: V: T:</p> <p>Ref Clause 6.7 [CD] - Clause 4.2</p> <p>Replace Clause 4.3 with the following:</p>	Item
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	<p>R</p>
<p>Section No. 1 Bill No. 1 Preliminaries</p>	

Item		Amount
	<p>Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained</p>	
5	<p>Clause 5.0 - Documents F: V: T:</p>	Item
6	<p>Replace Clause 5.4 with the following: The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference F: V: T:</p>	Item
7	<p>Replace Clause 5.5 with the following: The parties may publish or disclose on any platform only the contract scope and contract amount F: V: T:</p>	Item
8	<p>Clause 6.0 - Employer's agents F: V: T: Replace Clause 6.5 with the following: Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer shall appoint another principal agent and/or an agent. Add the following as Clause 6.7: In terms of the clauses listed hereunder, the employer has retained its authority and has not given a mandate to the principal agent, notwithstanding other provisions in the contract. The employer shall sign all documents in relation to clauses 4.2, 14.1.4, 14.4.1, 14.6, 15.1.4, , 15.4.1, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12</p>	Item
9	<p>Clause 7.0 - Design responsibility F: V: T: Replace first sentence of Clause 7.2 with the following: Any design responsibility undertaken by a subcontractor shall not devolve on the contractor except for items that require specific component design and or compatibility design and or shop drawings and or the assembly thereof.</p>	Item
	<p><u>Insurances and securities (A8-A11)</u></p>	
10	<p>Clause 8.0 - Works risk F: V: T: Replace Clause 8.4 with the following: The contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary.</p>	Item
	<p style="text-align: right;">TOTAL CARRIED TO SECTION SUMMARY</p>	R
	<p>Section No. 1</p>	
	<p>Bill No. 1</p>	
	<p>Preliminaries</p>	

Item	Amount
<p>11 Clause 9.0 - Indemnities</p> <p>F: V: T:</p> <p>Add the following to the end of the first sentence of Clause 9.2.7:</p> <p>“... due to no fault of the contractor</p> <p>9.2.9 No Clause</p> <p>9.2.10 No Clause</p> <p>Add the following as clause 9.3:</p> <p>The employer's rights to claim damages for the contractor's omissions and actions will not be affected.</p>	Item
<p>12 Clause 10.0 - Insurances</p> <p>F: V: T:</p> <p>Replace Clause 10.1 with the following:</p> <p>The party responsible shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary , from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractors obligations after the date of practical completion [8.2.2]</p> <p>Add the following as Clause 10.1.5.1:</p> <p>Hi Risk Insurance</p> <p>In the event of the project being executed in a geological area classified as a “High Risk Area”, that is an area which is subject to highly unstable sub-surface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply</p> <p>Add the following as Clause 10.1.5.1.1 Damage to the works</p> <p>The contractor shall, from the date of possession of the site until the date of the certificate of practical completion, bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary</p> <p>When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor’s own costs</p> <p>10.1.5.1.2 Injury to persons or loss of or damage to property</p> <p>The contractor shall be liable for and hereby indemnifies and holds harmless the employer against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above</p>	Item
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	<p>R</p>
<p>Section No. 1 Bill No. 1 Preliminaries</p>	

Item	Amount
<p>The contractor shall be liable for and hereby indemnifies the employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property, or personal property, or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract</p>	
<p>10.1.5.1.3 Replace Clause with the following:</p>	
<p>It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the contractor’s obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer proof of such insurance policy.</p>	
<p>10.1.5.1.4 Replace Clause with the following:</p>	
<p>The employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the contractor’s default of his obligations as set out in 10.1.5.1.1; 10.1.5.1.2 and 10.1.5.1.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole</p>	
<p>10.2 Replace Clause with the following:</p>	
<p>Where practical completion in sections is required [20.0), or where the works is for alterations and additions, the contractor shall effect and keep in force contract works insurance [10.1.1], supplementary insurance [10.1.2], public liability insurance [10.1.3] and where applicable, removal of lateral support insurance [10.1.4] and other insurances [10.1.5) in favour of the employer as beneficiary</p>	
<p>10.6 No Clause</p>	
<p>Add the following as Clause 10.11</p>	
<p>In the event that an insurer dispute the amount of the claim to be paid to the employer, the contractor shall be liable to the employer for the difference between the claim (as determined by the employers QS appointed on the project) made by the employer and the amount that the insurer is willing to pay</p>	
<p>13 Clause 11.0 - Securities</p>	Item
<p>F: V: T:</p>	
<p>Add the following as to the relevant related Clauses as follows:</p>	
<p>Add the following to Clause 11.1:</p>	
<p>Replace Clauses 11.1, 11.1.1, 11.1.2, 11.2.1 and 11.2.2 with the following:</p>	
<p>The security to be provided by the contractor to the employer will be a payment reduction of ten per cent (10) of the value certified in the payment certificate (excluding VAT).</p>	
<p>11.3 No Clause</p>	
<p>11.4 No Clause</p>	
<p>11.5 No Clause</p>	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	R
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Item	Amount
11.6 No Clause	
11.6 No Clause	
11.7 No Clause	
11.8 No Clause	
11.9 No Clause	
11.10 No Clause	
<u>Execution (A12 - A17) }</u>	
14 Clause 12.0 - Obligations of the parties	Item
F: V: T:	
12.1.1 No Clause	
Replace Clause 12.1.5 with the following:	
Give possession of the site to the contractor within ten (10) working days after approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22	
12.1.6 No Clause	
12.1.8 No Clause	
Replace Clause 12.2.2 with the following:	
The priced Bills must be submitted to as part of the returnable documents. Where the priced document contains errors or discrepancies and/or prices considered by the employer or principal agent to be imbalanced or unreasonable the employer or principal agent and the contractor shall adjust such prices without any change to the contract sum	
Replace Clause 12.2.5 with the following :	
Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0] [CD]	
Replace Clause 12.2.13 with the following:	
Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor	
Add the following as Clause 12.2.22:	
Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993)	
Add the following as Clause 12.2.23:	
The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0]	
Offices	
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Item	Amount
<p>The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 8 x 5 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times [12.2.18]</p>	
<p>Main notice board</p>	
<p>The contractor shall erect in a position approved by the principal agent, maintain and remove on practical completion a notice board recommended by the South African Institute of Architects and as approved by the principal agent listing the names and logos of the employer, the contractor, and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the principal agent for such notice boards to be erected.</p>	
<p>15 Clause 13.0 - Setting out</p>	Item
<p>F: V: T:</p>	
<p>16 Clause 14.0 - Nominated subcontractors</p>	Item
<p>F: V: T:</p>	N/A
<p>Clause 14.0</p>	
<p>Ref Clause 6.7 [CD] - Clause 14.1.4</p>	
<p>14.1.5 No Clause</p>	
<p>Replace “principal agent ” with “employer” [6.7 [CD]] in Clause 14.4.1</p>	
<p>Ref Clause 6.7 [CD] - Clause 14.6</p>	
<p>17 Clause 15.0 - Selected subcontractors</p>	Item
<p>F: V: T:</p>	N/A
<p>Clause 15.0</p>	
<p>Ref Clause 6.7 [CD] - Clause 15.1.4 & Clause 15.5</p>	
<p>15.1.5 No Clause</p>	
<p>Replace Clause 15.1.2 with the following:</p>	
<p>The principal agent shall call for tenders from a list of tenderers agreed between the contractor and the employer</p>	
<p>Replace “principal agent ” with “employer” [6.7 [CD]] in Clause 15.4.1</p>	
<p>18 Clause 16.0 - Direct contractors</p>	Item
<p>F: V: T:</p>	N/A
<p>19 Clause 17.0 - Contract instructions</p>	Item
<p>F: V: T:</p>	
<p><u>Completion (A18 - A24)</u></p>	
<p>20 Clause 18.0 - Interim completion</p>	Item
<p>F: V: T:</p>	
<p>21 Clause 19.0 - Practical completion</p>	Item
<p>F: V: T:</p>	
<p>Replace Clause 19.5 with the following:</p>	
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<p>Preliminaries</p>	

Item	Amount
<p>On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section</p> <p>22 Clause 20.0 - Completion in sections F: V: T:</p>	Item
<p>23 Clause 21.0 - Defects liability period and final completion F: V: T:</p> <p>Replace Clause 21.1 with the following: The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6), whichever is the later (if we use works completion)</p> <p>Replace Clause 21.6 with the following: On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent</p> <p>And/or On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall:</p> <p>(1) inspect the works And within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or</p> <p>(2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired</p> <p>21.6.1 Omit Clause 21.6.2 Omit Clause</p> <p>Add the following as Clause 21.13: The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14</p> <p>Add the following as Clause 21.14: Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have been added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied.[B12.0]</p>	Item
<p>24 Clause 22.0 - Latent defects liability period F: V: T:</p> <p>22.3.2 No Clause</p>	Item
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Item	Amount
25 Clause 23.0 - Revision of the date for practical completion F: V: T:	Item
26 Clause 24.0 - Penalty for late or non-completion F: V: T: Replace Clause 24.1 with the following: Where the contractor fails to bring the works, or a section thereof, to practical, or final- completion by the applicable completion date [CD], or the revised applicable completion date, the contractor shall be liable to the employer for the penalty [CD] Replace Clause 24.2 with the following: Where the employer elects to levy such penalty the employer, or the principal agent on instruction from the employer, shall give notice thereof to the contractor. The principal agent shall determine the penalty due from the later of the date for practical-, or final- completion [CD], or the revised date for practical-, or final-completion, up to and including the earlier of: Replace Clause 24.2.1 with the following: The actual or deemed date of practical, or final- completion, of the works, or a section thereof [23.7.1]	Item
Payment (A25 - A27) 27 Clause 25.0 - Payment F: V: T: Replace Clause 25.2 with the following: The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount Add the following to Clause 25.3: 25.3.12 Tax Invoice Replace Clause 25.6 with the following: Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer. 25.7.5 No clause. Replace Clause 25.10 with the following: The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate, invoice and all other substantiating documentation for items certified in the payment certificate Replace Clauses 25.12 to 25.12.3 with the following:	Item
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Item	Amount
<p>The value certified shall be subject to the following percentage adjustments:</p> <p>(25.12.1 Where a security is selected in terms of C 1.0 Securities [11.0], the value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments:</p> <p>25.12.2 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion</p> <p>25.12.3 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion</p> <p>25.12.4 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26</p> <p>25.12.5 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.</p> <p>Replace Clauses 25.12 to 25.12.3 with the following:</p> <p>Clause 25.12</p> <p>The value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments:</p> <p>25.12.1 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion</p> <p>25.12.2 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion</p> <p>25.12.3 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26</p> <p>25.12.4 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.</p> <p>25.14.2 Not applicable.</p>	
<p>28 Clause 26.0 - Adjustment of the contract value and final account</p>	<p>Item</p>
<p>F: V: T:</p>	
<p>Clause 26.0</p>	
<p>Ref Clause 6.7 [CD] – Clause 26.1</p>	
<p>Omit Clause 26.4.3</p>	
<p>Ref Clause 6.7 [CD] – Clause 26.7</p>	
<p>Replace Clause 26.10 with the following:</p>	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	<p>R</p>
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Item	Amount
<p>The principal agent shall prepare the final account in consultation with the employer and issue the final account, to the contractor within sixty (60) working days of the date of practical completion</p>	
<p>Ref Clause 6.7 [CD] – Clause 26.12</p>	
<p>29 Clause 27.0 - Recovery of expense and/or loss</p>	Item
<p>F: V: T:</p>	
<p>Add the following as Clause 27.6:</p>	
<p>Where a provisional sequestration or provisional liquidation order has been granted or where an order has been granted which commences sequestration, liquidation, bankruptcy, receivership, winding-up or any similar effect, against the contractor or this agreement is cancelled in terms of 29, the employer may issue a demand to the guarantor in terms of the construction guarantee or advance payment guarantee held as security</p>	
<p>Replace Clause 27.1.2 with the following:</p>	
<p>Interest due to late payment only</p>	
<p>Replace Clause 27.1.4 with the following:</p>	
<p>Interest due to late payment only</p>	
<p>27.1.5 No Clause</p>	
<p>Replace Clause 27.5 with the following:</p>	
<p>Where the employer decides to recover an amount due in terms of 27.2 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security</p>	
<p><u>Suspension and termination (A28 - A29)</u></p>	
<p>30 Clause 28.0 - Suspension by the contractor</p>	Item
<p>F: V: T:</p>	
<p>31 Clause 29.0 - Termination</p>	Item
<p>F: V: T:</p>	
<p>Add the following as Clause 29.1.4:</p>	
<p>The contractor’s estate has been sequestered, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa</p>	
<p>Add the following as Clause 29.1.5:</p>	
<p>The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract</p>	
<p>Add the following as Clause 29.1.6:</p>	
<p>Honour his obligations in terms of Clauses 10.1.5.1.3, 11.4.1 and 12.2. sub Clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22.</p>	
<p>Replace Clause 29.7 with the following:</p>	
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Item	Amount
<p>The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3]</p>	
<p>Replace Clause 29.9 with the following:</p>	
<p>The employer has the right of recovery against the contractor, where applicable, [CD] from:</p>	
<p>The payment reduction until the final payment is made.</p>	
<p>29.14.1 No Clause</p>	
<p>29.14.3 No Clause</p>	
<p>29.14.4 No Clause</p>	
<p>29.14.5 No Clause</p>	
<p>29.14.6 No Clause</p>	
<p>29.14.7 No Clause</p>	
<p>29.15 No Clause</p>	
<p>29.16 No Clause</p>	
<p>29.17.3 No Clause</p>	
<p>29.17.6 No Clause</p>	
<p>29.21.5 No Clause</p>	
<p>29.22 No Clause</p>	
<p>29.23 No Clause</p>	
<p>29.25.3 No Clause</p>	
<p>29.25.4 No Clause</p>	
<p>29.27 No Clause</p>	
<p><u>Dispute resolution (A30)</u></p>	
<p>32 Clause 30.0 - Dispute resolution</p>	Item
<p>F: V: T:</p>	
<p>Replace Clause 30.2 with the following:</p>	
<p>Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation</p>	
<p>30.3 to 30.7.7 No Clauses</p>	
<p>Replace Clause 30.8 with the following:</p>	
<p>The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:</p>	
<p>30.8.1 No Clause</p>	
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Item	Amount
<p>Replace Clause 30.8.2 with the following: The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties</p> <p>Replace Clause 30.8.3 with the following: Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses</p> <p>Replace Clause 30.9 with the following: Institution of Litigation shall be commenced and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse</p> <p>30.10 No Clause 30.12 No Clause</p> <p><u>SECTION B: GENERAL PRELIMINARIES</u> <u>Definitions and interpretation (B1)</u></p> <p>33 Clause 1.1 - Definitions Item F: V: T:</p> <p>34 Clause 1.2 - Interpretation Item F: V: T:</p> <p><u>Documents (B2)</u></p> <p>35 Clause 2.1 - Checking of documents Item F: V: T:</p> <p>36 Clause 2.2 - Provisional bills of quantities Item F: V: T:</p> <p>37 Clause 2.3 - Availability of construction information Item F: V: T:</p> <p>38 Clause 2.4 - Ordering of materials and goods Item F: V: T:</p> <p><u>Previous work and adjoining properties (B3)</u></p> <p>39 Clause 3.1 - Previous work - dimensional accuracy Item F: V: T:</p> <p>40 Clause 3.2 - Previous work - defects Item F: V: T:</p> <p>41 Clause 3.3 - Inspection of adjoining properties Item F: V: T:</p> <p><u>The site (B4)</u></p> <p>42 Clause 4.1 - Handover of site in stages Item F: V: T:</p> <p>43 Clause 4.2 - Enclosure of the works Item F: V: T:</p> <p style="text-align: right;">TOTAL CARRIED TO SECTION SUMMARY R</p> <p>Section No. 1 Bill No. 1 Preliminaries</p>	<hr/> <hr/>

Item	Amount
44 Clause 4.3 - Geotechnical and other investigations F: V: T:	Item
45 Clause 4.4 - Encroachments F: V: T:	Item
46 Clause 4.5 - Existing premises occupied F: V: T:	Item
47 Clause 4.6 - Services - known F: V: T:	Item
<u>Management of contract (B5)</u>	
48 Clause 5.1 - Management of the works F: V: T:	Item
49 Clause 5.2 - Progress meetings F: V: T:	Item
50 Clause 5.3 - Technical meetings F: V: T:	Item
<u>Samples, shop drawings and manufacturer's instructions (B6)</u>	
51 Clause 6.1 - Samples of materials F: V: T:	Item
52 Clause 6.2 - Workmanship samples F: V: T:	Item
53 Clause 6.3 - Shop drawings F: V: T:	Item
54 Clause 6.4 - Compliance with manufacturer's instructions F: V: T:	Item
<u>Deposits and fees (B7)</u>	
55 Clause 7.1 - Deposits and fees F: V: T:	Item
<u>Temporary services (B8)</u>	
56 Clause 8.1 - Water F: V: T:	Item
57 Clause 8.2 - Electricity F: V: T:	Item
58 Clause 8.3 - Ablution and welfare facilities F: V: T:	Item
59 Clause 8.4 - Communication facilities F: V: T:	Item
<u>Prime cost amounts (B9)</u>	
60 Clause 9.1 - Responsibility for prime cost amounts F: V: T:	Item
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Item	Amount
<u>Attendance on subcontractors (B10)</u>	
61 Clause 10.1 - General attendance	Item
F: V: T: General attendance The contractor shall at his own expense provide the following general attendance on the subcontractors: Access to the site and places where the subcontract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the contractor The provision of water and lighting and single phase electric power to a position within 50 metres of the place where the subcontract work is to be carried out but excluding water, fuel and power for commissioning of any installation The provision of an area for the subcontractor to establish temporary office accommodation and workshops and for the storage of plant and materials The use of erected scaffolding belonging to the contractor, in common with others having the like right, while it remains erected on the site The use, at reasonable times by arrangement of the contractor's erected hoisting equipment	
62 Clause 10.2 - Special attendance	Item
F: V: T: <u>General (B11)</u>	
63 Clause 11.1 - Protection of the works	Item
F: V: T:	
64 Clause 11.2 - Protection/isolation of existing works and works occupied in sections	Item
F: V: T:	
65 Clause 11.3 - Security of the works	Item
F: V: T:	
66 Clause 11.4 - Notice before covering work	Item
F: V: T:	
67 Clause 11.5 - Disturbance The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent	Item
F: V: T:	
68 Clause 11.6 - Environmental disturbance	Item
F: V: T:	
69 Clause 11.7 - Works cleaning and clearing	Item
F: V: T:	
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Item	Amount
70 Clause 11.8 - Vermin F: V: T:	Item
71 Clause 11.9 - Overhand work F: V: T:	Item
72 Clause 11.10 - Tenant installations F: V: T:	Item
73 Clause 11.11 - Advertising F: V: T:	Item
<u>B12. SCHEDULE OF VARIABLES</u>	
<u>B12.1 Pre-tender information</u>	
74 Fixed: _____ Value related: _____ Time related: _____ F: V: T:	Item
<p>This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries.</p> <p>Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [] brackets.</p>	
<u>12.1 PRE TENDER INFORMATION</u>	
<u>12.1.1 Provisional Bills of Quantities</u>	
[2.2] The quantities are provisional - Yes	
<u>12.1.2 Availability of construction documentation</u>	
[2.3] Construction of documentation is complete - No	
<u>12.1.3 Interest of agents</u>	
[2.4] Details: None	
<u>12.1.4 Defined works area</u>	
[3.1] Details: Yes.	
<u>12.1.5 Geotechnical investigation</u>	
[3.2] Details: Yes	
<u>12.1.6 Existing premises occupied</u>	
[3.4] Specific requirements: Yes.	
<u>12.1.7 Previous work - dimensional accuracy</u>	
[3.5] Details: No	
<u>12.1.8 Previous work - defects</u>	
[3.6] Details: No	
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<p><u>12.1.9 Services - known</u> [3.7] Details: Yes. Contractor is to inspect the site and mark up all services that are visible.</p> <p><u>12.1.10 Protection of trees</u> [3.9] Specific requirements: No</p> <p><u>12.1.11 Inspection of adjoining properties</u> [3.11] Specific requirements: None</p> <p><u>12.1.12 Enclosure of the works</u> [6.2] Specific requirements: Yes. The Contractor will, throughout the entire period of the works, be responsible for the proper and adequate protection of property and the public and patients and staff from damage or injury resultant from the works and for the proper security of the site at all times during the course of the works. Further, the Contractor must allow for all temporary hoardings, fans and walkways, etc. required by the Municipality, Construction Regulations, 2014 issued in terms of the Occupational Health and Safety Act, 1993, any other legal requirement and or demanded by his own requirements. Allowance must further be made for periodic adjustment of any hoardings and for their eventual removal and for making good.</p> <p><u>12.1.13 Offices</u> [6.4.3] Specific requirements: Yes.</p> <p><u>12.1.14 Main notice board</u> [6.5] Specific requirements: Yes</p> <p><u>12.1.15 Subcontractors' notice board</u> [6.6] Specific requirements: No</p> <p><u>12.1.16 Water</u> [7.2] Option A (by contractor) YES Option B (by employer - free of charge) NO Option C (by b employer - metered) NO</p> <p><u>12.1.17 Electricity</u> [7.3] Option A (by contractor) YES Option B (by employer - free of charge) NO Option C (by b employer - metered) NO</p> <p><u>12.1.18 Telecommunications</u> [7.4] Telephone YES Facsimile YES E-mail YES</p> <p><u>12.1.19 Ablution facilities</u> [7.5] Option A (by contractor) YES Option B (by employer) NO</p> <p><u>12.1.20 Protection of existing/sectionally occupied works</u> [11.2] Protection is required - Yes</p> <p><u>12.1.21 Special attendance</u> [9.2] Subcontractor (1) details: None Subcontractor (2) details: None Subcontractor (3) details: None Subcontractor (4) details: None</p>	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	<p>R</p>
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Item	Amount
<p><u>12.1.22 Protection of works</u></p>	
<p>[11.1] Specific requirements: None</p>	
<p><u>12.1.23 Disturbance</u></p>	
<p>[11.5] Specific requirements: The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent.</p>	
<p><u>12.1.24 Environmental disturbance</u></p>	
<p>[11.6] Specific requirements: None</p>	
<p><u>12.2 POST-TENDER INFORMATION</u></p>	
<p><u>12.2.1 Payment of preliminaries</u></p>	
<p>[10.2] Option A (pro-rated) YES/NO Option B (calculates) YES/NO</p>	
<p><u>12.2.2 Adjustment of preliminaries</u></p>	
<p>(10.3) Option A (three categories) YES/NO Option B (detailed breakdown) YES/NO</p>	
<p><u>12.2.3 Additional agreed preliminaries items</u></p>	
<p>Details: N/A</p>	
<p><u>SECTION C: SPECIFIC PRELIMINARIES</u></p>	
<p><u>C1 CONTRACT DRAWINGS</u></p>	
<p>75 The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed. A full set of drawings is issued with the tender documents indicating the full scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed. Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the principal agent.</p>	Item
<p>F: V: T:</p>	
<p><u>C2 GENERAL PREAMBLES</u></p>	
<p>76 The document “Construction Works: Specifications: General Specification (PW371-A) Edition 2.1” is obtainable on the Department’s website (http://www.publicworks.gov.za/ under “Consultants Guidelines”), and shall be read in conjunction with the bills of quantities / lump sum document and be referred to for the full descriptions of work to be done and materials to be used</p>	
<p>The document “Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2” is issued together with the drawings and shall be read in conjunction with the drawings and the bills of quantities / lump sum document</p>	Item
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Item	Amount
<u>C3 TRADE NAMES</u>	
77 Wherever a trade name for any product has been described in the bills of quantities / lump sum document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders. If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for.	Item
F: V: T:	
<u>C4 IMPORTED MATERIALS AND EQUIPMENT</u>	
78 Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment (T2.2q) to be completed by tenderer). Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable).	Item
F: V: T:	
<u>C5 VIEWING THE SITE IN SECURITY AREAS</u>	
79 The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes	Item N/A
F: V: T:	
<u>C6 COMMENCEMENT OF WORK IN SECURITY AREAS</u>	
80 As the works falls within a security area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Defence Force, Police or chief security officer	Item N/A
F: V: T:	
<u>C7 ENTRANCE PERMITS TO SECURITY AREAS</u>	
81 As the works falls within a security area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Defence Force, Police or chief security officer.	Item N/A
F: V: T:	
<u>C8 SECURITY CHECK OF PERSONNEL</u>	
82 The principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified. In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or any document or information relating to the works .	Item N/A
F: V: T:	
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Item	Amount
<p><u>C9 PROHIBITION OF TAKING PHOTOGRAPHS</u></p>	
<p>83 In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorised thereto by or on behalf of the Minister. The same prohibition is also applicable to all correctional institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959.</p>	Item N/A
<p>F: V: T:</p>	
<p><u>C10 HIV/AIDS AWARENESS</u></p>	
<p>It is required of the contractor to thoroughly study the HIV/AIDS Specification (PW1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities / lump sum document . Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.</p>	
<p>The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of Clause A 31.0 or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.</p>	
<p><u>C10.1 AWARENESS CHAMPION</u></p>	
<p>84 Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification.</p>	Item
<p>F: V: T:</p>	
<p><u>C10.2 AWARENESS WORKSHOPS</u></p>	
<p>85 Selection and appointment of a competent Service Provider approved by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification.</p>	Item
<p>F: V: T:</p>	
<p><u>C10.3 POSTERS, BOOKLETS, VIDEOS, ETC.</u></p>	
<p>86 Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification.</p>	Item
<p>F: V: T:</p>	
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Item	Amount
<p><u>C10.4 ACCESS TO CONDOMS</u></p>	
<p>87 Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification.</p> <p>F: V: T:</p>	Item
<p><u>C10.5 MONITORING</u></p>	
<p>88 Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification</p> <p>F: V: T:</p>	Item
<p><u>C11 OCCUPATIONAL HEALTH AND SAFETY ACT</u></p> <p>The contractor shall comply with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993). It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities / Lump Sum document.</p> <p>The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.</p> <p>The Contractors attention is drawn to C3.14 Health and Safety and Environmental Specification and C3.15 Base Line Risk Assessment included in Part C of the tender document. The Contractor shall price hereunder all other items that are likely to attract cost in compliance with the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), excluding the items included in the 'Occupational Health and Safety' in Section 7 of these Bills of Quantities.</p>	
<p><u>C12 WARRANTIES FOR MATERIALS AND WORKMANSHIP</u></p> <p>The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor</p> <p>F: V: T:</p>	
<p>89 Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the entity supplying the materials and/or executing the work and shall deliver same to the principal agent on the final completion of the contract.</p>	Item
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<p>The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of practical completion and that any defects that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written notice to do so</p>	
<p><u>C13 OVERTIME</u></p>	
<p>90 Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the employer</p>	Item
<p>F: V: T:</p>	
<p><u>C14 TESTING OF FLAT ROOF WAERPROOFING FOR WATERTIGHTNESS</u></p>	
<p>91 Flat roof waterproof areas shall be flooded and kept "ponded" for at least forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing.</p>	Item
<p>F: V: T:</p>	
<p><u>C15 SITE INSTRUCTIONS</u></p>	
<p>92 Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor.</p>	Item
<p>F: V: T:</p>	
<p><u>C16 DAYWORKS</u></p>	
<p>93 Where in the opinion of the quantity surveyor any extra work cannot properly be measured or valued, the contractor will be allowed daywork prices therefor calculated upon the costs defined hereunder together with the stated percentages. The total thus arrived at shall be the total amount recoverable by the contractor for performing such work.</p>	
<p>1. The cost to the contractor or sub-contractor of materials, being the net cost (at current market prices) actually paid for such materials after the deduction of cash discounts or if materials are supplied from the contractor's or sub-contractor's stock then the cost of such materials shall be based upon the current market price plus the cost of delivery to site; to which net cost 10 per cent thereof shall be added.</p>	
<p>2. The cost of labour to the contractor or sub-contractor, being all items of direct cost of labour actually remunerated to the workmen concerned which shall include the cost of all allowances in terms of the Industrial Conciliation Act (where applicable) or any other wage determination applying in the area or any other charge or expense which is normally binding as well as all statutory levies to education and training funds as may be applicable relating to the class of labour concerned at the time when and in the area where the daywork is executed: to which labour costs 75 per cent in respect of shopfitting, wall and floor tiling, mosaic work and electrical work, 60 per cent in respect of plumbing, plastering, joinery and stone masonry and 40 per cent in respect of painting and decorating, general builders work and any other trade not specified herein, shall be added.</p>	
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<p>Hourly based rates for labour shall be the current market rates for labour based upon standard working hours and shall be applied in respect of the time spent by workers directly engaged on the particular dayworks including any operators operating mechanical plant and transport and erecting and dismantling other plant. If a claim is made that individual workmen have been paid wages and allowances in excess of the minimum legalised rates, then proof must be furnished that such workmen had been so paid prior to the commencement of the extra work referred to. Time lost due to inclement weather shall be excluded from the time charged.</p> <p>3. Other direct costs, being any related direct costs such as mechanical plant and transport, other than costs of material and labour shall be the net cost thereof to which net cost 10 per cent thereof shall be added.</p> <p>4. The rates for mechanical plant shall be commercial hire rates current at the time of executing the daywork and shall include fuel and insurance costs. Supporting vouchers reflecting the time spent and materials used each week shall be delivered for verification to the Quantity Surveyor not later than twenty one days after the end of the week concerned. Should the contractor fail to submit the vouchers within this time, the Quantity Surveyor shall determine a fair price for the work.</p> <p>F: V: T:</p>	Item
<u>C17 OVERLOADING</u>	
<p>94 The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works e.g. scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense.</p> <p>F: V: T:</p>	Item
<u>C18 MAKING GOOD</u>	
<p>95 All materials and workmanship in building up, making good, etc., are to match existing and where new materials abut existing, they are to be neatly jointed to same. 'Making good' existing work where disturbed or damaged shall mean the provision of the necessary new material to match existing and the necessary workmanship so that a complete restoration is achieved to the satisfaction of the Principal Agent. 'Making good' where abutting walls, etc., are removed, shall mean the provision of the necessary material and workmanship in filling the gaps to match surrounding finishes so that a complete and perfect surface, continuous with surrounding surfaces and matching of same, is obtained to the Principal Agent's satisfaction.</p> <p>F: V: T:</p>	Item
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<p><u>C19 SMME CONTRACTORS AS SUB-CONTRACTORS TO THE PRINCIPAL CONTRACTOR</u></p>	
<p>96 The tenderer must allow for all costs applicable that they may feel will be associated with the successful integration, development of and completion of SMME Sub-Contractors' work to the approval of the Principal Agent on this project. Approximately 30% of the building work needs to be allocated to SMME Sub contractors. Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.</p> <p>Any additional costs that the Tenderer may deem applicable due to the use of 30% of SMME Sub-contractors, should be allowed for in this item (Preliminaries, OHS, Profit & Attendance, etc.), as no claim for any additional costs attributed to the incorporation and development of SMME Sub-contractors on this project will be entertained after the tenders are submitted.</p> <p>F: V: T:</p>	Item
<p><u>C20 SMME MONITORING</u></p>	
<p>97 Provision for pricing for the employment, on a full time basis for the duration of the contract, SMME Monitoring. All costs associated with the completion of the SMME Monitoring duties, provision of office facilities and tools of trade are deemed to be priced hereunder. No additional claims in this regard shall be entertained. The above is in strict accordance with the Specification for the Employment of SMME Sub-Contractors and all costs should be included in this item for the employment of an SMME Mentor for monitoring.</p> <p>F: V: T:</p>	Item
<p><u>C21 SOCIO-ECONOMIC DELIVERABLES</u></p>	
<p>98 The tenderer must allow for all costs associated with the administration, appointment, training and/or payment of the CLO, PSC, Built Environment students and interns, training of local labour, SMME's as applicable and included in this tender document (refer PROVISIONAL SUMS section). No additional claims in this regard shall be entertained.</p> <p>F: V: T:</p>	Item
<p><u>C22 TEMPORARY ACCESS</u></p>	
<p>99 The tenderer is to note that access and egress onto the site by both the main contractor and the public and staff of the hospital will be confirmed at the time of contract award. Tenderers are referred to C3.6 of the Scope of Works on the likely options. The construction work of this item is included as a provisional sum in the Bills of Quantities. The contractor is to take cognisance of the scope of works for any temporary access and to allow for the works in his/her program as well as pricing for any additional items. No additional claims in this regard shall be entertained.</p> <p>F: V: T:</p>	Item
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	R
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Item		Amount
	<p><u>C23 INGRESS OF WATER</u></p>	
100	<p>It is the contractors responsibility to prevent ingress of water into the buildings whilst all work is being completed, and damage arising out of the above will be made good at the Contractors expense.</p> <p>F: V: T:</p>	Item
	<p><u>C24 EMPLOYMENT OF LOCAL LABOUR</u></p>	
	<p>The contractor is to employ local labour. All requirements of the aforementioned are to be priced hereunder and no additional claims in this regard will be entertained.</p>	
101	<p>The Contractor is to ensure 80% of the General Labour is from the Hosting/Local Community whilst Local Semi/Skilled Labour are first considered should contractor wish to expand their existing skilled labour, provided that suitable skilled labour is available locally. All requirements of the aforementioned are to be priced hereunder and no additional claims in this regard will be entertained.</p> <p>F: V: T:</p>	Item
	<p><u>C25 CIDB BEST PRACTICE PROJECT ASSESSMENT SCHEME (CIDB B.U.I.L.D PROGRAMME)</u></p>	
	<p><u>Enterprise Development Co-Ordinator:</u></p>	
102	<p>The Contractor's attention is drawn to the Enterprise Development Co-Ordinator requirements as defined in the Scope of Work C3.11 and Annexure B. All requirements of the aforementioned are to be priced hereunder and no additional claims in this regard will be entertained. The Contractor is to price for providing the Enterprise Development Co-Ordinator for a period of 20 months.</p> <p>F: V: T:</p>	Months
<p>Section No. 1 Bill No. 1 Preliminaries</p>	<p style="text-align: center;">TOTAL CARRIED TO SECTION SUMMARY</p>	<p style="text-align: center;">R</p>

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Section No. 1
SECTION SUMMARY

SECTION NO. 2
CASUALTY AND OPD

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u> <u>CASUALTY AND OPD</u> <u>Bill No. 1</u> <u>ALTERATIONS</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of materials and methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent. <u>Cart Away:</u> Prices are to include for carting away from site all materials not specifically mentioned as being stored on site for re-use or handed over to the Employer and all rubbish, debris, etc., arising from the alterations, etc., and for making good all work damaged or disturbed to the approval of the Principal Agent. <u>View site:</u> Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained. <u>Explosives:</u> No explosives whatsoever may be used for demolition purposes unless otherwise stated. <u>General:</u> The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 1 Alterations</p>			R	

Item	Unit	Quantity	Rate	Amount
<p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent.</p>				
<p>Doors, fanlights, fittings, frames, linings, etc. which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehangng, cramping up, re-wedging as required and making good cramps, dowels, etc., and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately</p>				
<p>Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc.</p>				
<p>Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing.</p>				
<p>With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc., shall be levelled and prepared for raising of brickwork.</p>				
<p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary.</p>				
<p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)</p>				
<p><u>REMOVAL OF EXISTING WORK (CPAP Work Group No 102)</u></p>				
<p><u>Breaking up and removing unreinforced concrete:</u></p>				
1 Steps.	m ³	1		
2 150mm Thick unreinforced concrete surface bed, paving, etc.	m ²	360		
3 150 x 300mm Unreinforced concrete kerbs.	m	25		
<p><u>Breaking up and removing reinforced concrete, including cutting off and removing reinforcement:</u></p>				
4 Beams.	m ³	18		
5 Columns.	m ³	5		
<p><u>Breaking down and removing brickwork, etc:</u></p>				
6 Half brick walls.	m ²	78		
TOTAL CARRIED TO BILL SUMMARY			R	
<p>Section No. 2 Bill No. 1 Alterations</p>				

Item	Unit	Quantity	Rate	Amount
7	One brick walls.	m ²	35	
8	270mm Hollow walls of two half brick skins.	m ²	98	
<u>Taking out and removing doors, windows, etc from brickwork to be demolished:</u>				
9	Timber single door and frame not exceeding 2,5m high.	No	5	
10	Timber double door and frame exceeding 2,5m and not exceeding 5m high.	No	8	
11	Glazed aluminium shopfront 1,88m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
12	Glazed aluminium shopfront 1,95m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
13	Glazed aluminium shopfront 2,85m wide x exceeding 2,5m and not exceeding 5m high.	No	2	
14	Glazed aluminium shopfront including single door 2,85m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
15	Glazed aluminium shopfront including double door 2,85m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
16	Glazed aluminium shopfront 3,04m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
17	Glazed aluminium shopfront including double door 3,26m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
18	Glazed aluminium shopfront 4,22m wide x exceeding 2,5m and not exceeding 5m high.	No	1	
<u>Taking out and removing doors, windows, etc., including thresholds, sills, etc. (building up openings and making good finishes elsewhere):</u>				
19	Timber single door and frame 813 x 2032mm high overall from 270mm wide hollow walls of two half brick skins.	No	1	
20	Glazed aluminium window 1456 x 1571mm high from 270mm wide hollow walls of two half brick skins.	No	1	
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Item	Unit	Quantity	Rate	Amount
<u>Carefully taking out, removing and hand over to the hospital of doors, windows, etc., including thresholds, sills, etc. (building up openings and making good finishes elsewhere):</u>				
21	Timber sliding door and frame 1741 x 2032mm high overall from half brick walls.	No	1	
22	Glazed aluminium double door and frame 1632 x 2032mm high overall from half brick walls.	No	1	
23	Glazed aluminium double door and frame 1632 x 2032mm high overall from partition walls.	No	3	
<u>Taking out and removing doors, windows, etc., including thresholds, sills, etc. including building in new window into existing openings and making good finishes with external facebrick on one side and into reveals to match the existing, cement plaster on other side and into reveals (new window and making good paintwork elsewhere):</u>				
24	Glazed aluminium window 1000 x 700mm high overall from 270mm cavity walls.	No	1	
25	Glazed aluminium window 1225 x 700mm high overall from 270mm cavity walls.	No	1	
26	Glazed aluminium window 2859 x 700mm high overall from 270mm cavity walls.	No	1	
<u>Taking out and removing doors, windows, etc., including thresholds, sills, etc. including building in new door frame into existing openings and making good finishes with internal cement plaster on both sides and into reveals, (new door frame and making good paintwork elsewhere):</u>				
27	Timber door size 813 x 2032mm high from half brick wall.	No	2	
28	Timber door size 930 x 2040mm high from half brick wall.	No	4	
29	Timber door size 930 x 2040mm high from one brick wall.	No	1	
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc.:</u>				
30	Ribbed metal sheet roof covering, including box gutters, steel rafters, steel purlins, etc.	m ²	98	
31	Nutec nailed-up ceilings, including cornices, branderings, cover strips, etc.	m ²	97	
32	Drywall partitions 2800mm high, including doors, glazed borrowed lights, etc.	m	151	
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Item	Unit	Quantity	Rate	Amount
<u>Taking out and removing sundry joinery work, fittings, etc from wall to be demolished:</u>				
33	Timber skirtings.	m	399	
<u>Taking out and removing sundry joinery work, fittings, etc and making good plaster where disturbed. (making good paint elsewhere):</u>				
34	Timber skirtings.	m	146	
35	Timber wall cupboard 1886 x 600 x 800mm high.	No	1	
36	Timber wall cupboard 2747 x 600 x 800mm high.	No	1	
37	Timber wall cupboard 2760 x 600 x 800mm high.	No	1	
38	Timber wall cupboard L-shaped on plan with one leg 1225 x 600 x 800mm high and other leg 600 x 2644 x 800mm high.	No	1	
39	Timber wall cupboard L-shaped on plan with one leg 1237 x 600 x 800mm high and other leg 600 x 2760 x 800mm high.	No	1	
40	Timber work stations and counter 2367 x 1354 x 1000mm high complete with 50mm formica counter, framing, shelves, drawers, skirting, viewing panel, etc.	No	1	
41	Timber work stations and counter 3576 x 1354 x 1000mm high complete with 50mm formica counter, framing, shelves, drawers, skirting, viewing panel, etc.	No	1	
42	Nurses timber stations and counter U-shaped on plan with one leg 774 x 1092 x 1000mm high, middle 5084 x 774 x 1000mm high and other leg 685 x 1813 x 1000mm high complete with 50mm formica counter, framing, shelves, drawers, skirting, etc.	No	1	
43	Timber floor cupboard 1020 x 600 x 800mm high including hand wash basin and disconnecting waste pipe.	No	2	
44	Timber floor cupboard 1890 x 600 x 800mm high including hand wash basin and disconnecting waste pipe.	No	4	
45	Timber sink cupboard 1730 x 600 x 800mm high, including single bowl sink and disconnecting waste pipe.	No	6	
46	Timber sink cupboard 2760 x 600 x 800mm high, including double bowl sink and disconnecting waste pipe.	No	1	
47	Timber sink cupboard 4084 x 600 x 800mm high, including single bowl sink and disconnecting waste pipe.	No	1	
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Item	Unit	Quantity	Rate	Amount
48	Timber sink cupboard L-shaped on plan with one leg 1320 x 600 x 800mm high other leg 600 x 970 x 800mm high, including single bowl sink and disconnecting waste pipe.	No	1	
49	Timber built in wall shelf including bedhead ducting 1000mm high.	m	24	
<u>Carefully taking out removing and hand over to hospital of sundry joinery work, fittings, etc and making good plaster where disturbed. (making good paint elsewhere):</u>				
50	Hospital bed 1934 x 800 x 600mm high including foam mattress, curtain and curtain rail, etc.	No	16	
51	4 Sets of waiting area seating.	Sets	9	
<u>Taking out and removing ironmongery:</u>				
52	Chrome plated shower curtain rail from wall 900mm long.	No	3	
53	Wall mounted soap dish.	No	2	
54	Chrome plated wall mounted soap dispenser.	No	2	
<u>Taking out/off and removing sundry metalwork:</u>				
55	Cantilevered bolted steel balcony at approximately 2m wide x 1m high to height not exceeding 5m, comprising vastrap floor, including supporting columns, balustrades, etc.	m	21	
<u>Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc:</u>				
56	30mm Screed from floors, including vinyl floor covering.	m ²	644	
<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.:</u>				
57	Tiles to walls.	m ²	25	
<u>Taking out and removing piping, sanitary fittings, etc., including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere):</u>				
58	15mm Copper piping including fittings and brackets.	m	56	
59	22mm Copper piping including fittings and brackets.	m	56	
60	40mm uPVC piping including fittings and brackets.	m	28	
61	50mm uPVC piping including fittings and brackets.	m	9	
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Item	Unit	Quantity	Rate	Amount
62	110mm uPVC piping including fittings and brackets.	m	7	
63	160mm uPVC underground piping including fittings ,brackets, excavation, backfilling, etc.	m	48	
64	Existing steel wall mounted pipe ducting including fittings and brackets.	m	20	
65	Existing wall mounted AC units including fittings and brackets.	No	5	
66	Vitreous china wash hand basin, including short lengths of piping, taps, traps, etc.	No	12	
67	Vitreous china wall mounted WC pan with flush valve, including short lengths of piping, taps, traps, etc.	No	7	
68	Vitreous china wall mounted top entry bowl urinal , including short lengths of piping, taps, traps etc.	No	1	
69	Shower set comprising of shower rose and two under tile stop taps.	No	2	
70	Shower tray size 900 x 900mm including shower traps, short lengths of pipes etc.	No	1	
71	Shower tray size 1400 x 1200mm including shower traps, short lengths of pipes etc.	No	1	
<u>Digging and taking out and removing piping, inspection chambers, etc., including cutting off as necessary, disconnecting piping from fittings:</u>				
72	Existing fire hydrant including cutting and disconnecting of piping, fittings ,brackets, excavation, backfilling, etc.	No	2	
73	Existing sewer manhole including cutting and disconnecting of piping, fittings ,brackets, excavation, backfilling, etc.	No	5	
<u>Taking out/off and removing glass and mirrors:</u>				
74	Mirror 600 x 900mm high from wall.	No	18	
<u>MAKING GOOD OF FINISHES, ETC (CPAP Work Group No 102)</u>				
<u>Making good cement screeds:</u>				
75	30mm Thick on floors in patches.	m ²	40	
76	Floors where half brick walls removed.	m	187	
77	Floors where one brick walls removed.	m	13	
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Item	Unit	Quantity	Rate	Amount
<u>Making good internal cement plaster:</u>				
78	m ²	48		
79	m	45		
80	m	6		
<u>BUILDING UP OPENINGS (CPAP Work Group No 102)</u>				
<u>Brickwork in NFP bricks in class II mortar in building up openings:</u>				
81	m ²	4		
<u>Sundries:</u>				
82	m ²	3		
<u>PREPARATORY WORK TO EXISTING SURFACES (CPAP Work Group No 102)</u>				
<u>Preparatory work:</u>				
83	m ²	54		
84	m ²	146		
<u>OPENINGS THROUGH EXISTING WALLS, ETC (CPAP Work Group No 102)</u>				
<u>Breaking out for and forming openings through brick walls for new windows, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with sloping precast-concrete sills on outside and plastered reveals on inside (new windows and making good paintwork elsewhere)</u>				
85	No	2		
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Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u> <u>CASUALTY AND OPD</u> <u>Bill No. 2</u> <u>EARTHWORKS</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p>				
<p><u>Nature of ground:</u> A soils investigation has been carried out on the site and the report is annexed to these Bills of Quantities.</p>				
<p><u>Excavation for working space in rock:</u> Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be.</p>				
<p><u>Carting away of excavated material:</u> Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site.</p>				
<p><u>Filling:</u> Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material.</p>				
<p><u>SITE CLEARANCE, ETC (CPAP Work Group 104)</u></p>				
<p><u>Site clearance, etc:</u> 1 Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scuffling up as required and cart away all vegetation and debris.</p>	m ²	260		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 2 Bill No. 2 Earthworks</p>				

Item	Unit	Quantity	Rate	Amount
2 Strip average 150mm thick layer of topsoil and stockpile on site.	m ²	260		
<u>EXCAVATION OTHER THAN BULK (CPAP Work Group No 104)</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
3 Reduced levels under floors.	m ³	242		
4 Trenches.	m ³	72		
5 Holes.	m ³	48		
<u>Excavation in earth exceeding 2m and not exceeding 4m deep:</u>				
6 Holes.	m ³	5		
<u>Extra over excavations other than bulk in earth for excavation in:</u>				
7 Soft rock.	m ³	8		
8 Hard rock.	m ³	5		
<u>Extra over excavations other than bulk in earth for breaking up and removing:</u>				
9 Brickwork.	m ³	3		
10 Unreinforced concrete.	m ³	1		
11 Reinforced concrete.	m ³	3		
<u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 95% Mod AASHTO density:</u>				
12 Not exceeding 500mm deep for placing and removing formwork to walls etc, 300mm away from excavated face.	m ²	15		
13 Exceeding 500mm and not exceeding 1,5m deep for placing and removing formwork to walls etc, 300mm away from excavated face.	m ²	18		
14 Exceeding 1,5m and not exceeding 3m deep for placing and removing formwork to walls etc, 300mm away from excavated face.	m ²	2		
<u>Extra over all excavations for carting away:</u>				
15 Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor.	m ³	336		
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
<u>Risk of collapse of excavations:</u>				
16	Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	363	
17	Sides of trench and hole excavations exceeding 1,5m deep.	m ²	351	
<u>Keeping excavations free of water:</u>				
18	Keeping excavations free of all water other than subterranean water.	Item		
<u>FILLING, ETC (CPAP Work Group No 104)</u>				
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density:</u>				
19	Backfilling to trenches, holes, etc.	m ³	58	
<u>Filling with approved G7 material in accordance with SABS 1200 DM supplied and carted on to site by the Contractor, compacted to 95% Mod AASHTO density:</u>				
20	Under floors, pavings, etc.	m ³	363	
<u>Filling with approved G5 material in accordance with SABS 1200 DM supplied and carted on to site by the Contractor, compacted to a density of at least 98% Mod. AASHTO maximum density:</u>				
21	Under floors, pavings, etc.	m ³	204	
<u>Coarse river sand filling compacted to 98% Mod. AASHTO maximum density:</u>				
22	Under floors, etc.	m ³	20	
<u>Surface Preparation:</u>				
23	Trim and level off surface of ground (excavated or filled under this Contract) to receive concrete surface beds, including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 150mm to a density of at least 98% Mod. AASHTO maximum density, part to falls.	m ²	460	
<u>SOIL POISONING (CPAP Work Group No 104)</u>				
<u>Approved brand of soil poison to comply with SABS 0124 applied by a Registered Pest Control company and guaranteed for ten years:</u>				
24	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m ²	430	
25	To bottoms and sides of trenches, etc.	m ²	682	
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Item	Unit	Quantity	Rate	Amount
<u>TESTS (CPAP Work Group No 104)</u>				
<u>Prescribed density tests on filling:</u>				
26	Modified AASHTO Density test.	No	4	
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<u>CASUALTY AND OPD</u>				
<u>Bill No. 3</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Cost of tests:</u>				
The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).				
<u>Breeze Concrete:</u>				
Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (12:1), the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated.				
<u>Foamcement Lightweight Concrete:</u>				
Foamcement lightweight concrete is to have a density of 600kg/m3 for the top 50mm and 500kg/m3 for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm.				
<u>Celbeton Lightweight Concrete:</u>				
Celbeton lightweight concrete is to have a density of 1000kg/m3 for the top 20mm and 408kg/m3 for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 30mm.				
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Item	Unit	Quantity	Rate	Amount
<u>Formwork:</u>				
Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.				
The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.				
Formwork to soffits of solid slabs etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described.				
Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks.				
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES (CPAP Work Group No 110)</u>				
<u>15MPa/19mm Concrete:</u>				
1	m ³	1		
2	m ³	3		
<u>REINFORCED CONCRETE (CPAP Work Group No 110)</u>				
<u>30MPa/19mm Concrete:</u>				
3	m ³	42		
4	m ³	31		
5	m ³	6		
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES (CPAP Work Group No 110)</u>				
<u>20MPa/19mm Concrete:</u>				
6	m ³	6		
7	m ³	10		
8	m ³	48		
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Item	Unit	Quantity	Rate	Amount
9	m ³	2		
<u>30MPa/19mm Concrete:</u>				
10	m ³	62		
11	m ³	2		
<u>TEST BLOCKS (CPAP Work Group No 110)</u>				
<u>Test blocks:</u>				
12	Sets	16		
<u>FINISHING TOP SURFACE OF CONCRETE (CPAP Work Group No 110)</u>				
<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
13	m ²	32		
14	m ²	27		
<u>Finishing top surfaces of concrete smooth with a steel trowel:</u>				
15	m ²	9		
16	m ²	40		
17	m ²	22		
<u>Finishing top surfaces of concrete smooth with a power float:</u>				
18	m ²	393		
<u>Pneumatic bush-hammering of concrete surfaces to form vertical grooves:</u>				
19	m ²	53		
<u>GROUTING (CPAP Work Group No 110)</u>				
<u>30MPa non-shrink grout:</u>				
20	No	6		
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP Work Group No 111)</u>				
<u>Rough formwork to sides:</u>				
21	m ²	53		
22	m ²	287		
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Concrete, Formwork And Reinforcement				

Item	Unit	Quantity	Rate	Amount
23	Rectangular columns in foundations.	m ²	20	
	<u>Rough formwork to circular and partly circular columns:</u>			
24	300mm Diameter column 0,98m high.	No	18	
	<u>Boxing out rough formwork to form:</u>			
25	150 x 150mm Chamfers along top or bottom edges.	m	315	
	<u>Boxing out rough formwork to form:</u>			
26	135 x 170mm High horizontal projections to sides along bottom edges.	m	111	
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY II) (CPAP Work Group No 111)</u>			
	<u>Rough formwork to sides:</u>			
27	Beams.	m ²	88	
28	Inverted beams.	m ²	61	
29	Rectangular columns with total height exceeding 1,5m and not exceeding 3,5m above bearing level.	m ²	30	
30	Inverted beams above concrete.	m ²	52	
31	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	7	
	<u>Rough formwork to circular and partly circular columns:</u>			
32	300mm Diameter column 2,98m high.	No	18	
	<u>Rough formwork to sides and soffits:</u>			
33	Isolated beams propped up not exceeding 1,5m high.	m ²	6	
34	Isolated beams propped up exceeding 1,5m and not 3,5m high above bearing level.	m ²	190	
	<u>Extra over rough formwork to sides and soffits for alternating sand blasted shutter lining formwork (refer to Front Beam Shutter Detail on Drawing No. MDA477(B) UPH/Trauma Unit-208 attached to these Bills of Quantities:</u>			
35	Isolated beams propped up exceeding 1,5m and not 3,5m high above bearing level.	m ²	106	
	<u>Rough formwork to soffits:</u>			
36	Slabs propped up not exceeding 1,5m high.	m ²	9	
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Item	Unit	Quantity	Rate	Amount
<u>Rough formwork to form:</u>				
37	No	8		
<u>Boxing in rough formwork to form:</u>				
38	m	124		
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II) (CPAP Work Group No 111)</u>				
<u>Smooth formwork to circular and partly circular columns:</u>				
39	No	6		
<u>Smooth formwork to sides:</u>				
40	m	26		
41	m	8		
<u>Smooth formwork to soffits:</u>				
42	m ²	32		
<u>Smooth formwork to form:</u>				
43	No	6		
<u>Boxing in smooth formwork to form:</u>				
44	m	11		
45	m	6		
<u>MOVEMENT JOINTS ETC (CPAP Work Group No 111)</u>				
<u>Two layers five-ply approved waterproofing membrane in strict accordance with manufacturer's instruction:</u>				
46	m ²	47		
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Concrete, Formwork And Reinforcement				

Item	Unit	Quantity	Rate	Amount
<u>Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation between vertical concrete and brick surfaces:</u>				
47	m	40		
<u>Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted between vertical concrete surfaces, including necessary formwork:</u>				
48	m	14		
<u>Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted between concrete and brick surfaces:</u>				
49	m	27		
<u>Vertical joggle construction joints through concrete including applying two coats bitumen to mating face and finishing joint with a nosing tool:</u>				
50	m	73		
<u>REINFORCEMENT (CPAP Work Group No 114)</u>				
<u>Mild steel reinforcement to structural concrete work:</u>				
51	Tonnes	1.25		
52	Tonnes	1.98		
<u>High tensile steel reinforcement to structural concrete work:</u>				
53	Tonnes	1.83		
54	Tonnes	2.21		
55	Tonnes	2.33		
56	Tonnes	2.46		
57	Tonnes	2.72		
58	Tonnes	3.22		
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Item	Unit	Quantity	Rate	Amount
<u>High tensile steel dowel bars:</u>				
59	20mm Diameter dowel bar 600mm long wrapped in uPVC conduit pipe with heas, with one end embedded 300mm deep in side of concrete at expansion joint and other end drilled and grouted with approved reinforcing grout on existing concrete including hole though as detailed Section QC21-Callout 1 on Drawing No. 1746-6-02-S-008 attached to these Bills of Quantities.	No	294	
<u>Fabric reinforcement:</u>				
60	Type 193 fabric reinforcement in concrete surfacebeds, slabs, etc.	m ²	27	
61	Type 395 fabric reinforcement in concrete surfacebeds, slabs, etc.	m ²	9	
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<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 4</u>				
<u>WATERPROOFING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Waterproofing:</u>				
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs.				
<u>DAMP-PROOFING OF WALLS AND FLOORS (CPAP Work Group No 120)</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):</u>				
1	m ²	85		
<u>One layer 250 micron embossed polyethylene waterproof sheeting sealed at laps with pressure sensitive tape:</u>				
2	m ²	393		
3	m ²	266		
<u>Two coats of bitumen emulsion waterproof coating:</u>				
4	m ²	172		
5	m ²	399		
<u>WATERPROOFING SEALANTS TO NEW WALLS, FLOORS, ROOFS, ETC (CPAP Work Group No 120)</u>				
<u>Two coats of seamless waterproofing membrane applied in strict accordance with the manufacturer's instructions:</u>				
6	m ²	10		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 4 Waterproofing				

Item	Unit	Quantity	Rate	Amount
7	m ²	111		
8	m	32		
9	m	32		
10	No	35		
<u>WATERPROOFING TO FLAT SCREEDED ROOFS (CPAP Work Group No 120)</u>				
<u>One Layer 4mm thick polymer modified bitumen reinforced waterproofing membrane fully bonded to 'bituprime' primed surface by means of 'torch on fusion' with 100mm side laps and 150mm end laps in strict accordance with the manufacturer's instructions:</u>				
11	m ²	32		
12	m ²	63		
13	m	33		
14	m	33		
15	No	2		
<u>PROTECTIVE ROOFING PAINT (CPAP Work Group No 120)</u>				
<u>Two coats of bituminous aluminium paint:</u>				
16	m ²	96		
<u>JOINT SEALANTS ETC (CPAP Work Group No 120)</u>				
<u>Clear silicone sealant applied in accordance with the manufacturers instructions:</u>				
17	m	95		
<u>White silicone sealant applied in accordance with the manufacturers instructions:</u>				
18	m	71		
TOTAL CARRIED TO BILL SUMMARY				
Section No. 2				
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Waterproofing				
			R	

Item	Unit	Quantity	Rate	Amount
<u>Polyurethane sealing compound including backing cord, bond breaker, primer, etc:</u>				
19	In joints between external aluminium window frames and walls.	m	12	
20	In joints between stainless steel frames and plastered walls.	m	462	
21	10 x 12mm In vertical expansion joints including raking out joint filler as necessary.	m	93	
22	10 x 12mm In expansion joints in floors including raking out joint filler as necessary.	m	114	
TOTAL CARRIED TO BILL SUMMARY				R
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WATERPROOFING
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Bill No. 4

Waterproofing

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u> <u>CASUALTY AND OPD</u> <u>Bill No. 5</u> <u>ROOF COVERINGS</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent. <u>Supplementary Preambles:</u> <u>Flashings:</u> Stop endings must be formed at apex to form a dam and the pan turned down to form drip. The roof sheeting shall be closed as necessary with purpose made flashings and shall incorporate serrated closers and poly closers where necessary. Flashing shall be fixed to roofing by means of No. 14 Top speed Hex head screws 25mm long with 26mm diameter bonded washers on roof and 19mm diameter bonded washers for side cladding. <u>Safety:</u> The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity. <u>Installation:</u> Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 5 Roof Coverings</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Handling and storage:</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and stored in accordance with the manufacturer’s recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor’s expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>Inspection prior to installation:</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <p>The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted.</p> <p>Purlins and girts are at the correct spacing and are within the specified tolerances.</p> <p>The corners of the roof are square, and the wall framework is perpendicular or as specified.</p> <p>No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework.</p> <p>All members to which roofing, and cladding are to be fixed in aesthetically sensitive areas are true and square.</p> <p>Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided.</p> <p>The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding.</p> <p><u>Protrusion through sheeted surfaces:</u></p> <p>Protrusions such as pipes, ducts, and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs must be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting, and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>Guarantee:</u></p> <p>The manufacturer shall comply with ISO 9001:2015 Quality Management System.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 5 Roof Coverings</p>				R

Item	Unit	Quantity	Rate	Amount
<u>Cleaning of roof, etc.:</u>				
All debris, swarf, etc. arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc. shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks, or partially impedes the flow of water into the outlets, down pipes, etc.				
<u>CONCEALED FIX RIBBED METAL SHEETING AND ACCESSORIES (CPAP Work Group No 124)</u>				
<u>0.53mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face and accessories concealed fixed to timber purlins (elsewhere) with and including 'Diamondek clips' fixed with jetting screws, in strict accordance with the manufacturers instructions:</u>				
1	m ²	25		
<u>0.53mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face and accessories concealed fixed to steel purlins (elsewhere) with and including 'Diamondek clips' fixed with wafer head screws, in strict accordance with the manufacturers instructions:</u>				
2	m ²	557		
<u>0.55mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face flashings and accessories pop riveted to sheeting:</u>				
3	m	4		
4	m	18		
5	m	41		
6	m	96		
7	m	137		
8	m	96		
9	m	96		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 5 Roof Coverings				

Item	Unit	Quantity	Rate	Amount
<p><u>PROFILED METAL SHEETING AND ACCESSORIES</u> <u>(CPAP Work Group No 124)</u></p>				
<p><u>'IBR' ISO 230 0.8mm thick Z275 spelter galvanised steel sheeting with full 'Color-Tech G4' finish on external face and standard backing coat on internal face and accessories fixed to steel purlins (elsewhere) at 1700mm centres in strict accordance with the manufacturers instructions:</u></p>				
10	m ²	17		
11	m ²	17		
<p><u>OVER PURLIN ROOF INSULATION (CPAP Work Group No 142)</u></p>				
<p><u>Fire retardant industrial grade reinforced aluminium foil insulation, double sided reflective foil laminated together with low density polyethylene in accordance with SANS 1381-4:2009, with class 1 fire rating in accordance with SANS 10177-3:2005 and ASTM E84 and BS 476 part 5, 6 and 7:</u></p>				
12	m ²	25		
<p><u>Laminated polyisocyanurate core board with a minimum core density of 34 kg/m³, a minimum thickness of 40mm, finished with white mineral and natural mineral and laminated on each side, to be installed over purlin in accordance with manufacturer's specifications:</u></p>				
13	m ²	535		
<p>TOTAL CARRIED TO BILL SUMMARY</p>				<p>R</p>
<p>Section No. 2 Bill No. 5 Roof Coverings</p>				

Amount

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Section No. 2
Bill No. 5
Roof Coverings

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u></p>				
<p><u>CASUALTY AND OPD</u></p>				
<p><u>Bill No. 6</u></p>				
<p><u>CARPENTRY AND JOINERY</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u></p>				
<p>For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Proprietary items or materials:</u></p>				
<p>Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p>				
<p><u>Particle board:</u></p>				
<p>Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.</p>				
<p><u>Joinery:</u></p>				
<p>Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.</p>				
<p>Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.</p>				
<p><u>Fixing:</u></p>				
<p>Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.</p>				
<p><u>Decorative laminate finish:</u></p>				
<p>Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.</p>				
<p><u>Gumpoles:</u></p>				
<p>Gum pole structural units shall be in accordance with the following SABS Specifications: SABS 457-1982: Wooden poles, droppers, guard rail posts and spacer blocks. Units with defects exceeding the maximum permissible defects as listed in table 1 of SABS 457, shall be remove from site and shall under no circumstances be used in any part of the structure. State diameters are top (thin) end diameters in all cases.</p>				
<p><u>PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION, ETC (CPAP Work Group No 126)</u></p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p>Trusses are at maximum 930mm centres.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				
<p>Section No. 2</p>				
<p>Bill No. 6</p>				
<p>Carpentry And Joinery</p>				
			R	

Item	Unit	Quantity	Rate	Amount
<p>Roof coverings are 0.53mm thick 'ZincAL' ZA150 ' Diamondek 407' galvanised steel roof sheeting on 50 x 75mm purlins.</p> <p>Ceilings are generally 9mm thick gypsum plaster board suspended ceilings or Vermont building planks 225 x 12mm thick textured external weatherboarding on 38 x 50mm brandering</p> <p>References given in descriptions refer to the respective roofs detailed on the Architect's/Engineer's drawings accompanying these Bills of Quantities for tender purposes.</p> <p>Dimensions in descriptions of trusses are nominal and actual measurements are to be obtained from the architect/engineer and or taken on site before design or fabrication commences.</p> <p>The contractor will be required to provide a certificate of approval signed by a registered Professional Engineer that the trusses have been designed, manufactured and installed in accordance with the relevant SABS specifications.</p>				
<u>Sawn softwood grade 4:</u>				
1 Representative/Agent, the Truss Fabricator or his Design Engineer shall inspect the completed roof structure and issue a certificate of confirmation to the Department that the roof structure(s) has (have) been erected in accordance with the Design Engineer's drawings, as accepted by the Department, and the relevant details given in the manual "THE ERECTION AND BRACING OF TIMBER ROOF TRUSSES' issued by the National Timber Research Institute and the Institute for Timber Construction.'	Item			
2 50 x 76mm Purlins.	m	59		
3 Mono-pitched roof truss overall size 1,51m x 0,71m high complete, as detailed on Drawing No MDA477(B6a)-102 Ground Floor Section DD-Trauma Unit attached to these Bills of Quantities.	No	9		
4 Mono-pitched roof truss overall size 2,60m x 1,09m high complete, as detailed on Drawing No MDA477(B6a)-102 Ground Floor Section DD-Trauma Unit attached to these Bills of Quantities.	No	11		
<u>Wrought softwood grade 4:</u>				
5 50 x 38mm Battern fixed to fibre cement fascia boards (fascia boards elsewhere).	m	54		
<u>ROOF SUNDRIES (CPAP Work Group No 126)</u>				
<u>Sundries:</u>				
6 Shaped end to 38 x 114mm sawn timber.	No	20		
TOTAL CARRIED TO BILL SUMMARY			R	
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Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
7	No	80		
8	No	124		
9	No	20		
10	No	200		
<u>EAVES, VERGES, ETC (CPAP Work Group No 126)</u>				
<u>Medium density plain fibre cement fascias and barge boards:</u>				
11	m	27		
<u>SKIRTINGS (CPAP Work Group No 126)</u>				
<u>Wrought meranti:</u>				
12	m	14		
<u>SOLID CORE FLUSH DOORS (CPAP Work Group No 126)</u>				
<u>Solid chipcore flush doors with standard veneer suitable for painting on both sides and 10mm hardwood edge strips all around hung to steel frames (frame and ironmongery elsewhere):</u>				
13	No	10		
14	No	11		
<u>BUMPRAILS, GUARDS TO WALLS ETC (CPAP Work Group No 126)</u>				
<u>Wrought laminated meranti hardwood:</u>				
15	m	404		
16	No	101		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
17	No	109		
<u>FITTINGS (CPAP Work Group No 126)</u>				
<u>Doctors Lectern:</u>				
18	No	4		
<u>Linbin Units:</u>				
19	No	30		
<u>Admission Room Counters:</u>				
20	No	3		
21	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
<u>Reception:</u>				
22 Wall cupboard overall size 1000 x 450 x 2046mm high comprising of 22mm thick supawood one double hinged door, sides and bottoms, 22mm x 75mm supawood support, 22mm thick laminated SA pine shelves with clear finish, 150 x 16mm thick SA pine kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Reception Room 15' on Drawing No. MDA477(B) UPH / Trauma Unit-308 attached to these Bills of Quantities.	No	1		
23 Reception counter overall size 2268 x 740 x 1100mm high comprising of 22mm thick supawood one single hinged door, one drawer, sides and bottoms, 76mm diameter stainless steel leg support fixed to floors with 100 mm diameter escutcheon cover plate , 30mm thick L-shaped on elevation surrino counter top 22mm thick supawood panel with tarkett accent excellent 80 2mm thick heterogenous polyvinyl sheeting with bubble cold mix finish, 150 x 22mm thick marine ply kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Reception Room 15' on Drawing No. MDA477(B) UPH / Trauma Unit-308 attached to these Bills of Quantities.	No	1		
<u>Store Rooms:</u>				
24 High level wall open shelving L-shaped on plan with one leg overall size 1854 x 450 x 350mm high, other leg overall size 2292 x 450 x 350mm high comprising of 22mm thick SA pine slatted shelves fixed to 22 x 50mm support struts, 22mm thick SA pine solid top, sides, bottom, divisions, back, dividing framework, vanish finish, etc to be installed complete as per 'Joinery Details: Equipment Store 05' on Drawing No. MDA477(B) UPH / Trauma Unit-304 attached to these Bills of Quantities.	No	1		
25 Wall open shelving overall size 3805 x 450 x 2172mm high comprising of 22mm thick SA pine slatted shelves fixed to 22 x 50mm support struts, 22mm thick SA pine solid top, sides, bottom, divisions, back, dividing framework, vanish finish, 150 x 16mm thick SA pine kick plate with vinyl floor finish, etc to be installed complete as per 'Joinery Details: Equipment Store 05' on Drawing No. MDA477(B) UPH / Trauma Unit-304 attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
26 Wall open shelving L-shaped on plan with one leg overall size 3216 x 450 x 2172mm high, other leg overall size 1352 x 450 x 2172mm high comprising of 22mm thick SA pine slatted shelves fixed to 22 x 50mm support struts, 22mm thick SA pine solid top, sides, bottom, divisions, back, dividing framework, vanish finish, 150 x 16mm thick SA pine kick plate with vinyl floor finish, etc to be installed complete as per 'Joinery Details: Equipment Store 05' on Drawing No. MDA477(B) UPH / Trauma Unit-304 attached to these Bills of Quantities.	No	1		
27 Wall open shelving U-shaped on plan with two equal legs overall size 2700 x 400 x 2575mm high, and middle leg size 2967 x 400 x 2575mm high comprising of 22mm thick SA pine shelves fixed to and including backed enamel finish mild steel wall band bolted to walls, top, sides, bottom, divisions, back, dividing framework, varnish finish, bolts, etc installed complete as per 'Joinery Details: Consumable Store 06' on Drawing No. MDA477(B) UPH / 72-Trauma Unit-304 attached to these Bills of Quantities.	No	1		
<u>Procedure Room:</u>				
28 High level wall open shelving overall size 1850 x 350 x 730mm high comprising of 22mm thick supawood shelves, sides, top, bottoms dividing framework, melamine finish, etc to be installed complete as per 'Joinery Details: Procedure Room 37' on Drawing No. MDA477(B) UPH / Trauma Unit-307 attached to these Bills of Quantities.	No	1		
<u>P.O.P Room:</u>				
29 High level wall cupboard overall size 1200 x 350 x 616mm high comprising of 22mm thick two double hinged doors, 16mm thick supawood sides, bottom, divisions, shelves, back, dividing framework, melamine finish, ironmongery, etc to be installed complete as per 'Joinery Details: P.O.P Room 42' on Drawing No. MDA477(B) UPH / Trauma Unit-307 attached to these Bills of Quantities.	No	1		
30 Counter top overall size 1200 x 500 x 750mm high comprising of 30mm thick PG Bilson Lifeseal counter top with square edge top, 50mm diameter stainless steel support post fixed to floors with 100mm diameter escutcheon cover plate including 40mm square mild steel brace with powder coat finish, glue, bolts, etc to be installed complete as per 'Joinery Details: P.O.P Room 42' on Drawing No. MDA477(B) UPH / Trauma Unit-307 attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
<u>Paediatrics/Resus Room:</u>				
31	High level wall open shelving L-shaped on plan with one leg overall size 2800 x 400 x 662mm high, other leg overall size 3720 x 300 x 662mm high comprising of 22mm thick PAR laminated saligna shelves fixed to baked enamel wall band brackets with satin finish and bolted to walls, complete with top, sides, bottom, divisions, back, dividing framework, vanish finish, etc to be installed complete as per 'Joinery Details: Paediatrics/ Resus Room 07, 08' on Drawing No. MDA477(B) UPH / Trauma Unit-307 attached to these Bills of Quantities.	No	2	
32	High level wall open shelving L-shaped on plan with one leg overall size 2800 x 400 x 662mm high, other leg overall size 5125 x 300 x 662mm high comprising of 22mm thick PAR laminated saligna shelves fixed to baked enamel wall band brackets with satin finish and bolted to walls, complete with top, sides, bottom, divisions, back, dividing framework, vanish finish, bolts, etc to be installed complete as per 'Joinery Details: Paediatrics/ Resus Room 07, 08' on Drawing No. MDA477(B) UPH / Trauma Unit-307 attached to these Bills of Quantities.	No	2	
<u>Porters Room:</u>				
33	Floor cupboard overall size 1400 x 600 x 900mm high, comprising of 22mm thick supawood one double hinged door, one single hinged door, one drawer, 16mm thick white melamine sides, bottom, divisions, shelves, back, framework, 30mm thick Rustenburg Granite counter top with 100mm high Rustenburg Granite splashback including opening for double bowl sink (sink elsewhere), fixed to floors with 150 x 16mm thick SA pine kick plates with vinyl floor finish including ironmongery, to be installed complete as per 'Joinery Details: Porters 21' on Drawing No. MDA477(B) UPH / Trauma Unit-305 attached to these Bills of Quantities.	No	1	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 6 Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
<u>Sister's Office:</u>				
34	No	1		
<p>Work top counter U-shaped on plan with one leg overall size 818 x 300 x 900mm high, middle leg overall size 1504 x 600 x 900mm high, other leg overall size 1600 x 600 x 900mm high comprising of 22mm thick supawood one single hinged door, one drawer fixed to floors with 150 x 16mm thick SA pine kick plates with vinyl floor finish including ironmongery, 19mm thick surrino counter top on 12mm thick supawood substructure including 50mm diameter stainless steel support post fixed to floors with 100mm diameter escutcheon cover plate including 40mm square mild steel brace with powder coat finish to be installed complete as per 'Joinery Details: Sister's Office 14' on Drawing No. MDA477(B) UPH / Trauma Unit-305 attached to these Bills of Quantities.</p>				
<u>Doctor's Sleep:</u>				
35	No	1		
<p>Floor cupboard overall size 2458 x 600 x 900mm high, comprising of 22mm thick supawood three double hinged doors, two drawers, 16mm thick white melamine sides, bottom, divisions, shelves, back, framework, 30mm thick Rustenburg Granite counter top with 100mm high Rustenburg Granite splashback including opening for double bowl sink (sink elsewhere), fixed to floors with 150 x 16mm thick SA pine kick plates with vinyl floor finish including ironmongery, to be installed complete as per 'Joinery Details: Doctor's Sleep 19' on Drawing No. MDA477(B) UPH / Trauma Unit-305 attached to these Bills of Quantities.</p>				
<u>Staff Room:</u>				
36	No	1		
<p>Floor cupboard overall size 4348 x 600 x 900mm high, comprising of 22mm thick supawood five double hinged doors, six drawers, 16mm thick white melamine sides, bottom, divisions, shelves, back, framework, 30mm thick Rustenburg Granite counter top with 100mm high Rustenburg Granite splashback including opening for double bowl sink (sink elsewhere), fixed to floors with 150 x 16mm thick SA pine kick plates with vinyl floor finish including ironmongery, to be installed complete as per 'Joinery Details: Staff Room 36' on Drawing No. MDA477(B) UPH / Trauma Unit-305 attached to these Bills of Quantities.</p>				
<u>Triage:</u>				
37	No	1		
<p>High level wall open shelving overall size 1210 x 500 x 1138mm high comprising of 22mm thick supawood shelves, sides, top, bottoms, dividing framework, melamine finish, etc to be installed complete as per 'Joinery Details: Triage 24' on Drawing No. MDA477(B) UPH / Trauma Unit-306 attached to these Bills of Quantities.</p>				
TOTAL CARRIED TO BILL SUMMARY			R	
<p>Section No. 2 Bill No. 6 Carpentry And Joinery</p>				

Item	Unit	Quantity	Rate	Amount
38 Floor desk overall size 1600 x 622 x 1070mm high comprising of 22mm thick supawood one single hinged door, one drawer, sides and bottoms, two 50mm diameter stainless steel leg support fixed to floors with 100 mm diameter escutcheon cover plate , 30mm thick PG Bison Lifeseal counter top with square edge top, 22mm thick supawood panel with pvc impact edges to all exposed edge fixed to counter top, 150 x 16mm thick SA pine kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Triage 24' on Drawing No. MDA477(B) UPH / Trauma Unit-306 attached to these Bills of Quantities.	No	1		
39 Floor desk L-shaped on plan with one leg overall size 1000 x 622 x 1070mm high other leg overall size 1300 x 600 x 1070mm high comprising of 22mm thick supawood one single hinged door, one drawer, sides and bottoms, four 50mm diameter stainless steel leg support fixed to floors with 100 mm diameter escutcheon cover plate , 30mm thick PG Bison Lifeseal counter top with square edge top, 22mm thick supawood panel with pvc impact edges to all exposed edge fixed to counter top, 150 x 16mm thick SA pine kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Triage 24' on Drawing No. MDA477(B) UPH / Trauma Unit-306 attached to these Bills of Quantities.	No	1		
<u>Male and Female Change Room:</u>				
40 Slatted bench L-shaped on plan with one leg overall size 1610 x 410 x 515mm high other leg 1182 x 410 x 515mm high comprising of 50 x 25mm hardwood slats finished with three coats of clear matt varnish secret fix and screwed to and including 37 x 22 x 4mm galvanised hollow brackets bolted to walls with two M12 rowl bolts and 400mm centres with all mitred comers, etc to be installed complete as per 'Joinery Details: Female Change Room 41' on Drawing No. MDA477(B)UPH/ Trauma Unit-306 attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
41 Slatted bench L-shaped on plan with one leg overall size 3290 x 410 x 515mm high other leg 970 x 410 x 515mm high comprising of 50 x 25mm hardwood slats finished with three coats of clear matt varnish secret fix and screwed to and including 37 x 22 x 4mm galvanised hollow brackets bolted to walls with two M12 rowl bolts and 400mm centres with all mitred comers, etc to be installed complete as per 'Joinery Details: Male Change Room 35' on Drawing No. MDA477(B) UPH/ Trauma Unit-306 attached to these Bills of Quantities.	No	1		
<u>Nurses Station:</u>				
42 High level medical wall cabinet overall size 500 x 350 x 1066mm high comprising of 22mm thick two double hinged doors, 16mm thick supawood sides, bottom, divisions, shelves, back, dividing framework, melamine finish, ironmongery, etc to be installed complete as per 'Joinery Details: Schedule 5 &6 Medicine Cabinet' on Drawing No. MDA477(B) UPH / Trauma Unit-309 attached to these Bills of Quantities.	No	2		
43 Work top counter L-shape on plan with one leg overall size 1141 x 800 x 1100mm high other leg overall size 1594 x 800 x 1100mm high comprising of 22mm thick supawood one single hinged door, one drawer, sides and bottoms, 30mm thick L-shaped on elevation surrino counter top 22mm thick supawood panel with tarkett acczent excellent 80 2mm thick heterogenous polyvinyl sheeting with bubble cold mix finish, 150 x 22mm thick marine ply kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Nurses Station Counter A' on Drawing No. MDA477(B) UPH / Trauma Unit-309 attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 6 Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
44 Work top counter U-shape on plan with one leg overall size 1594 x 800 x 1100mm high middle leg overall size 1020 x 800 x 1100mm high other leg overall size 1620 x 800 x 1100mm high comprising of 22mm thick supawood two single hinged doors, two drawers, sides and bottoms, 76mm diameter stainless steel leg support fixed to floors with 100 mm diameter escutcheon cover plate , 30mm thick L-shaped on elevation surrino counter top 22mm thick supawood panel with tarkett acczent excellent 80 2mm thick heterogenous polyvinyl sheeting with bubble cold mix finish, 150 x 22mm thick marine ply kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Nurses Station Counter B' on Drawing No. MDA477(B) UPH / Trauma Unit-309 attached to these Bills of Quantities.	No	1		
45 Work top counter L-shape on plan with one leg overall size 2704 x 800 x 1100mm high other leg overall size 1854 x 800 x 1100 high comprising of 22mm thick supawood two single hinged doors, two drawers, sides and bottoms, 76mm diameter stainless steel leg support fixed to floors with 100 mm diameter escutcheon cover plate , 30mm thick L-shaped on elevation surrino counter top 22mm thick supawood panel with tarkett acczent excellent 80 2mm thick heterogenous polyvinyl sheeting with bubble cold mix finish, 150 x 22mm thick marine ply kick plate with vinyl floor finish, all complete with divisions, back, dividing framework, melamine finish, skirting, ironmongery, etc to be installed complete as per ' Joinery Details: Nurses Station 02 Room 46' on Drawing No. MDA477(B) UPH / Trauma Unit-309 attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 6 Carpentry And Joinery				

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Section No. 2

Bill No. 6

Carpentry And Joinery

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u> <u>CASUALTY AND OPD</u> <u>Bill No. 7</u> <u>CEILING PARTITIONS AND ACCESS FLOORING</u></p> <p><u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p> <p><u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p> <p><u>Descriptions:</u> Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete. Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.</p> <p><u>Proprietary suspended ceilings:</u> Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations. Electrical light fittings, diffusers, panels etc are generally "lay-in" units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).</p> <p><u>Flush plastered gypsum plasterboard suspended ceilings.</u> Ceilings shall comprise 9mm gypsum plasterboard boards screwed to and including screw-up suspension grid consisting of main tees at 1 200mm centres and galvanised steel capped cross tees at 400mm centres and with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface. The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 7 Ceilings Partitions And Access Flooring</p>			R	

Item	Unit	Quantity	Rate	Amount
<u>NAILED UP AND SCREW UP CEILINGS (CPAP Work Group No 126)</u>				
<u>Vermont building planks 225 x 12mm thick textured external weatherboarding with a minimum 20mm overlap, fixed to 38 x 50mm branderling at 600mm centres, using concealed 3 x 40mm copper nails, the branderling nailed to underside of steel trusses all in accordance with the manufacturer's recommendations:</u>				
1	Ceilings including 38 x 50mm sawn softwood branderling at 450mm centres with cross branderling at joints, ends of sheets and at light fitting, etc.	m ²	157	
<u>Vermont building planks 225 x 12mm thick textured external weatherboarding with a minimum 20mm overlap, fixed to 38 x 50mm branderling at 600mm centres, using concealed 3 x 40mm copper nails, the branderling plugged and screwed to concrete soffits all in accordance with the manufacturer's recommendations:</u>				
2	Ceilings including 38 x 50mm sawn softwood branderling at 450mm centres with cross branderling at joints, ends of sheets and at light fitting, etc.	m ²	25	
<u>Ceiling trims for nailed up and screw up ceilings:</u>				
3	37 x 24mm 'SM12' recessed shadow line cornice plugged and screwed to walls.	m	186	
TOTAL CARRIED TO BILL SUMMARY				R
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Ceilings Partitions And Access Flooring				

Item	Unit	Quantity	Rate	Amount
<u>DRYWALL PARTITIONS, ETC (CPAP Work Group No 129)</u>				
<u>Drywall partitioning system with overall thickness of 90mm comprising internal framing formed of 64mm galvanised steel studs fixed at 600mm centres to aluminium top and galvanised steel bottom track including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12,5mm thick tapered edge gypsum boards in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 300mm centres, the joints taped over and flushed over with jointing compound. All aluminium door frames, glazing sections, corners, transoms, cornices, skirtings, etc. shall be formed of natural anodised aluminium sections. (Intersections and abutments are measured separately and descriptions shall be deemed to include any additional studs, corner beads, jointing compound, tape, etc.):</u>				
4	Partitioning 2,7m high with splayed top, with bottom track plugged and top track plugged to suspended ceiling tees including 76mm natural anodised 'Drywall' aluminium head channel and skirting on both sides.	m	24	
5	Extra over partition 2,7m high for vertical abutment.	No	6	
6	Extra over partition 2,7m high for corner.	No	2	
7	Extra over partition 2,7m high for irregular corner.	No	2	
8	Extra over partition 2,72m high for T-intersection.	No	16	
9	Extra over partition 2,7m high for fair end.	No	9	
<u>Glazed aluminium windows to partitioning:</u>				
10	Extra over Drywall partition for purpose made natural anodised aluminium window, size 1055 x 1490mm high with one fixed glazed panel with 6.38mm Laminated HI clear safety glass, installed complete as per W-12 Window and Gate Schedule on Drawing No. MDA 477(B)UPH/ Trauma Unit-401 attached to these Bills of Quantities.	No	4	
TOTAL CARRIED TO BILL SUMMARY			R	
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Ceilings Partitions And Access Flooring				

Item	Unit	Quantity	Rate	Amount
<u>Timber doors to partitioning:</u>				
11	Extra over Drywall partition for 44mm semi-solid flush doors with standard tempered veneer on both sides and 10mm hardwood edge strips to vertical edges, hung to and including purpose made natural anodised aluminium aluminium door frame with one pair of 100mm steel hinges to each hanging stile, including additional studding, trimming, etc. to partitions as per DH Door Schedule on Drawing No. MDA 477(B) UPH/TRAUMA UNIT-400 to these Bills of Quantities. (ironmongery elsewhere)	No	1	
<u>Glazed aluminium doors to partitioning:</u>				
12	Extra over Drywall partition for purpose made natural anodised aluminium single door and including frame size 900 x 2040mm high overall comprising of 680 x 1030mm one times glazed panel with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, edges clad with 1.2mm thick 403 grade stainless steel plates over full door height and glazed with 6.38mm Laminated HI clear safety glass complete with 1.5 pairs 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D036S SS) stainless steel cylinder sash lock, 1 set 'Dormakaba' (TH120 Cyl S.S) stainless steel lever handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS- 022) stainless steel wall buffer, all installed complete as per DE07 Door Schedule on Drawing No. MDA 477(B) UPH/TRAUMA UNIT-400 attached to these Bills of Quantities.	No	1	
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 2 Bill No. 7 Ceilings Partitions And Access Flooring				

Item	Unit	Quantity	Rate	Amount
<p>13 Extra over Drywall partition for purpose made natural anodised aluminium single door and frame size 900 x 2040mm high overall comprising of 680 x 1030mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete with 1.5 pairs 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D036S SS) stainless steel cylinder sash lock, 1 set 'Dormakaba' (TH120 Cyl S.S) stainless steel lever handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS-022) stainless steel wall buffer, all installed complete as per DE08 on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
<p><u>TOILET PARTITIONS (CPAP Work Group No 138)</u></p>				
<p><u>'Classic Range Modular Cloakroom Toilet Cubicle' comprising of waterproof laminated construction with outer skins of white LM 2045/1 vitreous enamel sheets bonded to wood particle board, with an overall thickness not exceeding 20mm.</u></p>				
<p><u>All partitions to be manufactured in a one piece-construction, no horizontal or vertical joints permitted. All units framed with natural anodised aluminium channel beading and to be supplied complete with standard ironmongery, comprising of indicator bolts and keeps, coat hooks, rubber buffers, top rails and fixing components. The cubicles are to be set complete in position, 150mm above finished floor level, strictly in accordance with the manufacturers instructions.</u></p>				
<p><u>All ironmongery is to be secured by means of proprietary one way anti theft screws. All doors to be fitted with standard aluminium washered butt hinges. All styles and screens to be fitted with telescopic stainless steel leg anchors in a standard arrangement. The vitreous enamelled steel surface is guaranteed to perform specifically to the functions it was intended, and to remain functionally unchanged for a period of ten years, under the terms of the general guarantee.</u></p>				
<p>14 Toilet cubicle partition 1740 x 1800mm high complete with telescopic stainless steel leg anchors in a double standard arrangement.</p>	No	1		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 2 Bill No. 7 Ceilings Partitions And Access Flooring</p>				

Item	Unit	Quantity	Rate	Amount
15 Toilet cubicle partition 2020 x 1800mm high complete with telescopic stainless steel leg anchors in a double standard arrangement.	No	1		
16 Toilet cubicle partition 2740 x 1800mm high complete with telescopic stainless steel leg anchors in a double standard arrangement.	No	1		
17 Door 750 x 1800mm high including standard ironmongery excluding toilet roll holder (toilet roll holder elsewhere).	No	2		
18 End stile 150 x 1850mm high complete with telescopic stainless steel leg anchors in a double standard arrangement.	No	4		
19 Wall stile 115 x 1850mm high complete with telescopic stainless steel leg anchor/ stainless steel wall pins arrangement.	No	5		
<u>SHOWER PARTITIONS (CPAP Work Group No 138)</u>				
<u>Purpose made 'Frameless Shower Cubicles' comprising of 12,00mm thick toughened safety glass fixed with and including stainless steel glass clamps and sealing around frame with silicone sealant in strict accordance with manufacturer's instruction:</u>				
20 Shower cubicle panel size 96 x 2040mm high.	No	1		
21 Shower cubicle panel size 102 x 2040mm high.	No	2		
22 Shower cubicle panel size 305 x 2040mm high.	No	1		
23 Shower cubicle panel size 314 x 2040mm high.	No	1		
24 Shower cubicle panel size 670 x 2040mm high.	No	1		
25 Shower cubicle panel size 884 x 2040mm high.	No	1		
26 Shower cubicle panel size 860 x 2040mm high.	No	1		
27 Shower cubicle panel size 903 x 2040mm high.	No	1		
28 Shower cubicle panel size 1003 x 2040mm high.	No	1		
29 Door panel complete size 750 x 2040mm high.	No	6		
TOTAL CARRIED TO BILL SUMMARY			R	
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Ceilings Partitions And Access Flooring				

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CEILINGS PARTITIONS AND ACCESS FLOORING
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Section No. 2

Bill No. 7

Ceilings Partitions And Access Flooring

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 8</u>				
<u>FLOOR COVERINGS</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>FLOOR COVERINGS (CPAP Work Group No 130)</u>				
Tenderer's attention is to be drawn to Architectural Drawing No. MDA477(B)UPH/ Trauma Unit-300 attached to these Bills of Quantities for reference to the vinyl floor colours and patterns types.				
<u>2mm Thick x 2000mm wide 'IQ Eminent Unisense Homogeneous' heavy duty fully flexible vinyl floor sheeting with IQ PUR surface treatment and binder content of type 1 fixed with an approved adhesive on self-levelling screed (self-levelling screed elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u>				
1	m ²	999		
2	m	873		
<u>2mm Thick x 2000mm wide 'IQ Grainit Homogeneous' heavy duty fully flexible vinyl floor sheeting with IQ PUR surface treatment and binder content of type 1 fixed with an approved adhesive on self-levelling screed (self-levelling screed elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u>				
3	m ²	71		
4	m	332		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 8 Floor Coverings				

Item	Unit	Quantity	Rate	Amount
<p><u>2,5mm Thick x 2000mm wide 'Grainit Safe T Homogeneous' slip resistant R10 grip studded heavy duty fully flexible vinyl floor sheeting fixed with an approved adhesive on self-levelling screed (self-levelling screed elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>				
5 On floors.	m ²	30		
<p><u>500 x 500 x 3,0mm Thick Noppe Interlocking Stud rubber tiles fixed with an appropriate adhesive in accordance with SANS 10070 installed in strict accordance with the manufacturer's instructions:</u></p>				
6 On floors.	m ²	11		
<p><u>WALL LININGS (CPAP Work Group No 130)</u> <u>2mm Thick x 2000mm wide 'IQ Eminent Unisense Homogeneous' heavy duty fully flexible vinyl floor sheeting with IQ PUR surface treatment and binder content of type 1 fixed with an approved adhesive on plastered walls (plaster elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>				
7 On walls.	m ²	421		
<p><u>2mm Thick x 2000mm wide 'IQ Grainit Aqua Homogeneous' heavy duty fully flexible vinyl floor sheeting with IQ PUR surface treatment and binder content of type 1 fixed with an approved adhesive on timber bump rail (bump rail elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>				
8 Turn-ups over timber bump rail not exceeding 500mm girth as detailed on Drawing No. MDA 477(B)UPH/ Trauma Unit-210 attached to these Bills of Quantities.	m	479		
<p><u>SKIRTINGS, NOSINGS, ETC (CPAP Work Group No 130)</u> <u>Floor and wall accessories fixed with adhesive in strict accordance with the manufacturer's instructions:</u></p>				
9 100mm High PVC 2 in 1 cove former (code PAD 10) and capping strip.	m	74		
10 150mm High PVC cove former (code PA 15) (capping strip elsewhere).	m	819		
TOTAL CARRIED TO BILL SUMMARY			R	
<p>Section No. 2 Bill No. 8 Floor Coverings</p>				

Item	Unit	Quantity	Rate	Amount
11 12mm Natural anodised aluminium capping strips (code ASE) fixed over vinyl skirtings.	m	174		
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Section No. 2 Bill No. 8 Floor Coverings				

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Section No. 2
Bill No. 8
Floor Coverings

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 9</u>				
<u>IRONMONGERY</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>HINGES, FLOOR SPRINGS, BOLTS, PANIC BOLTS, ETC (CPAP Work Group No 132)</u>				
<u>Hinges:</u>				
1 'Dormakaba DBB-SS-009' or equal approved 102 x 75 x 3mm stainless steel two ball bearing butt hinges fire rated with stainless steel fixing screws.	Pairs	24		
<u>Bolts:</u>				
2 'Dormakaba DBC-SS-022' or equal approved stainless steel adjustable roller bolt.	No	4		
3 'Dormakaba DBC-SS-022' or equal approved brass barrel bolt 150 x 32mm sc on brass.	No	1		
4 'Dormakaba DBC-SS-022' or equal approved necked bolt 150 x 32mm sc on brass.	No	1		
<u>LOCKS (CPAP Work Group No 132)</u>				
<u>Locks:</u>				
5 'ISEO 1450.00.55' or equal approved single long throw profile cylinder gate lock, 55mm backset.	No	2		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 9 Ironmongery				

Item	Unit	Quantity	Rate	Amount
<u>Padlock:</u>				
6	No	2		
<u>EN-SUITE LOCKS (CPAP Work Group No 132)</u>				
<u>En-suite locks:</u>				
7	No	6		
8	No	1		
9	No	6		
<u>Conversion sets:</u>				
10	No	1		
<u>Cylinders:</u>				
11	No	2		
12	No	6		
13	No	1		
<u>Keys:</u>				
14	No	1		
15	No	1		
<u>HANDLES, FLUSH PULLS, ETC (CPAP Work Group No 132)</u>				
<u>Handles:</u>				
16	No	4		
17	No	4		
TOTAL CARRIED TO BILL SUMMARY				
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Bill No. 9				
Ironmongery				
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Item	Unit	Quantity	Rate	Amount
18 'Dormakaba DHP-430-CR-SF 170 x170' or equal approved stainless steel DPH301C pull handle on 170 x 170 x 1.2mm Thick grade 430 brushed stainless steel plate with 4 countersunk holes for screw fixing.	No	2		
19 'Dormakaba DHP-430-CL-SF 170 x170' or equal approved stainless steel DPH301C pull handle on 170 x 170 x 1.2mm Thick grade 430 brushed stainless steel plate with 4 countersunk holes for screw fixing.	No	2		
20 'Dormakaba TH120 BP Cyl S.S' or equal approved lever handle fixed on 170 x 170mm stainless steel plate with cylinder cutout.	Sets	1		
21 'Dormakaba TH120 BP WC RH S.S' or equal approved lever handle fixed on 170 x 170mm stainless steel plate with Bathroom/WC furniture RH.	Sets	6		
<u>DOOR FURNITURE, ESCUTCHEONS, ETC (CPAP Work Group No 132)</u>				
<u>Escutcheons:</u>				
22 'Dormakaba DCE-002' or equal approved stainless steel round cylinder escutcheon.	Pairs	2		
<u>PUSH PLATES AND KICKING PLATES (CPAP Work Group No 132)</u>				
<u>Plates:</u>				
23 'Dormakaba DKP-430-SF 300' or equal approved 900 x 300 x 1.2mm Thick grade 430 brushed stainless steel kick plate with 12 countersunk holes fixed to door with 8 x 30mm stainless steel screw.	No	16		
24 'Dormakaba DKP-430-GF 300' or equal approved 900 x 300 x 1.2mm Thick grade 430 brushed stainless steel kick plate glued to door.	No	12		
25 'Dormakaba DKP-430-SF 300' or equal approved 900 x 300 x 1.2mm Thick grade 430 brushed stainless steel push plate with 12 countersunk holes fixed to door with 8 x 30mm stainless steel.	No	16		
<u>DOOR CLOSERS (CPAP Work Group No 132)</u>				
<u>Door closers:</u>				
26 'Dormakaba TS73V SL' or equal approved EN 2-4 regular arm non hold open door closer with adjustable strength hydraulic speed control, pull-side fixing.	Sets	2		
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Ironmongery				

Item	Unit	Quantity	Rate	Amount
27	'Dormakaba TS73V PA- SL' or equal approved EN 2-4 parallel arm non hold open door closer with adjustable strength hydraulic speed control, push-side fixing (parallel arm bracket included).	Sets	2	
28	'Dormakaba ITS962-4 NHO' or equal approved EN 2-4 concealed in the non hold open door closer.	Sets	2	
<u>LETTERS, NAMEPLATES, ETC (CPAP Work Group No 132)</u>				
<u>Nameplates:</u>				
29	'Dormakaba DSS-130 M' or equal approved 150 x150mm solid stainless steel plate male person pictogram.	No	2	
30	'Dormakaba DSS-131 F' or equal approved 150 x 150mm solid stainless steel plate female person pictogram.	No	2	
<u>BATHROOM FITTINGS (CPAP Work Group No 130)</u>				
<u>'Medical Innovations' or equal approved 1,2mm thick grade 304 polished stainless steel:</u>				
31	245mm High soap dispenser bracket suitable for 500ml hibiscrub bottle fixed to walls above medical wash hand basin (code: 341-00-00C).	No	26	
<u>'Franke' or equal approved:</u>				
32	'Franke BR' or equal approved stainless steel bedpan and bottle rack 610 x 260 x 560mm high (code: 350650) designed to hold plastic and stainless steel bedpans and bottles manufactured from grade 304 (18/10) stainless steel 8mm diameter round bars and flat mounting brackets, complete with removable drip tray all fixed to walls with and including 4No of 12mm anchor bolts.	No	1	
33	'Franke STRATOS STRX600' or equal approved stainless steel wall mounted hands free paper towel dispenser (code: 2120038), size 300 x 134 x 305mm high overall.	No	30	
34	'Franke STRATOS STRX605' or equal approved stainless steel wall mounted waste bin (code: 359730), size 300 x 270 x 520mm high overall.	No	30	
35	'Franke Chronos BS611V' or equal approved stainless steel wall mounted sanitary disposal bin (code: 359830), size 200 x 128 x 295mm high overall.	No	8	
36	'Franke STRATOS SRTX625' or equal approved satin stainless steel wall mounted automatic soap dispenser (code: 359714), size 120 x 126 x 303mm high overall.	No	21	
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Section No. 2				
Bill No. 9				
Ironmongery				

Item	Unit	Quantity	Rate	Amount
37 'Franke RODAN RODX672' or equal approved satin stainless steel wall mounted double toilet roll holder with spindle system (code: 359987), size 138 x 144 x 301mm high overall.	No	8		
38 'Franke CNTX600' or equal approved 600 x 95mm grade 304 satin polished stainless steel disabled grab rail mounted to wall (code: 359872).	No	4		
39 'Franke CNTX PAR' or equal approved grade 304 satin polished stainless steel angle disabled grab rail mounted to wall (code: 359885).	No	4		
<u>1,5mm Thick grade 304 polished stainless steel:</u>				
40 'Franke BS618' or equal approved satin stainless steel wall mounted soap dispenser (code: 359800), size 200 x 85 x 130mm high overall.	No	9		
<u>1,6mm Thick grade 304 polished stainless steel:</u>				
41 Stainless steel soap dish holder with custom pressed metal recessed soap dish with flanged lip, fixed into brickwork.	No	7		
<u>'Railman' or equal approved:</u>				
42 480 x 460mm Wide stainless steel wall mounted fold up shower seat fixed securely to walls as per manufacturers specifications.	No	7		
<u>PELMETS AND CURTAIN TRACKS (CPAP Work Group No 130)</u>				
<u>Heavy duty powder coated aluminium:</u>				
43 'Hospi-track' or equal approved anodised aluminium single curtain track including 11 rollers per metre, hangers, brackets, stopped ends, etc plugged to walls.	m	102		
44 Extra over for slow bend.	No	21		
45 Extra over for ends.	No	29		
<u>SUNDRIES (CPAP Work Group No 130)</u>				
<u>Door stops:</u>				
46 'Dormakaba DDS 017' or equal approved stainless steel floor mounted door stop.	No	8		
47 'Halcast 401SC or equal approved satin chrome door stop and holder.	No	1		
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Ironmongery				
			R	

Item	Unit	Quantity	Rate	Amount
<u>Mop hooks:</u>				
48	No	1		
'Hafale' or equal approved 550 x 58 x 60 stainless steel 5 holder system mop hook securely fixed to brickwork (code: 520.10.764).				
<u>Sundries:</u>				
49	No	6		
'Dormakaba DHC-SS-030A' or equal approved stainless steel hat and coat hook.				
50	No	5		
'Dormakaba DHC-SS-0301B or equal approved stainless steel coat hook.				
<u>SHELVES, ETC (CPAP Work Group No 132)</u>				
<u>1,2mm Thick grade 316 stainless steel solid shelves:</u>				
51	No	1		
'Franke Z-Series' or equal approved 900 x 300 x 1000mm high solid stainless steel adjustable shelving (code: 35564), complete with 1000mm stainless steel band and shelf brackets (code: 359606), plugged.				
<u>STEEL LOCKERS (CPAP Work Group No 132)</u>				
<u>Steel lockers with hammertone finish:</u>				
52	No	2		
Four door heavy duty locker each 300 x 450 x 1 800mm high (code PS0104), complete with hasp and staple for padlock (elsewhere), bolted together.				
<u>STEEL FURNITURE (CPAP Work Group No 132)</u>				
<u>Steel furniture with hammertone finish:</u>				
53	No	2		
Heavy duty steel double bunk bed and access ladder size 1900 x 760mm, frame integral with 100 x 100 galvanised steel wire mesh section. (mattress elsewhere)				
54	No	2		
'Cranium SA' or equal approved 970 x 2000 x 450mm high seamless polyurethane moulded psychiatric bed.				
<u>Bed side locker:</u>				
55	No	2		
'Cranium SA' or equal approved 480 x 875 x 400mm high seamless polyurethane moulded locker complete with 4No tensile stainless steel tamper proof fasters fixed securely to the floor.				
<u>1,5mm Thick grade 201 stainless steel indoor waiting room bench seats bolted to floors:</u>				
56	No	1		
Two seater flat pack bench with aluminium arms and legs size 1200 x 670 x 820mm high (code PF02) including bolting to floors.				
TOTAL CARRIED TO BILL SUMMARY			R	
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Bill No. 9				
Ironmongery				

Item	Unit	Quantity	Rate	Amount
57 Three seater flat pack bench with aluminium arms and legs size 1850 x 670 x 820mm high (code PF03) including bolting to floors.	No	1		
58 Four seater flat pack bench with aluminium arms and legs size 2440 x 670 x 820mm high (code PF04) including bolting to floors.	No	1		
59 Five seater flat pack bench with aluminium arms and legs size 2440 x 670 x 820mm high (code PF04) including bolting to floors.	No	5		
<u>Sundry furniture:</u>				
60 760 x 1900 x 150mm Thick high 23 density virgin foam (min 23kg/m3 density mattress with waterproof taffela cover.	No	4		
61 'Cranium SA' or equal approved 940 x 1940 x 150mm double sided polyurethane cover, flame retardant and water proof mattress.	No	2		
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC (CPAP Work Group No 132)</u>				
<u>Approved white boards:</u>				
62 900 x 600mm High magnetic white board with natural anodised aluminium frame, plugged and screwed to brickwork, with concealed mounting in the corners, in strict accordance with the manufacturers instructions (code: 76135100).	No	24		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 9 Ironmongery				

Amount

Bill No. 9
IRONMONGERY
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Section No. 2

Bill No. 9

Ironmongery

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 10</u>				
<u>STRUCTURAL STEELWORK</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
<u>GALVANISED STEEL WELDED COLUMNS AND BEAMS (CPAP Work Group No 134)</u>				
<u>Welded beams in single lengths with flat section bearer, connection plates and L-section cleats, bolted to steel:</u>				
1	203 x 133mm x 25kg/m I-section beams in lengths not exceeding 13m.	Tonnes	0.98	
2	180 x 70mm x 21,1kg/m Parallel flange channel in lengths not exceeding 13m.	Tonnes	0.74	
<u>GALVANISED STEEL WELDED TRUSSES, ETC (CPAP Work Group No 134)</u>				
<u>Welded roof trusses of angle rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to steel:</u>				
3	Lattice trusses 10,42m long x 0,70m high extreme (In No 8).	Tonnes	5.20	
4	Lattice trusses 12,47m long x 0,83m high extreme (In No 1).	Tonnes	0.80	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 10 Structural Steelwork				

Item	Unit	Quantity	Rate	Amount
5	Lattice trusses in three sections bolted together 19,19m long x 1,20m high extreme (In No 1).	Tonnes	1.04	
<u>GALVANISED STEEL WELDED PURLINS, GIRTS, BRACING, ETC (CPAP Work Group No 134)</u>				
<u>Purlins and girts, bolted to steel:</u>				
6	100 x 50 x 20 x 2mm Thick cold-formed lipped channel purlin.	Tonnes	1.15	
7	175 x 50 x 20 x 2,5mm Thick cold-formed lipped channel purlins.	Tonnes	0.81	
<u>Welded bracing, anti-sag rails, etc with flat connection plates, bolted to steel:</u>				
8	Angle bracing.	Tonnes	0.07	
<u>GALVANISED BOLTS, FASTENERS, ETC (CPAP Work Group No 134)</u>				
<u>Bolts:</u>				
9	High tensile bolts (class 8.8).	Tonnes	0.97	
<u>Anchors:</u>				
10	12mm Diameter chemical anchor.	No	10	
11	16mm Diameter chemical anchor.	No	76	
12	20mm Diameter chemical anchor.	No	2	
TOTAL CARRIED TO BILL SUMMARY				
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Structural Steelwork				
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STRUCTURAL STEELWORK
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 2

Bill No. 10

Structural Steelwork

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u> <u>CASUALTY AND OPD</u> <u>Bill No. 11</u> <u>METALWORK</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent. <u>Descriptions:</u> Descriptions of bolts shall be deemed to include nuts and washers. Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete. Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described. <u>Aluminium doors and windows:</u> Doors and windows shall comply with AAAMSA design criteria. Glazing shall comply with SAGGA regulations. Glass shall be of the type of glass as shown on the window and door schedules and drawings appended to these Bills of Quantities and as described in the Bills of Quantities. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings. Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed. For purpose made windows and doors, refer to drawings annexed to these Bills of Quantities.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 11 Metalwork</p>			R	

Item	Unit	Quantity	Rate	Amount
<p>The following certificates shall be provided prior to commencement of site work: 1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product. 2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively 3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process. 4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked. 5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years.</p>				
<p><u>STEEL GATES, SCREENS, ETC (CPAP Work Group No 136)</u></p>				
<p><u>The following in duct screen refer Drawing No. MDA 477(B)UPH/Trauma Unit-211 attached to these Bills of Quantities:</u></p>				
<p>1 100 x 50mm x 11kg/m Hot dipped galvanised C-channel horizontal substructure member with 250 x 50 x 5mm thick L-section fixing plate twice holed for bolts (elsewhere) and welded on bottom of horizontal member at 1500mm maximum centres.</p>	Kg	771		
<p>2 150 x 75mm x 19kg/m Hot dipped galvanised C-channel section post 3220mm long with 250 x 75 x 5mm thick L-section fixing plate twice holed for bolts (elsewhere) and welded on to top and bottom of vertical post.</p>	Kg	795		
<p>3 'Wispeco Aluminium' or equal approved 57 x 28,5mm Top had aluminium profile substructure with and including solid neoprene rubber strip between aluminium and steel channel, all fixed to horizontal C-channel with zinc plated steel self-drilling screws with cylindrical head at maximum 1500mm centres.</p>	m	70		
<p>4 4,5mm Thick purpose made laser cut aluminium cladding panel size 1223 x 3150mm high six times pop reverted with aluminium pop rivets (framework elsewhere).</p>	No	2		
<p>5 4,5mm Thick purpose made laser cut aluminium cladding panel size 1500 x 3150mm high six times pop reverted with aluminium pop rivets (framework elsewhere).</p>	No	10		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
6	No	104		
<u>Hot dipped galvanised welded gates to brickwork:</u>				
7	No	2		
<u>HOT DIPPED GALVANISED STEEL MINOR WORK (CPAP Work Group No 136)</u>				
<u>Bolts:</u>				
8	Kg	5		
<u>Bearers to brick linings, lintels, etc:</u>				
9	Kg	1 587		
10	No	367		
<u>STAINLESS STEEL MINOR WORK (CPAP Work Group No 136)</u>				
<u>Corner protectors:</u>				
11	m	42		
<u>Door accessories:</u>				
12	m	56		
13	m	44		
14	No	162		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2				
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Metalwork				

Item	Unit	Quantity	Rate	Amount
<u>The following in grade 304 brushed stainless steel floor mounted bump rail refer to 'Detail 17' on Drawing No. MDA 477(B)UPH/Trauma Unit-210 attached to these Bills of Quantities:</u>				
15	m	2		
16	No	2		
17	No	2		
18	No	2		
19	No	8		
<u>STAINLESS STEEL DOOR FRAMES (CPAP Work Group 136)</u>				
Tenderer's attention is to be drawn to Architectural Drawing No. MDA477(B)UPH/ Trauma Unit-402 attached to these Bills of Quantities for reference to the detail of frame.				
<u>2mm Thick single-rebated frame manufactured from grade 304 stainless steel laser cut to form required profile, complete with mitred conners, fixing lugs welded on each stile and to be secured to wall in every forth course suitable for half brick walls:</u>				
20	No	8		
21	No	2		
<u>2mm Thick non-rebated frame manufactured from grade 304 stainless steel laser cut to form required profile, complete with mitred conners, fixing lugs welded on each stile and to be secured to wall in every forth course suitable for half brick walls:</u>				
22	No	1		
23	No	5		
TOTAL CARRIED TO BILL SUMMARY			R	
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Metalwork				

Item	Unit	Quantity	Rate	Amount
<u>2mm Thick non-rebated frame manufactured from grade 304 stainless steel laser cut to form required profile, complete with mitred conners, fixing lugs welded on each stile and to be secured to wall in every forth course suitable for one brick walls:</u>				
24	No	2		
25	No	5		
26	No	11		
27	No	2		
28	No	6		
<u>2mm Thick non-rebated frame manufactured from grade 304 stainless steel laser cut to form required profile, complete with mitred conners, fixing lugs welded on each stile and to be secured to wall in every forth course suitable for 270mm wide cavity walls:</u>				
29	No	1		
<u>Preparation of frames for fixing of ironmongery:</u>				
30	No	6		
<u>STEEL ROLLER SHUTTERS, ETC (CPAP Work Group No 136)</u>				
<u>Galvanised heavy duty roller shutters fixed to brickwork or concrete:</u>				
31	No	1		
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
<u>ALUMINIUM WINDOWS (CPAP Work Group No 140)</u>				
<u>Natural anodised aluminium windows, glazed with 6.38mm laminated NS pacific obscure safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete:</u>				
32 Purpose made aluminium window size 600 x 700mm high with one top hung opening section to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W1) attached to these Bills of Quantities.	No	6		
33 Purpose made aluminium window size 1000 x 700mm high with one top hung opening section to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W3) attached to these Bills of Quantities.	No	1		
<u>Natural anodised aluminium windows, glazed with 6.38mm laminated NS clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete:</u>				
34 Purpose made aluminium window size 632 x 1692mm high with one fixed panel and one opening section to be installed complete as per MDA Architect Drawing No. MDA477(B) UPH/Trauma Unit-401 (W13) attached to these Bills of Quantities.	No	1		
35 Purpose made aluminium window size 1225 x 700mm high with one top hung opening section to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W4) attached to these Bills of Quantities.	No	1		
36 Purpose made aluminium window size 1368 x 1171mm high with one fixed panel to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W9) attached to these Bills of Quantities.	No	1		
37 Purpose made aluminium window size 2869 x 700mm high with two fixed panels and two top hung opening sections to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W2) attached to these Bills of Quantities.	No	1		
38 Purpose made aluminium window size 2938 x 1692mm high with four fixed panels and two opening sections to be installed complete as per MDA Architect Drawing No. MDA477(B) UPH/Trauma Unit-401 (W7) attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
39 Purpose made aluminium window size 4210 x 1692mm high with eight fixed panels and two opening sections to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W6) attached to these Bills of Quantities.	No	1		
<u>Natural anodised aluminium windows, glazed with 6.38mm laminated HI clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete:</u>				
40 Purpose made aluminium window size 2330 x 2508mm high with four fixed panel to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W8) attached to these Bills of Quantities.	No	1		
<u>Natural anodised aluminium windows, double glazed with 15.00mm laminated HI clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete:</u>				
41 Purpose made aluminium window size 680 x 850mm high with four fixed viewing panels to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Trauma Unit-401 (W14) attached to these Bills of Quantities.	No	2		
<u>ALUMINIUM DOORS (CPAP Work Group 140)</u> <u>Purpose made natural anodised aluminium slatted doors, complete with subframes, ironmongery, glass, sealing, weather-bar to bottom edge of door, etc, and plugged to brickwork or concrete manufactured and installed in strict accordance with the manufacturers instructions:</u>				
42 Rebated single door size 780 x 2040mm high overall comprising of horizontal slatted panels, 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail complete with 1.5 pairs 'Dormakaba' (DBB-SS-009) 102 x 75 x 3mm two ball bearing butt hinge EN1935 grade 13 fire rated, 1No. 'Dormakaba' stainless steel adjustable roller bolt, 1No. 'Dormakaba' (DSC204101 MK) satin nickel europrofile 5 pin single cylinder master keyed, 1No. 'Dormakaba' (D037S SS) stainless steel cylinder deadlock, 0.5pair 'Dormakaba' (DCE-002- S.S) stainless steel round cylinder escutcheon, 1No. 'Dormakaba' (DKP-430-SF 300) 900 x 300 x 1.2mm thick grade 430 stainless steel kickplate to have 12 countersunk holes for screw fixing installed complete as pe DG on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.	No	5		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
<p><u>Purpose made natural anodised aluminium doors, sidelights and fanlights glazed with 6.38mm Laminated HI clear safety glass complete with subframes, ironmongery, glass, sealing, weather-bar to bottom edge of door, etc, and plugged to brickwork or concrete manufactured and installed in strict accordance with the manufacturers instructions:</u></p>				
<p>43 Purpose made aluminium single door size 900 x 2040mm high overall comprising of 680 x 1030mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete with 1.5 pairs 'Dormakaba'(DBB-SS-009) stainless steel 102 x 75 x 3mm two ball bearing butt hinge EN1935 grade 13 fire rated 120kg carrying capacity, 1No 'Dormakaba' (D035S SS) stainless steel bathroom sash lock, 1set 'Dormakaba' (TH120 BP WC RH S.S) stainless steel lever handle on 170 x 170 plate with Bathroom/WC furniture RH, 2No. 'Dormakaba' (DKP-430-GF-300) 430 brushed stainless steel 300 x 900 x 1.2mm thick kick plate, 1No. 'Dormakaba' (DHC-SS-030A) stainless steel hat and coat hook, 1No. 'Dormakaba' (DDS-SS-017) stainless steel floor mounted door stop</p> <p>all installed complete as per DE06 on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
<p>44 Purpose made aluminium single door size 900 x 2040mm high overall comprising of 680mm x 1030mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full height of door complete with 1.5 pairs 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D036S SS) stainless steel cylinder sash lock, 1 set 'Dormakaba' (TH120 Cyl S.S) stainless steel lever handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS-017) stainless steel floor mounted door stop, all installed complete as per DE13, DE12,DE11, DE10, DE05 on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	5		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>45 Purpose made aluminium single door size 900 x 2040mm high overall comprising of 680mm x 1030mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, edges clad with 1.2mm thick 403 grade stainless steel plates over full height of door complete with 1.5 pairs 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D036S SS) stainless steel cylinder sash lock, 1 set 'Dormakaba' (TH120 Cyl S.S) stainless steel lever handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS- 017) stainless steel floor mounted door stop, all installed complete as per DE04 on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
<p>46 Purpose made aluminium single door size 900 x 2040mm high overall comprising of 680mm x 1030mm glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, edges clad with 1.2mm thick 403 grade stainless steel plates over full height of door complete with 1.5 pairs 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D036S SS) stainless steel cylinder sash lock, 1 set 'Dormakaba' (TH120 Cyl S.S) stainless steel lever handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS- 017) stainless steel floor mounted door stop, all installed complete as per DE03 on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>47 Purpose made aluminium single door size 900 x 2040mm high overall comprising of 680mm x 1030mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680 x 560mm high, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full height of door complete with 1.5 pairs 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D036S SS) stainless steel cylinder sash lock, 1 set 'Dormakaba' (TH120 Cyl S.S) stainless steel lever handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS-017) stainless steel floor mounted door stop, all installed complete as per DE02 on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
<p>48 Purpose made aluminium single door size 900 x 2040mm high overall comprising of 680 x 1030mm glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 110mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 680mm x 560mm high, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full height of door complete with 1 pair 'Alufab'(1040) 100mm anodised aluminium sinkless hinges, 1set 'Dormakaba' (DWC-005) stainless steel bathroom WC indicator (red&white) and turnknob, 1No 'Dormakaba' (D035S SS) stainless steel bathroom sash lock, 1set. 'Dormakaba' (TH120 Latch S.S) stainless steel lever handle on rose - latch , 1No. 'Dormakaba' (DHC-SS-030A) stainless steel hat and coat hook , 1No. 'Dormakaba' (DDS-SS-017) stainless steel mounted door stop, all installed complete as per DE09, DE01 on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	2		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>49 Purpose made aluminium double swing door size 1800 x 2040mm high overall, comprising of two equal leaves 680 x 1000mm one times glazed fixed panel with 6.38mm Laminated HI plastic obscure safety glass with 115mm wide top and side rails, 220mm wide middle transom and 100mm wide bottom rail and internal cross brace rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 760 x 800mm high, 1.2mm thick 403 grade stainless steel kick plate 800mm high kick plate fixed to both sides of door with countersunk steel screws, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete with 2sets 'Dormakaba' (BTS75 DAA-HO) stainless steel adjustable size EN 1-4 hold open floor spring with double action accessories certified to EN1154, 2No. 'Dormakaba' (2300) sealing compound to be applied to floor spring cement box, 2No. 'Alufab' (M1519AS) 150mm natural anodised aluminium flush bolt , 1No 'Dormakaba' (DPS-SS-032) stainless steel dust proof strike, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 2 pairs 'Dormakaba' (DPH215 BTB) stainless steel 382 x 32mm D shaped offset tubular pull handle, 4No 'Dormakaba' (DDS-SS-017) stainless steel floor mounted door stop, all installed complete as per DA08 on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
<p>50 Purpose made aluminium double swing door size 1800 x 1980mm high overall, comprising of two equal leaves 680 x 1000mm one times glazed fixed panel with 6.38mm Laminated HI plastic obscure safety glass with 115mm wide top and side rails, 220mm wide middle transom and 100mm wide bottom rail and internal cross brace rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 760 x 800mm high, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete with 2sets 'Dormakaba' (BTS75 DAA-NHO) stainless steel adjustable size EN 1-4 hold open floor spring with double action accessories certified to EN1154, 2No. 'Dormakaba' (2300) sealing compound to be applied to floor spring cement box, 1No. 'Dormakaba' (DB25L) Electro mechanical mortice double action drop bolt lock with 1000kg holding force, 1No. 'CISA' Contact set (hinge side application) , 2No. 'Alufab' (M1519AS) 150mm natural anodised</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				R
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>aluminium flush bolt , 1No 'Dormakaba' (DPS-SS-032) stainless steel dust proof strike, 1No 'Dormakaba' (DKC206301 MK) 63mm satin nickel euro-profile 5 pin knob cylinder master keyed, 1No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 1pair 'Dormakaba' (DCE-022 S.S) stainless steel round cylinder escutcheon, 2 pairs 'Dormakaba' (DPH215 BTB) stainless steel 382 x 32mm D shaped offset tubular pull handle, 4No 'Dormakaba' (DDS-SS- 017) stainless steel floor mounted door stop,</p> <p>all installed complete as per DA01, DA05, DA06, DA07 on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	4		
<p>51 Purpose made aluminium double swing door size 1800 x 2040mm high overall, comprising of two equal leaves 680 x 1000mm one times glazed fixed panel with 6.38mm Laminated HI plastic obscure safety glass with 115mm wide top and side rails, 220mm wide middle transom and 100mm wide bottom rail and internal cross brace rail , 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 760 x 800mm high, 1.2mm thick 403 grade stainless steel kick plate 800mm high kick plate fixed to both sides of door with countersunk steel screws, stile edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete 2 sets 'Dormakaba' (BTS75 DAA-HO) stainless steel adjustable size EN 1-4 hold open floor spring with double action accessories certified to EN1154, 2No. 'Dormakaba' (2300) sealing compound applied to floor spring cement box, 1No. 'Dormakaba' (DB25L) Electro mechanical mortice double action drop bolt lock with 1000kg holding force, 1No. 'CISA' Contact set (hinge side application), 2No. 'Alufab' (M1519AS) 150mm anodised alum flush bolts, 1No</p> <p>'Dormakaba' (DPS-SS-032) dust proof strike, 1No. 'Dormakaba' (DKC206301 MK) 63mm satin nickel europrofile 5 pin knob cylinder master keyed, 1No. 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 1pair 'Dormakaba' (DCE-002 S.S) stainless steel round cylinder, 2No. 'Dormakaba' (DPH215 BTB) 382 x 32mm D shaped offset stainless steel tubular pull handle and 4No. 'Dormakaba' (DDS-SS-017) stainless steel floor mounted door stop, all installed complete as per DA04 on MDA Architects Drawing No. MDA 477(B)UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.</p>	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
52 Purpose made aluminium sliding door size 1850 x 2040mm high overall comprising of 1690 x 1090mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 80mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 9mm thick supawood insert clad both sides with 0.9mm grade 304 stainless steel plate size 1650 x 520mm, 1.2mm thick 403 grade stainless steel kick plate 800mm high kick plate fixed to both sides of door with countersunk steel screws complete with 1set 'Dormakaba (E200 EASY) sliding door operator, 2No 'Dormakaba' (TOUCH) no touch hand control from both sides, 2No 'Dormakaba' (DFP-SS-025) stainless steel 120 x 40mm rectangular flush pull handle, all installed complete as per DB on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.	No	2		
53 Purpose made aluminium sliding door size 1420 x 2040mm high overall comprising of 1260 x 1090mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 80mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 9mm thick supawood insert clad both sides with 0.9mm grade 304 stainless steel plate size 1220 x 520mm, 1.2mm thick 403 grade stainless steel kick plate 800mm high kick plate fixed to both sides of door with countersunk steel screws complete with 1set 'Dormakaba' (ES200 EASY) sliding door operator, 1No. 'Dormakaba' (DDC206301 MK) 63mm satin nickel europrofile 5 pin double cylinder master keyed, 1No. 'Dormakaba' (D02935 SS) stainless steel narrow stile hook lock operating with European profile cylinder, 2No. 'Dormakaba' (DFP-SS-025) 120 x 40mm stainless steel rectangular flush pull handle, 1pair 'Dormakaba' (DCE-105 S.S) narrow stile cylinder escutcheon installed complete as pe DC on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.	No	11		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 11 Metalwork				

Item	Unit	Quantity	Rate	Amount
54 Purpose made aluminium sliding door size 930 x 2040mm high overall comprising of 770 x 1090mm one times glazed panel with 6.38mm Laminated HI plastic obscure safety glass with 80mm wide top rail, 80mm wide side rails, 220mm wide middle transom and 100mm wide bottom rail , 9mm thick supawood insert clad both sides with 0.9mm grade 304 stainless steel plate size 730 x 520mm complete with 1set 'Dormakaba' (ES200 EASY) sliding door operator, 1No. 'Dormakaba' (DDC206301 MK) 63mm satin nickel europrofile 5 pin double cylinder master keyed, 1No. 'Dormakaba' (D02935 SS) stainless steel narrow stile hook lock operating with European profile cylinder, 2No. 'Dormakaba' (DFP-SS-025) 120 x 40mm stainless steel rectangular flush pull handle, 1pair 'Dormakaba' (DCE-105 S.S) narrow stile cylinder escutcheon installed complete as pe DI02,DI03 on MDA Architects Drawing No. MDA 477(B) UPH/TRAUMA UNIT 400 attached to these Bills of Quantities.	No	3		
<u>ALUMINIUM LOUVRE UNITS (CPAP Work Group 140)</u>				
<u>Natural anodised aluminium weathered louvre units fixed to brickwork or concrete:</u>				
55 Purpose made louvre unit for 1200 x 1200mm high opening.	No	1		
<u>Natural anodised aluminium louvre units fixed to timber doors:</u>				
56 Purpose made louvre unit size 300 x 300mm high six times holed and fitted to door with six 30mm counter sunk stainless steel screws.	No	11		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 11 Metalwork				

Item	Unit	Quantity	Rate	Amount
<p><u>ALUMINIUM SHOPFRONTS (CPAP Work Group No 149)</u></p> <p><u>Purpose made Aluminium Shopfront System, frames to be natural anodised. Aluminium sections, constructed and installed according to the guidelines of The Association of Architectural Aluminium Manufactures of South Africa (AAASA). Glazing is to be carried out in strict accordance with the SABS 0137/2000 Code of Practice: 'The Installation of Glazing in Buildings' and where required, safety glazing materials must conform to SABS 1263. Drawings of all sections and fixing details to be used to be submitted for approval and all dimensions are to be verified on site prior to manufacture. All shopfronts and windows need to be weatherproofed and sealed where necessary and all aluminium is to be protected during installation and for the duration of construction work by removable PVC tape. All doors to be fitted with tension bars/ bolts. All ironmongery to be as specified. Natural anodised and sealed where necessary and all aluminium is to be protected during installation and for the duration of construction work by removable PVC tape. All doors to be fitted with tension bars/ bolts. All ironmongery to be as specified.</u></p>				
<p>57 Natural anodised aluminium shopfront 2521 x 2580mm high, comprising of 32mm wide side and head rails , 32mm wide transoms and mullions, 220mm wide middle transom, 100mm wide bottom rail, seven fixed glazed panels complete with and including double door, size 1880 x 2040mm high overall in two equal leaves 710 x1000mm one times glazed fixed panel with 110mm wide top and side rail, 100mm wide bottom and internal horizontal brace rail, with one fixed glazed panel, 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 790 x 760mm high and edges clad with 1.2mm thick 403 grade stainless steel plates over full door height</p> <p>complete with 2sets 'Dormakaba' (BTS75 DAA-HO) stainless steel adjustable size EN 1-4 hold open floor spring with double action accessories certified to EN1154, 2No. 'Dormakaba' (2300) sealing compound to be applied to floor spring cement box, 2No. 'Alufab' (M1519AS) 150mm natural anodised aluminium flush bolt , 1No 'Dormakaba' (DPS-SS-032) stainless steel dust proof strike, 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 2 pairs 'Dormakaba' (DPH215 BTB) stainless steel 382 x 32mm D shaped offset tubular pull handle, 4No 'Dormakaba' (DDS-SS- 017) stainless steel floor mounted door stop with door glazed with 6.38mm Laminated HI clear safety glass,</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				<p>R</p>
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>all installed complete as W05 on MDA Architects Drawing No. MDA477(B)UPH/Trauma Unit-401 attached to these Bills of Quantities.</p>	No	1		
<p>58 Natural anodised aluminium shopfront 2863 x 2580mm high, comprising of 32mm wide side and head rails, 32mm wide transoms and mullions, 220mm wide middle transom, 100mm wide bottom rail, five fixed glazed panels with 6.38mm Laminated HI clear safety glass, two fixed glazed panels with 6.38mm Laminated HI plastic obscure safety glass complete with and including double door, size 1940 x 2040mm high overall in two equal leaves 680 x 1000mm one times glazed fixed panel with 110mm wide top and side rail, 100mm wide bottom and internal horizontal brace rail, 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 760 x 800mm high and edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete with 2sets 'Dormakaba' (BTS75 DAA-HO) stainless steel adjustable size EN 1-4 hold open floor spring with double action accessories certified to EN1154, 2No. 'Dormakaba' (2300) sealing compound applied to floor</p> <p>spring cement box, 1No. 'Dormakaba' (DB25L) Electro mechanical mortice double action drop bolt lock with 1000kg holding force, 1No. 'CISA' Contact set (hinge side application), 2No. 'Alufab' (M1519AS) 150mm anodised alum flush bolts, 1No</p> <p>'Dormakaba' (DPS-SS-032) dust proof strike, 1No. 'Dormakaba' (DKC206301 MK) 63mm satin nickel europrofile 5 pin knob cylinder master keyed, 1No. 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 1pair 'Dormakaba' (DCE-002 S.S) stainless steel round cylinder, 2No. 'Dormakaba' (DPH215 BTB) 382 x 32mm D shaped offset stainless steel tubular pull handle and 4No. 'Dormakaba' (DDS-SS-017) stainless steel floor mounted door stop with door glazed with 6.38mm Laminated HI clear safety glass,</p>	No	2		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 2 Bill No. 11 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>59 Natural anodised aluminium shopfront 3875 x 2580mm high, comprising of 50mm wide side and head rails , 50mm wide transoms and mullions, 220mm wide middle transom, 100mm wide bottom rail, five fixed glazed panels with 6.38mm Laminated HI clear safety glass, two fixed glazed panels with 6.38mm Laminated HI plastic obscure safety glass complete with and including double door, size 1940 x 2125mm high overall in two equal leaves 750 x 1000mm one times glazed fixed panel with 110mm wide top and side rail, 100mm wide bottom and internal horizontal brace rail, 2mm grade 304 stainless steel plate fixed to face of aluminium extrusion with stainless steel domed screws size 830 x 760mm high and stile edges clad with 1.2mm thick 403 grade stainless steel plates over full door height complete with 1set 'Dormakaba' (ES200 EASY) sliding door operator, 1No. 'Dormakaba' (DDC206301 MK) 63mm satin nickel europrofile 5 pin double cylinder master keyed, 1No. 'Dormakaba' (D02935 SS) stainless steel narrow stile hook lock operating with European profile cylinder, 4No. 'Dormakaba' (DFP-SS-025) 120 x 40mm stainless steel rectangular flush pull handle, 1pair 'Dormakaba' (DCE-105 S.S) narrow stile cylinder escutcheon with door glazed with 6.38mm Laminated HI clear safety glass, all installed complete as per W10 on MDA Architects Drawing No. MDA477(B)UPH/Trauma Unit-401 attached to these Bills of Quantities.</p>	No	2		
TOTAL CARRIED TO BILL SUMMARY				R
<p>Section No. 2 Bill No. 11 Metalwork</p>				

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Bill No. 11
METALWORK
BILL SUMMARY

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Section No. 2

Bill No. 11

Metalwork

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 12</u>				
<u>PLASTERING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>SCREEDS (CPAP Work Group No 142)</u>				
<u>Screeds wood floated, on concrete:</u>				
1	m ²	1 111		
2	m ²	32		
3	m ²	48		
4	m	33		
<u>Commercial grade single-component high performance self-levelling and smoothing underlayment compound manufactured from rapid-setting shrinkage compensated cement and selected aggregates on concrete floors applied in strict accordance with the manufacturer's instructions:</u>				
5	m ²	11		
<u>Scarify, sweep clean and ensure all surfaces are sound, laitance and dust free and prime with primer G (diluted to manufacturer's specification), apply one coat ultraplan eco self-levelling screeds on concrete floors applied in strict accordance with the manufacturer's instructions:</u>				
6	m ²	1 139		
<u>INTERNAL PLASTER (CPAP Work Group No 142)</u>				
<u>Cement plaster steel trowelled, on brickwork:</u>				
7	m ²	1 276		
8	m ²	15		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 12 Plastering				

Item	Unit	Quantity	Rate	Amount
<u>Cement plaster steel trowelled, on concrete:</u>				
9	On walls.	m ²	10	
<u>Skim coat plaster of 100 parts of Planitop 110 ME with 31-32 parts of water (approximately 6,2-6,4 litres of water per 20 kg bag to a minimum thickness of 2mm in strict accordance with manufacturer's instructions:</u>				
10	On existing plastered brick walls.	m ²	128	
<u>EXTERNAL PLASTER (CPAP Work Group No 142)</u>				
<u>Fine rough-cast plaster, on brickwork:</u>				
11	On walls.	m ²	211	
12	On narrow widths not exceeding 300mm wide.	m ²	6	
<u>Rough-cast plaster, on concrete:</u>				
13	On projecting and isolated beams.	m ²	190	
<u>TERRAZZO (CPAP Work Group No 142)</u>				
<u>Scarify, sweep clean and ensure all surfaces are sound, free of dust free and feeble material, diamond grind the surface and prime with Solid prime 321, apply one coat 'Polyscreed Epoxy Terrazzo' Decorative 8-10mm Terazzo floor finish on self-levelling screed (elsewhere) and sealed 'Polyscreed Sealkote' sealer, all applied in strict accordance with the manufacturer's instructions and to be undertaken by an approved applicator:</u>				
14	8mm Thick on floors and landings to falls.	m ²	39	
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC (CPAP Work Group No 136)</u>				
<u>Dividing strips:</u>				
15	12 x 2.5mm Natural anodised (code ASE120), aluminium dividing strips between differing floor finishes.	m	22	
16	6 x 40mm Brass weather bar built into screed to threshold of external door.	m	8	
TOTAL CARRIED TO BILL SUMMARY				
Section No. 2				
Bill No. 12				
Plastering				
			R	

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Bill No. 12
PLASTERING
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 2

Bill No. 12

Plastering

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 13</u>				
<u>TILING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Descriptions:</u>				
Unless described as fixed with adhesive to plaster (plaster elsewhere), descriptions of tiling on brick or concrete walls, columns, etc., shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding.				
<u>NOSINGS, JOINT COVERS, PROTECTORS, ETC (CPAP Work Group No 144)</u>				
<u>'M Trim' Grade 430 stainless steel straight edge trim:</u>				
1	m	183		
'M Trim' stainless steel straight edge trim 8mm high (code ASE080) size 8 x 2.5mm, fixed with adhesive to edges of tiling on walls.				
<u>CERAMIC WALL TILING (CPAP Work Group No 144)</u>				
<u>300 x 600 x 10mm Alphine white matt glazed ceramic wall tiles (code T0028291) fixed with 'Tal Goldstar 6' or equal approved rapid setting tile adhesive with 'Tal Bond' (replacing the water in the mix) and flush pointed with white 'Tal Wall and Floor Grout' or equal approved light grey tile grout with 'Tal Bond' (replacing the water in the mix) to plaster (plaster elsewhere):</u>				
2	m ²	437		
On walls.				
3	m ²	18		
On Dry wall partition.				
4	m ²	3		
On narrow widths not exceeding 300mm.				
5	No	41		
Fair exposed cutting and fitting around pipe not exceeding 100mm internal diameter.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 13 Tiling				

Item	Unit	Quantity	Rate	Amount
6 Fair exposed cutting and fitting around pipe exceeding 100mm and not exceeding 200mm internal diameter.	No	8		
<u>300 x 300 x 4mm Solid glass ceramic mosaic floor tiles fixed with mosaicfix tile adhesive with 3mm straight joints in both directions flush pointed with light grey grout to plaster (plaster elsewhere):</u>				
7 On projecting and isolated columns.	m ²	55		
<u>CERAMIC FLOOR TILING (CPAP Work Group No 144)</u>				
<u>315 x 294 x 5mm Penny round matt glazed ceramic mosaic floor tiles fixed with mosaicfix tile adhesive with 3mm straight joints in both directions flush pointed with anti-fungal grout on power floated concrete (floated concrete elsewhere):</u>				
8 On floors and landings to falls to shower trap.	m ²	10		
TOTAL CARRIED TO BILL SUMMARY				
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			R	

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TILING
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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 2

Bill No. 13

Tiling

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u> <u>CASUALTY AND OPD</u> <u>Bill No. 14</u> <u>PLUMBING AND DRAINAGE</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent. <u>'Polycop' polypropylene pipes:</u> Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with 'Fast-fuse' heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated. Pipes shall be firmly fixed to walls etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions. All pipe diameters are nominal external. <u>'Polylink' polypropylene pipes:</u> Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron 'SupraClamp' running joints. Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured. Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double X joint couplers. Branch tees shall include flanged and bolted joints to 'Polycop' branch pipes in addition and for brass compression male iron to copper straight couplers. Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reduces shall be of sufficient overall length to accommodate same. All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions. All pipe diameters are nominal external.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 14 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.</p> <p><u>Vitrified clay pipes etc.:</u> Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.</p> <p><u>uPVC pipes and fittings.</u> Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Fixing of pipes:</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level.</p> <p><u>Lead pipes and traps:</u> All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 14 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u> Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc. will be entertained.</p> <p><u>Wire gratings:</u> Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u> Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc. all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u> Exposed surfaces of concrete storm water channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc. shall be finished smooth with plaster.</p> <p><u>Excavations:</u> No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling. 'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc. of pipes:</u> Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions. Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Storm water drainage Pipe trenches etc. shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u> Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc.:</u> Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 2 Bill No. 14 Plumbing And Drainage</p>				<p>R</p>

Item	Unit	Quantity	Rate	Amount
<p><u>Waste unions:</u></p>				
<p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.</p>				
<p><u>Steel sectional water tanks:</u></p>				
<p>Tanks shall comply with SABS CKS 114.</p>				
<p><u>'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd:</u></p>				
<p>Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described.</p>				
<p>Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc.</p>				
<p>Prices for wrapping of pipes shall include for all work as described to couplings in the length.</p>				
<p><u>General:</u></p>				
<p>Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc. are given separately).</p>				
<p>Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends.</p>				
<p>Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site.</p>				
<p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc. and to steel pipes (adaptors for connections to copper pipes, etc. are given separately).</p>				
<p>Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured).</p>				
<p><u>RAINWATER DISPOSAL (CPAP Work Group No 148)</u></p>				
<p><u>Pre-coated externally and internally with approved G4 high performance non-fluorinated polymer modified long chain hydro-carbon paint aluminium 'Industrial Ogee' roll formed seamless gutter, with equal back and front height including cut and mitred angles covered with a mitre strip externally, stop ends crimped and all sealed on the inside with Dow Corning 813 silicone sealer installed in strict accordance with the manufacturers instructions:</u></p>				
<p>1 125 x 150mm Ogee eaves gutters.</p>	m	27		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 2</p>				
<p>Bill No. 14</p>				
<p>Plumbing And Drainage</p>				

Item	Unit	Quantity	Rate	Amount
2	No	2		
3	No	1		
4	m	4		
5	No	1		
<u>Grade 304 stainless premanufactured seamless watertight lipped box gutter to be installed in strict accordance with manufacturer's recommendation:</u>				
6	m	69		
7	No	2		
8	No	7		
<u>uPVC pipes:</u>				
9	m	2		
10	m	39		
<u>Extra over uPVC pipes for fittings:</u>				
11	No	9		
12	No	18		
13	No	9		
<u>Fulbore cast iron outlets:</u>				
14	No	9		
TOTAL CARRIED TO BILL SUMMARY				
Section No. 2				
Bill No. 14				
Plumbing And Drainage				
			R	

Amount

Bill No. 14
PLUMBING AND DRAINAGE
BILL SUMMARY

Page No

Brought Forward from Page

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TOTAL CARRIED TO SECTION SUMMARY

R

Section No. 2

Bill No. 14

Plumbing And Drainage

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 16</u>				
<u>HOT & COLD WATER INSTALLATION</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>WET SERVICES INSTALLATION (CPAP Work Group 170)</u>				
<u>Wet Services Installation:</u>				
Tenderers are to note that the amount included in the amount column for this section of the Bills of Quantities, should be the total of all the priced items in the Wet Services Installation Bills of Quantities as attached hereafter.				
1	Item			
Total transferred from Wet Services Installation summary page. (excluding VAT)				
2	Item			
Profit on above.				
3	Item			
Attendance on above.				
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 2 Bill No. 16 Hot & Cold Water Installation				

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT

WET SERVICES INSTALLATION
BILL NO.1 Preliminary and General

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PRELIMINARY & GENERAL				
1	Contractual Items				
1.1	Provision of Sureties	Sum	1		
1.2	Insurances	Sum	1		
1.3	Third Party Insurance	Sum	1		
1.4	Guarantee of the Works	Sum	1		
1.5	Provide test results	Sum	1		
1.6	Provision of Record Drawings	Sum	1		
1.7	Other (Specify)	Sum	1		
2	Fixed Cost Items				
2.1	Site Establishment / Removal	Sum	1		
2.2	Other (Specify)...TRANSPORT	Sum	1		
3	Time Related Items				
3.1	Project supervision	Sum	1		
3.2	Project administration	Sum	1		
3.3	Other Overheads (Specify)	Sum	1		
	a)				
	b)				
	c)				
4	Commissioning				
4.1	Test and commission	Sum	1		
4.2	Record drawing and O&Ms	Sum	3		
5	Training staff on the operation and daily				
5.1	Staff Training	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY					

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT

BILL NO: 2: WET Services Installation

ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	SUPPLY RATE	TOTAL
2	<i>Work shall comply with the relevant conditions and installation specifications of SANS 10252-1, manufacturers specifications and local By-laws and Regulations. Sub-Contractor shall issue a certificate of compliance in terms of local By-laws upon completion. All works, equipment and practices shall be SABS compliant and equipment stamped as such. Rates shall include allowance for fixings and bracketing of piping reticulation to vertical walls and soffits.</i>			Geberit List Price (ex VAT)		
2.1	Supply and install Geberit Mepla, or equal alternative, pipe (outside diameter):					
2.1,1	15mm pipes	m	240			
2.1,2	22mm pipes	m	180			
2.1,3	28mm pipes	m	60			
2.1,4	35mm pipes	m	30			
2.1	Supply and install high density polystyrene insulation:					
2.1,1	15mm pipes	m	120			
2.1,2	22mm pipes	m	90			
2.1,3	28mm pipes	m	60			
2.1,4	35mm pipes	m	20			
2.2	Supply and install Geberit Mepla, or equal alternative, fittings:					
2.2,1	15mm 90° bend	no	172			
2.2,2	22mm 90° bend	no	50			
2.2,3	28mm 90° bend	no	20			
2.2,4	35mm 90° bend	no	6			
2.3	Supply and install valves including threaded capillary fittings for connection to sanitary fixtures, etc. to mepla, or equal alternative, pipe:					
2.3,1	15mm Mepla tees	no	25			
2.3,2	22mm Mepla tees	no	6			
2.3,3	28mm Mepla tees	no	8			
2.3,4	22x22x15 Mepla tees	no	8			
2.3,5	22x15x15 Mepla tees	no	12			
2.3,6	28x22x15 Mepla tees	no	12			
2.3,7	25x28x22 Mepla tees	no	2			
2.3,8	15mm stop valve	no	90			
2.3,9	22mm stop valve	no	15			
2.3,10	35mm to 28mm reducer	no	15			
2.3,11	28mm to 22mm reducer	no	15			
2.3,12	22mm to 15mm reducer	no	40			
2.3,13	22mm 400kPA PRV	no	2			
2.3,14	35mm 400kPA PRV	no	6			
2.4	Supply and install geysers and heat pumps 150 liter geyser inclusive of drip tray, piping to heat pump, valves etc.	no.	4			
2.5	2.5kW heat pump inclusive of piping, valves, brackets etc.	no.	4			
2.6	Connect new water supply line to existing water line.	sum	1			
2.7	Testing of complete installed domestic water systems.	sum	1			
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT

WET SERVICES INSTALLATION

SUMMARY OF BILL OF QUANTITIES

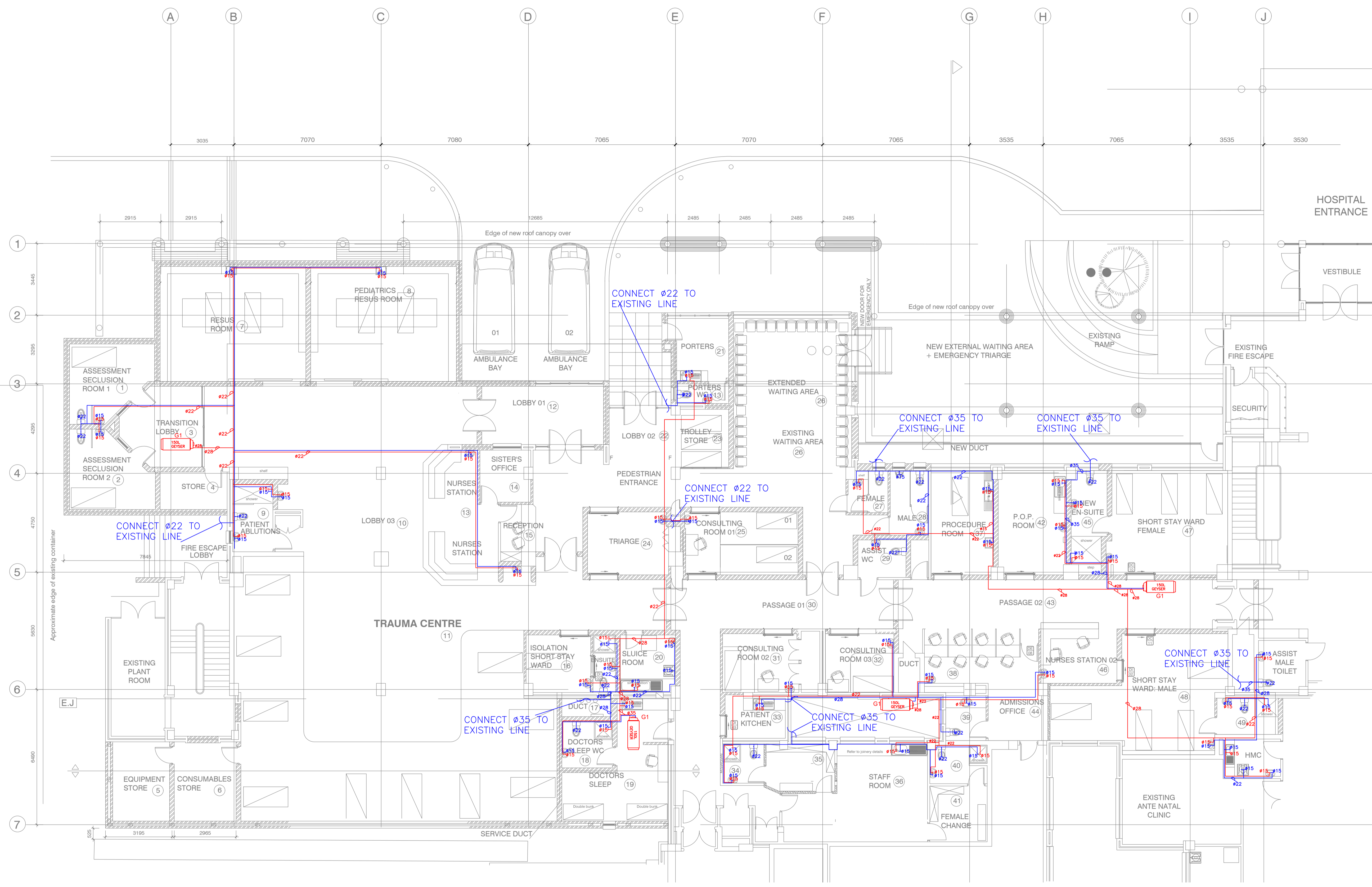
BILL NO	DESCRIPTION	AMOUNT
1	PRELIMINARY & GENERAL	
2	BILL NO: 2: WET Services Installation	
	SUB TOTAL (Excl. VAT)	
	TOTAL TRANSFERRED TO SECTION 2 BILL No.16 ITEM 1 OF BILLS OF QUANTITIES	

I,, on behalf of the Tenderer
.....advise that I have read and
priced the installation in accordance with the specifications, drawings and schedules of quantities and that I
have satisfied myself that no discrepancies exist between the various documents and the drawings.

TENDERER'S NAME/STAMP

SIGNATURE

DATE _____



CONTRACTORS
YARD / SITE CAMP
POSITION

EQUIPMENT SCHEDULE			
No.	DESCRIPTION	QTY	DUTY
G1	150 LITRE ELECTRIC GEYSER, COMPLETE WITH ALL PLUMBING CONNECTIONS	4	150L Storage with AC Element, 2.0kW, 230V

NOTES:
 1. All plumbing piping inside the building shall be Mepla or equal approved.
 2. All plumbing piping outside shall be Mepla or equal approved.
 3. Piping comply with SANS 10252
 4. Pipe insulation to withstand the temperatures within the piping.
 5. Insulation to be high density Polystyrene
 6. Minimum R-Values for insulation:
 less or equal to 80mm = 1.0(m²q.K/W)
 greater or equal to 80mm = 1.0(m²q.K/W)
 6. Electric geyser shall be installed in a ceiling void space. Support and mounting must be able to withstand the geyser and the full capacity.
 PIPE SIZING
 The minimum size of piping to be used is to be in accordance with the table below:
 - Ø15mm - 1 take off
 - Ø20mm - 4 take offs
 - Ø28mm - 8 take offs
 - Ø35mm - 24 take offs
 - Ø42mm - 49 take offs
 - Ø48mm - 99 take offs
 - Ø57mm - 200 take offs
 * Basins, urinals and similar are regarded as 1 draw off.
 * WCs, Showers, Sinks and similar are regarded as 2 draw offs

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTS LAYOUT

No	AMENDMENTS	DATE
TO	ISSUED FOR TENDER	23-01-2024
DRAWN	A. MTAMBEKI	23-01-2024
DESIGNED	A. MTAMBEKI	23-01-2024
CHECKED	MB. MALITI	23-01-2024
APPROVED		23/01/2024
	PR REGISTRATION NO. 200970291	DATE 23/01/2024

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www.ehealth.gov.za

PROJECT TITLE
**UITENHAGE PROVINCIAL
 HOSPITAL**

DRAWING TITLE
**CASUALTY UNIT - HOT AND COLD
 WATER LAYOUT**

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1
DRAWING No.	1746-6-HCW-01	REVISION T0

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 17</u>				
<u>MEDICAL GAS INSTALLATION</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>MEDICAL GAS INSTALLATION (CPAP Work Group No 170)</u>				
<u>Medical Gas Installation:</u>				
Tenderers are to note that the amount included in the amount column for this section of the Bills of Quantities, should be the total of all the priced items in the Medical Gas Installation Bills of Quantities as attached hereafter.				
1	Item			
Total transferred from Medical Gas Installation final summary page. (excluding VAT)				
2	Item			
Profit on above.				
3	Item			
Attendance on above.				
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 2 Bill No. 17 Medical Gas Installation				

UITENHAGE PROVINCIAL HOSPITAL – CASUALTY UNIT.

C3.1 Scope of Work – Medical Gas Installation

	Topic	Commentary
1	DESCRIPTION OF THE WORKS:	
1.1	Overview of the Works	This specification establishes the performance, design and test requirements for the medical gas systems that require alterations at Uitenhage Provincial Hospital at corner of Dodd Rd , Channer St & Dunn Rd, Kariega.
1.2	Extent of the Works	<ol style="list-style-type: none"> 1. This specification also relates to the supply, installation, testing, commissioning and leaving in good order of the main and all ancillary equipment required to provide fully functional equipment and systems for the medical system in the Casualty unit area as well the removal of any existing medical gas equipment within the building that is currently standing where the building for the new Casualty renovations will be built. 2. The removal and isolation of all medical gas supplies currently entering to existing building prior to the demolition thereof forms part of this contract. 3. Connection of the new line supplying the Casualty unit area from the existing line connection. 4. It is to be noted that this is to be part of a contract duration and as such all work on the medical gas system is to be completed in line with the main contractors program.
1.3	Location of the Works	<p>The site is an allotted part of the Uitenhage Provincial Hospital at corner of Dodd Rd , Channer St & Dunn Rd, Kariega.</p> <p>This work is to be carried out in a fully functioning hospital and as such care is to be taken not to disrupt the functioning of the medical gas system in the remainder of the hospital during the installation of new equipment.</p> <p>Altitude : 103m Outdoor design : 29°C DB 23.0°C WB Winter dry bulb : 4.0°C</p>
1.4	Order of the Works / Works in sections	<p>The medical gas installation contractor will have to comply with the main contractors program with respect to the carrying out of his work and this will generally be as follows.</p> <p>The construction of the new buildings, alterations to the other existing buildings, etc can otherwise be executed simultaneously, but due to site restrictions, the works will have to be executed in a phased sequence to be agreed with the contractor.</p>
1.5	Defined works area	<p>The area of the works to be occupied by the contractor, any restriction on the area and the limit of access or exit will be pointed out to Tenderers by the mechanical engineer at the pre-tender site inspection.</p> <p>Tenderers are to take note that because the site forms part of an existing hospital complex, there are limited areas for storing materials, erection of sheds, offices, etc. It will be prohibited for vehicles to traffic over certain areas, as will be pointed out to Tenderers at the pre-tender site inspection meeting.</p> <p>Should the medical gas installation contractor wish to have a site office or storage facility on site this will have to be agreed to with the main contractor and the hospital management.</p> <p>Construction vehicles will be prohibited from using other access gates and roads within the complex. Any further restrictions will be pointed out to Tenderers at the pre-tender site inspection meeting.</p> <p>Other contractors will also be executing construction or other works within the hospital complex, which could be in the adjacent and immediate vicinity of the works of this contract.</p>

1.6	Existing premises occupied	<p>The existing buildings, etc of the hospital complex will be in use and occupied during the construction period</p> <p>All services shall be maintained at all times to the existing buildings, etc and the contractor shall give notice before the interruption of any existing service.</p> <p>Works to be executed after normal working hours, over weekends and on public holidays shall be agreed with the Main Contractor and the Hospital prior to commencement.</p>	
1.7	Temporary Works	No specific temporary works other than items as described in the bills of quantities, scope of works, etc are prescribed.	
2	DESIGN AND DRAWINGS:		
2.1	Employer's Design and drawings	The Employer has provided no design or drawings relating to the new systems that are to be installed and as such the design of the system as provided by the Consultant is to be followed. See Medical Gas drawings provided with this specification.	
2.2	Contractor's Design - Brief	N/A	
3	PROCUREMENT:		
3.1	Preferential Procurement Procedures	The works shall be executed in accordance with the conditions attached to preferences granted in accordance with Eastern Cape Department of Health's tender Offer Evaluation and Scoring Specification and Social and Economic Deliverables forming part of these tender documents.	
3.2	Resource standard pertaining to targeted procurement	Refer to Eastern Cape Department of Health's Social and Economic Deliverables (C3.6) forming part of these tender documents.	
4	CONSTRUCTION:		
4.1	Applicable SANS 2001 standards	<p>SANS 10400 (2011)</p> <p>SANS 7396-1 (2009)</p> <p>SANS 7396-2 (2008)</p> <p>SANS 1453 (2011)</p> <p>SANS 1409 (2008)</p> <p>SANS 10140 (2003)</p> <p>SANS 1091</p> <p>SANS 10224</p>	<p>The Application of National Building Regulations</p> <p>Medical gas pipeline systems Part 1: Pipeline systems for compressed medical gases and vacuum</p> <p>Medical gas pipeline systems Part 2: Anaesthetic gas Scavenging disposal systems</p> <p>Copper tubes for medical gas and vacuum services</p> <p>Outlet sockets and probes for medical (gas and vacuum) services used in hospitals</p> <p>Identification colour marking</p> <p>National Colour Standard</p> <p>Section 6. Master medical gas alarm system</p>
4.2	Applicable national and international standards	<p>ASME V111:</p> <p>B S 3928 & SOP TEST</p> <p>Standard Specification for Electrical equipment and Installation for Mechanical Services</p> <p>The Machinery and Occupational Safety Act of 1984.</p> <p>All relevant Regulations and Bylaws of the Municipal Council and Fire Department</p>	Division 1
4.6	Plant and materials supplied by the employer	The following plant and materials will be provided by the Employer: a) Nil	
4.7	Materials, samples and shop drawings	<p>The requirements for proof of compliance with materials specifications, samples and shop drawings are:</p> <ul style="list-style-type: none"> Material specifications: 	

4.8	Services and facilities provided by the Employer	<p>The services and facilities to be provided by the Employer are:</p> <ol style="list-style-type: none"> 1. Location: The Contractor shall agree the location of all temporary services with the Principal Agent before installation and on completion remove the same and make good. 2. Water The Employer does not warrant that any water supply that may exist is adequate for the proper execution of the Works. Where such supply is inadequate, the Contractor shall provide an adequate supply at his own cost. Water for the Works shall be provided in accordance with the option indicated in the Contract Data (EC [2.11.1]). 3. Electricity: The Employer does not warrant that any electricity supply that may exist is adequate for the proper execution of the Works. Where such supply is inadequate, the Contractor shall provide an adequate supply at his own cost. Electricity for the Works shall be provided in accordance with the option indicated in the Contract Data (EC [2.11.2]).
4.9	Other facilities and services	<p>Temporary facilities necessary for providing the works which are not provided by the Employer include:</p> <ol style="list-style-type: none"> a) Telecommunication facilities: The contractor shall provide a cellular telephone facility on site at all times, while the works are being executed in addition to an e-mail address/facility for the works. b) Ablution facilities: The contractor shall provide adequate ablution facilities for the use of all personnel engaged on the works, and shall maintain such facilities in a clean and tidy condition and remove it on completion of the works. c) Security: The contractor shall take all appropriate measures for general security of the works and the temporary works. d) First aid & fire fighting: The contractor shall provide and maintain all first-aid and fire fighting facilities/equipment required by law
5	MANAGEMENT:	
5.1	Scheduling work	The Medical Gas Installation Contractor is scheduling his work as per the Main Contractors Schedule
5.2	Recording of weather	N/A
5.3	Management meetings	<p>Although the Medical Gas Contractor may not be required to attend all management meetings as indicated below he shall attend such meetings as may be required of him by the Main Contractor or the Engineer.</p> <p>Requirement for management meetings are: The Principal Agent, Contractor's designated representative and other Agents/Consultants as required shall hold meetings related to the progress of the works, technical issues and sub-contractor co-ordination matters at regular intervals not exceeding every 2 weeks, or at such other times as may be necessary. Sub-contractors shall not be present at the meetings unless specifically requested by the Principal Agent or Contractor.</p>
5.4	Forms for contract administration	<p>The following are the requirements for the use of standard forms for contract administration:</p> <ol style="list-style-type: none"> 1. The Main Contractor shall provide and keep on site a site instruction book (in triplicate) for the use of the Principal Agent and all Site Instructions relating to the work required of the Sub-contractor shall be entered into this book.
5.5	Electronic payments	<p>Should the Service Provider request electronic payment the following banking information is required:</p> <p style="margin-left: 40px;">Name of account holder Name of bank Branch code Account number Type of account</p>

5.6	Bonds and guarantees	The original guarantee shall be lodged with the Main Contractor who shall retain the document until expiry. The original guarantee shall be returned to the Guarantor after it has expired in accordance with the guarantee conditions.
5.7	Payment certificates	Requirements for substantiation of claims to expedite verification and certification are: The Sub-Contractor shall co-operate with and assist the Quantity Surveyor or Principal Agent and the Engineer in the preparation of the valuation information for payment certificates by providing to the Quantity Surveyor or Principal Agent and Engineer with all relevant documents (including invoices, rate-breakdowns, etc) and quantified assessments of work completed and materials and goods.
5.8	Permits	The requirements for the Sub-Contractor's staff to have security permits and the like are: All personnel employed by the Sub-Contractor on the Works, shall at all times display suitable identification and shall wear identifiable company workwear. The Employer reserves the right to request names, identification numbers and addresses of all personnel engaged on the Works.
5.9	Proof of compliance with the law	Documents/methods by which compliance with any legislation is to be verified is: There are no specific requirements for documents or methods by which compliance with any legislation is to be verified, however the Employer reserves the right to request suitable proof of compliance with legislation from the Contractor, in an appropriate format, and as necessary and required.
5.10	Insurance provided by the Employer	Copies of the insurance effected by the Employer (public liability; contract works and lateral support insurance where applicable) can be obtained from: The Employer stated in C1.2: Contract Data (EC)
6	EXTENT AND NATURE OF WORK REQUIRED	
6.1	Piping and Fittings	<p>1. <u>Identification and Packing</u></p> <p>1.1 All straight length tubes shall have the ends protected with red plastic caps to prevent ingress of foreign matter during storage and transport.</p> <p>1.2 All coiled tubes shall have their ends mechanically sealed and shall be marked M.G.</p> <p>1.3 All straight length tubes shall be packed and delivered in timber cases of suitable size and capacity.</p> <p>1.4 All coiled tubes shall be packed in M.G. standard cardboard boxes and marked M.G.</p> <p>2. <u>Medical Grade Cleaning Specifications Before and After Annealing</u></p> <p>2.1 The actual cleaning operations may be varied in order to satisfy final inspection requirements by the team of Responsible Persons. The following cleaning processes have to be undertaken on Medical Grade Copper Tubing before and after annealing at the Manufacturer's premises.</p> <p>(1) Blow pipes clean with medically pure compressed air. (2) Use Steam vapour aggravation next for cleaning inside of pipes. (3) Then use a hot detergent for washing of the pipes, internally. (4) Finally use a soft abrasive cleaning organic liquid. The final responsibility to ensure that clean tubing is used in the installation rests with the Contractor.</p> <p>The above steps may have to be repeated on all the tubing sizes especially when uncleaned tubing e.g. domestic copper tubing has to be used due to site circumstances. The inside of this tube with sealed ends shall be sufficiently clean so that when the interior of the tube is washed with a solvent e.g. a trichloro ethylene, the residue remaining upon evaporation of the solvent shall not exceed 0,0376 g/m² of interior surface. Trichloro Ethane and Methylene Chloride may also be used as cleaning agents. The bore of the tubing shall be clean and free from deleterious films and deposits.</p> <p>2.2 All valves and fittings shall be clean and degreased and supplied to site in individual heat sealed plastic bags which may only be opened prior to installation.</p>

		<p>3. <u>Pipe Sizing and Routing</u></p> <p>3.1 The size of pipes for main runs and branch lines are as shown on the drawings. Branch connections to all outlet points, if not otherwise shown, shall not be less than 10 mm OD for oxygen, nitrous oxide and medical air and 12 mm O.D. for vacuum and scavenge piping. The routing shown on the drawings shall be adhered to, the exact positioning of the tubing being left to the contractor so as to suit the conditions on site. The Contractor is to verify all pipe sizing and bring any alterations to the attention of the Engineer.</p> <p>3.2 All piping unless specifically so stated shall be run in the ceiling voids with no pipes mounted on the walls of the passages. Any valves that may be mounted above the ceilings are to be clearly indicated as such on the walls immediately under the valves below the ceiling. Where the Contractor has a problem in mounting piping above the ceilings, this fact is to be brought to the attention of the Engineer for a decision.</p> <p>3.3 All wall outlet points shall be centered 1,5 m above finished floor level, the position in the room being shown on the Supplementary Drawings. Alternative suggestions that a Tenderer considers may be an improvement, are permissible. Tenderers, however, must submit full particulars of such alternatives with their tenders. The same applies to contractors forwarding suggestions once on site. Written approval, however, must first be obtained before such alternatives are carried out from the Engineer (Mechanical).</p> <p>3.4 Only capillary hard solder fittings for M.G. copper classes 0 and 2 tubing, shall be used up to 50 mm outside diameter. Class 0 are preferred in all larger sizes.</p> <p>3.5 The fittings shall be degreased similar to the Medical Grade copper tubing. On site swaging is not acceptable unless carried out by technicians approved by the duly appointed Engineer/Technologist/Technician (Mechanical).</p> <p>3.6 Medical grade copper tubes joined by means of fittings suitable for capillary hard soldering shall be jointed with hard solder, not soft solder, with working temperatures between 600 deg C and 700 deg C, using:</p> <p>(a) Self-fluxing copper/phosphorous/over 7 % content silver rod similar or equal to Afrox Silbralloy. The recommended heating source shall be an oxygen-liquified petroleum gas flame.</p> <p>(b) When using self fluxing hard solder care must be taken to ensure that the joint is not overheated. Oxygen - acetylene gas flames must be used with special care.</p> <p>4 <u>Pipe Supports</u></p> <p>4.1 Where visible, interior wall mounted piping shall be secured in brass or plastic type holder brackets that can be used on tubing up to 50 mm outside diameter. Pipe runs in roof spaces, covered ways, under eaves and on the outside of buildings, i.e. where not in a space normally inhabited, shall be secured with brass type holder brackets for tubing up to 50 mm outside diameter. Other types of holder brackets that Tenderers may wish to offer, must first receive the approval of the duly appointed official (Mechanical). The Centre distance of supports shall not exceed the following up to and including:-</p> <table> <tr> <td>up to 10 mm outside diameter pipe</td> <td>- 1,00 m</td> </tr> <tr> <td>12 to 15 mm outside diameter pipe</td> <td>- 1,25 m</td> </tr> <tr> <td>22 mm outside diameter pipe</td> <td>- 1,80 m</td> </tr> <tr> <td>28 mm outside diameter pipe</td> <td>- 2,50 m</td> </tr> <tr> <td>35 to 76 mm outside diameter pipe</td> <td>-see Supplementary Drawings.</td> </tr> </table> <p>"Unistrut P4000" or other approved support shall be used for this duty. The support shall be fixed to the masonry by means of two suitable brackets, expanding and fixing bolts. The pipes shall be fixed to the support by means of Unistrut P1108 - 2025 series clamps or other approved. The pipes shall be wrapped with plastic tape to isolate them from the clamps. Fischer or equal plastic clamps are also acceptable. Hexagon head bolts and nuts shall be used with these clamps. All</p>	up to 10 mm outside diameter pipe	- 1,00 m	12 to 15 mm outside diameter pipe	- 1,25 m	22 mm outside diameter pipe	- 1,80 m	28 mm outside diameter pipe	- 2,50 m	35 to 76 mm outside diameter pipe	-see Supplementary Drawings.
up to 10 mm outside diameter pipe	- 1,00 m											
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22 mm outside diameter pipe	- 1,80 m											
28 mm outside diameter pipe	- 2,50 m											
35 to 76 mm outside diameter pipe	-see Supplementary Drawings.											

		bolts and nuts shall be galvanised and painted as specified.
		<p>5 <u>Optional Protection of Tubing</u></p> <p>5.1 Where pipes are concealed (i.e. buried in walls or structures) they shall run in conduit for easy removal and replacement or other suitable hard protective piping or run in metal channels built in and flush with the finished wall surface, with suitable covers painted to match the wall finish. Piping buried in walls shall be avoided and shall only be allowed in exceptional cases, such as operating theatres, unless the tubing is passing through walls.</p> <p>5.2 Where pipes are to be run in a location where they may be damaged by trolleys, stretchers or similar mobile equipment, or where they may be interfered with by the general public or other unauthorised persons, they shall be protected by encasement in pipes or metal channels up to a height of 2 m. The route of the pipes shall be so selected that they are out of the reach of traffic and the general public.</p> <p>5.3 All medical copper tubing in ducts, roof spaces or above suspended ceilings shall be laid in Admiralty type cable trays which shall be installed 150 mm clear of any other piping or conduits run in the same roof space wherever possible, and shall not bear against any galvanised surface.</p> <p>5.4 Surface mounting in existing buildings will be considered in all areas by the duly appointed officer (Mechanical). Where the pipes pass through walls and ceilings, etc., they shall be sleeved and provided with wall plates, which shall be rust free and painted to match the general wall finish. Where several pipes, of different diameter, are surface mounted side by side, the saddle centre distance appropriate for the smallest diameter pipe shall also be used for the larger pipes. The method of mounting and installation shall be as indicated on the drawings and specified in the Supplementary Specification. No dead ends on medical gas installations are permissible to avoid bacterial contamination.</p> <p>6 <u>Pipe Bends</u></p> <p>6.1 Bends in Class 2 tubing shall be free from flattening, buckling or thinning of the tube wall at any point. Form bends are permissible up to 28 mm. Elbow type fittings shall not be used unless for special purposes specified in the contract. Only slow bends shall be used. Both horizontal and vertical pipe runs shall conform to the following sequence. From top to bottom and from left to right as appropriate: Oxygen, Vacuum, Medical Air, Nitrous Oxide and Scavenging.</p> <p>6.2 Horizontal pipe runs shall whenever possible not be lower than 2 400 mm above the floor level, unless they are suitably protected and accessible for maintenance staff.</p> <p>7 <u>Painting</u></p> <p>7.1 Pipe support brackets and clamps shall be hot dipped galvanised to S.A.N.S. 121. In addition they shall be painted for protection with one primer coat followed by two finishing coats of enamel paint in accordance with the paint manufacturer's recommendations. The piping shall be painted and labelled to comply with the Identification Colour Marking specified hereafter.</p> <p>8 <u>Quality of Medical Gas ('MG') copper tubing</u></p> <p>8.1 General description</p> <p>The Medical Gas ('MG') tubing shall meet the stringent requirement laid down for the distribution of medical gases in hospital; services. Two categories are included (a) For high pressure coils and (b) for low pressure distribution. The tube sizes shall generally conform to metric domestic copper tube sizes specially cleaned and labelled. Special emphasis shall be placed on the tube bore cleanliness of the copper tubing.</p> <p>8.2 Compliance with S.A.N.S.1409 & S.A.N.S. 1453 (Vacuum system piping)</p> <p>All copper vacuum tubing shall comply with the latest edition of S.A.N.S. 1409 and 1453, shall be in metric sizes and shall be class 2 only.</p>

		<p>8.3 Compliance with S.A.N.S.7396 (Medical gas pipeline systems)</p> <p>All copper medical gas piping shall comply with the latest edition of S.A.N.S. 7396, (Maksal type "MG" only) and shall be in new metric sizes. Class 2 (half hard) up to 28 mm outside diameter and Class 0 (hard drawn) above this size. Annealed Class 2 MG tubing to be used where it is necessary to manipulate the tubing inside conduit droppers, etc.</p> <p>9 <u>High and Low Pressure Tubing</u></p> <p>9.1 High Pressure Applications</p> <p>Flexible connections are preferred. Stainless steel braid reinforced flexible connections may be used.</p> <p>Alternatively "Serpentine" of soft annealed copper coils Class 2 are preferred. "Manifolds" shall be of "hard" Class 0 straight copper in suitable lengths.</p> <p>9.2 Low Pressure Applications</p> <p>All tubes will normally be in the class annealed condition as standard, up to 28 mm outside diameter to facilitate bending but when preferred tubes can be specified to be in Class 0 "hard" condition as well.</p> <p>9.3 Freedom from Defects</p> <p>Eddy current testing shall be carried out on all tubes to ensure freedom from physical defects; the standards for such inspection shall be as specified in ASTM E. 243.</p> <p>9.4 Bore Cleanliness</p> <p>All tubes shall be processed in such a manner that the bores are bright and clean. The use of carbon tetrachloride as a cleaning agent is not permissible.</p> <p>The measure of acceptable cleanliness shall be that specified in ASTM B.290. This requires that when the interior of a test sample of the tube is washed with trichloro-ethylene, or other solvent such as redistilled chloroform or redistilled trichloro-ethylene, the residue remaining upon evaporation of the solvent shall not exceed 0,0376 g/m². Refer maximum allowable residue per 5,5 m length listed in the Table above.</p> <p>Size range available</p> <p>O.D. = Outside diameter W.T. = Wall thickness S.W.P. = Safe working pressure M.A.S. = maximum allowable stress).</p> <p>9.5 All medical gas piping shall be copper tube and shall be Maksal type "MG" only. The tubing shall be in new metric sizes and shall be Class 2 (half hard) in all sizes up to 1 1/8 O.D. and Class O (hard drawn) above this size. Annealed Class 2 MG tubing shall be used where it is necessary to manipulate the tubing inside conduit droppers, etc. All vacuum piping shall be SABS 460 Class 2 up to 28 O.D. and Class 0 above this size.</p> <p>9.6 The jointing of piping shall be by capillary hard soldering using silver-copper-phosphorous fluxless rod and an oxygen/L.P. Gas heat source using capillary fittings which have been cleaned and degreased to the same standard as the piping.</p> <p>9.7 Running joints may be made by swaging of the piping with a suitably calibrated tool provided that this is done in such a manner that flow of gas will be from the straight pipe end to the swaged pipe end. Class O piping shall not be swaged under any circumstances. Capillary joints between copper and brass or stainless steel shall be made using 40% silver solder with the recommended flux.</p>
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6.2	MEDICAL GAS OUTLETS	<p>1. <u>Identification of Medical Gas Outlets by Colour and Terminal Pipe Sizing</u></p> <p>In order to assist in the prevention of installation errors, the following colour coding and terminal pipe sizing for droppers to the service outlet points shall be used.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Medical Gas Service</th> <th style="text-align: center;">Pipe Line Colour Code</th> <th style="text-align: center;">Cover Plate Probe Colour</th> <th style="text-align: center;">Droppers to Service Outlet points O.D. mm</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Oxygen</td> <td style="text-align: center;">White</td> <td style="text-align: center;">White Black letters</td> <td style="text-align: center;">9.53</td> </tr> <tr> <td style="text-align: center;">Nitrous Oxide</td> <td style="text-align: center;">Ultramarine Blue F09</td> <td style="text-align: center;">Ultramarine Blue F09 White letters</td> <td style="text-align: center;">9.53</td> </tr> <tr> <td style="text-align: center;">LP Medical Air</td> <td style="text-align: center;">Dark Admiralty Grey G.12</td> <td style="text-align: center;">Dark Admiralty Grey G.12 with Black Letters</td> <td style="text-align: center;">9.53</td> </tr> <tr> <td style="text-align: center;">Vacuum</td> <td style="text-align: center;">Cornflower Yellow C.67</td> <td style="text-align: center;">Cornflower Yellow C.67 Black letters</td> <td style="text-align: center;">15</td> </tr> <tr> <td style="text-align: center;">Scavenging</td> <td style="text-align: center;">Light Orange B26</td> <td style="text-align: center;">Light Orange B26 Black letters</td> <td style="text-align: center;">15</td> </tr> </tbody> </table> <p>All wall outlets shall be preferably centered 1,5 m above floor level in positions shown on the drawings</p> <p>2 Outlet points on all new hospital installations shall be flush mounted, non-protruding, quick coupling, self-isolating types with safety keyed connections, similar or equal to Dragger or Heyer outlets to the configurations outlined in the enclosed Addendum All probes shall be to the most recent S.A.N.S. Specification for outlet sockets and probes for medical gas. The probes must be marked the same colour as the cover plate. For new installations in existing hospitals where surface mounting of tubing and fittings is specified, outlet points shall be as above and be of the surface mounted type. The use of check valves incorporated in the outlet point is optional and depends on the project design.</p> <p>3 The medical gas outlets and probes shall be indexed and mated such that only the correct probe be inserted into the appropriate gas outlet; for example, it shall not be</p>	Medical Gas Service	Pipe Line Colour Code	Cover Plate Probe Colour	Droppers to Service Outlet points O.D. mm	Oxygen	White	White Black letters	9.53	Nitrous Oxide	Ultramarine Blue F09	Ultramarine Blue F09 White letters	9.53	LP Medical Air	Dark Admiralty Grey G.12	Dark Admiralty Grey G.12 with Black Letters	9.53	Vacuum	Cornflower Yellow C.67	Cornflower Yellow C.67 Black letters	15	Scavenging	Light Orange B26	Light Orange B26 Black letters	15
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		<p>possible to insert a N₂O probe into an oxygen outlet or vice versa. The probes and outlets shall also be correctly identified. This shall be achieved by easily distinguishable shapes of probes and outlets and by permanent colouring of the probes and outlets.</p> <p>4 In compliance with par. 3.4.1 of S.A.N.S. 1409 specification for outlet sockets and probes for medical gas the outlet socket main body and base piece shall be mated as described in ISO 407 for Small Medical Gas Cylinders - yoke type valve connections.</p> <p>5 Each probe shall have permanently and clearly engraved upon it, the identification of the service, e.g. O₂, N₂O, Vac, Medical Air and Scavenging. Each outlet and/or cover-plate shall be identified in English.</p> <p>6 When a group of outlets are installed adjacent to each other the order from left to right as given above, shall always be followed.</p> <p>7 The outlets shall be such that the valve mechanism is easily accessible for maintenance purposes without having to unsolder pipe connections or break into the wall etc. Outlets shall first receive the approval of the duly appointed Engineer/Technologist/Technician (Mechanical) before installation.</p> <p>8 Probes used in outlets under pressure shall have unidirectional flow.</p> <p>9 Cover plates</p> <p>Each outlet shall have permanently and clearly engraved on the cover plate:</p> <p style="padding-left: 40px;">The full word Oxygen/in English.</p> <p style="padding-left: 40px;">The full words Nitrous Oxide/in English.</p> <p style="padding-left: 40px;">The full words Low Pressure Medical Air /in English.</p> <p style="padding-left: 40px;">The full word Vacuum/in English.</p> <p style="padding-left: 40px;">The full word Scavenge/ in English.</p> <p>10 The outlets supplied under this contract shall be of the flush or bedhead mounted standard medical type, non-interchangeable between services, and complete with colour-coded plastic cover plates in the instance of wall mounted outlets.</p> <p>11 The outlets shall be arranged in the following sequence from left to right:</p> <p style="padding-left: 40px;">Oxygen Vacuum Nitrous Oxide Low Pressure Medical Air</p> <p style="padding-left: 40px;">They shall be "Heyer" type or equivalent and approved by the Department of Health and shall comply with SANS 1409-1986 as amended.</p> <p style="padding-left: 40px;">The outlets shall be mounted in bedhead ducts. The duct shall allow easy entry of the piping without kinks or other strain being placed on it.</p>
6.3	ISOLATING VALVES	<p>1 Isolating valves shall be installed wherever shown on the drawings. They shall be of a size equal to that indicated for the pipe line in which they will be installed and shall be full bore. All valves except those mounted in the roof space and gas-bank room shall be housed in valve boxes as described hereafter.</p> <p>2 Isolating valves for gases, air and vacuum may be of the ball type with bronze or stainless steel bodies. Diaphragm type valves are equally acceptable for all gases including air and vacuum. All valves must be certified to be oil and grease free, suitable for the gas to be handled. They shall be suitable for a working pressure of 1 000 kPa gauge. Pipelines must be properly secured by holder bats in close proximity to and on either side of each valve. Approved diaphragm type valves may be offered as an alternative.</p>

		<p>3 Valves shall be fitted into the pipe line by means of capillary hard soldered joints containing silver.</p> <p>4 The ball-cock type isolating valves shall be replaceable using a flanged swing away body or removable ball and seal type system. They shall have bronze or stainless steel balls. All types of valves tendered shall be submitted for approval to the duly appointed Engineer/Technologist/Technician (Mechanical) prior to installation. The valve handle shall be the same colour as allocated to the gas.</p> <p>5 An adequate supply of valves to allow for maintenance of the various sections of the line are to be provided. This is over and above the valve boxes that are indicated on the drawings.</p> <p>6 A service point is to be provided immediately inside the hospital on the downstream side of the Pressure Reducing Valve Box.</p> <p>8 POSITIONING OF ISOLATING VALVES - MAIN AND BRANCH LINES</p> <p>8.1 The positions of these valves shall be as indicated on the drawings supplied with this Specification. No valve shall be positioned such that tampering by unauthorised persons is possible. The heights of these valves shall preferably be not less than 2,4 meters above finished floor level. All valve handles shall lift up to close off the service.</p> <p>9 ISOLATING VALVES SERVING OUTLETS</p> <p>9.1 Isolating valves serving outlets that are located either singly or in groups shall be placed in the same area as the outlet or outlets they are intended to serve and on the same floor in isolation valve boxes. They shall not be placed in the roof or inaccessible spaces but high up on the wall under the ceiling where they can be reached by skilled maintenance staff. Where the above is not possible, isolating valves in a false ceiling are acceptable. Their location shall be indicated by suitable marking on the wall below. The ceiling panels shall be provided with a suitable trap door.</p> <p>10 ISOLATING VALVE BOXES AND PRESSURE REDUCING VALVE STATIONS</p> <p>10.1 The design of the valve boxes shall be similar to the distribution board used for electrical distribution in buildings and shall be complete with architrave frame and flush piano-hinged door with catch. The valve boxes shall be large enough to accommodate the number of isolating valves that shall serve the branch lines shown on the drawings.</p> <p>10.2 All valve boxes situated in passages are to be of the surface mounted type and are to be positioned close under the ceiling.</p> <p>10.3 Where surface mounted pipelines are specified in this Specification, valve boxes shall be of the surface mounted type and the complete box is to be painted white.</p> <p>10.4 Where concealed pipelines are specified in this Specification, valve boxes shall be of the flush mounted type and the frame and door shall be painted white.</p> <p>10.5 In the case of ceiling mounted valve boxes the frame shall be suspended from the concrete ceiling or roof timbers by adjustable hangers designed to suit the installation and which allows the frame to sit neatly and securely against the underside of the false ceiling or ceiling panel.</p> <p>11 VALVE BOXES: PAINT FINISH</p> <p>11.1 All metal parts shall be degreased, rinsed, pickled, rinsed, phosphated, neutralized and then thoroughly dried. This process shall be followed up within 48 hours by white epoxy coating or one layer of a high quality zinc chromate primer, followed by two coats of good quality alkyd based enamel, colour white. The minimum film</p>
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6.4	CONTROL PANELS	<p>1 The control panels shall be of the surface mounted type, robustly fabricated of 3CR12 sheet with lockable doors.</p> <p>2 All metalwork shall be suitably treated against corrosion and shall be coated with a self-etching primer, two coats of a good quality orange hard gloss enamel.</p> <p>3 No hammertone or similar finish will be accepted.</p> <p>4 All control equipment is to be chassis mounted behind a lockable door through which only toggles, reset and push buttons, hour meters, etc., protrude. Equipment shall not be fixed to the door. Isolator handles shall be external to the panel, the door being interlocked with the isolator. Pilot lights etc., shall be mounted in the panel door. Each control panel shall be complete with pilot power on, run and trip</p>

		<p>and indicator lights, lamp test button, control equipment and main isolator. The isolator shall have two auxiliary contacts to break the separate alarm supply. The position of the panel shall be as shown on the drawings.</p> <p>5 Panel Wiring is to be neatly run, strapped into neat bunches. All wiring to external equipment shall terminate in a numbered terminal block into which external wiring is to be connected. Terminals shall be of rating suitable to each circuit. All connections to equipment, etc., are to carry similarly numbered ferrules.</p> <p>6 The function of each item protruding through the board face of cover plate is to be clearly indicated by "Ivorine" or similar labels screwed or riveted, directly adjacent to each item. Each item within the panel is to be labelled to correspond to its reference on the wiring diagram. Glued labels will into be accepted.</p> <p>7 All. All relays, lights, etc., shall be of the best quality. Pilot lights shall be of the transformer-operated type.</p>
6.5	OXYGEN SUPPLY REQUIREMENTS	<p>1 Low pressure Oxygen shall be supplied to the outlet points inside the hospital. The nominal pressure of the oxygen will be 450kPa.</p> <p>2 An adequate supply of valves to allow for maintenance of the various sections of the line are to be provided. This is over and above the valve boxes that are indicated on the drawings.</p> <p>3 A service point is to be provided immediately inside the hospital on the downstream side of the Pressure Reducing Valve Box.</p>
6.6	VACUUM SYSTEM REQUIREMENTS	<p>1 All vacuum piping is to be Class 2 copper piping with soldered joints. (Compression couplings and flanges are only permitted where joints are to be dismountable.)</p> <p>2 Vacuum traps shall be installed in the locations as identified on the drawings in an effort to limit the amount of solid matter deposited in the vacuum receiver in the plant room.</p>
6.7	MEDICAL AIR SYSTEM REQUIREMENTS	<p>1 High pressure air at 800 kPA shall be taken to the OPD operating theatre area to drive medical tools. 800 to 450 kPA Pressure Reducing Valves shall be fitted adjacent to the theatres for the low pressure medical air.</p> <p>2 Low pressure Medical Air shall be supplied to the outlet points inside the hospital. The nominal pressure of the oxygen will be 450kPa.</p> <p>3 An adequate supply of valves to allow for maintenance of the various sections of the line are to be provided. This is over and above the valve boxes that are indicated on the drawings.</p> <p>4 A service point is to be provided immediately inside the hospital on the downstream side of the Pressure Reducing Valve Box.</p>
6.8	NITROUS OXIDE SUPPLY REQUIREMENTS	<p>1 Low pressure Nitrous Oxide shall be supplied to the outlet points inside the hospital. The nominal pressure of the nitrous oxide will be 400kPa.</p>
6.9	SCAVENGING SYSTEM REQUIREMENTS	<p>1 Exhalation of anaesthetic gases from closed circuit absorbers, respirators and any anaesthetic equipment shall be subjected to a suction system that shall remove the anaesthetic gases and exhaled air to the outside of the building. These gases shall be released in such a position so as to avoid contamination through re-circulation of expelled gases.</p> <p>2 Scavenging shall be done by a stand-alone pump mounted in the plant room above the theatres. The system shall have specially adapted connection points that cannot be confused with standard vacuum points.</p> <p>3 The scavenging system shall provide an exhaust of at least 25l/min. at each point while overcoming the system resistance.</p> <p>4 The scavenging is to be performed as close as possible to the point of supply of the nitrous oxide without negatively influencing the performance of that system.</p>

		<p>5 The scavenging system shall operate on the low vacuum high volume principle. When mounted on the wall the outlet point shall be positioned at the extreme right-hand position of all the medical gas and vacuum terminal points. An operating pressure of –6 kPa is acceptable. It shall be capable of exhausting at least 25 l/min at each outlet point. It shall overcome the system resistance. The central turbine fan suction unit shall have a capacity of 150 l/min. Scavenging outlets may be mounted on pendants or walls.</p> <p>6 The ducting shall be in PVC piping or copper tubing and all joints shall be sealed airtight. Dampers must be provided in the ducting to balance the system.</p> <p>7 The distribution plenum shall be made of rigid PVC and shall be sealed airtight. Such a system may be connected to the theatre pendant or wall outlet. The fittings shall be 30 mm to ISO 5356 with 12 mm terminal pipe sizing. The flexible tube shall be installed on the pendant in a manner allowing for removal of the access plate without damage.</p>																													
6.10	ALARM PANELS	<p>1 There is an existing alarm system for the medical gas systems at the hospital and as such alarm panels as required in this specification shall be linked into that system.</p> <p>2 The slave alarm panels are to be sited as indicated on the drawings and are to meet the requirements as specified below.</p> <p>3 Wiring for the alarms from the plant room to the main section of the hospital is to run inside galvanised wire-ways/ducting in the same route used for the medical gas piping. Inside the main section of the hospital the wiring is to be inside trunking provided by others for low voltage alarm and communication wiring.</p> <p>4 The alarm panels shall include an audible alarm buzzer which can be cancelled (muted) while leaving the indicator light in operation until the cause of the signal has been attended to. The cancelling of the buzzer for an incoming signal shall not render it inoperative for further incoming signals.</p> <p>5 Resetting of the alarm condition must only be possible from the control panel in the cylinder room. The alarm must be of the latching type and it must only be possible to reset it once the alarm condition has been rectified.</p> <p>8 The entire alarm system shall operate on low voltage DC, and shall employ solid state circuitry. The alarm cabling used is to be PEX type cabling as used for fire detection systems, but with a different colour serving and is to be run in the ducting alongside the medical gas lines.</p> <p>9 The system shall be designed to be failsafe, so that should any wiring become damaged or disconnected, an alarm signal will be generated.</p> <p>7 The following indications and alarms are required:</p> <table border="0"> <tr> <td>General</td> <td>- Alarm system power on</td> <td>- green</td> </tr> <tr> <td rowspan="4">Oxygen</td> <td>- Liquid oxygen tank empty</td> <td>- red</td> </tr> <tr> <td>- Left cylinder bank empty</td> <td>- red</td> </tr> <tr> <td>- Right cylinder bank empty</td> <td>- red</td> </tr> <tr> <td>- Line pressure abnormal</td> <td>- red</td> </tr> <tr> <td rowspan="3">Nitrous Oxide</td> <td>- Left cylinder bank empty</td> <td>- red</td> </tr> <tr> <td>- Right cylinder bank empty</td> <td>- red</td> </tr> <tr> <td>- Line pressure abnormal</td> <td>- red</td> </tr> <tr> <td rowspan="2">Vacuum</td> <td>- Standby pump running</td> <td>- red</td> </tr> <tr> <td>- Line pressure abnormal</td> <td>- red</td> </tr> <tr> <td rowspan="2">Low Pressure Medical Air</td> <td>- Stand-by compressor running</td> <td>- red</td> </tr> <tr> <td>- Line pressure abnormal</td> <td>- red</td> </tr> </table>	General	- Alarm system power on	- green	Oxygen	- Liquid oxygen tank empty	- red	- Left cylinder bank empty	- red	- Right cylinder bank empty	- red	- Line pressure abnormal	- red	Nitrous Oxide	- Left cylinder bank empty	- red	- Right cylinder bank empty	- red	- Line pressure abnormal	- red	Vacuum	- Standby pump running	- red	- Line pressure abnormal	- red	Low Pressure Medical Air	- Stand-by compressor running	- red	- Line pressure abnormal	- red
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		7	Abnormal pressures shall be 10% above or below nominal pressure for oxygen, nitrous oxide and medical air and 20% above or below nominal pressure for the vacuum system.															
		8	The duly appointed official (Mechanical) shall be consulted in each case for final approval of the selected position.															
6.11	ELECTRICAL WORK	1	All electrical work carried out and all materials used, shall be in accordance with the latest issue of the "General Technical Specification" for electrical installations to the satisfaction of the duly appointed Engineer/Technologist/Technician of the Department of Works.															
		2	The electrical work includes the supply, delivery, erection and commissioning of all electrical equipment associated with this contract. The electrical power supply to the warning light panel, the plant rooms and between the main panel and the slave panels will be supplied by others.															
		3	The correct positioning and size of end boxes, etc. remains, however, the responsibility of the gas contractor. A wiring diagram of all electrical circuits involved in the gas, vacuum, scavenge and compressed air plant shall be framed behind glass and mounted on the walls of the respective plant rooms in suitable positions.															
6.12	TESTING AND ACCEPTANCE OF EQUIPMENT	1	The Contractor will be responsible for the supply of all test equipment necessary to carry out all tests required. Performance tests shall be carried out in the presence of the Consultants and, if required, other Client representatives															
6.13	TEST AND EVALUATION REQUIREMENTS	1	In general extreme care shall be taken to ensure that the piping system remains clean and oil free during installation, with all open ends of pipes capped during construction/installation.															
		2	After installation of the medical gas outlets, each system shall be blown through and purged with dry, oil free medical grade compressed air at high pressure to clear any particles or moisture from the pipelines. Each outlet valve shall be operated during this procedure. Thereafter each system shall be pressure tested at 1000kPa using medical grade air for 24 hours, using a recording pressure gauge.															
		3	At the completion of the pressure tests, valve leak tests for 15 minutes per valve shall be conducted.															
		4	The installation shall then be tested for continuity with pressure or vacuum, as appropriate, this only being applied to the system actually under test. Each system shall be tested in turn, but all outlets shall be checked with each test, to ensure that only the correct one is under pressure. Gas banks on systems not under test shall be disconnected, and the system pressure dropped.															
		5	In addition to the above, the whole system shall be tested for the correct operation of all changeover valves, safety valves, regulators, alarms, etc.															
		6	During continuity testing, a flow test shall be carried out at each outlet to confirm that flows, as listed below, are achieved. A flow meter/pressure gauge test unit shall be used.															
			<table border="1"> <thead> <tr> <th>Gas</th> <th>Flow Rate litres/min.</th> <th>Pressure Drop not exceeding kPa</th> </tr> </thead> <tbody> <tr> <td>Oxygen</td> <td>40</td> <td>30</td> </tr> <tr> <td>Nitrous Oxide</td> <td>15</td> <td>30</td> </tr> <tr> <td>Vacuum</td> <td>40</td> <td>7</td> </tr> <tr> <td>Low Pressure Medical Air</td> <td>50</td> <td>30</td> </tr> </tbody> </table>	Gas	Flow Rate litres/min.	Pressure Drop not exceeding kPa	Oxygen	40	30	Nitrous Oxide	15	30	Vacuum	40	7	Low Pressure Medical Air	50	30
Gas	Flow Rate litres/min.	Pressure Drop not exceeding kPa																
Oxygen	40	30																
Nitrous Oxide	15	30																
Vacuum	40	7																
Low Pressure Medical Air	50	30																
		7	All gas for the above tests shall be supplied by the Contractor. The Client's gas cylinders shall only be connected to the manifolds after satisfactory completion of all purging and continuity testing.															
		8	All the above tests shall be witnessed and signed off by the Engineer and a responsible person authorised by the Client.															

6.14	TESTS AND COMMISSIONING	<p>1 The Contractor shall allow for testing and commissioning of the complete installation which shall include the following procedures:-</p> <p>(a) Cleaning of the Medical Gas Pipeline by the Project Contractor.</p> <p>(b) Safety tests i.e. pressure and gas Continuity Tests by the Responsible Persons Team Specified in the Addendum and duly appointed.</p> <p>and</p> <p>(b) Purity Tests by the Hospital Anaesthetist and Hospital Medical Pipeline Technician duly appointed.</p> <p>2 <u>Cleaning with Medically Pure Air</u></p> <p>After installation of the medical gas outlets, but before the system is handed over, each gas system shall be purged by the Contractor with medical air. The piping shall first be blown through to clear all dirt and moisture with medical compressed air as supplied in cylinders and produced by an oil free compressor. The medical air shall be supplied by a recognised medical gas supplier. This blowing out shall be done in the presence of the Responsible Person or his duly authorised representative. All air for this purpose shall be supplied by the Contractor.</p> <p>3 <u>Pressure, Vacuum and Continuity Testing</u></p> <p>4 <u>Pressure and Vacuum Testing</u></p> <p>After fitting the medical gas outlets, a pressure of 1000 kPa shall be applied, using medical compressed air. All joints shall be tested with soapsuds for leaks. This pressure shall be maintained over 24 hours without dropping pressure, using a recording pressure meter.</p> <p>Alternatively the pressure tests may be as follows as indicated in the supplementary specifications:-</p> <p>(a) Pressure test of the pipeline-system inclusive of the base block of terminal unit. This test should last over 24hr. at 1,5 times of operating pressure. Pressure drop is not allowed.</p> <p>(b) Pressure test of the complete system after final installation: Draeger recommendation:-</p> <ol style="list-style-type: none"> (1) Put all pressure gas pipes under operation pressure. (2) Switch pressure and close valves. (3) Mark positions of gauge needles. (4) Close all stop cocks (5) Check pressure and vacuum gauges after 1 hour. Permissible pressure increase for vacuum 0,1 bar. Alternatively the pressure tests according to ISO/DIS. 7396 may be used. <p>5 <u>Gas Continuity Test by Team of Responsible Persons</u></p> <p>5.1 A test shall be carried out with medical compressed air to determine whether each outlet supplies the correct gas and that the correct safety keyed probe only fits that particular outlet. This test shall be carried out by putting only one system under pressure at a time. Each network shall be brought to a pressure of 400 kPa.</p> <p>5.2 All similar medical gas outlets shall be checked with each test. Only the one under pressure shall indicate the pressure at the appropriate medical gas outlet. Gas banks not under test during this test shall be disconnected. This test shall be done at the time of "taking over" under supervision and in the presence of the Responsible Persons. All isolating valves shall be operated at the time of test to certify that they are correctly installed.</p> <p>6 <u>Flow Gauge Test</u></p>
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		<p>A flow meter pressure gauge probe assembly shall be plugged into each medical gas outlet. A flow of 30 litres per minute shall be recorded at a pressure drop not exceeding 35 kPa.</p> <p>7 Purity Tests</p> <p>Purity tests (See addendum 4) on the medical gases shall be done by the appointed Responsible Persons of the Director: Hospital Services, i.e. a Hospital Anaesthetist and an Anaesthetic Technician for all the outlets including the theatres, induction and delivery rooms, etc.</p> <p>8 ACCEPTANCE CRITERIA</p> <p>The Engineer shall have the exclusive right to accept or reject the results of the tests carried out.</p> <p>8.1 After fitting the medical gas outlets, a pressure of 1 000 kPa shall be applied, using medical compressed air. All joints shall be tested with soapsuds for leaks. This pressure shall be maintained over 24 hours without dropping pressure, using a recording pressure meter.</p> <p>8.2 Vacuum piping shall be similarly tested with the medical gas outlets using a vacuum of at least –80 kPa which shall be applied to the system and held without loss over 24 hours using a recording meter. Only a vacuum recorder will be acceptable on the vacuum system and not a pressure recording.</p> <p>8.3 A test shall be carried out with medical compressed air to determine whether each outlet supplies the correct gas and that the correct safety keyed probe only fits that particular outlet. This test shall be carried out by putting only one system under pressure at a time. Each network shall be brought to a pressure of 400 kPa. The vacuum system shall be similarly tested to –80 kPa.</p> <p>8.4 All similar medical gas outlets shall be checked with each test. Only the one under pressure shall indicate the pressure at the appropriate medical gas outlet. Gas banks not under test during this test shall be disconnected. This test shall be done at the time of “taking over” under supervision and in the presence of the Responsible Persons. All isolating valves shall be operated at the time of test to certify that they are correctly installed.</p> <p>8.5 Flow gauge tests shall be carried out by using a flow meter pressure gauge probe assembly plugged into each medical gas outlet. A flow of 30 litres per minute shall be recorded at a pressure drop not exceeding 35 kPa.</p> <p>8.6 Purity Tests on the medical gases shall be done by the appointed Responsible Persons for all the outlets including the theatres, induction and delivery rooms, etc.</p>
6.15	MAINTENANCE AND SERVICE CONTRACT	<p>1 The Contractor shall provide for servicing and maintaining the installation on behalf of the Client for the Guarantee period.</p> <p>2 The Contractor shall provide for at least one year of free service at quarterly intervals after completion and hand-over of the system.</p> <p>3 It is a requirement of the Client that the Contractor have staff permanently available on a 24hour basis to be able to assist the hospital staff to effect emergency repairs to the equipment installed under this contract.</p>

6.16	GUARANTEE OF THE INSTALLATION	Unless otherwise specified the entire installation (for this contract) shall be subject to a 12 month guarantee of each item of equipment.
6.17	MANUALS	<p>1 OPERATING MANUALS</p> <p>1.1 Where possible instructions that have been laminated in plastic are to be supplied for easy dissemination of information to personnel who are required to make use of the equipment.</p> <p>1.2 Three complete sets of operating manuals shall be supplied by the Contractor, one set to the Engineer for onward forwarding to the Employer and one for the User Department's use.</p> <p>1.3 Manuals must be compiled in layman's language.</p> <p>1.4 At least one month before commissioning, one draft copy shall be submitted to the Department/Engineer for comments and approval.</p> <p>1.5 Operating manuals shall give a clear description of and the purpose of the installation.</p> <p>(a) Paper copies of all approved drawings and diagrams.</p> <p>(b) Detailed description of the different components used in the installation.</p> <p>(c) On- and off switching procedures.</p> <p>(d) Guidelines for routine-test to be carried out by the User Department inclusive of the periods during which tests are to be undertaken.</p> <p>(e) Detailed instructions for procedures to be followed during a fault</p> <p>2 MAINTENANCE MANUALS</p> <p>2.1 Two complete sets of maintenance manuals (Technical) prepared in English, shall be supplied by the Contractor.</p> <p>2.2 At least one month before commissioning a draft copy shall be submitted to the Department/Engineer for comments and approval.</p> <p>2.3 Maintenance manuals shall consist of the following:</p> <p>(a) A general description of the system.</p> <p>(b) A general description of the controls.</p> <p>(c) Schedule of equipment, model numbers, optional extras, modifications, electrical power requirements, etc.</p> <p>(d) Detailed monthly, quarterly, semi-annually and annual preventative maintenance procedures.</p> <p>(e) Manufacturer's catalogues clearly indicating type, size and model of equipment supplied.</p> <p>(f) Tabulated commissioning data of all equipment and the system, indicating- as measured and according to specification - requirements.</p> <p>(g) List of suppliers, addresses and telephone numbers.</p> <p>(h) List of spare parts for all equipment.</p> <p>(i) Fault tracing/finding procedures.</p> <p>2.4 Manuals shall be bound in a firm hard cover.</p> <p>2.5 The information shall be clear and readable and supplied with an index.</p>

		2.6 The above mentioned manuals shall be available at first delivery. Delivery of the installation will not be accepted without the manuals.
6.18	HEALTH AND SAFETY	The Contractor is required to abide by the requirements of the Occupational Health and Safety Act, Act 85 of 1993, with specific reference to the requirements as laid out in the Construction Regulations of July 2003. The Medical Gas contractor shall attend the Main Contractors Health and Safety meetings.
6.19	LOGISTICS	As far as possible equipment that requires regular maintenance is to be brought to the attention of the Client or Engineer and service agreements are to be entered into with the Client. Where possible locally supplied and manufactured equipment is to be used.
6.20	EMPLOYER TRAINING	1 A representative of the Contractor shall be available to instruct the proprietor's building maintenance staff (or his appointed representative) in the operation of his system, and to ensure that such persons are fully conversant with the control and operation of the system. 2 This instruction exercise is to take place prior to the system being left operational. The Engineers are to be informed in writing as to when this instruction period is scheduled to commence. Upon completion of the exercise the contractor is to obtain the Proprietor's representative's written acceptance of the hand-over tuition, thus acknowledging his complete understanding of the operational procedures for this installation.
6.21	RECORD DRAWINGS	1 The contractor is responsible for the production of record drawings, and for the issue of one laminated copy of each drawing to the proprietor's maintenance engineer. A further 3 paper print copies are required, these forming an integral part of his Maintenance Manuals. 2 These drawings are to illustrate any changes in the pipework and other equipment layouts. The record drawings are to include for control diagrams, board diagrams, and other electrical diagrams. 3 Electronic copies of the Consulting Engineer's original drawings may be obtained from the Engineers, and these modified by the sub-contractor such that they become the master record originals.
7.1	ANNEXES:	
	Tenderers are referred to any Appendices as listed in the Contents of this document.	

SCHEDULE A: STANDARD CERTIFICATE OF SAFETY TEST FOR MEDICAL GAS AND VACUUM SYSTEMS

INSTITUTION :

DETAILS OF SERVICE :

(NEW OR EXTENSION) :

ITEM NUMBER :

DATE OF TEST :

TIME OF TEST :

IT IS CERTIFIED THAT THE TESTS DETAILED IN THE ATTACHED SCHEDULES HAVE BEEN SATISFACTORILY CARRIED OUT IN TERMS OF THE REQUIREMENTS AS LAID DOWN IN PART FIVE SECTION GR.

- (a) MANIFOLD TEST
- (b) RETICULATION SYSTEM TEST
- (c) ISOLATING VALVE BOXES
- (d) WARNING LIGHTS

TESTING OFFICERS

CONTRACTOR (Firm's Name) :

NAME OF REPRESENTATIVE : (BLOCK LETTERS) :

SIGNATURE :

HOSPITAL SERVICES :

NAME (BLOCK LETTERS) :

SIGNATURE :

HOSPITAL SUPERINTENDANT TO ACKNOWLEDGE RECEIPT OF ORIGINAL OF TEST CERTIFICATE:

SIGNATURE :

COPIES TO :

SCHEDULE B: RETICULATION SYSTEM TEST

	O ₂	N ₂ O	VACUUM	Medical AIR
(a) Is correct gas emerging from corresponding outlets?				
(b) Are all other points without pressure during test (a)?				
Has every outlet been tested in the above manner?				
Detail and discrepancies				
LEAK TEST (Pressure Drop)				
Duration				
Pressure Recorded				
a) at START				
b) at END of test				
Have recorder charts been handed over?				
BLANK KEY TEST				
With blank key inserted is outlet gas tight?				
Does outlet adaptor release mechanism release properly at all outlet points?				
Are all outlets correctly marked?				
Is colour coding of all pipes correct?				
Are working parts of each outlet easily replaceable?				

Mechanical BOQ: Medical Gas Installation for Casualty
Unit

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No. 1: PRELIMINARY AND GENERAL

<u>NO.</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>RATE</u>	<u>TOTAL</u>
1,1	6.15 6.16	Compliance with General Conditions of Contract, Sureties, travelling, out of town alliance	Fixed Sum	1		
			Value related Sum	1		
			Time related Sum	1		
1,2	1,5	Establishment on site and provision of buildings and storage facilities including de-establishment of site, cleaning and tidying up after completion of contract	Fixed Sum	1		
			Value related Sum	1		
			Time related Sum	1		
1,3	5.1 5.3 5.5	Contract management and supervision of works	Fixed Sum	1		
			Value related Sum	1		
			Time related Sum	1		
14	6.17 6.21	Provision of drawings and manuals as specified	Sum	1		
1,5	5.8 5.9	Compliance with the OHS Act, Local by-laws and other Statutory regulations	Sum	1		
1,6		Any additional item not specifically included in this Bill of Quantities that the Contractor may wish to detail	Sum	1		
1,7	6,14	Final inspection of the works by an accredited representative and signing off of the installation	Sum	1		
1,8		Money provision for additional requirements to engineers detail	Sum	1		
1,9	5,8	The bidder must price for his staff to wear distinctive overalls/work clothes and hard hats. For the duration of the contract name tags must be provided to all employees on site, whether in work clothes or not	Sum	1		
1,10	6,19	Provide for attendance of health and safety meetings called by the Main Contractor	Sum	1		
TOTAL CARRIED FORWARD TO NEXT PAGE						

<u>NO.</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>RATE</u>	<u>TOTAL</u>
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE						
1,11	C3.4	<p><u>HIV/AIDS AWARENESS</u></p> <p>It is required of the Contractor to thoroughly study the HIV/AIDS Specification (PW1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bill of Quantities. Provision for pricing of HIV/AIDS awareness is made under item 1.14 to 1.18 hereafter and it is explicitly pointed out that all requirements of the aforementioned spec are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained. The Contractor must take note that compliance with the HIV/AIDS Specification is compulsory.</p> <p>In the event of partial or total non-compliance, the Representative/Agent, notwithstanding the provision of Clause 52 of the General Conditions of Contract for the Works of Civil Engineering Construction or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.</p>	Sum	1		
1,12	C3.4	<p>AWARENESS CHAMPION</p> <p>Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Spec.</p>	Sum	1		
1,13	C3.4	<p>AWARENESS WORKSHOPS</p> <p>Selection and appointment of a competent Service Provided approved by the Representative/Agent, provision of a Service Provided Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification.</p>	Sum	1		
1,14	C3.4	<p>POSTERS, BOOKLETS, VIDEO, ETC</p> <p>Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification.</p>	Sum	1		
TOTAL CARRIED FORWARD TO NEXT PAGE						

<u>NO.</u>		<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>RATE</u>	<u>TOTAL</u>
		TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE				
1,15	C3.4	ACCESS TO CONDOMS Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification	Sum	1		
1,16	C3.4	MONITORING Monitoring HIV/AIDS awareness of workers, providing the Representative/Agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification	Sum	1		
1,17	C3.6	SOCIAL & ECONOMIC DELIVERABLES				
1.17.1		Deliverable A1	Sum	1		
1.17.2		Deliverable A2	Sum	1		
		Deliverable B1	Sum	1		
		Deliverable C2	Sum	1		
		Deliverable D2	Sum	1		
		TOTAL CARRIED TO SUMMARY				

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No. 2: Medical Gas Installation

MEDICAL GAS PIPING

<u>ITEM NO</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>RATE</u>	<u>TOTAL COST</u>
		Capillary type copper tube fittings to SABS1067 Part 2 including cutting, reaming and soldering of joints, hard type solder and pipe supports as specified. Pipework in walls is to be run in a conduit chased into the wall, or in bedhead ducting. NOTE: Straight couplers, fittings, reducers, T's, and bends will not be measured as separate items and are to be included in the rates for straight piping.				
2,1		Supply and delivery to site and instalation to SABS1453 copper pipework as specified				
2.1.1	6,1	12.7mmdia ($1/2$ "	Metre	150		
2.1.2	6,1	15.83mmdia ($5/8$ "	Metre	500		
2.1.3	6,1	22.2mmdia ($7/8$ "	Metre	60		
2.1.4	6,1	28.6mm dia ($1 1/8$ "	Metre	30		
2,2		Pipe brackets and clips				
2.2.1	6,1	12.7mmdia ($1/2$ "	No.	30		
2.2.2	6,1	15.83mmdia ($5/8$ "	No.	100		
2.2.3	6,1	22.2mmdia ($7/8$ "	No.	12		
2.2.4	6,1	28.6mm dia ($1 1/8$ "	No.	6		
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No. 3: Medical Gas Installation

VALVE BOXES

<u>ITEM NO.</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>RATE</u>	<u>TOTAL AMOUNT</u>
3,1	6,3	Valve boxes as per attached drawings, complete with necessary valves.				
3.1.1	6,3	Two way valve boxes inclusive of valves	Unit	3		
3.1.2	6,3	Three way valve boxes inclusive of valves	Unit	3		
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No.4: Medical Gas Installation

GAS OUTLET POINTS

ITEM NO.	Spec. Ref	DESCRIPTION	UNIT	QTY	RATE	TOTAL
4,1		Vacuum traps sized to system requirements				
4.1.1	6,6	Vacuum traps	No	4		
4,2		Outlet points for medical gasses				
4.2.1	6,2	Oxygen	No	25		
4.2.2	6,2	Vacuum	No	25		
4.2.3	6,2	Medical air	No	15		
4,3		Emergency connection points complete with lock shield boxes to be sited by the Contractor in consultation with the Consulting Engineer				
4.3.1	6,2	Oxygen	No	3		
4.3.2	6,2	Medical air	No	3		
4,4		Pressure reducing valves for medical air to reduce from 800kPa to 450Kpa				
4.4.1	6,7	Pressure reducing valve 1½"	No	3		
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No. 5: Medical Gas Installation

MEDICAL GAS ALARM SYSTEM

ITEM NO.	Spec. Ref	DESCRIPTION	UNIT	QTY	RATE	TOTAL AMOUNT
5,1		Supply delivery and installation of alarm slave panels c/w all associated wiring and controls and sensors				
5.1.1	6.10	Alarm (Master) panel	Unit	1		
5.1.2	6.10	Alarm (slave) panels at each nurse station	Unit	1		
5.1.3	6.10	Alarm cabling	Metre	150		
5.1.4	6.10	Draw boxes	Unit	6		
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No. 6 Medical Gas Installation

TEST AND EVALUATION COMMISSIONING

ITEM NO.	Spec. Ref	DESCRIPTION	UNIT	QTY	RATE	TOTAL AMOUNT
6,1	6,14	Testing complete installation	Item	1		
6,2	6,14	Commissioning of complete installation	Item	1		
6,3		Connection of medical gas pipes to link the wards east and west of the new hospital street	Item	1		
6,4		The removal of existing pipes in the casualty unit	Item	1		
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

BILL No. 7: Medical Gas Installation

Day works

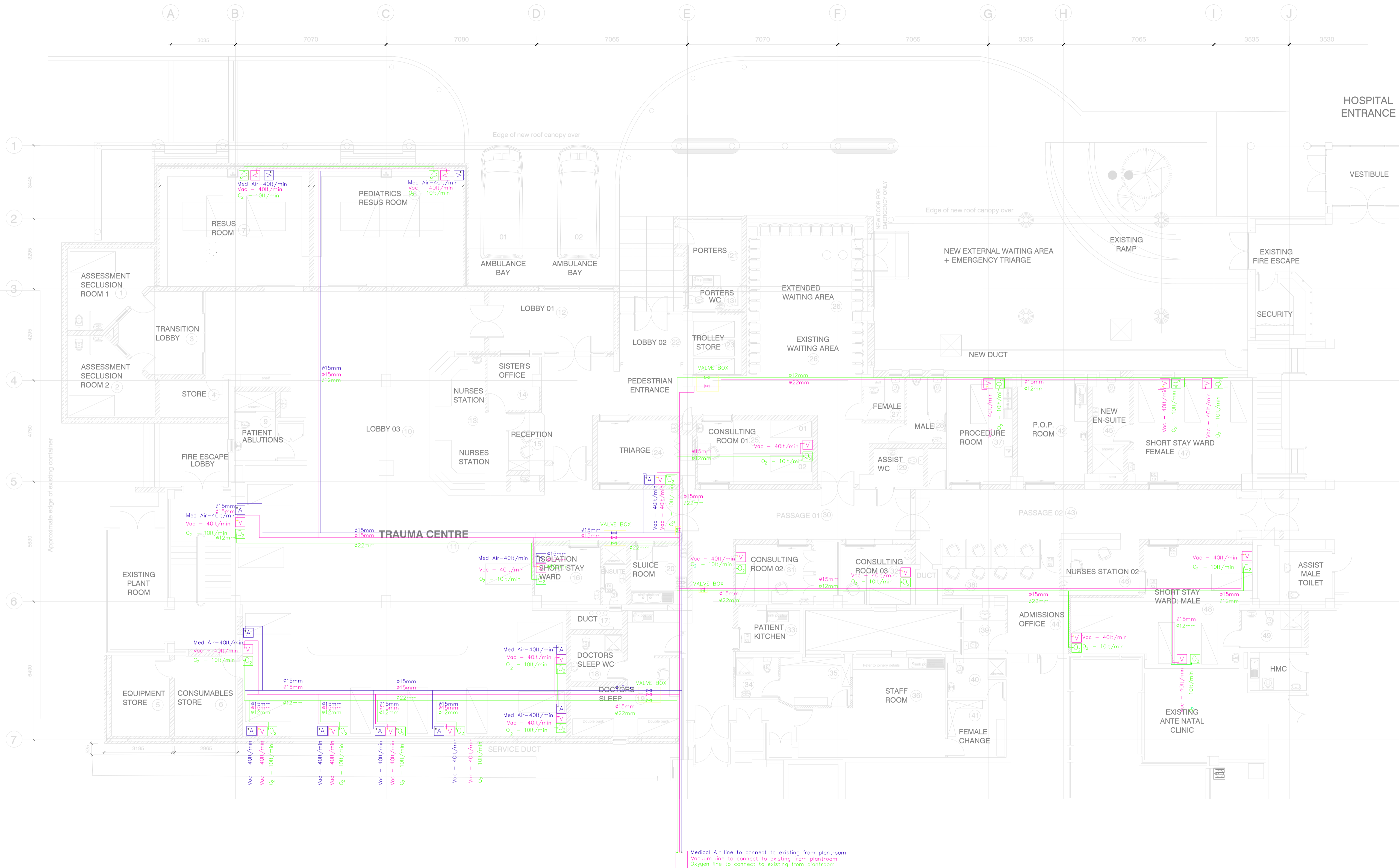
ITEM NO.	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>RATE</u>	<u>TOTAL AMOUNT</u>
8,1		Dayworks for unforeseen items to be approved by the Engineer prior to implementation				
8.1.1	n/a	Qualified Artisan	Hrs	40		
8.1.2	n/a	Semi-skilled labourer	Hrs	80		
8.1.3	n/a	Labourer	Hrs	160		
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT MEDICAL GAS

Item No.	Description	TOTAL
1	Total Bill No. 1 - Priliminary and General	
3	Total Bill No. 2 - Medical Gas Piping	
4	Total Bill No. 3 - Valve Boxes	
5	Total Bill No. 4 - Outlets * scavenging	
6	Total Bill No. 5 - Alarm System	
7	Total Bill No. 6 - Testing & Commissioning	
8	Total Bill No. 7 - Day works	
	TOTAL TRANSFERRED TO SECTION 2 BILL No.17 ITEM 1 OF BILLS OF QUANTITIES	

TENDERER'S NAME

SIGNATURE



THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTS LAYOUT

No	AMENDMENTS	DATE

T0 ISSUED FOR TENDER 23-01-2024

DRAWN	A. MTAMBEKI	19-09-2023
DESIGNED	MB. MALITI	19-09-2023
CHECKED	MB. MALITI	19-09-2023

APPROVED  PR REGISTRATION NO. 200970291 DATE 23/01/2024

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PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL
 DRAWING TITLE
CASUALTY UNIT - MEDICAL GAS LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1
DRAWING No.	1746-6-MG-01	REVISION T0

PIPE/1746-6-M-Uitenhage Provincial Hospital/04 Design & Drawings/13 Mechanical/01 Working Drawings/Casualty Unit/1746-6-MG - 01 REVISED DWG

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 18</u>				
<u>HVAC INSTALLATION</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>HVAC INSTALLATION (CPAP Work Group No 170)</u>				
<u>Mechanical installation:</u>				
Tenderers are to note that the amount included in the amount column for this section of the Bills of Quantities, should be the total of all the priced items in the HVAC Installation Bills of Quantities as attached hereafter.				
1	Item			
Total transferred from HVAC Installation final summary page. (excluding VAT)				
2	Item			
Profit on above.				
3	Item			
Attendance on above.				
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 2 Bill No. 18 Hvac Installation				

UITENHAGE PROVINCIAL HOSPITAL – CASUALTY UNIT

AIR CONDITIONING AND VENTILATION INSTALLATION

JANUARY 2024

PREPARED BY:

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NAME OF CONTRACTOR:

.....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

HVAC SPECIFICATION – UITENHAGE PROVINCIAL HOSPITAL

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1. GENERAL

The air conditioning and ventilation subcontractor shall be referred to as a tenderer or subcontractor in this document unless specified otherwise.

The scope of work shall include installation of a VRF/VRV air conditioning system, and ventilation systems for Uitenhage Provincial Hospital, Casualty Unit. The subcontractor is advised that the scope will not be limited to the abovementioned and any extra work shall be properly communicated with the subcontractor.

The subcontractor shall be responsible to supply, deliver, install, test, commission and maintain for twelve (12) months of the air conditioning and ventilation installation. During the construction, the Engineer shall periodically do quality inspections on the installation which will be communicated with the subcontractor for fixing.

The subcontractor will be required to comply Statutory and Regulatory Requirements as listed in section two (2) of this document.

2. STATUTORY AND LEGAL REQUIREMENT

This section contains acts and clauses that are generally applicable to mechanical engineering construction. The installation shall be completed and tested in accordance with the following requirements or latest issued and amendments of the following:

- a) SANS 10400 – 2014: The application of the National building regulations
- b) SANS 1238: Ductwork
- c) SANS 1125: Room air conditioning and heat pumps
- d) SANS 1287-1&2: Ventilation practices and ducting
- e) SANS 1424: Filters
- f) SANS 10147: Refrigeration Systems
- g) SANS 10173: Installation, testing and balancing of air conditioning ductwork.
- h) SANS 10142-1&2: Code of Practice for the Wiring of Premises
- i) SANS 10103: The measurement and rating of environmental noise with respect to annoyance and to speech communication
- j) SANS 1850-2014: The design and manufacture of commercial kitchen extraction/ventilation systems
- k) Construction Regulations and Health and Safety Requirements
- l) Local Fire Regulations
- m) Local Municipal by-laws and regulations
- n) The Electricity Act 1996

3. PROGRAMME

The Tenderer shall allow for programming the work in such a manner that if falls within the completion programme of the Main Contractor. Sequence of work to suit Contractor's requirements will not be guaranteed.

4. MAINTENANCE

The subcontractor shall be responsible for maintaining the installation for twelve (12) months from the date of Practical completion at no extra cost. During the twelve months maintenance period, the subcontractor shall visit the site at once a quarter and shall additional to this be notified in case of breakdowns to visit the site and remedy/adjust accordingly. A logbook must be kept and all servicing/repairs must be recorded. The logbook shall be issued to the client after the twelve (12) months guarantee period.

The contractual guarantee period on faulty equipment, materials, and workmanship shall be twelve (12) months and it shall commence on the date of issuing completion certificate by the engineer.

The subcontractor is required to produce a list of spares and where they are available; this shall be documented with the AS-BUILT documentation.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Representative / Agent, at his own expense replace the whole of the installations or such parts thereof as the Representative/Agent or the Director-General may deem necessary with apparatus specified by the Representative / Agent.

5. ELECTRICAL WIRING

Unless specifically stated otherwise in the project specification, the Contractor shall be responsible for all electrical work and control wiring associated with the air conditioning installation with the exception of the incoming power which will be provided by others.

All electrical work shall comply with the requirements of the local Municipal Authorities and the Code of Practice for the "Wiring of Premises" SANS 10142, as amended.

The contractor shall electrically connect the new air handling units and condensing units. The contractor shall allow for new cables that will run in galvanised wire baskets; allowance should be made for cable terminators and cable glands onto the control panel and main AC DB.

All Electrical Work shall be undertaken by a qualified and registered Installation Electrician as defined in the OHS Act.

6. SYSTEM PERFORMANCE

The subcontractor shall be required to guarantee that the installation will be installed in such a way that it complies with design and specifications, any deviations from the original designs should be discussed and approved by the Engineer. The subcontractor will be notified of any equipment that does not comply to the specifications and shall be deemed to rectify to the satisfaction of the Engineer.

The subcontractor shall be responsible from making sure that the installation does not have excessive vibration and noise.

All materials shall be of the qualities specified in this document.

All the equipment for this installation shall be brand new and undamaged, high standard of workmanship shall be maintained all times.

The subcontractor shall be responsible for producing samples for approval when requested by the Engineer.

7. **ALTERNATIVE EQUIPMENT**

The subcontractor shall price the works in accordance with the tender documentation. The subcontractor is welcomed to supply an alternative equipment that will comply with the specifications and shall not have a negative financial impact on the project.

The main option is a heat recovery VRV/VRF system, the tenderer is required to price the heat recovery as the main offer.

During tender submission, the alternative equipment can be submitted as an "alternative".

Alternative equipment offered by the subcontractor shall be of equal or better quality and performance than what is specified. Alternatives offered at tender stage shall be submitted with performance data and cost savings.

The Engineer shall be responsible for approving offered equipment and his/her decision shall be final.

8. **NOISE AND VIBRATION**

The noise from the equipment shall comply with SANS 10103 and the contractor shall be responsible to make sure that these standards are adhered to. Noise generation from equipment shall be selected to operate as close as possible to maximum efficiency.

The subcontractor shall be responsible to submit noise data of all equipment to the engineer and selected sound attenuators to the Engineer for approval.

The noise from equipment shall not exceed 55 dBA when measured three (3) meters from the source.

9. **MATERIALS, SAMPLES AND SHOP DRAWING**

The drawings provided with this tender document are general arrangement drawings only. The successful Tenderer shall check all design criteria and submit shop drawings (including builder' for approval which take into consideration available spaces, builders work requirements, access for maintenance purposes etc).

The contractor must satisfy themselves that the equipment their offer fits at the positions indicated on the drawings and that it will be easily accessible for maintenance or repairs. It is the responsibility of the contractor to verify positions and dimensions on site.

The requirements for proof of compliance with materials specifications, samples and shop drawings are:

- Material specifications
- Shop drawings

The contractor shall supply a list of equipment offered and workshop drawings to the engineer before ordering equipment. It is the responsibility of the contractor to facilitate engineering sessions with the engineer to discuss any discrepancies or clashes. The contractor will then update drawings and submit for approval which will then be used as construction drawings.

The contractor shall, on certain occasions, be required to provide samples on request by the Engineer.

The contractor shall guarantee that all equipment is installed in a manner that it doesn't cause excessive draughts, noise and vibrations. The equipment shall be installed, tested, commissioned to attain the specified design conditions.

All materials and equipment used for this installation shall be new and without any damages.

10. BRANDING AND EQUIPMENT MAKE

The specifications are combined in a manner that does not prejudice against brands; it is pure performance based. The contractor will be allowed to offer equivalent equipment for consideration under these conditions:

The equipment shall comply with the duties/requirements and shall be subject to approval by Engineer.

Equipment shall be of equivalent quality, aesthetics and performance.

The delivery period shall not comprise the final completion of the project and the availability of spare parts is local.

11. ATTENDANCE AND SITE SUPERVISION

The contractor shall make sure that the site is managed in a professional manner and must have a competent person to control and supervise the installation i.e a Contract Manager. The contract manager shall be based on site and shall be responsible for coordination with other services and making sure that all their requirements are passed on to the relevant services. The Contract Manager shall communicate all technical and financial aspects of the project through the main contractor.

12. INSPECTIONS, COMMISSIONING AND TESTING

The Engineer shall, periodically during construction, inspect the installation for quality, contract administration and compliance to the specifications. The Engineer shall notify the subcontractor of any part of the installation that has poor workmanship or not compliant to the specifications, the subcontractor shall be responsible to adjust or amend the installation. At any given time, the Engineer shall inspect the equipment to be installed on site or workshop or a factory. The Engineer shall condemn any poor workmanship or work that is not within the specification and the contractor shall rectify at no extra cost.

On completion of the installation, it shall be tested to the satisfaction of the Engineer and all results shall be recorded in the Operating and Maintenance manuals.

All balancing and testing shall be carried out by the subcontractor entirely at his own expense, and all test instruments shall be checked for accuracy by the Manufacturers, Suppliers, or an approved Laboratory and certified copies of the certificates showing the degree of accuracy shall be supplied to the Engineer, if requested.

The contractor must make sure that the following equipment is available for testing the equipment:

- Velocity meter
- Crane type manometer for balancing valves
- Sling psychrometer
- Clamp on ammeter
- Voltmeter
- Power factor meter
- Ohm meter
- Neon type test lamp
- Ammeter to measure peak motor starting currents

The contractor shall record all measurements taken during testing and shall do the necessary adjustment to make sure that the equipment is operating within the design requirements.

The Contractor shall balance, set, and test the entire plant and shall submit the results to the Engineer who shall then carry out spot checks in the presence of the Contractor.

13. TRAINING

The subcontractor shall be responsible for a detailed training session with the technical department of the Employer/Client.

14. AS-BUILT DRAWINGS AND OPERATION MANUALS

On completion of the project, the subcontractor shall be required to produce three (3) files with the following:

- Index
- General description of installed equipment and systems
- Operating and Maintenance Instructions
- Maintenance Schedules
- Recommended Spares
- Supplier Equipment data
- Equipment Supplier Schedule
- Commissioning data
- Drawings (3 hard copy and in a memory stick in AutoCad and Pdf)

15. WORK BY OTHERS

It is the subcontractor's responsibility to indicate their requirements to the main contractor. The following work shall be form part of this installation and shall be carried out by others:

- All builders' work including concrete plinths, the forming of holes in walls and making good thereafter.
- The cutting of holes in suspended ceilings and ceiling tiles for the fixing of air conditioning equipment.
- The provision of a 400/420V 3ph 50Hz electrical supply to the air conditioning outdoor units.
- The provision of a 230 V 1 Ph 50 Hz electrical supply to all ventilation systems.
- The provision of a chased in 100 x 50 x 50 back box and conduit with draw wire to the ceiling void above to accommodate installation of hard-wired remote controller supplied with each unit.
- Provision of Certificates of Compliance for all electrical works which forms part of this contract.

16. PAINTING

No untreated metal surfaces shall be permitted on the project. Items which are not galvanised or similarly protected against rust and corrosion, shall be painted.

All black metal work including brackets, hangers, platforms, piping etc. either exposed or concealed shall be thoroughly cleaned, de-scaled and painted with one coat zinc chromate followed by one coat enamel paint, to an approved colour.

Unless specified to the contrary hereafter, all equipment, exposed ducting, pipes, metal parts and insulated and plastered surfaces shall be painted with a primer coat followed by two coats enamel paint, to an approved colour.

17. HOISTING

The subcontractor shall allow for all hoisting and scaffolding associated with this installation. The installation involves the hoisting of condensing units to the first-floor roof slab. All regulations and health and safety procedures pertaining to such work must be noted.

The air conditioning and ventilation equipment is mounted at high level and therefore scaffolding shall be required. It is the responsibility of the subcontractor to make sure that the requirements of the Construction Regulations, OHS Act and Health and Safety procedures are adhered to.

18. DESIGN CONDITIONS

Environmental Conditions:

Summer	:	36°C dry bulb
	:	24°C wet bulb
Winter	:	16°C dry bulb
	:	15°C wet bulb

Room conditions:

Summer	:	23°C ± 1°C
	:	50%RH ± 10%
Winter	:	21°C ± 1°C
	:	50%RH ± 10%

The room temperature setpoint shall be adjustable between 17°C and 24°C.

Ventilation Rates:

Fresh Air : 7.5l/s per person
Extraction : 20 air changes per hour

Altitude: : 120m

Internal Loads

Heat load from lights : 20W/m²

Noise level:

The noise level shall not exceed 55dBA when measure at three (3) meters from the sources.

19. VRV/VRF HEAT RECOVERY SYSTEMS

The contract shall be the installation of a VRV/VRF heat recovery system to Uitenhage Provincial Hospital, Casualty Unit. The condensing units shall be mounted on HVAC plant area adjacent to the Casualty Unit. The system shall include the following:

- Outdoor or Condensing units
- Indoor or Evaporator units
- Branch selectors
- Refrigerant piping
- Control piping
- Control wiring
- Remote controls

The systems shall be capable of providing temperature control for each individual indoor/evaporator independently of all other units. They shall provide a complete functional system that achieves the designed and specified conditions.

The indoor units shall be a four-way ceiling mini cassettes, and four-way ceiling cassettes. The position of the wired remote controls to be advised.

All ceiling cassette type indoor/evaporator units shall be factory assembled and tested with the following:

- electronic proportional expansion valves,
- control circuit board,
- factory wiring and piping,
- self-diagnostics,
- auto-restart function,
- 3-minute fused delay and
- Test run switch

They shall have a washable long-life net filter with mildew proof resin filters.

All outdoor/condensing units shall be air-cooled DX refrigeration type compatible for the use with indoor/evaporator units. The system must be able to modulate the compressor capacity automatically to maintain constant suction and condensing pressure while varying refrigerant volume to suit the

required cooling/heating loads. The outdoor condensing units must be capable of heating operation at low end of the operating range as specified, without additional ambient control or auxiliary heat source. The refrigerant circuit shall include:

- scroll compressors,
- motors,
- fans,
- condenser coil,
- electronic expansion valves,
- solenoid valves,
- four-way valves,
- distribution headers,
- capillaries,
- filters
- shut of valves,
- oil separators,
- service ports and
- refrigerant regulators.

The outdoor/condensing unit shall be complete with the following safety devices:

- high pressure sensor and switch,
- low pressure sensor and switch,
- control circuit fuses,
- crankcase heaters,
- fusible plug,
- overload relay,
- inverter overload protector,
- thermal protectors for compressors and fan motors,
- over current protection for the inverter and anti-recycling timers.

There must a provision made of contacts for electrical demand shedding. The units shall have auto restart operation after a power failure without any loss of programmed settings. The units should provide refrigerant sub-cooling to ensure the liquid refrigerant does not flash when supplying to indoor units.

The condensing units shall be weatherproof and corrosion resistant and rust-proofed mild steel panels coated with baked enamel finish. The condenser coils shall be copper tubes expanded into aluminium fins to form mechanical bond, waffle louvre fin and rifled bore tube design to ensure high efficiency performance.

The compressors shall be scroll type, hermitically sealed, variable speed inverter driven and fixed speed combination to suit total capacity. In the event of a compressor failure, operate remaining compressors at proportionally reduced capacity. The microprocessor and associated control should be provided to address this. Each compressor must be fitted with a crankcase heater, high pressure safety switch and internal thermal load protector. Spring mounted vibration isolators must be provided.

The system shall be complete with branch selector boxes which will be designed to control heating/cooling mode selection of downstream indoor units. They shall consist of electronic expansion valves, subcooling heat exchanger, refrigerant control piping and electronics to facilitate the communication between unit and main processor and between branch unit and indoor/evaporator units.

The casing of the branch selector branches shall be galvanized steel with flame and heat resistant foamed polyethylene sound and thermal insulation. Its refrigerant connections shall be braze type. The branch selector units must not require any condensate drainage.

All refrigerant piping will be insulated and vapour sealed with closed cell preformed sections with taped joints; proprietary tape only will be used. The AC Contractor will ensure that the aggregate equivalent suction and liquid refrigerant lines lengths do not exceed the manufacturer's recommended allowances.

All refrigerants are to be R32. If alternatives are proposed they must have an Ozone Depleting Potential of zero.

Refrigeration piping shall be carried out in phosphoric acid deoxidised seamless copper tubing. The piping for R32 shall be as follows.

Outside Diameter (mm)	Outside Diameter (in)	Material	Wall Thickness (mm)
6.4	1/4	0	0.8
9.5	3/8	0	0.8
12.7	1/2	0	0.8
15.9	5/8	0	1.0
19.1	3/4	0	1.0
22.2	7/8	1/2H	1.2
25.4	1 1/8	1/2H	1.2
28.6	1 3/8	1/2H	1.2
31.8	1 5/8	1/2H	1.2
34.9	2 1/8	1/2H	1.3
38.1	2 5/8	1/2H	1.3

All piping shall be kept properly sealed against moisture and dirt at all times. Bends in soft drawn material shall be made with long radius using proper tools. If hard drawn piping material is used then only long radius brazed bends may be used.

The piping shall be correctly sized using the equipment manufacturer's method or software. The additional refrigerant charge shall be accurately calculated by the same method. The maximum pipe lengths shall be adhered to.

All branch connections shall be by means of "proprietary" type joints as supplied by the air conditioning equipment manufacturer. The joints shall be installed with the connections on a horizontal plane or with the direction of flow in a vertical plane.

Only synthetic oil compatible with the refrigerant shall be used to lubricate any cutting, reaming and flaring tools.

Only phosphor copper brazing rods shall be used without any flux on the piping joints. The pipe work shall be continuously purged with low pressure nitrogen during all brazing operations.

Simple purging of the refrigerant lines between the indoor and outdoor sections is not acceptable. The lines shall be correctly pressure tested with nitrogen plus a small amount of refrigerant to 3.8 MPa for R32 and left for 24 hours to ensure pressure does not drop. The piping shall then be purged using a vacuum pump to -100 kPa (for more than 2 hours) and ensure that it holds this vacuum for 1 hour to the satisfaction of the engineer. The system shall then be charged in the liquid state with the calculated amount of additional refrigerant by using an accurate charging scale (charging cylinder cannot be used). Only once the system is correctly charged shall the refrigerant valves on the outdoor units be opened.

The pipe work arrangement for multiple outdoor units shall be correctly arranged to meet the equipment manufacturer's requirement.

No ozone depleting substances are to be associated with the manufacture or composition of all thermal insulants.

Refrigerant insulation shall be of closed cell structure and be of the vapour barrier type.

Its thermal conductivity shall be not higher than 0.037 W/m °C and be fire retardant material of Class 1.

19.1 QUALITY ASSURANCE

The installation is not brand specific but performance based, on submission of the tender document the contractor must make sure that the manufacturer of the equipment has been manufacturing Heat recovery variable refrigerant volume equipment for at least five (5) years.

The installers must have received an approved training from a manufacturer.

19.2 ENERGY EFFICIENCY

The contractor shall be responsible to select the most energy efficient equipment and shall provide report on the equipment's EER and COP.

20. VENTILATION SYSTEMS

The subcontractor shall supply, install, test and commissioning fresh air and extract ventilation systems complete with ducting, sound attenuators, cowls, weather louvres, grilles, filters, extract valves, diffusers, flexible ducting, mounting equipment and electrical connections.

The subcontractor shall be required to test and balance the systems. The fan duties are indicated on the drawing.

Fans shall not exceed 1450 revs/min and each fan shall have its own isolator. Ablution extract fans shall be switched on/off by motion sensors that will be supplied by the Electrical Contractor. The subcontractor is required to provide equipment loads so that they can be incorporated to the electrical installation. The fresh air supply fans into the line shops shall be put into a timer that will run during operating hours. Suitable axial flow fans shall be provided and fan motors to be provided with corrosion protection.

The subcontractor is responsible for the electrical connections of fans to isolators that will be supplied by the Electrical Contractor.

The sound attenuators shall be selected in a manner that they will reduce noise level to a minimum noise pressure level of 55dBA.

The subcontractor is responsible for, timeously, indicating and verify builder's work e.g weather louvre holes etc.

21. DUCTING

Fresh air and extract ventilation ducting shall not be insulated. Air conditioning ducting insulation shall be 25mm sonic liner. External ducting on the supply and return side of the rooftop package unit must be cladded.

Ducting shall be manufactured from galvanized sheet steel in accordance with SANS 10173. SMACNA (Sheet Metal and Air Conditioning Contractors National Association Inc. USA, SANS 1238. All ductwork that carries air temperatures below ambient dew point shall be provided with a vapour barrier seal that complies with SANS 10173.

All MEZ flange joints shall be sealed and external joints shall be waterproofed.

Flexible ducting shall be fire retardant and shall have a class 1 fire rating. When requested, the subcontractor shall provide the certification document on the Engineer's request. Only air conditioning flexible ducting shall be insulated, insulation shall be fire retardant fibreglass. Sizes of flexible ducting shall be the same as the neck size of the diffuser connected to it. Flexible ducting shall be securely fixed onto spigots and diffuser neck by steel strapping or cable tires and duct tape wrap. Flexible ducting shall not exceed 1.2m in length.

Sizes are indicated on the drawings.

22. AIR DIFFUSION

22.1 AIR VALVES

Air valves shall be installed for abluion extraction and shall be of the plastic type. The valves shall be of the Systemair EFF exhaust type with lockable settings or approved equal. They shall be white powder coated to match the ceilings.

Sizes are indicated on the drawings.

22.2 WEATHER LOUVRES

Outside weather louvers shall be manufactured from extruded aluminium with anodised or powder coated finish. They shall also have backdraft shutters and vermin mesh.

Louvers used for outside air intakes shall be fitted with opposed blade dampers having blades no less than 100mm deep. All outside weather louvers shall be fitted with a vermin proof galvanised wire screen behind the blades. The face velocity of the louvers shall not be less than 2.5m/s at a specified flow or air quantity.

A water seal shall be created behind each weather louvre with clear silicone sealer to prevent ingress of rain water.

Sizes are indicated on the drawings.

23. DEHUMIDIFIER

Humidifier shall be MeacoDry or approved equal. It shall have continuous drainage. It shall to operational temperature range of 5°C to 35°C. The dehumidifier shall be able to maintain relative humidity of 50%RH ± 10%.

The dehumidifier shall have a guarantee of 12 months from the date of handover.

**UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT
HEATING, VENTILATION AND AIR CONDITIONING
SCHEDULE 1 : PRELIMINARY AND GENERAL**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Contractual Items				
1.1	Provision of Sureties	Sum	1		
1.2	Insurances	Sum	1		
1.3	Third Party Insurance	Sum	1		
1.4	Guarantee of the Works	Sum	1		
1.5	Provide test results	Sum	1		
1.6	Provision of Record Drawings	Sum	1		
2	Fixed Cost Items				
2.1	Site Establishment/Removal	Sum	1		
2.2	Other (Specify).....				
	(i).....	Sum			
	(ii).....	Sum			
	(iii).....	Sum			
	(iv).....	Sum			
	(v).....	Sum			
3	Time Related Items				
3.1	Supervision	Sum	1		
3.2	Project Administration	Sum	1		
3.3	Other Overheads (Specify)				
	(i).....	Sum			
	(ii).....	Sum			
	(iii).....	Sum			
	(iv).....	Sum			
	(v).....	Sum			
4	Commissioning				
4.1	Testing and Commissioning	Sum	1		
5	Training				
5.1	Training of staff on the operation and daily maintenance of the installed equipment under this contract	Sum	1		
	NOTE P&G costs for time related items shall be based on the Contract period specified in the Form of Tender				
TOTAL CARRIED FORWARD TO SUMMARY					

UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT
 HEATING, VENTILATION AND AIR CONDITIONING
 SCHEDULE 2 : HVAC INSTALLATION

ITEM	SPEC REF	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
2		Supply, deliver, install, test and commission equipment as specified including all fixtures, and all required equipment to successfully complete the installation,					
2.1		VRV SYSTEM					
2.1.1		VRV Condensing Unit - Heat Recovery Cooling Capacity: 55.0 kW Power input : 40A, 3-Ph	SUM	2			
2.1.2		Anti-corrosion treatment	Sum	1			
		Ceiling Cassette Inveter AC Units					
2.1.2		1.7 kW Nominal Cooling	each	6			
2.1.3		2.2 kW Nominal Cooling	each	3			
2.1.4		2.8 kW Nominal Cooling	each	3			
2.1.5		3.6 kW Nominal Cooling	each	2			
2.1.6		4.5 kW Nominal Cooling	each	1			
2.1.7		5.6 kW Nominal Cooling	each	2			
2.1.8		7.1 kW Nominal Cooling	each	3			
2.1.9		11.2 kW Nominal Cooling	each	4			
2.1.10		Wired remote controller with holder and reciever	each	24			
		Dehumidifier					
2.1.10		Dehumifier c/w continuous drainage (MaecoDry Arete One 25L or equal)	each	4			
2.2		FRESH AIR SUPPLY DUCTWORK					
		Unless otherwise specified all fresh air supply sheet metal ductwork shall be supplied without insulation. All duckwork shall be c/w all the necessary galvanized rod and angle					
2.2.1		1000 x 1000 mm Duct	m	1,5			
2.2.2		800 x 800 mm Duct	m	1			
2.2.3		800 x 400 mm Duct	m	15			
2.2.4		500 x 300 mm Duct	m	20			
2.2.5		450 x 300 mm Duct	m	5			
2.2.6		350 x 300 mm Duct	m	5			
2.2.7		300 x 300 mm Duct	m	8			
2.2.8		300 x 250 mm Duct	m	8			
2.2.9		250 x 300 mm Duct	m	10			
2.2.10		150 x 200 mm Duct	m	15			
2.2.11		150 x 150 mm Duct	m	1			
2.2.12		200mm diameter	m	35			
2.2.13		150mm diameter	m	100			
2.2.14		200mm diameter flexible (uninsulated)	m	12			
2.2.15		150mm diameter flexible (uninsulated)	m	50			
2.3		EXTRACTION DUCTWORK					
		Unless otherwise specified all ventilation sheet metal ductwork shall be supplied without insulation. All duckwork shall be c/w all the necessary galvanized rod and angle					
2.3.1		700 x 300 mm Duct	m	5			
2.3.2		500 x 250 mm Duct	m	15			
2.3.3		500 x 500 mm Duct	m	1			
2.3.4		450 x 200 mm Duct	m	10			
2.3.5		350 x 250 mm Duct	m	10			
2.3.6		300 x 200 mm Duct	m	15			
2.3.7		200 x 200 mm Duct	m	20			
2.3.8		150 x 200 mm Duct	m	5			
2.3.9		150 x 150 mm Duct	m	20			
2.3.10		150mm diameter flexible (uninsulated)	m	30			
2.4		TRANSITION PIECES					
2.4.1		800x400 mm to 300x300mm	No.	1			
2.4.2		500x300 mm to 450x300mm	No.	1			
2.4.3		450x300 mm to 350x300mm	No.	1			
2.4.4		350x300 mm to 250x300mm	No.	1			
2.4.5		700x300 mm to 500x250mm	No.	1			
2.4.6		500x250 mm to 300x200mm	No.	2			
2.4.7		300x200 mm to 200x200mm	No.	1			
2.4.8		300x200 mm to 150x150mm	No.	1			
2.4.9		350x250 mm to Ø 200 mm	No.	1			
TOTAL CARRIED FORWARD TO NEXT PAGE							

SCHEDULE 2 : HVAC INSTALLATION (Continues...)

				TOTAL BROUGHT FORWARD		
2.5	BENDS & FITTINGS					
2.5.1	800 x 400 mm 90 degree bend	No.	1			
2.5.2	700 x 300 mm 90 degree bend	No.	1			
2.5.3	500 x 250 mm 90 degree bend	No.	1			
2.5.4	200 x 200 mm 90 degree bend	No.	2			
2.5.5	150 x 150 mm 90 degree bend	No.	1			
2.5.6	250 x 300 mm - Stop End	No.	2			
2.5.7	200 x 200 mm - Stop End	No.	2			
2.5.8	150 x 200 mm - Stop End	No.	1			
2.5.9	Ø200 mm 90 degree bend	No.	1			
2.6	FANS					
	Supply and install low profile mixed flow, sound absorbent fan c/w with all supporting brackets and canvas collars , for continous duty.					
2.6.1	Ø 800 In-line Duct Supply Fan c/w Upstream and Downstream Attenuators 2335 l/s @300 Pa	No.	1			
2.6.2	Ø500 In-line Duct Extract Fan c/w Upstream and Downstream Attenuators 1320 l/s @ 150Pa	No.	1			
2.6.3	Ø500 Wall Mounted Extract Fan 180 l/s @ 80Pa	No.	2			
2.7	DIFFUSERS, GRILLES & VALVES					
2.7.1	150 diameter Plastic Exhaust Valve	No.	18			
2.7.2	150 diameter Plastic Supply Valve	No.	2			
2.7.3	500x500 weather louvre	No.	2			
2.7.4	1000x1000 weather louvre with filter media	No.	1			
2.7.5	1000x1000 - 50mm Washable Pleated Panel Filter c/w Filter Box	No.	1			
2.7.6	500x500 hinged weather louvre	No.	2			
2.7.7	600x600, Ø150 mm neck Extract Grilles	No.	2			
2.7.8	Non-return damper - Ø150mm	No.	2			
2.7.9	Non-return damper - 350x250	No.	1			
2.7.10	500x500 weather louvre	No.	8			
2.8	BRANCH SELECTOR UNITS					
	Heat recovery branch selector unit coupled with all controls and supporting brackets					
2.8.1	Heat Recovery Branch Selector Unit - 6 Port	No	2			
2.8.2	Heat Recovery Branch Selector Unit - 8 Port	No	2			
2.9	REFRIGERANT					
	Supply, delivery to site and installation of refrigeration grade copper pipework to specification including cutting, reaming and soldering (plain ends) and closed cell pipe insulation.					
2.9.1	Grade xxx copper piping ø6.35mm	m	30			
2.9.2	Grade xxx copper piping ø9.52mm	m	20			
2.9.3	Grade xxx copper piping ø12.7mm	m	70			
2.9.4	Grade xxx copper piping ø15.88mm	m	105			
2.9.5	Grade xxx copper piping ø19.05mm	m	75			
2.9.6	Grade xxx copper piping ø22.2mm	m	30			
2.9.7	Grade xxx copper piping ø28.58mm	m	20			
2.9.8	Grade xxx copper piping ø34.93mm	m	10			
2.9.9	Grade xxx copper piping ø41.28mm	m	10			
	Heavy Duty Cable Tray for Fixing of Refrigeration Pipe Bundles (including supports)					
2.9.10	100 mm wide	m	90			
2.9.11	250 mm wide	m	60			
2.9.12	Outdoor Unit Multi connection piping kit for 2 modules	no	2			
2.10	DRAIN PIPE WORK					
	Supply, delivery to site and installation of CL 6 UPVC pipework and fittings including cutting, reaming and solvent welding (plain ends) and supports					
2.10.1	16 mm dia	m	80			
2.10.2	32mm dia	m	120			
2.10.3	32 dia 90 or 45 deg bend	no	25			
2.10.4	32 dia tee	no	25			
	32 dia hose end coupling	no	10			
TOTAL CARRIED FORWARD TO SUMMARY						

**UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT
HEATING, VENTILATION AND AIR CONDITIONING
SCHEDULE 3 : TEST DAYWORKS**

<u>ITEM NO</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>MATERIAL RATE</u>	<u>LABOUR RATE</u>	<u>TOTAL AMOUNT</u>
3.1		Dayworks for unforeseen items to be approved by the Engineer prior to implementation					
3.1.1	n/a	Qualified Artisan	Hrs	40			
3.1.2	n/a	Semi-skilled labourer	Hrs	80			
3.1.3	n/a	Labourer	Hrs	160			
3.2		Snag, test, Balance, commissioning of the following:					
3.2.1		Outdoor package unit	sum	1			
3.2.2		VRV System indoor	sum	1			
3.2.3		Extract fans	sum	1			
3.2.4		Fresh air fans	sum	1			
TOTAL CARRIED FORWARD TO SUMMARY							

**UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT
HEATING, VENTILATION AND AIR CONDITIONING
SCHEDULE 4 :REFRIGERANT PIPING**

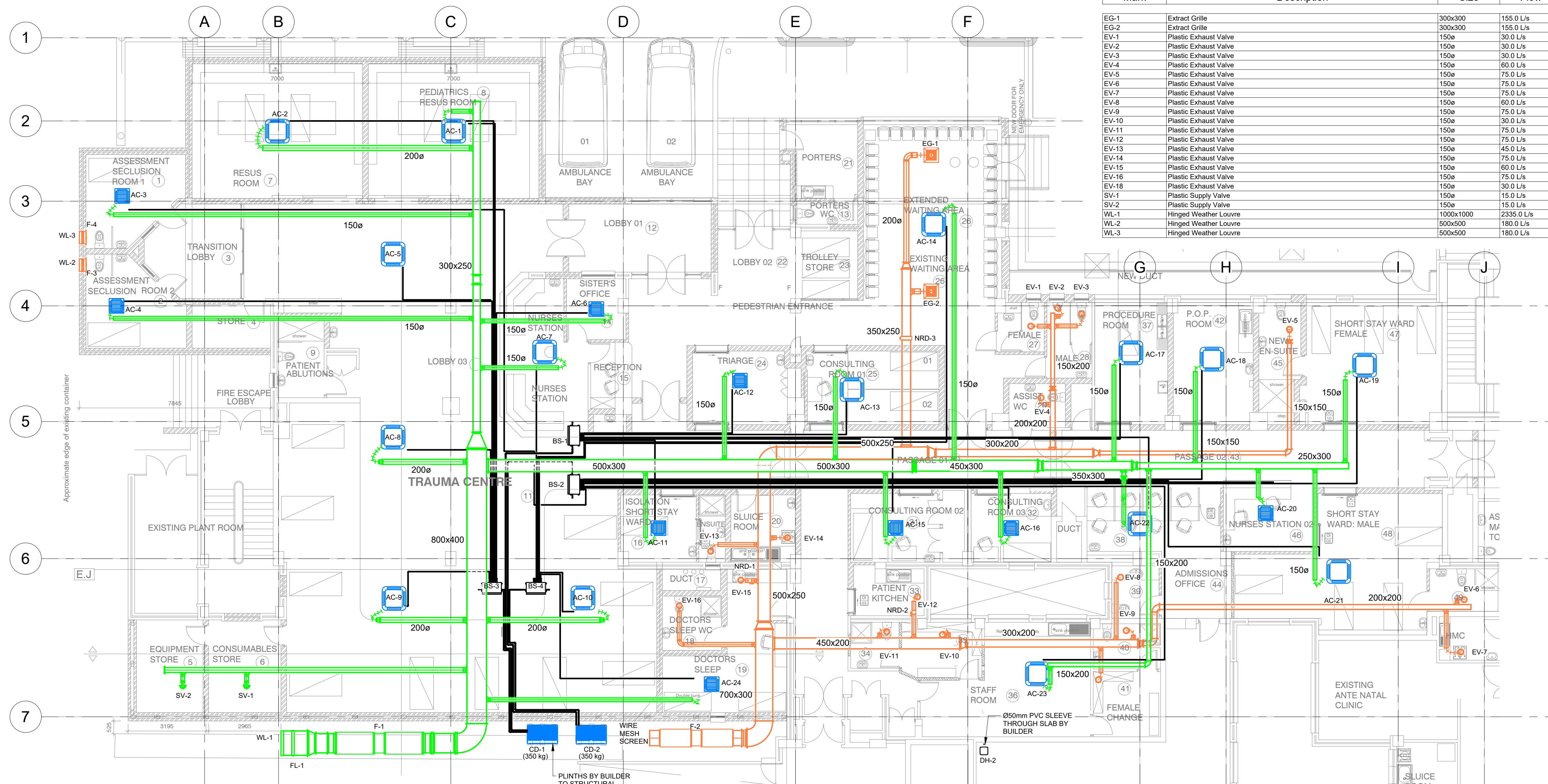
<u>ITEM NO</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>MATERIAL RATE</u>	<u>LABOUR RATE</u>	<u>TOTAL AMOUNT</u>
4.1		For purposes of measuring extra over to piping and fittings measured under the system Bills. Supply and install air conditioning gas piping and fittings for R401A system					
4.1.1		Grade xxx copper piping Ø6.35mm	m	1			
4.1.2		Grade xxx copper piping Ø9.52mm	m	1			
4.1.3		Grade xxx copper piping Ø12.7mm	m	1			
4.1.4		Grade xxx copper piping Ø15.88mm	m	1			
4.1.5		Grade xxx copper piping Ø19.05mm	m	1			
4.1.6		Grade xxx copper piping Ø22.2mm	m	1			
4.1.7		Grade xxx copper piping Ø28.58mm	m	1			
4.1.8		Grade xxx copper piping Ø34.93mm	m	1			
4.1.9		Grade xxx copper piping Ø41.28mm	m	1			
4.2		Gas piping insulation for pipes listed below					
4.2.1		Ø6.35mm	m	1			
4.2.2		Ø9.52mm	m	1			
4.2.3		Ø12.7mm	m	1			
4.2.4		Ø15.88mm	m	1			
4.2.5		Ø19.05mm	m	1			
4.2.6		Ø22.2mm	m	1			
4.2.7		Ø28.58mm	m	1			
4.2.8		Ø34.93mm	m	1			
4.2.9		Ø41.28mm	m	1			
4.3		Supply and install air conditioning gas piping and fittings - elbows					
4.3.1	6,1	Ø6.35mm ID	Unit	1			
4.3.2	6,1	Ø9.52mm ID	Unit	1			
4.3.3	6,1	Ø12.7mm ID	Unit	1			
4.3.4	6,1	Ø15.88mm ID	Unit	1			
4.3.5	6,1	Ø19.5mm ID	Unit	1			
4.3.6	6,1	Ø22.2mm ID	Unit	1			
4.3.7	6,1	Ø28.58mm ID	Unit	1			
4.3.8	6,1	Ø34.93mm ID	Unit	1			
4.3.9	6,1	Ø41.28mm ID	Unit	1			
4.4		Supply and install R410A refrigerant gas	kg	1			
4.5		Supply and install joint kits	Unit	1			
CARRY FORWARD TO SUMMARY PAGE							RATE ONLY

**UITENHAGE PROVINCIAL HOSPITAL - CASUALTY UNIT
HEATING, VENTILATION AND AIR CONDITIONING
FINAL SUMMARY**

ITEM No.	DESCRIPTION		TOTAL
1 2 3 4	PRELIMINARIES AND GENERAL HVAC INSTALLATION TEST DAYWORKS AC PIPES AND FITTINGS SUBTOTAL(Excl. VAT)		 RATES ONLY
TOTAL TRANSFERRED TO SECTION 2 BILL No.18 ITEM 1 OF BILLS OF QUANTITIES			

GENERAL NOTES

Mark	Description	Size	Flow
EG-1	Extract Grille	300x300	155.0 L/s
EG-2	Extract Grille	300x300	155.0 L/s
EV-1	Plastic Exhaust Valve	150ø	30.0 L/s
EV-2	Plastic Exhaust Valve	150ø	30.0 L/s
EV-3	Plastic Exhaust Valve	150ø	30.0 L/s
EV-4	Plastic Exhaust Valve	150ø	30.0 L/s
EV-5	Plastic Exhaust Valve	150ø	60.0 L/s
EV-6	Plastic Exhaust Valve	150ø	75.0 L/s
EV-7	Plastic Exhaust Valve	150ø	75.0 L/s
EV-8	Plastic Exhaust Valve	150ø	60.0 L/s
EV-9	Plastic Exhaust Valve	150ø	75.0 L/s
EV-10	Plastic Exhaust Valve	150ø	30.0 L/s
EV-11	Plastic Exhaust Valve	150ø	75.0 L/s
EV-12	Plastic Exhaust Valve	150ø	75.0 L/s
EV-13	Plastic Exhaust Valve	150ø	45.0 L/s
EV-14	Plastic Exhaust Valve	150ø	75.0 L/s
EV-15	Plastic Exhaust Valve	150ø	60.0 L/s
EV-16	Plastic Exhaust Valve	150ø	75.0 L/s
EV-18	Plastic Exhaust Valve	150ø	30.0 L/s
SV-1	Plastic Supply Valve	150ø	15.0 L/s
SV-2	Plastic Supply Valve	150ø	15.0 L/s
WL-1	Hinged Weather Louvre	1000x1000	2335.0 L/s
WL-2	Hinged Weather Louvre	500x500	180.0 L/s
WL-3	Hinged Weather Louvre	500x500	180.0 L/s



Ground Floor
SCALE 1:100

Mark	Description	Duty/Capacity	Area Serving	Power Requirements
AC-1	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	7.1 kW	RESUS ROOM	16 A, 1-ph
AC-2	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	7.1 kW	RESUS ROOM	16 A, 1-ph
AC-3	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	2.2 kW	ASSESSMENT SECLUSION ROOM 1	16 A, 1-ph
AC-4	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	2.2 kW	ASSESSMENT SECLUSION ROOM 2	16 A, 1-ph
AC-5	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	11.2 kW	TRAUMA CENTRE	16 A, 1-ph
AC-6	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	1.7 kW	TRAUMA CENTRE	16 A, 1-ph
AC-7	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	3.6 kW	NURSES STATION	16 A, 1-ph
AC-8	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	11.2 kW	TRAUMA CENTRE	16 A, 1-ph
AC-9	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	11.2 kW	TRAUMA CENTRE	16 A, 1-ph
AC-10	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	11.2 kW	TRAUMA CENTRE	16 A, 1-ph
AC-11	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	1.7 kW	TRAUMA CENTRE	16 A, 1-ph
AC-12	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	2.2 kW	TRAUMA CENTRE	16 A, 1-ph
AC-13	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.8 kW	TRAUMA CENTRE	16 A, 1-ph
AC-14	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	7.1 kW	EXTENDED WAITING AREA	16 A, 1-ph
AC-15	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	1.7 kW	EXTENDED WAITING AREA	16 A, 1-ph
AC-16	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	1.7 kW	EXTENDED WAITING AREA	16 A, 1-ph
AC-17	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.8 kW	EXTENDED WAITING AREA	16 A, 1-ph
AC-18	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.8 kW	EXTENDED WAITING AREA	16 A, 1-ph
AC-19	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	5.6 kW	SHORT STAY WARD FEMALE	16 A, 1-ph
AC-20	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	1.7 kW	NURSES STATION 02	16 A, 1-ph
AC-21	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	5.6 kW	NURSES STATION 02	16 A, 1-ph
AC-22	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	4.5 kW	NURSES STATION 02	16 A, 1-ph
AC-23	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	3.6 kW	NURSES STATION 02	16 A, 1-ph
AC-24	Ceiling Mini Cassette Inverter AC Unit c/w Wired Remote Controller	1.7 kW	NURSES STATION 02	16 A, 1-ph
BS-1	Heat Recovery Branch Selector Unit - 6 Port	6-Port	TRAUMA CENTRE	16 A, 1-ph
BS-2	Heat Recovery Branch Selector Unit - 8 Port	8-Port	TRAUMA CENTRE	16 A, 1-ph
BS-3	Heat Recovery Branch Selector Unit - 6 Port	6-Port	TRAUMA CENTRE	16 A, 1-ph
BS-4	Heat Recovery Branch Selector Unit - 6 Port	6-Port	TRAUMA CENTRE	16 A, 1-ph
CD-1	VRV Condensing Unit - Heat Recovery	55.0 kW	NEW EXTENSION	40 A, 3-ph
CD-2	VRV Condensing Unit - Heat Recovery	55.0 kW	NEW EXTENSION	40 A, 3-ph
DH-1	Dehumidifier c/w continuous drain	25L	NEW EXTENSION	0.4 kW, 1-ph
DH-2	Dehumidifier c/w continuous drain	25L	NEW EXTENSION	0.4 kW, 1-ph
DH-3	Dehumidifier c/w continuous drain	25L	NEW EXTENSION	0.4 kW, 1-ph
DH-4	Dehumidifier c/w continuous drain	25L	NEW EXTENSION	0.4 kW, 1-ph
F-1	Ø 800 In-line Duct Supply Fan c/w Upstream and Downstream Attenuators	2365 l/s @ 300 Pa	NEW EXTENSION	1.6 kW, 3-ph
F-2	Ø 500 In-line Duct Extract Fan c/w Upstream and Downstream Attenuators	1380 l/s @ 150Pa	NEW EXTENSION	0.4 kW, 3-ph
F-3	Ø 500 Wall Mounted Extract Fan	180 l/s @ 80Pa	NEW EXTENSION	0.3 kW, 1-ph
F-4	Ø 500 Wall Mounted Extract Fan	180 l/s @ 80Pa	NEW EXTENSION	0.3 kW, 1-ph

Mark	Description	Size (mm)
FL-1	50mm Washable Pleated Panel Filter c/w Filter Box	1000x1000
NRD-1	Non-Return Damper - Round	Ø150
NRD-2	Non-Return Damper - Round	Ø150
NRD-3	Non-Return Damper - Rectangular	350x250

T0	B.M	Issued for tender	23/01/2024
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN	A. ANGALO		15/09/2023
DESIGNED	A. ANGALO		15/09/2023
CHECKED	A. MTAMBEKI		15/09/2023
APPROVED			
	PR REGISTRATION NO. 200970291	DATE	23/01/2024

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CLIENT

 Province of the EASTERN CAPE HEALTH

PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL

DRAWING TITLE
MECHANICAL INSTALLATION CASUALTY UNIT HVAC LAYOUT

SCALE	SHEET SET	SHEET SIZE
1:100	SHEET 1 OF 1	A1
DRAWING No.	REVISION	
1746-6-HVAC-01	T0	

P:\PE\1746-6 Uitenhage Provincial Hospital\04 Design\6 Drawings\13 Mechanical\01 Working Drawings\Casualty Unit\1746-6 HVAC MECH.rvt 2024/01/23 11:38:39

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 19</u>				
<u>GLAZING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC (CPAP Work Group No 150)</u>				
<u>Polished plate glass mirror with bevelled edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork:</u>				
1	No	19		
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 2				
Bill No. 19				
Glazing				

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>CASUALTY AND OPD</u>				
<u>Bill No. 20</u>				
<u>PAINTWORK</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
<u>SABS Specifications</u>				
Matt or eggshell decorative paint for interior works : SABS 515				
High gloss enamel paint : SABS 630 Grade I				
Oil gloss enamel paint : SABS 631				
Primers for wood for external work : SABS 678 Type I				
Primers for wood for internal work : SABS 678 Type III				
Zink chromate primers for steel : SABS 679 Type I				
Undercoats for paints (except emulsion paint) : SABS 681 Type I				
Aluminium paint : SABS 682 Grade II				
Roof paints : SABS 683 Type B (Oil) SABS 940 (Emulsion)				
Structural steel paint : SABS 684 Type B				
Wash primer (metal etch) : SABS 723				
Varnish for interior use : SABS 887 Type I				
Emulsion paints : SABS 1586				
<u>ON BRICKS, STONWORK OR QUARRY TILES</u> <u>(CPAP Work Group No 152)</u>				
<u>Prepare surfaces and remove all loose material, builder's plaster etc with mortar lift and weak spirits of salts (or any other suitable means), clean with high pressure cleaner, dry and apply two coats of approved brick dressing:</u>				
1	On exterior recessed pointed existing face brick walls.	m ²	55	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 20 Paintwork				

Item	Unit	Quantity	Rate	Amount
<p><u>ON FLOATED PLASTER (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat 'Masonry Plaster Primer' (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats approved professional hygiene low sheen paint (THL 1000) pastel base acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
2 On interior walls.	m ²	471		
<p><u>ON TEXTURED PLASTER (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants and apply one coat 'Masonry Plaster Primer (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats extremely durable UV-resistant water based mica reinforced fine textured acrylic paint in strict accordance with manufacturer's instructions:</u></p>				
3 On exterior walls in patterned multi - colours.	m ²	228		
<p><u>ON SMOOTH CONCRETE (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat 'Masonry Plaster Primer (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats superior quality acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
4 On ceilings and beams.	m ²	32		
5 On exterior cills.	m ²	6		
<p><u>ON ROUGH CONCRETE (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat 'Masonry Plaster Primer (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats superior quality acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
6 On walls and columns.	m ²	190		
<p><u>ON PLASTER BOARD (CPAP Work Group No 152)</u> <u>One coat SABS approved universal undercoat and two coats superior quality white acrylic washable PVA paint in strict accordance with manufacturer's instructions:</u></p>				
7 On partitions.	m ²	42		
8 On ceilings and bulkheads.	m ²	105		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 20 Paintwork				

Item	Unit	Quantity	Rate	Amount
<u>ON FIBRE-CEMENT, ETC (CPAP Work Group No 152)</u>				
<u>One coat alkali resistant primer, one coat SABS approved universal undercoat and two coats superior quality acrylic emulsion paint in strict accordance with manufacturer's instructions:</u>				
9	m ²	13		
<u>ON WOOD, WOOD BOARD (CPAP Work Group No 152)</u>				
<u>Stop, fill, sand down and prepare wood surfaces and apply one coat wood primer, one coat SABS approved universal undercoat and two coats polyurethane enamel paint in strict accordance with manufacturer's instructions:</u>				
10	m ²	42		
11	m	14		
<u>Stop, fill, sand down and prepare wood surfaces and apply one coat alkali resistant primer, one coat SABS approved universal undercoat and two coats superior quality acrylic emulsion paint in strict accordance with manufacturer's instructions:</u>				
12	m ²	9		
<u>PREPARATORY WORK TO PREVIOUSLY PAINTED SURFACES</u>				
<u>Previously painted plastered surfaces:</u>				
Surfaces shall be thoroughly washed down to remove dirt and other contaminants and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with 'Polycell Mendall 90' or equal approved or 'Polycell Polyfilla Exterior' or equal approved filler, and sanded smooth. In the case of previously limewashed surfaces, completely remove all limewash if possible or at least wire brush and scrape down to achieve a 'grey state' exposure of the substrate and apply filler as indicated above.				
<u>Previously painted metal surfaces:</u>				
Surfaces shall be thoroughly rubbed and cleaned down to remove dirt and other contaminants and sanded lightly to provide a key for subsequent coats. Blistered or peeling paint shall be completely removed down to bare metal and any rust encountered shall be removed and bare metal areas cleaned, washed with Sugar Soap and spot primed with 'Namelcote Synthetic Metal Primer' or equal approved.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 2 Bill No. 20 Paintwork				

Item	Unit	Quantity	Rate	Amount
<p><u>Previously painted galvanised metal surfaces:</u> Surfaces shall be thoroughly rubbed and cleaned down to remove dirt and other contaminants and sanded lightly to provide a key for subsequent coats. Blistered or peeling paint shall be completely removed down to bare metal and any rust encountered shall be removed and bare metal areas cleaned with 'Plascon Galvanised Iron Cleaner' and spot primed with 'Galvogrip Metal Primer'.</p> <p><u>Previously painted wood surfaces:</u> Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with a filler as described and sanded smooth. In the case of previously varnished surfaces, all existing varnish must be thoroughly sanded off before new coats are applied.</p> <p><u>ON FLOATED PLASTER (CPAP Work Group No 152)</u> <u>Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or weak spirits of salts, open up cracks and make good with 'approved exterior filla' sanded smooth, apply one coat 'Masonry Plaster Primer' (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats approved professional hygiene low sheen paint (THL 1000) pastel base acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>	m ²	406		
13 On interior walls.				
TOTAL CARRIED TO BILL SUMMARY			R	
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Amount

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PAINTWORK
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Section No. 2

Bill No. 20

Paintwork

Item	Amount
<p><u>SECTION NO. 2</u></p> <p><u>CASUALTY AND OPD</u></p> <p><u>Bill No. 21</u></p> <p><u>PROVISIONAL SUMS</u></p> <p><u>PROVISIONAL AMOUNTS</u></p> <p>1.The following sums and amounts are NET.</p> <p>2. Under no circumstances may any Provisional Sum be extended at an amount lower than the amount given in the bill.</p> <p>3. Unless a specific percentage mark-up for Attendance is indicated in a rate column, the amount priced by the Contractor for Attendance against each Provisional Sum shall be deemed to be the Lump Sum and shall not be adjusted unless the scope of the sub contract varies significantly.</p> <p>4. Provisional Sums contained here-in may be omitted or reduced at the employer's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reductions or omissions or any discount, or percentage relating to Provisional Sums or PC amounts or any loss of profit related thereto.</p> <p>5. The following Sub-Contract amounts are for work to be carried out by Selected Sub- Contractors in terms of clause 14 or 15 of the Principal Building Agreement:</p> <p><u>LOOSE FURNITURE AND EQUIPMENT</u></p> <p><u>Loose Furniture and Equipment:</u></p> <p>1 Provide the amount of R 2 500 000.00 (Two Million Five Hundred Thousand Rands) for Loose Furniture and Equipment.</p> <p>2 Profit on above item.</p> <p>3 Attendance on ditto.</p> <p><u>SIGNAGE</u></p> <p><u>Signage:</u></p> <p>4 Provide the amount of R 300 000.00 (Three Hundred Thousand Rands) for Signage.</p> <p>5 Profit on above item.</p> <p>6 Attendance on ditto.</p>	
Item	2 500 000 00
Item	
Item	
Item	300 000 00
Item	
Item	
R	<hr/> <hr/>
<p>TOTAL CARRIED TO SECTION SUMMARY</p> <p>Section No. 2</p> <p>Bill No. 21</p> <p>Provisional Sums</p>	

Amount

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CASUALTY AND OPD
SECTION SUMMARY

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TOTAL CARRIED TO FINAL SUMMARY

R

Section No. 2
SECTION SUMMARY

SECTION NO. 3

72-HOUR ASSESSMENT AREA

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u> <u>72-HOUR ASSESSMENT AREA</u> <u>Bill No. 1</u> <u>ALTERATIONS</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent. <u>Cart Away:</u> Prices are to include for carting away from site all materials not specifically mentioned as being stored on site for re-use or handed over to the Employer and all rubbish, debris, etc., arising from the alterations, etc., and for making good all work damaged or disturbed to the approval of the Principal Agent. <u>View site:</u> Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained. <u>Explosives:</u> No explosives whatsoever may be used for demolition purposes unless otherwise stated. <u>General:</u> The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 1 Alterations</p>			R	

Item	Unit	Quantity	Rate	Amount
<p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent.</p>				
<p>Doors, fanlights, fittings, frames, linings, etc. which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehangng, cramping up, re-wedging as required and making good cramps, dowels, etc., and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately</p>				
<p>Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc.</p>				
<p>Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing.</p>				
<p>With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc., shall be levelled and prepared for raising of brickwork.</p>				
<p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary.</p>				
<p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)</p>				
<p><u>Removal of asbestos containing material:</u></p>				
<p>Should the principal contractor not be suitably registered to remove asbestos, a specialist asbestos removal contractor needs to be appointed. The specialist contractor will be required to provide an Asbestos Plan of Work compiled by the AIA which is to be submitted to the DoL for notification of asbestos work. On completion of the asbestos removal, the specialist contractor is to provide an Asbestos Clearance Certificate.</p>				
<p><u>TEMPORARY BARRICADES, SCREENS, ETC (CPAP Work Group 102)</u></p>				
<p><u>Temporary barricades, screens, roofs, etc including removal:</u></p>				
<p>1 Security barrier 3 600mm high formed of two 18mm shutterboard with insulation lining securely fixed to 50 x 75mm softwood framework corners, ends, etc.</p>	m	24		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 3 Bill No. 1 Alterations</p>				

Item	Unit	Quantity	Rate	Amount
2 Taking down security barrier 3 600mm high formed of two 18mm shutterboard with insulation lining securely fixed to 50 x 75mm softwood framework corners, ends, etc. and re-erect in new position.	m	24		
<u>REMOVAL OF EXISTING WORK (CPAP Work Group No. 102)</u>				
<u>Breaking up and removing unreinforced concrete:</u>				
3 Steps.	m ³	2		
4 100mm Thick aprons.	m ²	41		
<u>Breaking up and removing reinforced concrete including cutting off and removing reinforcement:</u>				
5 25mm Thick walkways.	m ²	404		
6 125mm Thick ramps.	m ²	8		
<u>Breaking down and removing brickwork etc:</u>				
7 Half brick walls.	m ²	177		
8 One brick walls.	m ²	7		
9 270mm Hollow walls of two half brick skins.	m ²	94		
<u>Carefully breaking down, removing, chipping off mortar and storing facebrick work for re-use elsewhere:</u>				
10 Extra over brickwork for facebrick work.	m ²	103		
<u>Taking out and removing doors, windows, etc from brickwork to be demolished:</u>				
11 Fire hose reel and housing size 1350mm wide x 340mm deep x 1000mm high.	No	1		
12 Servicing hatch and frame 400mm x 600mm high overall from half brick wall.	No	1		
13 Timber single door and frame 810mm x 2 030mm high overall from half brick wall.	No	13		
14 Steel double gate and frame 1 790mm x 2 200mm high overall from one brick wall.	No	1		
<u>Taking out and removing electrical goods from brickwork to be demolished:</u>				
15 Electrical distribution board size 800mm long x 120mm deep x 1 000mm high.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
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Alterations				

Item	Unit	Quantity	Rate	Amount
<u>Taking out and removing doors, windows, etc., including thresholds, sills, etc. including building in new door frame into existing openings and making good finishes with internal cement plaster on both sides and onto reveals, (making good paintwork and new frame elsewhere):</u>				
16	Timber single door and steel frame 813mm x 2 032mm high from half brick wall.	No	6	
17	Timber single door and steel frame 813mm x 2 032mm high from one brick wall.	No	3	
18	Timber double door and steel frame 1 511mm x 2 032mm high from one brick wall.	No	2	
<u>Taking out and removing doors, windows, etc., including thresholds, sills, etc. including building in new aluminium windows into existing openings and making good finishes with internal cement plaster on both sides and onto reveals, (making good paintwork and new windows elsewhere):</u>				
19	Glazed steel window 800mm x 1 390mm high from 270mm cavity wall. W04	No	2	
20	Glazed steel window 900mm x 1 390mm high from 270mm cavity wall. W11	No	1	
21	Glazed steel window 1 430mm x 1 730mm high from 270mm cavity wall. W05	No	2	
22	Glazed steel window 1 450mm x 1 135mm high from 270mm cavity wall. W07	No	3	
23	Glazed steel window 1 490mm x 1 220mm high from 270mm cavity wall. W09	No	6	
<u>Taking out and removing doors, windows, security screen, etc. including thresholds, sills, etc., including making good cement plaster on both sides and into reveals (building up openings and making good paintwork elsewhere):</u>				
24	Glazed steel window approximately size 1 030mm x 1 400mm high from 270mm cavity wall.	No	1	
<u>Taking out and removing doors, windows, security screen, etc. including thresholds, sills, etc and building up openings in brick walls, including making good face brickwork on one side and cement plaster on other side (making good paintwork elsewhere):</u>				
25	Glazed steel window approximately size 1 000mm x 1 100mm high from 270mm cavity wall.	No	2	
TOTAL CARRIED TO BILL SUMMARY				
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			R	

Item	Unit	Quantity	Rate	Amount
26	Glazed steel window approximately size 1 490mm x 1 020mm high from 270mm cavity wall.	No	2	
27	Glazed steel window approximately size 1 490mm x 1 220mm high from 270mm cavity wall.	No	2	
<u>Taking down and removing doors, windows, etc including thresholds, sills, etc. including making good to cement plaster on both sides and onto reveals, (making good paintwork elsewhere):</u>				
28	Aluminium double door with fanlight approximately size 1 640mm x 2 475mm high overall.	No	1	
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc:</u>				
29	Carefully take off existing asbestos containing material 'Big Six' roof covering including screws, nails, etc and prepare timber purlins, trusses, etc., to receive new roof covering (elsewhere) and cart away the asbestos containing material to an accredited disposal site for asbestos products including submission of disposal certificate, all by certified specialist asbestos removal contractor and in accordance with current legislation.	m ²	584	
30	Carefully take off and remove existing barge and fascia boards with asbestos containing material, and prepare to receive new fascia and barge boards (elsewhere measured) and cart away the asbestos containing material to an accredited disposal site for asbestos products including submission of disposal certificate, all by certified specialist asbestos removal contractor and in accordance with current legislation.	m	144	
31	Carefully take off and remove existing gutters with asbestos containing material, and prepare to receive new aluminium gutters (elsewhere measured) and cart away the asbestos containing material to an accredited disposal site for asbestos products including submission of disposal certificate, all by certified specialist asbestos removal contractor and in accordance with current legislation.	m	90	
32	Carefully take off and remove existing 75mm diameter downpipe with asbestos containing material, and prepare to receive new aluminium downpipes (elsewhere measured) and cart away the asbestos containing material to an accredited disposal site for asbestos products including submission of disposal certificate, all by certified specialist asbestos removal contractor and in accordance with current legislation.	m	38	
33	Gypsum plasterboard ceilings including timber brandering, etc.	m ²	153	
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
34 Acoustic tile suspended ceilings including suspension grid, hangers, etc.	m ²	239		
35 Composite metal panel ceiling.	m ²	206		
<u>Taking out and removing sundry joinery work, fittings, etc:</u>				
36 Timber skirtings.	m	456		
37 Timber slatted seating bench size 1 000mm long x 300mm wide.	No	4		
38 Timber wall shelf comprising of five shelves size 2 500mm long x 400mm wide.	No	1		
39 Timber floor cupboard 800mm long x 450mm wide x 1 800mm high.	No	1		
40 Timber floor cupboard 1 200mm long x 450mm wide x 1 800mm high.	No	1		
41 Timber floor cupboard 1 482mm long x 450mm wide x 1 800mm high.	No	1		
42 Timber floor cupboard 4 000mm long x 600mm wide x 800mm high.	No	1		
43 Timber sink cupboard 2 320mm long x 600mm wide x 1 000mm high, including sink and disconnecting waste pipe.	No	2		
44 Timber sink cupboard 4 675mm long x 600mm wide x 1 000mm high, including sink and disconnecting waste pipe.	No	1		
45 Timber reception desk size 6 340mm long x 600mm wide x 1 500mm high.	No	1		
<u>Taking out and removing sundry joinery work, setting aside for re-use and later refixing in new position:</u>				
46 Roof construction of double pitched roof over female ward, as shaped on plan overall size 10,82m x 10,90m and 2,68m high overall with 650mm overhanging eaves on both sides, including wall plates, trusses, purlins, splayed purlins, jack rafters, permanent bracing, loose connectors, hurricane clips or 5mm galvanised steel shoes and hangers as detailed on drawing no MDA477(B) UPH/72 HR ASSESSMENT-201 Demolition plan.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
47	No	1		
<p>Roof construction of double pitched roof over male ward, as shaped on plan overall size 13,62m x 10,90m and 2,68m high overall with 650mm overhanging eaves on both sides, including wall plates, trusses, purlins, splayed purlins, jack rafters, permanent bracing, loose connectors, hurricane clips or 5mm galvanised steel shoes and hangers as detailed on drawing no MDA477(B) UPH/72 HR ASSESSMENT-201 Demolition plan.</p>				
<p><u>Taking up and removing wood block floor coverings, vinyl floor coverings, carpets, etc. preparing existing screeds for new self-levelling screeds (self-levelling screeds elsewhere):</u></p>				
48	m ²	444		
<p>Existing vinyl sheet floor covering with welded joints.</p>				
<p><u>Taking out and removing ironmongery:</u></p>				
49	No	6		
<p>Toilet paper holder from wall.</p>				
50	No	4		
<p>Chromium plated towel rail not exceeding 1 000mm long.</p>				
<p><u>Taking out/off and storing for later re-use sundry metalwork:</u></p>				
51	No	2		
<p>Steel waiting room table bolted to floors size 1 000mm long x 1 000mm wide.</p>				
52	No	3		
<p>Steel waiting room chairs bolted to floors size 2 500mm long x 650mm wide.</p>				
<p><u>Taking out/off and removing sundry metalwork:</u></p>				
53	No	4		
<p>Steel mesh burglar proofing with frame size 700mm x 700mm high bolted to brickwork, including making good plaster. (seclusion room).</p>				
54	No	4		
<p>Steel mesh burglar proofing with frame size 800mm x 800mm high bolted to brickwork, including making good plaster. (seclusion room).</p>				
55	No	2		
<p>Steel wire mesh burglar proofing with frame size 1 290mm x 1 650mm high bolted to brickwork, including making good face brickwork. (External windows)</p>				
56	No	12		
<p>Steel wire mesh burglar proofing with frame size 1 750mm x 1 480mm high bolted to brickwork, including making good face brickwork. (External windows)</p>				
57	No	2		
<p>Steel gate and frame size 813mm x 2 032mm high fixed to one brick wall.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 3 Bill No. 1 Alterations</p>				

Item	Unit	Quantity	Rate	Amount
<u>Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc:</u>				
58	30mm Screed from floors.	m ²	444	
<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc:</u>				
59	Tiles to floors.	m ²	3	
60	Tiles to walls.	m ²	31	
<u>Taking out and removing piping, sanitary fittings, air conditioning units, tanks, geysers, etc, including disconnecting from pipes, traps, etc and making good floor and wall finishes (making good tiling and paintwork elsewhere):</u>				
61	15mm copper piping including fittings and brackets.	m	42	
62	22mm copper piping including fittings and brackets.	m	42	
63	PVC piping not exceeding 50mm diameter.	m	32	
64	PVC piping exceeding 50mm and not exceeding 100mm diameter.	m	6	
65	Air conditioning split system including converter and condenser.	No	4	
66	Vitreous china wash hand basin.	No	10	
67	Vitreous china WC pan with cistern and flush pipe.	No	6	
68	Vitreous china wall hung urinal with flush valve and flush pipe.	No	2	
69	Shower set comprising of ball joint shower rose, overhead arm and two under tile stop taps.	No	4	
70	Slop hopper.	No	1	
<u>BUILDING UP OPENINGS (CPAP Work Group 102)</u>				
<u>Brickwork in NFP bricks in class II mortar in building up openings:</u>				
71	Half brick walls.	m ²	36	
72	One brick walls.	m ²	9	
73	270mm cavity brick walls with inner skin bagged and sealed.	m ²	10	
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
<u>Sundries:</u>				
74	m ²	8		
75	m	57		
<u>Face bricks pointed with recessed horizontal and vertical joints:</u>				
76	m ²	36		
77	m ²	9		
<u>PREPARATORY WORK TO EXISTING SURFACES (CPAP Work Group 102)</u>				
<u>Preparatory work to existing surfaces:</u>				
78	m ²	184		
<u>MAKING GOOD OF FINISHES ETC (CPAP Work Group 102)</u>				
<u>Making good internal cement plaster:</u>				
79	m	107		
80	m	6		
<u>Making good cement screeds:</u>				
81	m	81		
82	m	3		
<u>OPENINGS THROUGH EXISTING WALLS ETC (CPAP Work Group 102)</u>				
<u>Altering openings:</u>				
83	No	2		
TOTAL CARRIED TO BILL SUMMARY				
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				R

Item	Unit	Quantity	Rate	Amount
84 Altering opening in 230mm brick wall where 850mm x 1 000mm high steel window removed to form opening for new timber door and steel frame size 900mm x 2 125mm high overall by breaking out brickwork on one side and bottom, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new door and frame and making good paintwork elsewhere).	No	1		
85 Altering opening in 270mm brick wall where 480mm x 1 000mm high steel window removed to form opening for new aluminium window and frame size 1 450mm x 1 010mm high overall by breaking out brickwork on one side and bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
86 Altering opening in 270mm brick wall where 1 030mm x 1 390mm high steel window removed to form opening for new aluminium window and frame size 800mm x 1 370mm high overall by breaking out brickwork at on one side and bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
87 Altering opening in 270mm brick wall where 1 450mm x 1 000mm high steel window removed to form opening for new aluminium window and frame size 1 000mm x 1 010mm high overall by breaking out brickwork on one side and bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
88 Altering opening in 270mm brick wall where 1 490mm x 1 020mm high steel window removed to form opening for new aluminium window and frame size 500mm x 900mm high overall by breaking out brickwork at bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 1 Alterations				

Item	Unit	Quantity	Rate	Amount
89 Altering opening in 270mm brick wall where 1 490mm x 1 020mm high steel window removed to form opening for new aluminium window and frame size 1 500mm x 1 500mm high overall by breaking out brickwork at bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
90 Altering opening in 270mm brick wall where 1 490mm x 1 020mm high steel window removed to form opening for new aluminium window and frame size 1 500mm x 1 500mm high overall by breaking out brickwork on one side and bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
91 Altering opening in 270mm brick wall where 1 490mm x 1 220mm high steel window removed to form opening for new door and frame size 1 000mm x 2 1250mm high overall by breaking out brickwork at bottom, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new door and frame and making good paintwork elsewhere).	No	1		
92 Altering opening in 270mm brick wall where 1 450mm x 1 730mm high steel window removed to form opening for new serving hatch size 1 450mm x 1 520mm high overall by building up brickwork at bottom, including prestressed concrete lintels, fibre cement concrete cill, making good cement plaster on both sides and into reveals and with 20 MPa concrete threshold with steel trowelled finish (making good paintwork elsewhere).	No	1		
93 Altering opening in 270mm brick wall where 3 657mm x 2 550mm high aluminium shopfront removed to form opening for new aluminium windows and frame size 800mm x 1 530mm high overall and size 600mm x 1 530mm high overall by breaking out brickwork at on one side, including prestressed concrete lintels, making good cement plaster on both sides and into reveals with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 1 Alterations				

Item	Unit	Quantity	Rate	Amount
94 Altering opening in 270mm brick wall where 3 657mm x 2 550mm high aluminium shopfront removed to form opening for two new aluminium windows and frame sizes 1 200mm x 1 435mm high overall by breaking out brickwork at on one side, including prestressed concrete lintels, making good cement plaster on both sides and into reveals with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
95 Altering opening in 270mm brick wall where 4 860mm x 2 475mm high aluminium shopfront removed to form opening for new aluminium window and frame size 820mm x 1 535mm high overall by breaking out brickwork at on one side and bottom, including prestressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish (new window and frame and making good paintwork elsewhere).	No	1		
<u>Breaking out for and forming plain openings through brick walls, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with 20 MPa concrete thresholds with steel trowelled finish (making good paintwork elsewhere):</u>				
96 Opening 1 200 x 2 305mm high through one brick wall.	No	1		
<u>Breaking out for and forming openings through brick walls for new doors and frames, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with 20 MPa concrete thresholds with steel trowelled finish (new doors and frames and making good paintwork elsewhere):</u>				
97 Opening for door with steel frame size 900mm x 2 125mm high overall through half brick wall.	No	1		
98 Opening for door with steel frame size 1 000mm x 2 125mm high overall through 270mm cavity wall.	No	2		
99 Opening for double door with steel frame size 1 3750mm x 2 125mm high overall through half brick wall.	No	1		
<u>Breaking out for and forming openings through brick walls for new windows, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with sloping precast concrete sills on outside and cast in-situ sills on inside (new windows and making good paintwork elsewhere):</u>				
100 Opening for window 614mm x 850mm high through one brick wall.	No	2		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 1 Alterations				

Item	Unit	Quantity	Rate	Amount
101 Opening for window 1 400mm x 1 260mm high through one brick wall.	No	1		
102 Opening for window 800mm x 850mm high through 270mm cavity brick wall.	No	1		
<p><u>Breaking out for and forming openings through brick walls for new windows, including brick lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with sloping precast concrete sills on outside and on inside (new windows and making good paintwork elsewhere):</u></p>				
103 Opening for window 600mm x 850mm high through 270mm cavity wall, including building cavity solid.	No	1		
104 Opening for window 1 200mm x 850m high through 270mm cavity wall, including building cavity solid.	No	1		
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 3 Bill No. 1 Alterations				

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Section No. 3

Bill No. 1

Alterations

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u></p>				
<p><u>72-HOUR ASSESSMENT AREA</u></p>				
<p><u>Bill No. 2</u></p>				
<p><u>EARTHWORKS</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u></p>				
<p>For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Proprietary items or materials:</u></p>				
<p>Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p>				
<p><u>Nature of ground:</u></p>				
<p>A soils investigation has been carried out on the site and the report is annexed to these Bills of Quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as earth described in the above report and where conditions of a more difficult character are indicated these are separately measured.</p>				
<p><u>Excavation for working space in rock:</u></p>				
<p>Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be.</p>				
<p><u>Carting away of excavated material:</u></p>				
<p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site.</p>				
<p><u>Filling:</u></p>				
<p>Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				
<p>Section No. 3</p>				
<p>Bill No. 2</p>				
<p>Earthworks</p>				
			R	

Item	Unit	Quantity	Rate	Amount
<u>SITE CLEARANCE (CPAP Work Group No 104)</u>				
<u>Site clearance:</u>				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth.	m ²	857	
2	Stripping average 200mm thick layer of top soil and stockpiling on site.	m ²	857	
<u>REMOVAL OF TREES ETC (CPAP Work Group No 104)</u>				
<u>Cutting down and removing, grubbing up roots and filling in holes:</u>				
3	Tree exceeding 1000mm and not exceeding 1500mm girth.	No	4	
<u>EXCAVATION OTHER THAN BULK (CPAP Work Group No 104)</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
4	Trenches.	m ³	89	
5	Thickening under surface beds etc.	m ³	14	
<u>Extra over excavations other than bulk in earth for excavation in:</u>				
6	Soft rock.	m ³	22	
7	Hard rock.	m ³	22	
<u>Extra over excavations other than bulk for breaking up and removing:</u>				
8	Reinforced concrete.	m ³	3	
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
9	Off site to a dumping site to be found by the Contractor.	m ³	84	
<u>Risk of collapse of excavations other than bulk:</u>				
10	Sides of trench and hole excavations not exceeding 1.5m deep.	m ²	276	
<u>Keeping excavations free of water:</u>				
11	Keeping excavations free of all water other than subterranean water.	Item		
TOTAL CARRIED TO BILL SUMMARY				
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Earthworks				
			R	

Item	Unit	Quantity	Rate	Amount
<u>EARTH FILLING, ETC (CPAP Work Group No 104)</u>				
<u>Filling with selected material from excavations compacted to a density of at least 95% Mod AASHTO maximum density:</u>				
12	m ³	5		
<u>Filling with G7 material in accordance with SABS 1200 DM, material supplied and carted onto site by the Contractor, compacted to a density of at least 98% Mod. AASHTO maximum density:</u>				
13	m ³	6		
<u>Filling with G5 material in accordance with SABS 1200 DM, material supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density:</u>				
14	m ³	84		
15	m ³	6		
<u>Surface Preparation:</u>				
16	m ²	853		
<u>SOIL POISONING (CPAP Work Group No 104)</u>				
<u>Approved brand of anti-termite soil poison in terms of SANS 5859 applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:</u>				
17	m ²	858		
18	m ²	630		
<u>TESTS (CPAP Work Group No 104)</u>				
<u>Prescribed tests to determine degree of compaction or other properties of ground or filling:</u>				
19	No	26		
TOTAL CARRIED TO BILL SUMMARY				
Section No. 3				
Bill No. 2				
Earthworks				
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EARTHWORKS
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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 3

Bill No. 2

Earthworks

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 3</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Cost of tests:</u>				
The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).				
<u>Breeze Concrete:</u>				
Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (12:1), the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated.				
<u>Foamcement Lightweight Concrete:</u>				
Foamcement lightweight concrete is to have a density of 600kg/m ³ for the top 50mm and 500kg/m ³ for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm.				
<u>Celbeton Lightweight Concrete:</u>				
Celbeton lightweight concrete is to have a density of 1000kg/m ³ for the top 20mm and 408kg/m ³ for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 30mm.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 3 Concrete, Formwork And Reinforcement				

Item	Unit	Quantity	Rate	Amount
<u>Formwork:</u>				
Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.				
The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.				
Formwork to soffits of solid slabs etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described.				
Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks.				
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES (CPAP Work Group No 110)</u>				
<u>15MPa/19mm Concrete:</u>				
1	m ³	5		
2	m ³	2		
3	m ³	3		
4	m	89		
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES (CPAP Work Group No 110)</u>				
<u>30MPa/19mm Concrete:</u>				
5	m ³	3		
6	m ³	2		
7	m ³	66		
8	m ³	27		
9	m ³	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 3 Concrete, Formwork And Reinforcement				

Item	Unit	Quantity	Rate	Amount
10	m ³	23		
11	m ³	10		
<u>REINFORCED CONCRETE (CPAP Work Group No 110)</u>				
<u>30MPa/19mm Concrete:</u>				
12	m ³	101		
13	m ³	3		
14	m ³	1		
15	m ³	2		
<u>TEST BLOCKS (CPAP Work Group No 110)</u>				
<u>Test blocks:</u>				
16	Sets	40		
<u>FINISHING TOP SURFACE OF CONCRETE (CPAP Work Group No 110)</u>				
<u>Finishing top surfaces of concrete smooth with a brushed wood float:</u>				
17	m ²	296		
18	m ²	155		
<u>Finishing top surfaces of concrete smooth with a steel trowel:</u>				
19	m ²	78		
<u>Finishing top surfaces of concrete smooth with a power float:</u>				
20	m ²	572		
<u>Pneumatic bush-hammering of concrete surfaces to form vertical grooves:</u>				
21	m ²	8		
<u>GROUTING (CPAP Work Group No 110)</u>				
<u>25MPa non-shrink grout:</u>				
22	No	6		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
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Concrete, Formwork And Reinforcement				

Item	Unit	Quantity	Rate	Amount
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u> <u>(CPAP Work Group No 111)</u>				
<u>Rough formwork to sides:</u>				
23	Foundation beams.	m ²	436	
24	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	8	
<u>Rough formwork to sides and soffits:</u>				
25	Beams propped up exceeding 1,5m and not 3,5m high above bearing level.	m ²	452	
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u> <u>(CPAP Work Group No 111)</u>				
<u>Rough formwork to sides and soffits:</u>				
26	Isolated beams propped up exceeding 1,5m and not 3,5m high above bearing level.	m ²	18	
<u>Rough formwork to circular columns:</u>				
27	300mm Diameter column 2455m high.	No	8	
28	300mm Diameter column 2600m high.	No	6	
29	300mm Diameter column 2727m high.	No	1	
<u>Boxing out rough formwork to form:</u>				
30	120mm x 100mm high horizontal projection to side along bottom edge.	m	158	
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u> <u>(CPAP Work Group No 111)</u>				
<u>Smooth formwork to sides:</u>				
31	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	20	
<u>Smooth formwork to soffits:</u>				
32	Slabs propped up exceeding 1,5m and not exceeding 3,5m high.	m ²	7	
<u>MOVEMENT JOINTS ETC. (CPAP Work Group No 111)</u>				
<u>Two layers of 375 micron dampproof course in slip joints between horizontal concrete and brick surfaces including cement mortar bed:</u>				
33	Not exceeding 300mm wide.	m	5	
TOTAL CARRIED TO BILL SUMMARY				
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Concrete, Formwork And Reinforcement				
			R	

Item	Unit	Quantity	Rate	Amount
<u>Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation between vertical concrete and brick surfaces:</u>				
34	m	6		
35	m ²	103		
<u>Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation between vertical concrete surfaces:</u>				
36	m	3		
<u>Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation between vertical brick surfaces:</u>				
37	m	28		
<u>REINFORCEMENT (CPAP Work Group No 114)</u>				
<u>Mild steel reinforcement to structural concrete work:</u>				
38	Tonnes	1.08		
39	Tonnes	1.95		
<u>High tensile steel reinforcement to structural concrete work:</u>				
40	Tonnes	1.93		
41	Tonnes	1.83		
42	Tonnes	3.68		
43	Tonnes	4.59		
44	Tonnes	3.68		
45	Tonnes	1.10		
<u>Fabric reinforcement:</u>				
46	m ²	296		
TOTAL CARRIED TO BILL SUMMARY				
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Concrete, Formwork And Reinforcement				
			R	

Item	Unit	Quantity	Rate	Amount
47 Type 245 fabric reinforcement in concrete surfacebeds, slabs, etc.	m ²	155		
48 Type 617 fabric reinforcement in concrete slabs, etc.	m ²	7		
TOTAL CARRIED TO BILL SUMMARY			R	
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Bill No. 3

Concrete, Formwork And Reinforcement

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u> <u>72-HOUR ASSESSMENT AREA</u> <u>Bill No. 4</u> <u>PRECAST CONCRETE</u></p> <p><u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p> <p><u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p> <p><u>Note:</u> Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item.</p> <p><u>Sizes:</u> Blocks, sills, etc. measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the principal agent for approval before moulds are made.</p> <p><u>General:</u> Where kerbstones, blocks, etc. are laid in ground descriptions shall be deemed to include necessary excavation, filling in and ramming.</p> <p><u>User-Note:</u> Where precast concrete copings, sills, beams, facings, claddings, etc. are specially designed then the relevant supplementary preambles are to be included here. Items are to be given with brief descriptions referring to detailed drawings annexed to these bills of quantities where necessary.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 4 Precast Concrete</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>WINDOW FRAMES, COPINGS, CILLS, ETC (CPAP Work Group No 112)</u></p>				
<p><u>Precast concrete exterior window cill finished smooth on exposed surfaces including bedding, jointing and pointing with Class I mortar installed in strict accordance with manufacturer's instructions:</u></p>				
1	170mm x 90mm Thick overall type 007 window cill with drip groove in bottom along edge as per MDA Architects drawing no MDA 477(B) UPH/72 HR ASSESSMENT-401 window schedule.	m	53	
2	280mm x 95mm Thick overall type 024 window cill with drip groove in bottom along edge as per MDA Architects drawing no MDA 477(B) UPH/72 HR ASSESSMENT-401 window schedule.	m	36	
<p>TOTAL CARRIED TO BILL SUMMARY</p>				<p>R</p>
Section No. 3				
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Precast Concrete				

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PRECAST CONCRETE
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Section No. 3
Bill No. 4
Precast Concrete

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 5</u>				
<u>WATERPROOFING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Waterproofing:</u>				
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs.				
<u>DAMP-PROOFING OF WALLS AND FLOORS (CPAP Work Group No 120)</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):</u>				
1	m ²	163		
<u>One layer 250 micron embossed polyethylene waterproof sheeting sealed at laps with pressure sensitive tape:</u>				
2	m ²	861		
3	m ²	555		
<u>Two coats of bitumen emulsion waterproof coating:</u>				
4	m ²	8		
5	m ²	895		
<u>WATERPROOFING SEALANTS TO NEW WALLS, FLOORS, ROOFS, ETC (CPAP Work Group No 120)</u>				
<u>Two coats of seamless waterproofing membrane applied in strict accordance with the manufacturer's instructions:</u>				
6	m ²	11		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 5 Waterproofing				

Item	Unit	Quantity	Rate	Amount
7	m ²	88		
8	m	38		
9	m	38		
10	No	32		
<u>WATERPROOFING TO FLAT SCREEDED ROOFS (CPAP Work Group No 120)</u>				
<u>One Layer 4mm thick polymer modified bitumen reinforced waterproofing membrane fully bonded to 'bituprime' primed surface by means of 'torch on fusion' with 100mm side laps and 150mm end laps in strict accordance with the manufacturer's instructions:</u>				
11	m ²	7		
12	m	5		
13	m	5		
14	No	1		
<u>PROTECTIVE ROOFING PAINT (CPAP Work Group No 120)</u>				
<u>Two coats of bituminous aluminium paint:</u>				
15	m ²	7		
<u>JOINT SEALANTS ETC (CPAP Work Group No 120)</u>				
<u>Clear silicone sealant applied in accordance with the manufacturers instructions:</u>				
16	m	347		
<u>White silicone sealant applied in accordance with the manufacturers instructions:</u>				
17	m	12		
<u>Polyurethane sealing compound including backing cord, bond breaker, primer, etc:</u>				
18	m	126		
19	m	11		
TOTAL CARRIED TO BILL SUMMARY				
Section No. 3				
Bill No. 5				
Waterproofing				
			R	

Item		Unit	Quantity	Rate	Amount
20	10 x 12mm In expansion joints in walls etc including raking out expansion joint filler as necessary	m	10		
21	10 x 12mm In expansion joints in floors including raking out joint filler as necessary.	m	3		
TOTAL CARRIED TO BILL SUMMARY					
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Bill No. 5

Waterproofing

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 6</u>				
<u>ROOF COVERINGS</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Supplementary Preambles:</u>				
<u>Sheeting:</u>				
The roof sheeting shall be double-interlocking concealed-fix profile with transverse stiffener ribs roll-formed in continuous lengths and cut to length by a pneumatic cut-off process from certified (select from: Galvanised 0.58mm thick steel Z275 or Galvanised 0.58mm thick steel Z200 complying with ISQ 550 (3T) with a Chromadek® colour coat or 0.5mm/0.53mm thick ZincAL® AZ150/AZ200 or ColorPLUS®). A certificate verifying compliance shall be issued by the manufacturer. The profile must include structural transverse stiffener ribs located in the pans / troughs for increased wind loading capabilities. The profile shall be roll-formed with four narrow flutes / Ribs with centres not exceeding 233mm and a cover width not exceeding 700mm. These will include a male and female rib with capillary action breaks. The male rib shall incorporate spurs spaced no more than 200mm apart to ensure minimum clipping areas on the side lap and stand proud of the rib for purposes of double interlocking action with adjacent sheets. When interlocked, the minimum sheet depth shall be 41mm.				
<u>Flashings:</u>				
Stop endings must be formed at apex to form a dam and the pan turned down to form drip. The roof sheeting shall be closed as necessary with purpose made flashings and shall incorporate serrated closers and poly closers where necessary. Flashing shall be fixed to roofing by means of No. 14 Top speed Hex head screws 25mm long with 26mm diameter bonded washers on roof and 19mm diameter bonded washers for side cladding.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
Bill No. 6				
Roof Coverings				

Item	Unit	Quantity	Rate	Amount
<p><u>Safety:</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>Installation:</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>Handling and storage:</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and stored in accordance with the manufacturer’s recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor’s expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>Inspection prior to installation:</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <p>The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted.</p> <p>Purlins and girts are at the correct spacing and are within the specified tolerances.</p> <p>The corners of the roof are square, and the wall framework is perpendicular or as specified.</p> <p>No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework.</p> <p>All members to which roofing, and cladding are to be fixed in aesthetically sensitive areas are true and square.</p> <p>Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided.</p> <p>The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3</p> <p>Bill No. 6</p> <p>Roof Coverings</p>			R	

Item	Unit	Quantity	Rate	Amount
<u>Protrusion through sheeted surfaces:</u>				
Protrusions such as pipes, ducts, and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs must be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting, and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.				
<u>Guarantee:</u>				
The manufacturer shall comply with ISO 9001:2015 Quality Management System.				
<u>Cleaning of roof, etc.:</u>				
All debris, swarf, etc. arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc. shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks, or partially impedes the flow of water into the outlets, down pipes, etc.				
<u>CONCEALED FIX RIBBED PROFILE METAL SHEETING AND ACCESSORIES (CPAP Work Group No 124)</u>				
<u>0.53mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face and accessories concealed fixed to timber purlins (elsewhere) with and including 'Diamondek clips' fixed with jetting screws, in strict accordance with the manufacturers instructions:</u>				
1	m ²	1 475		
<u>0.55mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face flashings and accessories pop riveted to sheeting:</u>				
2	m	119		
3	m	64		
4	m	26		
5	m	11		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 6 Roof Coverings				

Item	Unit	Quantity	Rate	Amount
6 Sidewall flashing 308mm girth, two times bent along girth.	m	20		
7 Headwall flashing 308mm girth, three times bent along girth.	m	2		
8 Counter flashing 166mm girth, three times bent along girth.	m	18		
9 Broad flute serrated closures to suit 'Diamondek 407' profile.	m	56		
10 Broad flute poly closures to suit 'Diamondek 407' profile.	m	56		
<u>ROOF AND WALL LINING AND INSULATION (CPAP Work Group No 124)</u>				
<u>Laminated polyisocyanurate core board with a minimum core density of 34 kg/m³, a minimum thickness of 40mm, finished with white mineral and natural mineral and laminated on each side, to be installed over purlin in accordance with manufacturer's specifications:</u>				
11 40mm Thick insulation laid over purlins (at approximately 1 200mm centres) and fixed concurrent with roof covering in strict accordance with the manufacturers instructions.	m ²	1 475		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 6 Roof Coverings				

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Section No. 3
Bill No. 6
Roof Coverings

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u> <u>72-HOUR ASSESSMENT AREA</u> <u>Bill No. 7</u> <u>CARPENTRY AND JOINERY</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent. <u>Particle board:</u> Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type. <u>Joinery:</u> Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc. Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes. <u>Fixing:</u> Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete. Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as bolted, the bolts have been given elsewhere <u>Decorative laminate finish:</u> Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish. <u>Gumpoles:</u> Gum pole structural units shall be in accordance with the following SABS Specifications: SABS 457-1982: Wooden poles, droppers, guard rail posts and spacer blocks. Units with defects exceeding the maximum permissible defects as listed in table 1 of SABS 457, shall be remove from site and shall under no circumstances be used in any part of the structure. State diameters are top (thin) end diameters in all cases.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 7 Carpentry And Joinery</p>			R	

Item	Unit	Quantity	Rate	Amount
<u>ROOFS, ETC (CPAP Work Group No 126)</u>				
<u>Sawn softwood grade 4:</u>				
1	m	268		
2	m	218		
<u>ROOFS SUNDRIES (CPAP Work Group No 126)</u>				
<u>Sundries:</u>				
3	No	168		
4	No	504		
<u>PREFABRICATED ROOF TRUSSES, ETC (CPAP Work Group No 126)</u>				
<u>SUPPLEMENTARY PREAMBLES</u>				
Trusses are at maximum 1200mm centres.				
Roof coverings are 0.53mm thick 'ZincAL' ZA150 'Diamondek 407' galvanised steel roof sheeting on 75 x 50mm purlins.				
Ceilings are generally 9mm thick gypsum plaster board suspended ceilings or 80mm thick chromadek on 38 x 50mm brandering				
References given in descriptions refer to the respective roofs detailed on the Architect's/Engineer's drawings accompanying these Bills of Quantities for tender purposes.				
Dimensions in descriptions of trusses are nominal and actual measurements are to be obtained from the architect/engineer and or taken on site before design or fabrication commences.				
The contractor will be required to provide a certificate of approval signed by a registered Professional Engineer that the trusses have been designed, manufactured and installed in accordance with the relevant SABS specifications.				
<u>Sawn softwood grade 4:</u>				
5	Item			
Representative/Agent, the Truss Fabricator or his Design Engineer shall inspect the completed roof structure and issue a certificate of confirmation to the Department that the roof structure(s) has (have) been erected in accordance with the Design Engineer's drawings, as accepted by the Department, and the relevant details given in the manual "THE ERECTION AND BRACING OF TIMBER ROOF TRUSSES' issued by the National Timber Research Institute and the Institute for Timber Construction.'				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 7 Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
6 Roof construction to double pitched roof over 12 Bed female ward, as shaped on plan overall size 10,90m x 29,46m and 2,72m high overall with 0,650m overhanging eaves on both sides, including wall plates, trusses, purlins, splayed purlins, jack rafters, permanent bracing, loose connectors, hurricane clips or 5mm galvanised wire ties at intersection of each purlin with every second truss, galvanised steel shoes, hangers, bolts and 75 x 50mm purlins at 1200mm centres installed complete, as detailed on Drawing No MDA477(B6b) UPH/72 HR ASSESSMENT-200 Roof plan attached to these Bills of Quantities.	No	1		
7 Roof construction to double pitched roof over 14 Bed male ward, as shaped on plan overall size 10,90m x 31,83m and 2,72m high overall with 0,650m overhanging eaves on both sides, including wall plates, trusses, purlins, splayed purlins, jack rafters, permanent bracing, loose connectors, hurricane clips or 5mm galvanised wire ties at intersection of each purlin with every second truss, galvanised steel shoes, hangers, bolts and 75 x 50mm purlins at 1200mm centres installed complete, as detailed on Drawing No MDA477(B) UPH 72-HOUR ASSESSMENT-200 Roof plan attached to these Bills of Quantities.	No	1		
8 Roof construction to double pitched roof over 72 Hour assessment administration ward, as shaped on plan overall size 54,10m x 16,91m and 2,68m high overall with 0,650m overhanging eaves on both sides, including wall plates, trusses, purlins, splayed purlins, jack rafters, permanent bracing, loose connectors, hurricane clips or 5mm galvanised wire ties at intersection of each purlin with every second truss, galvanised steel shoes, hangers, bolts and 75 x 50mm purlins at 1200mm centres installed complete, as detailed on Drawing No MDA477(B) UPH 72-HOUR ASSESSMENT-200 Roof plan attached to these Bills of Quantities.	No	1		
<u>Wrought softwood grade 4:</u>				
9 38 x 38mm Battern fixed to fibre cement fascia boards (fascia boards elsewhere measured).	m	535		
<u>EAVES, VERGES, ETC (CPAP Work Group No 126)</u>				
<u>Wrought softwood:</u>				
10 38 x 114mm Bearers.	m	108		
11 38 x 114mm Hanger.	m	45		
TOTAL CARRIED TO BILL SUMMARY			R	
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Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
<u>Medium density plain ungrooved fibre cement fascias and barge boards:</u>				
12	m	268		
13	m	13		
14	No	4		
15	No	168		
<u>FRAMED DOORS ETC. (CPAP Work Group No 126)</u>				
<u>Wrought meranti doors hung to steel frames (frame and ironmongery elsewhere):</u>				
16	No	2		
<u>SOLID CORE FLUSH DOORS (CPAP Work Group No 126)</u>				
<u>Solid chipcore flush doors with tempered smooth hardwood face suitable for painting on both sides and 10mm hardwood edge strips all around with 25mm rebated meeting stiles hung to steel frames (frame and ironmongery elsewhere):</u>				
17	No	13		
18	No	15		
19	No	1		
20	No	12		
<u>FRAMED FRAMES, MULLIONS, TRANSOMS, ETC (CPAP Work Group No 126)</u>				
<u>Wrought hardwood meranti:</u>				
21	m	10		
TOTAL CARRIED TO BILL SUMMARY				
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Carpentry And Joinery				
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Item	Unit	Quantity	Rate	Amount
<u>BEADS, ARCHITRAVES, SILLS, ETC (CPAP Work Group No 126)</u>				
<u>Wrought hardwood:</u>				
22	m	24		
<u>BUMPRAILS, GUARDS TO WALLS ETC (CPAP Work Group No 126)</u>				
<u>Wrought laminated meranti hardwood:</u>				
23	m	196		
24	No	305		
25	No	203		
<u>FITTINGS (CPAP Work Group No 126)</u>				
<u>Drug store room:</u>				
26	No	1		
<u>Fire hydrant:</u>				
27	No	1		
<u>Server room:</u>				
28	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
<u>Linen Room:</u>				
29	Linen room wooden wall shelving U-shaped on plan with one leg size 3 070 x 450 x 2 172mm high, other leg size 935 x 428 x 1 372mm high, other leg 2 400 x 450 x 2 172mm high comprised of 22mm SA Pine slatted shelves, 22mm SA Pine solid top, sides, bottom, divisions, back, dividing framework, varnish finish, etc installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-302 attached to these Bills of Quantities.	No	1	
<u>Store Room:</u>				
30	Storeroom wooden wall shelving L-shaped on plan with one leg size 3 462 x 450 x 2 172mm high, other leg size 1 520 x 450 x 2 172mm high comprised of 22mm SA Pine slatted shelves, 22mm SA Pine solid top, sides, bottom, divisions, back, dividing framework, varnish finish, etc installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-303 attached to these Bills of Quantities.	No	1	
31	Storeroom wooden wall shelving U-shaped on plan with one leg size 2 400 x 450 x 2 172mm high, other leg size 1 100 x 430 x 1 732mm high, other leg 2 968 x 450 x 2 172mm high comprised of 22mm SA Pine slatted shelves, 22mm SA Pine solid top, sides, bottom, divisions, back, dividing framework, varnish finish, etc installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-302 attached to these Bills of Quantities.	No	1	
<u>CCTV Room:</u>				
32	CCTV room desk size 600 x 1 950 x 750mm high comprised of two 50mm diameter stainless steel support legs with 30mm thick Rustenburg Granite counter top installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-303 attached to these Bills of Quantities.	No	1	
<u>Ward Kitchen:</u>				
33	Ward Kitchen wall cupboard size 350 x 1 650 x 941mm high comprised of 2 double hinged doors, 22mm thick Supawood sides, bottom, divisions, shelves, back, framework fixed to walls installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-303 attached to these Bills of Quantities.	No	1	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 7 Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
34 Ward Kitchen floor cupboard size 600 x 1 650 x 900mm high comprised of 2 double hinged doors, 2 drawers, 22mm thick Supawood sides, bottom, divisions, shelves, back, framework with 30mm thick Rustenburg Granite counter top with 100mm high Rustenburg Granite splashback fixed to floors with 150 x 16mm thick SA pine kick plates installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-303 attached to these Bills of Quantities.	No	1		
<u>Staff Kitchen:</u>				
35 Staff Kitchen floor desk L-shaped on plan with one leg 600 x 2 989 x 900mm high, other leg size 570 x 1 508 x 900mm high, comprises of 4 double hinged doors, 1 single hinged door, 2 drawers, 22mm thick Supawood sides, bottom, divisions, shelves, back, framework with 30mm thick Rustenburg Granite counter top with 100mm high Rustenburg Granite splashback complete with opening for double bowl sink (sink elsewhere), fixed to floors with 150 x 16mm thick SA pine kick plates installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-303 attached to these Bills of Quantities.	No	1		
<u>Reception room:</u>				
36 Reception floor desk U-shaped on plan with one leg 800 x 3 000 x 1 100mm high, other leg size 600 x 1 242 x 750mm high, other leg 450 x 3 400 x 750mm high comprises of 4 double hinged doors, 2 open leg rooms, 1 drawer, 22mm thick Supawood sides, bottom, divisions, shelves, back, two 70mm diameter stainless steel leg supports bolted to floors, 30mm thick Surrino counter top, fixed to floors with 150 x 16mm thick SA pine kick plates installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-304 attached to these Bills of Quantities.	No	1		
<u>Nurses Station:</u>				
37 Nurses station floor desk U-shaped on plan with one leg 800 x 3 278 x 1 100mm high, other leg size 600 x 1 930 x 750mm high, other leg 600 x 3 233 x 750mm high comprises of 4 single hinged doors, 4 open leg rooms, 4 drawers, 22mm thick Supawood sides, bottom, divisions, shelves, back, framework with four 70mm diameter stainless steel leg supports bolted to floors with 30mm thick Surrino counter top, fixed to floors with 150 x 16mm thick SA pine kick plates installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESMENT-304 attached to these Bills of Quantities.	No	1		
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Bill No. 7

Carpentry And Joinery

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 8</u>				
<u>CEILING PARTITIONS AND ACCESS FLOORING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Proprietary suspended ceilings:</u>				
Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations.				
Electrical light fittings, diffusers, panels etc are generally "lay-in" units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).				
<u>Flush plastered gypsum plasterboard suspended ceilings.</u>				
Ceilings shall comprise 9mm gypsum plasterboard boards screwed to and including screw-up suspension grid consisting of main tees at 1 200mm centres and galvanised steel capped cross tees at 400mm centres and with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface.				
The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood.				
<u>Descriptions:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 8 Ceilings Partitions And Access Flooring				

Item	Unit	Quantity	Rate	Amount
<u>NAILED UP AND SCREW UP CEILINGS (CPAP Work Group No 126)</u>				
<u>12mm Fibre-cement boards with 32 x 6mm Meranti cover strips over joints:</u>				
1	Ceilings including 38 x 50mm sawn softwood branderling at 450mm centres in one direction.	m ²	417	
<u>Gypsum plasterboard cornices:</u>				
2	75mm Coved cornices, plugged.	m	40	
<u>IBR 0.80mm thick ISQ230 Z275 galvanised steel sheeting and accessories with H-profile aluminium jointing strips with Chromadek finish on one side fixed with stainless steel round head bolt and nuts onto purpose made steel "Z" branderings:</u>				
3	0.80mm Thick prepainted galvanised metal ceiling.	m ²	534	
4	Extra over metal ceiling for opening for 600 x 600 mm light fitting.	No	81	
5	Extra over metal ceiling for opening for 150mm diameter opening for ventilation grille/air conditioning diffuser.	No	10	
<u>SUSPENDED CEILINGS (CPAP Work Group No 126)</u>				
<u>Note:</u>				
Descriptions shall be deemed to include any additional studs at ends and intersections, corner beads, cornices at junctions with ceilings, jointing compound, tape, etc.:				
<u>9mm Thick flush plastered bulkheads formed of jumbo taper edged gypsum plasterboard screwed galvanised steel studding of 63,5mm top and bottom tracks with vertical studs at maximum 1 200mm centres, pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc. and covered as described with plasterboard screwed to studding with drywall screws at maximum 300mm centres. Boards shall be butt jointed and finished with tape and jointing compound and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer:</u>				
6	Horizontal portion of bulkhead 2462mm wide including standard steel branderling at 1200mm centres, joined with joiner sections and hung with suspension brackets including supporting framework installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-301 ceiling plan attached to these Bills of Quantities.	m	4	
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Section No. 3				
Bill No. 8				
Ceilings Partitions And Access Flooring				
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Item	Unit	Quantity	Rate	Amount
7 Vertical portion of bulkhead 2800mm high including standard steel bandering at 1200mm centres, joined with joiner sections and hung with suspension brackets including supporting framework installed completed as per MDA Architects drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-301 ceiling plan attached to these Bills of Quantities.	m	4		
8 Extra over ceiling for opening for 600 x 600 mm light fitting.	No	2		
<p><u>595 x 595mm gypsum embossed vinyl clad board laid on 600 x 600mm double stitched pre-painted white T38 main tees and T38 cross tees including grids, plates and hold-down clips all suspended with minimum 4mm diameter galvanised suspension rods not exceeding 1200mm centres strictly in accordance with the manufacturer's instructions:</u></p>				
9 Ceilings suspended not exceeding 1m below timber purlins at approximately 1200mm centres.	m ²	301		
10 Extra over ceiling for opening for 600 x 600 mm light fitting.	No	124		
11 Extra over ceiling for 150mm diameter opening for ventilation grille/air conditioning diffuser.	No	24		
<p><u>Cornices to suspended ceilings:</u></p>				
12 37 x 24mm 'SM12' Pre-painted shadowline cornices, plugged and screwed to wall.	m	416		
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Section No. 3 Bill No. 8 Ceilings Partitions And Access Flooring				

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Bill No. 8

Ceilings Partitions And Access Flooring

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<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 9</u>				
<u>FLOOR COVERINGS</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Fixing:</u>				
Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc.				
<u>FLOOR COVERINGS (CPAP Work Group No 130)</u>				
<u>2mm Thick x 2 000mm wide iQ Eminent Unisense homogenous heavy duty fully flexible vinyl floor sheeting fixed with approved acrylic adhesive on self levelling screed (self levelling screed elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u>				
1	m ²	684		
2	m	550		
<u>2mm Thick x 2 000mm wide Excellence heterogenous heavy duty fully flexible vinyl floor sheeting fixed with approved acrylic adhesive on self levelling screed (self levelling screed elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u>				
3	m ²	79		
4	m	75		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 9 Floor Coverings				

Item	Unit	Quantity	Rate	Amount
<p><u>2,5mm Thick x 2 000mm wide Granite Safe.T homogenous heavy duty fully flexible vinyl floor sheeting with R10 grip slip resistance fixed with approved acrylic adhesive on self levelling screed (self levelling screed elsewhere) and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>	m ²	15		
5 On floors.				
<p><u>8mm Thick Polyurethane non-slip floor screed applied on primer and sealed with sealing compound in strict accordance with the manufacturer's instructions:</u></p>	m ²	62		
6 On floors.				
<p><u>25mm High synthetic grass complete with silica fill complete with stem yarn with triple backing laid over surface bed in strict accordance with the manufacturer's instructions.</u></p>	m ²	155		
7 On floors.				
<u>WALL LININGS (CPAP Work Group No 130)</u>				
<p><u>2mm Thick x 2 000m wide iQ Eminent Unisense Homogenous heavy duty fully flexible vinyl wall sheeting fixed with approved acrylic adhesive on plastering and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>	m ²	412		
8 On walls.				
<p><u>2mm Thick x 2 000mm wide Excellence Heterogenous heavy duty fully flexible vinyl wall sheeting fixed with approved acrylic adhesive on plastering and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>	m ²	58		
9 On walls.				
<p><u>2mm Thick x 2 000m wide iQ Granit Aqua Homogenous heavy duty fully flexible vinyl wall sheeting fixed with approved acrylic adhesive on plastering and joints welded with a fully flexible coloured welding rod to provide a continuous finished surface in strict accordance with the manufacturer's instructions:</u></p>	m ²	75		
10 Turn-ups over timber bump rail not exceeding 500mm girth as detailed on Drawing No. MDA 477(B)UPH/ Trauma Unit-210 attached to these Bills of Quantities.				
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Section No. 3 Bill No. 9 Floor Coverings				

Item	Unit	Quantity	Rate	Amount
<u>SKIRTINGS, NOSINGS, ETC (CPAP Work Group No 130)</u>				
<u>Floor and wall accessories fixed with adhesive in strict accordance with the manufacturer's instructions:</u>				
11	m	92		
12	m	625		
13	m	625		
<u>Skirting accessories fixed in strict accordance with the manufacturer's instructions:</u>				
14	m	92		
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Bill No. 9
Floor Coverings

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<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 10</u>				
<u>IRONMONGERY</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>HINGES, FLOOR SPRINGS, BOLTS, PANIC BOLTS, ETC (CPAP Work Group No 132)</u>				
<u>Hinges:</u>				
1	Pairs	5		
2	Pairs	20		
3	Pairs	4		
4	Pairs	53		
<u>Bolts:</u>				
5	No	10		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 10 Ironmongery				

Item	Unit	Quantity	Rate	Amount
6 'Dormakaba DPS-SS-032' or equal approved stainless steel dust proof strike let into concrete.	No	3		
7 Dormakaba DBC-SS-022' or equal approved stainless steel adjustable roller bolt.	No	6		
8 'Dormakaba DFB-SC-180' or equal approved 153mm satin chrome flush bolt with heel let into concrete or steel.	No	2		
<u>CATCHES, CABIN HOOKS, ETC (CPAP Work Group No 132)</u>				
<u>Cabin hooks:</u>				
9 'Dormakaba' or equal approved 70 x 80mm high stainless steel cabin hook with rubber buffer fixed to doors (code: DHC-SS-031B).	No	6		
10 'Halcast 166' or equal approved 200mm satin chrome cabin hook and eye with 100 x 100 x 75mm high chamfered wrot meranti block.	No	4		
11 'Cranium SA' or equal approved stainless steel and silicone 65mm diameter tamper proof anti ligature hook.	No	8		
<u>EN-SUITE LOCKS (CPAP Work Group No 132)</u>				
<u>Locks:</u>				
12 'Dormakaba D035S-SS' or equal approved stainless steel europrofile cylinder sash lock and strike plate fixed to steel.	No	3		
13 'Dormakaba D036S-SS' or equal approved stainless steel europrofile cylinder sash lock and strike plate fixed to steel.	No	15		
14 'Dormakaba D037D-SS' or equal approved stainless steel europrofile cylinder dead lock and strike plate fixed to steel.	No	12		
15 'Iseo 1450.00.55' or equal approved 55mm backset single long throw profile cylinder gate lock.	No	34		
<u>Padlocks, etc:</u>				
16 30mm Approved brass padlock with 20mm hardened shackle.	No	4		
<u>Conversion sets:</u>				
17 'Dormakaba D038R NP' or equal approved nickel plated rebate conversion set for euro-profile lock.	No	1		
<u>Cylinders:</u>				
18 'Dormakaba DSC104001 KA' or equal approved 40mm satin nickel euro-profile single cylinder master keyed.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
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Bill No. 10				
Ironmongery				

Item	Unit	Quantity	Rate	Amount
19 'Dormakaba DSC203901 KA' or equal approved 39mm satin nickel euro-profile single cylinder master keyed.	No	32		
20 'Dormakaba DSC054001 KD' or equal approved 40mm satin nickel euro-profile single cylinder master keyed.	No	6		
21 'Dormakaba DDC056501 KD' or equal approved 65mm satin nickel euro-profile double cylinder master keyed.	No	20		
22 'Dormakaba DDC206301 MK' or equal approved 63mm satin nickel euro-profile E-SP 5 pin double cylinder master keyed.	No	2		
23 'Dormakaba DWC-005' or equal approved stainless steel WC indicator (Red and White) set and knobturn with escutcheon cover plates epoxy glued on with striking plate fixed to steel.	No	3		
<u>Keys:</u>				
24 'Dormakaba' or equal approved master key.	No	1		
25 'Dormakaba' or equal approved grand master key.	No	1		
<u>HANDLES, FLUSH PULLS, ETC (CPAP Work Group No 132)</u>				
<u>Handles:</u>				
26 'Cisa DPAPHREC' or equal approved stainless steel anti ligature pull handle bolted through with 4 x m5x50 torx screws.	No	29		
27 'Dormakaba CR001 cyl-SS' or equal approved stainless steel lever pull handle on rose with cylinder escutcheons.	Sets	15		
28 'Dormakaba CR001 Latch SS' or equal approved stainless steel lever pull handle on rose.	Sets	3		
29 'Dormakaba DFP-SS-025' or equal approved 120 x 40mm rectangular flush pull handle.	No	8		
30 'Dormakaba DPH215 BTB' or equal approved 382 x 32mm D-shaped tubular pull handle.	Pairs	4		
31 'Dormakaba DPH301C BT' or equal approved 149 x 19mm straight tubular pull handle.	No	6		
<u>DOOR FURNITURE, ESCUTCHEONS, ETC (CPAP Work Group No 132)</u>				
<u>Escutcheons:</u>				
32 'Dormakaba DCE-002' or equal approved stainless steel round cylinder escutcheon.	Pairs	10		
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Item	Unit	Quantity	Rate	Amount
<u>PUSH PLATES AND KICKING PLATES (CPAP Work Group No 132)</u>				
<u>Plates:</u>				
33	'Dormakaba DPP-430-BL-GF' or equal approved 170 x 170 x 1.2mm Thick grade 430 brushed stainless steel push plate fixed with glue.	No	4	
34	'Dormakaba DPP-430-BL-SF' or equal approved 150 x 300 x 1.2mm Thick grade 430 brushed stainless steel push plate fixed with glue.	No	4	
35	'Dormakaba DPP-430-BL-GF' or equal approved 150 x 300 x 1.2mm Thick grade 430 brushed stainless steel push plate fixed with glue.	No	1	
36	Dormakaba DKP-430-GF-300' or equal approved 300 x 914 x 1.2mm Thick grade 430 brushed stainless steel kick plate with 12 no. Countersunk holes fixed to door with 8 x 30mm stainless steel screws.	No	6	
37	Dormakaba DKP-430-SF-300' or equal approved 300 x 914 x 1.2mm Thick grade 430 brushed stainless steel kick plate with 12 no. Countersunk holes fixed to door with 8 x 30mm stainless steel screws.	No	58	
<u>DOOR CLOSERS (CPAP Work Group No 132)</u>				
<u>Door closers:</u>				
38	'Dormakaba EMC 600 AM' or equal approved single mortise-mounted electromagnetic lock with 600 lbf (2668 N) holding force, mortise-mounted, with lock status sensor, fixed to aluminium or timber.	Sets	31	
39	'Dormakaba EMC 600 AM' or equal approved single mortise-mounted electromagnetic lock with 600 lbf (2668 N) holding force, mortise-mounted, with lock status sensor and armature plate size 185 x 38 x 12.5mm high, fixed to aluminium or timber.	Sets	2	
40	'Dormakaba PHA' or equal approved panic device micro-switch.	Sets	8	
41	'Dormakaba PHA2 S SD' or equal approved stainless steel pushbar for single door complete with two point locking mechanisms (code 2201), Top and bottom locking latches (code PHX02), Top and bottom rods for 2270mm high door (code PHX04).	Sets	7	
42	'Dormakaba TS73V PA SL EN2-4' or equal approved parallel arm delayed action door closer with bracket fixed to metal.	Sets	1	
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
43 'Dormakaba TS73V DC SL EN2-4' or equal approved regular arm delayed action door closer with bracket fixed to metal.	No	1		
44 'Dormakaba TS91B SL EN3/4' or equal approved cam action side channel non hold open door closer with hydraulic speed control, pull side brackets fixed to metal.	No	2		
45 'Dormakaba TS92B SL EN3/4' or equal approved cam action side channel non hold open door closer with hydraulic speed control, pull side brackets fixed to metal.	No	3		
46 'Dormakaba PHA5 S DD' or equal approved stainless steel pushbar for double door complete with one-point locking mechanism (code 2101), Two point locking mechanism (code 2201), two push bars for doors up to 1000mm wide (code 2104),	Sets	1		
47 'Dormakaba ITS962-4 NHO' or equal approved EN 2-4 concealed door closer.	Sets	7		
<u>LETTERS, NAMEPLATES, ETC (CPAP Work Group No 132)</u>				
<u>Nameplates:</u>				
48 'Dormakaba DSS-130 M' or equal approved 150 x150mm solid stainless steel male person pictogram.	No	1		
49 'Dormakaba DSS-131 F' or equal approved 150 x150mm solid stainless steel male person pictogram.	No	1		
50 'Dormakaba DSS-132' or equal approved 150 x150mm solid stainless steel male/female person pictogram.	No	1		
<u>PELMETS AND CURTAIN TRACKS (CPAP Work Group No 130)</u>				
<u>Heavy duty powder coated aluminium:</u>				
51 'Hospi-track' or equal approved anodised aluminium single curtain track including 11 rollers per metre, hangers, brackets, stopped ends, etc plugged to walls.	m	4		
52 Extra over for slow bend.	No	1		
53 Extra over for ends.	No	2		
<u>SUNDRIES (CPAP Work Group No 130)</u>				
<u>Door stops:</u>				
54 'Dormakaba DDS 017' or equal approved stainless steel floor mounted door stop.	No	26		
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
55	'Dormakaba DDS 021' or equal approved stainless steel floor mounted door stop.	No	2	
56	'Halcast 401SC' or equal approved satin chrome door stop and holder.	No	1	
<u>Hat and coat hooks:</u>				
57	'Dormakaba DHC-SS-030A' or equal approved stainless steel hat and coat.	No	3	
<u>Mop hooks:</u>				
58	'Hafale' or equal approved 550 x 58 x 60 stainless steel 5 holder system mop hook securely fixed to brickwork (code: 520.10.764).	No	1	
<u>BATHROOM FITTINGS (CPAP Work Group No 130)</u>				
<u>Bathroom fittings:</u>				
<u>'Medical Innovations' or equal approved 1,2mm Thick grade 304 polished stainless steel:</u>				
59	245mm High soap dispenser bracket suitable for 500ml hibiscrub bottle fixed to walls above medical wash hand basin. (code: 341-00-00C).	No	12	
<u>'Franke' or equal approved:</u>				
60	'Franke' BR or equal approved stainless steel bedpan and bottle rack 610 x 260 x 560mm high (code: 350650) complete with removable drip tray.	No	1	
61	'Franke' RODAN or equal approved stainless steel wall mounted hands free paper towel dispenser (code: STRX600), size 300 x 226 x 305mm high overall.	No	15	
62	'Franke' RODAN or equal approved stainless steel wall mounted waste bin (code: STRX605), size 300 x 270 x 520mm high overall.	No	15	
63	'Franke' RODAN or equal approved stainless steel sanitary wall mounted sanitary bin (code: 359830), size 200 x 295mm high overall.	No	3	
64	'Franke' RODAN or equal approved satin stainless steel wall mounted automatic soap dispenser (code: FW-STRX625), size 120 x 126 x 303mm high overall.	No	13	
65	'Franke' RODAN or equal approved satin stainless steel double toilet roll holder with spindle system (code: RODX672), size 138 x 144 x 301mm high overall.	No	4	
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
66	'Franke' RODAN or equal approved satin stainless steel toilet roll holder (code: RODX674), size 145 x 144 x 610mm high overall.	No	5	
67	'Franke' FW-TR1R or equal approved vandal proof stainless steel toilet roll holder, size 155mm diameter overall.	No	4	
68	'Franke' CNTX600 or equal approved 600 x 95mm grade 304 satin polished stainless steel disabled grab rail mounted to wall (code: 359872).	No	3	
69	'Franke' CNTX PAR or equal approved grade 304 satin polished stainless steel angle disabled grab rail mounted to wall (code: 359885).	No	1	
<u>1,5mm Thick grade 304 polished stainless steel:</u>				
70	'Franke' RODAN or equal approved satin stainless steel wall mounted soap dispenser (code: 359800), size 200 x 85 x 130mm high overall.	No	5	
<u>1,6mm Thick grade 304 polished stainless steel:</u>				
71	Stainless steel soap dish holder with custom pressed metal recessed soap dish with flanged lip, deep drawn ribbed tray fixed into brickwork. (code 359863)	No	8	
<u>'Railman' or equal approved shower seat:</u>				
72	480 x 460mm Wide stainless steel fold up shower seat fixed securely to walls as per manufacturer's specifications.	No	1	
<u>SHELVES ETC (CPAP Work Group No 132)</u>				
<u>1,2mm Thick grade 316 stainless steel solid shelves:</u>				
73	'Franke' Z-Series or equal approved 900 x 300 x 1 000mm high solid shelving (code: 355064), complete with 1 800mm stainless steel band and shelf brackets (code: 359606), plugged.	No	2	
<u>STEEL LOCKERS (CPAP Work Group No 132)</u>				
<u>Steel lockers with standard baked enamel finish:</u>				
74	Four door heavy duty locker each 300 x 450 x 1 800mm high, complete with hasp and staple for padlock (elsewhere), bolted together. (Hammertone Grey finish)	No	12	
TOTAL CARRIED TO BILL SUMMARY				
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Item	Unit	Quantity	Rate	Amount
<p><u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC. (CPAP Work Group No 132)</u></p>				
<p><u>Approved white boards:</u></p>				
75	<p>900 x 600mm High magnetic white board with natural anodised aluminium frame, plugged and screwed to brickwork, with concealed mounting in the corners, in strict accordance with the manufacturers instructions. (code: 76135100)</p>	10		
		No		
<p>TOTAL CARRIED TO BILL SUMMARY</p>				<p>R</p>
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Ironmongery

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 11</u>				
<u>STRUCTURAL STEELWORK</u>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Note:</u>				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item.				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
<u>GALVANISED STEEL WELDED TRUSSES (CPAP Work Group No 134)</u>				
<u>Welded roof trusses of angle rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to concrete.</u>				
1	Welded double-pitched symmetrical roof truss 3 330mm wide x 2 550mm high overall, formed of I sections and flat sections, including holes and bolting to concrete columns. (In no 3 trusses)			
	Tonnes	0.52		
<u>GALVANISED STEEL WELDED PURLINS, GIRTS, BRACING, ETC (CPAP Work Group No 134)</u>				
<u>Purlins and girts, bolted to steel:</u>				
2	100 x 50 x 20 x 2,5mm Thick cold-formed lipped channel purlins.			
	Tonnes	0.17		
<u>Welded bracing, anti-sag rails, etc with flat connection plates, bolted to steel:</u>				
3	Angle bracing.			
	Tonnes	0.02		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
Bill No. 11				
Structural Steelwork				

Item	Unit	Quantity	Rate	Amount
<u>GALVANISED BOLTS, FASTENERS, ETC (CPAP Work Group No 134)</u>				
<u>Bolts:</u>				
4	High tensile bolts (class 8.8).	Tonnes	0.07	
<u>Anchors:</u>				
5	12mm Diameter chemical anchor including two nuts and washers, 120mm long drilled to top of concrete.	No	24.00	
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STRUCTURAL STEELWORK
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Section No. 3

Bill No. 11

Structural Steelwork

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u> <u>72-HOUR ASSESSMENT AREA</u> <u>Bill No. 12</u> <u>METALWORK</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent. <u>Descriptions:</u> Descriptions of bolts shall be deemed to include nuts and washers. Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete. Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described. <u>Aluminium doors and windows:</u> Doors and windows shall comply with AAAMSA design criteria. Glazing shall comply with SAGGA regulations. Glass shall be of the type of glass as shown on the window and door schedules and drawings appended to these Bills of Quantities and as described in the Bills of Quantities. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings. Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed. For purpose made windows and doors, refer to drawings annexed to these Bills of Quantities.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 12 Metalwork</p>			R	

Item	Unit	Quantity	Rate	Amount
<p>The following certificates shall be provided prior to commencement of site work: 1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product. 2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively 1861 3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process. 4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked. 5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years.</p>				
<p><u>HOT DIPPED GALVANISED STEEL GATES, SCREENS, ETC (CPAP Work Group No 136)</u></p>				
<p><u>Hot dipped galvanised screens and gates to brickwork:</u></p>				
<p><u>Hot dipped galvanised welded security gates to brickwork:</u></p>				
<p>1 Single swing gate and frame overall size 900 x 2 766mm high comprises of 76 x 50 x 2.5mm mild steel rectangular tube gate surround filled in with horizontal and vertical wires with apertures 76.2 x 12.7 x 3mm diameter welded onto frame complete with 3No. heavy duty mild steel hinges, one m.s heavy duty drop bolt and one m.s heavy duty sliding bolt (ironmongery elsewhere) to be installed complete as shown on drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 G05' attached to these Bills of Quantities.</p>	No	1		
<p>2 Single swing gate and frame overall size 1 138 x 2 040mm high comprises of 76 x 50 x 2.5mm mild steel rectangular tube gate surround filled in with horizontal and vertical wires with apertures 76.2 x 12.7 x 3mm diameter welded onto frame complete with 3No. heavy duty mild steel hinges, one m.s heavy duty drop bolt and one m.s heavy duty sliding bolt (ironmongery elsewhere) to be installed complete as shown on drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 G02' attached to these Bills of Quantities.</p>	No	12		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 3 Bill No. 12 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p>3 Double swing gate and frame overall size 1 400 x 3 595mm high comprises of 76 x 50 x 2.5mm mild steel rectangular tube gate surround filled in with horizontal and vertical wires with apertures 76.2 x 12.7 x 3mm diameter welded onto frame complete with 3No. heavy duty mild steel hinges, one m.s heavy duty drop bolt and one m.s heavy duty sliding bolt (ironmongery elsewhere) to be installed complete as shown on drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 G03' attached to these Bills of Quantities.</p>	No	2		
<p>4 Double swing gate and frame overall size 1 723 x 3 595mm high comprises of 76 x 50 x 2.5mm mild steel rectangular tube gate surround filled in with horizontal and vertical wires with apertures 76.2 x 12.7 x 3mm diameter welded onto frame complete with 3No. heavy duty mild steel hinges, one m.s heavy duty drop bolt and one m.s heavy duty sliding bolt (ironmongery elsewhere) to be installed complete as shown on drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 G04' attached to these Bills of Quantities.</p>	No	2		
<p><u>Galvanised welded grille gates to brickwork:</u></p>				
<p>5 Single prison cell gate overall size 900 x 2100mm high of 50 x 50 x 4mm thick square hollow section frame and four 50 x 50 x 4mm thick square horizontal cross rails, filled with 16mm diameter round solid bars at maximum 110mm centres, complete with one set of gate lock box and key, three heavy duty steel hinges fixed to steel door frame with and including 200 x 25 x 2mm m.s lugs welded on at every third brick course, to be installed complete as per Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 G05 attached to these Bills of Quantities.</p>	No	1		
<p>6 Single prison cell gate overall size 900 x 2100mm high of 50 x 50 x 4mm thick square hollow section frame and four 50 x 50 x 4mm thick square horizontal cross rails, filled with 16mm diameter round solid bars at maximum 110mm centres, gate covered with 12 x 220mm fibre cement plank fixed to frame with anti tamper galvanised m.s self tapping screws, complete with one set of gate lock box and key, three heavy duty steel hinges fixed to steel door frame with and including 200 x 25 x 2mm m.s lugs welded on at every third brick course, to be installed complete as per Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 G06 attached to these Bills of Quantities.</p>	No	1		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 3 Bill No. 12 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<u>Galvanised mild steel window burglar bars including painted finish to specified colour:</u>				
7	Security window burglar bar size 1 000 x 1 050mm high formed of two horizontal 25mm thick mild steel square tube neatly welded joints prior to galvanising, with and including bolting to brickwork, four 25mm frame welds fixed to 100 x 25 x 6mm fixing plate 225mm away from brickwork, vertical height covered with galvanised expanded mesh 50 x 25 x 3mm diameter wire to be installed as shown on architects drawing no 'MDA477 (B) UPH/72 HOUR ASSESSMENT-401' attached to these Bills of Quantities.	No	33	
8	Security window burglar bar size 1 400 x 1 050mm high formed of two horizontal 25mm thick mild steel square tube neatly welded joints prior to galvanising, with and including bolting to brickwork, four 25mm frame welds fixed to 100 x 25 x 6mm fixing plate 225mm away from brickwork, vertical height covered with galvanised expanded mesh 50 x 25 x 3mm diameter wire to be installed as shown on architects drawing no 'MDA477 (B) UPH/72 HOUR ASSESSMENT-401' attached to these Bills of Quantities.	No	18	
9	Security window burglar bar size 1 650 x 1 050mm high formed of two horizontal 25mm thick mild steel square tube neatly welded joints prior to galvanising, with and including bolting to brickwork, four 25mm frame welds fixed to 100 x 25 x 6mm fixing plate 225mm away from brickwork, vertical height covered with galvanised expanded mesh 50 x 25 x 3mm diameter wire to be installed as shown on architects drawing no 'MDA477 (B) UPH/72 HOUR ASSESSMENT-401' attached to these Bills of Quantities.	No	7	
10	Security window burglar bar size 1 800 x 1 050mm high formed of two horizontal 25mm thick mild steel square tube neatly welded joints prior to galvanising, with and including bolting to brickwork, four 25mm frame welds fixed to 100 x 25 x 6mm fixing plate 225mm away from brickwork, vertical height covered with galvanised expanded mesh 50 x 25 x 3mm diameter wire to be installed as shown on architects drawing no 'MDA477 (B) UPH/72 HOUR ASSESSMENT-401' attached to these Bills of Quantities.	No	22	
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Section No. 3 Bill No. 12 Metalwork				

Item	Unit	Quantity	Rate	Amount
11 Security window burglar bar size 2 500 x 1 390mm high formed of two horizontal 25mm thick mild steel square tube neatly welded joints prior to galvanising, with and including bolting to brickwork, four 25mm frame welds fixed to 100 x 25 x 6mm fixing plate 225mm away from brickwork, vertical height covered with galvanised expanded mesh 50 x 25 x 3mm diameter wire to be installed as shown on architects drawing no 'MDA477 (B) UPH/72 HOUR ASSESSMENT-401' attached to these Bills of Quantities.	No	1		
<u>STAINLESS STEEL MINOR WORK (CPAP Work Group No 136)</u>				
<u>Corner protectors:</u>				
12 75 x 75 x 2mm Thick angle section corner protectors to vertical corners, plugged and screwed on both sides.	m	5		
<u>STAINLESS STEEL DOOR FRAMES (CPAP Work Group 136)</u>				
Tenderer's attention is to be drawn to Architectural Drawing No. MDA477(B)UPH/ 72-HOUR ASSESTMENT 400 attached to these Bills of Quantities for reference to the detail of frame.				
<u>2mm Thick single-rebated frame manufactured from grade 304 stainless steel laser cut to form required profile, complete with mitred corners, fixing lugs welded on each stile and to be secured to wall in every fourth course suitable for half brick walls:</u>				
13 Purpose made frame for door 955 x 2040 mm high including 50 x 6mm flat bracing welded to door frame base.	No	15		
<u>2mm Thick non-rebated frame manufactured from grade 304 stainless steel laser cut to form required profile, complete with mitred corners, fixing lugs welded on each stile and to be secured to wall in every fourth course suitable for one brick walls:</u>				
14 Purpose made frame for door 900 x 2040 mm high including 50 x 6mm flat bracing welded to door frame base.	No	9		
15 Purpose made frame for door 1295 x 2040 mm high including 50 x 6mm flat bracing welded to door frame base.	No	1		
<u>Preparation of frames for fixing of ironmongery:</u>				
16 Arm of door closer.	No	7		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 12 Metalwork				

Item	Unit	Quantity	Rate	Amount
<u>ALUMINIUM WINDOWS (CPAP WORK GROUP NO. 140)</u>				
<u>Natural anodised aluminium windows, glazed with 6.38mm laminated NS clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete:</u>				
17 Purpose made aluminium window size 600mm x 850mm high with one sliding sash opening section and four fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W4) attached to these Bills of Quantities.	No	22		
18 Purpose made aluminium window size 755mm x 2 040mm high with two fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W2) attached to these Bills of Quantities.	No	1		
19 Purpose made aluminium window size 2 300mm x 1 190mm high with two sliding opening sections and six fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W1) attached to these Bills of Quantities.	No	1		
20 Purpose made aluminium window size 1 200mm x 850mm high with two sliding sash opening sections and two fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W3) attached to these Bills of Quantities.	No	18		
<u>Natural anodised aluminium windows, glazed with 12mm laminated HI clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete.</u>				
21 Purpose made aluminium window size 614mm x 850mm high with three fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W09) attached to these Bills of Quantities.	No	3		
22 Purpose made aluminium window size 800mm x 850mm high with one sliding sash opening section and eight fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W6) attached to these Bills of Quantities.	No	33		
23 Purpose made aluminium window size 1 450mm x 850mm high with two sliding opening sections and fourteen fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W7) attached to these Bills of Quantities.	No	4		
TOTAL CARRIED TO BILL SUMMARY			R	
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Item	Unit	Quantity	Rate	Amount
24 Purpose made aluminium window size 1 450mm x 850mm high with nine fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W10) attached to these Bills of Quantities.	No	3		
25 Purpose made aluminium window size 1 600mm x 850mm high with ten fixed panes. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W08) attached to these Bills of Quantities.	No	6		
<u>Natural anodised aluminium windows, glazed with 15mm double glazed HI clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete.</u>				
26 Purpose made aluminium window size 680mm x 790mm high with four fixed glazing panel. Installed complete as per MDA Architect Drawing No. MDA477(B) UPH / 72-Hr Assesment-401 (W05) attached to these Bills of Quantities.	No	6		
<u>ALUMINIUM DOORS (CPAP Work Group No 149)</u> <u>Purpose made aluminium doors and frames are to be natural anodized finish. Aluminium sections to be constructed and installed according to the guidelines of The Association of Architectural Aluminium Manufactures of South Africa (AAASA). Glazing is to be carried out in strict accordance with the SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings" and where required, safety glazing materials must conform to SABS 1263. Drawings of all sections and fixing details to be used to be submitted for approval and all dimensions are to be verified on site prior to manufacture. All shopfronts and windows need to be weatherproofed and sealed where necessary and all aluminium is to be protected during installation and for the duration of construction work by removable PVC tape. All ironmongery to be as specified.</u>				
27 Rebated single door overall size 800 x 2040mm high, comprising of 75mm top and side rails, one 200mm transoms and 100mm bottom rail, complete with 1.5 pairs of 'Alufab' (1040) anodized aluminium sinkless hinge, 1No 'Dormakaba' (DSC104001 KA) 40mm satin nickel euro-profile 5 pin single cylinder master keyed, 1No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 1 set 'Dormakaba' (DPH301C BT) stainless steel straight tubular pull handle on rose with cylinder escutcheons 1No 'Dormakaba' (DCE-002 S.S), 1 set 'Dormakaba' (DBC-SS-022) stainless steel adjustable roller bolt, all installed complete as per Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 (DK) attached to these Bills of Quantities.	No	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 12 Metalwork				

Item	Unit	Quantity	Rate	Amount
28 Rebated double door overall size 1320 x 2040mm high, comprising of 660 x 2040mm high two times glazed panel double door in equal leaves with 82mm top and side rails, one 80mm transom and 100mm bottom rail, bottom section covered with 2mm grade 304 stainless steel plate fixed with domed screws with 6.38mm High Impact Laminated Clear Safety glass, complete with 4 pairs of 'Alufab' (2040) anodized aluminium sinkless hinge, 1No 'Dormakaba' PHA micro switch, 1No 'Dormakaba' five point locking panic bar, 1No 'Dormakaba' emc 600 AM single electromagnetic lock all installed complete as per MDA Architects Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-400 DB attached to these Bills of Quantities.	No	1		
29 Rebated double door overall size 1604 x 2040mm high, comprising of 802 x 2050mm high two times glazed panel double door in equal leaves with 82mm top and side rails, one 80mm transom and 100mm bottom rail, bottom section covered with 2mm grade 304 stainless steel plate fixed with domed screws with 6.38mm High Impact Laminated Clear Safety glass, complete with 4 pairs of 'Alufab' (2040) anodized aluminium sinkless hinge, 1No 'Dormakaba' (DSC054001 KD) 40mm nickel plated euro-profile 5 pin single cylinder, 1No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 1 set 'Dormakaba' (DFP-SS-025) stainless steel rectangular flush pull handle on rose with cylinder escutcheons 1No 'Dormakaba' (DCE-002 S.S), 2No 'Alufab' (M1519AS) 150mm Anodised aluminium flush bolt, 1 set 'Dormakaba' (DBC-SS-022) stainless steel adjustable roller bolt, 2No 'Halstad' (166) brass cabin hook, 1No 'Dormakaba' (EMC600 AM) single electro mechanical lock all installed complete as per Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 (DI attached to these Bills of Quantities.	No	2		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 12 Metalwork				

Item	Unit	Quantity	Rate	Amount
<p>30 Rebated double door overall size 1664 x 2040mm high, comprising of 635 x 2050mm high four times glazed panel double door in equal leaves with 82mm top and side rails, one 80mm transom and 100mm bottom rail, with 6.38mm High Impact Laminated Clear Safety glass, complete with 4No 'Alufab' (2040) anodized aluminium sinkless hinge ,2No 'Alufab' (1519AS) 150mm natural anodized aluminium flush bolt , 1No 'Dormakaba' (ITS962-4 NHO) non hold door closer, 1No 'Dormakaba' (DPS-SS-032) stainless steel dust proof strike, 1 No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock 1No 'Dormakaba' (DDC206301 MK) 63mm satin nickel euro-profile 5 pin double cylinder master keyed, 1No 'Dormakaba' EMC 600AM) anodized aluminium electromagnetic lock, 1 set 'Dormakaba' (DPH215 BTB) stainless steel D shaped tubular pull handle on rose with cylinder escutcheons, 1No 'Dormakaba' (DDS-SS-021) floor mounted door stop, all installed complete as per MDA Architects Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-400 DA attached to these Bills of Quantities.</p>	No	1		
<p>31 Rebated double door overall size 2810 x 2040mm high, comprising of 75mm top and side rails, one 220mm transoms and 100mm bottom rail, complete with 3 pairs of 'Alufab' (1040) anodized aluminium sinkless hinge, 1No 'Dormakaba' (DSC054001 KD) 40mm nickel plated euro-profile 5 pin single cylinder, 1No 'Dormakaba' (D037D SS) stainless steel cylinder deadlock, 1 set 'Dormakaba' (DPH301C BT) stainless steel straight tubular pull handle on rose with cylinder escutcheons 1No 'Dormakaba' (DCE-002 S.S), 2No 'Alufab' (M1519AS) 150mm Anodised aluminium flush bolt, 1 set 'Dormakaba' (DBC-SS-022) stainless steel adjustable roller bolt, all installed complete as per Drawing No. MDA477(B) UPH / 72-HOUR ASSESSMENT-402 (DL) attached to these Bills of Quantities.</p>	No	1		
<p><u>ALUMINIUM LOUVRE UNITS (CPAP WORK GROUP NO. 140)</u></p>				
<p><u>Natural anodised aluminium louvre units fixed to timber doors:</u></p>				
<p>32 Purpose made louvre unit size 300 x 300mm high six times holed and fitted to door with six 30mm counter sunk stainless steel screws.</p>	No	14		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 3 Bill No. 12 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<p><u>STEEL RECORDROOM AND STRONGROOM DOORS, VENTILATORS, ETC (CPAP Work Group No 136)</u></p>				
<p><u>'Mutual Safes G2' or equal approved strong room doors etc suitable for 230mm walls fixed to brickwork:</u></p>				
33	No	3		
<p>'Mutual Safes G2' or equal approved purpose made bullet resistant door size 930mm x 2 100mm high with 100 x 50 x 2mm thick mild steel frame complete with 5-pin CISA deadlock, continuous roton type hinge, aluminium slam bar, D-type pull handles, 38mm bullet resistant viewing panel size 280mm x 380mm high.</p>				
<p><u>HOT DIPPED GALVANISED PRESSED STEEL DOOR FRAMES (CPAP Work Group No 136)</u></p>				
<p><u>2mm Rebated frames suitable for new half brick walls complete with 10mm fixing lugs every 4th course, backing plate, 15Mpa reinforced concrete infill with Y10 bars and 50x6mm flat bar bracing member to be installed as detailed in drawing MDA477(B) UPH / 72-HOUR ASSESSMENT-400 DETAIL 01:</u></p>				
34	No	14		
<p>Frame for door 900 x 2040mm high.</p>				
<p><u>2mm Rebated frames suitable for existing half brick walls complete with 10mm fixing lugs every 4th course, backing plate, 15Mpa reinforced concrete infill with Y10 bars and 50x6mm flat bar bracing member to be installed as detailed in drawing MDA477(B) UPH / 72-HOUR ASSESSMENT-400 DETAIL 01:</u></p>				
35	No	9		
<p>Frame for door 900 x 2040mm high.</p>				
36	No	1		
<p>Frame for door 1295 x 2040mm high and hinged fanlight 2040mm high.</p>				
<p><u>2mm Rebated frames suitable for existing one brick walls complete with 10mm fixing lugs every 4th course, backing plate, 15Mpa reinforced concrete infill with Y10 bars and 50x6mm flat bar bracing member as shown on drawing MDA477(B) UPH / 72-HOUR ASSESSMENT-400 DETAIL 02:</u></p>				
37	No	1		
<p>Frame for door 900 x 2040mm high.</p>				
<p><u>SUNDRY STAINLESS STEELWORK (CPAP Work Group No 136)</u></p>				
<p><u>Mirrors:</u></p>				
38	No	4		
<p>Stainless steel mirror size 600 x 500 x 1mm thick with reflective polished surface and concealed thief resistant fixings. (code: 359902)</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 3 Bill No. 12 Metalwork</p>				

Item	Unit	Quantity	Rate	Amount
<u>The following in grade 304 brushed stainless steel floor mounted bump rail refer to 'Detail 17' on Drawing No. MDA 477(B)UPH/Trauma Unit-210 attached to these Bills of Quantities:</u>				
39	m	1		
40	No	2.00		
41	No	2.00		
42	No	2.00		
43	No	6		
<u>Television enclosure:</u>				
44	Item			
45	Item			
46	Item			
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METALWORK
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Bill No. 12

Metalwork

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 13</u>				
<u>PLASTERING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>SCREEDS (CPAP Work Group No 142)</u>				
<u>Screeds wood floated, on concrete:</u>				
1	m ²	812		
2	m ²	39		
3	m ²	7		
4	m ²	1		
<u>Scarify, sweep clean and ensure all surfaces are sound, laitance and dust free and prime with primer G (diluted to manufacturer's specification), apply one coat ultraplan eco self-levelling screeds on concrete floors applied in strict accordance with the manufacturer's instructions:</u>				
5	m ²	777		
<u>GRANOLITHIC SCREED (CPAP Work Group No 142)</u>				
<u>30Mpa 2 part Granite or equal approved 5mm hard stone chips, 2 parts sand and one part cement granolithic screed steel trowelled, on concrete:</u>				
6	m ²	26		
7	m ²	26		
<u>INTERNAL PLASTER (CPAP Work Group No 142)</u>				
<u>Cement plaster steel trowelled, on brickwork:</u>				
8	m ²	1 994		
TOTAL CARRIED TO BILL SUMMARY				
Section No. 3				
Bill No. 13				
Plastering				
			R	

Item	Unit	Quantity	Rate	Amount
9				
On narrow widths.	m ²	281		
<u>Cement plaster steel trowelled, on concrete:</u>				
10				
On walls.	m ²	214		
<u>Skim coat plaster of 100 parts of Planitop 110 ME with 31-32 parts of water (approximately 6,2-6,4 litres of water per 20 kg bag to a minimum thickness of 2mm in strict accordance with manufacturer's instructions:</u>				
11				
On existing plastered brick walls.	m ²	470		
<u>Cement plaster rendering coat with gypsum skim plaster finishing coat, on concrete:</u>				
12				
On sloping top, front edge and projecting soffit of sills 430mm girth.	m	89		
<u>EXTERNAL PLASTER (CPAP Work Group No 142)</u>				
<u>Fine rough-cast plaster, on brickwork:</u>				
13				
On walls.	m ²	1 059		
14				
On walls in foundations.	m ²	25		
15				
On narrow widths not exceeding 300mm wide.	m ²	61		
<u>TERRAZZO (CPAP Work Group No 142)</u>				
<u>Scarify, sweep clean and ensure all surfaces are sound, free of dust free and feeble material, diamond grind the surface and prime with Solid prime 321, apply one coat 'Polyscreed Epoxy Terrazzo' Decorative 8-10mm Terazzo floor finish on self-levelling screed (elsewhere) and sealed 'Polyscreed Sealkote' sealer, all applied in strict accordance with the manufacturer's instructions and to be undertaken by an approved applicator:</u>				
16				
8mm Thick on floors and landings.	m ²	45		
<u>8mm Thick polyurethane non-slip floor screed applied on primer and sealed with sealing compound in strict accordance with the manufacturer's instructions:</u>				
17				
On plastered walls.	m ²	51		
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC (CPAP Work Group No 136)</u>				
<u>Corner protectors:</u>				
18				
75mm x 75mm x 2mm thick grade 403 stainless steel corner protector plugged to brickwork.	m	10		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
Bill No. 13				
Plastering				

Item	Unit	Quantity	Rate	Amount
<u>Dividing strips:</u>				
19	m	6		
20	m	6		
TOTAL CARRIED TO BILL SUMMARY				R
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PLASTERING
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Plastering

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 14</u>				
<u>TILING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
<u>Descriptions:</u>				
Unless described as fixed with adhesive to plaster (plaster elsewhere), descriptions of tiling on brick or concrete walls, columns, etc., shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding.				
<u>NOSINGS, JOINT COVERS, PROTECTORS, ETC</u> <u>(CPAP Work Group No 144)</u>				
<u>Wall edge protectors:</u>				
1	m	426		
12mm Straight edge trim (code ASE120.BL) fixed to walls with adhesive to edges of tiling on walls.				
<u>WALL TILING (CPAP Work Group No 144)</u>				
<u>300 x 600 x 10mm Alphine white matt glazed ceramic wall tiles (code T0028291) fixed with 'Tal Goldstar 6' or equal approved rapid setting tile adhesive with 'Tal Bond' (replacing the water in the mix) and flush pointed with white 'Tal Wall and Floor Grout' or equal approved light grey tile grout with 'Tal Bond' (replacing the water in the mix) to plaster (plaster elsewhere):</u>				
2	m ²	483		
On walls.				
3	m ²	13		
On walls in isolated panels, splashbacks, etc.				
4	m ²	7		
On narrow widths.				
5	No	31		
Fair exposed cutting and fitting around pipe not exceeding 100mm internal diameter.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 14 Tiling				

Item	Unit	Quantity	Rate	Amount
<u>CERAMIC FLOOR TILING (CPAP Work Group No 144)</u>				
<u>315 x 294 x 5mm Penny round matt glazed ceramic mosaic floor tiles fixed with mosaicfix tile adhesive with 3mm straight joints in both directions flush pointed with anti fungal grout on power floated concrete (floated concrete elsewhere):</u>				
6	m ²	6		
<u>SUNDRIES (CPAP Work Group No 144)</u>				
<u>White glazed ceramic soap dishes etc:</u>				
7	No	3		
TOTAL CARRIED TO BILL SUMMARY				
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TILING
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Section No. 3

Bill No. 14

Tiling

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u> <u>72-HOUR ASSESSMENT AREA</u> <u>Bill No. 15</u> <u>PLUMBING AND DRAINAGE</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent. <u>'Polycop' polypropylene pipes:</u> Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with 'Fast-fuse' heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated. Pipes shall be firmly fixed to walls etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions. All pipe diameters are nominal external. <u>'Polylink' polypropylene pipes:</u> Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron 'SupraClamp' running joints. Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured. Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double X joint couplers. Branch tees shall include flanged and bolted joints to 'Polycop' branch pipes in addition and for brass compression male iron to copper straight couplers. Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reduces shall be of sufficient overall length to accommodate same. All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions. All pipe diameters are nominal external.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 15 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.</p> <p><u>Vitrified clay pipes etc.:</u> Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.</p> <p><u>uPVC pipes and fittings.</u> Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Fixing of pipes</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level</p> <p><u>Lead pipes and traps:</u> All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				<p>R</p>
<p>Section No. 3 Bill No. 15 Plumbing And Drainage</p>				

Item	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u> Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc. will be entertained.</p> <p><u>Wire gratings:</u> Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u> Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc. all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u> Exposed surfaces of concrete storm water channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc. shall be finished smooth with plaster.</p> <p><u>Excavations:</u> No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling. 'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc. of pipes</u> Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions. Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Storm water drainage Pipe trenches etc. shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u> Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc.:</u> Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 15 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Waste unions:</u> Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.</p> <p><u>Steel sectional water tanks:</u> Tanks shall comply with SABS CKS 114.</p> <p><u>'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd:</u> Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described. Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc. Prices for wrapping of pipes shall include for all work as described to couplings in the length.</p> <p><u>General:</u> Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc. are given separately). Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends. Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site. Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc. and to steel pipes (adaptors for connections to copper pipes, etc. are given separately). Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured).</p> <p><u>RAINWATER DISPOSAL (CPAP Work Group No 148)</u> <u>Pre-coated externally and internally with approved G4 high performance non-fluorinated polymer modified long chain hydro-carbon paint aluminium 'Industrial Ogee' roll formed seamless gutter, with equal back and front height including cut and mitred angles covered with a mitre strip externally, stop ends crimped and all sealed on the inside with Dow Corning 813 silicone sealer installed in strict accordance with the manufacturers instructions:</u></p>	m	268		
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 3 Bill No. 15 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
2 Extra over 125 x 150mm eaves gutter for stopped end.	No	2		
3 Extra over 125 x 150mm eaves gutter for angle.	No	14		
4 Extra over 125 x 150mm eaves gutter for outlet for 75 x 50mm pipe.	No	17		
5 75 x 50mm Rainwater pipes.	m	95		
6 Extra over 75 x 50mm rainwater pipe for bend.	No	34		
7 Extra over 75 x 50mm rainwater pipe for eaves offset 650mm projection.	No	17		
8 Extra over rainwater pipe for shoe.	No	17		
TOTAL CARRIED TO BILL SUMMARY			R	
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225

226

TOTAL CARRIED TO SECTION SUMMARY

R

Section No. 3

Bill No. 15

Plumbing And Drainage

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 16</u>				
<u>WET SERVICES INSTALLATION</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>WET SERVICES INSTALLATION (CPAP Work Group 170)</u>				
<u>Wet services installation:</u>				
Tenderers are to note that the amount included in the amount column for this section of the Bills of Quantities, should be the total of all the priced items in the Wet Services Installation Bills of Quantities as attached hereafter.				
1	Item			
Total transferred from Wet Services Installation schedule summary. (excluding VAT)				
2	Item			
Profit on above.				
3	Item			
Attendance on above.				
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 3 Bill No. 16 Wet Services Installation				

UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION

WET SERVICES INSTALLATION

BILL NO.1 Preliminary and General

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PRELIMINARY & GENERAL				
1	Contractual Items				
1.1	Provision of Sureties	Sum	1		
1.2	Insurances	Sum	1		
1.3	Third Party Insurance	Sum	1		
1.4	Guarantee of the Works	Sum	1		
1.5	Provide test results	Sum	1		
1.6	Provision of Record Drawings	Sum	1		
1.7	Other (Specify)	Sum	1		
2	Fixed Cost Items				
2.1	Site Establishment / Removal	Sum	1		
2.2	Other (Specify)...TRANSPORT	Sum	1		
3	Time Related Items				
3.1	Project supervision	Sum	1		
3.2	Project administration	Sum	1		
3.3	Other Overheads (Specify)	Sum	1		
	a)				
	b)				
	c)				
4	Commissioning				
4.1	Test and commission	Sum	1		
4.2	Record drawing and O&Ms	Sum	3		
5	Training staff on the operation and daily				
5.1	Staff Training	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY					

UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION

BILL NO: 2: WET Services Installation

ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	SUPPLY RATE	TOTAL
	<i>Work shall comply with the relevant conditions and installation specifications of SANS 10252-1, manufacturers specifications and local By-laws and Regulations. Sub-Contractor shall issue a certificate of compliance in terms of local By-laws upon completion. All works, equipment and practices shall be SABS compliant and equipment stamped as such. Rates shall include allowance for fixings and bracketing of piping reticulation to vertical walls and soffits.</i>					
2,1	Supply and install Geberit Mepla, or equal alternative, pipe (outside diameter):					
2,1,1	15mm pipes	m	195			
2,1,2	22mm pipes	m	70			
2,1,3	28mm pipes	m	105			
2,1,4	35mm pipes	m	130			
2,1,5	42mm pipes	m	30			
2,1	Supply and install high density polystyrene insulation:					
2,1,1	15mm pipes	m	100			
2,1,2	22mm pipes	m	40			
2,1,3	28mm pipes	m	50			
2,1,4	35mm pipes	m	65			
2,1,5	42mm pipes	m	45			
2,1,6	35mm pipes - Insulation with sheet metal cladding for hot water reticulation (external installation)	m	30			
2,1,7	42mm pipes - Insulation with sheet metal cladding for hot water reticulation (external installation)	m	30			
2,2	Supply and install Geberit Mepla, or equal alternative, fittings:					
2,2,1	15mm 90° bend	no	150			
2,2,2	22mm 90° bend	no	30			
2,2,3	28mm 90° bend	no	1			
2,2,4	35mm 90° bend	no	15			
2,2,5	42mm 90° bend	no	10			
2,3	Supply and install valves including threaded capillary fittings for connection to sanitary fixtures, etc. to mepla, or equal alternative, pipe:					
2,3,1	15mm Mepla tees	no	12			
2,3,2	22mm Mepla tees	no	5			
2,3,3	28mm Mepla tees	no	5			
2,3,4	22x22x15 Mepla tees	no	10			
2,3,5	22x15x15 Mepla tees	no	10			
2,3,6	28x22x15 Mepla tees	no	10			
2,3,7	35x35x28 Mepla tees	no	3			
2,3,8	35x35x22 Mepla tees	no	6			
2,3,9	35x35x15 Mepla tees	no	19			
2,3,10	15mm stop valve	no	75			
2,3,11	22mm stop valve	no	20			
2,3,12	35mm to 28mm reducer	no	2			
2,3,13	28mm to 22mm reducer	no	7			
2,3,14	22mm to 15mm reducer	no	10			
2,3,15	35mm 400kPA PRV	no	2			
2,3,16	42mm 400kPA PRV	no	1			
2,3,17	28mm 400kPA PRV	no	2			
2,4	1000 litre Thermal storage tank, indirect heating type. Complete with a 15kW high Pressure Heat Pump. Refrigerant type R134a, Hot & Cold water meters with brass tails & gaskets.	sum	1			
2,5	Connect new water supply line to existing water line.	sum	1			
2,6	Testing of complete installed domestic water system.	sum	1			
TOTAL CARRIED FORWARD TO SUMMARY						

UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION

WET SERVICES INSTALLATION

SUMMARY OF BILL OF QUANTITIES

BILL NO	DESCRIPTION	AMOUNT
1	PRELIMINARY & GENERAL	
2	BILL NO: 2: WET Services Installation	
	SUB TOTAL (Excl. VAT)	
	TOTAL TRANSFERRED TO SECTION 3 BILL No.16 ITEM 1 OF BILLS OF QUANTITIES	

I,, on behalf of the Tenderer
.....advise that I have read and
priced the installation in accordance with the specifications, drawings and schedules of quantities and that I
have satisfied myself that no discrepancies exist between the various documents and the drawings.

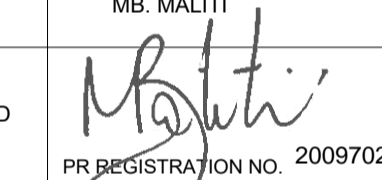
TENDERER'S NAME/STAMP

SIGNATURE

DATE _____



THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTS LAYOUT

No	AMENDMENTS	DATE
T0	ISSUED FOR TENDER	23-01-2024
DRAWN	A. MTAMBEKI	23-01-2024
DESIGNED	MB. MALITI	23-01-2024
CHECKED	MB. MALITI	23-01-2024
APPROVED		23-01-2024
PR REGISTRATION NO. 200970291 DATE 23/01/2024		
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CLIENT



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DEPARTMENT OF HEALTH**

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 Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL

DRAWING TITLE
LISTED 72 HOUR OBSERVATION AREA - HOT AND COLD WATER LAYOUT

SCALE 1 : 100	SHEET SET SHEET 1 OF 1 SHEETS	SHEET SIZE A1
DRAWING No. 1746-6-HCW-02	REVISION T0	

No.	DESCRIPTION	QTY	DUTY	ELECTRICAL REQUIREMENTS
T1	THERMAL STORAGE TANK, INDIRECT HEATING TYPE, COMPLETE WITH A 15KW HIGH PRESSURE HEAT PUMP, REFRIGERANT TYPE R134a	1	1000 LITRE TANK 15KW HEAT PUMP R134a REFRIGERANT	3 PHASE 25amp ISOLATOR

- NOTES:
- All plumbing piping inside the building shall be Meplo or equal approved.
 - All plumbing piping outside shall be Meplo or equal approved.
 - Piping comply with SANS 10252
 - Pipe insulation to withstand the temperatures within the piping.
 - Insulation to be high density Polystyrene
 - Minimum R-values for insulation:
less or equal to 80mm = 1.0(msq.K/W)
greater or equal to 80mm = 1.0(msq.K/W)
 - ClearView or approved fencing around the heatpump and storage tank

PIPE SIZING
 The minimum size of piping to be used is to be in accordance with the table below:
 - Ø15mm - 1 take off
 - Ø22mm - 4 take offs
 - Ø28mm - 8 take offs
 - Ø35mm - 24 take offs
 - Ø42mm - 49 take offs
 - Ø54mm - 99 take offs
 - Ø67mm - 200 take offs
 * Basins, urinals and similar are regarded as 1 draw off.
 * WC, Showers, Sinks and similar are regarded as 2 draw offs

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 17</u>				
<u>HVAC SERVICES INSTALLATION</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>HVAC INSTALLATION (CPAP Work Group No 170)</u>				
<u>HVAC installation:</u>				
Tenderers are to note that the amount included in the amount column for this section of the Bills of Quantities, should be the total of all the priced items in the HVAC installation Bills of Quantities as attached hereafter.				
1	Item			
Total transferred from HVAC Installation schedule summary. (excluding VAT)				
2	Item			
Profit on above.				
3	Item			
Attendance on above.				
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 3 Bill No. 17 Hvac Services Installation				

UITENHAGE PROVINCIAL HOSPITAL – 72 HOUR OBSERVATION

AIR CONDITIONING AND VENTILATION INSTALLATION

JANUARY 2024

PREPARED BY:

LUKHOZI CONSULTING ENGINEERS (PTY) LTD
36 PICKERING STREET
NEWTON PARK
GQEBERHA
6045

TEL: 041-363 1984
www.lukhozi.co.za



NAME OF CONTRACTOR:

.....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

HVAC SPECIFICATION – UITENHAGE PROVINCIAL HOSPITAL

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1. GENERAL

The air conditioning and ventilation subcontractor shall be referred to as a tenderer or subcontractor in this document unless specified otherwise.

The scope of work shall include installation of a VRF/VRV air conditioning system, and ventilation systems for Uitenhage Provincial Hospital, 72 Hour Observation Area. The subcontractor is advised that the scope will not be limited to the abovementioned and any extra work shall be properly communicated with the subcontractor.

The subcontractor shall be responsible to supply, deliver, install, test, commission and maintain for twelve (12) months of the air conditioning and ventilation installation. During the construction, the Engineer shall periodically do quality inspections on the installation which will be communicated with the subcontractor for fixing.

The subcontractor will be required to comply Statutory and Regulatory Requirements as listed in section two (2) of this document.

2. STATUTORY AND LEGAL REQUIREMENT

This section contains acts and clauses that are generally applicable to mechanical engineering construction. The installation shall be completed and tested in accordance with the following requirements or latest issued and amendments of the following:

- a) SANS 10400 – 2014: The application of the National building regulations
- b) SANS 1238: Ductwork
- c) SANS 1125: Room air conditioning and heat pumps
- d) SANS 1287-1&2: Ventilation practices and ducting
- e) SANS 1424: Filters
- f) SANS 10147: Refrigeration Systems
- g) SANS 10173: Installation, testing and balancing of air conditioning ductwork.
- h) SANS 10142-1&2: Code of Practice for the Wiring of Premises
- i) SANS 10103: The measurement and rating of environmental noise with respect to annoyance and to speech communication
- j) SANS 1850-2014: The design and manufacture of commercial kitchen extraction/ventilation systems
- k) Construction Regulations and Health and Safety Requirements
- l) Local Fire Regulations
- m) Local Municipal by-laws and regulations
- n) The Electricity Act 1996

3. PROGRAMME

The Tenderer shall allow for programming the work in such a manner that if falls within the completion programme of the Main Contractor. Sequence of work to suit Contractor's requirements will not be guaranteed.

4. MAINTENANCE

The subcontractor shall be responsible for maintaining the installation for twelve (12) months from the date of Practical completion at no extra cost. During the twelve months maintenance period, the subcontractor shall visit the site at once a quarter and shall additional to this be notified in case of breakdowns to visit the site and remedy/adjust accordingly. A logbook must be kept and all servicing/repairs must be recorded. The logbook shall be issued to the client after the twelve (12) months guarantee period.

The contractual guarantee period on faulty equipment, materials, and workmanship shall be twelve (12) months and it shall commence on the date of issuing completion certificate by the engineer.

The subcontractor is required to produce a list of spares and where they are available; this shall be documented with the AS-BUILT documentation.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Representative / Agent, at his own expense replace the whole of the installations or such parts thereof as the Representative/Agent or the Director-General may deem necessary with apparatus specified by the Representative / Agent.

5. ELECTRICAL WIRING

Unless specifically stated otherwise in the project specification, the Contractor shall be responsible for all electrical work and control wiring associated with the air conditioning installation with the exception of the incoming power which will be provided by others.

All electrical work shall comply with the requirements of the local Municipal Authorities and the Code of Practice for the "Wiring of Premises" SANS 10142, as amended.

The contractor shall electrically connect the new air handling units and condensing units. The contractor shall allow for new cables that will run in galvanised wire baskets; allowance should be made for cable terminators and cable glands onto the control panel and main AC DB.

All Electrical Work shall be undertaken by a qualified and registered Installation Electrician as defined in the OHS Act.

6. SYSTEM PERFORMANCE

The subcontractor shall be required to guarantee that the installation will be installed in such a way that it complies with design and specifications, any deviations from the original designs should be discussed and approved by the Engineer. The subcontractor will be notified of any equipment that does not comply to the specifications and shall be deemed to rectify to the satisfaction of the Engineer.

The subcontractor shall be responsible from making sure that the installation does not have excessive vibration and noise.

All materials shall be of the qualities specified in this document.

All the equipment for this installation shall be brand new and undamaged, high standard of workmanship shall be maintained all times.

The subcontractor shall be responsible for producing samples for approval when requested by the Engineer.

7. ALTERNATIVE EQUIPMENT

The subcontractor shall price the works in accordance with the tender documentation. The subcontractor is welcomed to supply an alternative equipment that will comply with the specifications and shall not have a negative financial impact on the project.

The main option is a heat recovery VRV/VRF system, the tenderer is required to price the heat recovery as the main offer.

During tender submission, the alternative equipment can be submitted as an "alternative".

Alternative equipment offered by the subcontractor shall be of equal or better quality and performance than what is specified. Alternatives offered at tender stage shall be submitted with performance data and cost savings.

The Engineer shall be responsible for approving offered equipment and his/her decision shall be final.

8. NOISE AND VIBRATION

The noise from the equipment shall comply with SANS 10103 and the contractor shall be responsible to make sure that these standards are adhered to. Noise generation from equipment shall be selected to operate as close as possible to maximum efficiency.

The subcontractor shall be responsible to submit noise data of all equipment to the engineer and selected sound attenuators to the Engineer for approval.

The noise from equipment shall not exceed 55 dBA when measured three (3) meters from the source.

9. MATERIALS, SAMPLES AND SHOP DRAWING

The drawings provided with this tender document are general arrangement drawings only. The successful Tenderer shall check all design criteria and submit shop drawings (including builder' for approval which take into consideration available spaces, builders work requirements, access for maintenance purposes etc).

The contractor must satisfy themselves that the equipment their offer fits at the positions indicated on the drawings and that it will be easily accessible for maintenance or repairs. It is the responsibility of the contractor to verify positions and dimensions on site.

The requirements for proof of compliance with materials specifications, samples and shop drawings are:

- Material specifications
- Shop drawings

The contractor shall supply a list of equipment offered and workshop drawings to the engineer before ordering equipment. It is the responsibility of the contractor to facilitate engineering sessions with the engineer to discuss any discrepancies or clashes. The contractor will then update drawings and submit for approval which will then be used as construction drawings.

The contractor shall, on certain occasions, be required to provide samples on request by the Engineer.

The contractor shall guarantee that all equipment is installed in a manner that it doesn't cause excessive draughts, noise and vibrations. The equipment shall be installed, tested, commissioned to attain the specified design conditions.

All materials and equipment used for this installation shall be new and without any damages.

10. BRANDING AND EQUIPMENT MAKE

The specifications are combined in a manner that does not prejudice against brands; it is pure performance based. The contractor will be allowed to offer equivalent equipment for consideration under these conditions:

The equipment shall comply with the duties/requirements and shall be subject to approval by Engineer.

Equipment shall be of equivalent quality, aesthetics and performance.

The delivery period shall not comprise the final completion of the project and the availability of spare parts is local.

11. ATTENDANCE AND SITE SUPERVISION

The contractor shall make sure that the site is managed in a professional manner and must have a competent person to control and supervise the installation i.e a Contract Manager. The contract manager shall be based on site and shall be responsible for coordination with other services and making sure that all their requirements are passed on to the relevant services. The Contract Manager shall communicate all technical and financial aspects of the project through the main contractor.

12. INSPECTIONS, COMMISSIONING AND TESTING

The Engineer shall, periodically during construction, inspect the installation for quality, contract administration and compliance to the specifications. The Engineer shall notify the subcontractor of any part of the installation that has poor workmanship or not compliant to the specifications, the subcontractor shall be responsible to adjust or amend the installation. At any given time, the Engineer shall inspect the equipment to be installed on site or workshop or a factory. The Engineer shall condemn any poor workmanship or work that is not within the specification and the contractor shall rectify at no extra cost.

On completion of the installation, it shall be tested to the satisfaction of the Engineer and all results shall be recorded in the Operating and Maintenance manuals.

All balancing and testing shall be carried out by the subcontractor entirely at his own expense, and all test instruments shall be checked for accuracy by the Manufacturers, Suppliers, or an approved Laboratory and certified copies of the certificates showing the degree of accuracy shall be supplied to the Engineer, if requested.

The contractor must make sure that the following equipment is available for testing the equipment:

- Velocity meter
- Crane type manometer for balancing valves
- Sling psychrometer
- Clamp on ammeter
- Voltmeter
- Power factor meter
- Ohm meter
- Neon type test lamp
- Ammeter to measure peak motor starting currents

The contractor shall record all measurements taken during testing and shall do the necessary adjustment to make sure that the equipment is operating within the design requirements.

The Contractor shall balance, set, and test the entire plant and shall submit the results to the Engineer who shall then carry out spot checks in the presence of the Contractor.

13. TRAINING

The subcontractor shall be responsible for a detailed training session with the technical department of the Employer/Client.

14. AS-BUILT DRAWINGS AND OPERATION MANUALS

On completion of the project, the subcontractor shall be required to produce three (3) files with the following:

- Index
- General description of installed equipment and systems
- Operating and Maintenance Instructions
- Maintenance Schedules
- Recommended Spares
- Supplier Equipment data
- Equipment Supplier Schedule
- Commissioning data
- Drawings (3 hard copy and in a memory stick in AutoCad and Pdf)

15. WORK BY OTHERS

It is the subcontractor's responsibility to indicate their requirements to the main contractor. The following work shall be form part of this installation and shall be carried out by others:

- All builders' work including concrete plinths, the forming of holes in walls and making good thereafter.
- The cutting of holes in suspended ceilings and ceiling tiles for the fixing of air conditioning equipment.
- The provision of a 400/420V 3ph 50Hz electrical supply to the air conditioning outdoor units.
- The provision of a 230 V 1 Ph 50 Hz electrical supply to all ventilation systems.
- The provision of a chased in 100 x 50 x 50 back box and conduit with draw wire to the ceiling void above to accommodate installation of hard-wired remote controller supplied with each unit.
- Provision of Certificates of Compliance for all electrical works which forms part of this contract.

16. PAINTING

No untreated metal surfaces shall be permitted on the project. Items which are not galvanised or similarly protected against rust and corrosion, shall be painted.

All black metal work including brackets, hangers, platforms, piping etc. either exposed or concealed shall be thoroughly cleaned, de-scaled and painted with one coat zinc chromate followed by one coat enamel paint, to an approved colour.

Unless specified to the contrary hereafter, all equipment, exposed ducting, pipes, metal parts and insulated and plastered surfaces shall be painted with a primer coat followed by two coats enamel paint, to an approved colour.

17. HOISTING

The subcontractor shall allow for all hoisting and scaffolding associated with this installation. The installation involves the hoisting of condensing units to the first-floor roof slab. All regulations and health and safety procedures pertaining to such work must be noted.

The air conditioning and ventilation equipment is mounted at high level and therefore scaffolding shall be required. It is the responsibility of the subcontractor to make sure that the requirements of the Construction Regulations, OHS Act and Health and Safety procedures are adhered to.

18. DESIGN CONDITIONS

Environmental Conditions:

Summer	:	36°C dry bulb
	:	24°C wet bulb
Winter	:	16°C dry bulb
	:	15°C wet bulb

Room conditions:

Summer	:	23°C ± 1°C
	:	50%RH ± 10%
Winter	:	21°C ± 1°C
	:	50%RH ± 10%

The room temperature setpoint shall be adjustable between 17°C and 24°C.

Ventilation Rates:

Fresh Air : 7.5l/s per person
Extraction : 20 air changes per hour

Altitude: : 120m

Internal Loads

Heat load from lights : 20W/m²

Noise level:

The noise level shall not exceed 55dBA when measure at three (3) meters from the sources.

19. VRV/VRF HEAT RECOVERY SYSTEMS

The contract shall be the installation of a VRV/VRF heat recovery system to Uitenhage Provincial Hospital, 72 Hour Observation Area. The condensing units shall be mounted on HVAC plant area located in the yard between male and female patient ablutions. The system shall include the following:

- Outdoor or Condensing units
- Indoor or Evaporator units
- Branch selectors
- Refrigerant piping
- Control piping
- Control wiring
- Remote controls

The systems shall be capable of providing temperature control for each individual indoor/evaporator independently of all other units. They shall provide a complete functional system that achieves the designed and specified conditions.

The indoor units shall be a four-way ceiling mini cassettes, and four-way ceiling cassettes. The position of the wired remote controls to be advised.

All ceiling cassette type indoor/evaporator units shall be factory assembled and tested with the following:

- electronic proportional expansion valves,
- control circuit board,
- factory wiring and piping,
- self-diagnostics,
- auto-restart function,
- 3-minute fused delay and
- Test run switch

They shall have a washable long-life net filter with mildew proof resin filters.

All outdoor/condensing units shall be air-cooled DX refrigeration type compatible for the use with indoor/evaporator units. The system must be able to modulate the compressor capacity automatically to maintain constant suction and condensing pressure while varying refrigerant volume to suit the

required cooling/heating loads. The outdoor condensing units must be capable of heating operation at low end of the operating range as specified, without additional ambient control or auxiliary heat source. The refrigerant circuit shall include:

- scroll compressors,
- motors,
- fans,
- condenser coil,
- electronic expansion valves,
- solenoid valves,
- four-way valves,
- distribution headers,
- capillaries,
- filters
- shut of valves,
- oil separators,
- service ports and
- refrigerant regulators.

The outdoor/condensing unit shall be complete with the following safety devices:

- high pressure sensor and switch,
- low pressure sensor and switch,
- control circuit fuses,
- crankcase heaters,
- fusible plug,
- overload relay,
- inverter overload protector,
- thermal protectors for compressors and fan motors,
- over current protection for the inverter and anti-recycling timers.

There must a provision made of contacts for electrical demand shedding. The units shall have auto restart operation after a power failure without any loss of programmed settings. The units should provide refrigerant sub-cooling to ensure the liquid refrigerant does not flash when supplying to indoor units.

The condensing units shall be weatherproof and corrosion resistant and rust-proofed mild steel panels coated with baked enamel finish. The condenser coils shall be copper tubes expanded into aluminium fins to form mechanical bond, waffle louvre fin and rifled bore tube design to ensure high efficiency performance.

The compressors shall be scroll type, hermitically sealed, variable speed inverter driven and fixed speed combination to suit total capacity. In the event of a compressor failure, operate remaining compressors at proportionally reduced capacity. The microprocessor and associated control should be provided to address this. Each compressor must be fitted with a crankcase heater, high pressure safety switch and internal thermal load protector. Spring mounted vibration isolators must be provided.

The system shall be complete with branch selector boxes which will be designed to control heating/cooling mode selection of downstream indoor units. They shall consist of electronic expansion valves, subcooling heat exchanger, refrigerant control piping and electronics to facilitate the communication between unit and main processor and between branch unit and indoor/evaporator units.

The casing of the branch selector branches shall be galvanized steel with flame and heat resistant foamed polyethylene sound and thermal insulation. Its refrigerant connections shall be braze type. The branch selector units must not require any condensate drainage.

All refrigerant piping will be insulated and vapour sealed with closed cell preformed sections with taped joints; proprietary tape only will be used. The AC Contractor will ensure that the aggregate equivalent suction and liquid refrigerant lines lengths do not exceed the manufacturer's recommended allowances.

All refrigerants are to be R32. If alternatives are proposed they must have an Ozone Depleting Potential of zero.

Refrigeration piping shall be carried out in phosphoric acid deoxidised seamless copper tubing. The piping for R32 shall be as follows.

Outside Diameter (mm)	Outside Diameter (in)	Material	Wall Thickness (mm)
6.4	1/4	0	0.8
9.5	3/8	0	0.8
12.7	1/2	0	0.8
15.9	5/8	0	1.0
19.1	3/4	0	1.0
22.2	7/8	1/2H	1.2
25.4	1 1/8	1/2H	1.2
28.6	1 3/8	1/2H	1.2
31.8	1 5/8	1/2H	1.2
34.9	2 1/8	1/2H	1.3
38.1	2 5/8	1/2H	1.3

All piping shall be kept properly sealed against moisture and dirt at all times. Bends in soft drawn material shall be made with long radius using proper tools. If hard drawn piping material is used then only long radius brazed bends may be used.

The piping shall be correctly sized using the equipment manufacturer's method or software. The additional refrigerant charge shall be accurately calculated by the same method. The maximum pipe lengths shall be adhered to.

All branch connections shall be by means of "proprietary" type joints as supplied by the air conditioning equipment manufacturer. The joints shall be installed with the connections on a horizontal plane or with the direction of flow in a vertical plane.

Only synthetic oil compatible with the refrigerant shall be used to lubricate any cutting, reaming and flaring tools.

Only phosphor copper brazing rods shall be used without any flux on the piping joints. The pipe work shall be continuously purged with low pressure nitrogen during all brazing operations.

Simple purging of the refrigerant lines between the indoor and outdoor sections is not acceptable. The lines shall be correctly pressure tested with nitrogen plus a small amount of refrigerant to 3.8 MPa for R32 and left for 24 hours to ensure pressure does not drop. The piping shall then be purged using a vacuum pump to -100 kPa (for more than 2 hours) and ensure that it holds this vacuum for 1 hour to the satisfaction of the engineer. The system shall then be charged in the liquid state with the calculated amount of additional refrigerant by using an accurate charging scale (charging cylinder cannot be used). Only once the system is correctly charged shall the refrigerant valves on the outdoor units be opened.

The pipe work arrangement for multiple outdoor units shall be correctly arranged to meet the equipment manufacturer's requirement.

No ozone depleting substances are to be associated with the manufacture or composition of all thermal insulants.

Refrigerant insulation shall be of closed cell structure and be of the vapour barrier type.

Its thermal conductivity shall be not higher than 0.037 W/m °C and be fire retardant material of Class 1.

19.1 QUALITY ASSURANCE

The installation is not brand specific but performance based, on submission of the tender document the contractor must make sure that the manufacturer of the equipment has been manufacturing Heat recovery variable refrigerant volume equipment for at least five (5) years.

The installers must have received an approved training from a manufacturer.

19.2 ENERGY EFFICIENCY

The contractor shall be responsible to select the most energy efficient equipment and shall provide report on the equipment's EER and COP.

20. VENTILATION SYSTEMS

The subcontractor shall supply, install, test and commissioning fresh air and extract ventilation systems complete with ducting, sound attenuators, cowls, weather louvres, grilles, filters, extract valves, diffusers, flexible ducting, mounting equipment and electrical connections.

The subcontractor shall be required to test and balance the systems. The fan duties are indicated on the drawing.

Fans shall not exceed 1450 revs/min and each fan shall have its own isolator. Ablution extract fans shall be switched on/off by motion sensors that will be supplied by the Electrical Contractor. The subcontractor is required to provide equipment loads so that they can be incorporated to the electrical installation. The fresh air supply fans into the line shops shall be put into a timer that will run during operating hours. Suitable axial flow fans shall be provided and fan motors to be provided with corrosion protection.

The subcontractor is responsible for the electrical connections of fans to isolators that will be supplied by the Electrical Contractor.

The sound attenuators shall be selected in a manner that they will reduce noise level to a minimum noise pressure level of 55dBA.

The subcontractor is responsible for, timeously, indicating and verify builder's work e.g weather louvre holes etc.

21. DUCTING

Fresh air and extract ventilation ducting shall not be insulated. Air conditioning ducting insulation shall be 25mm sonic liner. External ducting on the supply and return side of the rooftop package unit must be cladded.

Ducting shall be manufactured from galvanized sheet steel in accordance with SANS 10173. SMACNA (Sheet Metal and Air Conditioning Contractors National Association Inc. USA, SANS 1238. All ductwork that carries air temperatures below ambient dew point shall be provided with a vapour barrier seal that complies with SANS 10173.

All MEZ flange joints shall be sealed and external joints shall be waterproofed.

Flexible ducting shall be fire retardant and shall have a class 1 fire rating. When requested, the subcontractor shall provide the certification document on the Engineer's request. Only air conditioning flexible ducting shall be insulated, insulation shall be fire retardant fibreglass. Sizes of flexible ducting shall be the same as the neck size of the diffuser connected to it. Flexible ducting shall be securely fixed onto spigots and diffuser neck by steel strapping or cable tires and duct tape wrap. Flexible ducting shall not exceed 1.2m in length.

Sizes are indicated on the drawings.

22. AIR DIFFUSION

22.1 AIR VALVES

Air valves shall be installed for abluion extraction and shall be of the plastic type. The valves shall be of the Systemair EFF exhaust type with lockable settings or approved equal. They shall be white powder coated to match the ceilings.

Sizes are indicated on the drawings.

22.2 WEATHER LOUVRES

Outside weather louvers shall be manufactured from extruded aluminium with anodised or powder coated finish. They shall also have backdraft shutters and vermin mesh.

Louvers used for outside air intakes shall be fitted with opposed blade dampers having blades no less than 100mm deep. All outside weather louvers shall be fitted with a vermin proof galvanised wire screen behind the blades. The face velocity of the louvers shall not be less than 2.5m/s at a specified flow or air quantity.

A water seal shall be created behind each weather louver with clear silicone sealer to prevent ingress of rain water.

Sizes are indicated on the drawings.

23. DEHUMIDIFIER

Dehumidifier shall be MeacoDry or approved equal. It shall have continuous drainage. It shall to operational temperature range of 5°C to 35°C. The dehumidifier shall be able to maintain relative humidity of 50%RH ± 10%.

The dehumidifier shall have a guarantee of 12 months from the date of handover.

**UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION AREA
HEATING, VENTILATION AND AIR CONDITIONING
SCHEDULE 1 : PRELIMINARY AND GENERAL**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Contractual Items				
1.1	Provision of Sureties	Sum	1		
1.2	Insurances	Sum	1		
1.3	Third Party Insurance	Sum	1		
1.4	Guarantee of the Works	Sum	1		
1.5	Provide test results	Sum	1		
1.6	Provision of Record Drawings	Sum	1		
2	Fixed Cost Items				
2.1	Site Establishment/Removal	Sum	1		
2.2	Other (Specify).....	Sum			
	(i).....	Sum			
	(ii).....	Sum			
	(iii).....	Sum			
	(iv).....	Sum			
	(v).....	Sum			
3	Time Related Items				
3.1	Supervision	Sum	1		
3.2	Project Administration	Sum	1		
3.3	Other Overheads (Specify)				
	(i).....	Sum	1		
	(ii).....	Sum			
	(iii).....	Sum			
	(iv).....	Sum			
	(v).....	Sum			
4	Commissioning				
4.1	Testing and Commissioning	Sum	1		
5	Training				
5.1	Training of staff on the operation and daily maintenance of the installed equipment under this contract	Sum	1		
	NOTE P&G costs for time related items shall be based on the Contract period specified in the Form of Tender				
TOTAL CARRIED FORWARD TO SUMMARY					

**UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION AREA
HEATING, VENTILATION AND AIR CONDITIONING
SCHEDULE 2 : HVAC INSTALLATION**

ITEM	SPEC REF	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
2		Supply, deliver, install, test and commission equipment as specified including all fixtures, and all required equipment to successfully complete the installation,					
2.1		VRV SYSTEM					
2.1.1		VRV Condensing Unit - Heat Recovery Cooling Capacity: 40.0 kW Power input : 40A, 3-Ph	SUM	2			
2.1.2		Anti-corrosion treatment	Sum	1			
		INDOOR UNITS					
2.1.2		22.0 kW Ducted Hide Away AC unit	each	3			
2.1.3		28.0 kW Ducted Hide Away AC unit	each	1			
2.1.4		3.5 kW Ceiling Cassette Inveter AC unit	each	2			
2.1.5		2.5 kW Ceiling Cassette Inveter AC unit	each	7			
2.1.6		5.0 kW Ceiling Cassette Inveter AC unit	each	1			
2.1.7		Wired remote controller with holder and reciever	each	14			
2.2		CONDITIONED AIR SUPPLY DUCTWORK Conditioned air supply sheet metal ductwork shall be supplied with insulation. All duckwork shall be c/w all the necessary galvanized rod and angles					
2.2.1		550 x 300 mm Duct (insulated)	m	3			
2.2.2		450 x 300 mm Duct (insulated)	m	8			
2.2.3		300 x 300 mm Duct (insulated)	m	20			
2.2.4		250 x 250 mm Duct (insulated)	m	10			
2.2.5		150 x 200 mm Duct (insulated)	m	20			
2.2.6		200 mm dia. Duct (insulated)	m	20			
2.3		FRESH AIR SUPPLY DUCTWORK Unless otherwise specified all fresh air supply sheet metal ductwork shall be supplied without insulation. All duckwork shall be c/w all the necessary galvanized rod and angle					
2.3.1		400 x 300 mm Duct	m	20			
2.3.2		300 x 300 mm Duct	m	16			
2.3.3		200 x 200 mm Duct	m	20			
2.3.4		350 x 300 mm Duct	m	18			
2.3.5		250 x 300 mm Duct	m	10			
2.3.6		150mm diameter (uninsulated)	m	30			
2.3.7		150mm diameter flexible (uninsulated)	m	22			
2.4		EXTRACTION DUCTWORK All extraction sheet metal ductwork shall be supplied without insulation. All duckwork shall be c/w all the necessary galvanized rod and angle					
2.4.1		350 x 300 mm Duct	m	10			
2.4.2		300 x 300 mm Duct	m	20			
2.4.3		300 x 200 mm Duct	m	5			
2.4.4		250 x 200 mm Duct	m	15			
2.4.5		200 x 200 mm Duct	m	5			
2.4.6		150 x 200 mm Duct	m	28			
2.4.7		400 x 300 mm Duct	m	10			
2.4.8		150mm diameter Duct	m	30			
2.4.9		150mm diameter flexible (uninsulated)	m	40			
2.5		TRANSITION PIECES					
2.5.1		550x300mm to 450x300mm Duct (insulated)	No.	1			
2.5.2		450x300mm to 300x300mm Duct (insulated)	No.	1			
2.5.3		400x300mm to 300x300mm Duct (insulated)	No.	1			
2.5.4		300x300mm to 250x250mm Duct (insulated)	No.	1			
2.5.5		300x300mm to 150x200mm Duct (insulated)	No.	1			
TOTAL CARRIED FORWARD TO NEXT PAGE							

SCHEDULE 2 : HVAC INSTALLATION (Continues...)

				TOTAL BROUGHT FORWARD		
2.5.6		400x300mm to 300x300mm	No.	1		
2.5.7		400x300mm to 200x200mm	No.	1		
2.5.8		350x200 mm to 300x300mm	No.	1		
2.5.9		300x300 mm to 300x200mm	No.	1		
2.5.10		300x200 mm to 250x200mm	No.	1		
2.5.11		250x200 mm to 150x200mm	No.	1		
2.5.12		220x200 mm to 150x200mm	No.	1		
2.6		BENDS & FITTINGS				
2.6.1		200mm dia - 90 degree bend (insulated)	No.	3		
2.6.2		150x200mm Duct 45 degree (insulated)	No.	2		
2.6.3		150mm dia - 90 degree bend	No.	4		
2.6.4		150 x 150 mm 90 degree bend	No.	1		
2.6.5		250 x 250 mm - Stop End	No.	1		
2.6.6		200 x 200 mm - Stop End	No.	3		
2.6.7		150 x 200 mm - Stop End	No.	4		
		250 x 200 mm - TEE	No.	2		
		400 x 300 mm - TEE	No.	1		
2.7		FANS				
		Supply and install low profile mixed flow, sound absorbent fan c/w with all supporting brackets and canvas collars , for continuous duty.				
		Ø 250 In-line Duct Extract Fan c/w Upstream Attenuator 200 l/s @100 Pa	No.	2		
2.7.1		Ø315 In-line Duct Supply Fan c/w Upstream and Downstream Attenuators 359 l/s @ 250Pa	No.	1		
2.7.2		Ø355 In-line Duct Supply Fan c/w Upstream and Downstream Attenuators 523 l/s @ 150Pa	No.	1		
2.7.3						
2.8		DIFFUSERS, GRILLES & VALVES				
2.8.1		150 diameter Plastic Exhaust Valve	No.	22		
2.8.2		250 dia Supply Difusser - Rectagular face	No.	4		
2.8.3		200 dia Supply Difusser - Rectagular face	No.	9		
2.8.4		600x600 hinged weather louvre with filter media	No.	1		
2.8.5		500x500 hinged weather louvre with filter media	No.	1		
2.8.6		400x400 hinged weather louvre with filter media	No.	2		
2.8.7		300x300 hinged weather louvre with filter media	No.	2		
		600x600 - 50mm Washable Pleated Panel Filter c/w Filter Box	No.	1		
2.8.8		400x400 - 50mm Washable Pleated Panel Filter c/w Filter Box	No.	2		
2.8.9						
2.8.10		400x400mm Door Grille	No.	1		
2.8.11		300x300mm Door Grille	No.	2		
2.9		BRANCH SELECTOR UNITS				
		Heat recovery branch selector unit coupled with all controls and supporting brackets				
2.9.1		Heat Recovery Branch Selector Unit - 2 Port	No.	2		
2.9.2		Heat Recovery Branch Selector Unit - 4 Port	No.	1		
2.9.3		Heat Recovery Branch Selector Unit - 6 Port	No.	1		
TOTAL CARRIED FORWARD TO NEXT PAGE						

SCHEDULE 2 : HVAC INSTALLATION (Continues...)

		TOTAL BROUGHT FORWARD			
2.10		REFRIGERANT			
		Supply, delivery to site and installation of refrigeration grade copper pipework to specification including cutting, reaming and soldering (plain ends) and closed cell pipe insulation.			
2.10.1		Grade xxx copper piping ø6.35mm	m	35	
2.10.2		Grade xxx copper piping ø9.52mm	m	30	
2.10.3		Grade xxx copper piping ø12.7mm	m	80	
2.10.4		Grade xxx copper piping ø15.88mm	m	95	
2.10.5		Grade xxx copper piping ø19.05mm	m	50	
2.10.6		Grade xxx copper piping ø22.2mm	m	30	
2.10.7		Grade xxx copper piping ø28.58mm	m	20	
2.10.8		Grade xxx copper piping ø34.93mm	m	60	
2.10.9		Grade xxx copper piping ø41.28mm	m	40	
		Heavy Duty Cable Tray for Fixing of Refrigeration Pipe Bundles (including supports)			
2.10.10		100 mm wide	m	120	
2.10.11		250 mm wide	m	70	
2.10.12		Outdoor Unit Multi connection piping kit for 2 modules	no	2	
2.11		DRAIN PIPE WORK			
		Supply, delivery to site and installation of CL 6 UPVC pipework and fittings including cutting, reaming and solvent welding (plain ends) and supports			
2.11.1		16 mm dia	m	200	
2.11.2		32mm dia	m	120	
2.11.3		32 dia 90 or 45 deg bend	no	40	
2.11.4		32 dia tee	no	20	
2.11.5		32 dia hose end coupling	no	10	
TOTAL CARRIED FORWARD TO SUMMARY					

**UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION AREA
 HEATING, VENTILATION AND AIR CONDITIONING
 SCHEDULE 3 :TEST DAYWORKS**

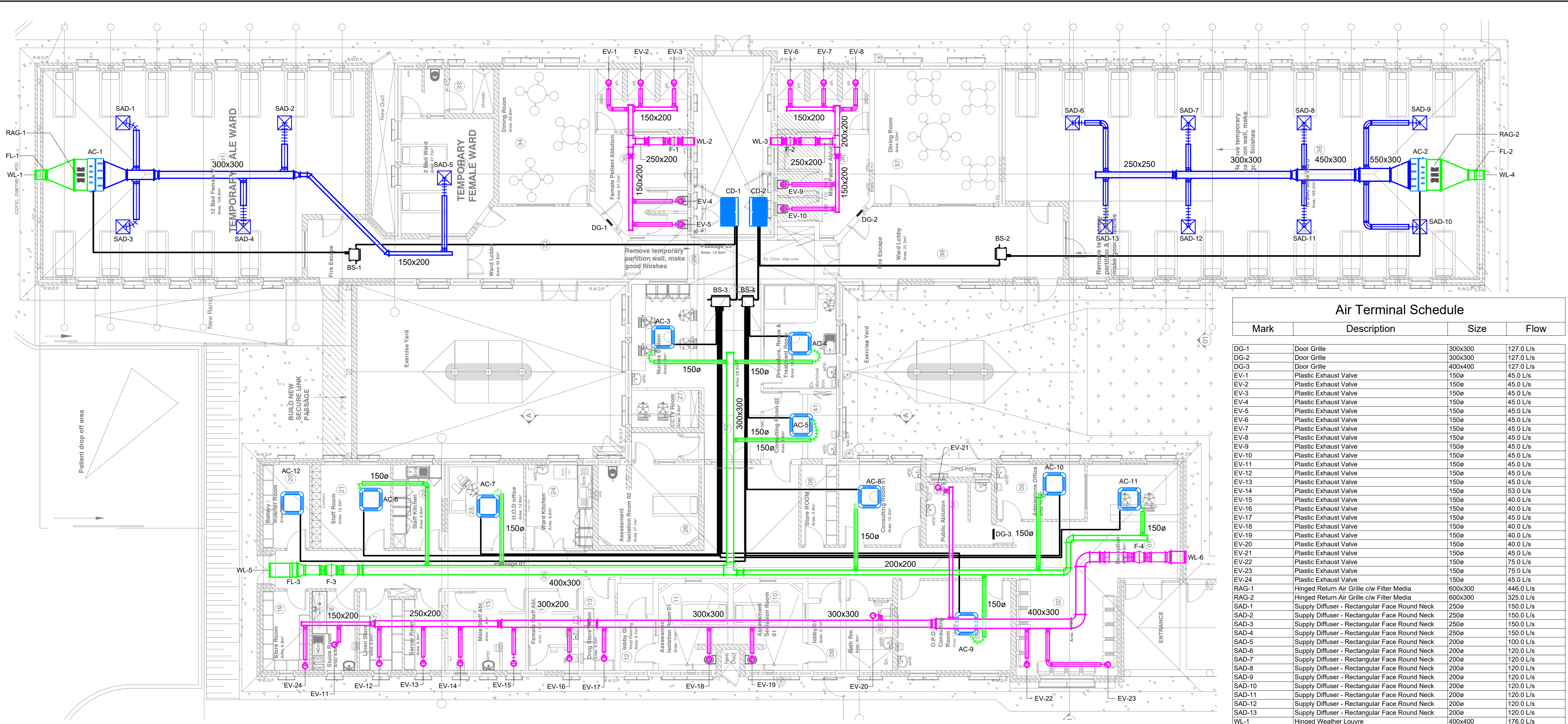
<u>ITEM NO</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>MATERIAL RATE</u>	<u>LABOUR RATE</u>	<u>TOTAL AMOUNT</u>
3.1		Dayworks for unforeseen items to be approved by the Engineer prior to implementation					
3.1.1	n/a	Qualified Artisan	Hrs	40			
3.1.2	n/a	Semi-skilled labourer	Hrs	80			
3.1.3	n/a	Labourer	Hrs	160			
3.2		Snag, test, Balance, commissioning of the following:					
3.2.1		Otu package unit	sum	1			
3.2.2		VRV System indoor	sum	1			
3.2.3		Extract fans	sum	1			
3.2.4		Fresh air fans	sum	1			
TOTAL CARRIED FORWARD TO SUMMARY							

**UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION AREA
HEATING, VENTILATION AND AIR CONDITIONING
SCHEDULE 4 :REFRIGERANT PIPING**

<u>ITEM NO</u>	<u>Spec. Ref</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY</u>	<u>MATERIAL RATE</u>	<u>LABOUR RATE</u>	<u>TOTAL AMOUNT</u>
4.1		For purposes of measuring extra over to piping and fittings measured under the system Bills. Supply and install air conditioning gas piping and fittings for R401A system					
4.1.1		Grade xxx copper piping Ø6.35mm	m	1			
4.1.2		Grade xxx copper piping Ø9.52mm	m	1			
4.1.3		Grade xxx copper piping Ø12.7mm	m	1			
4.1.4		Grade xxx copper piping Ø15.88mm	m	1			
4.1.5		Grade xxx copper piping Ø19.05mm	m	1			
4.1.6		Grade xxx copper piping Ø22.2mm	m	1			
4.1.7		Grade xxx copper piping Ø28.58mm	m	1			
4.1.8		Grade xxx copper piping Ø34.93mm	m	1			
4.1.9		Grade xxx copper piping Ø41.28mm	m	1			
4.2		Gas piping insulation for pipes listed below					
4.3		Ø6.35mm	m	1			
4.4		Ø9.52mm	m	1			
4.5		Ø12.7mm	m	1			
4.6		Ø15.88mm	m	1			
4.7		Ø19.05mm	m	1			
4.8		Ø22.2mm	m	1			
4.9		Ø28.58mm	m	1			
4.10		Ø34.93mm	m	1			
4.11		Ø41.28mm	m	1			
4.3		Supply and install air conditioning gas piping and fittings - elbows					
4.3.1	6,1	Ø6.35mm ID	Unit	1			
4.3.2	6,1	Ø9.52mm ID	Unit	1			
4.3.3	6,1	Ø12.7mm ID	Unit	1			
4.3.4	6,1	Ø15.88mm ID	Unit	1			
4.3.5	6,1	Ø19.5mm ID	Unit	1			
4.3.6	6,1	Ø22.2mm ID	Unit	1			
4.3.7	6,1	Ø28.58mm ID	Unit	1			
4.3.8	6,1	Ø34.93mm ID	Unit	1			
4.3.9	6,1	Ø41.28mm ID	Unit	1			
4.4		Supply and install R410A refrigerant gas	kg	1			
4.5		Supply and install joint kits	Unit	1			
CARRY FORWARD TO SUMMARY PAGE							RATES ONLY

**UITENHAGE PROVINCIAL HOSPITAL - 72 HOUR OBSERVATION AREA
 HEATING, VENTILATION AND AIR CONDITIONING
 FINAL SUMMARY**

ITEM No.	DESCRIPTION		TOTAL
1 2 3 4	PRELIMINARIES AND GENERAL HVAC INSTALLATION TEST DAYWORKS AC PIPES AND FITTINGS SUBTOTAL (Excl. VAT)		 RATES ONLY
TOTAL TRANSFERRED TO SECTION 3 BILL No.17 ITEM 1 OF BILLS OF QUANTITIES			



Ground Floor
SCALE 1 : 100

Mark	Description	Size	Flow
DG-1	Door Grille	300x300	127.0 L/s
DG-2	Door Grille	300x300	127.0 L/s
DG-3	Door Grille	400x400	127.0 L/s
EV-1	Plastic Exhaust Valve	150ø	45.0 L/s
EV-2	Plastic Exhaust Valve	150ø	45.0 L/s
EV-3	Plastic Exhaust Valve	150ø	45.0 L/s
EV-4	Plastic Exhaust Valve	150ø	45.0 L/s
EV-5	Plastic Exhaust Valve	150ø	45.0 L/s
EV-6	Plastic Exhaust Valve	150ø	45.0 L/s
EV-7	Plastic Exhaust Valve	150ø	45.0 L/s
EV-8	Plastic Exhaust Valve	150ø	45.0 L/s
EV-9	Plastic Exhaust Valve	150ø	45.0 L/s
EV-10	Plastic Exhaust Valve	150ø	45.0 L/s
EV-11	Plastic Exhaust Valve	150ø	45.0 L/s
EV-12	Plastic Exhaust Valve	150ø	45.0 L/s
EV-13	Plastic Exhaust Valve	150ø	45.0 L/s
EV-14	Plastic Exhaust Valve	150ø	53.0 L/s
EV-15	Plastic Exhaust Valve	150ø	40.0 L/s
EV-16	Plastic Exhaust Valve	150ø	40.0 L/s
EV-17	Plastic Exhaust Valve	150ø	45.0 L/s
EV-18	Plastic Exhaust Valve	150ø	40.0 L/s
EV-19	Plastic Exhaust Valve	150ø	40.0 L/s
EV-20	Plastic Exhaust Valve	150ø	40.0 L/s
EV-21	Plastic Exhaust Valve	150ø	45.0 L/s
EV-22	Plastic Exhaust Valve	150ø	75.0 L/s
EV-23	Plastic Exhaust Valve	150ø	75.0 L/s
EV-24	Plastic Exhaust Valve	150ø	45.0 L/s
RAG-1	Hinged Return Air Grille c/w Filter Media	600x300	446.0 L/s
RAG-2	Hinged Return Air Grille c/w Filter Media	600x300	325.0 L/s
SAD-1	Supply Diffuser - Rectangular Face Round Neck	250ø	150.0 L/s
SAD-2	Supply Diffuser - Rectangular Face Round Neck	250ø	150.0 L/s
SAD-3	Supply Diffuser - Rectangular Face Round Neck	250ø	150.0 L/s
SAD-4	Supply Diffuser - Rectangular Face Round Neck	250ø	150.0 L/s
SAD-5	Supply Diffuser - Rectangular Face Round Neck	200ø	100.0 L/s
SAD-6	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-7	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-8	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-9	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-10	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-11	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-12	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
SAD-13	Supply Diffuser - Rectangular Face Round Neck	200ø	120.0 L/s
WL-1	Hinged Weather Louvre	400x400	176.0 L/s
WL-2	Hinged Weather Louvre	300x300	225.0 L/s
WL-3	Hinged Weather Louvre	300x300	225.0 L/s
WL-4	Hinged Weather Louvre	400x400	255.0 L/s
WL-5	Hinged Weather Louvre	600x600	359.0 L/s
WL-6	Hinged Weather Louvre	500x500	523.0 L/s

Mark	Description	Size (mm)
FL-1	50mm Washable Pleated Panel Filter c/w Filter Box	400x400
FL-2	50mm Washable Pleated Panel Filter c/w Filter Box	400x400
FL-3	50mm Washable Pleated Panel Filter c/w Filter Box	600x600

NOTES:
- FL-1 & FL-2 TO BE ACCESSIBLE FROM THE WEATHER LOUVRE

Mark	Description	Duty/Size	Power Requirements
AC-1	Ducted Hide Away Inverter AC Unit c/w Wired Remote Controller	22.0 kW	16 A, 1-ph
AC-2	Ducted Hide Away Inverter AC Unit c/w Wired Remote Controller	28.0 kW	16 A, 1-ph
AC-3	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
AC-4	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	3.5 kW	16 A, 1-ph
AC-5	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
AC-6	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
AC-7	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
AC-8	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
AC-9	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	3.5 kW	16 A, 1-ph
AC-10	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
AC-11	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	5.0 kW	16 A, 1-ph
AC-12	Ceiling Cassette Inverter AC Unit c/w Wired Remote Controller	2.5 kW	16 A, 1-ph
BS-1	Heat Recovery Branch Selector Unit - 2 Port	2-Port	16 A, 1-ph
BS-2	Heat Recovery Branch Selector Unit - 2 Port	2-Port	16 A, 1-ph
BS-3	Heat Recovery Branch Selector Unit - 6 Port	6-Port	16 A, 1-ph
BS-4	Heat Recovery Branch Selector Unit - 4 Port	4-Port	16 A, 1-ph
CD-1	VRV Condensing Unit - Heat Recovery	40.0 kW	32 A, 3-ph
CD-2	VRV Condensing Unit - Heat Recovery	40.0 kW	32 A, 3-ph
F-1	Ø250 In-line Duct Extract Fan c/w Upstream Attenuator	200 l/s @ 100 Pa	0.2 kW, 1-ph
F-2	Ø250 In-line Duct Extract Fan c/w Upstream Attenuator	200 l/s @ 100 Pa	0.2 kW, 1-ph
F-3	Ø315 In-line Duct Supply Fan c/w Upstream and Downstream Attenuators	359 l/s @ 250 Pa	0.4 kW, 1-ph
F-4	Ø355 In-line Duct Extract Fan c/w Upstream and Downstream Attenuators	618 l/s @ 150 Pa	0.4 kW, 1-ph

NOTES:
- CONTROLLERS FOR AC-1 & AC-2 TO BE LOCATED IN THE H.O.D OFFICE

GENERAL NOTES

NO	APPROVED	AMENDMENTS	DATE
T0		Issued for tender	23/01/2024
SURVEYED			15/09/2023
DRAWN	A. NGALO		15/09/2023
DESIGNED	A. NGALO		15/09/2023
CHECKED	A. MTAMBEKI		15/09/2023
APPROVED			23/01/2024

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PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL

DRAWING TITLE
**MECHANICAL INSTALLATION
72 HOUR OBSERVATION AREA
HVAC LAYOUT**

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1	A1
DRAWING No.	1746-6-HVAC-02	REVISION T0

P:\PE\1746-6-Uitenhage Provincial Hospital\04_Design\8_Drawing\13_Mechanical\01_Working Drawings\72_Hour Observation Area\1746-6-MECH-Observation Area.rvt 2024/01/23 12:00:31

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 18</u>				
<u>GLAZING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Float glass:</u>				
The term 'float glass' is used for monolithic annealed glass				
<u>Laminated glass:</u>				
Laminated glass to have polyvinyl butyral (PVB) interlayer(s)				
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC (CPAP Work Group No 150)</u>				
<u>5mm Safety glass mirror with polished edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork:</u>				
1	Mirror 600 x 600mm high with four screws.	No	12	
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 3 Bill No. 18 Glazing				

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 19</u>				
<u>PAINTWORK</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
<u>SABS Specifications</u>				
Matt or eggshell decorative paint for interior works : SABS 515				
High gloss enamel paint : SABS 630 Grade I				
Oil gloss enamel paint : SABS 631				
Primers for wood for external work : SABS 678 Type I				
Primers for wood for internal work : SABS 678 Type III				
Zink chromate primers for steel : SABS 679 Type I				
Undercoats for paints (except emulsion paint) : SABS 681 Type I				
Aluminium paint : SABS 682 Grade II				
Roof paints : SABS 683 Type B (Oil) SABS 940 (Emulsion)				
Structural steel paint : SABS 684 Type B				
Wash primer (metal etch) : SABS 723				
Varnish for interior use : SABS 887 Type I				
Emulsion paints : SABS 1586				
<u>ON BRICKS, STONEMWORK OR QUARRY TILES</u> <u>(CPAP Work Group No 152)</u>				
<u>Prepare surfaces and remove all loose material, builder's plaster etc with mortar lift and weak spirits of salts (or any other suitable means), clean with high pressure cleaner, dry and apply two coats of approved brick dressing:</u>				
1	On exterior recessed pointed existing face brick walls.	m ²	105	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 19 Paintwork				

Item	Unit	Quantity	Rate	Amount
<p><u>ON FLOATED PLASTER (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat 'Masonry Plaster Primer' (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats approved professional hygiene low sheen paint (THL 1000) pastel base acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
2 On interior walls.	m ²	987		
<p><u>ON TEXTURED PLASTER (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants and apply one coat 'Masonry Plaster Primer (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats extremely durable UV resistant waterbased mica reinforced fine textured acrylic paint in strict accordance with manufacturer's instructions:</u></p>				
3 On exterior walls in multi patterned multi-colours.	m ²	1 192		
<p><u>ON NEW INTERNAL TEXTURED PLASTER SURFACES (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat Professional Plaster Primer (PP 700), one coat SABS approved undercoat and two coats Professional Hygiene Low Sheen Acrylic Paint (TLL 1000) in strict accordance with manufacture's instructions:</u></p>				
4 Sills, thresholds, etc.	m ²	19		
<p><u>ON NEW SMOOTH CONCRETE SURFACES (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat 'Masonry Plaster Primer (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats superior quality acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
5 On ceilings and beams.	m ²	25		
6 On exterior cills.	m ²	24		
<p><u>ON NEW ROUGH CONCRETE SURFACES (CPAP Work Group No 152)</u> <u>One coat bonding liquid, one coat primer and two coats superior quality acrylic emulsion paint for interior and exterior use, including stopping blow holes:</u></p>				
7 Walls and columns.	m ²	8		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 19 Paintwork				

Item	Unit	Quantity	Rate	Amount
<u>ON PLASTER BOARD (CPAP Work Group No 152)</u>				
<u>One coat SABS approved universal undercoat and two coats superior quality white acrylic washable PVA paint in strict accordance with manufacturer's instructions:</u>				
8	m ²	10		
<u>ON FIBRE-CEMENT, ETC (CPAP Work Group No 152)</u>				
<u>One coat alkali resistant primer, one coat SABS approved universal undercoat and two coats superior quality acrylic emulsion paint in strict accordance with manufacturer's instructions:</u>				
9	m ²	420		
10	m ²	182		
<u>ON METAL (CPAP Work Group No 152)</u>				
<u>Prepare surface and apply one coat water based primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on galvanised steel:</u>				
11	m ²	206		
12	m ²	11		
<u>Prepare, remove all dust, grease, salts, rinse and apply one coat red oxide zinc chromate metal primer, one coat universal undercoat and two coats polyurethane enamel paint on steel:</u>				
13	m ²	42		
<u>ON WOOD, WOOD BOARD (CPAP Work Group No 152)</u>				
<u>Two coats oil wood primer:</u>				
14	m	3		
<u>Stop, fill, sand down and prepare wood surfaces and apply one coat wood primer, one coat SABS approved universal undercoat and two coats polyurethane enamel paint in strict accordance with manufacturer's instructions:</u>				
15	m ²	123		
16	m ²	4		
17	m ²	3		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
Bill No. 19				
Paintwork				

Item	Unit	Quantity	Rate	Amount
<p><u>PREPARATORY WORK TO PREVIOUSLY PAINTED SURFACES</u></p>				
<p><u>Previously painted plastered surfaces:</u></p>				
<p>Surfaces shall be thoroughly washed down to remove dirt and other contaminants and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with 'Polycell Mendall 90' or equal approved or 'Polycell Polyfilla Exterior' or equal approved filler, and sanded smooth. In the case of previously limewashed surfaces, completely remove all limewash if possible or at least wire brush and scrape down to achieve a 'grey state' exposure of the substrate and apply filler as indicated above.</p>				
<p><u>Previously painted metal surfaces:</u></p>				
<p>Surfaces shall be thoroughly rubbed and cleaned down to remove dirt and other contaminants and sanded lightly to provide a key for subsequent coats. Blistered or peeling paint shall be completely removed down to bare metal and any rust encountered shall be removed and bare metal areas cleaned, washed with Sugar Soap and spot primed with 'Namelcote Synthetic Metal Primer' or equal approved.</p>				
<p><u>Previously painted galvanised metal surfaces:</u></p>				
<p>Surfaces shall be thoroughly rubbed and cleaned down to remove dirt and other contaminants and sanded lightly to provide a key for subsequent coats. Blistered or peeling paint shall be completely removed down to bare metal and any rust encountered shall be removed and bare metal areas cleaned with 'Plascon Galvanised Iron Cleaner' and spot primed with 'Galvogrip Metal Primer'.</p>				
<p><u>Previously painted wood surfaces:</u></p>				
<p>Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with a filler as described and sanded smooth. In the case of previously varnished surfaces, all existing varnish must be thoroughly sanded off before new coats are applied.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>			<p>R</p>	
<p>Section No. 3 Bill No. 19 Paintwork</p>				

Item	Unit	Quantity	Rate	Amount
<p><u>ON FLOATED PLASTER (CPAP Work Group No 152)</u> <u>Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or weak spirits of salts, open up cracks and make good with 'approved exterior filla' sanded smooth, apply one coat 'Masonry Plaster Primer' (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats approved professional hygiene low sheen paint (THL 1000) pastel base acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
18 On interior walls.	m ²	793		
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 3 Bill No. 19 Paintwork				

Amount

Bill No. 19
PAINTWORK
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 3

Bill No. 19

Paintwork

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 20</u>				
<u>FURNITURE</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
<u>LOOSE FURNITURE (CPAP Work Group No. 136, Unless Otherwise Stated)</u>				
<u>Tables:</u>				
1	800mm Diameter x 825mm high 4 seater round table complete with integrated seating and compact laminate with rubber bumper surround fixed securely to floor as per manufacturers specification .	No	6	
2	1 200mm Diameter x 825mm high 6 seater round table complete with integrated seating and compact laminate with rubber bumper surround fixed securely to floor as per manufacturers specification .	No	1	
<u>Chairs:</u>				
3	700 x 700 x 810mm High seamless polyurethane moulded resting chair.	No	10	
<u>Locker:</u>				
4	480 x 875 x 400mm High seamless polyurethane moulded locker complete with stainless steel tamper proof fasters fixed securely to the floor.	No	32	
<u>Beds:</u>				
5	970 x 2 000 x 450mm High seamless polyurethane moulded psychiatric bed.	No	35	
6	940 x 1 940 x 150mm Double sided polyurethane cover, flame retardant and waterproof mattress.	No	35	
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 3 Bill No. 20 Furniture				

Item	Unit	Quantity	Rate	Amount
<u>Electrical appliances:</u>				
7 40" HD Smart LED TV set.	No	2		
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 3 Bill No. 20 Furniture				

Amount

Bill No. 20
FURNITURE
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 3

Bill No. 20

Furniture

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>72-HOUR ASSESSMENT AREA</u>				
<u>Bill No. 24</u>				
<u>RETAINING WALL</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item.				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Nature of ground:</u>				
A soils investigation has been carried out on the site and the report is annexed to these Bills of Quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as earth described in the above report and where conditions of a more difficult character are indicated these are separately measured.				
<u>SUBSOIL DRAINAGE (CPAP WORK GROUP NO. 146)</u>				
<u>Earthworks:</u>				
1	m ³	20		
2				
Extra over excavation for pipe trenches, chambers, etc. for carting away surplus material to a dumping site to be located by the contractor.	m ³	13		
3				
Backfilling to drain trenches compacted to 93% Mod AASHTO density.	m ³	13		
4				
19mm Crushed stone encasing to pipes.	m ³	7		
5				
Compaction of ground surface in bottom of trenches etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m ²	16		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3 Bill No. 24 Retaining Wall				

Item	Unit	Quantity	Rate	Amount
6				
Grade A2 geofabric filter blanket wrapped around 450 x 450mm stone encasing with 150mm side and 300mm end laps, including stitching.	m ²	73		
<u>HDPe pipes:</u>				
7				
110mm Slotted uPVC agricultural pipes laid in stone encasing (encasing elsewhere).	m	35		
<u>Extra over HDPe pipes for fittings:</u>				
8				
Extra over 110mm capped end.	No	2		
9				
Extra over 110mm bend.	No	3		
<u>EXCAVATION OTHER THAN BULK (CPAP Work Group No 114)</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
10				
Trenches.	m ³	31		
<u>Extra over excavations other than bulk in earth for excavation in:</u>				
11				
Soft rock.	m ³	8		
12				
Hard rock.	m ³	8		
<u>Risk of collapse of excavations other than bulk:</u>				
13				
Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	84		
<u>CARTING AWAY. (CPAP Work Group No 104)</u>				
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
14				
Off site to a dumping site to be found by the Contractor.	m ³	6		
<u>EARTH FILLING, ETC. (CPAP Work Group No 104)</u>				
<u>Filling with material from the excavations compacted to a density of at least 93% Mod. AASHTO maximum density:</u>				
15				
Backfilling behind retaining walls.	m ³	6		
<u>Coarse river sand filling supplied by the contractor:</u>				
16				
Behind retaining walls.	m ³	6		
<u>KEEPING EXCAVATIONS FREE OF WATER (CPAP Work Group No 104):</u>				
<u>Keeping excavations free of water:</u>				
17				
Keeping excavations free of all water other than subterranean water.	Item			
TOTAL CARRIED TO BILL SUMMARY				
Section No. 3			R	
Bill No. 24				
Retaining Wall				

Item	Unit	Quantity	Rate	Amount
<u>TESTS (CPAP Work Group No 104)</u>				
<u>Prescribed density tests on filling:</u>				
18	Modified AASHTO Density test.	No	9	
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES (CPAP Work Group No 110)</u>				
<u>15MPa/19mm Concrete:</u>				
19	Blinding.	m ³	3	
<u>REINFORCED CONCRETE (CPAP Work Group No 110)</u>				
<u>25MPa/19mm Concrete:</u>				
20	Cavity of hollow walls.	m ³	3	
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES (CPAP Work Group No 110)</u>				
<u>25MPa/19mm Concrete:</u>				
21	Strip footings.	m ³	5	
<u>TEST BLOCKS (CPAP Work Group No 110)</u>				
<u>Test blocks:</u>				
22	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes.	Sets	3	
<u>REINFORCEMENT (CPAP Work Group No 114)</u>				
<u>Mild steel reinforcement to structural concrete work:</u>				
23	8mm Diameter bars.	Tonnes	0.04	
24	10mm Diameter bars.	Tonnes	0.07	
<u>High tensile steel reinforcement to structural concrete work:</u>				
25	10mm Diameter bars.	Tonnes	0.04	
26	12mm Diameter bars.	Tonnes	0.07	
27	16mm Diameter bars.	Tonnes	0.14	
28	22mm Diameter bars.	Tonnes	0.18	
29	25mm Diameter bars.	Tonnes	0.14	
30	32mm Diameter bars.	Tonnes	0.04	
TOTAL CARRIED TO BILL SUMMARY				
Section No. 3				
Bill No. 24				
Retaining Wall				
			R	

Item	Unit	Quantity	Rate	Amount
<u>BRICKWORK IN RETAINING WALLS (CPAP Work Group No 116)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar in loadbearing walls, etc.:</u>				
31	m ²	41.75		
<u>300mm Hollow walls of two half brick skins.</u>				
<u>BRICKWORK SUNDRIES (CPAP Work Group No 116)</u>				
<u>Brickwork reinforcement:</u>				
32	m	164		
<u>150mm Wide reinforcement built in horizontally.</u>				
<u>MOVEMENT JOINTS ETC (CPAP Work Group No 111)</u>				
<u>Movement joint:</u>				
33	m	35		
<u>10mm Expansion joints with low density (33kg/m³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation between vertical concrete and brick surfaces not exceeding 300mm high to edges of concrete stormwater channels.</u>				
<u>DAMPPROOFING OF WALLS AND FLOORS (CPAP Work Group No 120)</u>				
<u>One layer 500 micron orange polyethylene waterproof sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape:</u>				
34	m ²	35		
<u>Vertically behind retaining walls.</u>				
<u>EXTERNAL PLASTER (CPAP Work Group No 142)</u>				
<u>Cement plaster on brickwork:</u>				
35	m ²	35		
<u>On walls.</u>				
36	m ²	10		
<u>On narrow widths.</u>				
<u>ON FLOATED PLASTER (CPAP Work Group No 152)</u>				
<u>Prepare and brush to remove all loose contaminants and apply one coat 'Plascon UC56' plaster primer and two coats 'Plascon Wall and All' or equal approved extremely durable UV-resistant waterbased mica reinforced fine textured acrylic paint:</u>				
37	m ²	46		
<u>On exterior walls.</u>				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 3				
Bill No. 24				
Retaining Wall				

Amount

Bill No. 24
RETAINING WALL
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

R

Section No. 3
Bill No. 24
Retaining Wall

Item	Amount
<p><u>SECTION NO. 3</u></p> <p><u>72-HOUR ASSESSMENT AREA</u></p> <p><u>Bill No. 25</u></p> <p><u>PROVISIONAL AMOUNTS</u></p> <p><u>PROVISIONAL AMOUNTS</u></p> <p>1.The following sums and amounts are NET.</p> <p>2. Under no circumstances may any Provisional Sum be extended at an amount lower than the amount given in the bill.</p> <p>3. Unless a specific percentage mark-up for Attendance is indicated in a rate column, the amount priced by the Contractor for Attendance against each Provisional Sum shall be deemed to be the Lump Sum and shall not be adjusted unless the scope of the sub contract varies significantly.</p> <p>4. Provisional Sums contained here-in may be omitted or reduced at the employer's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reductions or omissions or any discount, or percentage relating to Provisional Sums or PC amounts or any loss of profit related thereto.</p> <p>5. The following Sub-Contract amounts are for work to be carried out by Selected Sub- Contractors in terms of clause 14 or 15 of the Principal Building Agreement:</p> <p><u>LOOSE FURNITURE AND HOSPITAL EQUIPMENT</u></p> <p><u>Loose furniture and hospital equipment:</u></p>	
1 Provide the amount of R 1 400 000.00 (One Million Four Hundred Thousand Rands) for loose furniture and hospital equipment.	Item 1 400 000 00
2 Profit on above item.	Item
3 Attendance on ditto.	Item
<p><u>SIGNAGE</u></p> <p><u>Signage:</u></p>	
4 Provide the amount of R 300 000.00 (Three Hundred Thousand Rands) for signage.	Item 300 000 00
5 Profit on above item.	Item
6 Attendance on ditto.	Item
TOTAL CARRIED TO SECTION SUMMARY	R
Section No. 3	
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Provisional Amounts	

Amount

SECTION NO. 3
72-HOUR ASSESSMENT AREA
SECTION SUMMARY

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TOTAL CARRIED TO FINAL SUMMARY

R

Section No. 3
SECTION SUMMARY

SECTION NO. 4
ROOF REPLACEMENT AND
REMEDIAL WORKS

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 4</u> <u>ROOF REPLACEMENT AND REMEDIAL WORKS</u> <u>Bill No. 1</u> <u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p> <p><u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p> <p><u>Cost of tests:</u> The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).</p> <p><u>Breeze Concrete:</u> Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (12:1), the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated.</p> <p><u>Foamcement Lightweight Concrete:</u> Foamcement lightweight concrete is to have a density of 600kg/m³ for the top 50mm and 500kg/m³ for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm.</p> <p><u>Celbeton Lightweight Concrete:</u> Celbeton lightweight concrete is to have a density of 1000kg/m³ for the top 20mm and 408kg/m³ for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 30mm.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				<p>R</p>
<p>Section No. 4 Bill No. 1 Concrete, Formwork And Reinforcement</p>				

Item	Unit	Quantity	Rate	Amount
<u>Formwork:</u>				
Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.				
The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.				
Formwork to soffits of solid slabs etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described.				
Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks.				
<u>CONCRETE SUNDRIES (CPAP Work Group No 110)</u>				
<u>30Mpa non-shrink grout:</u>				
1	No	20		
2	No	24		
<u>MOVEMENT JOINTS ETC (CPAP Work Group No 111)</u>				
<u>Two layers five-ply approved waterproofing membrane in strict accordance with manufacturers instruction:</u>				
3	m ²	20		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4				
Bill No. 1				
Concrete, Formwork And Reinforcement				

Bill No. 1
CONCRETE, FORMWORK AND REINFORCEMENT
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Section No. 4

Bill No. 1

Concrete, Formwork And Reinforcement

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 4</u> <u>ROOF REPLACEMENT AND REMEDIAL WORKS</u></p>				
<p><u>Bill No. 2</u> <u>MASONRY</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p>				
<p><u>Sizes in descriptions:</u> Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.</p>				
<p><u>Hollow walls etc.:</u> Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.</p>				
<p><u>Bagged and sealed walls:</u> Walls in two skins described as 'bagged and sealed' shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats 'Brixal' bitumen emulsion waterproofing coating.</p>				
<p><u>Face bricks:</u> Bricks shall be ordered timeously to obtain uniformity in size and colour.</p>				
<p><u>Pointing:</u> Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.</p>				
<p><u>BRICKWORK IN SUPERSTRUCTURE (CPAP Work Group No 116)</u></p>				
<p><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u></p>				
<p>1 270mm Hollow walls of two half brick skins, including wall ties.</p>	m ²	127		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 4 Bill No. 2 Masonry</p>				

Item	Unit	Quantity	Rate	Amount
<u>BRICKWORK SUNDRIES (CPAP Work Group No 116)</u>				
<u>Brickwork sundries:</u>				
2	Splayed mortar fillet one course high in 50mm cavity.	m	189	
3	Closing 50mm cavity of hollow wall vertically with brickwork half brick wall.	m	11	
4	Closing 50mm cavity of hollow wall horizontally with two courses of brickwork.	m	183	
<u>Bagging of 1:3 cement and sand mixture:</u>				
5	On brick walls. piers, etc.	m ²	127	
<u>Brickwork reinforcement:</u>				
6	75mm Wide reinforcement built in horizontally.	m	749	
<u>Galvanised hoop iron cramps, ties, etc:</u>				
7	30 x 1,6mm Cramp 500mm long with one end fixed to timber and other end built into brickwork.	No	9	
<u>Joint forming material in movement joints:</u>				
8	10mm Thick expansion joints with low density (33kg/m ³), cross linked, closed cell, expanded polyethylene joint former, with tear off strip fitted to brick surfaces as per manufacturer's recommendation built vertically through brick walls.	m ²	2	
<u>FACE BRICKWORK (CPAP Work Group No 116)</u>				
<u>'Country Manor Traventine' FBS clay face bricks, pointed with square recessed horizontal and vertical joints:</u>				
9	Extra over brickwork for face brickwork.	m ²	127	
TOTAL CARRIED TO BILL SUMMARY				
Section No. 4				
Bill No. 2				
Masonry				
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MASONRY
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Section No. 4

Bill No. 2

Masonry

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 3</u>				
<u>WATERPROOFING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Waterproofing:</u>				
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs.				
<u>DAMPROOFING OF WALLS AND FLOORS (CPAP Work Group No 20)</u>				
<u>Two coats of bitumen emulsion waterproof coating:</u>				
1	m ²	127		
<u>WATERPROOFING ON FLAT SCREEDED ROOFS (CPAP Work Group No 120)</u>				
<u>One layer 4mm thick polymer modified bitumen reinforced waterproofing membrane fully bonded to "bituprime" primed surface by means of 'torch on fusion' with 100mm side laps and 150mm end laps in strict accordance with the manufacturer's instructions:</u>				
2	m ²	940		
3	m ²	339		
4	m ²	261		
5	m	678		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 3 Waterproofing				

Item	Unit	Quantity	Rate	Amount
6 Additional membrane double lapped into 110mm diameter gargyle pipes.	No	270		
7 Extra over for dressing 110mm diameter full-bore outlets.	No	30		
<u>Acrylic top flashing membrane seamless professional waterproofing system applied in strict accordance with the manufacturers instructions:</u>				
8 Bandage cover flashing 200mm girth.	m	374		
<u>PROTECTIVE ROOFING PAINT (CPAP Work Group No 120)</u>				
<u>Two coats of bituminous aluminium paint:</u>				
9 On waterproofing to roofs.	m ²	1 279		
10 On waterproofing to box gutters.	m ²	355		
<u>JOINT SEALANTS, ETC (CPAP Work Group No 120)</u>				
<u>Clear silicone sealant applied in accordance with the manufacturer's instructions:</u>				
11 In joints sealing and pointing between external aluminium window frames and facebrick surround.	m	7		
<u>Polyurethane sealing compound including backing cord, bond breaker, primer, etc:</u>				
12 10 x 12mm In vertical expansion joints including raking out joint filler as necessary.	m	2		
13 10 x 12mm In horizontal expansion joints including raking out joint filler as necessary.	m	183		
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Section No. 4 Bill No. 3 Waterproofing				

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WATERPROOFING
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Section No. 4

Bill No. 3

Waterproofing

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 4</u> <u>ROOF REPLACEMENT AND REMEDIAL WORKS</u> <u>Bill No. 4</u> <u>ROOF COVERINGS</u></p> <p><u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p> <p><u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p> <p><u>Supplementary Preambles:</u> <u>Sheeting:</u> The roof sheeting shall be double-interlocking concealed-fix profile with transverse stiffener ribs roll-formed in continuous lengths and cut to length by a pneumatic cut-off process from certified (select from: Galvanised 0.58mm thick steel Z275 or Galvanised 0.58mm thick steel Z200 complying with ISQ 550 (3T) with a Chromadek® colour coat or 0.5mm/0.53mm thick ZincAL® AZ150/AZ200 or ColorPLUS®). A certificate verifying compliance shall be issued by the manufacturer. The profile must include structural transverse stiffener ribs located in the pans / troughs for increased wind loading capabilities. The profile shall be roll-formed with four narrow flutes / Ribs with centres not exceeding 233mm and a cover width not exceeding 700mm. These will include a male and female rib with capillary action breaks. The male rib shall incorporate spurs spaced no more than 200mm apart to ensure minimum clipping areas on the side lap and stand proud of the rib for purposes of double interlocking action with adjacent sheets. When interlocked, the minimum sheet depth shall be 41mm.</p> <p><u>Flashings:</u> Stop endings must be formed at apex to form a dam and the pan turned down to form drip. The roof sheeting shall be closed as necessary with purpose made flashings and shall incorporate serrated closers and poly closers where necessary. Flashing shall be fixed to roofing by means of No. 14 Top speed Hex head screws 25mm long with 26mm diameter bonded washers on roof and 19mm diameter bonded washers for side cladding.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 4 Bill No. 4 Roof Coverings</p>			R	

Item	Unit	Quantity	Rate	Amount
<p>Safety:</p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p>Installation:</p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p>Handling and storage:</p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and stored in accordance with the manufacturer’s recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor’s expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p>Inspection prior to installation:</p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <p>The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted.</p> <p>Purlins and girts are at the correct spacing and are within the specified tolerances.</p> <p>The corners of the roof are square, and the wall framework is perpendicular or as specified.</p> <p>No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework.</p> <p>All members to which roofing, and cladding are to be fixed in aesthetically sensitive areas are true and square.</p> <p>Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided.</p> <p>The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 4</p> <p>Bill No. 4</p> <p>Roof Coverings</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Protrusion through sheeted surfaces:</u> Protrusions such as pipes, ducts, and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs must be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting, and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p>				
<p><u>Guarantee:</u> The manufacturer shall comply with ISO 9001:2015 Quality Management System.</p>				
<p><u>Cleaning of roof, etc.:</u> All debris, swarf, etc. arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc. shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks, or partially impedes the flow of water into the outlets, down pipes, etc.</p>				
<p><u>CONCEALED FIX RIBBED PROFILE METAL SHEETING AND ACCESSORIES (CPAP Work Group No 124)</u></p>				
<p><u>0.53mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face and accessories concealed fixed to steel purlins (elsewhere) with and including 'Diamondek clips' fixed with jetting screws, in strict accordance with the manufacturers instructions:</u></p>				
<p>1 Roof covering with pitch not exceeding 25 degrees, in transportable lengths not exceeding 20m.</p>	m ²	1 631		
<p><u>0.55mm Thick 'Diamondek 407' Zinalume® sheeting and accessories with 'Color-Tech G4' finish on external face and standard backing coat on internal face flashings and accessories pop riveted to sheeting:</u></p>				
<p>2 Rolltop ridge cappings 462mm girth, notched on site to suit roof profile.</p>	m	53		
<p>3 V-Ridge cappings 462mm girth, notched on site to suit roof profile.</p>	m	125		
<p>4 Sidewall flashing 308mm girth, two times bent along length.</p>	m	300		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 4 Bill No. 4 Roof Coverings</p>				

Item	Unit	Quantity	Rate	Amount
5 Headwall flashing 308mm girth, three times bent along length.	m	103		
6 Counter flashing 166mm girth, three times bent along length.	m	502		
7 Broad flute serrated closers to suit 'Diamonddek 407' profile.	m	280		
8 Broad flute poly closures to suit 'Diamonddek 407' profile.	m	236		
<u>ROOF AND WALL LINING AND INSULATION (CPAP Work Group No 142)</u>				
<u>Laminated polyisocyanurate core board with a minimum core density of 34 kg/m³, a minimum thickness of 40mm, finished with white mineral and natural mineral and laminated on each side, to be installed over purlin in accordance with manufacturers specifications:</u>				
9 40mm Thick Insulation board laid over steel purlins (at approximately 1500mm centres) and fixed concurrent with roof covering in strict accordance with the manufacturers instruction.	m ²	1 631		
TOTAL CARRIED TO BILL SUMMARY			R	
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ROOF COVERINGS
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Section No. 4
Bill No. 4
Roof Coverings

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 5</u>				
<u>CARPENTRY AND JOINERY</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Particle board:</u>				
Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
<u>Joinery:</u>				
Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
<u>Fixing:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
<u>Decorative laminate finish:</u>				
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
<u>Gumpoles:</u>				
Gum pole structural units shall be in accordance with the following SABS Specifications: SABS 457-1982: Wooden poles, droppers, guard rail posts and spacer blocks. Units with defects exceeding the maximum permissible defects as listed in table 1 of SABS 457, shall be remove from site and shall under no circumstances be used in any part of the structure. State diameters are top (thin) end diameters in all cases.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 5 Carpentry And Joinery				

Item	Unit	Quantity	Rate	Amount
<u>EAVES, VERGES, ETC. (CPAP Work Group No 126)</u>				
<u>Medium density plain ungrooved fibre cement fascias and barge boards:</u>				
1	12 x 225mm Fibre cement fascias including aluminium H-profile jointing strips.	m	438	
<u>FRAMED DOORS ETC. (CPAP Work Group No 126)</u>				
<u>Wrought meranti doors hung to timber frames (frame and ironmongery elsewhere):</u>				
2	44mm Framed ledged and braced hatch door 920 x 935mm high as per MDA Architect Drawing No. MDA 477(B) UPH / Roof - 202 (D1) attached to these Bills of Quantities.	No	2	
3	PVC buffers screwed to door frames.	No	6	
<u>FRAMED FRAMES, MULLIONS, TRANSOMS, ETC (CPAP Work Group No 126)</u>				
<u>Wrought meranti:</u>				
4	75 x 100mm Rebated frames.	m	6	
<u>BEADS, ARCHITRAVES, SILLS, ETC (CPAP Work Group No 126)</u>				
<u>Wrought hardwood:</u>				
5	19mm Quadrant bead, plugged.	m	11	
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 4 Bill No. 5 Carpentry And Joinery				

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CARPENTRY AND JOINERY
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Section No. 4

Bill No. 5

Carpentry And Joinery

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 6</u>				
<u>IRONMONGERY</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>HINGES, FLOOR SPRINGS, BOLTS, PANIC BOLTS, ETC (CPAP Work Group No 132)</u>				
<u>Hinges:</u>				
1	'Dormakaba DBB-SS-009' or equal approved 102 x 75 x 3mm thick stainless steel two ball bearing butt hinge with stainless steel fixing screws.	Pairs	2	
<u>Bolts:</u>				
2	Dormakaba DBC-SS-022' or equal approved stainless steel adjustable roller bolt.	No	2	
<u>EN-SUITE LOCKS (CPAP Work Group No 132)</u>				
<u>Locks:</u>				
3	'Dormakaba D037D-SS' or equal approved stainless steel europrofile cylinder dead lock and strike plate fixed to steel.	No	2	
<u>Cylinders:</u>				
4	'Dormakaba DSC054001 KD' or equal approved 40mm nickel plated euro-profile single cylinder master keyed.	No	2	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 6 Ironmongery				

Item	Unit	Quantity	Rate	Amount
<u>HANDLES, FLUSH PULLS, ETC (CPAP Work Group No 132)</u>				
<u>Handles:</u>				
5	'Dormakaba DFP-SS-025' or equal approved 120 x 40mm rectangular flush pull handle.	No	2	
<u>DOOR FURNITURE, ESCUTCHEONS, ETC (CPAP Work Group No 132)</u>				
<u>Escutcheons:</u>				
6	'Dormakaba DCE-002' or equal approved stainless steel round cylinder escutcheon.	Pairs	2	
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Section No. 4 Bill No. 6 Ironmongery				

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IRONMONGERY
BILL SUMMARY

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Section No. 4

Bill No. 6

Ironmongery

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 7</u>				
<u>STRUCTURAL STEELWORK</u>				
<u>TRADE PREAMBLES</u>				
<u>For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</u>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Note:</u>				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item.				
Bidders are to note that structural steelwork to roof walkway is to be fully welded prior to galvanising.				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
<u>GALVANISED STEEL WELDED COLUMNS AND BEAMS (CPAP Work Group No 134)</u>				
<u>Welded beams in single lengths with flat section bearer, connection plates and L-section cleats, bolted to steel:</u>				
1	406 x 140mm x 39kg/m I-section beams in lengths not exceeding 13m.	Tonnes	3.60	
2	100 x 50mm x 10kg/m Parallel flange channel in lengths not exceeding 13m.	Tonnes	0.42	
3	150 x 75mm x 10kg/m Unequal angle.	Tonnes	3.13	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4				
Bill No. 7				
Structural Steelwork				

Item	Unit	Quantity	Rate	Amount
<u>GALVANISED STEEL PORTAL FRAMES, ETC (CPAP Work Group No 134)</u>				
<u>Welded portal frames with flat bearer, gusset and connection plates and angle cleats, bolted to concrete:</u>				
4	(4No) Mono pitched portal frames 6.75m wide x 2.61m high extreme of 254 x 146mm x 37kg/m I-section rafters, columns and haunches including base plates, connection plates and angle cleats as per Lukhozi Consulting Engineers Drawing No. 1746-6-04-S-004 Rev P1 and 1746-6-04-S-005 Rev P1 attached to these Bills of Quantities (Frame type 2).	Tonnes	2.14	
5	(12No) Double pitched portal frames 9.87m wide x 2.50m high extreme in two sections bolted together at apex, of 254 x 146mm x 37kg/m I-section rafters, columns and haunches including base plates, connection plates and angle cleats as per Lukhozi Consulting Engineers Drawing No. 1746-6-04-S-002 and 1746-6-04-S003 Rev P1 attached to these Bills of Quantities (Frame type 1).	Tonnes	8.73	
6	(6No) Double pitched portal frames 12.94m wide x 2.50m high extreme in two sections bolted together at apex, of 305 x 165mm x 40kg/m I-section rafters, 254 x 146mm x 37kg/m columns and haunches including base plates and connection plates and angle cleats as per Lukhozi Consulting Engineers Drawing No. 1746-6-04-S-006 Rev P1 attached to these Bills of Quantities (Frame type 3).	Tonnes	5.23	
<u>GALVANISED WELDED STEEL TRUSSES, ETC (CPAP Work Group No 134)</u>				
<u>Welded roof trusses of angle rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to steel:</u>				
7	(2No) Double pitched trusses 11.14m wide in two sections bolted to existing wall, of 125 x 75mm x 8kg/m as per Lukhozi Consulting Engineers Drawing No. 1746-6-04-S-007 Rev P1 attached to these Bills of Quantities (False rafter).	Tonnes	0.29	
<u>GALVANISED STEEL WELDED PURLINS, GIRTS, BRACING, ETC (CPAP Work Group No 134)</u>				
<u>Purlins and girts, bolted to steel:</u>				
8	60 x 60 x 6mm/kg Channel section supports to eaves closure.	Tonnes	0.09	
9	175 x 50 x 20 x 2.5mm Thick cold-formed lipped channel purlins.	Tonnes	7.05	
<u>Welded bracing, anti-sag rails, etc with flat connection plates, bolted to steel:</u>				
10	Angle bracing.	Tonnes	0.36	
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Bill No. 7				
Structural Steelwork				
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Item	Unit	Quantity	Rate	Amount
11 Angle anti-sag rails.	Tonnes	0.66		
<u>GALVANISED BOLTS, FASTENERS, ETC (CPAP Work Group No 134)</u>				
<u>Bolts:</u>				
12 High tensile bolts (class 8.8).	Tonnes	3.17		
<u>Anchors:</u>				
13 16mm Diameter chemical anchor including two nuts and washers embedded in concrete.	No	106		
14 20mm Diameter chemical anchor including two nuts and washers embedded in concrete.	No	16		
15 24mm Diameter chemical anchor including two nuts and washers embedded in concrete.	No	96		
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Section No. 4 Bill No. 7 Structural Steelwork				

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Section No. 4

Bill No. 7

Structural Steelwork

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 8</u>				
<u>METALWORK</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
<u>Aluminium doors and windows:</u>				
Doors and windows shall comply with AAAMSA design criteria.				
Glazing shall comply with SAGGA regulations. Glass shall be of the type of glass as shown on the window and door schedules and drawings appended to these Bills of Quantities and as described in the Bills of Quantities. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings.				
Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed.				
For purpose made windows and doors, refer to drawings annexed to these Bills of Quantities.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 8 Metalwork				

Item	Unit	Quantity	Rate	Amount
<p>The following certificates shall be provided prior to commencement of site work: 1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product. 2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively 3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process. 4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked. 5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years.</p>				
<p><u>GALVANIZED STEEL FLOOR (CPAP Work Group No 136)</u></p>				
<p><u>The following in galvanised welded and bolted metal screen to roof walkway (framework elsewhere):</u></p>				
<p>1 10mm Diameter mild steel bars.</p>	Kg	14		
<p>2 4.5mm Strand thickness (40 x 140mm opening) expanded metal sheeting welded to roof walkway complete as per Lukhozi Consulting Engineers Drawing No. 1746-6-04-S-007 Rev P1 attached to these Bills of Quantities.</p>	m ²	57		
<p><u>ALUMINIUM WINDOWS (CPAP Work Group No 140)</u></p>				
<p><u>Natural anodised aluminium windows, glazed with 6.38mm laminated NS clear safety glass, complete with subframes, ironmongery, glass, glazing beads, etc and plugged to brickwork or concrete:</u></p>				
<p>3 W1 Purpose made aluminium window size 2420 x 1755mm high with one fixed panel and one sliding section to be installed complete as per MDA Architect Drawing No. MDA477(B)UPH/Roof - 202 (W1) attached to these Bills of Quantities.</p>	No	2		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 4 Bill No. 8 Metalwork</p>				

Amount

Bill No. 8
METALWORK
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

R

Section No. 4

Bill No. 8

Metalwork

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 9</u>				
<u>PLASTERING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>SCREEDS (CPAP Work Group No 142)</u>				
<u>Screeds wood floated, on concrete:</u>				
1	m ²	50		
<u>INTERNAL PLASTER (CPAP Work Group No 142)</u>				
<u>Cement plaster on brickwork:</u>				
2	m ²	127		
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC (CPAP Work Group No 136)</u>				
<u>Dividing strips:</u>				
3	m	2		
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 4 Bill No. 9 Plastering				

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 4</u></p>				
<p><u>ROOF REPLACEMENT AND REMEDIAL WORKS</u></p>				
<p><u>Bill No. 10</u></p>				
<p><u>PLUMBING AND DRAINAGE</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u></p>				
<p>For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Proprietary items or materials:</u></p>				
<p>Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p>				
<p><u>'Polycop' polypropylene pipes:</u></p>				
<p>Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with 'Fast-fuse' heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.</p>				
<p>Pipes shall be firmly fixed to walls etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.</p>				
<p>All pipe diameters are nominal external.</p>				
<p><u>'Polylink' polypropylene pipes:</u></p>				
<p>Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron 'SupraClamp' running joints.</p>				
<p>Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.</p>				
<p>Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double X joint couplers.</p>				
<p>Branch tees shall include flanged and bolted joints to 'Polycop' branch pipes in addition and for brass compression male iron to copper straight couplers.</p>				
<p>Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reduces shall be of sufficient overall length to accommodate same.</p>				
<p>All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.</p>				
<p>All pipe diameters are nominal external.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				
<p>Section No. 4</p>				
<p>Bill No. 10</p>				
<p>Plumbing And Drainage</p>				
			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.</p> <p><u>Vitrified clay pipes etc.:</u> Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.</p> <p><u>uPVC pipes and fittings.</u> Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Fixing of pipes</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level</p> <p><u>Lead pipes and traps:</u> All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 4 Bill No. 10 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u> Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc. will be entertained.</p> <p><u>Wire gratings:</u> Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u> Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc. all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u> Exposed surfaces of concrete storm water channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc. shall be finished smooth with plaster.</p> <p><u>Excavations:</u> No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling. 'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc. of pipes</u> Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions. Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Storm water drainage Pipe trenches etc. shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u> Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc.:</u> Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 4 Bill No. 10 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<p><u>Waste unions:</u></p>				
<p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.</p>				
<p><u>Steel sectional water tanks:</u></p>				
<p>Tanks shall comply with SABS CKS 114.</p>				
<p><u>'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd:</u></p>				
<p>Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described.</p>				
<p>Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc.</p>				
<p>Prices for wrapping of pipes shall include for all work as described to couplings in the length.</p>				
<p><u>General:</u></p>				
<p>Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc. are given separately).</p>				
<p>Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends.</p>				
<p>Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site.</p>				
<p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc. and to steel pipes (adaptors for connections to copper pipes, etc. are given separately).</p>				
<p>Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured).</p>				
<p><u>RAINWATER DISPOSAL (CPAP Work Group No 148)</u></p>				
<p><u>Pre-coated externally and internally with approved G4 high performance non fluorinated polymer modified long chain hydro-carbon paint aluminium 'Industrial Ogee' roll formed seamless gutter, with equal back and front height including cut and mitred angles covered with a mitre strip externally, stop ends crimped and all sealed on the inside with Dow Corning 813 silicone sealer installed in strict accordance with the manufacturers instructions:</u></p>				
<p>1 125 x 150mm Ogee eaves gutters.</p>	m	393		
<p>TOTAL CARRIED TO BILL SUMMARY</p>			R	
<p>Section No. 4</p>				
<p>Bill No. 10</p>				
<p>Plumbing And Drainage</p>				

Item	Unit	Quantity	Rate	Amount
2 Extra over 125 x 150mm ogee eaves gutter for stopped end.	No	12		
3 Extra over 125 x 150mm ogee eaves gutter for outlet for 75 x 100mm pipe.	No	30		
4 75 x 100mm Rainwater pipes.	m	1 420		
5 Extra over 75 x 100mm rainwater pipe for bend.	No	60		
6 Extra over 75 x 100mm rainwater pipe for shoe.	No	30		
<u>uPVC pipes:</u>				
7 110mm PVC gargoyle outlet pipe through 270mm cavity wall (hole elsewhere measured).	m	135		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 10 Plumbing And Drainage				

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Bill No. 10
PLUMBING AND DRAINAGE
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 4

Bill No. 10

Plumbing And Drainage

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>ROOF REPLACEMENT AND REMEDIAL WORKS</u>				
<u>Bill No. 11</u>				
<u>PAINTWORK</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other equal approved - by the Principal Agent.				
<u>SABS Specifications</u>				
Matt or eggshell decorative paint for interior works : SABS 515				
High gloss enamel paint : SABS 630 Grade I				
Oil gloss enamel paint : SABS 631				
Primers for wood for external work : SABS 678 Type I				
Primers for wood for internal work : SABS 678 Type III				
Zink chromate primers for steel : SABS 679 Type I				
Undercoats for paints (except emulsion paint) : SABS 681 Type I				
Aluminium paint : SABS 682 Grade II				
Roof paints : SABS 683 Type B (Oil) SABS 940 (Emulsion)				
Structural steel paint : SABS 684 Type B				
Wash primer (metal etch) : SABS 723				
Varnish for interior use : SABS 887 Type I				
Emulsion paints : SABS 1586				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 11 Paintwork				

Item	Unit	Quantity	Rate	Amount
<p><u>ON FLOATED PLASTER (CPAP Work Group No 152)</u> <u>Prepare and brush to remove all loose contaminants, apply one coat 'Masonry Plaster Primer' (PP 700), sand down smooth and apply one coat SABS approved universal undercoat and two coats approved professional hygiene low sheen paint (THL 1000) pastel base acrylic PVA paint in strict accordance with manufacturer's instructions:</u></p>				
1 On interior walls.	m ²	155		
<p><u>ON FIBRE - CEMENT, ETC (CPAP Work Group No 152)</u> <u>One coat alkali resistant primer, one coat SABS approved universal undercoat and two coats superior quality acrylic emulsion paint in strict accordance with manufacturers instructions:</u></p>				
2 On exterior fascias and barge boards.	m ²	101		
<p><u>ON WOOD, WOOD BOARD (CPAP Work Group No 152)</u> <u>Two coats oil wood primer:</u></p>				
3 On back of frames, linings, etc. not exceeding 300mm wide.	m	6		
<p><u>Stop, fill, sand down and prepare wood surfaces and apply one coat wood primer, one coat SABS approved universal undercoat and two coats polyurethane enamel paint in strict accordance with manufacturer's instructions:</u></p>				
4 On exterior doors.	m ²	3		
5 On exterior door frames.	m ²	1		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 4 Bill No. 11 Paintwork				

Amount

Bill No. 11
PAINTWORK
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

R

Section No. 4

Bill No. 11

Paintwork

Item	Amount
<p><u>SECTION NO. 4</u> <u>ROOF REPLACEMENT AND REMEDIAL WORKS</u> <u>Bill No. 12</u> <u>PROVISIONAL SUMS</u> <u>BUDGETARY ALLOWANCES</u> <u>General:</u></p>	
<p>1. The following sums and amounts are NET.</p>	
<p>2. Under no circumstances may any Provisional Sum be extended at an amount lower than the amount given in the bill.</p>	
<p>3. Unless a specific percentage mark-up for Attendance is indicated in a rate column, the amount priced by the Contractor for Attendance against each Provisional Sum shall be deemed to be the Lump Sum and shall not be adjusted unless the scope of the sub contract varies significantly.</p>	
<p>4. Provisional Sums contained here-in may be omitted or reduced at the employer's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reductions or omissions or any discount, or percentage relating to Provisional Sums or PC amounts or any loss of profit related thereto.</p>	
<p>5. The following Sub-Contract amounts are for work to be carried out by Sub-Contractors in terms of clause 14 or 15 of the Principal Building Agreement:</p>	
<p><u>SUSPENDED SCAFFOLDING</u></p>	
<p><u>Suspended scaffolding:</u></p>	
1	Provide the amount of R 2 000 000.00 (Two Million Rands) for the provision of a suspended mono-rail scaffold to be installed by a suitably registered service provider.
	Item 2 000 000 00
2	Profit on above item.
	Item
3	Attendance on ditto.
	Item
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	
<p>R</p>	
<p>Section No. 4 Bill No. 12 Provisional Sums</p>	

Amount

SECTION NO. 4
ROOF REPLACEMENT AND REMEDIAL WORKS
SECTION SUMMARY

Bill No.		Page
1	CONCRETE, FORMWORK AND REINFORCEMENT	250
2	MASONRY	253
3	WATERPROOFING	256
4	ROOF COVERINGS	261
5	CARPENTRY AND JOINERY	264
6	IRONMONGERY	267
7	STRUCTURAL STEELWORK	271
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10	PLUMBING AND DRAINAGE	281
11	PAINTWORK	284
12	PROVISIONAL SUMS	285

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SECTION SUMMARY

SECTION NO. 5

BASEMENT STORES
WATERPROOFING

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 5</u> <u>BASEMENT STORES WATERPROOFING</u></p>				
<p><u>Bill No. 1</u> <u>ALTERATIONS</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>View site:</u> Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.</p>				
<p><u>Explosives:</u> No explosives whatsoever may be used for alteration purposes unless otherwise stated.</p>				
<p><u>General:</u> The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide , erect and remove when directed , any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent.</p>				
<p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary.</p>				
<p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)</p>				
<p><u>REMOVAL OF EXISTING WORK (CPAP Work Group No. 102)</u></p>				
<p><u>Breaking up and removing unreinforced concrete:</u></p>				
1	40mm Thick asphalt paving.	m ²	400	
TOTAL CARRIED TO BILL SUMMARY			R	
<p>Section No. 5 Bill No. 1 Alterations</p>				

Item	Unit	Quantity	Rate	Amount
<u>Taking up and removing waterproofing:</u>				
2	Torch on waterproofing to flat roofs including turn ups and turn downs and preparing existing screed for new.	m ²	100	
<u>PREPARATORY WORK TO EXISTING SURFACES (CPAP Work Group No. 102)</u>				
<u>Preparatory work to existing surfaces:</u>				
3	Cleaning out of existing full bores.	No	8	
4	Cleaning of existing retaining walls to receive new waterproofing (elsewhere measured).	m ²	420	
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 5 Bill No. 1 Alterations				

Amount

Bill No. 1
ALTERATIONS
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 5

Bill No. 1

Alterations

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 5</u> <u>BASEMENT STORES WATERPROOFING</u> <u>Bill No. 2</u> <u>EARTHWORKS</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Nature of ground:</u> The nature of the ground is assumed to be loose sandy material, therefore earth, but possibly interspersed with soft rock or hard rock.</p>				
<p><u>Excavation for working space in rock:</u> Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be.</p>				
<p><u>Carting away of excavated material:</u> Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p>				
<p><u>Filling:</u> Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material.</p>				
<p><u>EXCAVATION OTHER THAN BULK (CPAP Work Group No. 104)</u></p>				
1	Trenches.	m ³	15	
<p><u>Excavation in earth exceeding 2m and not exceeding 4m deep:</u></p>				
2	Trenches.	m ³	1 260	
TOTAL CARRIED TO BILL SUMMARY			R	
<p>Section No. 5 Bill No. 2 Earthworks</p>				

Item	Unit	Quantity	Rate	Amount
<u>Extra over bulk excavations in earth for excavation in:</u>				
3	Soft rock.	m ³	319	
4	Hard rock.	m ³	128	
<u>Extra over all excavations for carting away:</u>				
5	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor.	m ³	1 070	
<u>Risk of collapse of excavations:</u>				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	18	
7	Sides of trench and hole excavations exceeding 1,5m deep.	m ²	420	
<u>Keeping excavations free of water:</u>				
8	Keeping excavations free of all water other than subterranean water.	Item		
<u>FILLING, ETC (CPAP Work Group No. 104)</u>				
<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density:</u>				
9	Backfilling to trenches, holes, etc.	m ³	190	
<u>Filling with approved G7 material in accordance with SABS 1200 DM supplied and carted on to site by the Contractor, compacted to 95% Mod AASHTO density:</u>				
10	Under floors, pavings, etc.	m ³	756	
<u>Filling with approved G5 material in accordance with SABS 1200 DM supplied and carted on to site by the Contractor, compacted to a density of at least 98% Mod. AASHTO maximum density:</u>				
11	Under floors, pavings, etc.	m ³	315	
<u>TESTS (CPAP Work Group No 104)</u>				
<u>Prescribed density tests on filling:</u>				
12	Modified AASHTO Density test.	No	2	
TOTAL CARRIED TO BILL SUMMARY				
Section No. 5				
Bill No. 2				
Earthworks				
			R	

Amount

Bill No. 2
EARTHWORKS
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 5

Bill No. 2

Earthworks

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>BASEMENT STORES WATERPROOFING</u>				
<u>Bill No. 3</u>				
<u>LATERAL SUPPORT</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>MOVEMENT MONITORING</u>				
<u>Movement monitoring:</u>				
1	Item	Establishing bench marks, pegs, painted lines and arrows, etc as required for movement monitoring control including necessary excavation, steel pegs, concrete bedding, paint, etc and protection and maintenance thereof during the works.		
2	No	Periodic movement survey check comprising necessary surveying equipment including setting up thereof, accurately monitoring control points and providing records of the results of the survey.	2	
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 5 Bill No. 3 Lateral Support				

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>BASEMENT STORES WATERPROOFING</u>				
<u>Bill No. 4</u>				
<u>WATERPROOFING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials:</u>				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>Waterproofing:</u>				
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs.				
<u>DAMP-PROOFING OF WALLS AND FLOORS (CPAP Work Group No 120)</u>				
<u>One layer 500 micron orange polyethylene waterproof sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape:</u>				
1	Vertically against walls and supported as backfilling commences.	m ²	560	
<u>One Layer 4mm thick polymer modified bitumen reinforced waterproofing membrane fully bonded to 'bituprime' primed surface by means of 'torch on fusion' with 100mm side laps and 150mm end laps in strict accordance with the manufacturer's instructions:</u>				
2	On concrete walls and columns in foundations.	m ²	315	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 5 Bill No. 4 Waterproofing				

Item	Unit	Quantity	Rate	Amount
<u>WATERPROOFING TO ROOFS, ETC (CPAP Work Group No 120)</u>				
<u>One Layer 4mm thick polymer modified bitumen reinforced waterproofing membrane fully bonded to 'bituprime' primed surface by means of 'torch on fusion' with 100mm side laps and 150mm end laps in strict accordance with the manufacturer's instructions:</u>				
3	m ²	205		
4	m ²	24		
5	No	8		
6	No	8		
<u>PROTECTIVE ROOFING PAINT (CPAP Work Group No 120)</u>				
<u>Two coats of bituminous aluminium paint:</u>				
7	m ²	229		
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 5 Bill No. 4 Waterproofing				

Amount

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WATERPROOFING
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Bill No. 4

Waterproofing

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 5</u> <u>BASEMENT STORES WATERPROOFING</u> <u>Bill No. 5</u> <u>PLASTERING</u></p>				
<p><u>TRADE PREAMBLES</u></p>				
<p><u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.</p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>Proprietary items or materials:</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.</p>				
<p><u>SCREEDS (CPAP Work Group No 142)</u></p>				
<p><u>Screeds wood floated on concrete:</u></p>				
1	Average 50mm thick on floors to falls and currents.	m ²	100	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>				<p>R</p>
<p>Section No. 5 Bill No. 5 Plastering</p>				

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>BASEMENT STORES WATERPROOFING</u>				
<u>Bill No. 6</u>				
<u>PLUMBING AND DRAINAGE</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with 'Fast-fuse' heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.				
Pipes shall be firmly fixed to walls etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.				
<u>Proprietary items or materials:</u>				
All pipe diameters are nominal external.				
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Principal Agent.				
<u>'Polylink' polypropylene pipes:</u>				
Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron 'Supraclamp' running joints.				
Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.				
Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double X joint couplers.				
Branch tees shall include flanged and bolted joints to 'Polycop' branch pipes in addition and for brass compression male iron to copper straight couplers.				
Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reduces shall be of sufficient overall length to accommodate same.				
All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.				
All pipe diameters are nominal external.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 5				
Bill No. 6				
Plumbing And Drainage				

Item	Unit	Quantity	Rate	Amount
<p><u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.</p> <p><u>Vitrified clay pipes etc:</u> Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.</p> <p><u>uPVC pipes and fittings.</u> Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Fixing of pipes:</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level</p> <p><u>Lead pipes and traps:</u> All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.</p>				
<p>TOTAL CARRIED TO BILL SUMMARY</p>				R
<p>Section No. 5 Bill No. 6 Plumbing And Drainage</p>				

Item	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u> Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p> <p><u>Wire gratings:</u> Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u> Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u> Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u> No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling. 'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u> Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions. Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u> Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u> Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 5 Bill No. 6 Plumbing And Drainage</p>			R	

Item	Unit	Quantity	Rate	Amount
<u>Waste unions:</u>				
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
<u>Steel sectional water tanks:</u>				
Tanks shall comply with SABS CKS 114.				
<u>'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd:</u>				
Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described.				
Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc.				
Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
<u>General:</u>				
Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately).				
Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends.				
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site.				
Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately).				
Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured).				
<u>SUBSOIL DRAINAGE (CPAP WORK GROUP NO. 146)</u>				
<u>Earthworks:</u>				
1	m ³	40		
2	m ²	160		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 5				
Bill No. 6				
Plumbing And Drainage				

Item	Unit	Quantity	Rate	Amount
3 Grade A2 geofabric filter blanket wrapped around 450 x 450mm stone encasing with 150mm side and 300mm end laps, including stitching.	m ²	211		
<u>HDPe pipes:</u>				
4 110mm Slotted uPVC agricultural pipes laid in stone encasing (encasing elsewhere).	m	160		
<u>Extra over HDPe pipes for fittings:</u>				
5 Extra over 110mm capped end.	No	3		
6 Extra over 110mm bend.	No	2		
<u>HOLES ETC (CPAP Work Group No 148)</u>				
<u>Core drilling hole exceeding 50mm and not exceeding 100mm diameter:</u>				
7 270mm Thick reinforced concrete slab, beam, wall, etc.	No	26		
TOTAL CARRIED TO BILL SUMMARY			R	
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Bill No. 6

Plumbing And Drainage

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>BASEMENT STORES WATERPROOFING</u>				
<u>Bill No. 7</u>				
<u>ROADWORK, PARKING AREAS AND PAVING</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of materials and methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Testing of material and filling:</u>				
Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series.				
<u>Precast concrete block road surfacing:</u>				
Paving shall be laid in accordance with SABS 1200 MJ, S A N S 1058 and the Concrete Masonry Associations specifications.				
Clean sand shall be swept into joints between roadstones at completion.				
<u>ROADWORK, PARKING AREAS AND PAVING</u>				
<u>SOIL POISONING (CPAP Work Group No 104)</u>				
<u>Approved brand of anti-termite soil poison in terms of SANS 5859 applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:</u>				
1	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m ²	200	
<u>ASPHALT (CPAP Work Group No 154)</u>				
<u>All surfacing and patching to be done in accordance with the specification of COLTO (Standard Specification Road and Bridge Works for State Authorities 1998) and the manufacturers instruction. Asphalt to be continuously graded- Fine mix:</u>				
2	40mm thick paving to parking areas, roadways etc. including bitumen spray to base course.	m ²	200	
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 5 Bill No. 7 Roadwork, Parking Areas And Paving				

Item	Unit	Quantity	Rate	Amount
<u>Prime coat and double seal of 13,2mm and 6,7mm grade 1 aggregate (SBR modified bitumen) and fog spray bitumen surfacing etc, in strict accordance with the manufacturers instructions:</u>				
3	m ²	200		
<u>TESTS (CPAP Work Group No 104)</u>				
<u>Additional tests required by the engineer:</u>				
4	No	1		
5	No	1		
6	No	1		
7	No	1		
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 5 Bill No. 7 Roadwork, Parking Areas And Paving				

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ROADWORK, PARKING AREAS AND PAVING
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Roadwork, Parking Areas And Paving

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3	LATERAL SUPPORT	294
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5	PLASTERING	298
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SECTION NO. 6
TEMPORARY HOARDING AND
ACCESS

Item	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 6</u> <u>TEMPORARY HOARDING AND ACCESS</u> <u>Bill No. 1</u> <u>TEMPORARY HOARDINGS</u> <u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill. <u>SUPPLEMENTARY PREAMBLES</u> Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item. <u>TEMPORARY FENCING AND GATES (CPAP Work Group No 136)</u> <u>Temporary fencing and gates:</u> NOTE: The Contractor will, throughout the entire period of the works, be responsible for the proper and adequate protection of property and the public and Government personnel and patients from damage or injury resultant from the works and for the proper security of the site at all times during the course of the works. Further, the Contractor must allow for all temporary hoardings, fans and walkways, etc. required by the Local Authorities, National Building Regulations. OHS Act and or demanded by his own requirements. Allowance must further be made for periodic adjustment of any hoardings/ temporary fencing and for their eventual removal and for making good. The following specific temporary fencing is required. All other temporary fencing hoardings etc. Required must be priced for in the Preliminaries of these Bills of Quantities. NOTE: The prices of fencing shall be deemed to include site clearance and the preparation of ground as necessary, and the removal of the fencing after completion, filling in holes etc. and making good grass etc. where fence removed and the Contractor is to price accordingly.</p>				
<p style="text-align: right;">TOTAL CARRIED TO BILL SUMMARY</p> <p>Section No. 6 Bill No. 1 Temporary Hoardings</p>			R	

Item	Unit	Quantity	Rate	Amount
1 Stout barrier fencing 1800mm high of 50 x 100mm weld mesh covered with 70% shade cloth or equal approved material, including 75mm-100mm diameter x 2400mm long pretreated gumpole intermediate posts, straining posts, stays and end posts, all planted on 200 x 200 x 600mm deep concrete base (15Mpa/19mm concrete) including excavation, cut away, etc. Intermediate post to be placed at 3000mm maximum centres and stayed in two direction at 20m intervals, including 4 rows of 8 gauge galvanised straining wires tied to intermediate posts with binding wire, including all necessary excavation, backfilling, cut away, etc.	m	592		
2 900mm x 1200mm High pedestrian gate including gate posts, etc.	No	3		
3 3500mm x 1200mm Vehicular gate including gate posts, etc.	No	4		
4 Temporary passageway 1000mm wide made of 75mm-100mm diameter x 2400mm long pretreated gumpole intermediate posts, straining posts, stays and end posts, all planted on 200 x 200 x 600mm deep concrete base (15Mpa/19mm concrete) including excavation, cut away, etc. Intermediate post to be placed at 3000mm maximum centres and stayed in two direction at 20m intervals, including IBR roof sheeting nailed to intermediate posts etc.	m	38		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 6 Bill No. 1 Temporary Hoardings				

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TEMPORARY HOARDINGS
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Section No. 6

Bill No. 1

Temporary Hoardings

Item	Amount
<p><u>SECTION NO. 6</u></p> <p><u>TEMPORARY HOARDING AND ACCESS</u></p> <p><u>Bill No. 2</u></p> <p><u>BUDGETARY ALLOWANCES</u></p> <p><u>BUDGETARY ALLOWANCES</u></p> <p><u>General:</u></p> <p>1. The following sums and amounts are NET.</p> <p>2. Under no circumstances may any Provisional Sum be extended at an amount lower than the amount given in the bill.</p> <p>3. Unless a specific percentage mark-up for Attendance is indicated in a rate column, the amount priced by the Contractor for Attendance against each Provisional Sum shall be deemed to be the Lump Sum and shall not be adjusted unless the scope of the sub contract varies significantly.</p> <p>4. Provisional Sums contained here-in may be omitted or reduced at the employer's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reductions or omissions or any discount, or percentage relating to Provisional Sums or PC amounts or any loss of profit related thereto.</p> <p>5. The following Nominated Sub-Contract/ Selected amounts are for work to be carried out by Nominated / Selected Sub- Contractors in terms of clause 14 or 15 of the Principal Building Agreement:</p> <p>6. Work for which budgetary allowances are provided will be measured and valued in accordance with the relevant building agreement and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances.</p> <p><u>TEMPORARY ACCESS</u></p> <p><u>Temporary access:</u></p> <p>1 Provide the amount of R 900 000.00 (Nine Hundred Thousand Rands) for the temporary access either option 1 or 2. (Refer to Scope of Works C3.6)</p> <p>2 Profit on above item.</p> <p>3 Attendance on ditto.</p>	
Item	900 000 00
Item	
Item	
<p>TOTAL CARRIED TO SECTION SUMMARY</p>	
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<p>Section No. 6</p> <p>Bill No. 2</p> <p>Budgetary Allowances</p>	

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SECTION NO. 7
OCCUPATIONAL HEALTH AND
SAFETY

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 7</u>				
<u>OCCUPATIONAL HEALTH AND SAFETY</u>				
<u>Bill No. 1</u>				
<u>OCCUPATIONAL HEALTH AND SAFETY</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles:</u>				
For Trade Preambles refer to 'Specification of Materials and Methods' (PW371-A) for the full descriptions of material to be used and work to be done in this Bill.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Supplementary Preambles:</u>				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent each item.				
Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications.				
After pricing of the health and safety bill of quantities, the Contractor must sign the Certificate of Acquaintance as evidence that he is up to date regarding the contents, obligations and demands of the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications. Failure, by the Tenderer, to sign the Certificate of Acquaintance may result in the Tender being deemed non-responsive.				
<u>OCCUPATIONAL HEALTH AND SAFETY</u>				
<u>General:</u>				
1	Fumigation of ducting space.	Item		
2	Preparation of the contractors site specific health and safety plan and Safety File. (Refer to 4.3 of the OHS Specification attached in tender document)	No	2	
3	Principal contractors initial obligations in respect of the occupational health and safety act and construction regulations.	Item		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 7 Bill No. 1 Occupational Health And Safety				

Item	Unit	Quantity	Rate	Amount
4 Principal contractor's time related obligations in of the occupational health and safety act and construction regulations.	Item			
<u>Provision of personal protective equipment (ppe):</u>				
5 (a) Reflective vest. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
6 (b) Hard hats. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
7 (c) Protective foot wear. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
8 (d) Hearing protection. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
9 (e) Dust masks. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
10 (f) Gloves. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
11 (g) Reflective jackets. (Contractor is to insert the quantity based on the Contractors own requirements and no bibs will be accepted)	No			
12 (h) Gum boots. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
13 (i) Safety harness with big hooks. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
14 (j) Respiratory protection to a minimum of FFP2. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
15 (k) Safety goggles. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
16 (l) Any other necessary PPE identified from MSDS's and/or risk assessments. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
<u>Provision of Personnel:</u>				
17 Provision of a Full time construction health and safety manager for the duration of the project.	Months	20		
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 7 Bill No. 1 Occupational Health And Safety				

Item	Unit	Quantity	Rate	Amount
18 Provision of a Full time construction health and safety officer for the duration of the project.	Months	20		
<u>Cost of medical certificates and medical surveillance:</u>				
19 (a) Initial (baseline) medical examinations. (Contractor is to insert the quantity based on the Contractors own requirements and refer to 5.1 of the OHS specification attached in the tender document as C3.14)	No			
20 Periodic and exit examination. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
21 Exit medical (End of the Project). (Contractor is to insert the quantity based on the Contractors own requirements)	No			
22 Contractors charges to allow for handling costs.	%			
<u>Health & Safety Education:</u>				
23 Induction training. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
24 Tool box talks. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
25 Demonstrations. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
26 Working at heights certificate US 229998. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
<u>First Aid Box:</u>				
27 Provision of first aid boxes to GSR requirements. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
<u>Noise Monitoring:</u>				
28 (a) Establish noise zone (Plant). (Contractor is to insert the quantity based on the Contractors own requirements)	No			
29 (b) Audiograms (Personnel). (Contractor is to insert the quantity based on the Contractors own requirements)	No			
30 (c) Dust monitoring to be taken at regular intervals. (Contractor is to insert the quantity based on the Contractors own requirements)	No			
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 7 Bill No. 1 Occupational Health And Safety				

Item	Unit	Quantity	Rate	Amount
<u>Method Statements:</u>				
31	Risk Assessments CR 9(1). (Contractor is to insert the quantity based on the Contractors own requirements)	No		
32	Safety plan. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
33	Fall protection plan CR 10(1). (Contractor is to insert the quantity based on the Contractors own requirements)	No		
34	Electrical and use of machinery CR 24. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
35	Emergency Plan and Response Plan. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
36	Fire precautions. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
37	Construction Vehicles and Mobile Plant. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
38	Use of explosive power tools. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
39	Demolition. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
<u>Accommodation:</u>				
40	Accommodation for employees. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
41	Transportation of workers. (Contractor is to insert the quantity based on the Contractors own requirements)	No		
<u>Submission of reports:</u>				
42	Submission of a health and safety file - scanned to Flash Drive.	No	1	
43	Submission of Close Out Report.	No	2	
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PROVISIONAL AMOUNTS

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<u>SECTION NO. 8</u>				
<u>PROVISIONAL AMOUNTS</u>				
<u>Bill No. 1</u>				
<u>PROVISIONAL AMOUNTS</u>				
<u>BUDGETARY ALLOWANCES</u>				
<u>COMMUNITY LIAISON OFFICER</u>				
<u>Community Liaison Officer:</u>				
1				
	Item			120 000 00
2				
	Item			
3				
	Item			
<u>PROJECT STEERING COMMITTEE</u>				
<u>Project steering committee:</u>				
4				
	Item			30 000 00
5				
	Item			
6				
	Item			
<u>EXPERIENTIAL WORK OPPORTUNITIES</u>				
<u>Experiential work opportunities:</u>				
7				
	Item			280 000 00
8				
	Item			
9				
	Item			
10				
	Item			160 000 00
TOTAL CARRIED TO BILL SUMMARY				
Section No. 8				
Bill No. 1				
Provisional Amounts				
			R	

Item	Unit	Quantity	Rate	Amount
11	Item			
12	Item			
<u>LOCAL LABOUR INTENSIVE TRAINING</u>				
<u>Local labour intensive training:</u>				
13	Item			550 000 00
14	Item			
15	Item			
<u>PPE FOR SMME CONTRACTORS</u>				
<u>PPE for SMME contractors:</u>				
16	Item			250 000 00
17	Item			
18	Item			
<u>CLERK OF WORKS</u>				
<u>Clerk of works:</u>				
19	Item			800 000 00
20	Item			
21	Item			
TOTAL CARRIED TO BILL SUMMARY				
Section No. 8				
Bill No. 1				
Provisional Amounts				
				R

Amount

Bill No. 1
PROVISIONAL AMOUNTS
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TOTAL CARRIED TO SECTION SUMMARY

R

Section No. 8

Bill No. 1

Provisional Amounts

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 8</u>				
<u>PROVISIONAL AMOUNTS</u>				
<u>Bill No. 2</u>				
<u>SMME SUBCONTRACTORS</u>				
<u>SMME SUBCONTRACTORS</u>				
<u>SMME subcontractors:</u>				
The following provisional amounts are for work to be undertaken by SMME's in accordance with the Specification for Employment of SMME Sub-Contractors as defined in C3 Scope of Work.				
The amounts scheduled represent the estimated value of the SMME'S works and expressly exclude main contractor's profit and attendance which is to be priced separately under the respective item.				
The SMME's will be domestic subcontractors to the Contractor.				
The Contractors attention is bought to the requirements for the employment of SMME Contractors as set out in C3 Scope of Work, and the Contractor is to price them, in the Preliminaries Section of these Bills of Quantities. The Contractors' attention is drawn to the Clauses and Sub-Causes in the Preliminaries Section of these Bills of Quantities.				
Contractors must during the tender stage identify additional works over and above the SMME Provisional Sums that can be Subcontracted to SMME's Subcontractors in order to achieve the SMME participation goal.				
<u>ARCHIVE BUILDING SECTION</u>				
<u>Archiving Building Section:</u>				
1				
Provide the amount of R 670 000.00 (Six Hundred and Seventy Thousand Rands) for the construction of Archiving Building Section to be constructed by an approved 2GB CIDB graded SMME Subcontractor.				
	Item			670 000 00
2				
Profit on above item.				
	Item			
3				
Attendance on ditto.				
	Item			
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 8				
Bill No. 2				
Smme Subcontractors				

Item	Unit	Quantity	Rate	Amount
<u>FIRE PROTECTION INSTALLATION: CASUALTY AND OPD</u>				
<u>Fire Protection Installation: Casualty and OPD:</u>				
4	Item			120 000 00
5	Item			
6	Item			
<u>FIRE PROTECTION INSTALLATION: 72HOUR ASSESSMENT AREA</u>				
<u>Fire Protection Installation: 72Hour Assessment Area:</u>				
7	Item			80 000 00
8	Item			
9	Item			
<u>ELECTRICAL INSTALLATION: CASUALTY AND OPD</u>				
<u>Electrical Installation: Casualty and OPD:</u>				
10	Item			5 900 000 00
11	Item			
12	Item			
<u>ELECTRICAL INSTALLATION: 72 HOUR ASSESSMENT AREA</u>				
<u>Electrical Installation: 72 Hour Assessment Area:</u>				
13	Item			7 300 000 00
14	Item			
15	Item			
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 8				
Bill No. 2				
Smme Subcontractors				

Item	Unit	Quantity	Rate	Amount
<u>PARKING AREA TO 72 HOUR ASSESSMENT AREA</u>				
<u>Parking Area to 72 Hour Assessment Area:</u>				
16	Item			320 000 00
Provide the amount of R 320 000.00 (Three Hundred and Twenty Thousand Rands) for the Parking Area to the 72 Hour Assessment Area to be constructed by an approved 1GB or 1 SB CIDB graded SMME Subcontractor.				
17	Item			
Profit on above item.				
18	Item			
Attendance on ditto.				
<u>GRASSING AND LANDSCPING TO 72 HOUR ASSESSMENT AREA</u>				
<u>Grassing and Landscaping to 72 Hour Assessment Area:</u>				
19	Item			170 000 00
Provide the amount of R 170 000.00 (One Hundred and Seventy Thousand Rands) for Grassing and Landscaping to the 72 Hour Assessment Area to be constructed by an approved 1SH CIDB graded SMME Subcontractor.				
20	Item			
Profit on above item.				
21	Item			
Attendance on ditto.				
<u>PARKING AREA TO CASUALTY AND OPD</u>				
<u>Parking Area to Casualty and OPD:</u>				
22	Item			630 000 00
Provide the amount of R 630 000.00 (Six Hundred and Thirty Thousand Rand) for Parking Area to the Casualty and OPD constructed by an approved 2GB or 2SB CIDB graded SMME Subcontractor.				
23	Item			
Profit on above item.				
24	Item			
Attendance on ditto.				
<u>MASONARY TO CASUALTY AND OPD</u>				
<u>Masonry to Casualty and OPD:</u>				
25	Item			1 200 000 00
Provide the amount of R 1 200 000.00 (One Million Two Hundred Thousand Rand) for Masonary to the Casualty constructed by an approved 3GB CIDB graded Subcontractor.				
26	Item			
Profit on above item.				
27	Item			
Attendance on ditto.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 8				
Bill No. 2				
Smme Subcontractors				

Item	Unit	Quantity	Rate	Amount
<u>MASONARY TO 72 HOUR ASSESSMENT AREA</u>				
<u>Masonry to 72 Hour Assessment Area:</u>				
28	Item			1 700 000 00
Provide the amount of R 1 700 000.00 (One Million Seven Hundred Thousand Rands) for Masonary to the 72 Hour Assessment Area constructed by an approved 3GB CIDB graded Subcontractor.				
29	Item			
Profit on above item.				
30	Item			
Attendance on ditto.				
<u>SUSPENDED CEILINGS TO THE CASUALTY AND OPD</u>				
<u>Suspended Ceilings to The Casualty and OPD:</u>				
31	Item			430 000 00
Provide the amount of R 430 000.00 (Four Hundred and Thirty Thousand Rand) for Suspended Ceilings to the Casualty and OPD to be constructed by an approved 1GB CIDB graded Subcontractor.				
32	Item			
Profit on above item.				
33	Item			
Attendance on ditto.				
<u>SIX FLOOR ALTERATIONS AND CLEANING EXISTING RAINWATER GOODS</u>				
<u>Six Floor Alterations and Cleaning of Existing Rainwater Goods:</u>				
34	Item			800 000 00
Provide the amount of R 800 000.00 (Eight Hundred Thousand Rands) for Sixth Floor Alterations and Cleaning Existing Rainwater Goods to be constructed by an approved 2GB CIDB graded Subcontractor.				
35	Item			
Profit on above item.				
36	Item			
Attendance on ditto.				
<u>FENCING TO THE 72 HOUR ASSESSMENT AREA</u>				
<u>Fencing to the 72 Hour Assessment Area:</u>				
37	Item			700 000 00
Provide the amount of R 700 000.00 (Seven Hundred Thousand Rands) for Fencing to the 72 Hour assessment Area to be constructed by an approved 2SQ CIDB graded Subcontractor.				
38	Item			
Profit on above item.				
39	Item			
Attendance on ditto.				
TOTAL CARRIED TO BILL SUMMARY			R	
Section No. 8				
Bill No. 2				
Smme Subcontractors				

Item	Unit	Quantity	Rate	Amount
<u>PLUMBING AND DRIANAGE TO CASUALTY AND OPD</u>				
<u>Plumbing and Drainage to Casualty and OPD:</u>				
40				
Provide the amount of R2 300 000.00 (Two Million Three Hundred Thousand Rands) for Plumbing and Drainage to Casualty and OPD to be constructed by an approved 3SO CIDB graded Subcontractor.	Item			2 300 000 00
41				
Profit on above item.	Item			
42				
Attendance on ditto.	Item			
<u>PLUMBING AND DRIANAGE TO 72 HOUR ASSESSMENT AREA</u>				
<u>Plumbing and Drainage to 72 Hour assessment Area:</u>				
43				
Provide the amount of R2 200 000.00 (Two Million Two Hundred Thousand Rands) for Plumbing and Drainage to 72 Hour Assessment Area to be constructed by an approved 3SO CIDB graded Subcontractor.	Item			2 200 000 00
44				
Profit on above item.	Item			
45				
Attendance on ditto.	Item			
TOTAL CARRIED TO BILL SUMMARY				R
Section No. 8 Bill No. 2 Smme Subcontractors				

Bill No. 2
SMME SUBCONTRACTORS
BILL SUMMARY

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TOTAL CARRIED TO SECTION SUMMARY

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Section No. 8

Bill No. 2

Smme Subcontractors

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 8</u>				
<u>PROVISIONAL AMOUNTS</u>				
<u>Bill No. 3</u>				
<u>CONTINGENCY AND CPAP</u>				
<u>MONETARY ALLOWANCES</u>				
The following monetary provisions are to be omitted from the contract sum and used as directed below.				
<u>Contingencies:</u>				
1				
Provide the sum of R 5 100 000.00 (Five Million One Hundred Thousand Rands) for contingencies and design contingency, to be used as instructed by the Architect in terms of the Principal Building Agreement.	Item			5 100 000 00
<u>Statutory Increases:</u>				
2				
Provide the amount of R 4 100 000.00 (Four Million One Hundred Thousand Rands) for CPAP to be used in terms of clause 26.9.5 of the Principal Building Agreement.	Item			4 100 000 00
TOTAL CARRIED TO SECTION SUMMARY				R
Section No. 8				
Bill No. 3				
Contingency And Cpap				

Amount

SECTION NO. 8
PROVISIONAL AMOUNTS
SECTION SUMMARY

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2	SMME SUBCONTRACTORS	331
3	CONTINGENCY AND CPAP	332

TOTAL CARRIED TO FINAL SUMMARY

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Section No. 8
SECTION SUMMARY

SECTION NO. 9

CIDB B.U.I.L.D PROGRAMME

Item	Unit	Quantity	Rate	Amount
<u>SECTION NO. 9</u>				
<u>CIDB B.U.I.L.D PROGRAMME</u>				
<u>Bill No. 1</u>				
<u>CIDB B.U.I.L.D PROGRAMME</u>				
<u>CIDB BEST PRACTICE PROJECT ASSESSMENT SCHEME (CIDB B.U.I.L.D PROGRAMME)</u>				
<u>The Standard for Indirect Targeting for Enterprise Development:</u>				
1	Item			
The Contractor must provide a minimum contribution of five percent of the contract value for development support and comply with the Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts as per board notice 21 of 2013 (No 36910 Government Gazette 25 February 2013) Construction Industry Development Board Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts 29 January 2013.				
2	Item			
Profit on above item.				
3	Item			
Attendance on ditto.				
<u>Skills Development Standard:</u>				
4	Item			
The Contractor achieve a Contract Skills Development Goal (CSDG) of 0.50 percent of the Contract Amount expressed in Rand and comply with the Standard for Developing Skills through Infrastructure Contracts as per Board Notice 180 of 2013 (No 36780 Government Gazette, 23 August 2013) Construction Industry Development Board Standard for Developing Skills through Infrastructure Contracts 8 August 2013.				
5	Item			
Profit on above item.				
6	Item			
Attendance on ditto.				
<u>Best Practice Project Assessment Scheme; Assessment Fee; Projects of Tender Grades 7 to 9.</u>				
7	Item			
The Contractor price a Best Practice Assessment fee of 0.2 percent of the contract value.				
8	Item			
Profit on above item.				
9	Item			
Attendance on ditto.				
TOTAL CARRIED TO FINAL SUMMARY			R	
Section No. 9 Bill No. 1 Cidb B.u.i.l.d Programme				

Section No.	<u>FINAL SUMMARY</u>	Page	Amount
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2	CASUALTY AND OPD	136	
3	72-HOUR ASSESSMENT AREA	246	
4	ROOF REPLACEMENT AND REMEDIAL WORKS	286	
5	BASEMENT STORES WATERPROOFING	308	
6	TEMPORARY HOARDING AND ACCESS	314	
7	OCCUPATIONAL HEALTH AND SAFETY	321	
8	PROVISIONAL AMOUNTS	333	
9	CIDB B.U.I.L.D PROGRAMME	335	
	TOTAL BEFORE VAT		
	ADD: VALUE ADDED TAX @ 15%:		
	TOTAL CARRIED TO FORM OF OFFER AND ACCEPTANCE C1.1		R
	FINAL SUMMARY		

PART C3

SCOPE OF WORKS

C3 SCOPE OF WORK

C3 Scope of Work

Bid Description:	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
Tender No:	SCMU3-23/24-0734-HO

C3.1 SCOPE OF WORKS

1. DESCRIPTION OF THE WORKS:

1.1 General:

- The works are to be carried out at the Uitenhage Provincial Hospital, located at 36 Channer Street, Levyvale, Kariega.

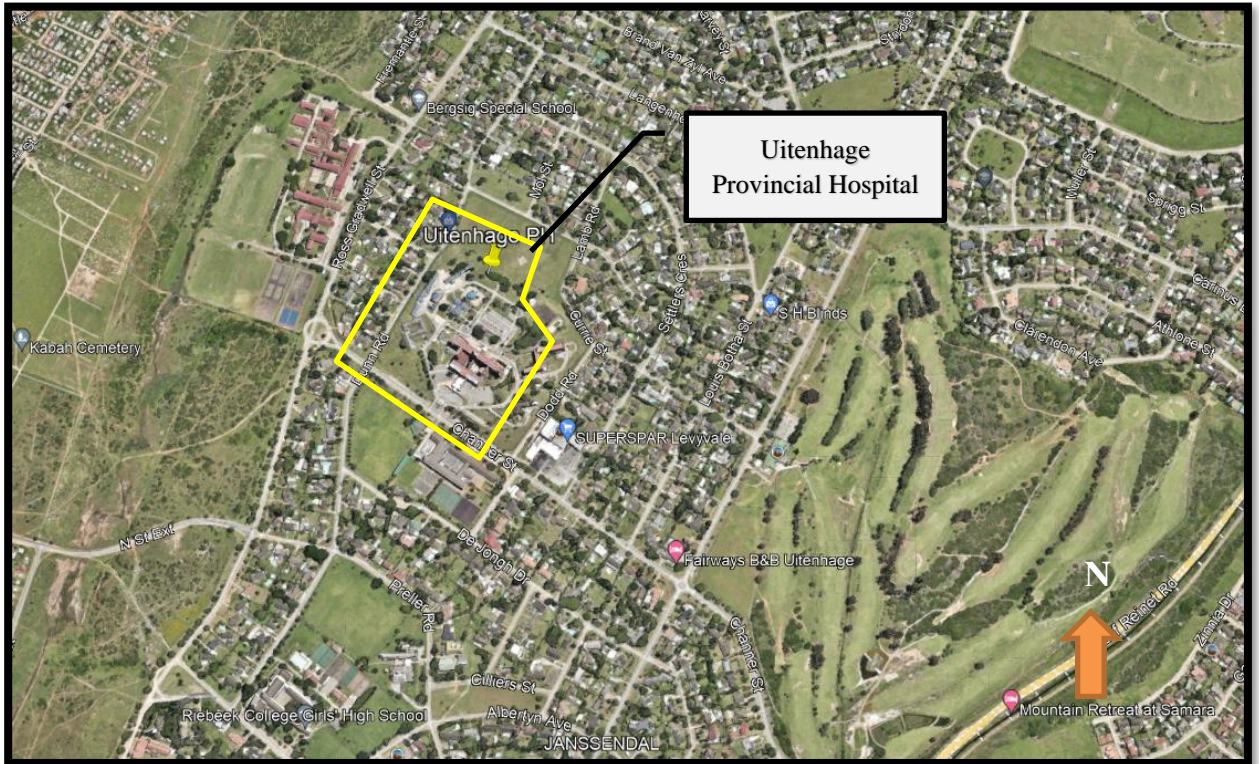


Figure 01: Locality Plan

- The project is comprised of 5 sub sections as follows:
 - Archive expansion
 - Roof replacement to a portion of the hospital and remedial work
 - 72 hour assessment area upgrade and expansion
 - Trauma unit upgrade and expansion
 - Urgent intervention to resolve waterproofing problems at the basement stores.
- The scope of work at Uitenhage Provincial Hospital is described in further detail hereunder.
- The 5 sub sections will run concurrently.
- The Trauma unit upgrade, 72 Hour Assessment Area upgrade and roof remedial are in themselves phased projects.

- All clinical facilities (including the 5 project sub sections) will remain operational throughout the construction period.
- Phasing diagrams are included with the details sub section scope of work descriptions.
- Sectional practical completions are an integral part of this project and are explained elsewhere.

1. Detailed Scope of Works:

1.1 72 Hour Assessment Area:

- Building Floor Areas:
 - New Work / Extension: 510m²
 - Refurbishment to Existing Building Area: 470m²
- Construction of a new male ward.
- Construction of a new female ward.
- Provision of new patient dining facilities
- Reconfiguration of patient ablutions.
- Reconfiguration of staff and clinical facilities.
- Construction of a new entrance with lobby and reception facilities.
- Reconfiguration of existing seclusion rooms and provision of en-suite facilities.
- The provision of one additional seclusion room with en-suite facilities.
- General reconfiguration and upgrade of clinical spaces.
- The work is to be completed in 3 phases with sectional completion dates recorded for each phase.
- Sectional practical completion is to be realised for each phase before the commencement of the next phase.
- The phasing of the works is as follows:
 - Phase 1:
Construction of the male ward extension to be used as a temporary male and female ward while phase 2 is constructed
 - Phase 2:
Construction of the new female ward and admin extensions, inclusive of secure link walkway/passage and renovation of internal ablution and dining spaces
Dining room renovation to be a temporary female ward whilst phase 3 is in construction.
 - Phase 3:
Extension and renovation of existing 72 Hour Assessment Area, inclusive of new entrance
Revisit male ward extension and complete and commission interior
- Refer to the detailed phasing diagrams annexed hereto.

1.1.1 72 Hour Assessment Area Specialist sub contracts will be required for the following:

- Electrical Installation:
- Fire Detection:
- HVAC Installation:

1.1.2 72 Hour Assessment Area Specialist Engineering

- Civil Scope of Works:
- Structural Scope of Works

1.2 Trauma Unit:

- Building Floor Areas:
 - New Work / Extensions: 365m²
 - Refurbishment to Existing Building Area: 634m²
- General reconfiguration and upgrade of the Trauma Unit.

- Extension of the building to realise the provision of 6 additional trauma beds to give a total of 10 trauma beds.
- Upgrade of male and female short stay wards.
- Extension to the building to realise the provision of adult and paediatric resuscitation rooms.
- Extension to the building to realise a reconfigured entrance, ambulance bays and emergency triage.
- Provision of temporary access and circulation routes.
- Complete an extensive upgrade of internal finishes, doors, door frames, sanitary ware and ironmongery.
- The work is to be completed in 2 phases with sectional completion dates.
- Sectional practical completion is to be realised before the commencement of phase 2.
- The phasing of the works is as follows:
 - Phase 1:
Renovation of the existing short stay ward and admissions into a temporary trauma unit.
Erection of temporary external pedestrian corridor to link existing trauma unit to hospital main entrance.
 - Phase 2:
Extension to trauma unit and entrance.
Complete renovation and reconfiguration of trauma unit, consulting rooms, and other clinical spaces.
Removal of temporary corridor.
 - Completion phase.
Revisit phase 1 to complete and commission the male and female short stay wards and completion of finishes.
- Refer to the detailed phasing diagrams annexed hereto.

1.2.1 Trauma Unit Specialist sub contracts will be required for the following:

- Electrical Installation:
- Fire Detection:
- HVAC Installation:

1.2.2 Trauma Unit Specialist Engineering

- Civil Scope of Works:
- Structural Scope of Works

1.3 Archive:

- Construction of a 41.7sqm extension to the existing archive at an elevated ground floor level.
- Structural steel and reinforced concrete detailing identifies the elevated construction over the basement level kitchen driveway.
- Existing perimeter wall is demolished / adjusted to suite expanded footprint of the Archive.
- Light weight insulated sheet metal roof construction on timber roof structure.
- The works include conventional internal finishes viz plaster / paint, suspended ceiling, carpet tiles, hardwood timber skirting and quadrant.
- Commencement date to be consistent with project commencement and phasing.
- Contract Duration: 5 months with sectional practical completion.

1.3.1 Archive Specialist Engineering:

- Structural work.

1.3.2 Archive specialist sub contracts will be required:

- Electrical
- Mechanical / HVAC
- Fire detection

1.4 Roof Replacement and Remedial Work:

- Deterioration of existing roof coverings, flat roof waterproofing, gutters and rainwater down pipes is evident in many areas.
- Remedial work has been packaged into different sub sections dependant on the state of maintenance and severity of roof leaks.
- The primary roof problem is at the 6th floor paediatrics ward which will have a new roof and structural steel supporting roof structure installed above the existing roof covering which is retained as a sub roof.
- The different elements of the roofing contract are explained in further detail and are identified on the roof plan annexed here with elsewhere in this document.
- The summary of the scope is as follows (to be read in conjunction with the roof plan drawing MDA 477(B6c) – 200
- Replacement of ceilings and painting redecoration at 6th floor paediatrics ward is included.
- The roof remedial work is to be completed in phases which are to be mutually agreed with the principal agent and the hospital at site handover and contract commencement.
- Sectional practical completion of the predetermined phases will be required before commencement of further phases.
- Completion of the roof related scope of work items is to be realised at contractual practical completion.

1.4.1 Roof Specialist Engineering:

- Structural work.

1.4.2 Roof specialist sub contracts will be required:

- Electrical
- Mechanical / HVAC
- Fire detection

1.5 Emergency intervention at storage basement: Sub soil water and rainwater ingress

- This scope of work is an external intervention to address water ingress at the basement stores.
- Water ingress through roof slab
A section of the slab has been covered with paving while the rest has unpainted “torch-on” waterproofing. The paving needs to be removed, and that section should receive a new “torch-on” waterproofing and screeded to falls. The existing “torch-on” waterproofing also needs to be replaced and a screed to falls should be added.
- Water ingress through the retaining walls.
This part of the retaining wall requires a new subsoil drain and vertical waterproofing. The subsoil drain should be directed to discharge into the nearest stormwater discharge point or open air. To enable this process, around 3 meters of backfill material behind the retaining wall, along with paving, needs to be temporarily removed. Backfill material must be reinstated in layers no thicker than 200mm and finished with black top surfacing.
- Lack of drainage holes in the retaining walls:
This retaining wall must have a new subsoil drain, vertical waterproofing, and new drainage holes installed. To do this, approximately 3 meters of backfill material behind the retaining wall, along with the paving, will need to be temporarily removed. Drainage holes should be core drilled through the wall at 5-meter intervals and then connected to the subsoil drain. Backfill material must be reinstated in layers no thicker than 200mm and finished with black top surfacing and paving to match the existing.
- Water ingress through the 1sts floor roof slab
It is suspected that the water entering the roof slab is due to blocked full bores. Further investigations must be conducted on this floor to confirm if there is any other source of water ingress.
- Severe water ingress through the 1sts floor roof slab

It is suspected that the water entering through the roof slab is due to blocked full bores. Further investigations must be conducted on this floor and on the ground floor paving to confirm if there is any other source of water ingress.

- Blocked full bores.
All full bores are to be investigated for blockages and for deterioration of the waterproofing around the bell mouth of the full bore. An alternate design for stormwater discharge is to be investigated in unblocking of a full bore proved impossible.

2. Civil and Structural Scope of Work

Notwithstanding the inferred Civil and Structural scope above, a summary of the required civil and structural scope for each work area is as follows:

2.1 72 Hour Unit

2.1.1 Civil Scope of Works:

- Concrete encase existing Sewer and Stormwater pipes.
- Install new Stormwater pipes and grid inlet structures.
- Install new concrete apron and grid inlets.
- Connect into existing Manholes.
- Install new Sewer pipes.
- Remove and abandon existing pipes and seal off manholes.
- Reshape earthworks to ensure adequate drainage to low points.
- Amend existing kerb line and road layout to suit.
- Build new retaining structure at parking area.

2.1.2 Structural Scope of Works:

- import layer works to construct a soil raft for the ground floor slab
- Construct concrete rafts.
- Construct concrete aprons.
- Construct concrete surface beds for the court yards.

2.2 Trauma Unit

2.2.1 Civil Scope of Works:

- Reroute sewer and stormwater by installing new pipes and abandoning the old pipes.
- Install new Stormwater pipes, manholes and grid inlet structures.
- Connect into existing Manholes.
- Remove and abandon existing pipes and seal of abandoned manholes.
- Move and reinstate existing road furniture.
- Surface and layer work repair to the entrance.
- Repaint existing road markings.
- Confirm position and protect all existing services.

2.2.2 Structural Scope of Works:

Main Entrance

- Remove the existing 1st floor roof at the front of the building.
- Construct a new reinforced concrete raft at ground floor level.
- Construct a new structural steel roof over 80% of the area.
- Construct a new reinforced concrete slab roof over 20% of the area.

Expansion of Trauma at South Facade

- Import 600mm of material and construct a new reinforced concrete slab.
- Construct a structural steel roof over the new section.

2.3 Archive Expansion

2.3.1 Civil Scope of Works:

- Identify all existing services.
- Install new sewer pipes and manhole structures as required.
- Install new Stormwater downpipes and grid inlet structures as required.
- Connect Sewer and Stormwater to the existing system.
- Remove and abandon redundant pipes and seal off abandoned manholes.
- Cover services with a new concrete apron.

2.3.2 Structural Scope of works

- Construct a new reinforced concrete slab to tie into the existing 1st floor slab of the archives and to rest onto the existing roof slab of the kitchen.
- Construct a light timber roof structure.

2.4 Roof Remedial

2.4.1 Civil Scope of Works:

- None.

2.4.2 Structural Scope of works:

- Construct new structural steel roofs over the existing roofs.
- Add extruded aluminium gutters to the eaves of the new roofs.
- Add structural steel service walkways at apex level.

2.5 Basement Remedial

2.5.1 Civil Scope of Works:

- Remove existing black top and paving surfaces.
- Excavate to reach problem areas.
- Install new subsoil drain and weep holes.
- Apply waterproofing measures as per engineers specification.
- Backfill in layers.
- Replace black top surface and paving and make good.

3. Electrical Scope of Work

3.1 72 Hour Unit

- Replacement of the complete power and light installation.
- Installation of Fire Detection and voice evacuation.
- Access control
- CCTV
- Upgrading of the existing distribution boards
- Installation of Inverter, Batteries and Solar panels

3.2 Trauma Unit

- Replacement of the complete power and light installation.
- Installation of Fire Detection and voice evacuation.
- New medical skirtings
- New nurse call points
- Access control
- CCTV
- Upgrading of the existing distribution boards
- Installation of UPS for the Trauma section

3.3 Archive Expansion

- Installation of new power and lights
- Installation of fire detection

3.4 Roof Remedial

- None

3.5 Basement Remedial

- None

4. Mechanical Scope of Work

4.1 72 Hour Unit

- Installation of Air conditioning and ventilation equipment
- Installation of firefighting equipment and evacuation signage
- Installation of hot and cold water

4.2 Trauma Unit

- Installation of Air conditioning and ventilation equipment
- Installation of medical gas points
- Installation of firefighting equipment and evacuation signage
- Installation of hot and cold water

4.3 Archive Expansion

- Installation of dehumidifiers, price included in Trauma Bill of Quantities

4.4 Roof Remedial

- Installation of roof ventilation louvres, price included in Trauma Bill of Quantities

4.5 Basement Remedial

- None

5. Construction Period: over entire project inclusive of decanting:

- All areas to commence simultaneously.
 - Trauma unit : 17 months
 - 72 hour unit : 20 months
 - Roof replacement : 10 months
 - Roof remedial : 11 months
 - Archive : 5 months
 - Basement stores remedial : 5 months
- There are to be a total of 5 sectional completions. Refer to figure 02 below:

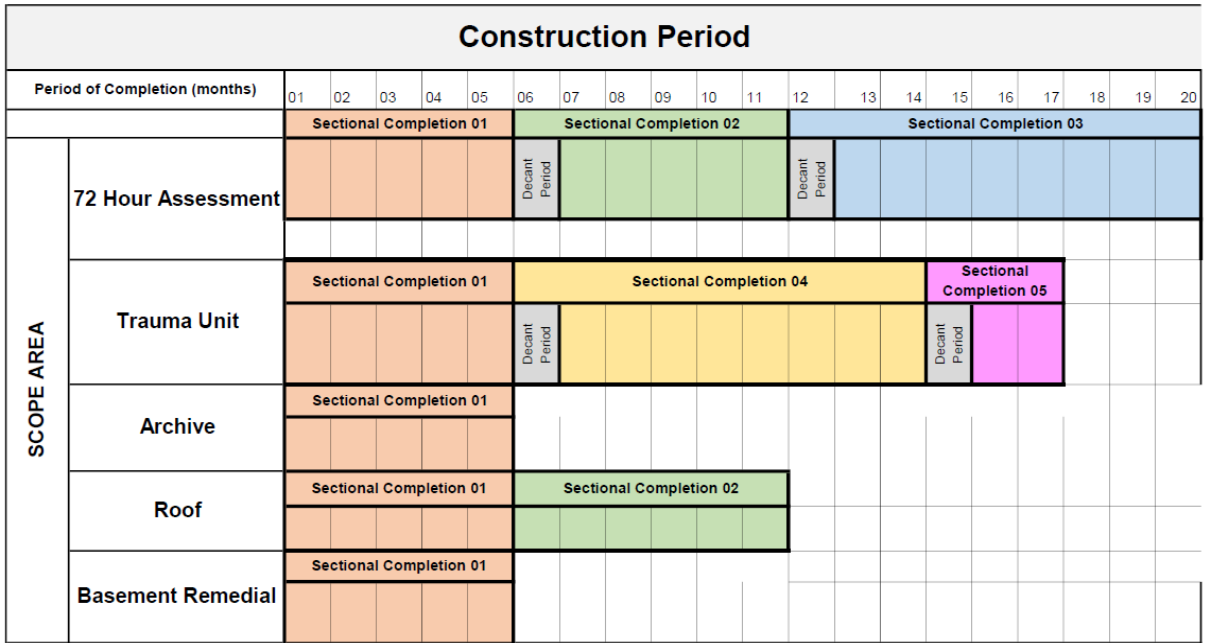


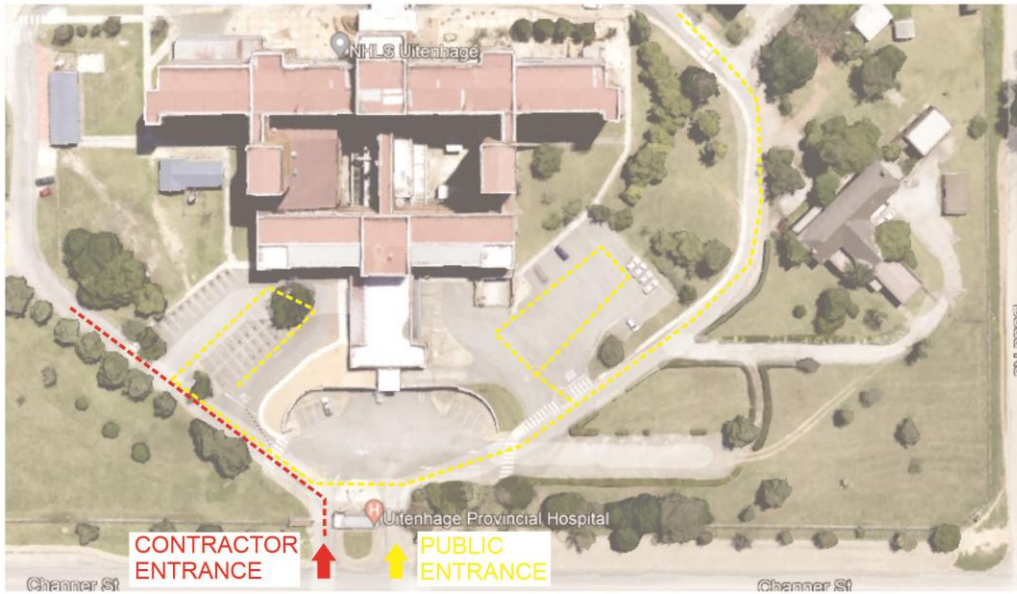
Figure 02: Construction Period timeline

6. Access and Egress:

- Access and Egress onto the site by both the main contractor and the public and staff of the hospital will be confirmed at the time of contract award.
- 2 options are tabled hereunder.
- A provisional sum is included in the tender bills of quantities for this work.

6.1 Option 01:

- Option one includes splitting the main hospital entrance into the contractors entrance and public entrance.
- The contractor will take over control, management and securing of the left hand side gate of the main entrance.
- The public entrance (right side) will be made wider temporarily to accommodate the 2 way traffic entering and existing the hospital. Public will be directed to the right side of the hospital ring road to gain access into the hospital and other services.
- The entrance will be re-instated to its original format at the end of the construction period, inclusive of a cosmetic upgrade.



Option 01:

- Hospital main entrance is split for use by main contractor and public.
- Left side to be controlled and maintained by main contractor
- Right side to be widened in the short term to accommodate ingress and egress of public. This entrance will be maintained and controlled by hospital security.
- At the end of the contract, the entrance will be re-instated to its original configuration with a cosmetic upgrade to guard house and wing walls.

OPTION 01

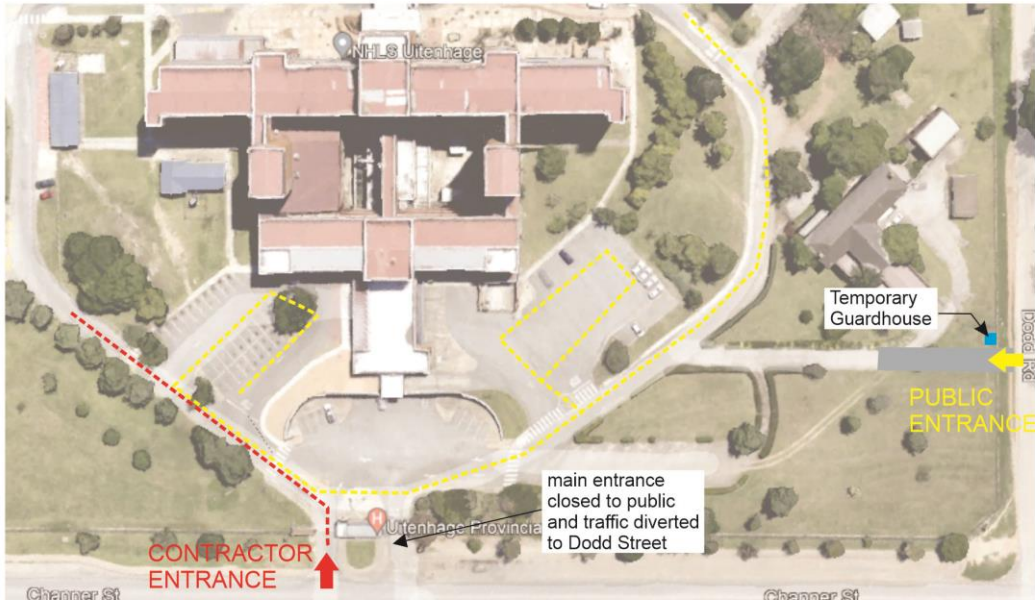


Contractor to demolish portion of existing wall
Widen driveway, remove kerb and make good road surface for duration of construction period (20 months)
At completion, reinstate brickwork, kerb and road surface

At end of contract, entrance structure and wing walls to be redecorated

6.2 Option 02:

- Option 2 allows the contractor to take over the hospital main entrance entirely.
- Public and hospital staff will be rerouted to a new temporary entrance located in the adjacent street (Dodd Street)
- This temporary entrance will include a temporary guard house, permanent gate and new road / layer works.



Option 02:

- Hospital main entrance is for the sole use by main contractor.
- Hospital staff and the public will be diverted to the side street, Dodd Street, where a temporary guarded entrance will be provided
- Temporary entrance to comprise of new sliding gate, temporary guard house, and associated permanent roads works.
- Sliding gate and new paved roadway will remain after completion of the contract for use by the hospital.

OPTION 02



Contractor to make provision for the following:

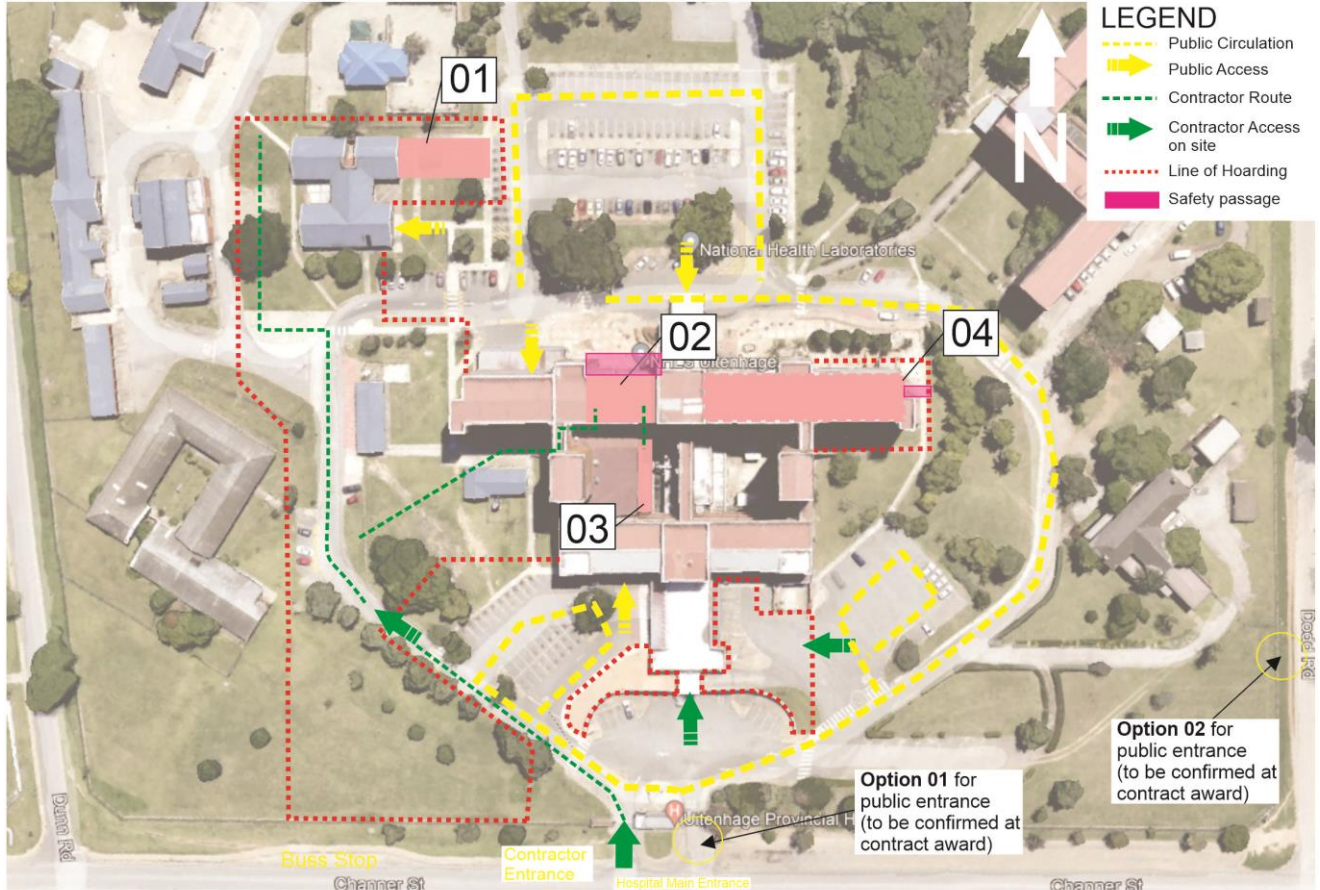
1. New palisade sliding gate and track
2. Temporary guard house
3. New paved driveway to link to internal road
4. New bell mouth and kerb at road

Note: New gate and driveway surface will be permanent installations and will be retained for use by the hospital

7. Sectional Completion requirements:

7.1.1 Phase 1: Phasing, Hoarding and Circulation Diagrams

* Refer to MDA Architects detailed phasing, hoarding layout and controlled access diagrams: MDA 477(B) UPH Phasing Diagram-001

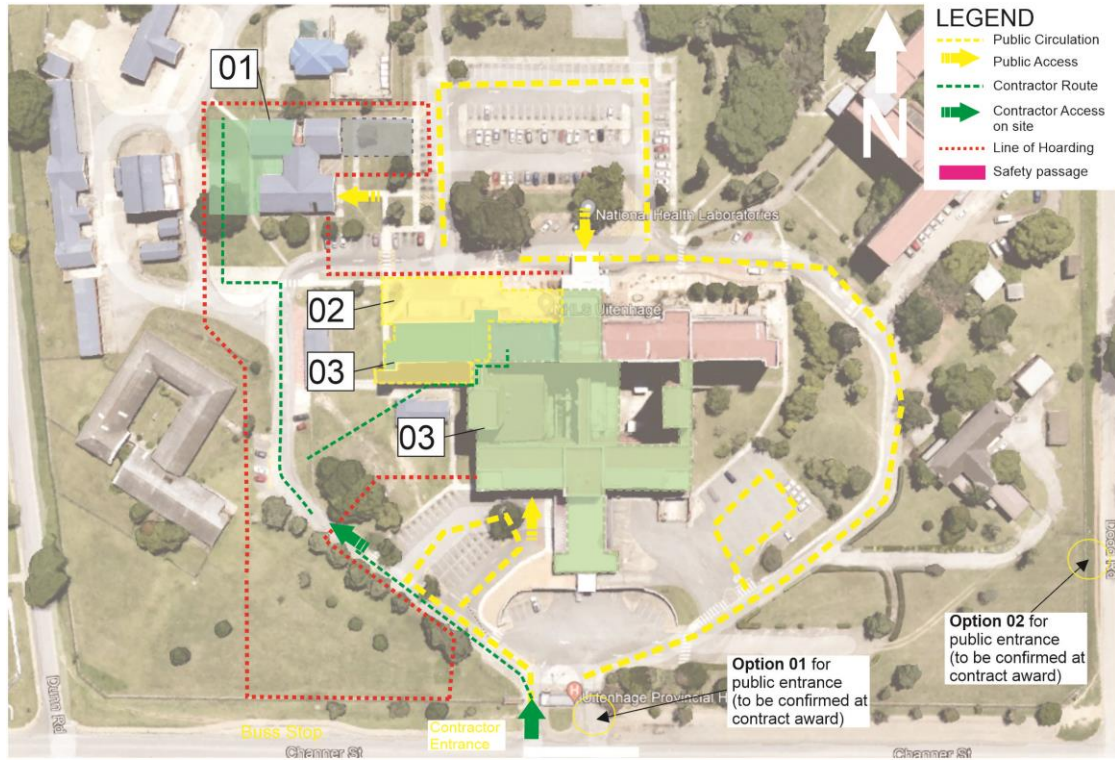


Sectional Completion 01			
<p>01</p> <p>72 Hour Assessment Extension Ph1 5 Months</p> <ul style="list-style-type: none"> - Erect Hoarding to isolate construction zone - Construct male ward extension with temporary partition for female patients - Handover ward for decanting of patients 	<p>02</p> <p>Trauma Unit renovation Ph1 5 Months</p> <ul style="list-style-type: none"> - Erect Hoarding to isolate construction zone, inclusive of patient safety tunnel link to hospital - Complete internal renovation of temporary trauma unit, final finishes and internal walls to be completed in phase 3 - Handover ward for decanting of patients 	<p>03</p> <p>Archive Extension 5 Months</p> <ul style="list-style-type: none"> - Create link to construction zone through Trauma phase 1 area - Complete 51sqm extension to the archive - Handover for sectional completion 	<p>04</p> <p>Roof Replacement 5 Months</p> <ul style="list-style-type: none"> - Roof replacement at NE corner of hospital to be completed. - Existing roof will be retained, all works competed in strict accordance with H&S plan and specifications

* refer to figure 02 for timelines
Figure 03: Phase 1 Hoarding Diagram

7.1.2 Phase 2: Phasing, Hoarding and Circulation Diagrams

* Refer to MDA Architects detailed phasing, hoarding layout and controlled access diagrams: MDA 477(B) UPH Phasing Diagram-002

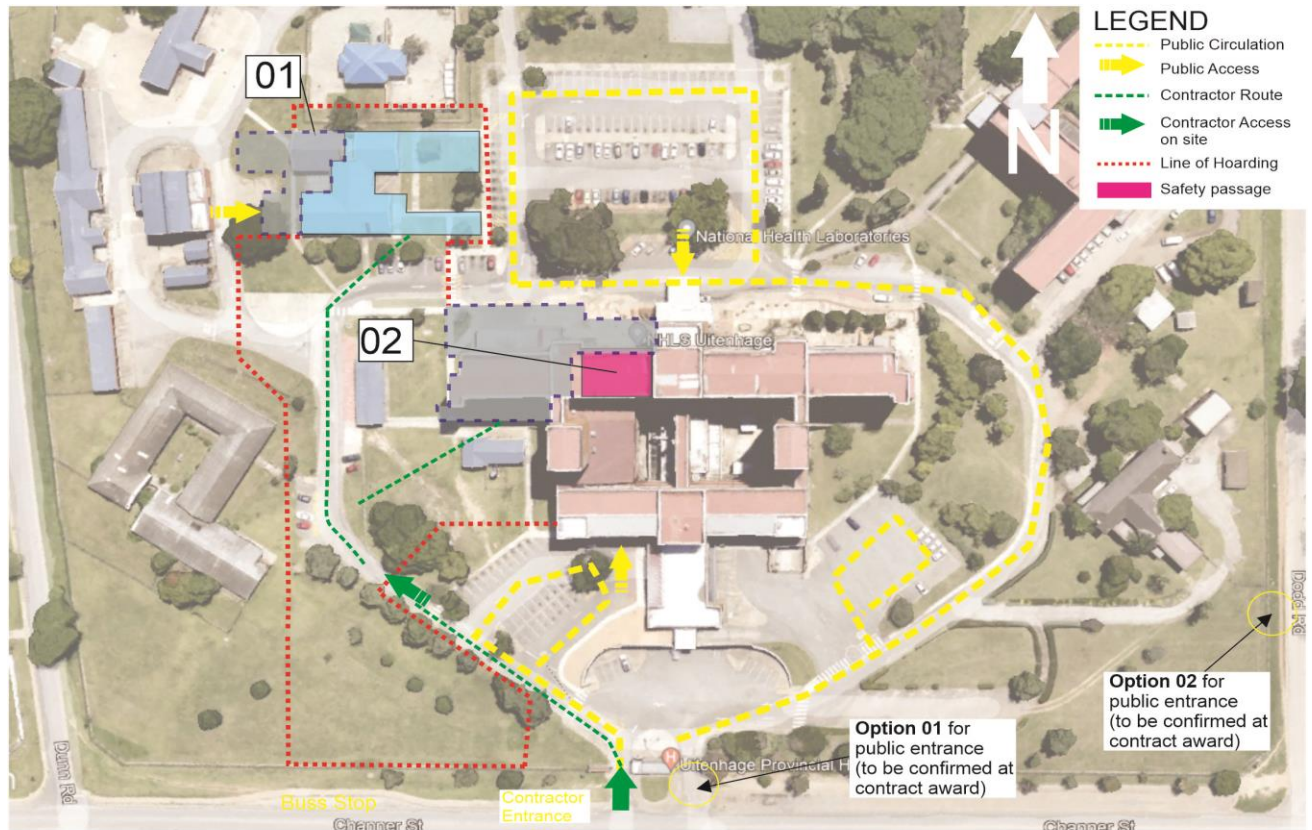


Sectional Completion 02	Sectional Completion 04	Sectional Completion 02
<p>01</p> <p>72 Hour Assessment Extension Ph2 5 Months</p> <ul style="list-style-type: none"> - Erect Hoarding to isolate construction zone - Construct female ward and admin extension for sectional completion - Handover ward for decanting of patients 	<p>02</p> <p>Trauma Unit renovation Ph2 8 Months</p> <ul style="list-style-type: none"> - Erect Hoarding to isolate construction zone - Complete extension renovations - Handover ward 	<p>03</p> <p>Roof Replacement 5 Months</p> <ul style="list-style-type: none"> - Roof replacement at NW corner of hospital to be completed. - Existing roof will be retained, all works completed in strict accordance with H&S plan and specifications - Remedial works to remainder of roofs at hospital

* refer to figure 02 for timelines
Figure 04: Phase 2 Hoarding Diagram

7.1.3 Phase 3: Phasing, Hoarding and Circulation Diagrams

* Refer to MDA Architects detailed phasing, hoarding layout and controlled access diagrams: MDA 477(B) UPH Phasing Diagram-003



Sectional Completion 03	Sectional Completion 05
<p>01</p> <p>72 Hour Assessment Extension Ph2 5 Months</p> <ul style="list-style-type: none"> - Erect Hoarding to isolate construction zone - Construct female ward and admin extension for sectional completion - Handover ward for decanting of patients 	<p>02</p> <p>Trauma Unit renovation Ph2 8 Months</p> <ul style="list-style-type: none"> - Erect Hoarding to isolate construction zone - Complete extension renovations - Handover ward

* refer to figure 02 for timelines

Figure 05: Phase 3 Hoarding Diagram

7.1.4 Detailed Sectional Completion Areas:

- MDA Architects phasing diagrams are included in the construction drawings which give more detail to the sectional completion at the 72 Hour Assessment and the Trauma Unit.
- 72 Hour Assessment Phasing Diagram:
 - MDA 477(B) UPH/72 HR Assessment-100 Phase 1
 - MDA 477(B) UPH/72 HR Assessment-101 Phase 2
 - MDA 477(B) UPH/72 HR Assessment-102 Phase 3
- Trauma Unit Phasing Diagram:
 - MDA 477(B) UPH/Trauma Unit-100 Phase 1
 - MDA 477(B) UPH/ Trauma Unit -101 Phase 2
 - MDA 477(B) UPH/ Trauma Unit -102 Phase3

7.2 Detailed Summary of Sectional Completion Areas:

7.2.1 Sectional Completion 01 : Duration 5 months.

- 72 hour unit: ph I: New ward expansion: East.
- Trauma refurbishment ph I.
- Archive extension
- 6th floor roof replacement ph I: East wing and roof remedial commencement.
- Basement stores remedial.
- Commencing at site handover / construction commencement date.
- Sectional practical completion no.1 for phase 1 is 5 months after construction commencement date.

After sectional practical completion no. 1 there will be a 4-week decanting period:

- Within 2 days contractor to vacate areas newly completed.
- Hoardings to be adjusted.
- Hospital to occupy newly completed areas.
- Hospital to vacate areas to be handed over to contractor for the next sectional completion.

7.2.2 Sectional Completion 02 : Duration 6 months

- 72 Hour Unit ph II: New ward expansion: West and new service facilities: West.
- Roof remedial completion and 6th floor roof replacement ph II: West wing.
- Commencement to coincide with end of the decanting period at the end of phase 1.

At Sectional practical completion no. 2 at the 72-hour unit: There will be a 4-week decanting period:

- Contractor to vacate areas newly completed with 2 days.
- Hoardings to be adjusted.
- Hospital to occupy newly completed areas and temporary entrance established.
- Hospital to vacate areas to be handed over to contractor for the next sectional completion.

7.2.3 Sectional Completion 03 : Duration 6 months

- 72 hour unit ph 3: reconfiguration of existing building and construction new entrance.
- Commencement to coincide with end of the decanting period at the end of phase 1.

At Sectional no. 2 practical completion of ph II: 72-hour unit: There will be a 4-week decanting period:

- Contractor to vacate areas newly completed with 2 days.
- Hoardings to be adjusted.
- Hospital to occupy newly completed areas and temporary entrance established.
- Hospital to vacate areas to be handed over to contractor for the next sectional completion phase.

7.2.4 Sectional Completion 04 : Duration 9 months

- Trauma extensions and refurbishment ph II.
- Commencement to coincide with end of the decanting period at the end of phase 1.

At Sectional no. 4 practical completion of ph II: Trauma Unit: There will be a 4-week decanting period:

- Contractor to vacate areas newly completed with 2 days.
- Hoardings to be adjusted.
- Hospital to occupy newly completed areas and temporary entrance established.
- Hospital to vacate areas to be handed over to contractor for phase III.

7.2.5 Sectional Completion 05 : Duration 3 months

- Trauma unit: reconfiguration of ph I area to suite final detail design.
- Contractor to vacate the works and de-establish site.
- Contractor to remove hoardings and re-instate site elements.

8. SMME Specifications

The following specification governs the employment of SMMEs as Domestic Sub-Contractors and is binding to the Contractor. Its purpose is to enhance the methods that are implemented to improve the development of local SMMEs.

This specification is to be read in conjunction with following applicable documents:

- (a) Any applicable form of contract used between the Contractor and DOH (The JBCC Principal Building Agreement (PBA) Edition 6.2 (May 2018))
- (b) Tender Document for the appointment of the Contractor;

The following specification governs the employment of SMME subcontractors:

1. SMME Subcontract

The Contractor shall appoint all SMME subcontractors in terms of an agreement that provides for fair and equitable conditions of contract compatible with the JBCC PBA Edition 6.2 (May 2018). All work and the associated risks related to SMME subcontractors shall be the direct responsibility of the Contractor.

2. SMME Subcontract Target

Thirty Percent (30%) of the Tender Value (excluding Socio Economic Value, CPAP/escalation, Contingency, OHS, Preliminaries, CIDB B.U.I.L.D Program and Value-Added Tax (VAT)) must be executed by SMMEs. It is compulsory for the Contractor to achieve this target as the Contractor's performance against this target will be monitored.

Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.

3. A SMME subcontractor is defined as follows:

3.1. A targeted enterprise;

3.2. A business concern operating in any business sector and which complies with the qualitative and quantitative criteria outlined in the Schedule contained in the National Small Business Act (Act No. 102 of 1996);

3.3. An entity which must have an active registration status with the CIDB, targeted CIDB Grade designations 1 to 6;

3.4. An entity which must be at least 51% black-owned and managed,

3.5. Must be registered on the CSD, and with COIDA

3.6. Electrical Contractor's to hold Wireman License and be registered with DOL.

3.7. A local entity. Depending on where the site of the project is located, then locality will be judged on a sliding scale, with the immediate local municipality preferred, followed by the district municipality and then the Province in which the project is located.

4. Procurement and contracting of SMME subcontractors

The Appointed contractor must take note that the Preliminaries Section of document allows for the appointment of an SMME Mentor or Mentors if more than one are required.

After the Award of the Contract, the Contractor will have to start the process of procuring and subcontracting SMME subcontractors to achieve the tendered SMME Participation Goal of 30%. This contracting process for subcontracting SMMEs must commence after the commencement of the Contract Period and shall be completed prior to the commencement of the Contraction Period. It is a condition that the Employer shall not give the Contractor possession of site until the above process and the appointment of SMME subcontractors is complete. The Contractor shall take due cognisance to also programme this SMME contracting process in its detailed construction programme.

The SMME Subcontractors must be procured as follows:

4.1. The identification of potential SMME's subcontractors to tender for the SMME packages shall be determined by the recognized community representatives/ structures, involving but not be limited by the Local Ward Councillor, the Social Facilitator and the PSC.

4.2. A competitive tender process obtaining at least three tenders from SMME subcontractors for each SMME package.

4.3. The SMME package documents will be prepared by the representative PSP's in conjunction with the Contract. The PSP's will provide the measured works portion of the tender document, to which the Contractor shall include his conditions of subcontract and requirements.

4.4. The tender documents will be issued to the SMME subcontractors to tender.

4.5. The Contractor shall facilitate a mandatory briefing session with the invited SMME subcontractors. The briefing session must be attended by the representative PSP's including the OHS Agent and social facilitator.

4.6. The Contractor shall provide assistance to the prospective SMME subcontractors and ensure;

4.6.1. They understand the liabilities and responsibilities of the subcontract.

4.6.2. Scope of the SMME package

4.6.3. Procedures for submitting tenders.

4.6.4. Understanding the pricing and implications of the tendered rates.

4.6.5. Procedures and basis of tender adjudication.

4.6.6. Subcontract conditions and implications when awarded.

4.7. Adjudication

4.7.1. Contractor to receive all tenders at a specific location, in sealed tender submissions, placed in a tender box provided by the Contractor prior to the closing date and time. Late tenders will not be considered.

4.7.2. Contractor to maintain a tender submission register, recording tender receipt.

4.7.3. Tenders to be evaluated by the Contractor in terms of the tender conditions and submit a draft tender evaluation to the PA within 5 working days of the closing of tenders.

4.7.4. The PA will have the right to

4.7.4.1. Interview the tenderer

4.7.4.2. Clarify any aspect of the tender

4.7.4.3. Verify the eligibility of the tenderer

4.7.4.4. Conduct a rate analysis to clarify rates and prices.

4.7.5. The Contractor shall provide reasonable opportunity to tenderers, to correct patent errors, without altering the total tendered sum.

4.8. Award of tender

The Contractor shall

- 4.8.1. Notify unsuccessful tenderers
- 4.8.2. Award/ appoint the SMME subcontractor
- 4.8.3. Compile and sign the SMME subcontract agreements.
- 4.8.4. Supply a Fully Compliance Safety File for Works
 - 4.8.4.1. Only on Approval of Safety File may works commence.
 - 4.8.4.1.1. Each Employee to have medical in place.
 - 4.8.4.1.2. Supply of PPE

5. Construction and close out

5.1. The Contractor to ensure that his construction programme takes cognizance of SMME packages including their mentoring and training requirements.

5.2. The Contractor is to assist SMME subcontractors but not limited to, to the following:

- 5.2.1. Compilation and maintenance of the Occupational Health, Safety and Environmental File and compliance with Construction Regulations by a Part Time CHS Officer (CHSO) registered with the South African Council for the Project Management Professions.
- 5.2.2. Setting up and Maintaining Cash Flow, Construction Programme and Method Statement.
- 5.2.3. Setting up and Maintaining Quality Management Plan and Risk Register.
- 5.2.4. Basic Conditions of Contract of the relevant contract and setting up short term contracts for labour as per the main contract.
- 5.2.5. Balancing of Bill of Quantities, Financial Control and Management.
- 5.2.6. Technical Training.
- 5.2.7. Methods of Measuring Resource Productivity.
- 5.2.8. Measurement of Work Done, Interim Payment Certificate and Compilation.
- 5.2.9. Dispute Avoidance and Resolution Procedures.

5.3. The Contractor shall on a fulltime basis closely mentor, manage and supervise all SMMEs subcontractors and shall manage, guide and assist each SMME subcontractor in all aspects of management, execution and completion of its subcontract. This shall typically include the on-site productivity planning and management of:

- 5.3.1. Materials Management
- 5.3.2. Cost Management
- 5.3.3. Contract Management
- 5.3.4. Health & Safety Management
- 5.3.5. Quality Management
- 5.3.6. Communication Management

Payment for such on-going assistance is to be included in the Preliminaries Section of the Bills of Quantities.

5.4. The Contractor shall manage all SMME's throughout the construction period and will assist in the compilation of the final account of each SMME package. Payment for such on-going assistance is to be included in the Preliminaries Section of the Bills of Quantities.

5.5. The Contractor shall, on completion of each and every subcontract completed in accordance with the provisions of this Specification, issue free of charge to the SMME within 7 days of the completion of the subcontract, a Certificate of Experience on a single A4 page stating:

- (i) Contract title;

- (ii) Contractor's full name and address;
- (iii) Principal agent's name and address;
- (iv) SMME subcontractors name and address;
- (v) Scope or extent of the subcontract works;
- (vi) Value of the SMME subcontract works;
- (vii) Applicable level of the SMME subcontract;
- (viii) Duration of the SMME subcontract;
- (ix) Date of completion of the SMME subcontract; and
- (x) Description of the training undergone by the SMME subcontractor;

5.6. No provision or requirement set out in this Specification shall be deemed to relieve the Contractor of any liability or obligation under the Contract between the DOH and the Contractor, and the Contractor shall be fully liable for the acts, defaults and neglects of any SMME subcontractors, his agents or employees, as fully as if they were the acts, defaults and neglects of the Contractor, his agents or employees.

5.7. The Contractor is not to permit SMME subcontractors to further subcontract on any other conditions than those applying in the project specification to subcontractors or SMME subcontractors.

5.8. The Tenderer is to price all associated administrative, supervision, mentoring costs, profit and attendance in the relevant sections of the Preliminaries as no claims for additional costs will be entertained.

5.9. These are monetary provisions only and the use, value and payment thereof are subject to adjustment based on actual costs through contractually approved variation orders calculated in terms of the prescribed contractual directives.

The SMME Packages involves the following works:

1. Archiving
2. Casualty & OPD fire protection
3. 72 Hour Assessment area fire protection
4. Casualty & OPD electrical installation
5. 72 Hour Assessment area electrical installation
6. 72 Hour Assessment area parking area
7. Casualty & OPD parking area
8. 72 Hour Assessment area grassing & landscaping
9. Casualty & OPD masonry
10. 72 Hour Assessment area masonry
11. Casualty & OPD suspended ceilings
12. Roof replacement alterations and cleaning of existing rainwater goods
13. 72 Hour Assessment area fencing
14. Casualty & OPD plumbing & drainage
15. 72 Hour Assessment area plumbing & drainage

Sequence of Works:

The sequence of works will be agreed between the facility, PA and contractor, and areas for minor maintenance will be decanted is required.

9. Trade Names:

- Contractors are to familiarise themselves with the supplementary preambles in all instances contained within the BOQ document.

- Trade names for fixtures, fittings, finishes and other construction elements are specifically used because of the nature of the project.
- Proprietary items or materials where specified are to be brand specific or other approved. Approval may only be granted by the Principal Agent in writing.

C3.2 RESTRICTIONS AND CONSTRAINTS

- The completion of the project is urgent and work shall be executed during normal working hours i.e. 7h30 till 17h00 weekdays only. Work required to be executed outside of these hours must be arranged with the Facilities Manager and the Chief Executive of the hospital, in advance.
- Noise must be kept to a minimum and within acceptable levels at all times.
- All shut-offs and tie/cut-ins to existing services must be arranged in advance with the Facilities Manager and a methodology with appropriate mitigation of risks must be prepared by the contractor and submitted to the relevant Professional discipline in advance, for approval.
- Dust emanating from the work site must be controlled at all times.

C3.3 OPERATIONAL PROTOCOLS

- Security is a priority, and the site shall be kept safe at all times.
- The approved Health and Safety plan shall be adhered to at all times
- All staff members of the contractor shall wear PPE at all times
- All staff members of the contractor shall be specifically identifiable at all times and to this end shall wear a predetermined coloured overall to be able to enter and work on the site.
- Regular meetings, the frequency of which is to be determined, shall be held with the management of the hospital to always ensure a cohesive spirit of co-operation
- The successful contractor must take into account that other contractors may be busy with construction in close proximity to the works and allowance must be made in the contractor's submission to accommodate these parties.

C3.4 ACCESS AND SITE ESTABLISHMENT

- Prospective bidders are to fully familiarize themselves with the site and access to the site and restricted area for site establishment. Allowance for temporary construction access etc. shall be deemed to be included in contractor's price/bid. Prospective bidders are to familiarize themselves with the site as no additional costs shall be entertained.
- No Contractor's representatives or worker's are allowed to sleep at establishment area or within the hospital complex.
- The Contractors are required to price for establishment, de-establishment and re-instatement in the Preliminaries section of the Bills of Quantities.
- Refer to locality site diagram below for detail on site camp position, hoarding lines and contractor's access routes.

C3.4.1 Site Layout, contractors' access and site camp

- Refer to MDA Architects detailed phasing, hoarding layout and control access diagrams, as listed in the contract drawings.
 - MDA 477(B) UPH Phasing Diagram – phase 001
 - MDA 477(B) UPH Phasing Diagram – phase 002
 - MDA 477(B) UPH Phasing Diagram – phase 003

C3.5 ACCEPTANCE OF TENDERS

- The Employer is not bound to accept the lowest, or any tender, or any portion of any tender

C3.6 MINIMUM WAGE

- The Contractor shall adhere to “The national minimum wage determined by the Minister in accordance with the National Minimum Wage Act (NMWA)”, and yearly pronounced increases for duration of contract.

C3.7 TEMPORARY WORKS

- All temporary work to comply with the Construction Health and safety Act (Act 85 of 1993) and its regulations and are confirmed and recorded under section C3.14 Occupational Health & Safety.

C3.8 DESIGN DETAILS

- Refer to architectural and engineering detail design drawings.

C3.9 EMPLOYER'S OBJECTIVES IN RELATION TO INDIRECT TARGETING

- The Contractor shall achieve in performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the CIDB Standard for Enterprise Development Through Construction Works Contracts Gazette Notice No. 36190 of 25 February 2023. The Minimum CPG target for this contract is 5 percent of the total value.

C3.10 CIDB B.U.I.L.D SKILLS DEVELOPMENT

- The Contractor shall achieve in performance of the contract the Contract Skills Development Goal (CSDG) established in the CIDB Standard for Developing Skills Through Infrastructure Contracts published in Gazette Notice No 48491 of April 2023. The minimum CSDG factor applicable to this contract is 0.50 percent.

C3.11 CIDB B.U.I.L.D ENTERPRISE DEVELOPMENT CO-ORDINATOR

- The contractor shall appoint an Enterprise Development Co-ordinator who shall Develop a project specific Enterprise Development plan to improve the targeted enterprises performance in the identified development areas and shall allocate resources to monitor progress in relation to improved performance; and
- Submit to the Employer’s representative a monthly enterprise development report (Proforma -ED105P) which documents all mentoring activities that have taken place during the month and the progress made in improving the targeted enterprise’s performance in the agreed developmental area, counter signed by the targeted enterprise. (Template forms are attached for reference as Annexure C)
- Details of competencies required are annexed as Annexure B.

C3.12 DESIGN BRIEF

N/A

C3.13 DRAWINGS

UPH DRAWING DESCRIPTION	CONTRACT DRAWINGS – NUMBER	DATE
ARCHITECTURAL DRAWINGS		
Master Site Plan	MDA 477(B) UPH 200	20.11.2023
TRAUMA UNIT REFERENCE NUMBER:	MDA 477(B) UPH/TRAUMA UNIT	
Phasing Diagram – Phase 1	MDA 477(B) UPH/TRAUMA UNIT-100	20.11.2023
Phasing Diagram – Phase 2	MDA 477(B) UPH/TRAUMA UNIT-101	20.11.2023
Phasing Diagram – Phase 3	MDA 477(B) UPH/TRAUMA UNIT-102	20.11.2023
Demolition Plan	MDA 477(B) UPH/TRAUMA UNIT-201	20.11.2023
Roof Plan	MDA 477(B) UPH/TRAUMA UNIT-202	20.11.2023
Ground Floor Plan	MDA 477(B) UPH/TRAUMA UNIT-203	20.11.2023
Services Level Floor Plan	MDA 477(B) UPH/TRAUMA UNIT-204	20.11.2023
Sections 01	MDA 477(B) UPH/TRAUMA UNIT-205	20.11.2023
Sections 02	MDA 477(B) UPH/TRAUMA UNIT-206	20.11.2023
Elevations	MDA 477(B) UPH/TRAUMA UNIT-207	20.11.2023
Details 01	MDA 477(B) UPH/TRAUMA UNIT-208	24.11.2023
Details 02	MDA 477(B) UPH/TRAUMA UNIT-209	24.11.2023
Details 03	MDA 477(B) UPH/TRAUMA UNIT-210	24.11.2023
Details 04	MDA 477(B) UPH/TRAUMA UNIT-211	27.11.2023
Floor Finishes Layout	MDA 477(B) UPH/TRAUMA UNIT-300	23.11.2023
Ceiling Plan	MDA 477(B) UPH/TRAUMA UNIT-301	23.11.2023
Bulkhead Details 01	MDA 477(B) UPH/TRAUMA UNIT-302	20.11.2023
Bulkhead Details 02	MDA 477(B) UPH/TRAUMA UNIT-303	20.11.2023
Joinery Details 01	MDA 477(B) UPH/TRAUMA UNIT-304	20.11.2023

Joinery Details 02	MDA 477(B) UPH/TRAUMA UNIT-305	20.11.2023
Joinery Details 03	MDA 477(B) UPH/TRAUMA UNIT-306	20.11.2023
Joinery Details 04	MDA 477(B) UPH/TRAUMA UNIT-307	20.11.2023
Joinery Details 05	MDA 477(B) UPH/TRAUMA UNIT-308	21.11.2023
Joinery Details 06	MDA 477(B) UPH/TRAUMA UNIT-309	21.11.2023
Joinery Details Reference Plan	MDA 477(B) UPH/TRAUMA UNIT-310	21.11.2023
Door Schedule	MDA 477(B) UPH/TRAUMA UNIT-400	20.11.2023
Window Schedule	MDA 477(B) UPH/TRAUMA UNIT-401	12.12.2023
Door Frame Details 01	MDA 477(B) UPH/TRAUMA UNIT-402	20.11.2023
Shower Glass Screens	MDA 477(B) UPH/TRAUMA UNIT-403	12.12.2023
Shower Glass Screens	MDA 477(B) UPH/TRAUMA UNIT-404	12.12.2023
Signage Schedule	MDA 477(B) UPH/TRAUMA UNIT-500	20.11.2023
72HR ASSESSMENT REFERENCE NUMBER:		
MDA 477(B) UPH/72 HR ASSESSMENT		
Phasing Diagram – Phase 1	MDA 477(B) UPH/72 HR ASSESSMENT-100	20.11.2023
Phasing Diagram – Phase 2	MDA 477(B) UPH/72 HR ASSESSMENT-101	20.11.2023
Phasing Diagram – Phase 3	MDA 477(B) UPH/72 HR ASSESSMENT -102	20.11.2023
Roof / Site Plan	MDA 477(B) UPH/72 HR ASSESSMENT -200	20.11.2023
Demolition Plan	MDA 477(B) UPH/72 HR ASSESSMENT -201	20.11.2023
Ground Floor Plan	MDA 477(B) UPH/72 HR ASSESSMENT -202	20.11.2023
Sections	MDA 477(B) UPH/72 HR ASSESSMENT -203	20.11.2023
Elevations	MDA 477(B) UPH/72 HR ASSESSMENT -204	20.11.2023
Details 01	MDA 477(B) UPH/72 HR ASSESSMENT -205	20.11.2023
Floor Finish Layout	MDA 477(B) UPH/72 HR ASSESSMENT -300	20.11.2023

Ceiling Plan	MDA 477(B) UPH/72 HR ASSESSMENT -301	23.11.2023
Joinery Details 01	MDA 477(B) UPH/72 HR ASSESSMENT -302	20.11.2023
Joinery Details 02	MDA 477(B) UPH/72 HR ASSESSMENT -303	20.11.2023
Joinery Details 03	MDA 477(B) UPH/72 HR ASSESSMENT -304	20.11.2023
Joinery Details Reference Plan	MDA 477(B) UPH/72 HR ASSESSMENT -305	21.11.2023
Door Schedule	MDA 477(B) UPH/72 HR ASSESSMENT -400	20.11.2023
Window Schedule	MDA 477(B) UPH/72 HR ASSESSMENT -401	20.11.2023
Gate Schedule	MDA 477(B) UPH/72 HR ASSESSMENT -402	23.11.2023
Signage Schedule	MDA 477(B) UPH/72 HR ASSESSMENT -500	20.11.2023
ARCHIVE REFERENCE NUMBER:		
	MDA 477(B) UPH/ARCHIVE	
Roof, Basement and Ground Floor Plan	MDA 477(B) UPH/ARCHIVE -201	20.11.2023
Sections 01	MDA 477(B) UPH/ARCHIVE -202	23.11.2023
Elevations	MDA 477(B) UPH/ARCHIVE -203	23.11.2023
ROOF REFERENCE NUMBER:		
	MDA 477(B) UPH/ROOF	
Roof Plan	MDA 477(B) UPH/ROOF -200	23.11.2023
Sections and Details	MDA 477(B) UPH/ROOF -201	23.11.2023
Roof Safety Walkway Detail	MDA 477(B) UPH/ROOF -202	23.11.2023

CIVIL AND STRUCTURAL DRAWINGS		
UPH DRAWING DESCRIPTION	CONTRACT DRAWINGS – NUMBER	DATE
TRAUMA UNIT REFERENCE NUMBER:		
Survey & existing services layout plan	1746-6-GEN-000	05.12.2023
Overall Layout	1746-6-GEN-001	15.02.2024
Trauma unit civil installation	1746-6-GEN-003	15.02.2024
Proposed Stormwater Network: Casualty unit layout	1746-6-STW-001	15.02.2024
Proposed Stormwater Network: Sections & Layout	1746-6-STW-011	15.02.2024
Proposed Sewer Network: Casualty Unit Layout	1746-6-SEW-001	15.02.2024
Proposed Sewer Network: Long Sections	1746-6-SEW-003	15.02.2024
Proposed Sewer Network: Sections & typical details	1746-6-SEW-010	15.02.2024
Proposed roads & Parking: Casualty Unit Layout	746-6-RDS-001	15.02.2024
Proposed roads & Parking: Sections & Typical Details	746-6-RDS-010	15.02.2024
Water & Fire Reticulation: Typical Details	1746-06-WAT-010	15.02.2024
Demolition plan & ground floor layout	1746-6-02-S-001	29.11.2023
Ring beam layout	1746-6-02-S-002	29.11.2023
Roof sections - sheet 1	1746-6-02-S-003	29.11.2023
Roof sections – sheet 2	1746-6-02-S-004	29.11.2023
Roof sections – sheet 3	1746-6-02-S-005	29.11.2023
Ground floor sections – sheet 1	1746-6-02-S-006	29.11.2023
Ground floor sections – sheet 2	1746-6-02-S-007	29.11.2023
Beam over entrance	1746-6-02-S-008	29.11.2023
3D View of roof over trauma entrance	1746-6-02-S-009	29.11.2023

72HR ASSESSMENT REFERENCE NUMBER:		
72 Hour Assessment civil installation	1746-6-GEN-002	15.02.2024
72 Hour facility unit layout	1746-6-STW-002	15.02.2024
Proposed Stormwater Network: Long sections – sheet 1	1746-6-STW-003	15.02.2024
Proposed Stormwater Network: Sections & details	1746-6-STW-010	15.02.2024
Proposed Sewer Network: 72 Hour Facility Layout	1746-6-SEW-002	15.02.2024
Proposed roads & Parking: 72 Hour Facility Layout	746-6-RDS-002	15.02.2024
Sections – sheet 3	1746-6-04-S-S-012	29.11.2023
External sheeting structure – sections & details	1746-6-04-S-S-013	29.11.2023
ARCHIVE REFERENCE NUMBER:		
Structural plan & sections	1746-6-01-S-S-001	29.11.2023
ROOF REFERENCE NUMBER:		
Plans	1746-6-04-S-001	29.11.2023
Frame type F1 – sheet 1	1746-6-04-S-002	29.11.2023
Frame type F1 – sheet 2	1746-6-04-S-003	29.11.2023
Frame type F2 – sheet 1	1746-6-04-S-004	29.11.2023
Frame type F2 – sheet 2	1746-6-04-S-005	29.11.2023
Frame type F3 – sheet 1	1746-6-04-S-006	29.11.2023
General details	1746-6-04-S-007	29.11.2023

The full set of drawings are attached as Annexure A.

C3.14 OHS SPECIFICATION

Occupational Health and Safety Specification

**Issued in terms of the Occupational Health and Safety Act, 1993
Construction regulations 2014**

PROJECT NAME	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
LOCATION	36 CHANNER STREET, LEVYVALE, KARIEGA.
DISTRICT	NELSON MANDELA BAY
BID NO	CONTRACT NUMBER: SCMU3-23/24-0734-HO

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ANNEXURE F	OHS BILL OF QUANTITIES

1 SCOPE

This health and safety specification in respect to the services for Uitenhage Provincial Hospital:

The project is comprised of 6 sub sections as follows:

- Trauma unit : 16 months
- 72-hour unit : 20 months
- Roof replacement : 10 months
- Roof remedial : 10 months
- Archive : 5 months
- Basement stores remedial : 5 months

1. Scope of works relating to Construction.

The relevant upgrading and refurbishment that will take place at the Uitenhage Provincial Hospital will consist of the following:

BEFORE ANY CONSTRUCTION WORKS MAY COMMENCE:

There are areas within the hospital where bird droppings have been identified e.g. Service Duct, Service Yard etc. It is recommended that the affected area be fumigated and decontaminated by a pest control specialist before any work is done in those areas.

9.1 Archive:

- Construction of a 41.7sqm extension to the existing archive at an elevated ground floor level.
- Structural steel and reinforced concrete detailing identifies the elevated construction over the basement level kitchen driveway.
- Existing perimeter wall is demolished / adjusted to suite expanded footprint of the Archive.
- Light weight insulated sheet metal roof construction on timber roof structure.
- The works include conventional internal finishes viz plaster / paint, suspended ceiling, carpet tiles, hardwood timber skirting and quadrant.
- Commencement date to be consistent with project commencement and phasing.
- Contract Duration: 5 months with sectional practical completion.

9.2 Roof Replacement and Remedial Work:

- Deterioration of existing roof coverings, flat roof waterproofing, gutters and rainwater down pipes is evident in many areas.
- Remedial work has been packaged into different sub sections dependent on the state of maintenance and severity of roof leaks.
- The primary roof problem is at the 6th floor pediatric ward which will have a new roof and structural steel supporting roof structure installed above the existing roof covering which is retained as a sub roof.
- The different elements of the roofing contract are explained in further detail and are identified on the roof plan annexed here with elsewhere in this document.
- Replacement of ceilings and painting redecoration at 6th floor pediatric ward is included.
- The roof remedial work is to be completed in phases which are to be mutually agreed with the principal agent and the hospital at site handover and contract commencement.
- Sectional practical completion of the predetermined phases will be required before commencement of further phases.

9.3 72 Hour Assessment Unit:

- Roof/ fascia/ gutters and barge boards are all identified to contain asbestos containing material.
 - Building Floor Areas:
 - New Work / Extension: 510m²
 - Refurbishment to Existing Building Area: 470m²
- Construction of a new male ward.
- Construction of a new female ward.
- Provision of new patient dining facilities
- Reconfiguration of patient ablutions.
- Reconfiguration of staff and clinical facilities.
- Construction of a new entrance with lobby and reception facilities.
- Reconfiguration of existing seclusion rooms and provision of ensuite facilities.
- The provision of one additional seclusion room with ensuite facilities.
- General reconfiguration and upgrade of clinical spaces.
- The work is to be completed in 3 phases with sectional completion dates recorded for each phase.
- Sectional practical completion is to be realized for each phase before the commencement of the next phase.
- The phasing of the works is as follows:
 - Phase 1:
Construction of the male ward extension to be used as a temporary male and female ward while phase 2 is constructed.
 - Phase 2:
Construction of the new female ward and admin extensions, inclusive of secure link walkway/passage and renovation of internal ablution and dining spaces
Dining room renovation to be a temporary female ward whilst phase 3 is in construction.
 - Phase 3:
Extension and renovation of existing Psychiatric unit, inclusive of new entrance
Revisit male ward extension and complete and commission interior.
- Refer to the detailed phasing diagrams annexed hereto.

9.4 Trauma Unit:

- Building Floor Areas:
 - New Work / Extensions: 365m²
 - Refurbishment to Existing Building Area: 634m²
- Refurbishment to Existing Building Area: 634m² General reconfiguration and upgrade of the Trauma Unit.
- Extension of the building to realize the provision of 6 additional trauma beds to give a total of 10 trauma beds.
- Upgrade of male and female short stay wards.
- Extension to the building to realize the provision of adult and pediatric resuscitation rooms.
- Extension to the building to realize a reconfigured entrance, ambulance bays and emergency triage.
- Provision of temporary access and circulation routes.
- Complete an extensive upgrade of internal finishes, doors, door frames, sanitaryware and ironmongery.
- The work is to be completed in 2 phases with sectional completion dates.

- Sectional practical completion is to be realized before the commencement of phase 2.
- The phasing of the works is as follows:
 - Phase 1:
Renovation of the existing short stay ward and admissions into a temporary trauma unit.
Erection of temporary external pedestrian corridor to link existing trauma unit to hospital main entrance.
 - Phase 2:
Extension to trauma unit and entrance.
Complete renovation and reconfiguration of trauma unit, consulting rooms, and other clinical spaces.
Removal of temporary corridor.
 - Completion phase.
Revisit phase 1 to complete and commission the male and female short stay wards and completion of finishes.
- Refer to the detailed phasing diagrams annexed hereto.

9.5 Emergency intervention at storage basement: Sub soil water and rainwater ingress

This scope of work is an external intervention to address water ingress at the basement stores.

- Water ingress through roof slab
A section of the slab has been covered with paving while the rest has unpainted “torch-on” waterproofing. The paving needs to be removed, and that section should receive a new “torch-on” waterproofing and screeded to falls. The existing “torch-on” waterproofing also needs to be replaced and a screed to falls should be added.
- Water ingress through the retaining walls.
This part of the retaining wall requires a new subsoil drain and vertical waterproofing. The subsoil drain should be directed to discharge into the nearest stormwater discharge point or open air. To enable this process, around 3 meters of backfill material behind the retaining wall, along with paving, needs to be temporarily removed. Backfill material must be reinstated in layers no thicker than 200mm and finished with black top surfacing.
- Lack of drainage holes in the retaining walls:
This retaining wall must have a new subsoil drain, vertical waterproofing, and new drainage holes installed. To do this, approximately 3 meters of backfill material behind the retaining wall, along with the paving, will need to be temporarily removed. Drainage holes should be core drilled through the wall at 5-meter intervals and then connected to the subsoil drain. Backfill material must be reinstated in layers no thicker than 200mm and finished with black top surfacing and paving to match the existing.
- Water ingress through the 1sts floor roof slab
It is suspected that the water entering the roof slab is due to blocked full bores. Further investigations must be conducted on this floor to confirm if there is any other source of water ingress.
- Severe water ingress through the 1sts floor roof slab
It is suspected that the water entering through the roof slab is due to blocked full bores. Further investigations must be conducted on this floor and on the ground floor paving to confirm if there is any other source of water ingress.
- Blocked full bores.

All full bores are to be investigated for blockages and for deterioration of the waterproofing around the bell mouth of the full bore. An alternate design for stormwater discharge is to be investigated in unblocking of a full bore proved impossible.

- Completion of the roof related scope of work items is to be realised at contractual practical completion.

With all these Phases and plans there is a detailed phasing plan in place.

Please adhere to Specification in BOQ for Hoarding and insulation for Noise & Dust.

The scope provides the overarching framework within which the Principal Contractor is required to demonstrate compliance with certain requirements for occupational health and safety established by the Occupational Health and Safety Act 85 of 1993 during construction work;

- Establishes the way the Principal Contractor is to manage the risk of health and safety incidents during construction; and
- Establishes the way the Client's Health and Safety Agent will interact with The Principal Contractor.

This specification establishes general requirements to enable the Principal Contractor to satisfy aspects of the Occupational Health and Safety, (Act No. 85 of 1993) and the Construction Regulations, 2014. The Principal Contractor is required to develop, implement and maintain a site-specific health and safety plan. The Client is required to provide certain site-specific information to the Principal Contractor or a health and safety specification for the works to enable such a plan to be formulated. Accordingly, this specification on its own cannot ensure compliance with the requirements of the Act.

The Construction Regulations, 2014, requires a Client to stop any contractor from executing construction work which is not in accordance with the contractor's health and safety plan for the site or which poses to be a threat to the health and safety of persons.

2 DEFINITIONS

As per the Occupational Health and Safety Act (85 of 1993) and the relevant regulations and applicable standards.

2.1 List of Abbreviations

AIA	Authorized Independent Authority
CC	Compensation Commissioner
CHSA	Construction Health and Safety Agent
CHSO	Construction Health and Safety Officer
CR	Construction Regulations (Gazette 10113 of 07/02/2014)
DoL	Department of Labour
GAR	General Administration Regulations
GSR	General Safety Regulations
HCSR	Hazardous Chemical Substances Regulations
HIRA	Hazard Identification Risk Assessment
H&S	Health and Safety
OHSA	Occupational Health and Safety Act No. 85 of 1993 (as amended)
OHSS	Occupational Health and Safety Specification
PA	Principal Agent
PSHSS	Project Specific Health and Safety Specification
PC	Principal Contractor
PPE	Personal Protective Equipment
SANS	South African National Standards (Authority)
SDS	Safety Data Sheet
SWP	Safe Work Procedure

2.2 Key References

Occupational Health and Safety Act No. 85 of 1993 and Regulations (as amended)

Construction Regulations 2014.

Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as amended).

SANS codes.

3 INTERPRETATION

The Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this specification.

3.1 PURPOSE OF THE PROJECT SPECIFIC HEALTH AND SAFETY SPECIFICATION (PSHSS)

The PSHSS is a performance specification to ensure that the Client and any bodies that enter into formal agreements with the Client / Agents, Professional Service Consultants (Engineers, Quantity Surveyors and Architects), Principal Contractors and Contractors achieve an acceptable level of OHS performance.

No advice, approval of any document required by the PSHSS, such as hazard identification and risk assessments, or any other form of communication from the Client shall be construed as acceptance by the Client of any obligation that absolves the Principal Contractor from achieving the required level of performance and compliance with legal requirements. Furthermore, there is no acceptance of liability by the Client, which may result from the Principal Contractor failing to comply with the PSHSS, i.e. the Principal Contractor remains responsible for achieving the required performance levels.

A Mandatory Agreement in terms of Section 37.2 of the OHS Act will be signed between parties prior to any works commencing. The PSHSS highlights the aspects to be implemented over and above the minimum requirements of current legislation. Requirements may be changed should new risks or issues are identified that could not have been foreseen during the design phase of the project, or during the construction phase. Any new legislation or standards (legislated or determined by the Client) that are promulgated or accepted during the contract will automatically be applied.

It should be noted that this OHSS in no way relieves the Contractor of any of his responsibilities set out in the Act and Regulations

3.2 REQUIREMENTS

A project specific H&S Plan in response to this PSHSS will be subject to approval by the CHS Agent. This must include all supporting documentation as required to verify the H&S system:

4 GENERAL REQUIREMENTS

4.1 RISKS

Principal Contractor to provide a detailed risk assessment for the entire work on site. The items noted are for information only and must be expanded as required by the project.

Summary of Risk on site:

- a) Working within an operational hospital (sick people).
- b) Working at Heights.
- c) Lifting equipment
- d) Excavations
- e) Fire
- f) Flammable Liquids / Gas
- g) Fragile Materials
- h) Hazardous Substances
- i) Hot Works
- j) Members of Public

- k) Night Work
- l) Road Working – in or next to (including Traffic Management and site access)
- m) Snakes
- n) Underground Services
- o) Underpinning
- p) Piling
- q) Steel structure
- r) Biological risks
- s) Ergonomic risks
- t) Environmental pollution
- u) Weather related.
- v) Equipment and machinery
- w) Asbestos management

Existing structures on site and surrounding land use (with a significant impact on Health & Safety):

- a) Public Hospital Staff safety a concern.
- b) Security at Trauma Unit
- c) SMME (Construction Mafia)

4.2 SPECIFIED HAZARDOUS CHEMICAL SUBSTANCES

The PC is to supply the products required as per the bill of quantities-, materials safety data sheets (MSDSs) for each of the product envisaged to be utilized on site.

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

4.3 CONSTRUCTION WORK PERMIT

The below is to be supplied Two (2) Safety Files to OHS Consultant for one for the preparation of Construction Work Permit, the other for site:

1. Appointment letter of Principal Contractor
2. Approved SHEQ BOQ- (priced)
3. Signed mandatory agreement (Sec 37,2 & 5.1(k))
4. Site organogram
5. Submitted Health and Safety Plan
6. Baseline Risk Assessment
7. Valid proof of letter of good standing
8. CIBD registration of Contractor
9. Profile of appointed Construction Manager in terms of CR 8(1):
 - a. Letter of appointment
 - b. CV
 - c. Certified copies of qualifications
 - d. Professional registration (if applicable)
10. Profile of appointed Health and safety Officer in terms of CR 8(5):
 - a. Letter of appointment
 - b. CV
 - c. Certified copies of qualifications
 - d. Professional registration (if applicable)
11. Profile of appointed Health and Safety Manager in terms of CR 8:
 - a. CV
 - b. Certified qualifications
 - c. Professional registration (if applicable)
 - d. Letter of appointment

The file must be submitted for approval to the OHS Consultant and issued to the Department of Labour before any construction work commences on site.

It should be noted that this OHSS in no way relieves the Contractor of any of his responsibilities set out in the Act and Regulations.

4.4 HEALTH AND SAFETY PLAN FRAMEWORK

The H & S aspects related to the project outlined in the previous sections are to be taken into account when drawing up the H & S Plan. The PC is required to demonstrate competence by providing an H & S system that will address the requirements of the project.

The CHS Agent may from time-to-time request additions or systems as they relate to the works or legislative requirements at the time.

The PC is to prepare a site layout drawing to indicate at least the following:

- The positions of site offices of all Contractors, toilets, drinking water and worker rest areas;
- Indicate the positions of emergency personnel and equipment (fire, first aiders, first aid posts);
- Protection of plant and pedestrians, indicate parking, and
- Storage areas (materials and equipment, waste etc.)
- Access and egress to site for deliveries and intended temporary traffic management,
- Emergency assembly point

Such layouts are to be updated regularly throughout the project.

APPOINTMENT OF COMPETENT SITE PERSONNEL

The CEO (OHSA S16.1) of the PC will take overall responsibility for the appointment of competent site staff for the duration of the project. Should the CEO not be personally involved in the project, the H & S responsibilities are to be delegated to the Site Agent (OHSA 16.2). Knowledge and training in H & S is required, and certificates indicating H & S training as well as experience to be included in CVs.

All other legal appointments are to be made with relevance to the type of work required.

4.5 CONSTRUCTION MANAGER / SUPERVISORS

Competent **FULL TIME** Construction Managers (CR 8.1) must be appointed to manage part or all the works and have training and/or experience in the area of responsibility. All site supervisors must show evidence of appropriate training in H & S, and an understanding or training in areas of responsibility (i.e., risk assessments, method statements etc.). Multiple competent Assistant Construction Managers (CR8.2) may be appointed where justified by the scope and complexity of the works.

Curriculum Vitae (CVs) are to be submitted for approval by the Designer (PA) and/or Client. The Supervisor will be held responsible for the safety of working teams and subordinates, housekeeping and stacking and storage of materials. The Construction Supervisor must, as a minimum, have a supervision course as per Unit Standard 262845 (Civil Engineering), 119080 (Building Construction) and 262884 (Civil Engineering)

If the Construction Manager (CR8.1) changes throughout the project. The Principal Contractor must ensure to provide the proposed Construction Manager CV and certificates for approval and then update the Annexure 2 and ensure that the appointment letter as well as proof of competency is available in the Health and Safety File.

4.6 CONSTRUCTION HEALTH AND SAFETY MANAGER & OFFICER

Competent registered **Full-Time** Health and Safety Manger and (1) X **Full-Time** Safety Officer to be appointed for the duration of the project.

The CHSM &O must provide the SACPCMP valid registration certificate, CV and relevant certificates/qualifications. The officer will be required to compile a monthly report, see **Annexure A**. These people may not hold any other position on the site staff.

The site supervisor may not act as the CHSM or Officer.

The CHS Manager will be held responsible for all H&S on the project.

Should any of the key personnel be replaced the principal contractor is required to submit the CV, applicant's competency certificates and a valid SACPCMP letter of good standing for approval by the Client or appointed Pr.CHSA at least two weeks before as The Department of Employment of Labour will need to be notified regarding the changes.

4.7 HEALTH AND SAFETY REPRESENTATIVE

Irrespective of the number of employees on site the PC must appoint a **Two Full-Time Health and Safety Representatives**, who at least has completed the necessary health and safety representative course. The H&S representatives will liaise and report to the full-time health and safety officer.

9.9 OTHER APPOINTMENTS

Not limited too but other legal appointments must be done as per the OHS Act 85 of 1993 and related regulations.

5 GENERAL RISK MANAGEMENT

5.1 HEALTH RISKS AND MEDICAL SURVEILLANCE

All workers (including those of Contractors) are required to be in possession of a medical certificate of fitness issued by a registered Occupational Medical Practitioner prior to commencing work. Medical surveillance will commence at pre-employment.

Many of the processes may be labour intensive and ergonomic risks are to be noted. All workers (including Contractors) are to be included in the medical surveillance programme.

Workers will be exposed to biological risk, noise, dust, and physical risks from extended periods of work of a repetitive nature, materials specified and the general nature of the business.

Environmental monitoring results and risk assessments are to be made available to the occupational health professionals doing the medical surveillance. The use of occupational risk exposure profiling (OREPS) and job descriptions are to be used to determine specific exposures for management.

All workers (including Contractors) are required to be in possession of a medical certificate of fitness prior to commencing work.

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

Annual medical surveillance is required (unless identified as being required more frequently e.g. Noise, Dust, Asbestos etc), as well as an exit medical.

Arrangements for keeping medical records for the required time are to be noted.

It is preferable that the PC has a medical surveillance plan.

5.2 HAZARDOUS BIOLOGICAL AGENTS

"HBA" means a hazardous biological agent which may cause an infection, allergy or toxicity or otherwise create a risk to human health, subdivided into four groups:

- (a) Group 1 HBA, an HBA that is unlikely to cause human disease;
- (b) Group 2 HBA, an HBA that may cause human disease and be a hazard to exposed persons, which is unlikely to spread to the community and for which effective prophylaxis and treatment is usually available;

- (c) Group 3 HBA, an HBA that may cause severe human disease, which presents a serious hazard to exposed persons and which may present a risk of spreading to the community, but for which effective prophylaxis and treatment is available; and
- (d) Group 4 HBA, an HBA that cause severe human disease and is a serious hazard to exposed persons and which may present a high risk of spreading to the community, but for which no effective prophylaxis and treatment is available;

Regulations for Hazardous Biological Agents, 2022

HBA reg. 5 Duties of persons who might be exposed to HBAs (please follow regulation requirements)

HBA reg. 6 Risk assessment for HBAs (please follow regulation requirements)

5.3 Noise and Dust Control and Risk

All plant from plant hire companies (suppliers) or that of the PC is to be compliant with the Noise Induced Hearing Loss Regulations. Plant identified that has not been tested and marked for noise emissions will result in having to be tested at the Contractors or PCs expense. Failure to do so within a reasonable time period will result in such plant being removed from site.

Audiometric testing of all workers is noted as required in the medical surveillance programme for all permanent workers prior to work commencing. All workers in identified noise areas will require testing if the noise levels are indicated on plant or through processes as greater than 85dB. Audiometry records are to be available in the H&S file.

Suitable SANS approved hearing protective equipment shall be issued and worn. Where several items of construction plant are in operation at or near to each other, the noise zone for the combined plant should be established and suitable hearing protective equipment used within this zone.

The PC must ensure to take note that the facility will be fully operational and take extra care and planning communicated to the Community Health Centre staff to ensure that noise and dust does not interfere with daily activities.

EMERGENCY PROCEDURES

An emergency plan and procedure that is appropriate to the risks is required prior to commencement on site. It is advised that the system should be simple and easy for any worker to follow.

The emergency plan is to ensure the inclusion of local service providers where possible. Such arrangements should be made with these persons prior to the commencement of the project.

Local emergency telephone numbers must be displayed and made part of the emergency procedure.

The general principals of emergency management are to be applied as it applies to the hierarchy of control and management. The PC must consult with the Client in preparation of the emergency as buildings will be operational.

5.3 **FIRST AIDERS AND FIRST AID EQUIPMENT**

Irrespective of the number of employees on site the PC will appoint at least **2 First Aiders** who will be trained to Level 3. First aiders shall be available and accessible on site always and be able to work as a team when responding to any emergency on the project.

Appropriately stocked first aid kits, at least to the requirements of the Annexure to the GAR , are to be available at all times to assure continual availability and access on site.

5.4 **FIRES AND EMERGENCY MANAGEMENT**

Attention to emergency planning and procedures is very important. Requirement in terms of identified risks:

- Fire;
- Public Safety;

- Falls from heights,

The emergency plan is to ensure the inclusion of local service providers where possible. Such arrangements should be made with these persons prior to the commencement of the project; the emergency plan is to include the risks of fire on site and related to any specific activities.

Fire extinguishers will be appropriate for the risk and in sufficient numbers to deal with the type of fires that could occur. All mobile plants are to have appropriate, accessible fire extinguishers. Hot work permits are required for any such activities.

5.7 INCIDENT MANAGEMENT AND COMPENSATION CLAIMS

All incidents and accidents are to be investigated. All serious incidents involving any form of disabling injury or fatality are to be reported to the Client /CHS Agent immediately. This shall be confirmed in writing following the incident.

Any person who contracts an Occupational Disease will need to be reported to the Compensation Commissioner as an occupational disease where their work is to monitor and in contact with others. Such details are provided in the Compensation for Injuries and Diseases Act (COIDA).

Failure to comply with emergency provisions will be considered a serious offence, and the operation or project may be stopped if deemed inadequate for the work at the time of assessment or site inspection.

5.8 PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING

The PC is to provide PPE to all employees free of charge.

The wearing of the identified SANS approved PPE at all times is non-negotiable.

- Hard hats;
- Protective footwear;
- Overalls that ensure worker visibility.
- Eye protection (if required)
- Hearing protection;
- Reflective jackets (no bibs);
- Respiratory protection (minimum of FFP2);
- Safety Harnesses with Big Hooks; and
- Any other necessary PPE identified from SDS's and/or risk assessments.

5.9 OCCUPATIONAL HEALTH AND SAFETY SIGNAGE

On-site H&S signage is required. Signage shall be posted up at fixed or temporary working areas, or other potential risk areas/operations. These signs shall be in accordance with the requirements of the General Safety Regulations or SANS requirements as amended. Signage is to be noted on the site drawings indicating where fixed/temporary signage is required.

- 'hard hat area' or other PPE requirements noted;
- First aid box positions (including vehicles); and
- Fire extinguishers.
- Scaffold signage.
- Assembly Area
- No Un-authorized entry.
- Hoarding.
- Access for Staff
- Safe Walkway

Signs shall be posted at areas of work on site indicating that a construction site is being entered and that persons should take note of H&S requirements. The Principal Contractor must ensure that members of the that need

to access the hospital will not be able to gain access to the construction area. It should be noted that the hospital will be fully operational, and the construction area should be properly and securely barricaded at all times.

INDUCTION OF EMPLOYEES AND VISITORS, GENERAL H&S TRAINING

A simple, formal induction program is to be prepared which is site specific. Inductions must be carried out for all workers and visitors (including Client) to the site.

DSTi training is required to ensure workers are familiar with the risks and H&S measures of the work or tasks to be done. Any person found on site without proof of induction in the H&S File will be removed from site until the proof is supplied and, and a penalty issued per non-compliance.

5.5 DECANTING

Decanting of patients and employee:

Care should be taken to ensure that construction activities is at all times being separated from employees as well as patients are reallocated specifically when Asbestos removal takes place.

No work should be conducted when employees are being decanted, all employees be removed from area before construction activities commences.

Once decanting is completed, area should be checked for safe for use and signed off by Construction Supervisor.

6 COMMUNICATION ON SITE

All H&S communication during the project between the CHS Agent and the PC will be done in writing, including the issue and responses to non-conformances and H&S audit results.

7 AUDITING

Frequency of external auditing by the CHS Agent or Client will be conducted every 30 Days to ensure that the contractors conform to the requirements of the Construction Regulations. The site will be inspected, and the documentation audited relative to the activities and H&S plan. The CHS Officer of the PC must accompany the Client, or the CHS Agent, on all audits and inspections.

The PC will ensure that all their Contractors are audited at a frequency determined by the CHS Agent. Audit frequency may be increased if Contractors are not performing adequately. Audit results will be acted upon, and non-conformances and penalties issued where deemed appropriate. The Client, Designer or CHS Agent may act or require further outcomes if non-compliances are noted, or unsafe acts are noted on site.

Internal audits are to include site conditions as well as ensuring H&S files are appropriate, and compliant. Comprehensive audit reports are to be made available, the format of the audit reports are to be acceptable by the CHS Agent.

The PC will be audited using a template as supplied in the tender document. The audit template will be adjusted from time to time relative to the activities on site. A similar process is to be used by the PC when auditing their Contractors on site. Compliance with legislative requirements and the systems provided by the PC to manage the H&S on site will be measured. Full compliance is required. Time limits for corrective actions will be set and must be adhered to.

8 SITE ACCESS POINTS AND SECURITY CONTROL

Site access - Entry to site may only be through pre-arranged security-controlled access points.

Please view C3 Scope of works (item 7. Access & Egress)

Contractor must detail how will members of public be prevented from accessing site (risk of cross contamination between persons working on site and members of public).

Provision of Visitors Book for signing in and out of site. Records of all personnel entering site and their contact details must be kept.

- The proposed hospital and the proposed staff housing confines will attract separate site entrances of which the main contractor will establish and ensure access control thereof.
- The main contractor will be required to demarcate and hoard off the work. Hoarding plans will be provided indicating proposed construction site access points. (Hoarding measured in BOQ)
- The main contractor is required to provide and secure a separate exclusive site own access, for the entire construction works. The main hospital entrance is not to be used for any construction related business. It is recommended that the access be on the western boundary of the site adjacent to the dedicated contractor's site camp. (Not a measured item)
- The site access shall be contractor's responsibility. For main contractor, selected-, domestic-, SMME subcontractors, suppliers, visitors, etc.
- The Contractor shall provide and maintain an all-weather temporary graded surface from the site access (gate) for construction area and access to construction site offices.
 - A Traffic Management Plan is required for entry to site yard and in Hospital Areas.
 - Access will only be allowed at designated public entrance for Public.

9. CARE OF WORKERS ON SITE (WELFARE)

Adequate toilets, clean, safe drinking water and decent shelter must be afforded workers at all times.

Toilets will be within reasonable distance of workers, or placed with each working team in safe manner, with reasonable privacy. Existing facilities may not be shared with existing users of the facility.

No substances containing Formaldehyde may be used in Chemical Toilets.

Ablution facilities are an essential facility that must be available for workers across a site.

Facilities are a high-risk area and increased cleaning regimes are required to be introduced.

Hand washing facilities must be provided with soap and hand drying facility.

Waste procedures to be clearly documented.

DISCIPLINE, ALCOHOL AND SUBSTANCE ABUSE

All employees (management included) are to follow instructions given in the interest of H&S. Disciplinary action is to be imposed on those who do not follow such instructions or company rules or policies.

No person can work or access site if under the influence of alcohol or other substances that could impact on their own or others safety.

7 WORKING AT HEIGHTS

A practical site-specific fall plan as per CR 10 needs to be compiled by a competent person as per unit standard 229994.

Only competent persons may be allowed to work at heights.

All employees working at height shall be in possession of working at heights certificate US 229998.

No Homemade structures or ladders will be permitted on the project.

Surroundings to be clear of rubble.

Fall protection, fall prevention, and fall rescue plans to be in place and communicated to site employees.

Ladders to be structurally sound and not broken and in accordance with GSR 13A.

Correct personal protective equipment to be used (safety harness and lanyard) to be used.

GSR (6) 6. No employer shall require or permit any person to work in an elevated position and no person shall work in an elevated position, unless such work is performed safely from a ladder or scaffolding, or from a position where such person has been made as safe as if they were working from scaffolding.

Construction regulation 10 of 2014 to be implemented when working at heights and to prevent any person from falling from heights.

Trestle tables are not to be used.

SCAFFOLDING

A contractor must appoint a competent person in writing who must ensure that all scaffolding work operation are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work as per the SANS 10085 of 2004.

A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act and SANS 10085 Scaffold must be;

- Level and balanced upon the correct footing such as base jacks, U-Jacks, and mobile wheels
- Have the correct Ledgers and bracing methods to secure the frames and Standards
- To be fully boarded with the correct edge protection on both the 0.500m and 1 meter height per working platforms.
- Working platforms to be in accordance with the Tables 4 and 5 of the SANS 10085 for weight restrictions
- Have the correct access that is fitted within the scaffold and grants access to the working platform and must be fitted with a trap door system.
- Secured with fastening methods such as Reveals and fixed ties according to table 7 of SANS 10085 Buttresses to be used when required.
- signage must be displayed to indicate if the scaffold is safe or unsafe to use.

CRANES

A contractor must, in addition to compliance with the Driven Machinery Regulations, 1988 ensure that where tower cranes are used.

CRANE Safety: Please ensure crane operators are competent and supervisor present at all times.

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

Failure to comply with the above will lead to a fine as stipulated below.

12. DEMOLITION WORK

The Contractor must provide a Demolition Method statement for approval by the Architect. Dust control and noise reduction measures must be put in place before demolition starts.

All rubble and waste material must be removed from site asap and registers thereof kept as per the waste management plan. Proof of disposal of the demolished material must also be provided and kept on record.

12.1 ASBESTOS

All asbestos work should be done in compliance with the Asbestos Abatement Regulations 2020.

The Contractor shall ensure that all asbestos work is done only by registered "Asbestos Contractor" as prescribed by the Asbestos Abatement Regulations, 2020.

All asbestos containing material removed on site will be disposed of at an accredited disposal site and disposal certificates must be obtained from the accredited disposal site and kept on file.

An AIA to be appointed in accordance with Asbestos Regulation. AIA to compile and submit Asbestos Plan of works to Department of Labour for acknowledgement.

All asbestos work may only continue after the notification for asbestos work has been submitted.

AIA will visit the site for assessment before the asbestos work commence, during and after for clearance.

On completion of asbestos removal submit the Asbestos Clearance certificate and kept it on file.

13 EXCAVATIONS

The Principal Contractor is to provide a method statement for excavations, and this will be approved by the H&S Agent and the Engineer/Architect.

The Principal Contractor must ensure that all excavations are safe to enter prior to any work commencing.

Area being worked at needs to be properly barricaded or fenced off. Barricading must be done in such a manner that it prevents people and animals from falling into open excavations.

All deep excavations deeper than 1m must be sloped or shored to make the work environment for employees safe to work in.

All excavations deeper than 2,5m must be shored, and shoring must be signed off by the Construction Manager before any work can take place in such excavation.

All excavations on site where employees are performing work, must have a ladder for safe access in and out of excavation. The ladder must be long enough to protrude 900mm above the edge of the excavation.

Excavations should preferably not be opened beyond what can be worked in daily.

DANGER TAPE OR CANDY TAPE IS NOT PERMITTED TO BE USED ON SITE AS A MEANS OF DEMARCATION!

Suitable material such a hard-plastic mesh (long durability) adequately supported being able to withstand a normal person's weight and the elements (wind, rain) must be utilized as barricading. The PC must ensure that this is priced for in the BOQ.

All open excavations will be kept clean (dewatered) of standing water.

ELECTRICAL

In addition to the requirements of the Electrical Machinery Regulations and the General Machinery Regulations any electrical distribution board used for construction work shall be fitted with suitable earth leakage protection.

Leads must be properly and firmly connected.

Plugs and sockets shall be in good and safe condition.

All electrical apparatus, other than electrical hand tools, shall have a physical "lock out" system which will prevent any operation other than that authorized by a super-visor.

A "lock out" sign shall be displayed when the apparatus is not in use.

Method statements and safe work procedures will be required for all work involving electrical apparatus.

TRAUMA PROJECT: Ensure that main power supply and gas line in service duct to be identified and method statement to be submitted to Electrical & Mechanical Engineer for approval.

8 INSPECTION AND HAND TOOLS

No handmade or damaged tools may be used on site.

The Principal Contractor needs to exercise control over all contractors on site. Hand tools may only be used for its intended purpose.

A competent person must be appointed to inspect hand tools weekly.

Inspections need to be recorded on a register and each tool identified with a unique number.

Inspection of equipment and tools.

The following items of equipment must be regularly inspected and maintained and appropriate records kept on file.

- 1.1. First Aid dressing registers
- 1.2. Fire equipment
- 1.3. Portable electrical equipment
- 1.4. Stacking and storage inspections
- 1.5. Hazardous Chemical Substances (HCS)
- 1.6. Ladders
- 1.7. Excavations
- 1.8. Construction vehicles and mobile plant.
- 1.9. Health and Safety Representatives checklists.

Not limited to just above items.

9 LADDERS AND LADDER WORK

The Principal Contractor shall appoint a competent person in writing to inspect all ladders weekly and record such findings in a register.

Ladders are to extend one meter above a landing and must be secured at the top and have a secure, non-slip base.

All ladders that do not comply with Health and Safety standards are to be removed from the site immediately. Electrical contractors to use Fiberglass ladder for non-conducting purposes.

10 SUBCONTRACTORS

The PC is to ensure that every sub-contractor will comply with the health and safety specifications. All subcontractors' health and safety file must be approved prior to any work commencing.

Contractor and SMME's to be Audited by Principal contractor on monthly bases.

11 DELIVERY OF MATERIALS

The PC must reasonably manage all deliveries of material to site. Stacking and storage of materials to be properly coordinated.

The PC is to consider the neighbors and public in all its activities related to this construction work.

Hospital services namely Gas not to be affected by construction activities.

HOARDING

Adequate hoarding to be done to reduce dust and noise and prevent public entrance to site.

Security features must accompany the hoarding to maintain a secure environment for the existing occupants.

No Unauthorized person signage should be installed and various entrances.

Hoarding Plans have been available: Please view C3 Scope of works (item 8.) Hoarding Plans

Internal hoarding – 24m in total length

External hoarding – 592m in total length

Maintenance of Hoarding to be done at regular intervals.

12 NON-CONFORMANCES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients OHS Spec or PCs H&S Plan; the PC shall have no claim for extension of time or any other compensation.

The following constitute examples of the types of non-conformances that will attract penalties:

Minor: Penalty: R50/count	Medium: Penalty: R500/count and a non-conformance	Severe Penalty: R5000/count, a non- conformance and/or activity stoppage
Non-use of PPE supplied	Toilets not supplied or regularly serviced; lack of drinking water	Contractors working without Health and Safety Plan approval
Non completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate H&S method statements	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Fall protection harness not tied off / not worn
	No certificates of fitness for workers as required	Any breach of legal requirements

13 HEALTH AND SAFETY FILE

The documentation submitted and approved following the awarding of the contract will be used to form the H&S file. The H&S file is required to be laid out in a logical manner, and documentation filed within the file is to be easily accessible.

The following completed information shall be included (but not be limited to) as part of the index:

- The Site-Specific Health and Safety Specification. (from Client)
- The H&S Plan and the approval by Client;
- Appointment by Client;
- Mandatory agreement with Client;
- Construction work permit and confirmation letter from DOL.
- H&S specifications issued;
- Record of Competencies (CVs) and appointments;
- Training Records;
- Method statements;
- Risk assessments;
- Safe work procedures;
- Emergency and injury management;
- Safety data sheets
- Medical surveillance records;
- Registers; and
- Employee records (who is on site)

ANNEXURE A
CONTRACTORS MONTHLY HEALTH AND SAFETY REPORT
(To be submitted by the end of the first week of each month and be available with each audit)

CONTRACT NUMBER:		PROJECT NAME:	CONTRACT DETAILS:
1	GENERAL ACTIVITIES FOR THE MONTH (detail each area of work)		
2	NUMBER OF WORKERS (permanent and local, contractors)		
3	TRAINING DONE (supplier, no of people, type)		
4	INCIDENTS / ACCIDENT (list number and details, attach reports)		
6	NON-CONFORMANCES (closed out or active)		
7	CONTRACTORS (list, approval status)		
8	AUDITS COMPLETED (internal and external)		
9	CRITICAL ISSUES		
10	GENERAL		

Health and Safety Officer: _____ Signature: _____ Date: _____

Construction Manager: _____ Signature: _____ Date: _____

ANNEXURE B – REQUIREMENTS FOR THE SAFETY PLAN ASSESSMENT

The Contractor must note that the information below is pertinent to the compilation of their safety plan response to this site-specific safety specification and it would be preferred if the Safety Plan is written in the order of the assessment documented below.

No	Item	Notes
1	Project Directory	Please state details of Project Client, Project Manager / Principal Agent, Safety Agent, Consulting Engineer, etc. (Name, address, contact details).
2	Contractors Directory	Please indicate if you will be using Contractors on this project, if yes, include their details, trade, and FEM details.
3	Other Parties Directory	Please indicate contact details for any services applicable (electricity, water, etc.) as well as Department of Labour and Emergency Services.
4	Project Safety Statement	The Project Safety Statement must be included in the Safety Plan.
5	Health and Safety standards for the project (OHS Act, construction regulations, basic conditions of employment, etc.)	Health and Safety standards must be included in the Safety Plan.
6	Project Particulars	Scope of works must be included in the Safety Plan. This is critical.
7	Existing environment – Structures and Surroundings, Services (Electrical, Water, Sewerage, etc.), Traffic Arrangements, Parking, Access to Site, Storage of Plant and Materials	Please include these items in the plan. The items must be Site Specific, the location of services and services that will be affected must be mentioned.
8	Management Structure for safety on the Project	A structured organogram with names of the responsible people must be included.
9	Appointed Persons, Supervision	The required appointments must be identified. A list of the appointed persons must be included in the Safety Plan.
10	Security Procedures	Please indicate if a security company will be appointed and include the contact information in the Safety Plan.
11	Registers list and inspection frequency	A list of the Inspection Registers that will be on file must be included in the Safety Plan.
12	Design Co-ordination	Please indicate your procedure for implementation of design changes by designer on the project, and the procedures for liaison and implementation of temporary works design on the project.
13	Contractor Co-ordination	Mention must be made of how Contractors will be coordinated on site to ensure that they work together and not adversely affected health and safety.

14	Housekeeping, stacking and storage	Housekeeping policies and procedures must be included in the Safety Plan.
15	Waste Disposal Arrangements	Waste disposal arrangements procedures must be included in the Safety Plan.
16	Noise and dust control	Please indicate if any noisy operations (more than 85 decibels) will be carried out and what measures will be used to reduce noise exposure to workforce.
17	Training Requirements	Training requirements must be identified and recorded.
18	Plant and Equipment	A list of plant and equipment to be used on site must be included in the Safety Plan.
19	Safety Monitoring Arrangements	The name, contact details and SACPCMP registration status of the Safety Officer must be included in the Safety Plan. State how often the Safety officer will be on site (note safety specification requirement in section 1.7).
20	Information for Contractors	State how information will be given to Contractors on site.
21	Consultation/communication arrangements with Employees	State how information will be given to employees e.g., notice board.
22	Selection of Contractors Procedures	Principal contractor must state what health and safety procedures they will use to assess the competence and resources of their contractors on site.
23	Activities with risk to Health and Safety (Risk Assessment)	A Baseline Risk Assessment must be included in the Safety Plan; it must address the Risks identified in the Safety Specification as well as the risk of any other hazards that the Principal Contractor is aware of that are relevant to the site.
24	Hazardous Substances	Must be listed in the Safety Plan and addressed in the Risk Assessment.
25	First Aid and Medical Procedures	Please indicate name of first aider, position of first aid box, location of nearest medical facility and emergency numbers.
26	Fire and Emergency Procedures	List of emergency telephone numbers must be drawn up and included in the Safety Plan. The position of Fire Extinguishers, Assembly Point location, fire drill frequencies, numbers of fire marshals, etc.
27	Accident and Incident Reporting and investigation	State the Accident and Incident Reporting and investigation procedures of your company.
28	Welfare and Site Facilities	Elaborate on toilets and eating areas, water provision, how will workers be protected during wet weather conditions etc.
29	Site Rules	The Site Rules must be included in the Safety Plan.
30	Personal Protective Equipment	The necessity must be identified by Risk Assessments.
31	Health & Safety File arrangements	Please indicate arrangements for the return of the Health and Safety File to the safety agent at the end of the project.

No	Item	Notes
32	Method Statements/Safe System of Works	A list of Method Statements/Safe System of Works must be included in Safety Plan for all High-risk activities
33	Permits and wayleaves	List of activities that Principal Contractor anticipates will require permits and wayleaves (including those stated in the safety specification) to be included.
34	Fall Prevention and Protection Plan and Fall Rescue Plan	A copy of the Fall Prevention and Protection Plan, fall rescue plan and fall risk assessment must be included in the Safety Plan.
35	Demolition method statement	A copy of the Demolition Method Statement must be included in the Safety Plan.
36	Confined spaces	The Principal Contractors' procedures for managing access, egress and work in confined spaces must be specified in the Safety Plan. Includes permit procedures, air monitoring, PPE, etc.
37	Safety Representatives and Safety Committees	When a project has more than 20 employees a designated employee must be chosen by the labourers to represent them. A safety committee must be established if 2 or more safety representatives are appointed. Please note Safety Specification requirements regarding this section (section 2.12).
38	Have the significant hazards from the safety specification been addressed?	See section 1.9 of the Specifications and ensure practical measures have been detailed in the safety plan.
39	Safety File - Safety Policies in File and Signed by 16(1) CEO.	Safety Policies must be signed and explained to employees.
40	Safety File - A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.	A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.
41	Safety File - Signed copy of the 37.2 Mandatary Agreement	A 37.2 Mandatary Agreement needs to be signed between the Client and the Principal Contractor.
42	Safety File - Appointment letter from Client (as well as 5.1.K)	The Client must appoint the Principal Contractor in writing.
43	Safety File – Notification / Permit	A copy of the Annexure 2 Notification (and proof of submission) to Department of Labour must be available. This can be in the form of a Department stamp, email, or copy of Construction Work Permit.

ANNEXURE C – LEGAL APPOINTMENTS

The contractor shall make the following appointments, as required:

Chief Executive Officer (OSH Act 16(1))
Contract Director/Manager (OSH Act 16(2))
Construction Manager (CR 8(1))
Construction Supervisor (CR 8(7))
Assistant Construction Supervisor (CR 8(8))
Construction Safety Officer (CR 8(5))
Safety Representative (where > 20 employees on site)
Temporary work Designer (CR 12(1))
Temporary work Supervisor (CR12(2))
Construction risk assessor (CR 9(1))
Excavation Supervisor (CR13(1)(a))
Demolition Supervisor (CR14(1))
Scaffold Supervisor (CR16(1))
Suspended Platform Supervisor (CR17(1))
Material Hoist Inspector (CR19(8)(a))
Material Hoist Operator (CR19(6))
Bulk Mixing Plant Supervisor (CR20(1))
Bulk Mixing Plant Operator (CR20(2))
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
Controller of Temporary Electrical Installations (CR24(c))
Stacking Supervisor (CR28(a))
Fire Extinguishing Equipment Inspector (CR29(h))
Fall Protection Plan Developer (CR 10(1)(a))
Incident Investigator (OSH Act 9(2))

**ANNEXURE D – SAFETY SPECIFICATION AND BASELINE RISK ASSESSMENT
ISSUE REGISTER**

Date of Original Safety Specification Compilation	Compiled By	Issue Date
25 th August 2023	J Bhana	10 th October 2023

Revision Summary	Revised By	Revision Date
Scaffolding/ Access to Site/ Biohazard/	J Bhana	26 th February 2024
Additional Changes	J Bhana & N Mcopele	2 nd March 2024

Acknowledgement:

I, _____ representing.

_____(Contractor), have satisfied myself with the content of this Health and Safety Specification and shall ensure that our employees and contractors on site comply with the requirements of this document, our safety documentation and health and safety legislation.

Signature of Contractor

Date

Comments:

C3.15 BASELINE RISK ASSESSMENT



**CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS**

low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

The base line risk assessment is to highlight hazards emanating from project risks identified. During Stage 2 of the project. This is a working document and does not have a mitigate risk rating and controls as this will be finalized in Stage 3 of the project. This document also includes our view of early works which included tests, analysis and surveys but not limited too that should be done before tender phase.

					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category

Site Establishment

CR 10	Site Establishment	Use of Plant and Machinery Graders / TLB,s / Excavators / DumpTrucks.	Plant and Machinery may injure persons on site	All operators of Plant and Machinery to be trained and have valid operator's certificates	1	3	3	9
		Container/ Pre Fab Placement	Falling over or incorrect load	Load Test Certificates Method Statement Correct Site Lay Out(Approved By Clients Agent)	1	3	3	9
		Fencing of site/ Access control	Working off ladders or using incorrect tools for the job	All ladders and tools for the job to be fit for purpose All work to be under the supervision of a trained and experienced person.Access for authorised persons only	1	2	3	6
		Existing Services	Contact with underground and overhead services	Underground & Overhead Services: Electrical/ water/ telephone / sewer lines to be identified	2	2	3	12
		Security	Theft	Contractors and professionals doing construction activities should have own security on site. Contractors to ensure that materials and items of value are stored correctly.	1	2	3	6
		RTA	SANRAL / Municipality	Traffic Accommodation issues	Additional access for construction and permanent entrances	2	2	3



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
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Reference	Area	Hazard	Risks identified at present	Control measures	Baseline risk			
					Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
GSR 13A		Geotechnical Survey	Construction Activities in the vicinity of public and Hospital staff	Survey to be done by a registered Geotechnical Professional	1	1	1	1
		Bird Droppings	(Histoplasmosis is an infection caused by breathing in spores of a fungus often found in bird and bat droppings. People usually get it from breathing in these spores when they become airborne during demolition or cleanup projects.)	Before Construction may commence it is recommended that the affected area be fumigated (Existing Duct where the Birds have messed and polluted the area).	2	2	3	12

General Hospital Safety

CR 10		Access	Injury to person's / employees /personnel/ consultants/patients	Separate general public from early works / construction site.Extra care to be taken to ensure the public and personnel do not gain access to the construction activities as well as early works. Contractors Main Gate: proper control as not to block Bus Stop / Taxi Rank.	2	2	3	12
		Exposure noise	Interruption to existing activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity to consulting rooms A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
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Risk Rating multiplier: Low = 1; Medium = 2; High = 3

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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
	General	Exposure to dust	Interruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient areas. Extra special care and planning and communication between the contractor and hospital staff where working in close vicinity to patient areas. A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8
		Waste Management	Daily waste from contractor / professionals / specialists cross contaminated with Hospital waste.	Normal waste from all the appointed contractor / professionals / specialists should have separate controlled waste areas. To ensure no cross contamination with the existing Hospital waste management systems. Waste to be managed as per waste management plan. Disposal to be done at an approved landfill site and disposal certificates be kept on file.	2	2	2	8
GSR 13A		Contact with Biohazardous Waste	contractor / professionals / specialists coming into contact with medical biohazardous waste from the hospital	Training to be done to all site staff on proper management of waste. Anyone coming into contact with biological waste to be referred to a health facility for further management.	2	2	2	8
		Barricading / Demarcating / Hoarding	Interaction with existing hospital activities / personell and general public	Control should be taken to ensure that construction activities is at all times being seperated from day to day hospital activities / staff / patients / general public as well as hospital storage facilities. A solid hoarding structure to be above ceiling height to be considered. Clear demacation of construction areas from the hospital. Safety signage to be placed at all the construction areas.	3	3	3	27



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

The base line risk assessment is to highlight hazards emanating from project risks identified. During Stage 2 of the project. This is a working document and does not have a mitigate risk rating and controls as this will be finalized in Stage 3 of the project. This document also includes our view of early works which included tests, analysis and surveys but not limited too that should be done before tender phase.

Reference	Area	Hazard	Risks identified at present	Control measures	Baseline risk			
					Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
GSR 13A		Security	Theft	Contractors and professionals doing construction activities should have own security on site. Contractors to ensure that materials and items of value are stored correctly as this can cause a security risk for the existing hospital. (Security at every gate and access controlled(all should be manned)	1	1	2	2
GSR 13A		Epidemic and Pandemic Control	Contact with airbourne and infectious diseases.	Control should be taken to ensure that construction activities is at all times being seperated from day to day hospital activities / staff / patients / general public. Employees to be trained on infection prevention and control. Those who came into contact with infections be refered to the health facility for further management.	1	1	3	3
GSR 13A		Medicine Access Control	Theft and substance abuse	Control should be taken to ensure that construction activities is at all times being seperated from day to day hospital activities and deliveries and medical storage facilities.	2	3	3	18
GSR 13A		Decanting of patients and employees	Contact with Asbestos materials and construction works	Care should be taken to ensure that construction activities is at all times being seperated from employees as well as patients are reallocated specifically when Asbestos removal takes place. Asbestos work to be done by an Accredited Asbestos Contractor. Contractor to adhere to the requirements of the Asbestos Abatement Regulations 2020.	1	3	3	9
GSR 13A		Infection Prevention	Jeopodising the sterility of the patients environment.	Control should be taken to ensure that construction activities is at all times being seperated from day to day hospital activities / staff / patients.	2	3	3	18



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
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low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
GSR 13A		Fratenization	Harasmment of persons on hospital property.	No communication with staff or suppliers, either by means of seperation by barricading and controlled access.	1	2	3	6

SCOPE AREA TRAUMA UNIT

CR 10		Consultant/early works safety	Injury to person's / employees /personnel/ consultants/patients	Consultants should not walk on their own in the facility and should always be accompanied by Hospital staff. Separate general public from early works / construction site.Extra care to be taken to ensure the public and personnel do not gain access to the construction activities as well as early works	1	1	2	2
		Decanting of patients and employees	Contact with Asbestos materials and construction works	Care should be taken to ensure that construction activities is at all times being seperated from employees as well as patients are reallocated specifically when Asbestos removal takes place.	1	1	3	3
		Exposure noise	Interruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity to ICU and operating theatres. A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

The base line risk assessment is to highlight hazards emanating from project risks identified. During Stage 2 of the project. This is a working document and does not have a mitigate risk rating and controls as this will be finalized in Stage 3 of the project. This document also includes our view of early works which included tests, analysis and surveys but not limited too that should be done before tender phase.

					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Exposure to dust	Interruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity to Trauma Unit A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8
		Barricading / Demarcating / Hoarding	Interaction with existing Hospital activities / personell and general public	Control should be taken to ensure that construction activities is at all times being seperated from day to day Hospital activities / staff / patients / general public as well as Hospital storage facilities. To bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity to Trauma Unit. A solid hoarding structure to be above ceiling height to be considered.	3	3	3	27
GSR 13A		Fratenization	Harrasment of persons on Hospital property.	Control should by means barricasing and controlled access- be taken to ensure that consultants / professionals / specialists / contractors are seperated from staff / patients / general public No communication with staff or suppliers, either by means of seperation by barricading and controlled access.	1	2	3	6

SCOPE AREA 72 HOUR



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

The base line risk assessment is to highlight hazards emanating from project risks identified. During Stage 2 of the project. This is a working document and does not have a mitigate risk rating and controls as this will be finalized in Stage 3 of the project. This document also includes our view of early works which included tests, analysis and surveys but not limited too that should be done before tender phase.

					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Contact with Existing Employees	Theft / injury / fraternization	Separate general public from construction site.Extra care to be taken to ensure the patients / public and personnel do not gain access to the construction activities.	1	1	3	3
		Contact with Existing Patients	Theft / injury / fraternization	Separate general public from construction site.Extra care to be taken to ensure the patients / public and personnel do not gain access to the construction activities .	1	1	3	3
		Access to Medication	Theft and substance abuse	Control should be taken to ensure that construction activities is at all times being seperated from day to day Hospital activities and deliveries and medical storage facilities.	2	3	3	18
		Decanting of patients and employees	Contact with Asbestos materials and construction works	Care should be taken to ensure that construction activities is at all times being seperated from employees as well as patients are reallocated.	1	1	3	3
		Exposure noise	Interruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity. A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
1	4	12
2	6	18
3	8	27

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The base line risk assessment is to highlight hazards emanating from project risks identified. During Stage 2 of the project. This is a working document and does not have a mitigate risk rating and controls as this will be finalized in Stage 3 of the project. This document also includes our view of early works which included tests, analysis and surveys but not limited too that should be done before tender phase.

					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Exposure to dust	Interruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospitalstaff where working in close vicinity to ICU and operating theatres. A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8
		Noise/dust	Falling objects	Use of toe boards, proper decking, catch nets	3	3	3	27
		Barricading / Demarcating / Hoarding	Interaction with existing Hospital activities / personell and general public	Control should be taken to ensure that construction activities is at all times being seperated from day to day Hospital activities / staff / patients / general public as well as Hospital storage facilities. To bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospitalstaff where working in close vicinity to ICU and operating theatres. A solid hoarding structure to be above ceiling height to be considered.	3	3	3	27
GSR 13A		Fratenization	Harrasment of persons on Hospital property.	No communication with staff or suppliers, either by means of seperation by barricading and controlled access.	1	2	3	6

SCOPE AREA ROOFS and ASBESTOS SHEETING



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Asbestos Removal	Potential to pollute the environment and pose a health risk to human health	All waste identified by a registered AIA who will submit a Asbestos Plan to Department of Labour (obtaining notification approval to remove)and removed by a competent registered contractor and disposed of to a certificated asbestos site.	1	3	3	9
		Site Establishment & Storage of Construction Materials	Injury / Property damage / Theft / Security Issues	Proper seperated demarcated areas to be allocated to the contractor. Materials to be stored in demacated areas.	3	3	3	27
		Plant and Equipment	Injury / Property damage / Theft / Security Issues	Proper seperated demarcated areas to be allocated to the contractor. Plant and equipment to be stored in demacated areas.	3	3	3	27



CONSTRUCTION BASELINE RISK ASSESSMENT
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72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Mobile Crane Erection and Dismantling and Use	Collapse of structure Overturning of structure Falling materials	<ul style="list-style-type: none"> • Ensure emergency procedures are in place and all operatives are aware of the details • Only use trained and competent operators for the erection and dismantling and use of cranes • Ensure crane driver is trained and holds certification as proof. Must have valid medical certificate of fitness. • Ensure there is safe means of access available at all times • Ensure the mobile crane driver has 360° vision if not ensure a fully trained banksman is used • Banksman to wear reflector vest to identify himself to the crane driver • Ensure all personnel wear suitable and sufficient personal protective equipment • Consider creating exclusion areas 	3	3	3	27
		Exposure to dust	Intereruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospitalstaff where working in close vicinity to Taruam Area. A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
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low	med	high
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Reference	Area	Hazard	Risks identified at present	Control measures	Baseline risk			
					Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Exposure noise	Interruption to existing Hospital activities	Control should be taken to ensure to bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity to Taruam Area. A solid hoarding structure to be above ceiling height to be considered.	2	2	2	8
		Waste Management	Daily waste from contractor / professionals / specialists cross contaminated with Hospital waste.	Normal waste from all the appointed contractor / professionals / specialists should have separate controlled waste areas. TO ensure no cross contamination with the existing Hospital waste management systems	1	1	1	1
		Access	Injury to person's / employees /personnel/ consultants/patients	Separate general public from early works / construction site.Extra care to be taken to ensure the public and personnel do not gain access to the construction activities as well as early works	1	1	2	2
		Barricading / Demarcating / Hoarding	Interaction with existing Hospital activities / personell and general public	Control should be taken to ensure that construction activities is at all times being seperated from day to day Hospital activities / staff / patients / general public as well as Hospital storage facilities. To bear in mind exposure to general patient wards. Extra special care and planning and communication between the contractor and Hospital staff where working in close vicinity to Trauma area. A solid hoarding structure to be above ceiling height to be considered.	3	3	3	27



CONSTRUCTION BASELINE RISK ASSESSMENT
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low	med	high
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2	6	18
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Risk Rating multiplier: Low = 1; Medium = 2; High = 3

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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Working and Heights	Fall from heights / tools and equipment falling / struck by	Ladders to be used to be safe and inspected on regular basis. Electrical Contractors to use Non Conductive ladders Scaffold to be adhere to SANS Codes. Crane to adhere to machine Regualtions	3	3	3	27

ENVIRONMENTAL

	Waste management	Serious injuries, smoke inhalation, damage to property, ground or water pollution, allergic reaction when in contact with hazardous waste,	Staff responsible for cleaning are to ensure that waste is disposed of in the correct manner at all times, and that all wheelie bins (dustbins) are fitted with liner bags. (Wheelie bin lids to be sanitized daily). Green Wheelie Bins - Domestic Waste Only RED Wheelie Bin - Contaminated PPE and materials Red Wheelie Bins - Hazardous Waste and materials All Wheelie Bins will be properly labelled to indicate the type of waste it is intended for. Full Liner bags are to be removed from the dustbins, and disposed of in the correct manner. Waste Disposal Certificates shall be obtained where required, and records kept on file. Waste Skips shall be made available on site. Waste to be disposed off as per waste management plan.	1	3	3	9
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CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
72 HOUR OBSERVATION AREA, CASUALTY & OPD, ARCHIVING AND ROOF REPAIRS

low	med	high
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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Hyperthermia - Heat	Heat exhaustion. Heat stroke. Fatalities. Unconscious. Poor work performance	Health and Hygiene Survey, Risk Assessment, Safe Operating Procedure., Awareness to all employees, Ensure there is enough cold water available for all employees. Provide shade for employees against sun	1	3	3	9
		Hypothermia - Cold	Frost bite. Ill health. Injuries. Fatalities. Unconscious. Poor work performance. Veld fires	Health and Hygiene Survey, Risk Assessment, Safe Operating Procedure., Awareness to all employees, Ensure that employees are wearing the correct PPE. Provide protection to employees against extreme cold.	1	3	3	9
		Office activities and areas,	Trip and fall. Electrocution. Fires due to faulty electrical wires - property damage. Fatalities due to faulty electrical wires. Injuries to body. Poor work performance due to injuries / pain / unsafe furniture. Head injuries due to falling objects from cupboards / heights	Monthly Electrical inspections by competent person. Good housekeeping. No unsafe furniture to be used. Communicate Emergency procedures. Implement good ergonomic suggestions from Surveyors, e.g.. Material handling, bending, sitting, working with computer, etc.. No unsafe stacking on cupboards allowed. Proper training on risk assessment and Safe Operating Procedure. Do not work long hours without taking regular breaks.	1	1	2	2
CONFINED SPACES								



CONSTRUCTION BASELINE RISK ASSESSMENT
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO
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Risk Rating multiplier: Low = 1; Medium = 2; High = 3

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					Baseline risk			
Reference	Area	Hazard	Risks identified at present	Control measures	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category
		Confined space entry	Asphyxiation, explosion, inadequate air supply, unconsciousness, fatal injuries	<p>Only trained and competent employees shall be allowed to work inside a confined space. RA and SOP shall be conducted with all personnel involved.</p> <p>Permit to enter confined space shall be completed by the supervisor and Safety officer once all safety precautionary measures have been implemented prior to entering the confined space.</p> <p>Air monitoring to be conducted before Confined Space entry and readings recorded on the Permit To Work.</p> <p>Competent person (standby) assigned to remain immediately outside of the confined space.</p> <p>Emergency Response nrs shall be readily available on site, and EMS dispatched when required.</p>	3	2	3	18
DEMOLITIONS								
		Demolition	Fatal injuries due to uncontrolled collapse, dust inhalation, serious injuries	<p>Constant supervision, competent operator, demolish according engineer instructions. PPE.</p> <p>Job Safety Analysis shall be conducted for all demolition work.</p> <p>Full time supervision by responsible supervisors.</p>	3	2	3	18

C3.16 AREAS FOR SITE ESTABLISHMENT AND HOARDINGS

PART C4 SITE INFORMATION

C4.1 SITE INFORMATION

Bid Description:	UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA BAY METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING
Project Number:	SCMU3-23/24-0734-HO

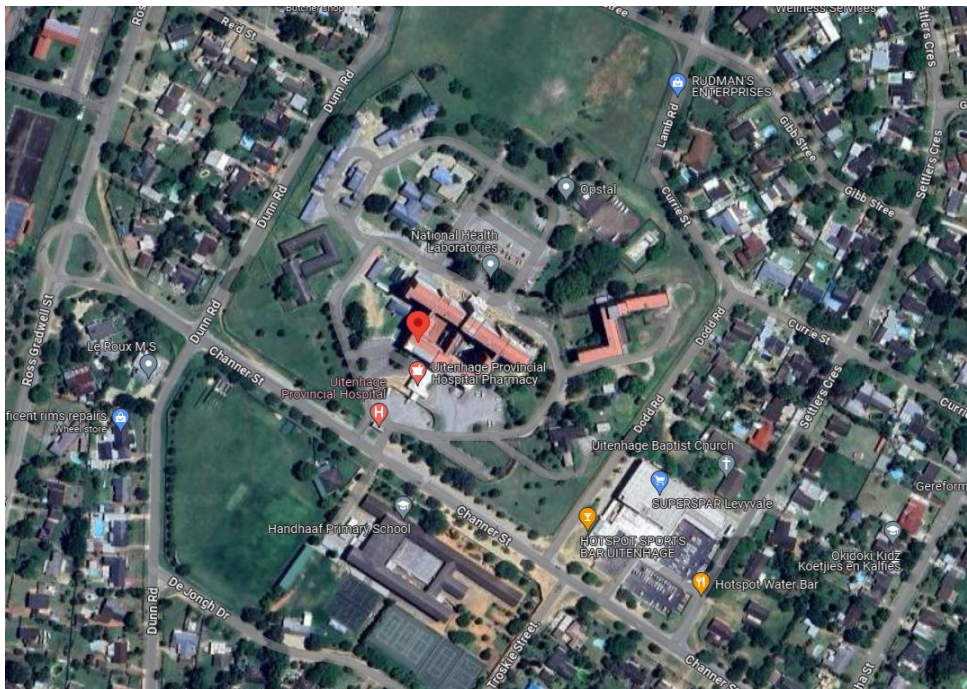
GENERAL

Prospective bidders to familiarize themselves with the locality, access, any other “restrictions”. (Refer to Scope of Works C3)

Uitenhage Provincial Hospital

Address : 36 Channer Street, Levvyvale, Kariega, 6229

Coordinate : 33°44'29.98" S; 25°24'23.95" E



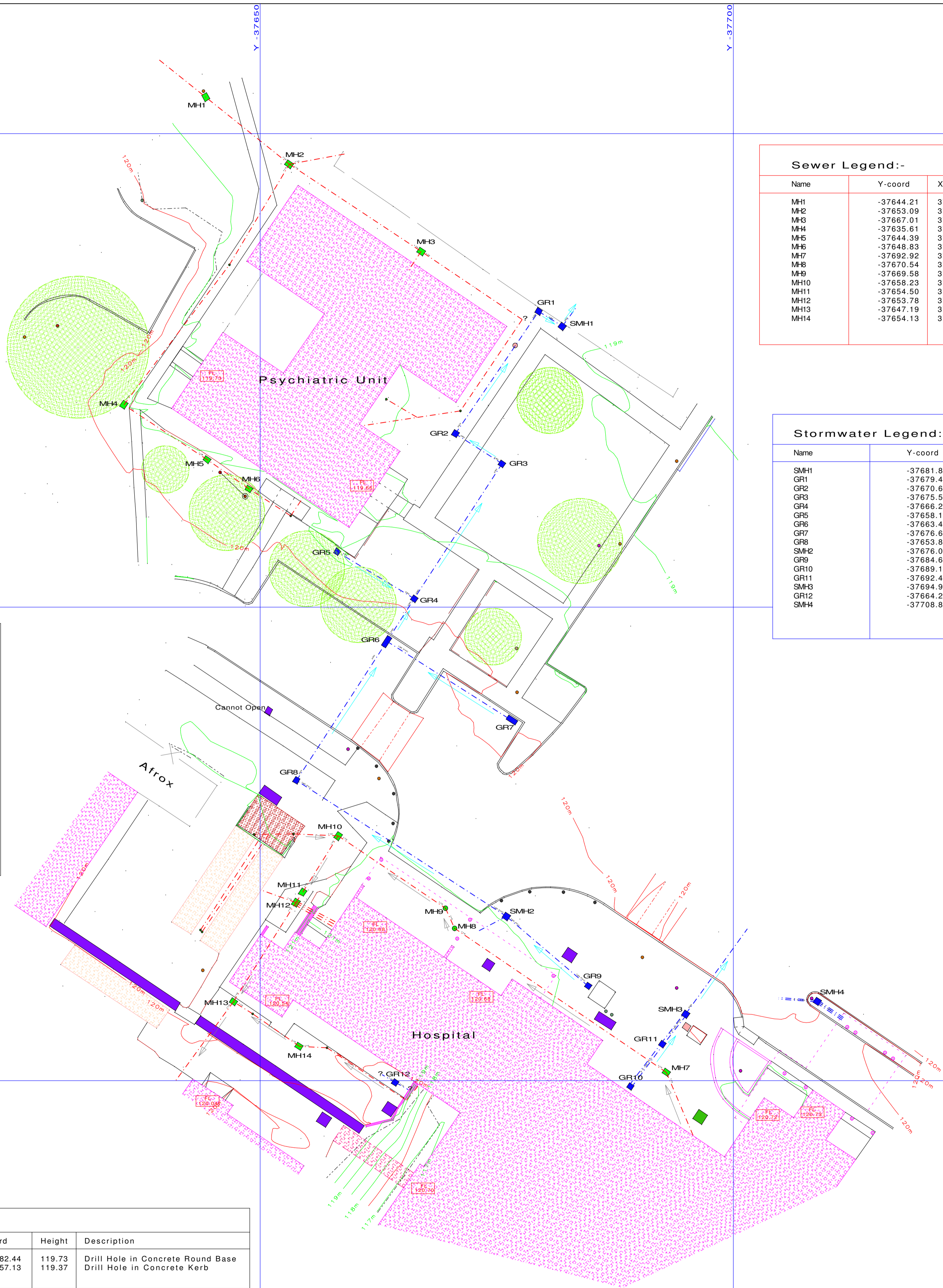
SITE INFORMATION REPORTS INCLUDED IN THE BID DOCUMENT:

- Geotechnical report
- Site Survey/Topography plan
- Existing services layout
- Engineers design report: Basement waterproofing and remedial repairs

TIN
SCALE 1:250

- LEGEND:
- = STORM WATER
 - = SEWER MANHOLE
 - = TELKOM/NEOTEL
 - = DATA/OPTIC FIBRE MANHOLE
 - = VALVE MARKER
 - = WATER VALVE
 - = FIRE HYDRANT
 - = FIRE HYDRANT MARKER
 - = WATER METER
 - = LAMP POLE
 - = ELECTRICAL
 - = ELECTRICAL MANHOLE
 - = SPOT LIGHT
 - = CCTV
 - = GAS/OTHER MANHOLE
 - = ROAD/INFO SIGN
 - = AIR VENT

Benchmarks:-				
Name	Y-coord	X-coord	Height	Description
BM1	-37609.46	3734982.44	119.73	Drill Hole in Concrete Round Base
BM2	-37739.12	3735057.13	119.37	Drill Hole in Concrete Kerb



Sewer Legend:-

Name	Y-coord	X-coord	CL	IL	BD(TOP)	Pipe dia	Notes
MH1	-37644.21	3734946.16	119.26	117.55		110	
MH2	-37653.09	3734953.23	119.32	117.79		110	
MH3	-37667.01	3734962.46	119.49	118.80		110	
MH4	-37635.61	3734978.66	119.54	118.50		110	
MH5	-37644.39	3734984.42	119.56	118.50		110	blocked
MH6	-37648.83	3734987.52	119.56	118.86		110	
MH7	-37692.92	3735049.12	120.28	119.48		110	
MH8	-37670.54	3735033.92	120.58	119.05		110	
MH9	-37669.58	3735031.80	120.55	118.97		110	
MH10	-37658.23	3735024.15	120.34	118.79		110	
MH11	-37654.50	3735030.11	120.32	118.75		110	
MH12	-37653.78	3735031.20	120.30	118.66	119.95	110	
MH13	-37647.19	3735041.67	120.24	118.62		110	
MH14	-37654.13	3735046.37	120.11	119.07		110	

Stormwater Legend:-

Name	Y-coord	X-coord	CL	IL	TOP	BD(IL)	Pipe dia	Notes
SMH1	-37681.89	3734970.34	119.13	117.93			480/280	
GR1	-37679.43	3734968.78	119.07		118.35		280	
GR2	-37670.62	3734981.69	119.30		118.50		280	
GR3	-37675.55	3734984.86	119.25		118.61		280	
GR4	-37666.27	3734999.09	119.60		119.00		280	
GR5	-37658.14	3734994.16	119.43					
GR6	-37663.41	3735003.62	120.04		118.97		280/185 PVC	
GR7	-37676.60	3735011.94	119.80					cannot open
GR8	-37653.85	3735018.30	120.39		119.08		280/185 PVC	
SMH2	-37676.02	3735032.66	120.48	119.43		119.67	185 PVC	
GR9	-37684.65	3735040.01	120.27		119.95		185 PVC	
GR10	-37689.12	3735050.62	120.19		119.94		2 x 185 PVC	
GR11	-37692.49	3735046.14	120.19		119.83		2 x 185 PVC	
SMH3	-37694.95	3735043.00	120.12	119.55		119.63	280/2 x 185 PVC	
GR12	-37664.27	3735050.19	119.92	119.26				
SMH4	-37708.87	3735041.62	120.06	119.08		119.12	3 x 150/2 x 150	

NOTES:
 1. Heights are based on Town Survey Mark = RM175 = 114.282m.
 2. Co-ordinate system = WGS84/LO25.
 3. Tree canopies are approximate.

SCALE: 1:250

DATE OF SURVEY: AUGUST 2023

CLIENT: LUKHOZI CONSULTING ENGINEERS

JOB DESCRIPTION: TOPOGRAPHICAL PLAN

PROPERTY: ERF 31 UITENHAGE PROVINCIAL HOSPITAL

DRAWING NO: UPHTP-1

IBHAYI GEOMATICS
 Topographical & Engineering Surveyors
 81 Justin Road, Broadwood
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Province of the
EASTERN CAPE
HEALTH

EASTERN CAPE DEPARTMENT OF HEALTH

UPGRADE OF UITENHAGE PROVINCIAL HOSPITAL

STRUCTURAL DESIGN REPORT

REPORT No. 1746-06

28 FEBRUARY 2024

REVISION 2

PREPARED FOR:

Eastern Cape Department of Health
GQEBERHA (PORT ELIZABETH)
6000

Contact Person: Mr Johan Cronje
Tel: 041 506 2631

PREPARED BY:

Lukhozi Consulting Engineers
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East LONDON
5201

Contact Person: Mr Louis Coetzer
Tel: 043 7211 321

LUKHOZI





**EASTERN CAPE DEPARTMENT OF HEALTH
UPGRADE OF UITENHAGE PROVINCIAL HOSPITAL
STRUCTURAL DESIGN REPORT
REPORT NO. 1746-06
28 FEBRUARY 2024
REVISION 2**

TABLE OF CONTENTS

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EASTERN CAPE DEPARTMENT OF HEALTH
UPGRADE OF UITENHAGE PROVINCIAL HOSPITAL
STRUCTURAL DESIGN REPORT
REPORT NO. 1746-06
28 FEBRUARY 2024
REVISION 2

1. INTRODUCTION AND BACKGROUND

Lukhozi Consulting Engineers was appointed by the Eastern Cape Department of Health to provide consulting engineering services for the civil and structural upgrades of the Uitenhage Provincial Hospital.

This report outlines the proposed structural changes to the hospital.

2. PURPOSE OF REPORT

As instructed by the client and in line with the architect's drawings, changes are envisaged to the hospital.

The purpose of this report is to provide a framework for the structural designs of the hospital.

3. SITE DESCRIPTION

The site is located in Levyvale, Kariega, Eastern Cape. The coordinates for the centre of the site are Latitude 33.768798°S Longitude 25.38803°E.

The site can be accessed from Channer Street which is located 4.1km from the R75 of Graaf Reinet Road.

4. Existing Structure Description

The hospital comprises several structures but for the purpose of this report only the sections where work will be carried out, will be covered. A separate report, titled "Structural Design Report – Water Ingress", addresses the waterproofing issues encountered at the pharmaceutical stores.

4.1. 72 Hour Assessment

The existing 72 Hour Assessment building was constructed some 50 years ago. It is a single storey structure with asbestos cement roof sheeting on timber roof trusses. The structure comprises a concrete raft with face brick external walls. Stormwater management is by means of channels which discharge into an underground system.

There are several cracks in this building indicating movement of the founding material. Although unsightly, the cracks do not have a significant impact on the building's operations.

4.2. Trauma Unit

The existing trauma unit is located at the ambulance entrance to the hospital. The ground floor of the 7 storey building houses most of this unit, but the entrance itself is a single story structure with a steel roof, which was added later on.

4.3. Archive Extension

The existing archives which are located on the 2nd floor of the 7 storey building, form an integral part of the main structure. This structure is a concrete frame structure with brick infill with a face brick external wall.

4.4. Roofs over the 7th floor

The hospital building is constructed using a concrete frame structure of varying heights and brick infill. The roof is made of galvanized IBR roof sheeting on timber trusses. The design of the roof is such that it is concealed behind parapet walls with box gutters.

5. GEOTECHNICAL REPORT

The geotechnical report results indicate that the area is a site class designation for single and double-storey class 1 structures with an H3 site classification.

The DCP tests indicate a ground pressure varying between 28kPa and 138kPa with an average of 84kPa.

6. STRUCTURAL CHANGES

The following designs are envisaged.

5.1. 72 Hour Assessment

The new design of the 72 Hour Assessment building, covering some 740m², will increase the building's footprint by approximately 75% with extensions to the east and west of the existing structure. The architect's design will follow the same principles as before, and considering the poor ground conditions, it is advisable to use the same structural design.

The new building will be connected to the existing structure and will have multiple joints to accommodate movement. It will consist of a reinforced concrete raft constructed on a soil raft. The superstructure will have articulated brickwork walls with concrete ring beams at the eaves. The removal of the existing lightweight partition walls as proposed by the architect is acceptable. Lightweight masonry internal partition walls will be constructed on the reinforced raft.

The roof trusses will be from timber and will be covered with Youngman Diamond Deck roof sheeting.

A concrete apron on all sides of the building will assist in keeping the founding material dry.

5.2. Trauma Unit

Significant extensions are envisaged for the trauma unit. On the south of the superstructure an extension to the order of 155m² is envisaged whereas on the north the extension is envisaged to be 500m².

The south extension will comprise a concrete raft on a soil raft with Youngman Diamond Deck roof sheeting on a steel roof structure.

The north extension will comprise a concrete raft on a soil raft. The roof structure will comprise two structures. The sheeted roof, which is the majority, will be a structural steel structure with Youngman Diamond Deck roof sheeting with the 2nd being a concrete roof slab which will be on the eastern section.

The removal of the existing lightweight partition walls as proposed by the architect is acceptable. Lightweight masonry internal partition walls will be constructed on the reinforced raft. The superstructure will have articulated brickwork walls with concrete ring beams at the eaves.

5.3. Archive Extension

The plan is to expand the archive structure by constructing a new concrete slab that will be placed on top of the roof slab of the current kitchen. This new slab will then connect to the existing 2nd floor slab. The roof will be made of light timber with Youngman Diamond Deck roof sheeting. There will be no internal walls, but the outer wall will be a light wall, designed by the architect.

5.4. Roofs over the 7th floor

To avoid disruption of the hospital's operations, the new roof will be built on top of the existing one. The new roof's eaves will be at the same level as the current parapet walls and will end with an extruded gutter fixed against the parapet wall. The new roof will be a structural steel structure with Youngman Diamond Deck roof sheeting. There will also be a galvanised structural steel walkway at the apex to allow for maintenance. Stainless steel grappling cables will be fixed to the walkway to allow for safe passage during servicing of the roof.

5. ESTIMATE

The Quantity Surveyor has determined an estimate for the development and must be approached for more information.

CONCLUSION

It is recommended that the Eastern Cape Department of Health accept and approve the design report and include the construction thereof in the new development plan of the hospital.



**L J COETZER (Pr Tech Eng PR CPM)
PROFESSIONAL TECHNOLOGIST**

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12 January 2024

DOCUMENT CONTROL SHEET

CLIENT: Eastern Cape Department of Health

JOB NO: 1746/6

PROJECT: Upgrade of Uitenhage Hospital Facility Design Report

	Prepared By	Reviewed By	Approved By
ORIGINAL	NAME L Coetzer	NAME	NAME
DATE	SIGNATURE	SIGNATURE	SIGNATURE

REVISION	NAME	NAME	NAME
DATE	SIGNATURE	SIGNATURE	SIGNATURE

REVISION	NAME	NAME	NAME
DATE	SIGNATURE	SIGNATURE	SIGNATURE

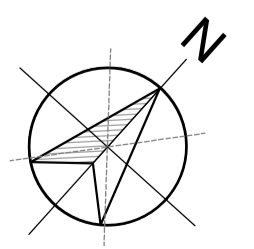
REVISION	NAME	NAME	NAME
DATE	SIGNATURE	SIGNATURE	SIGNATURE

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ANNEXURE A – DRAWINGS



MASTER SITE PLAN
SCALE 1:750

General Notes:

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- ✦ No setting out is to commence before the positions of the boundary pegs on the site have been verified by a Land Surveyor.
- ✦ Sewer connection to comply with municipal regulations.
- ✦ The Architects reserve the copyright on this drawing.

Municipal Information:

.....

Architects Information:
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Designers Signature

Clients Information:

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Revision	Date	Drawn By	Description

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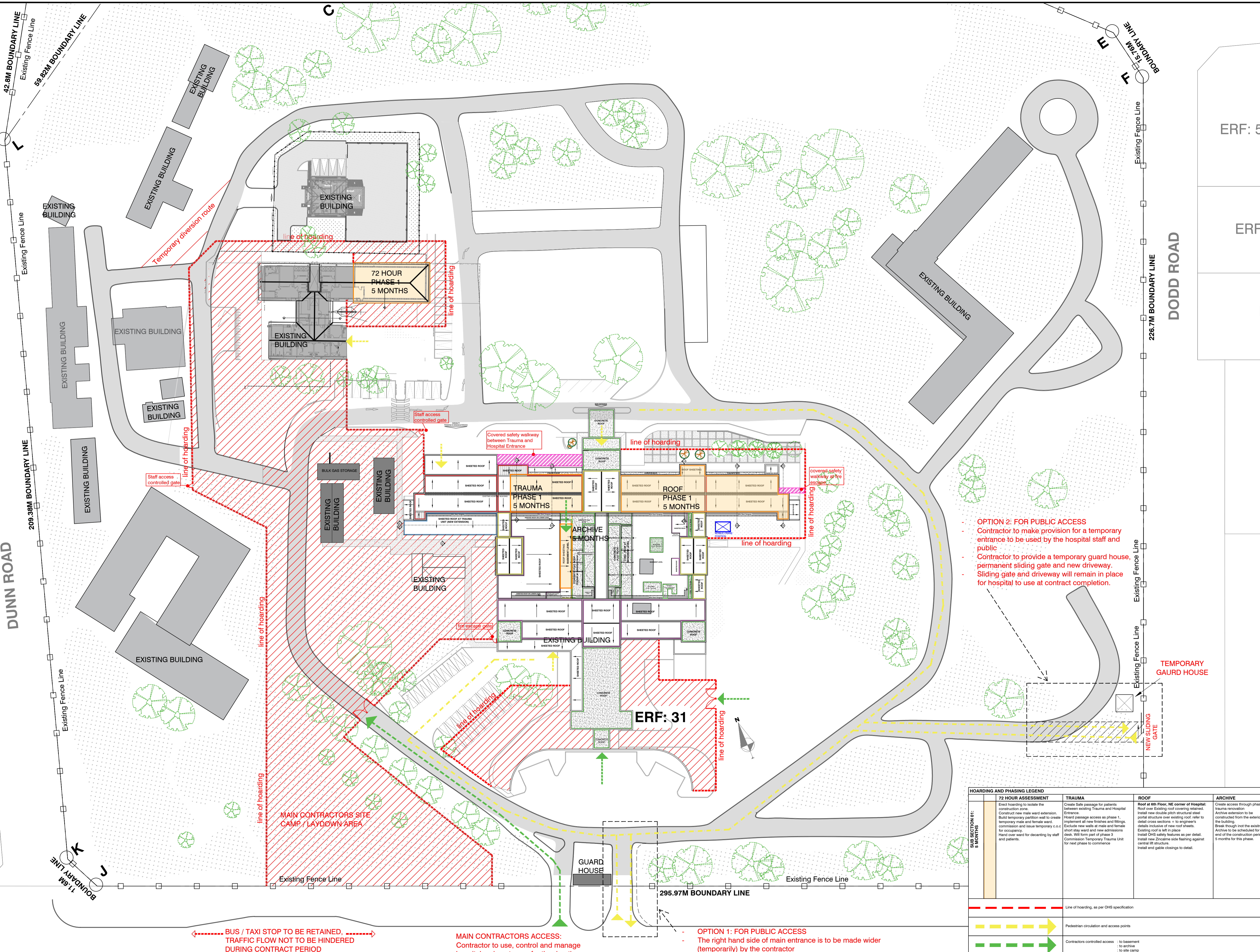
Project Title:
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
Uitenhage Provincial Hospital - 72-hour Assessment

Drawing Name:
Working Drawing:
MASTER SITE PLAN- Uitenhage Provincial Hospital

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number	Drawing Status	By	Date	Revision
MDA477(B) UPH / 200	1: Issued	GD	20-11-2023	X
	2: Revising			
	3: Deleted			
	4: Revised			

ISSUED FOR: TENDER



Phase 1: Hoarding, Phasing and Circulation Diagram
Scale 1:500

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Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn	Description

- OPTION 2: FOR PUBLIC ACCESS**
Contractor to make provision for a temporary entrance to be used by the hospital staff and public
- Contractor to provide a temporary guard house, permanent sliding gate and new driveway.
- Sliding gate and driveway will remain in place for hospital to use at contract completion.

HOARDING AND PHASING LEGEND			
SUB SECTION 01: 6 MONTHS	72 HOUR ASSESSMENT Erect hoarding to access the construction zone. Construct new male ward extension. Build temporary partition wall to create temporary male and female ward. Exclude new walls at male and female short stay ward and new admissions desk. Will form part of phase 2 Commission Temporary Trauma Unit for next phase to commence	TRAUMA Create safe passage for patients between existing Trauma and Hospital Entrance. Hoard passage access as phase 1, implement all new finishes and fittings. Exclude new walls at male and female short stay ward and new admissions desk. Will form part of phase 2 Commission Temporary Trauma Unit for next phase to commence	ROOF Roof at 6th Floor, NE corner of Hospital: Roof over existing roof covering retained. Install new double pitch structural steel portal structure over existing roof, refer to detail cross sections. + to engineer's details inclusive of new roof sheets. Existing roof to left in place Install new Zincalume side flashing against existing structure. Install end gable closings to detail.
			ARCHIVE Create access through phase 1 Trauma renovation Archive extension to be constructed from the exterior of the building. Break through not the existing Archive to be scheduled for the end of the construction period of 5 months for this phase.
	Line of hoarding, as per OHS specification		
	Pedestrian circulation and access points		
	Contractors controlled access : to basement : to archive : to site camp		
	Main Contractors construction area		
	Covered safety walkways to be erected by main contractor, as per OHS specification		

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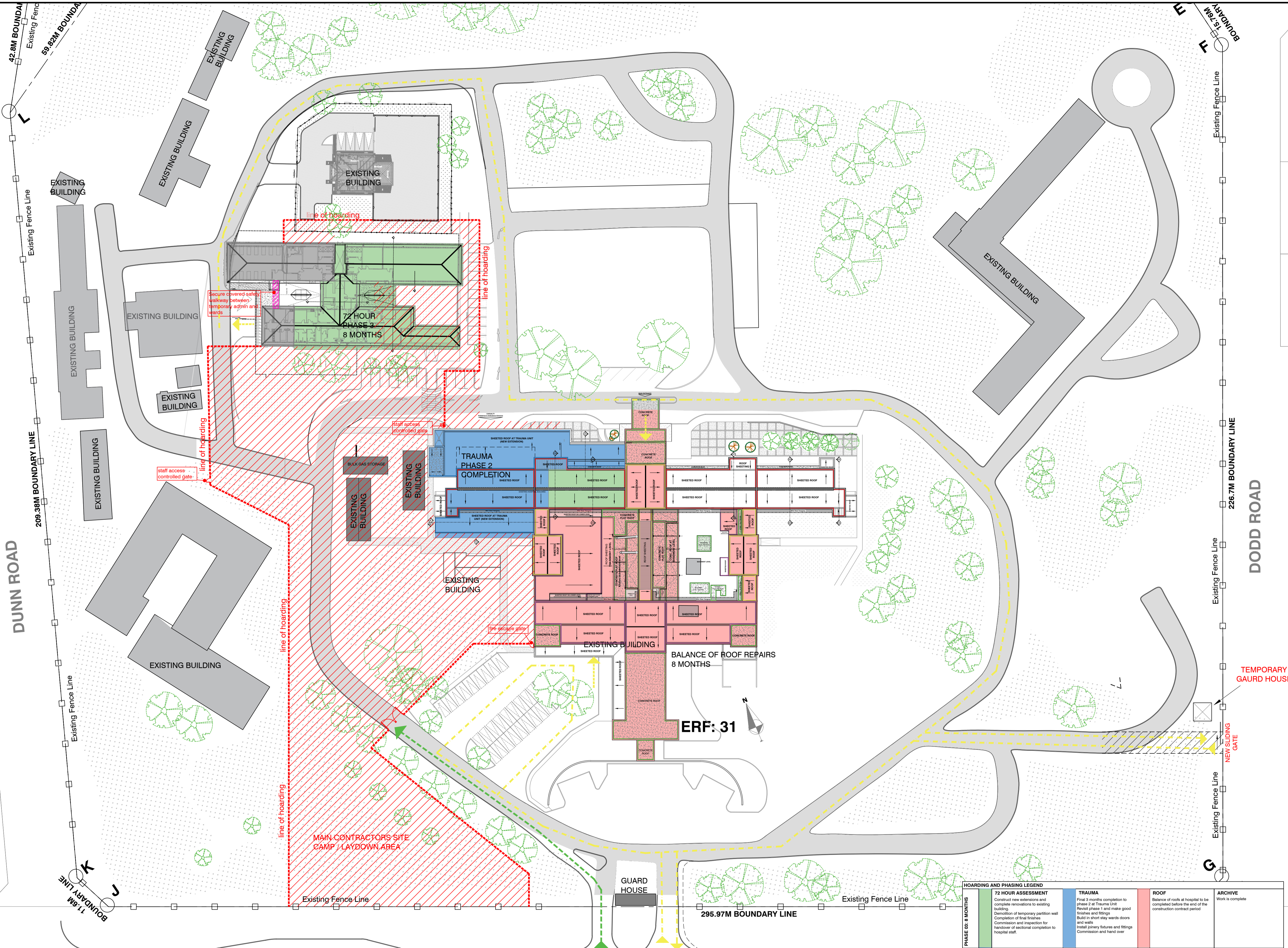
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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Working Drawing: SITE PLAN

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

ISSUED FOR: TENDER



General Notes:

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- The Architects reserve the copyright on this drawing.

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Revision	Date	Drawn	Description

Revision	Date	Drawn	Description

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Project Title: Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name: Working Drawing: SITE PLAN

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH HOARDING AND PHASING DIAGRAM -003

Rev. 1	20-11-2023	GD	Issue
Rev. 2			
Rev. 3			
Rev. 4			

ISSUED FOR: TENDER

Phase 3: Hoarding, Phasing and Circulation Diagram
 Scale 1:500

←----- BUS / TAXI STOP TO BE RETAINED, TRAFFIC FLOW NOT TO BE HINDERED DURING CONTRACT PERIOD ----->

MAIN CONTRACTORS ACCESS: Contractor to use, control and manage hospital main entrance for the duration of the contract

HOARDING AND PHASING LEGEND

Phase / Area	Description
PHASE 03: 8 MONTHS	Construct new extensions and complete renovations to existing building. Demolition of temporary partition wall. Completion of final finishes. Commission and inspection for handover of sectional completion to hospital staff.
TRAUMA	Final 3 months completion to Phase 2 at Trauma Unit. Revise Phase 1 and make good finishes and fittings. Build in short stay wards doors and walls. Install joinery fixtures and fittings. Commission and hand over.
ROOF	Balance of roofs at hospital to be completed before the end of the construction contract period.
ARCHIVE	Work is complete.

Line of hoarding, as per OHS specification
Pedestrian circulation and access points
Main Contractors construction area
Covered safety walkways to be erected by main contractor, as per OHS specification
Remaining work on roof at 6th floor to be completed, after phase 3 construction at 72 hour Assessment is completed.

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Designers Signature:

Clients Information:
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Drawing Revisions:

Revision	Date	Drawn	Description	By



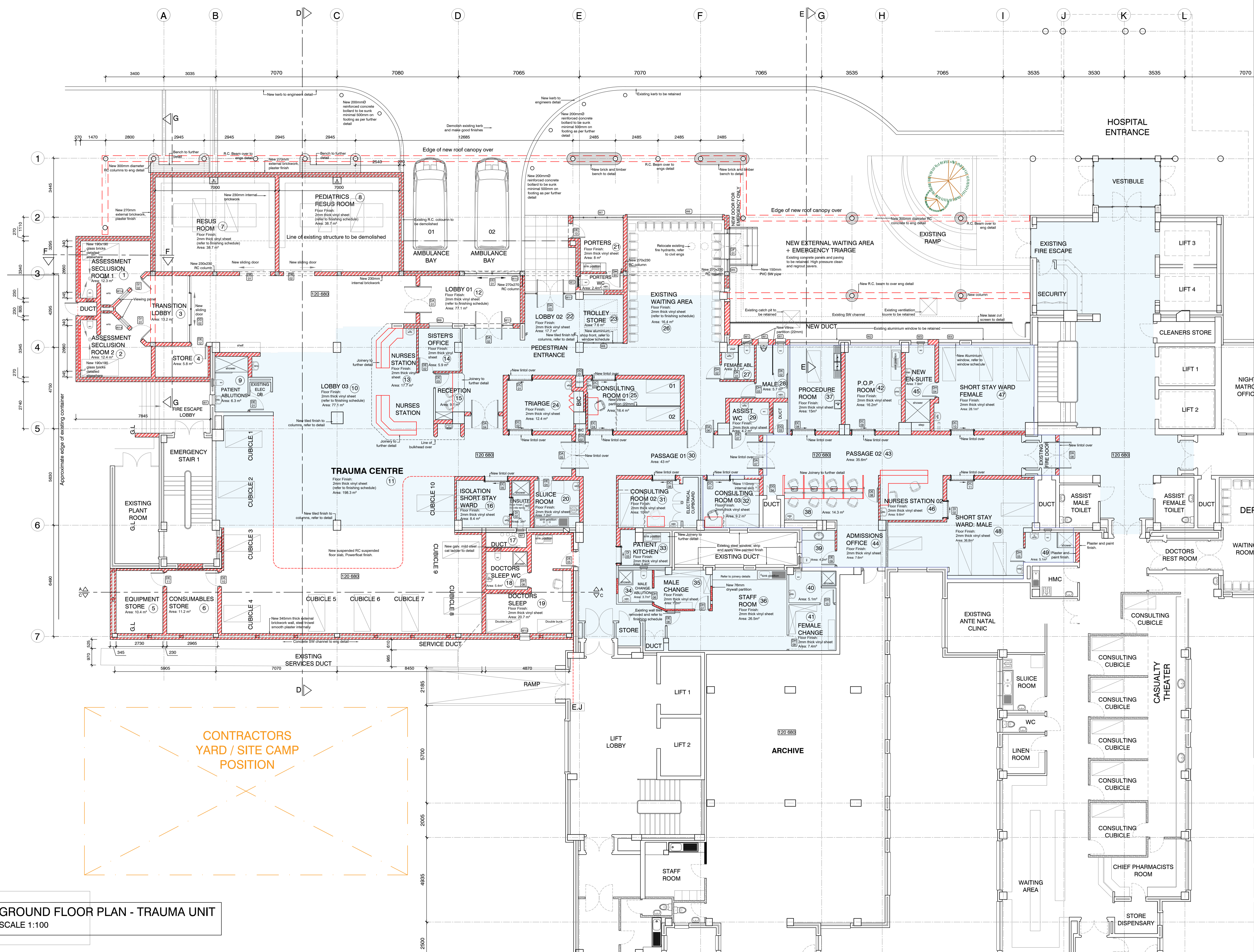
Project Title:
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name:
 Sketch Plans:
 GROUND FLOOR PLAN - TRAUMA UNIT

Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	Scale	Revision
MDA477(B)UPH/ Trauma Unit-203	As shown	1

ISSUED FOR: TENDER



GROUND FLOOR PLAN - TRAUMA UNIT
 SCALE 1:100

CONTRACTORS
 YARD / SITE CAMP
 POSITION

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Designers Signature:

Clients Information:


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Drawing Revisions:

Revision	Date	Drawn	Description

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Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

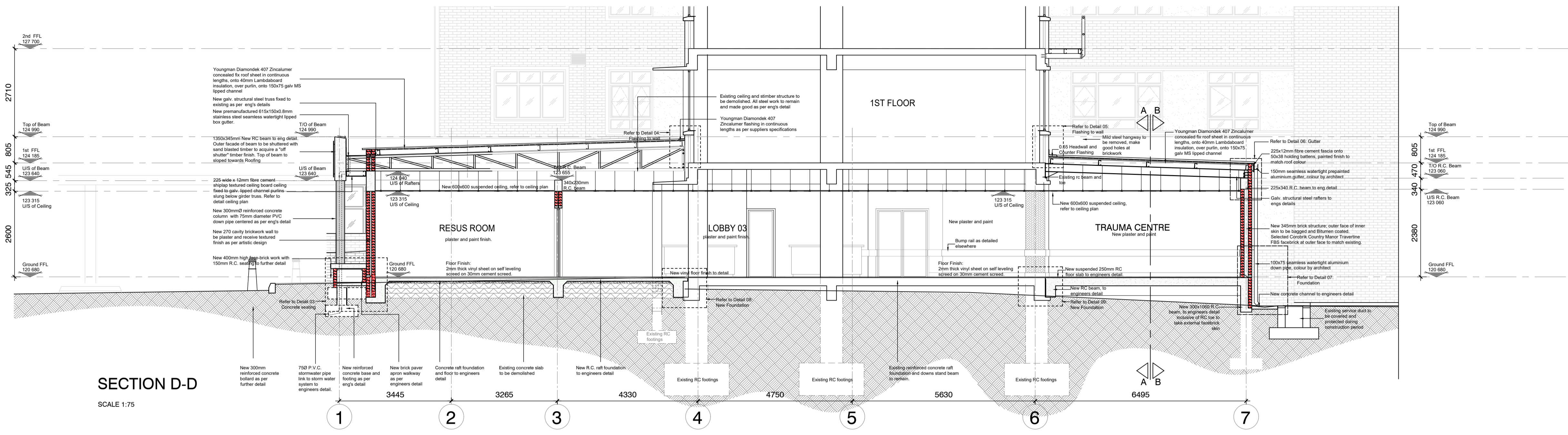
Drawing Name
 Working Drawings:
 SECTIONS 02- TRAUMA UNIT

Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

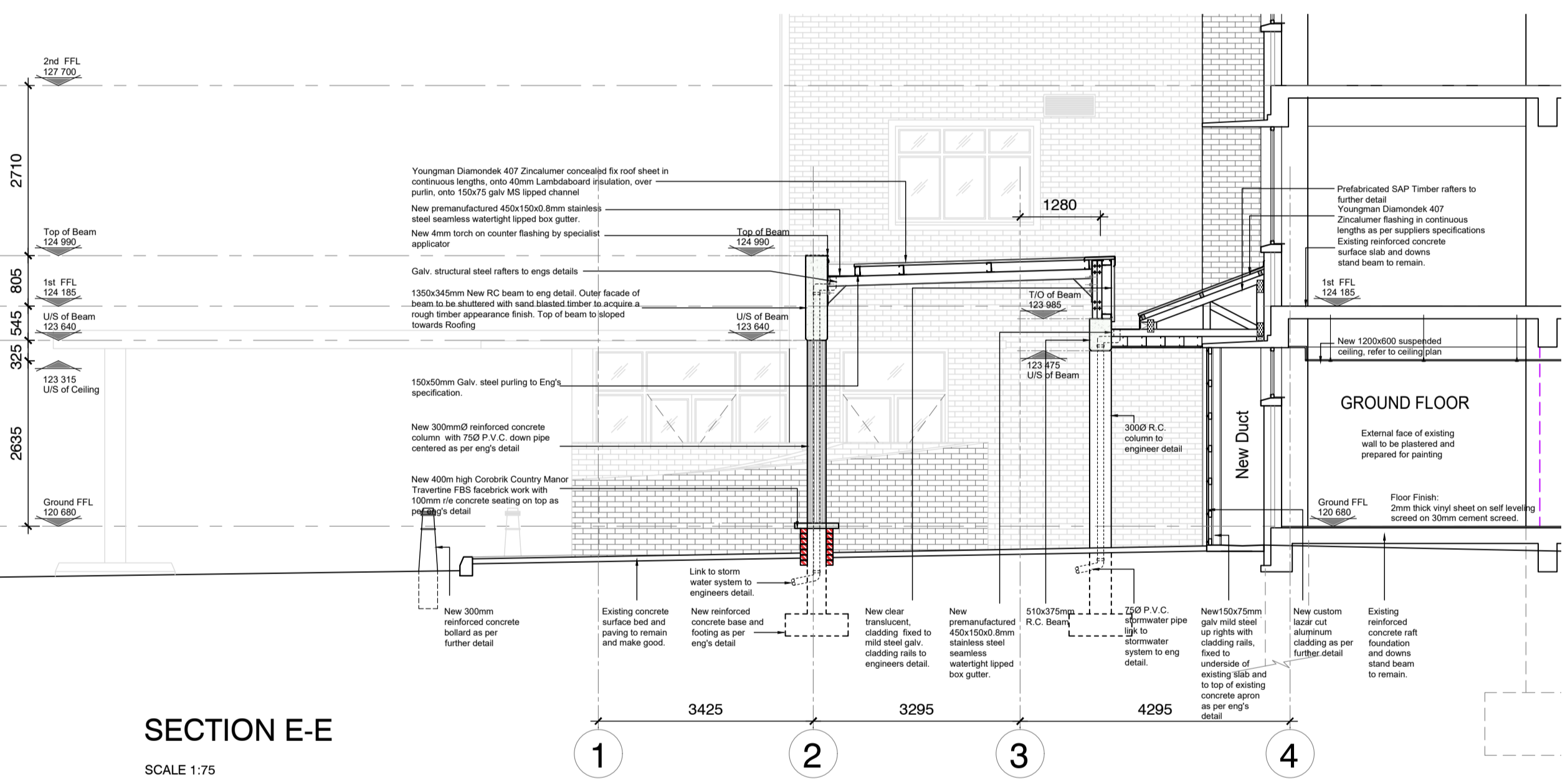
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Drawn	EM	Scale	As shown
Checked	DBA	Revision	1

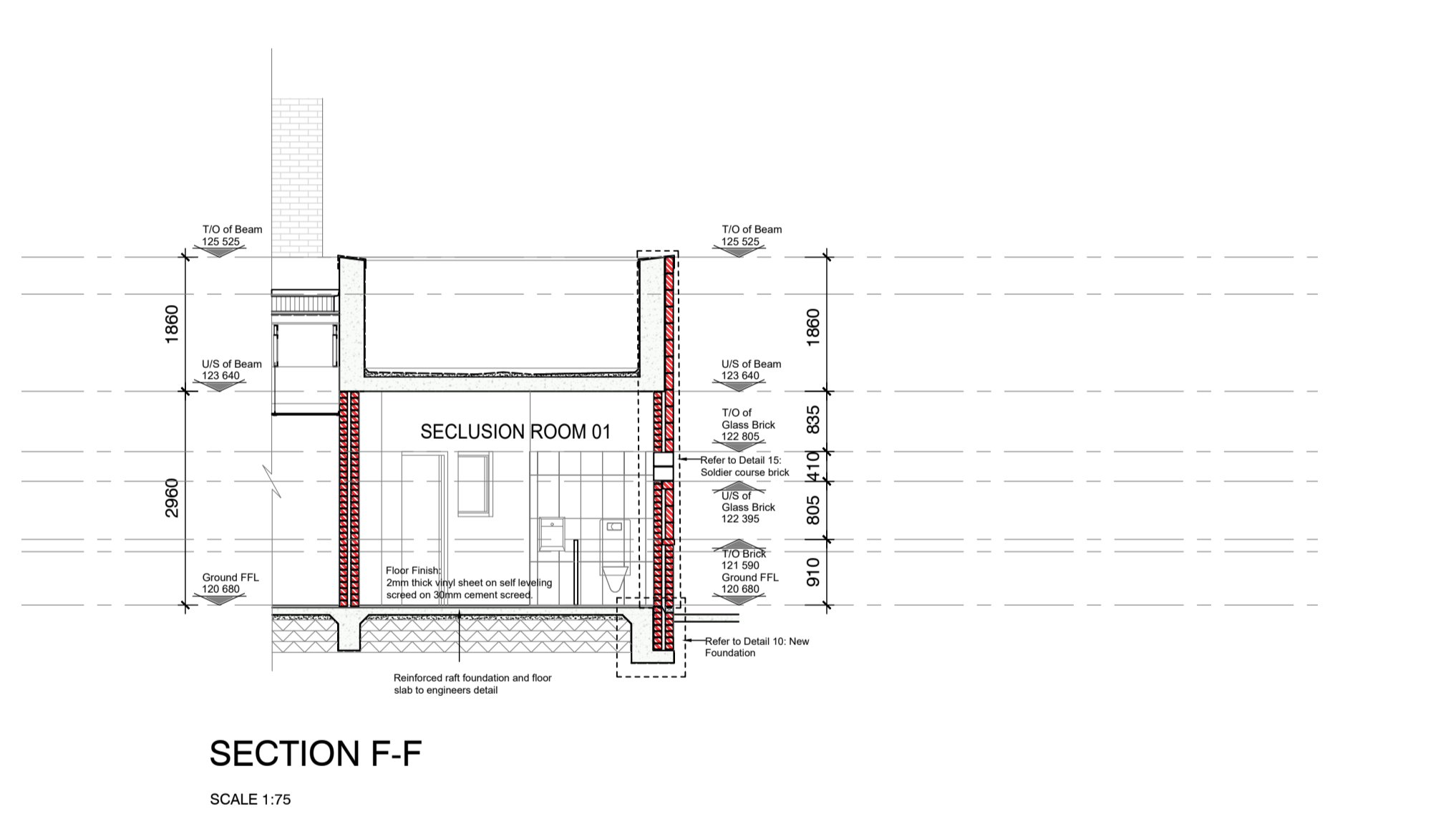
ISSUED FOR: TENDER



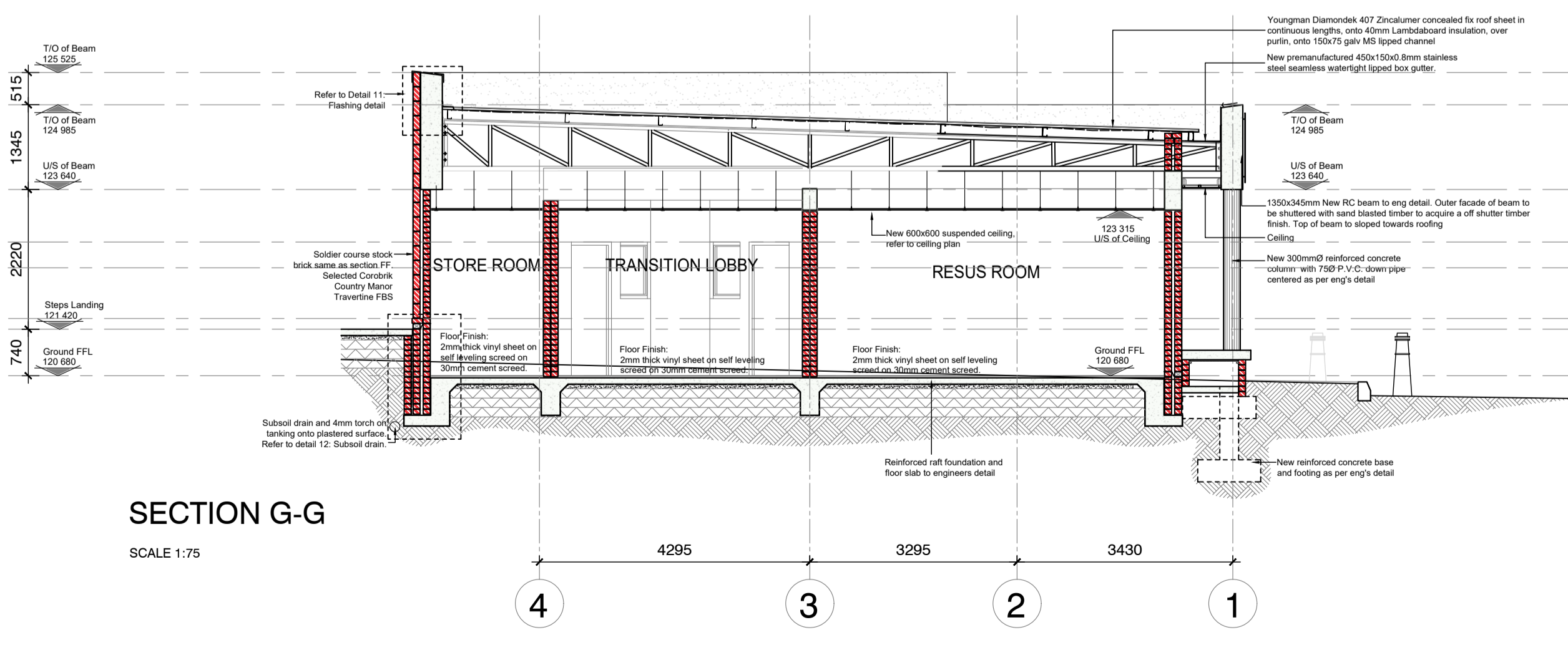
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 SCALE 1:75



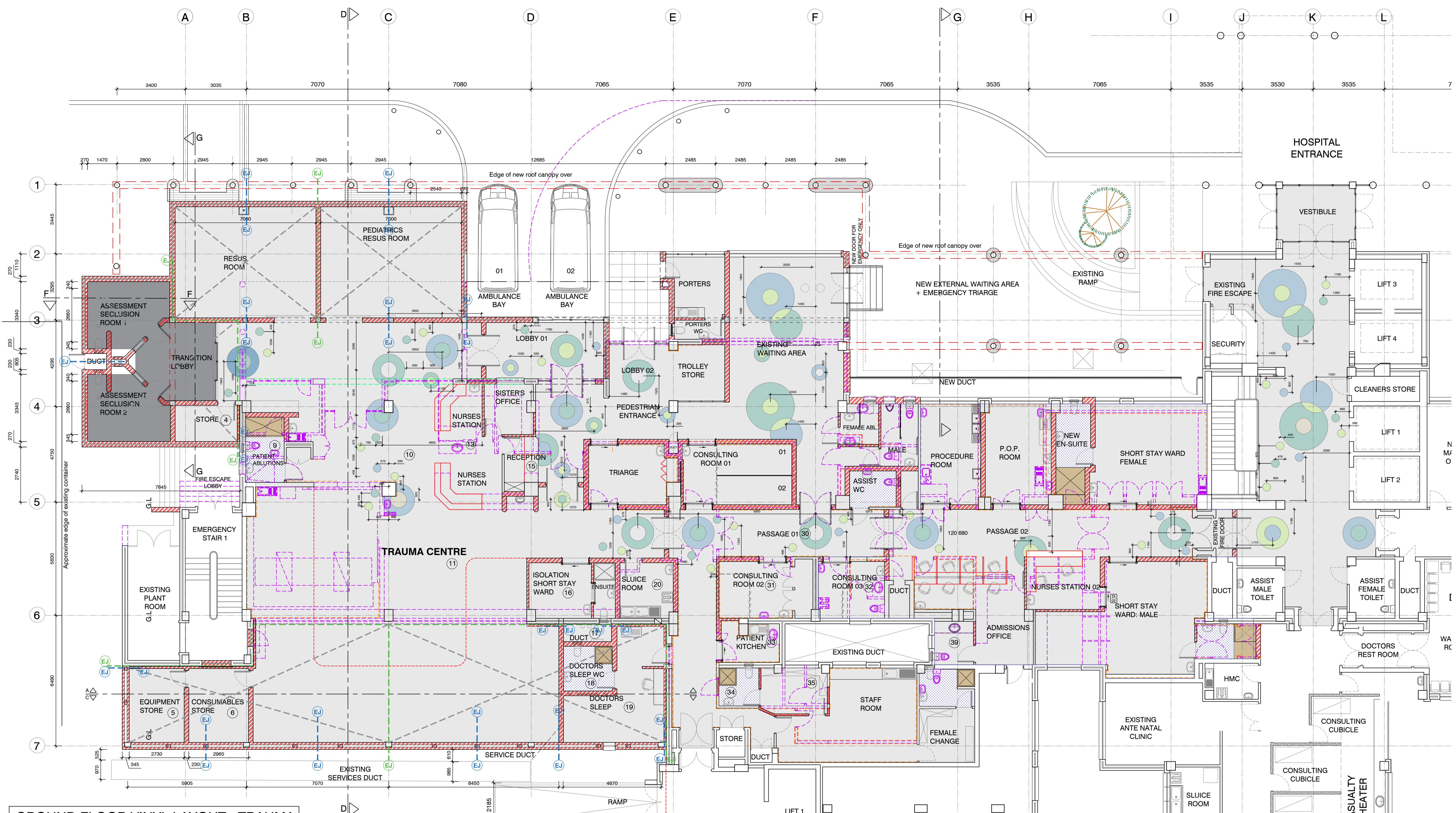
SECTION E-E
 SCALE 1:75



SECTION F-F
 SCALE 1:75



SECTION G-G
 SCALE 1:75



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Designers Signature

Clients Information:
 Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn	Description

GROUND FLOOR VINYL LAYOUT - TRAUMA UNIT
 SCALE 1:100

VINYL PATTERN TYPES	QUANTITY
	40
	08
	18

Vinyl Pattern Dimensions
 SCALE 1:50

VINYL PATTERN TYPES	QUANTITY
	04

FLOOR FINISH LEGEND

COLOUR	THICKNESS	SPECIFICATION
	2mm	Tarkett 2mm thick homogenous IQ Eminnet Unisense vinyl floor sheet. Sheet width 2m, with PUR surface treatment. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self levelling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
	2mm	Tarkett 2mm thick homogenous IQ Grant vinyl floor sheet. Sheet width 2m, with PUR surface treatment. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self levelling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
	2mm	Tarkett 2mm thick homogenous IQ Grant vinyl floor sheet. Sheet width 2m, with PUR surface treatment. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self levelling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
	2mm	Tarkett 2mm thick homogenous IQ Grant vinyl floor sheet. Sheet width 2m, with PUR surface treatment. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self levelling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
	2.5mm	Tarkett 2.5mm thick homogenous Grant Safe T studded vinyl floor sheet. Sheet width 2m, slip resistant R10 grip. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self levelling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
	2.5mm	Technical Finishes 8mm decorative Terrazzo Epoxy resin screed on to min 20MPa concrete substrate, moisture content to be less than 5%. Concrete to be primed with Solidkote STP. Screed finish to be sealed with Polyscreed Sealcoat. All surface preparations and installations to be completed in strict accordance with manufacturers specifications.
	4mm	Douglas Jones, or similar Penny Round matt white ceramic mosaic floor tile (sheet size: 315x294mm), light grey anti fungal grout, mixed with bonding liquid

NOTES:
 All concrete to be tested for strength and moisture content accordingly
 All substrates to be inspected by specialist floor finish manufacturers prior to laying of any vinyl or specialist screed products. Approval of substrate / concrete condition to be provided in writing at time of inspection.
 All specialist surfaces, vinyl and screeds, to be installed by suitably registered specialist installers, per manufacturers specifications and requirements
 Certificates of compliance and guarantees to be provided in every instance for vinyl and screed applications.

EXPANSION JOINT LEGEND

	Expansion Joint position in the brickwork
	Expansion Joint position in the concrete surface bed: Refer to floor finish expansion joint detailed elsewhere.
	Extent of concrete panel in single pour.

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Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
 Sketch Plans:
 GROUND FLOOR PLAN - TRAUMA UNIT VINYL AND FLOOR FINISHES LAYOUT

Issue Date: 23-11-2023
 Technician: EM
 Checked By: DBA
 Drawing Scale: As shown

Drawing Number	Revision
MDA477(B)UPH/ Trauma Unit-300	X

ISSUED FOR: TENDER

CEILING PLAN LEGEND

- 1200 x 600 x 9mm white vinyl faced Gypsum ceiling tile laid into Down prepared white aluminum ceiling system comprising of double stitched T38 Main T and T38 cross Ts inclusive of grids, plates and holding down clips. All on 4mm galv. suspension rods.
- Suspended bulkheads comprising of 9mm jumbo plasterboard onto aluminum T frame suspended at 1200mm centres. All edges to be finished with 25mm galv. perimeter and 25mm galv. T-bar to wall/gypsum.
- 12mm x 225mm Ship-lap Fibre cement Ship-lap building plank, spaced at 245 centres with 20mm spacing. Painted finish to boards.
- Exposed 40mm Dia. Diamond #17 2mm thick galv. ex roof sheet
- Off shutter concrete, rubbed down 3mm skim coat, primer and acrylic washable PVA. Refer to finishing schedule.

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 - ◆ Sewer connection to comply with municipal regulations.
 - ◆ The Architects reserve the copyright on this drawing.

Municipal Information:

Architects Information:
 Member of the South African Architectural Profession
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 PI Insurance: AON South Africa (Pty) Ltd
 PI Membership No. 25021-ARCP470506
 duncan@mdaarchitects.co.za
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Designers Signature

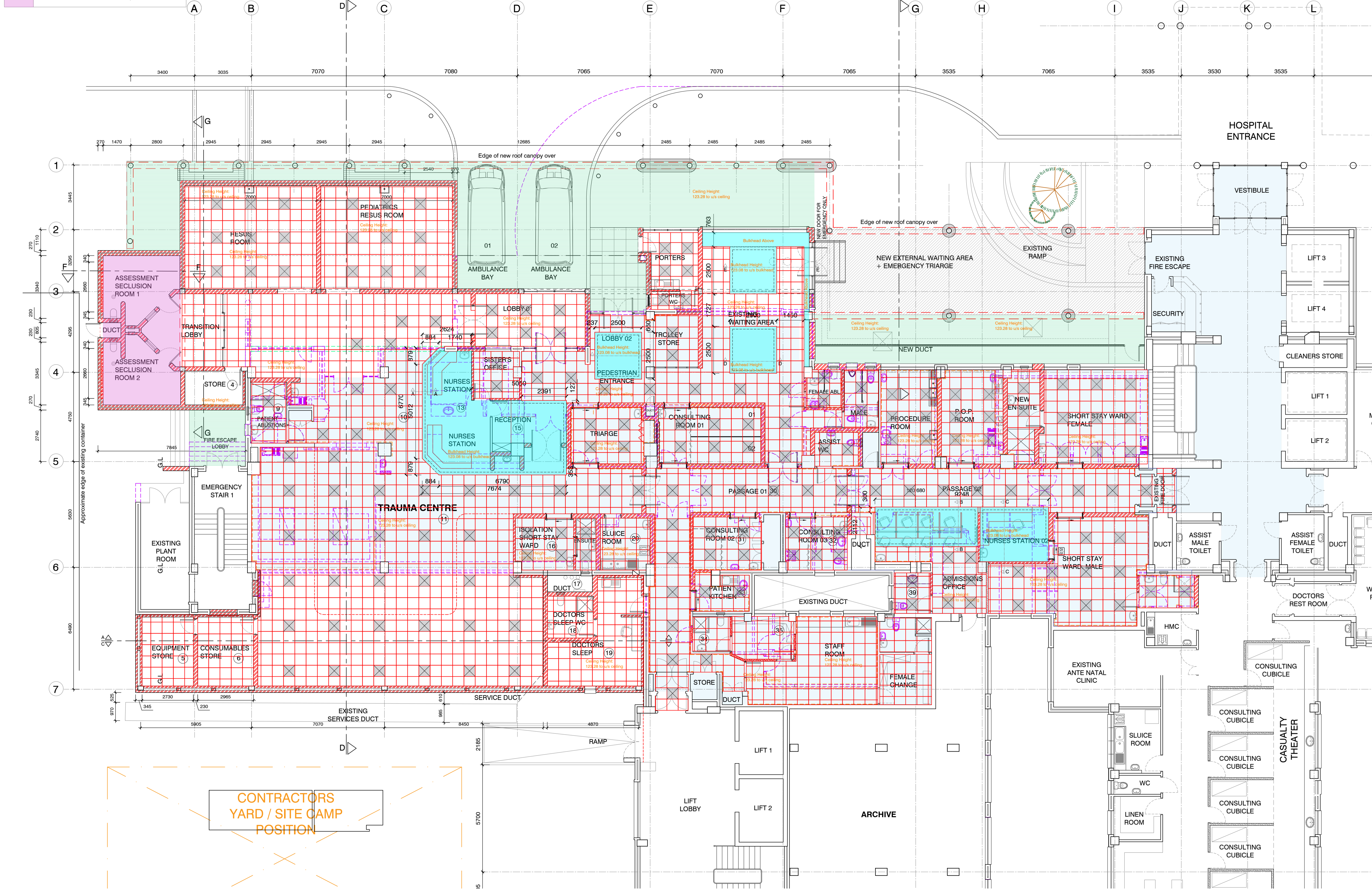
Province of the
EASTERN CAPE
 HEALTH

Clients Information:



Drawing Revisions:

Revision	Date	Drawn By	Description
01	23-11-2023	EM	Revision to ceiling specifications.



CEILING LAYOUT PLAN- TRAUMA UNIT
 SCALE 1:100



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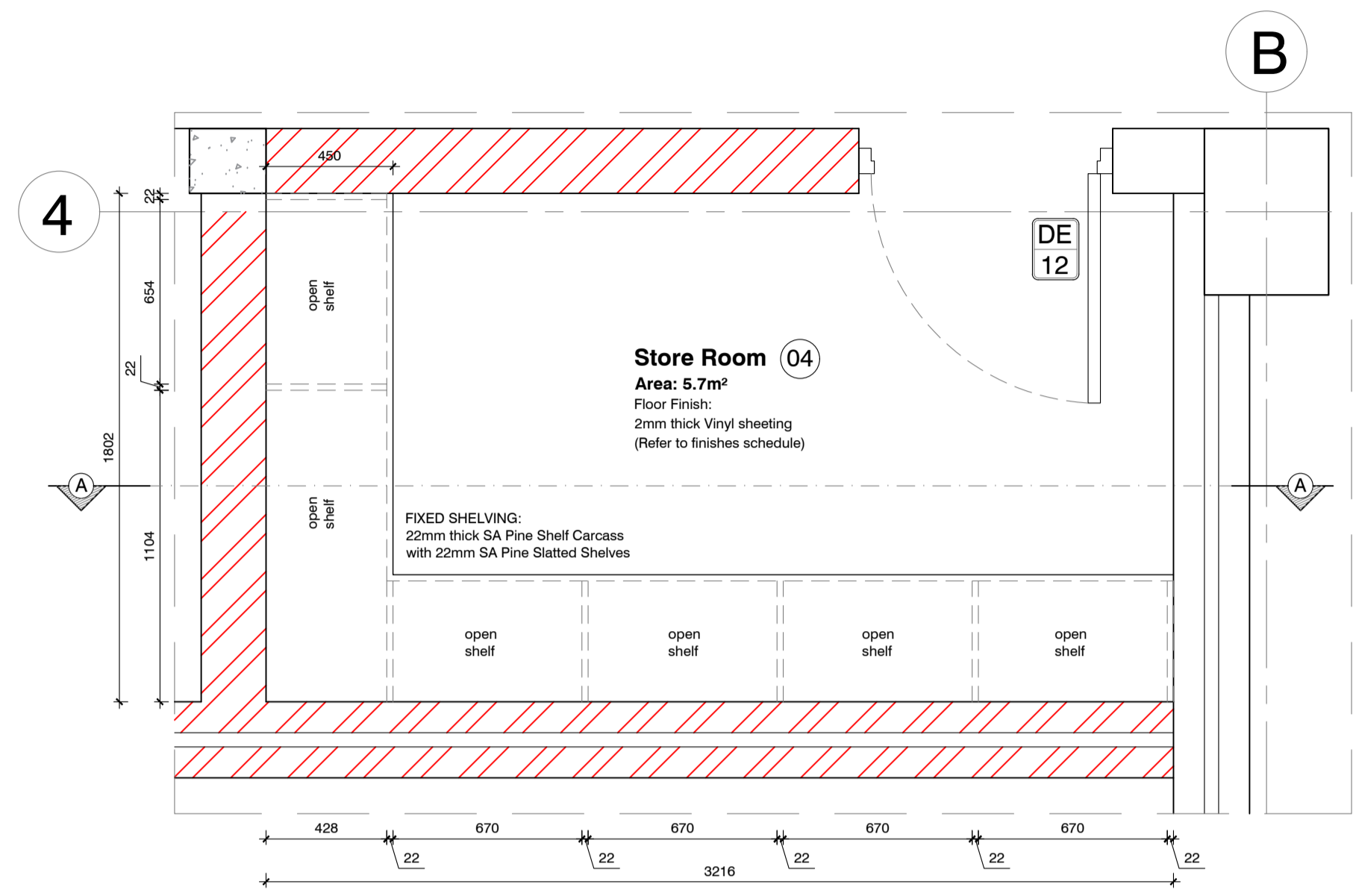
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
 Uitenhage Provincial Hospital

Drawing Name
 Working Drawings:
 GROUND FLOOR CEILING PLAN - TRAUMA UNIT

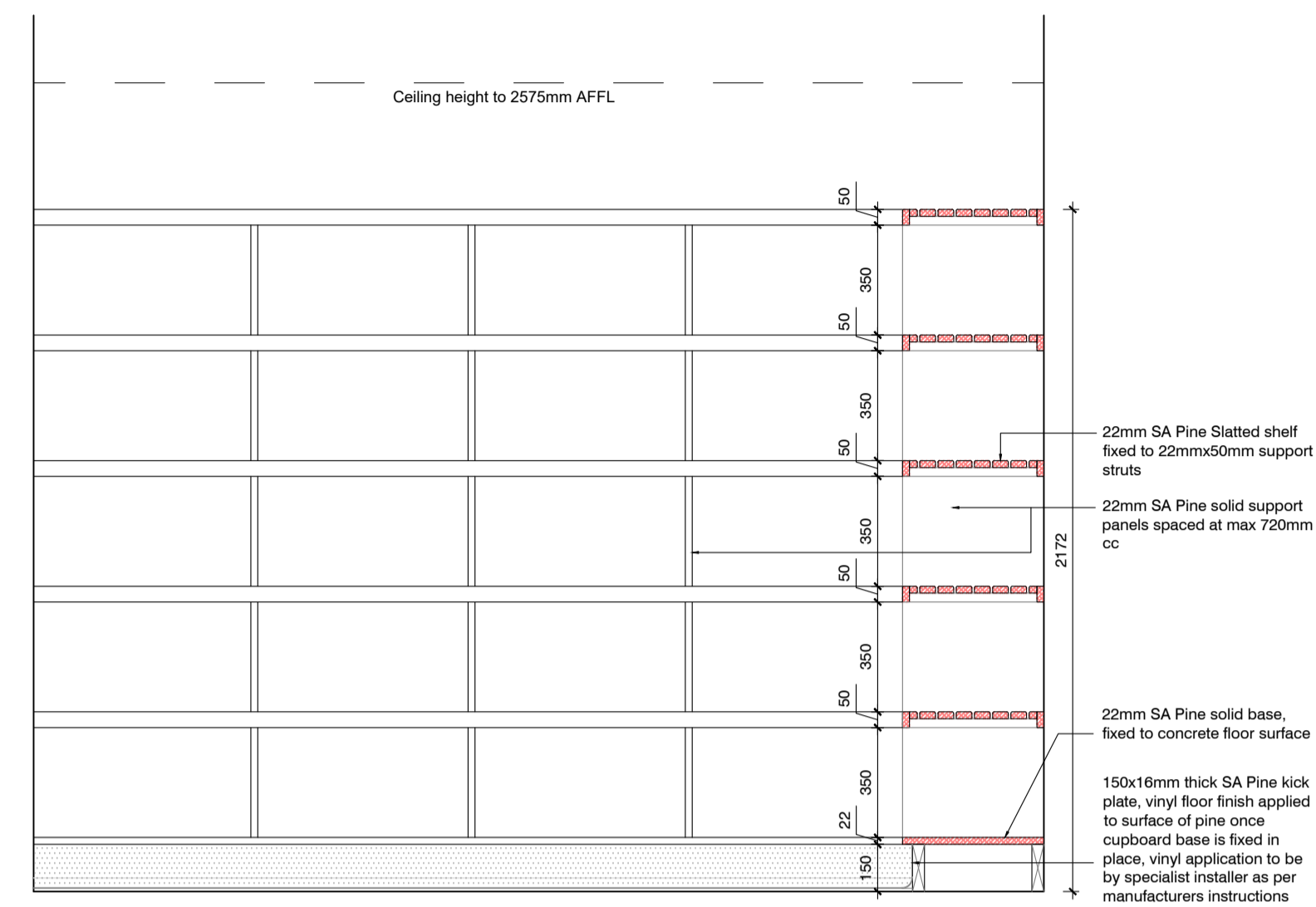
Issue Date: 23-11-2023
 Technician: EM
 Checked By: DBA
 Drawing Scale: As shown

MDA477(B)UPH/
 Trauma Unit-301

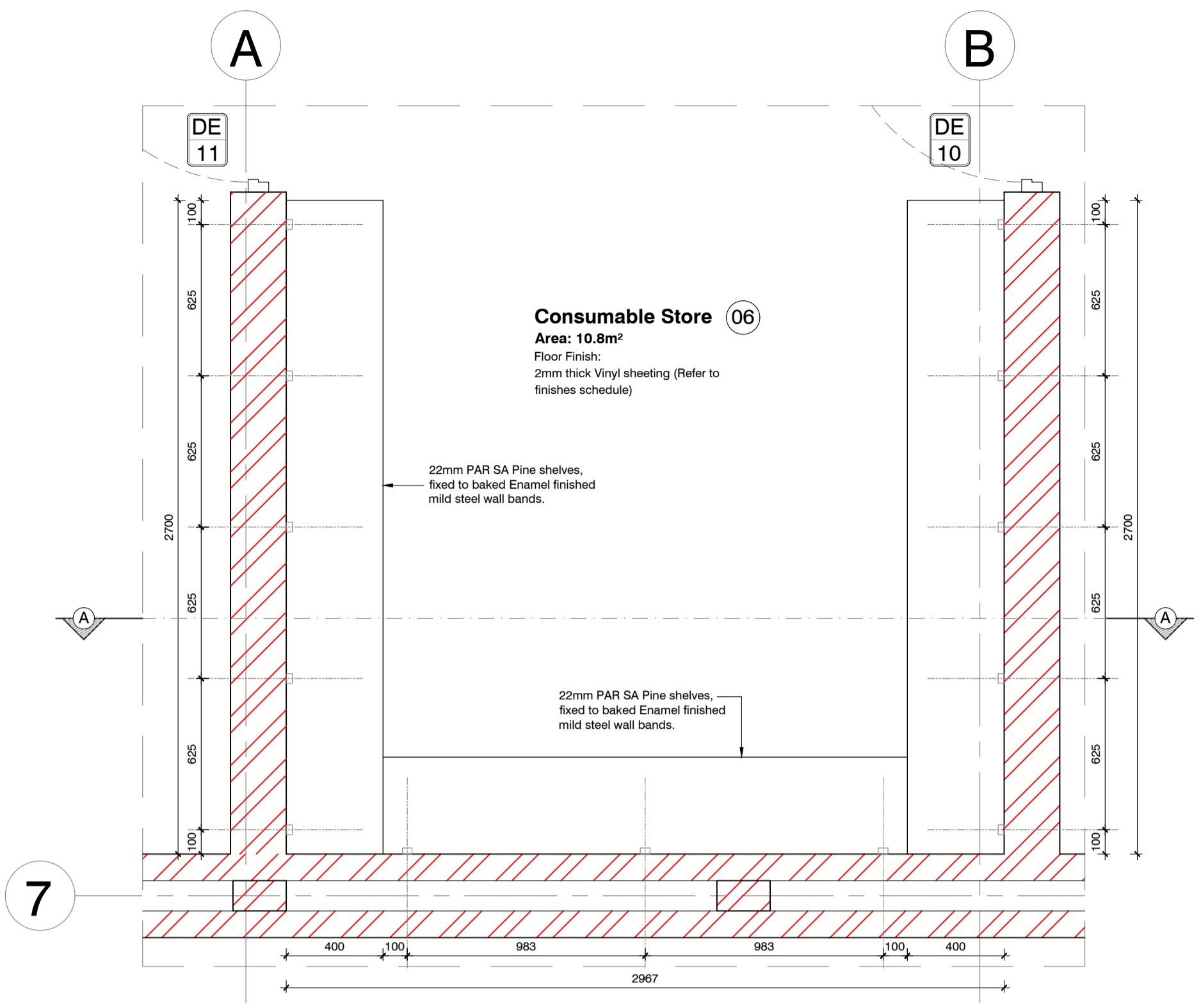
ISSUED FOR: TENDER



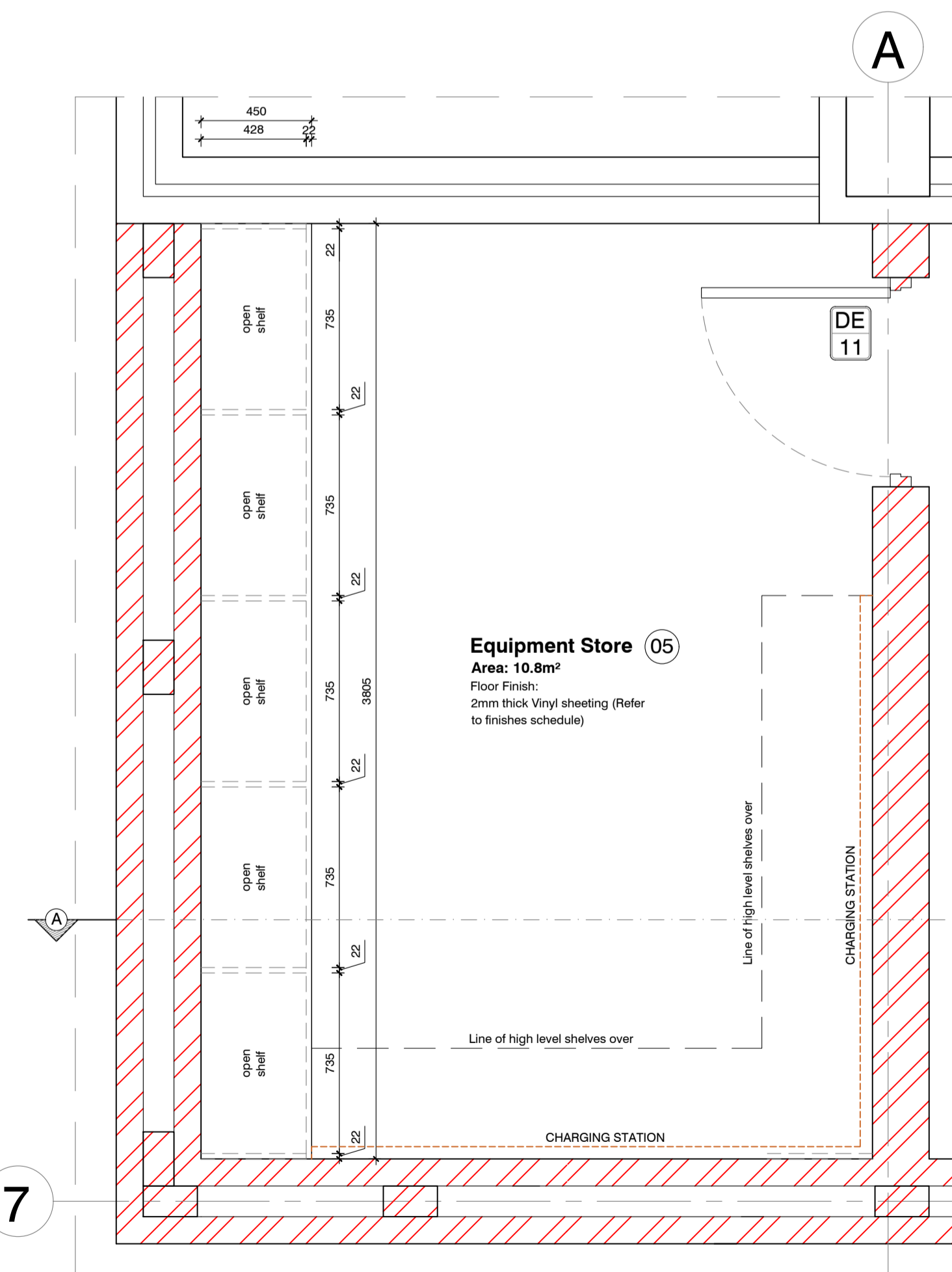
Joinery Details: Store Room 04 - Plan



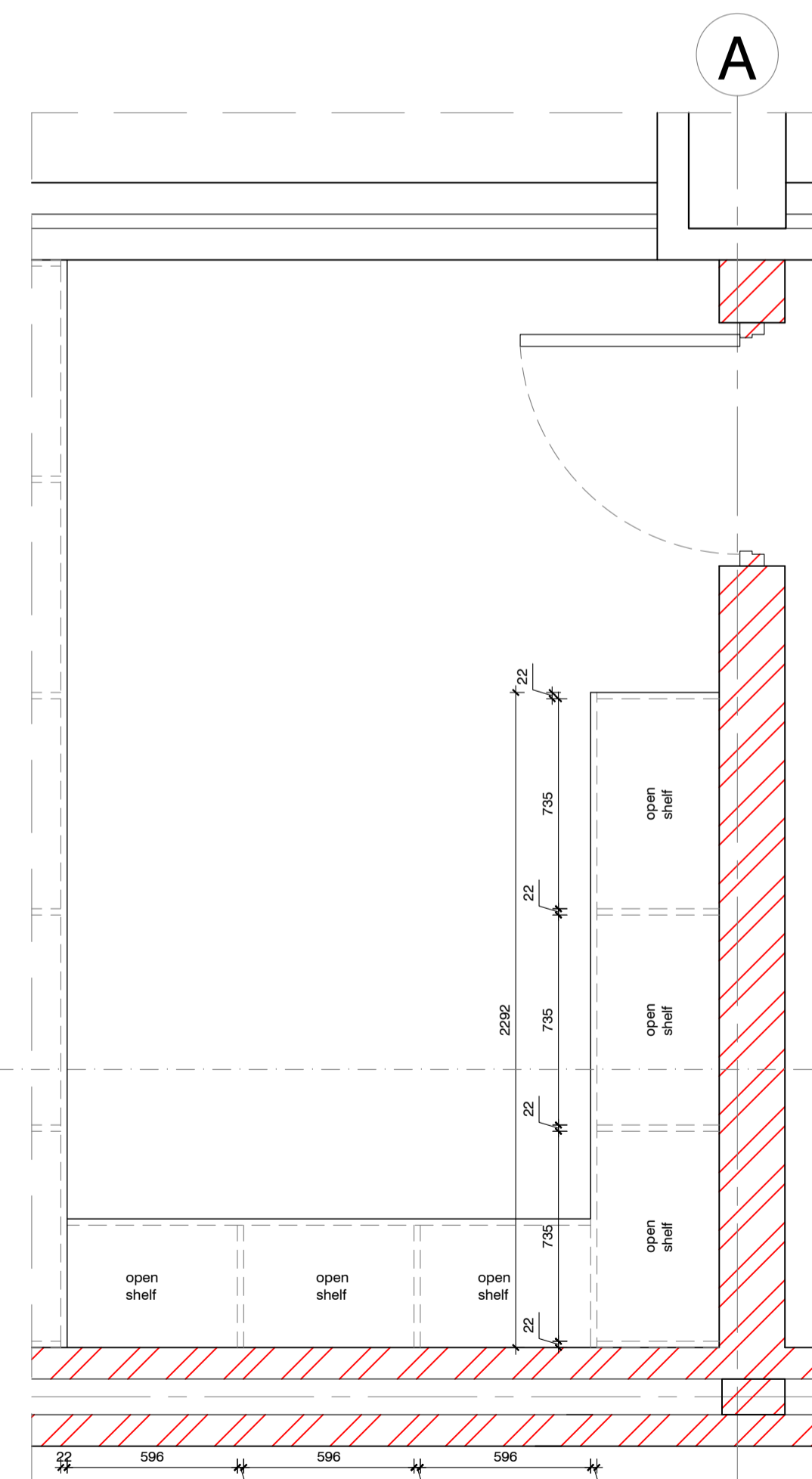
Joinery Details: Store Room 04 - Section A-A
Scale 1:20



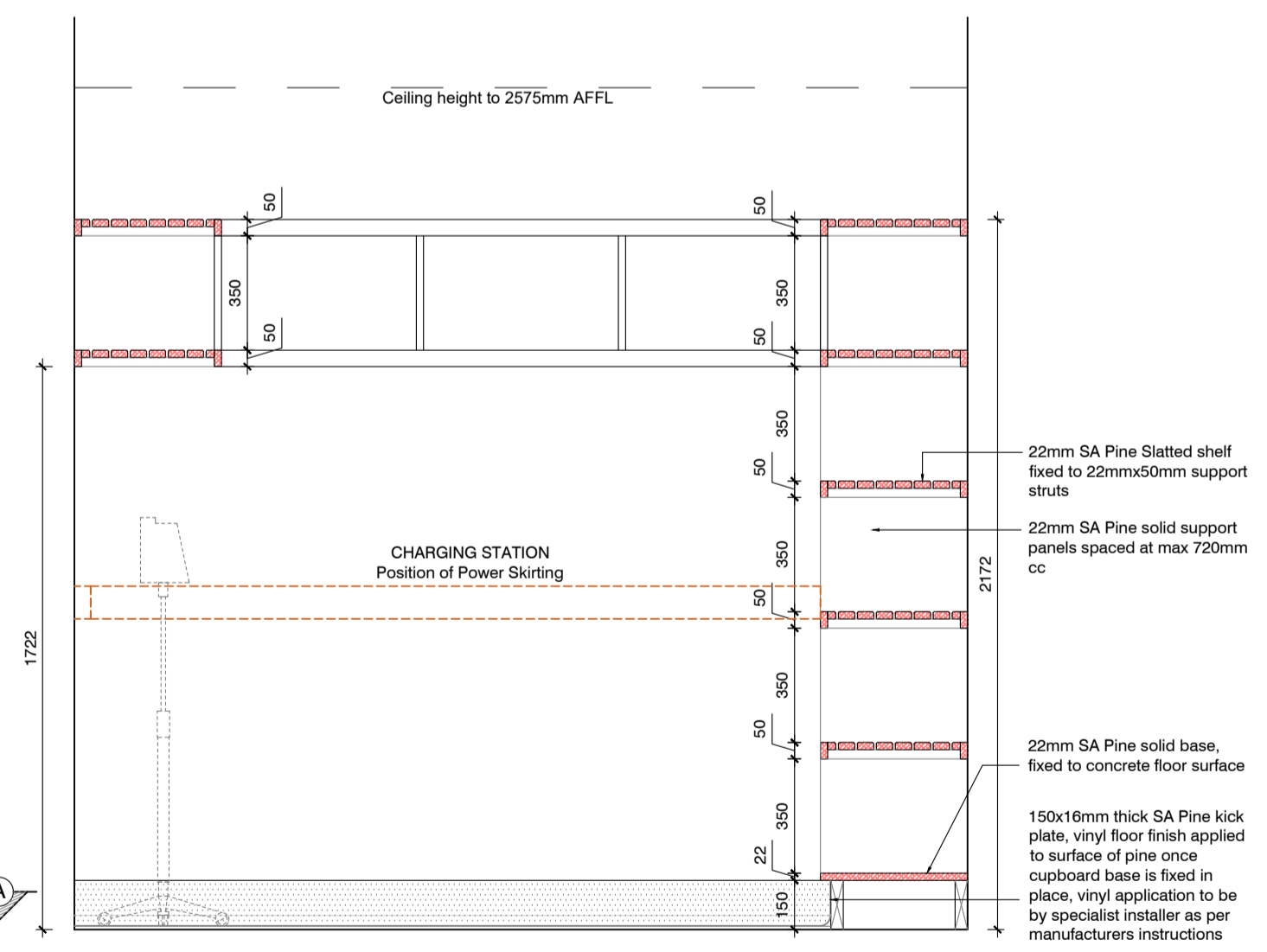
Joinery Details: Consumable Store 06 - Plan
Scale 1:20



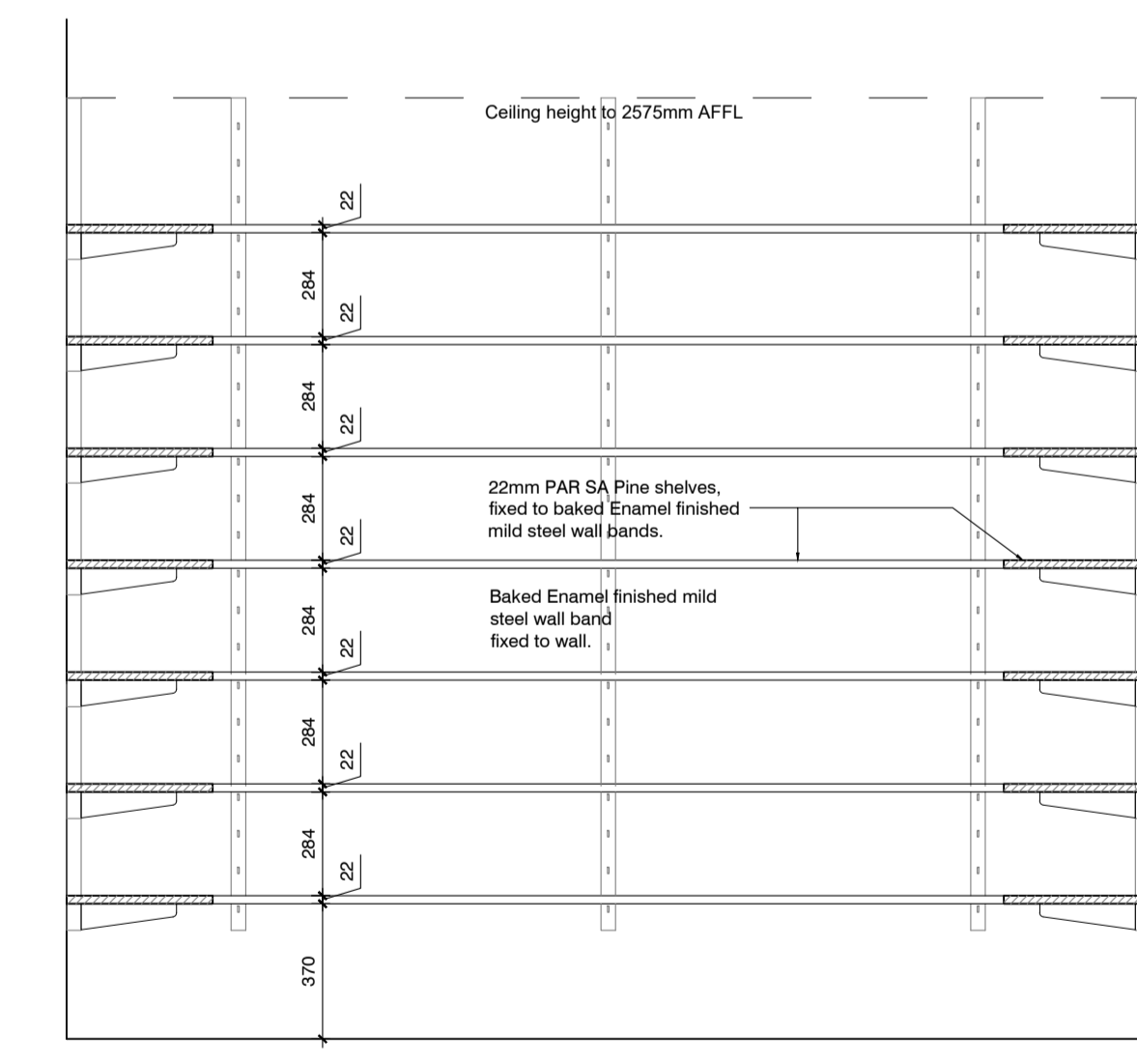
Joinery Details: Equipment Store 05 - Plan
Scale 1:20



High Level Cupboard Plan



Joinery Details: Equipment Store 05 - Section A-A
Scale 1:20



Joinery Details: Consumable Store 06 - Section A-A
Scale 1:20

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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Working Drawings:
JOINERY DETAILS 01 - TRAUMA UNIT

Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number MDA477(B)UPH/
Trauma Unit-304
Revision 2 of 3

ISSUED FOR: TENDER

General Notes:

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Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

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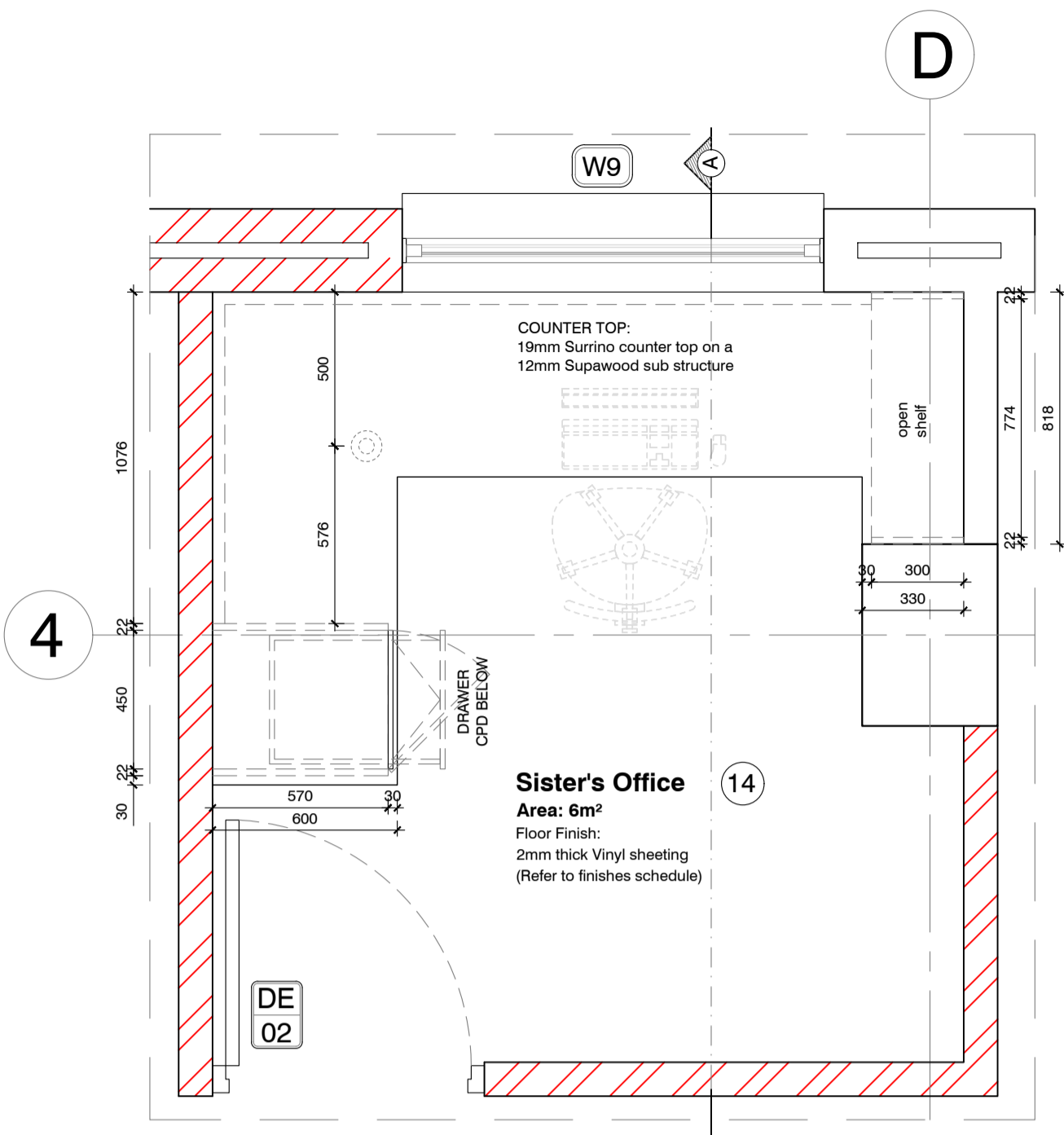
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
 Working Drawings:
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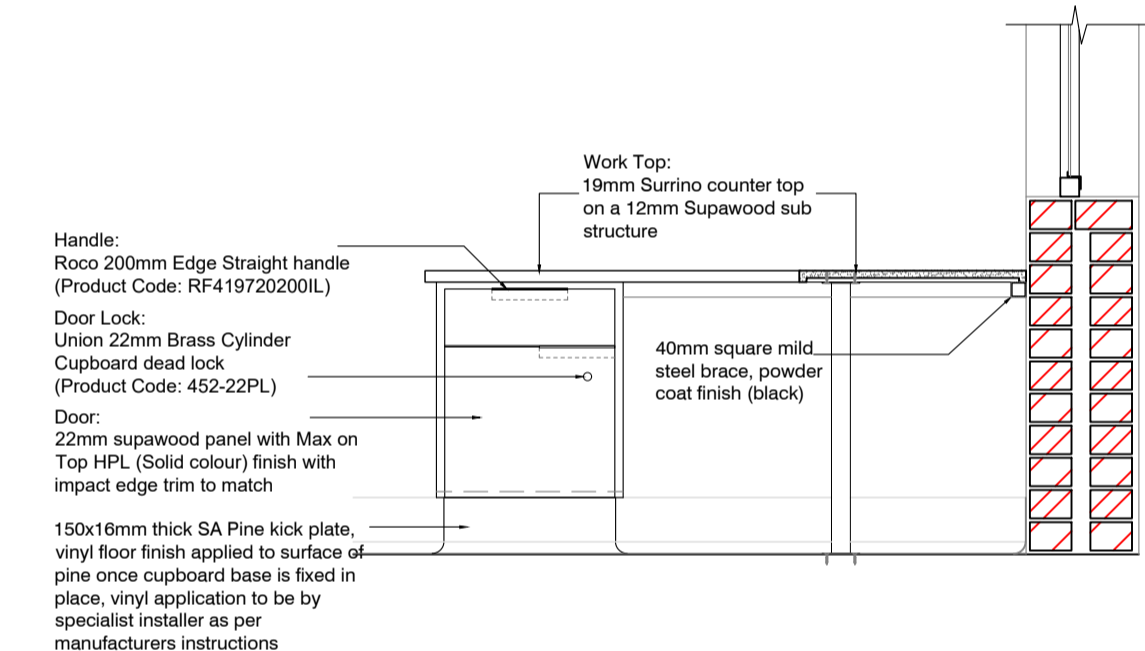
Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B)UPH/
 Trauma Unit-305

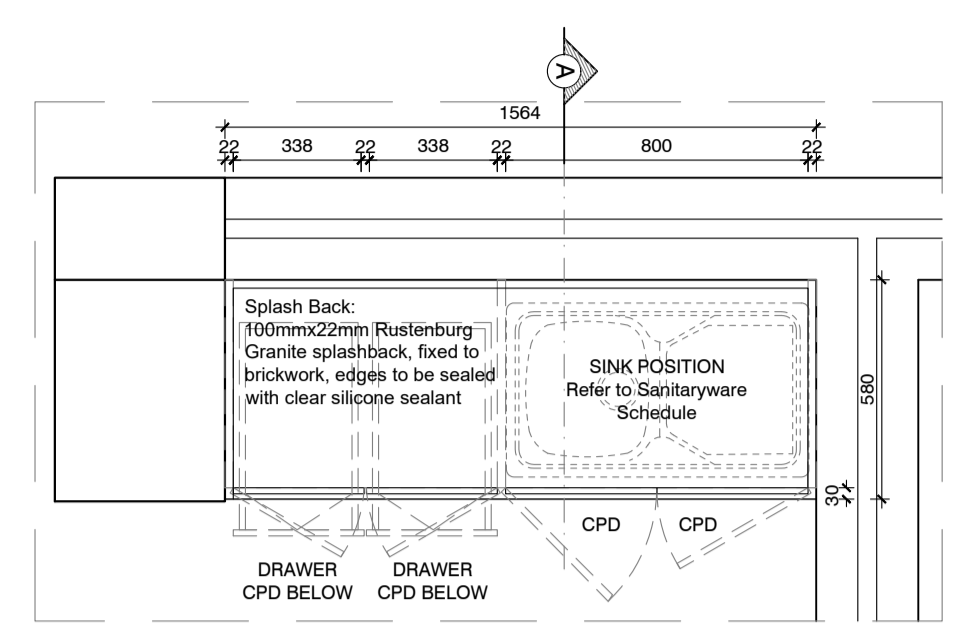
ISSUED FOR: TENDER



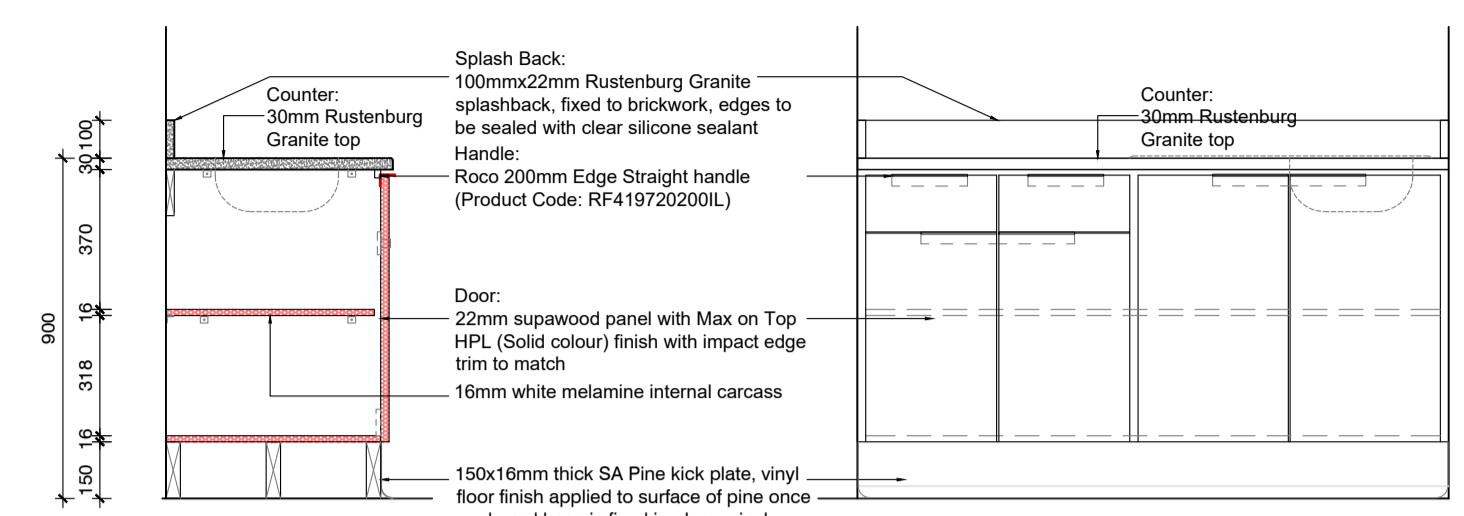
Joinery Details: Sister's Office 14 - Plan
 Scale 1:20



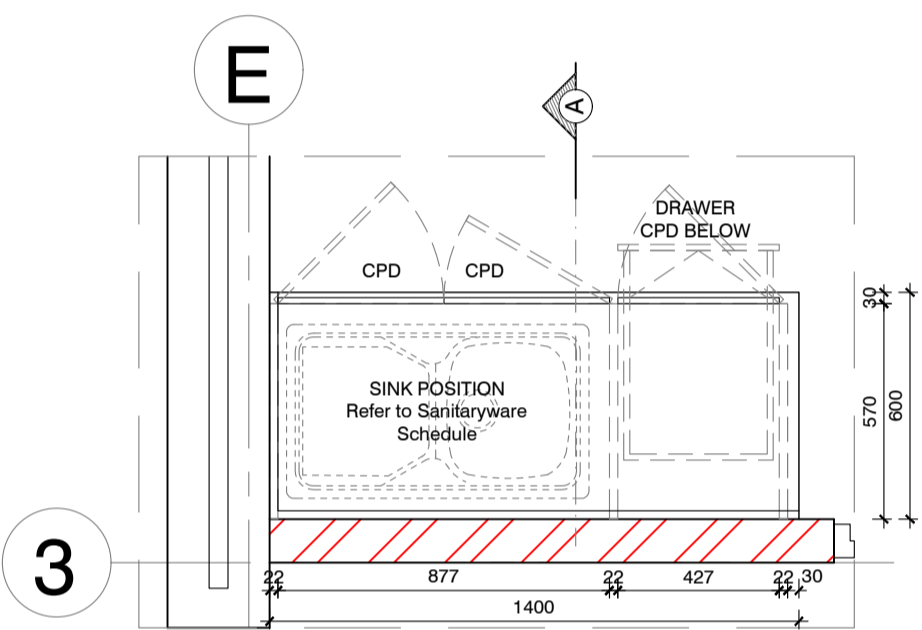
Joinery Details: Sister's Office 14 - Section A-A
 Scale 1:20



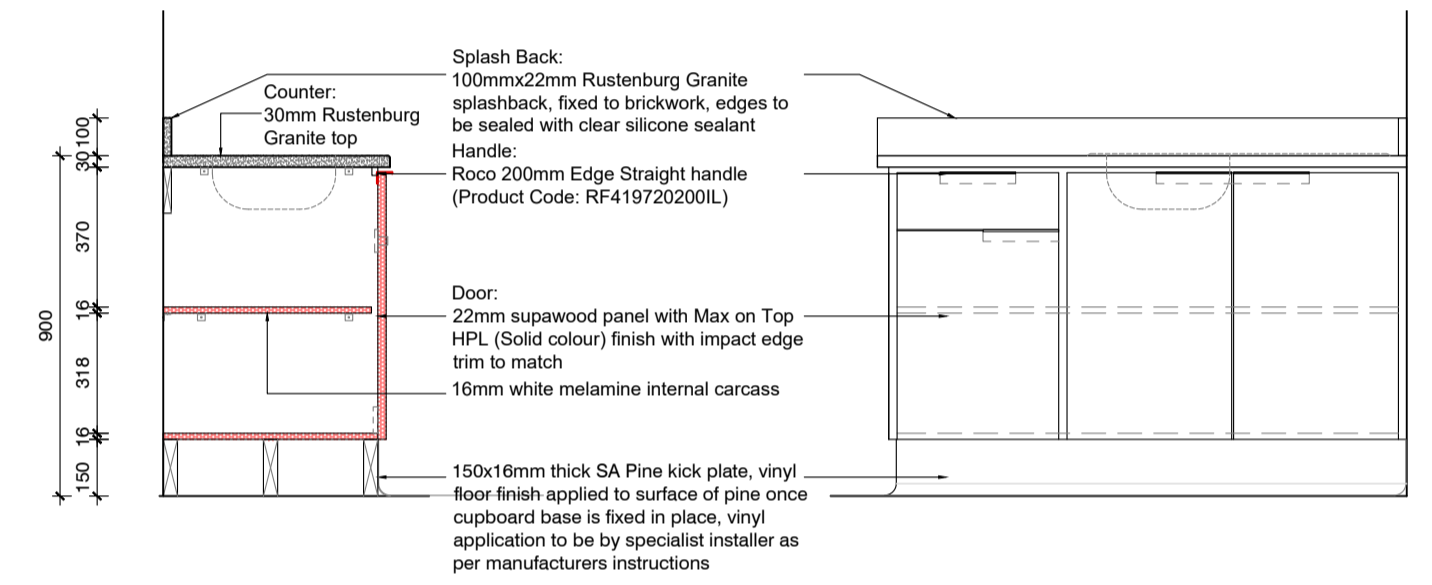
Joinery Details: Patient Kitchen 33 - Plan
 Scale 1:20



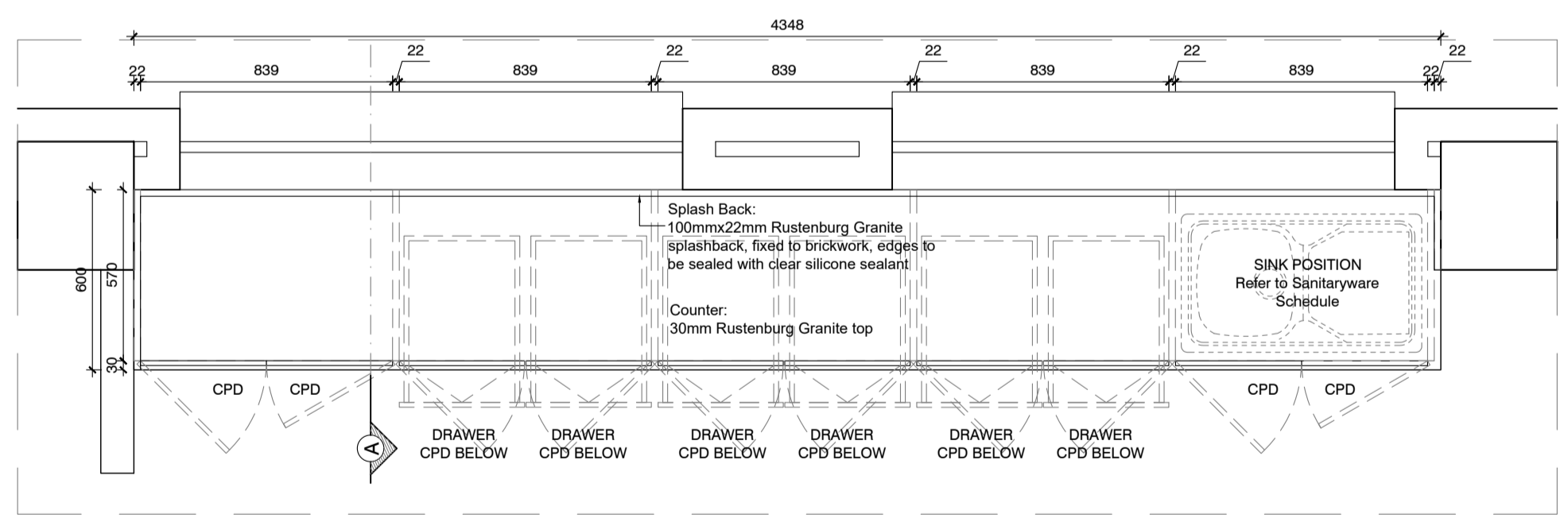
Joinery Details: Patient Kitchen 33 - Section A-A & Elevation
 Scale 1:20



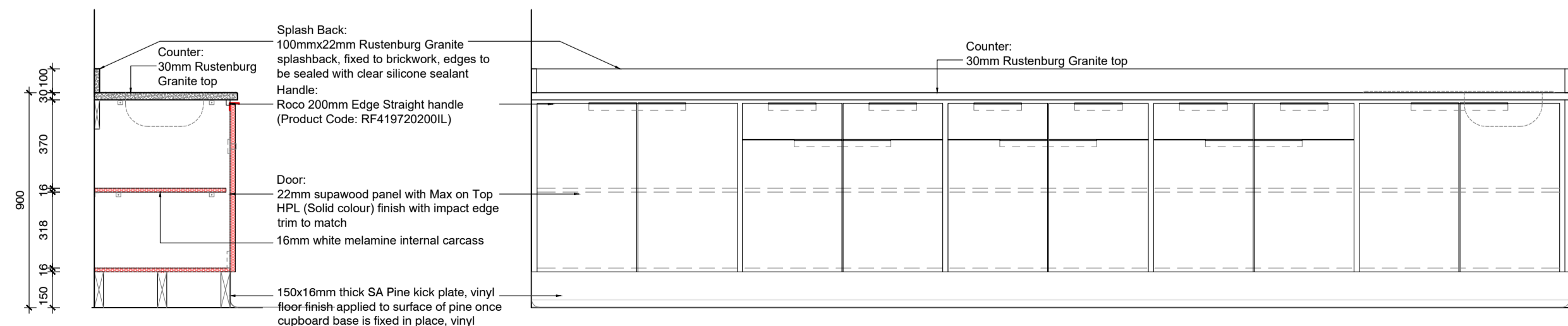
Joinery Details: Porters 21 - Plan
 Scale 1:20



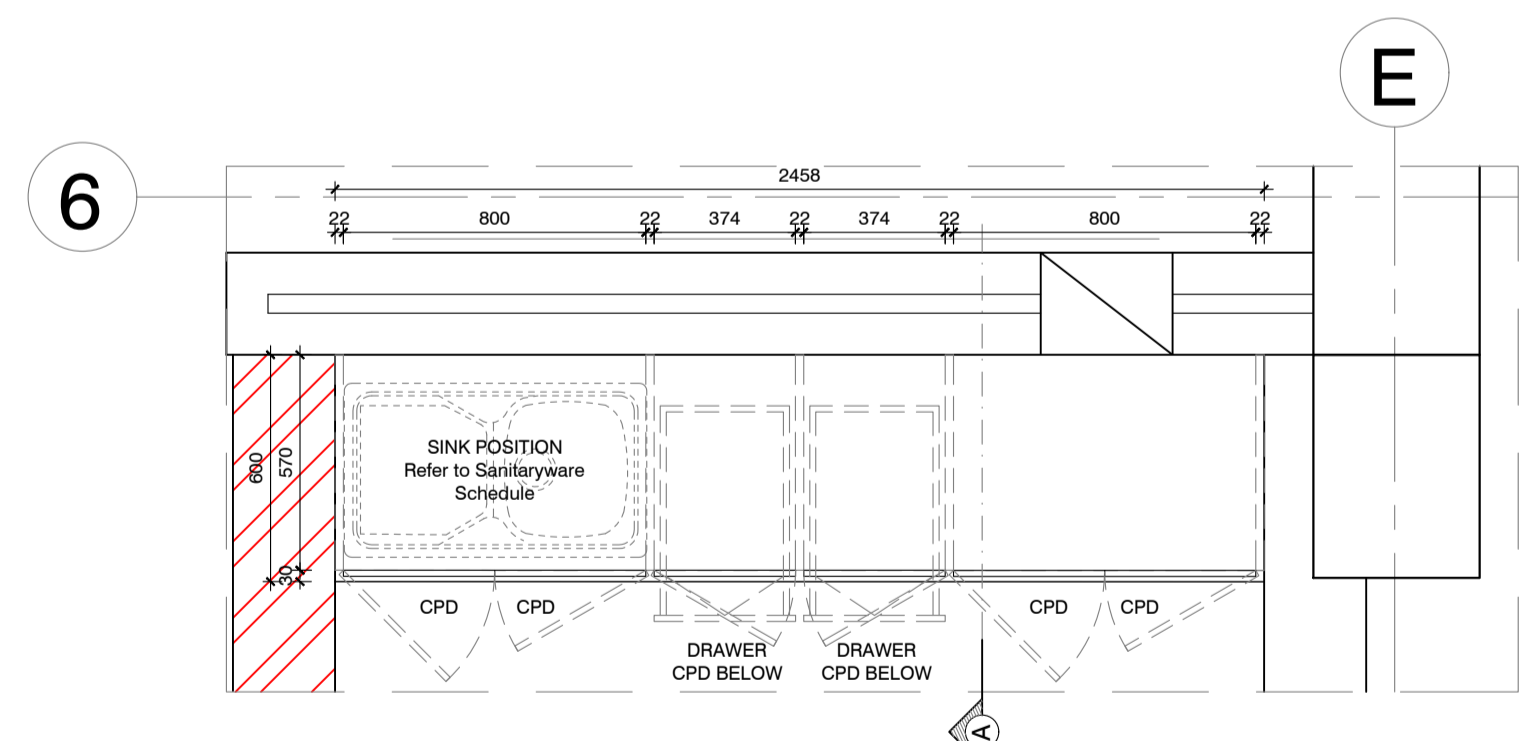
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 Scale 1:20



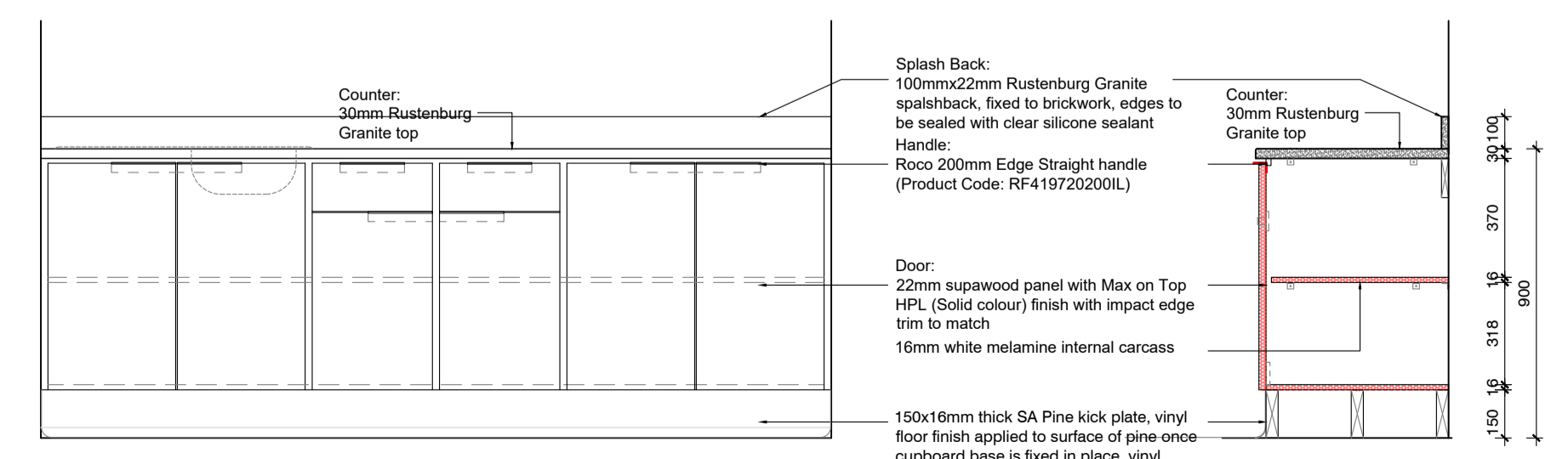
Joinery Details: Staff Room 36 - Plan
 Scale 1:20



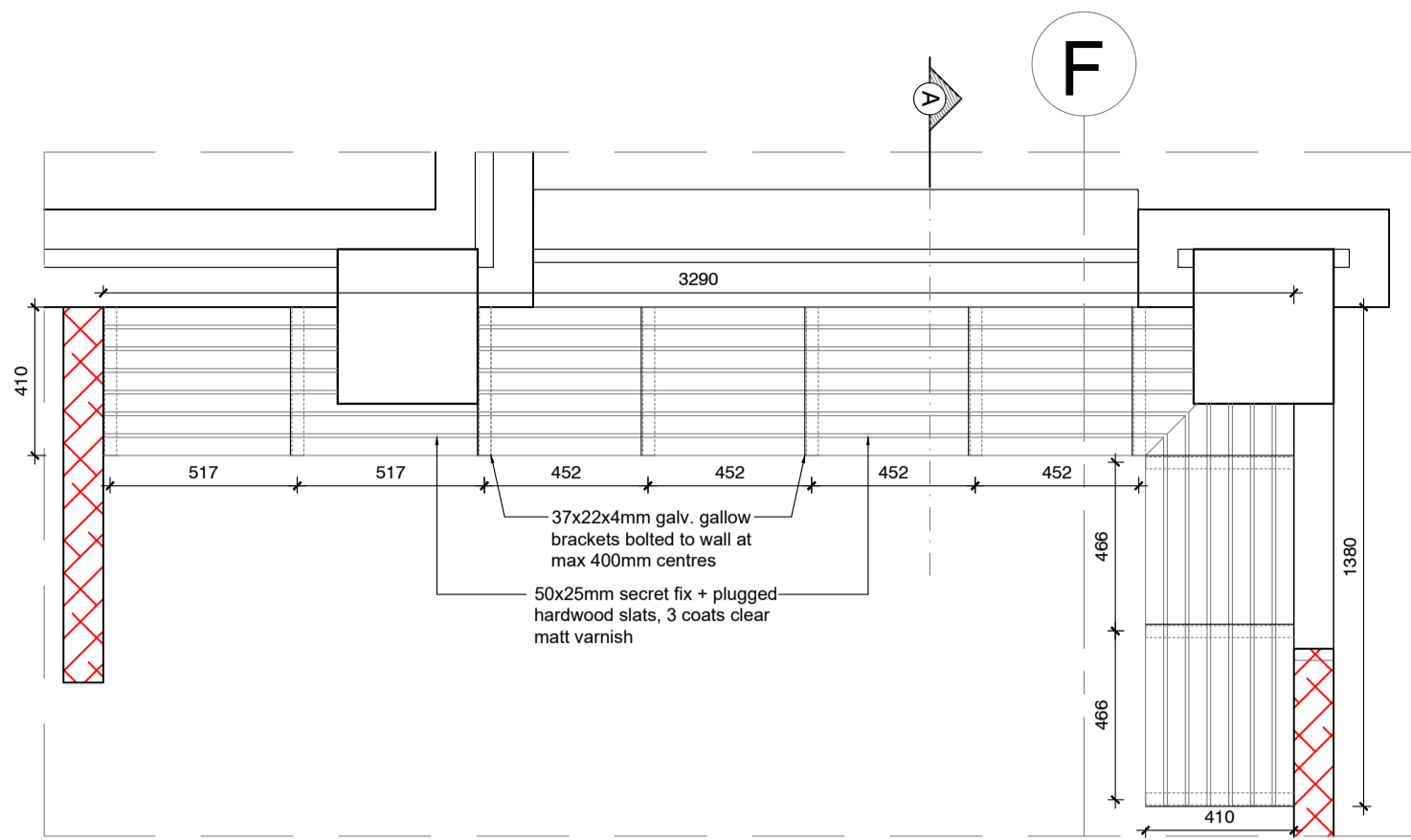
Joinery Details: Staff Room 36 - Section A-A & Elevation
 Scale 1:20



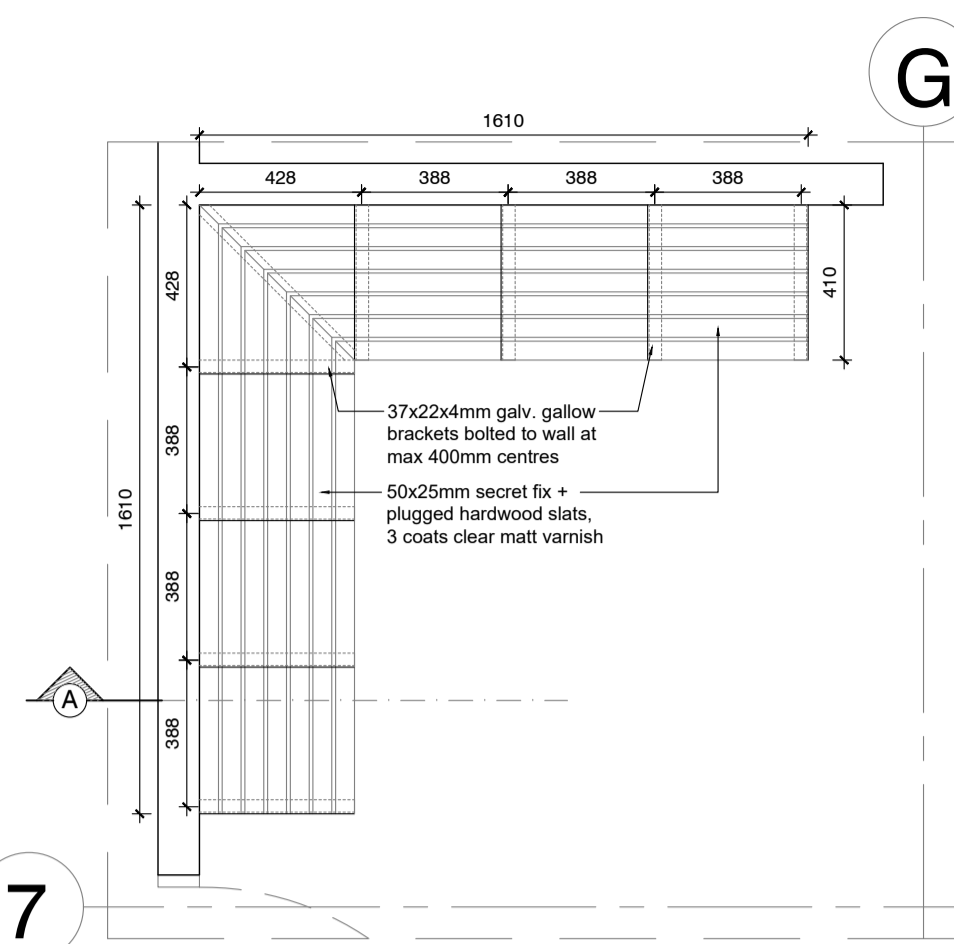
Joinery Details: Doctor's Sleep 19 - Plan
 Scale 1:20



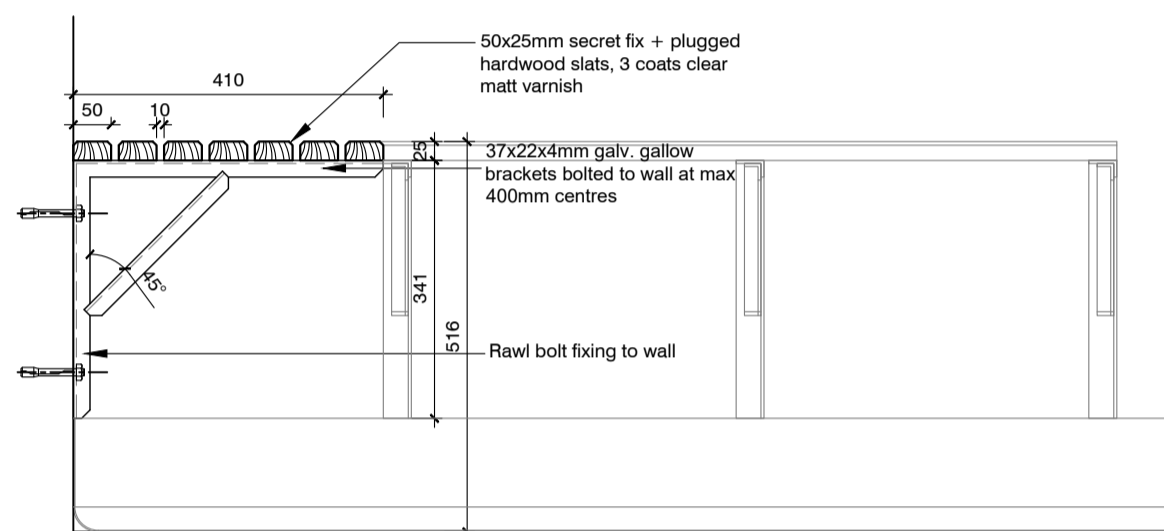
Joinery Details: Doctor's Sleep 19 - Section A-A & Elevation
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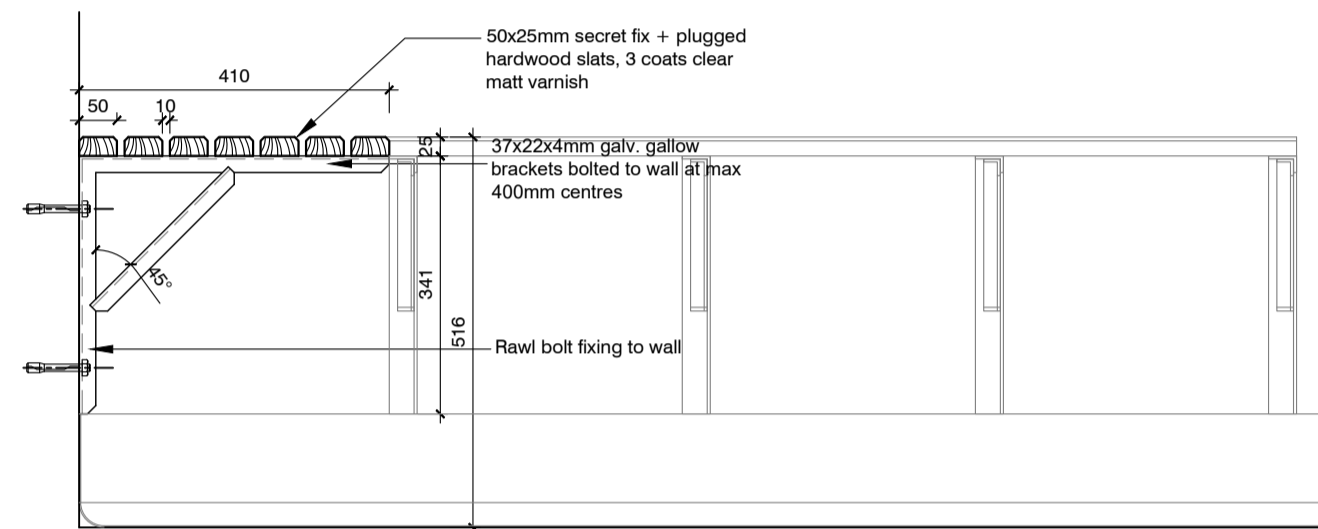
Joinery Details: Male Change Room 35 - Plan
Scale 1:20



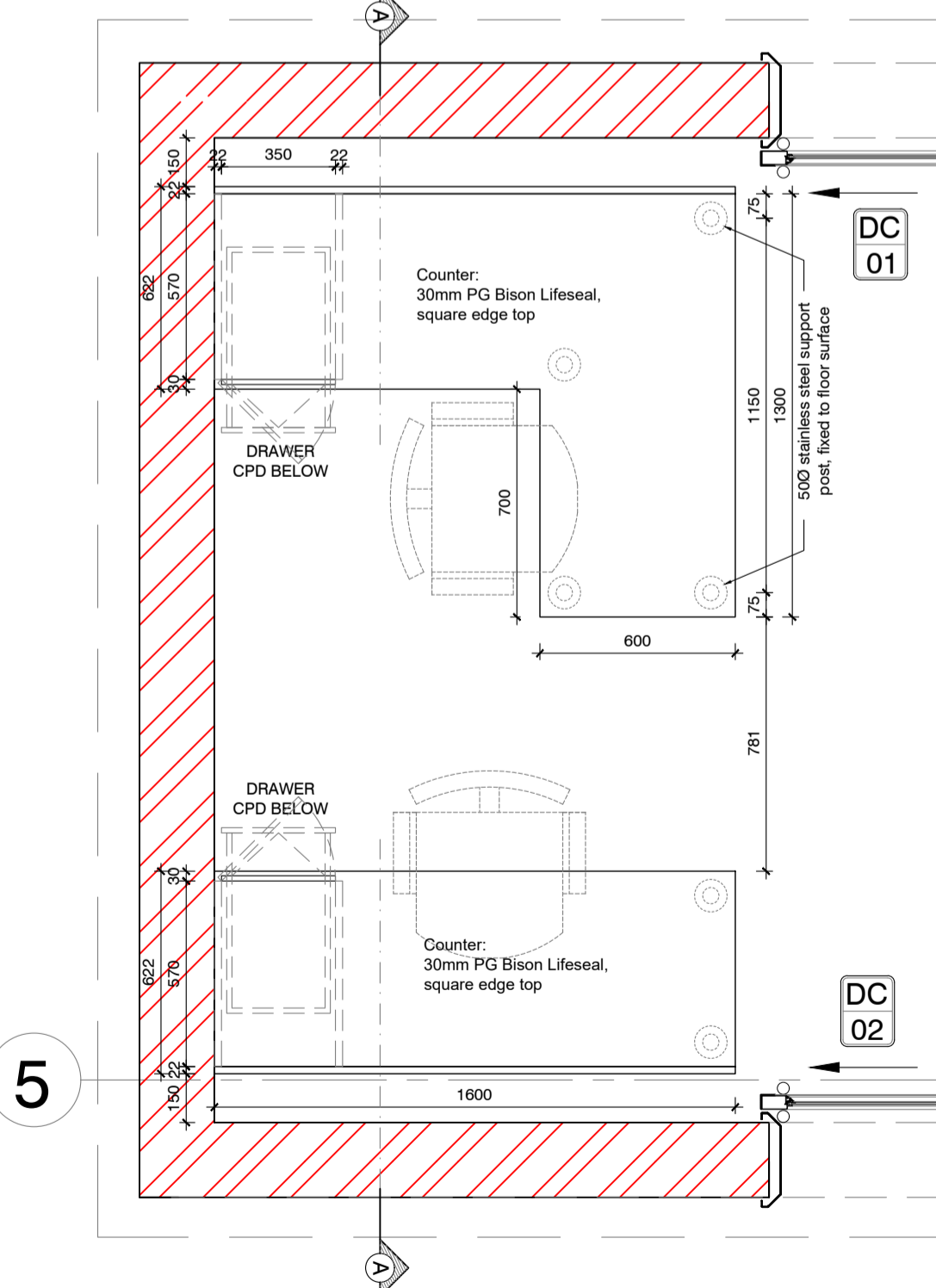
Joinery Details: Female Change Room 41 - Plan
Scale 1:20



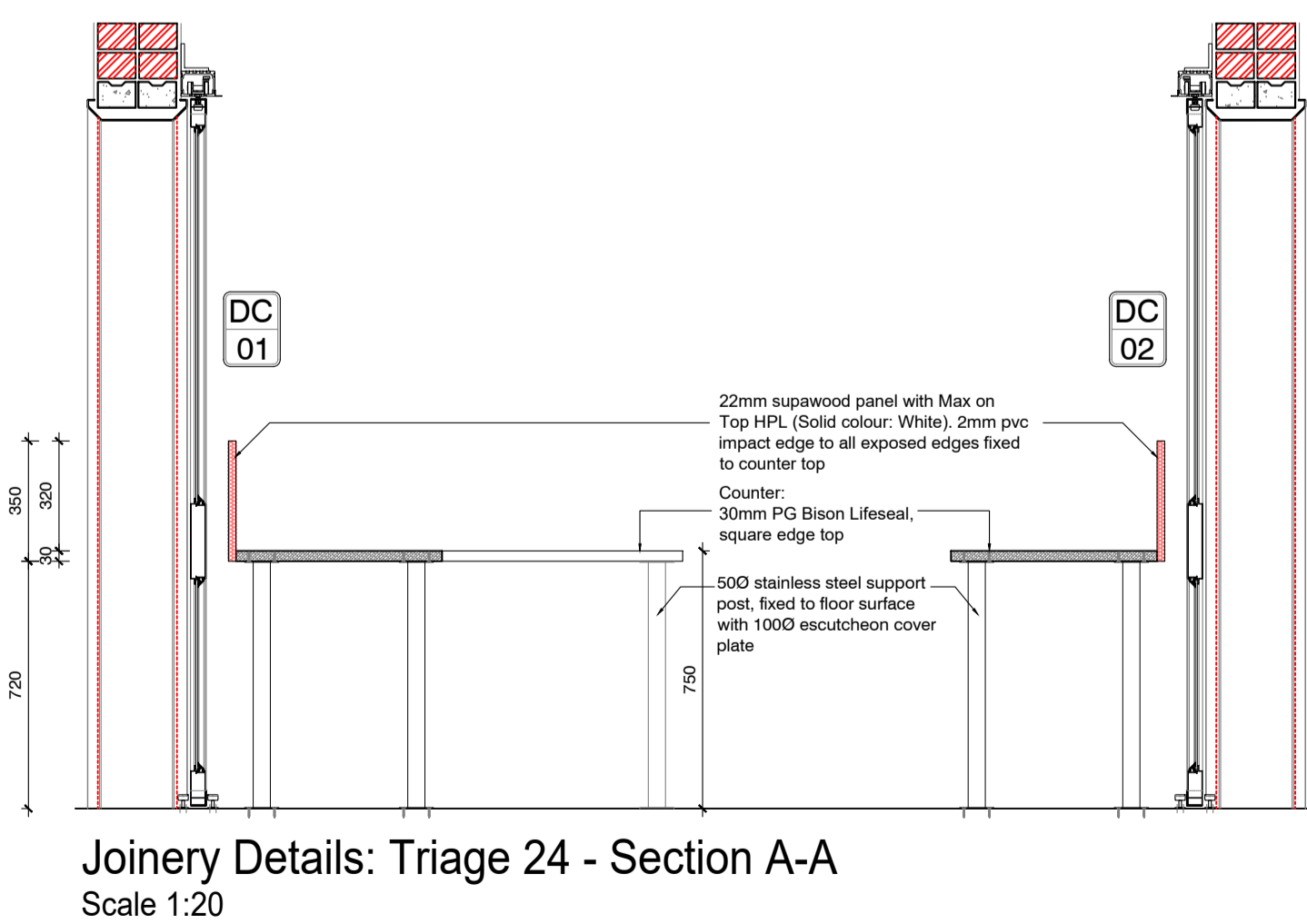
Joinery Details: Male Change Room Bench - Section A-A
Scale 1:10



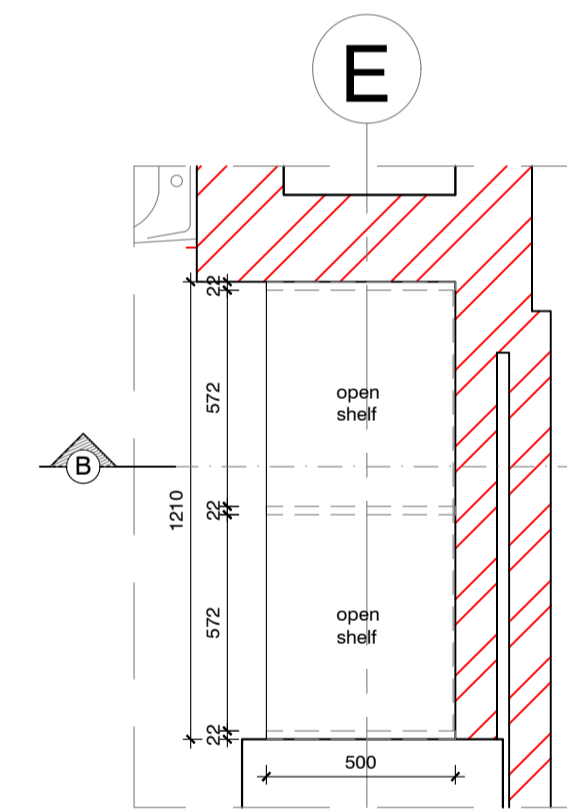
Joinery Details: Female Change Room Bench - Section A-A
Scale 1:10



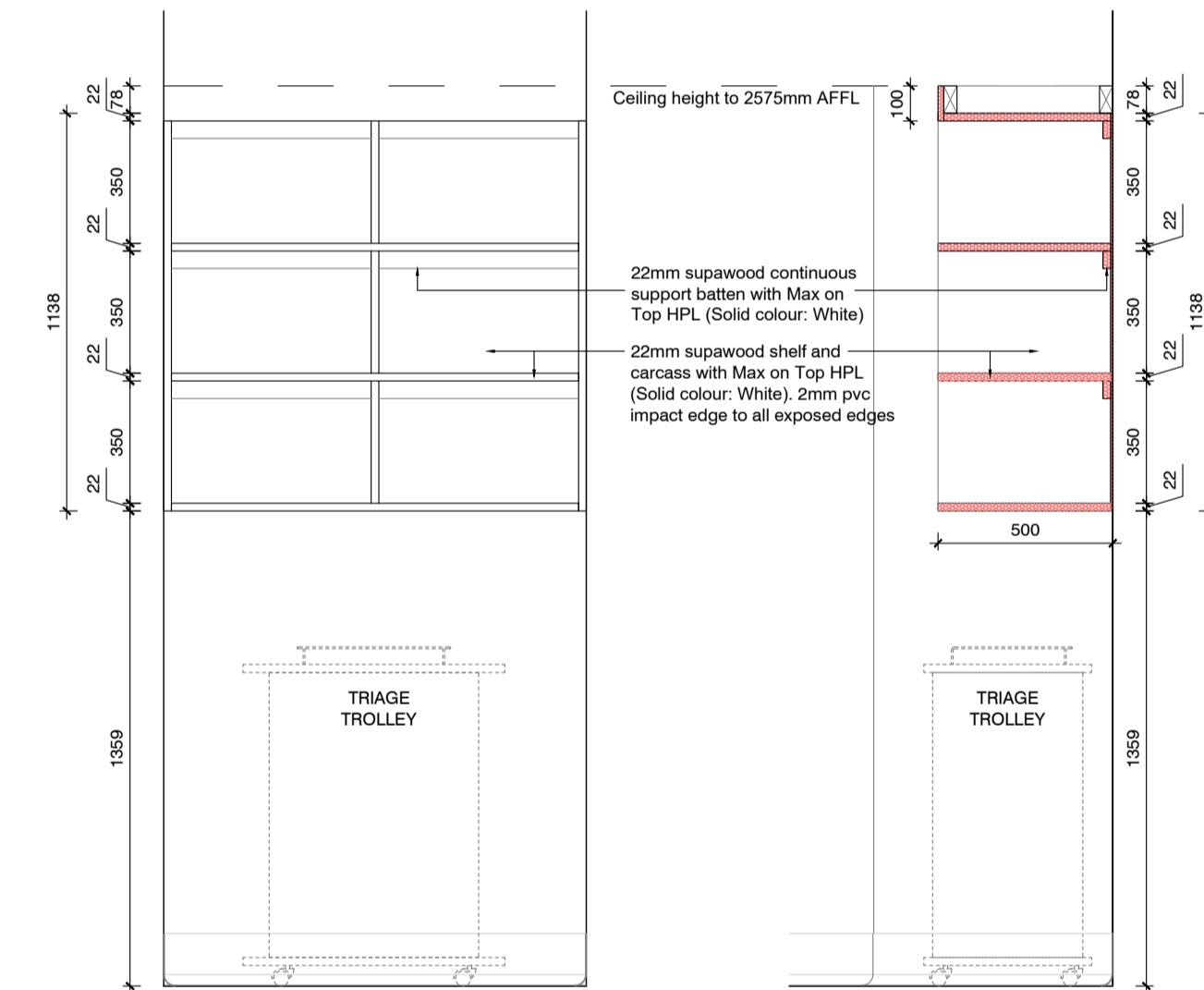
Joinery Details: Triage 24 - Plan
Scale 1:20



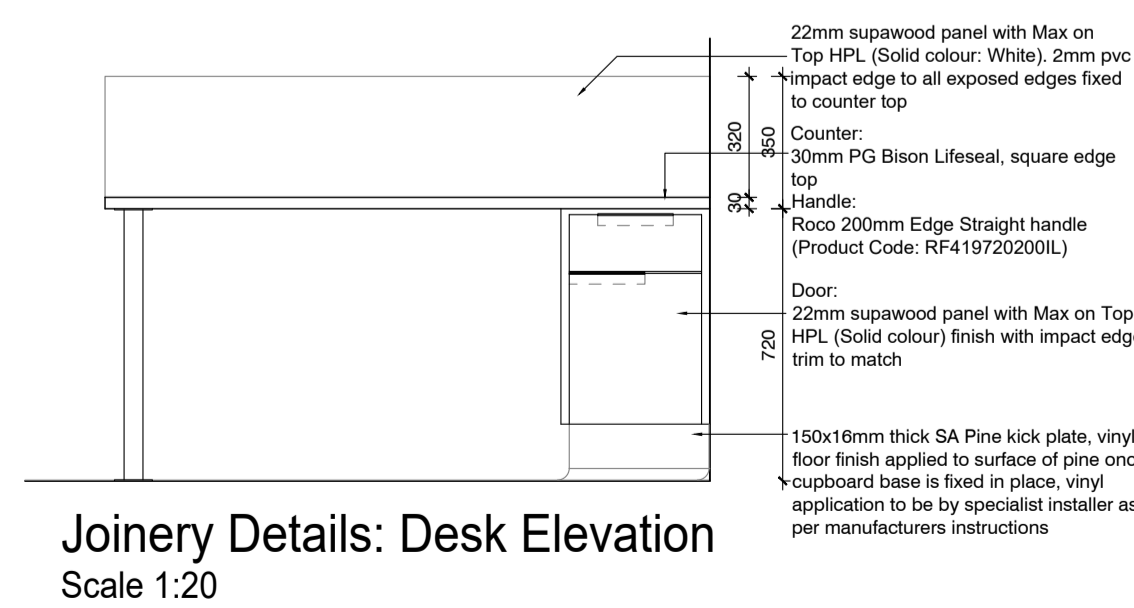
Joinery Details: Triage 24 - Section A-A
Scale 1:20



Joinery Details: Triage 24 - Plan
Scale 1:20



Joinery Details: Triage 24 - Elevation & Section B-B
Scale 1:20



Joinery Details: Desk Elevation
Scale 1:20

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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
18 Park Lane Central Port Elizabeth 6001
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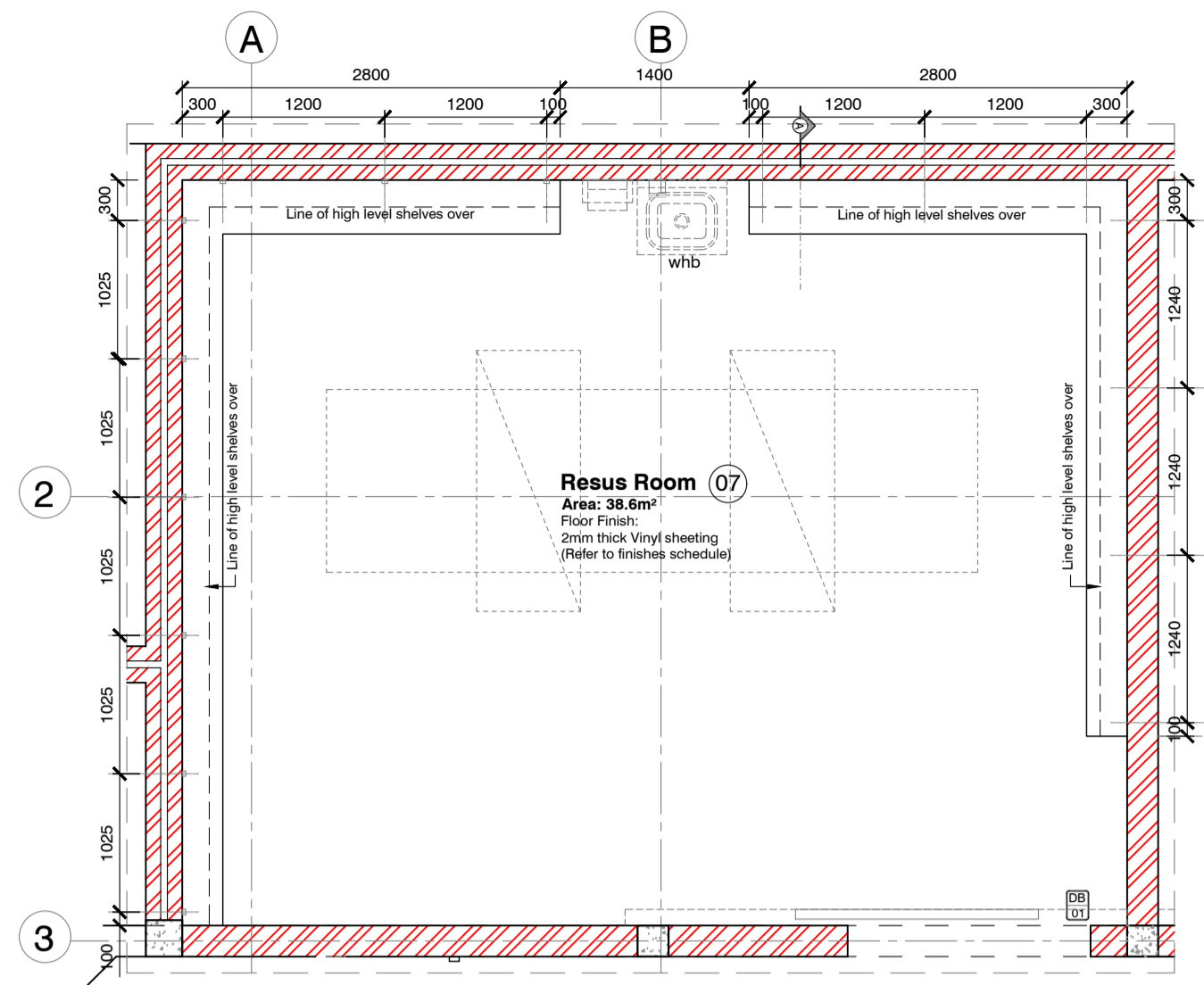
Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Working Drawings:
JOINERY DETAILS 03 - TRAUMA UNIT

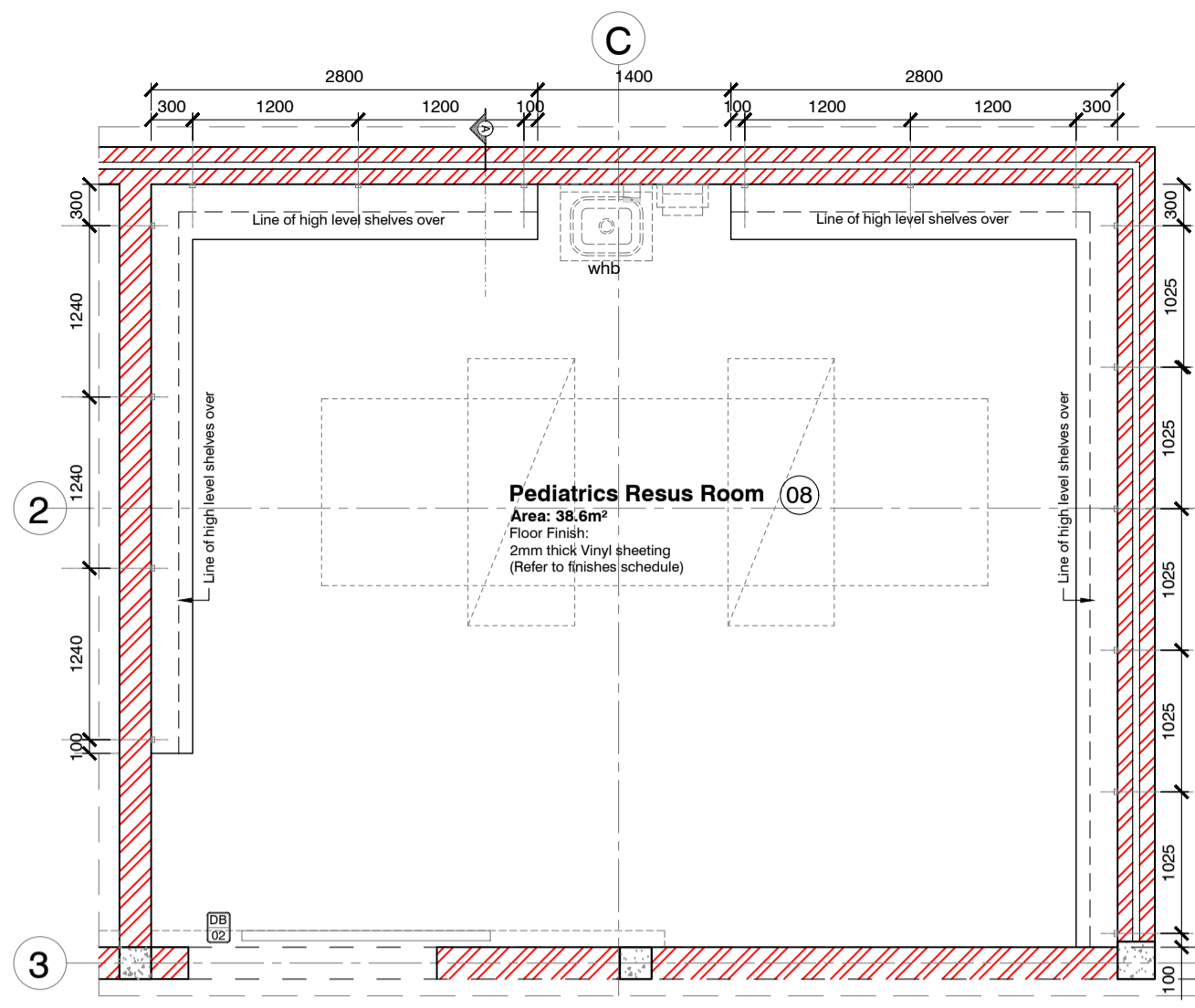
Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA477(B)UPH/ Trauma Unit-306										
Drawing Status	<table border="1"> <tr> <td>Disc. Status</td> <td> </td> </tr> <tr> <td>1. Update</td> <td> </td> </tr> <tr> <td>2. Deleted</td> <td> </td> </tr> <tr> <td>3. Revisions</td> <td> </td> </tr> <tr> <td>4. Deleted</td> <td> </td> </tr> </table>	Disc. Status		1. Update		2. Deleted		3. Revisions		4. Deleted	
Disc. Status											
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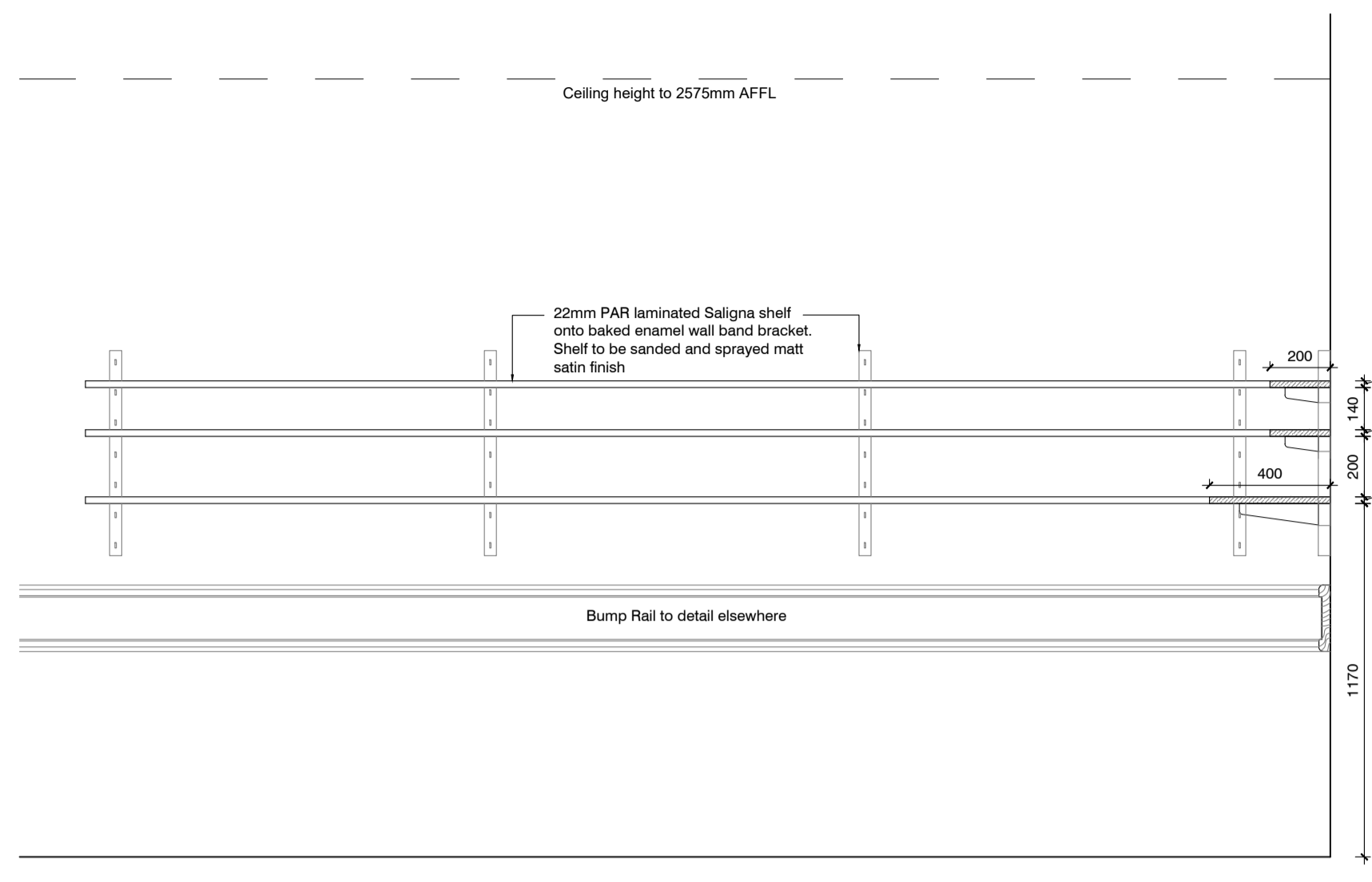
ISSUED FOR: TENDER



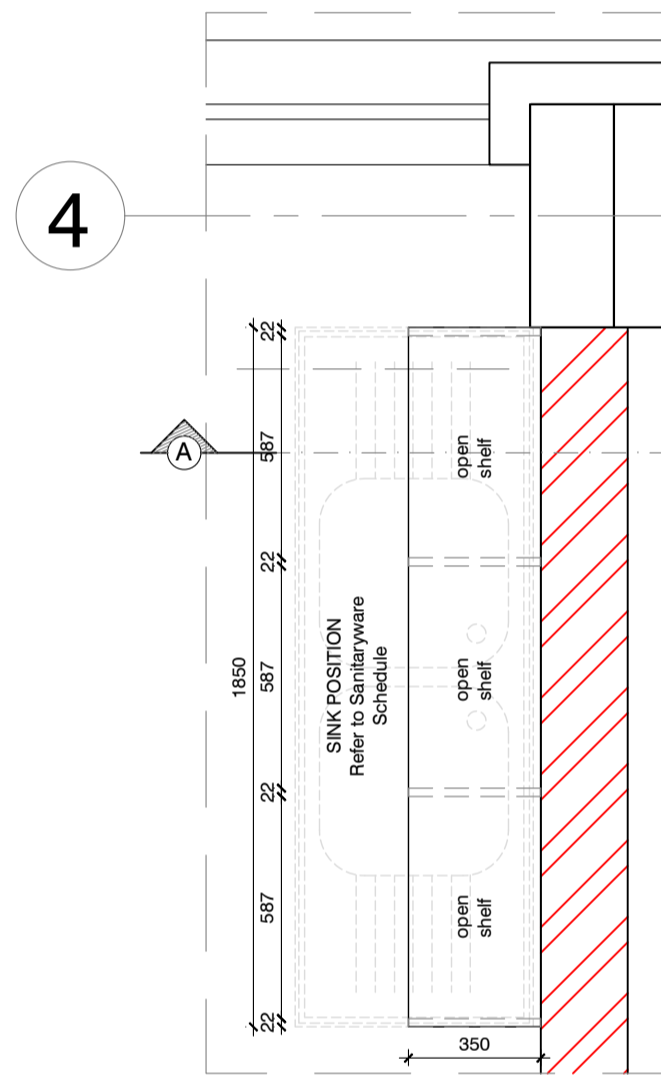
Joinery Details: Resus Room 07 - Plan
Scale 1:50



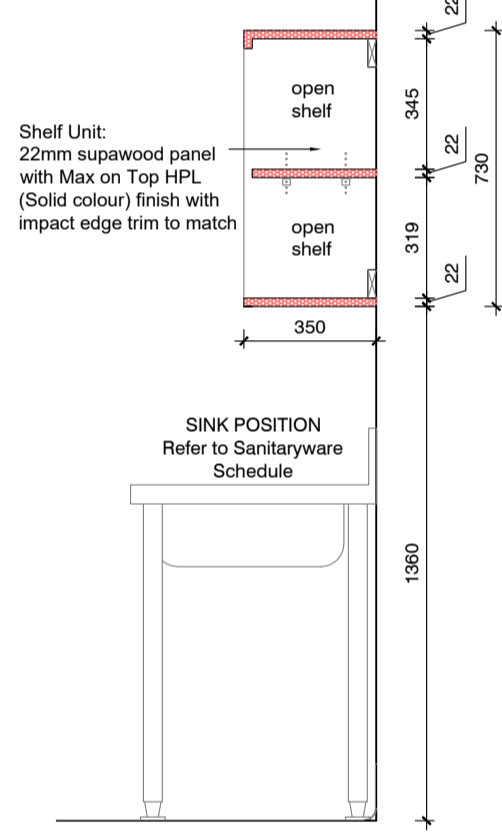
Joinery Details: Pediatrics Resus Room 08 - Plan
Scale 1:50



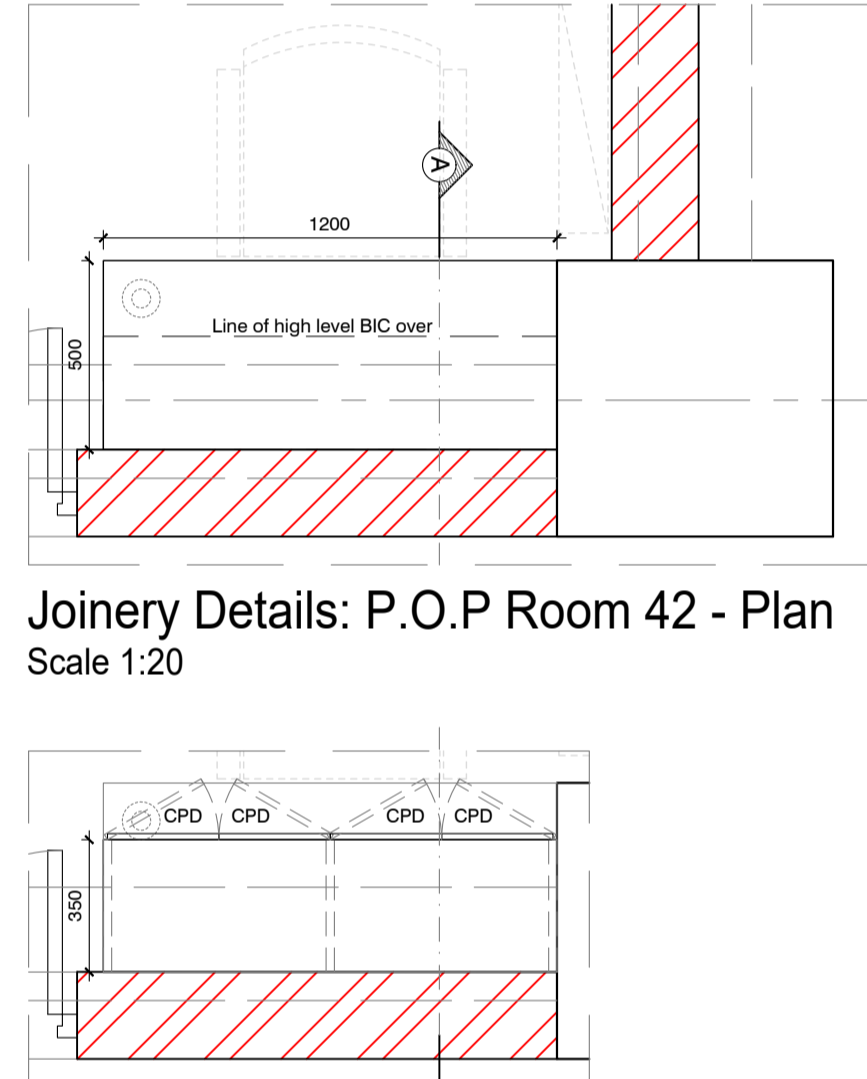
Joinery Details: Pediatrics/ Resus Room 07, 08 - Section A-A
Scale 1:20



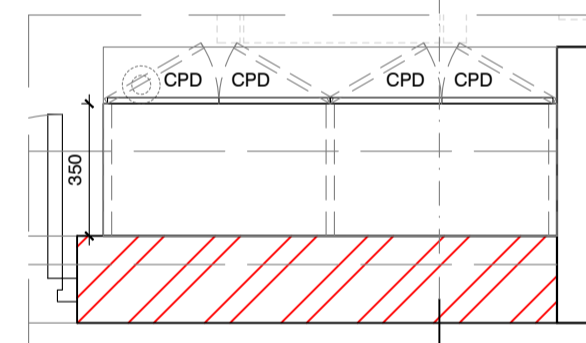
Joinery Details: Procedure Room 37 - Plan
Scale 1:20



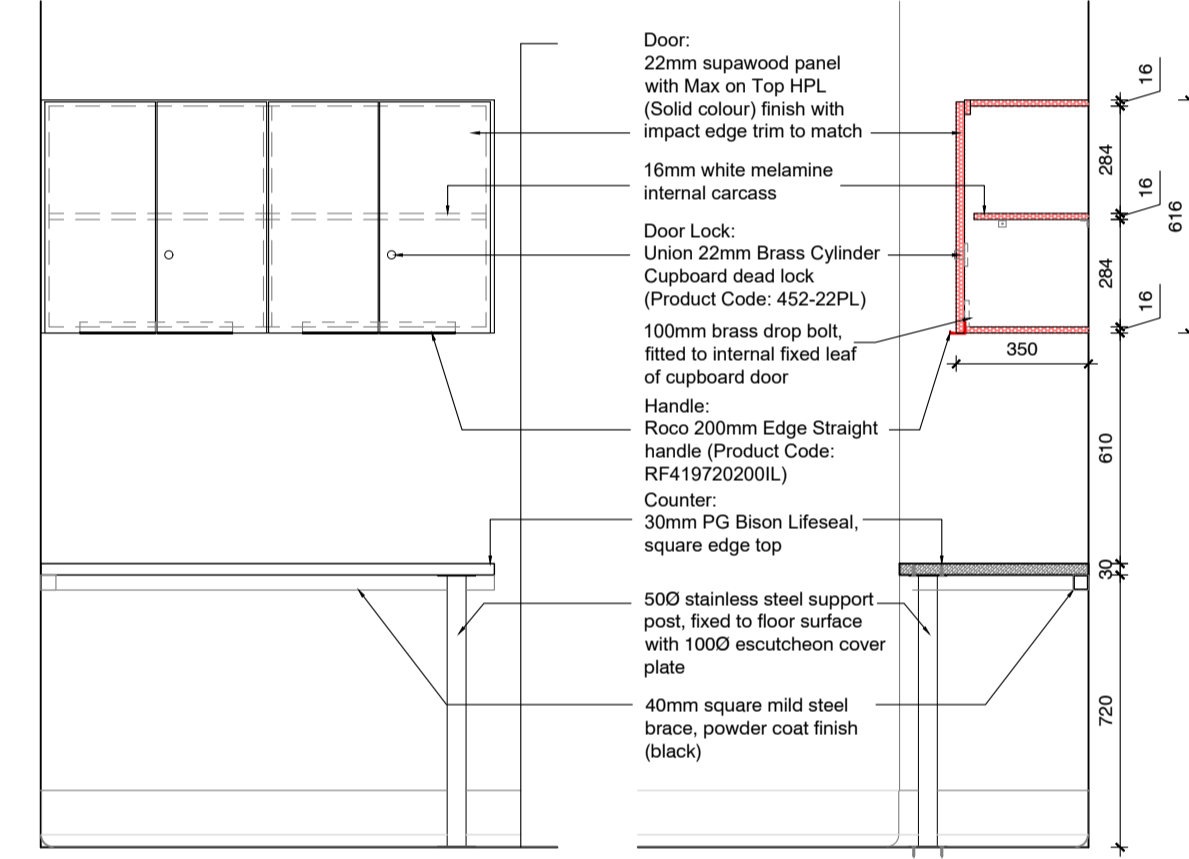
Joinery Details: Procedure Room 37 - Section A-A
Scale 1:20



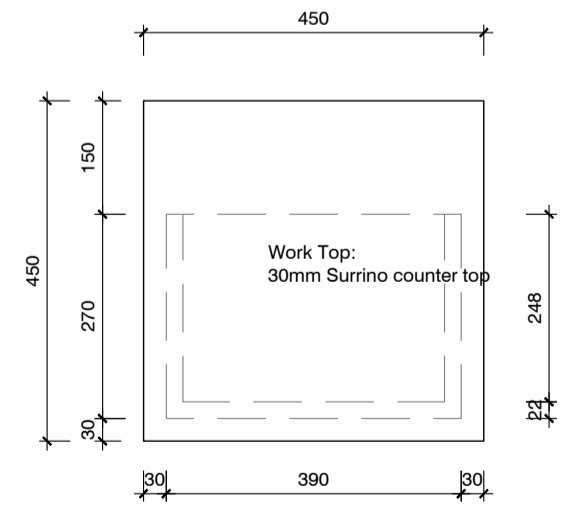
Joinery Details: P.O.P Room 42 - Plan
Scale 1:20



High Level BIC Plan

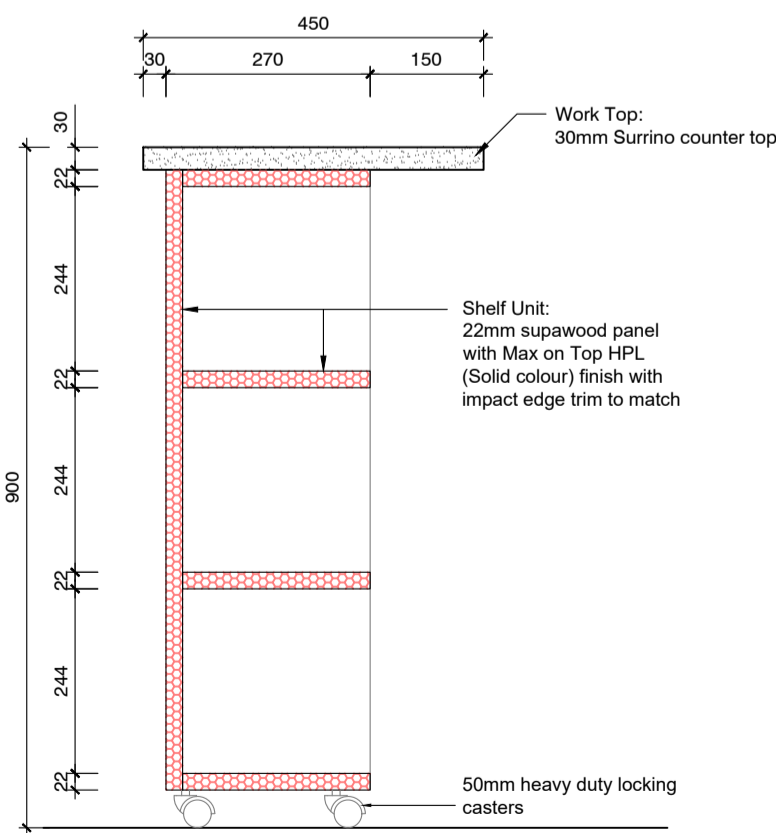


Joinery Details: P.O.P Room 42 - Elevation & Section A-A
Scale 1:20

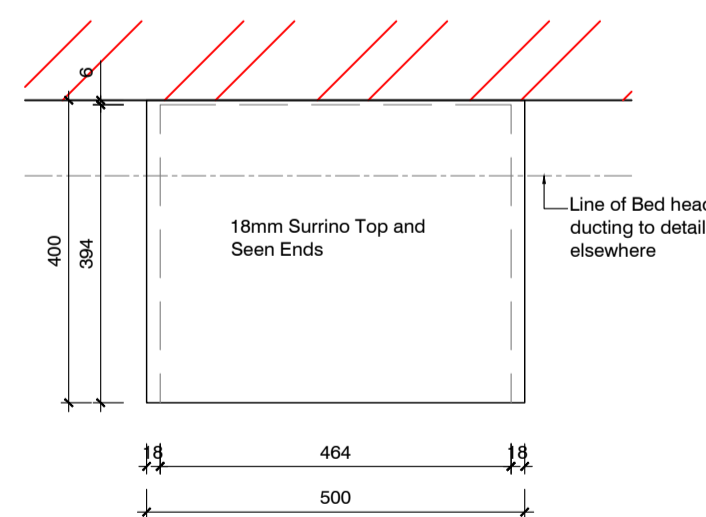


Joinery Details: Doctors Lectern - Plan
Scale 1:10

QUANTITY: 04

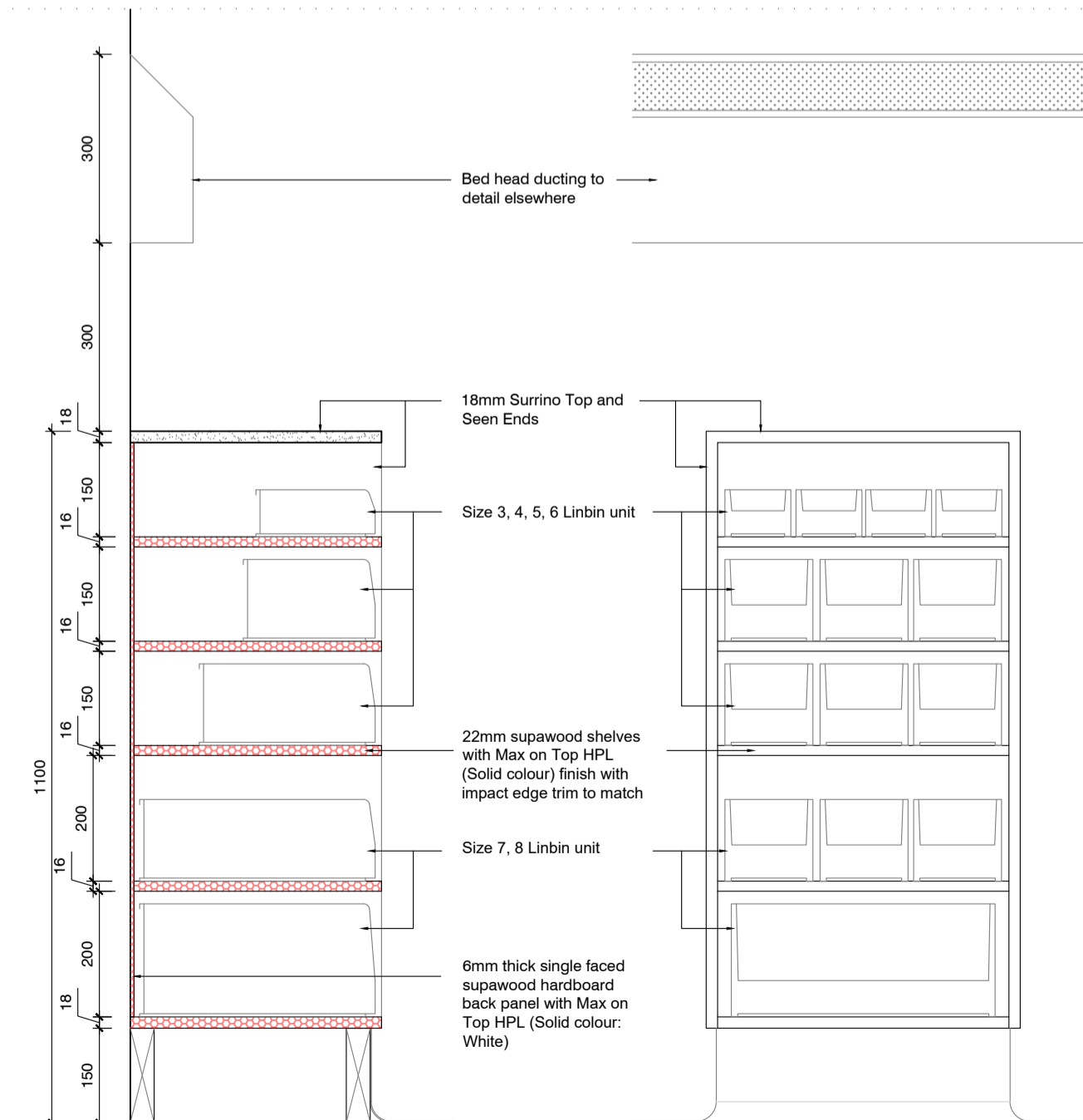


Joinery Details: Doctors Lectern - Section A-A
Scale 1:10



Joinery Details: Linbin Consumable Storage Unit - Plan
Scale 1:10

QUANTITY: 30



Joinery Details: Linbin Consumable Storage Unit - Section A-A & Elevation
Scale 1:10

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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
18 Park Lane Central Port Elizabeth 6001
PO Box 6213 Walter Park Elizabeth 6005
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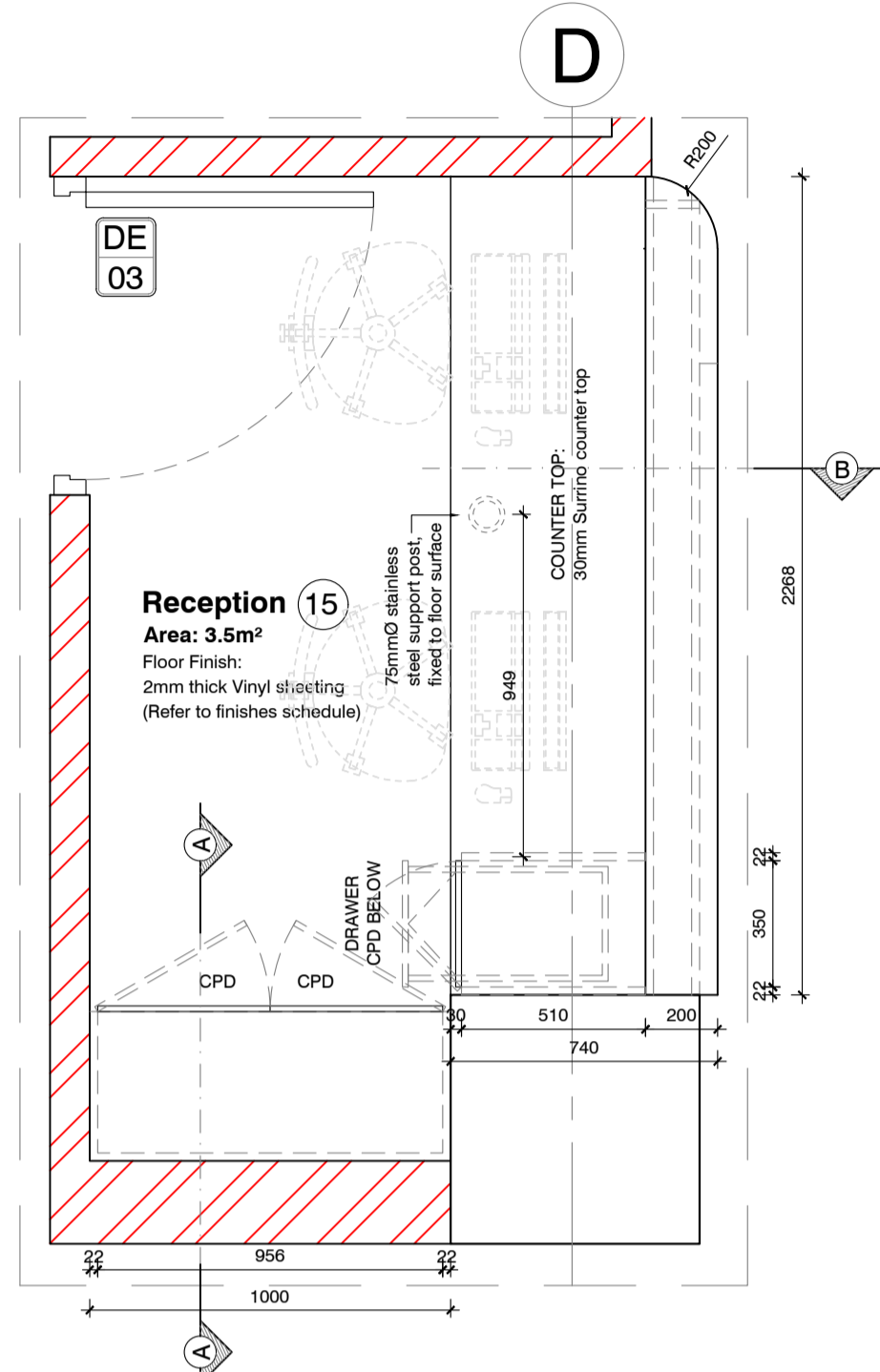
Project Title:
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name:
Working Drawings:
JOINERY DETAILS 04 - TRAUMA UNIT

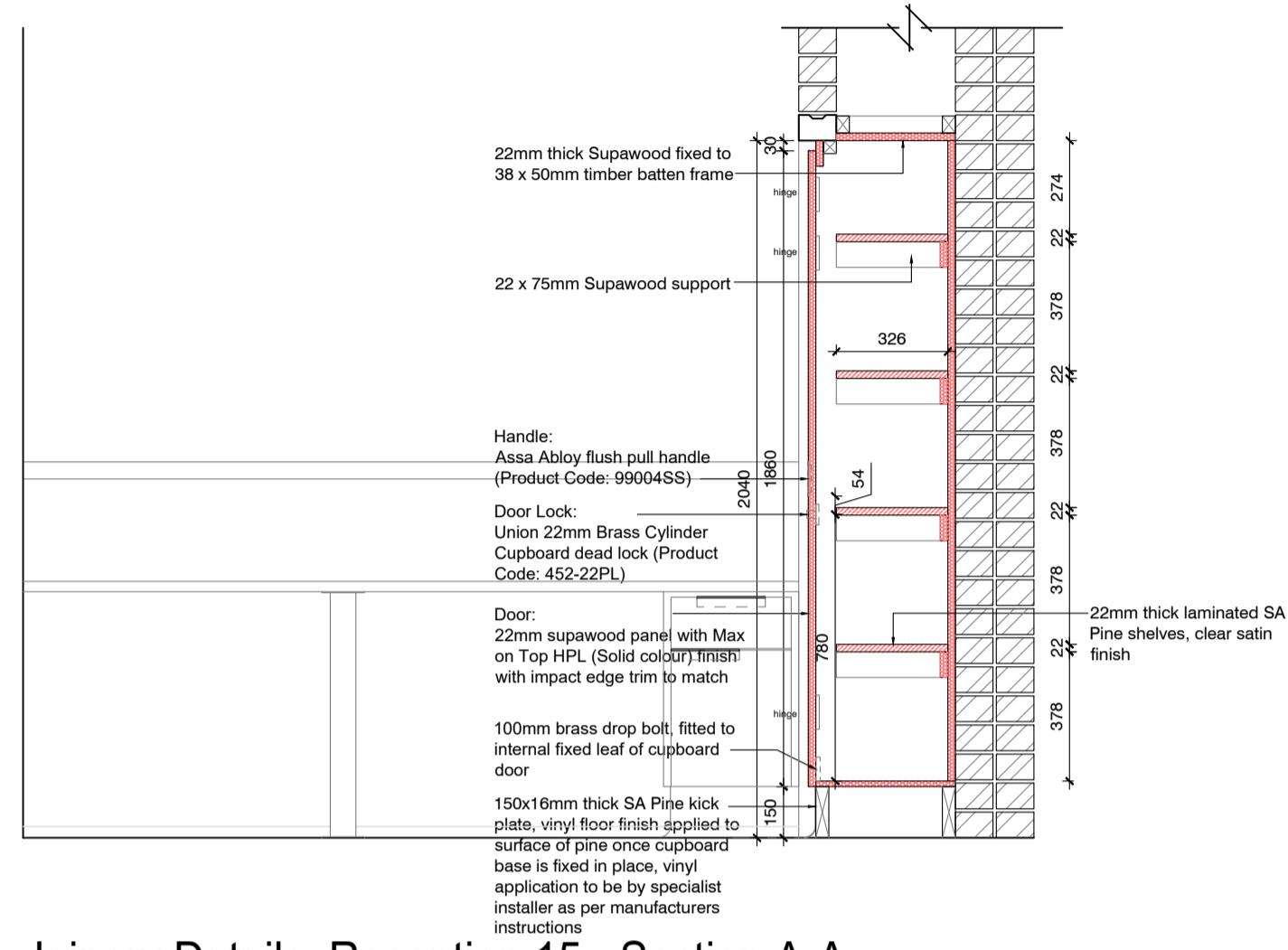
Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA477(B)UPH/ Trauma Unit-307
Disc Status	1/1
1/1	1/1
2/2	2/2
3/3	3/3
4/4	4/4
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6/6	6/6
7/7	7/7
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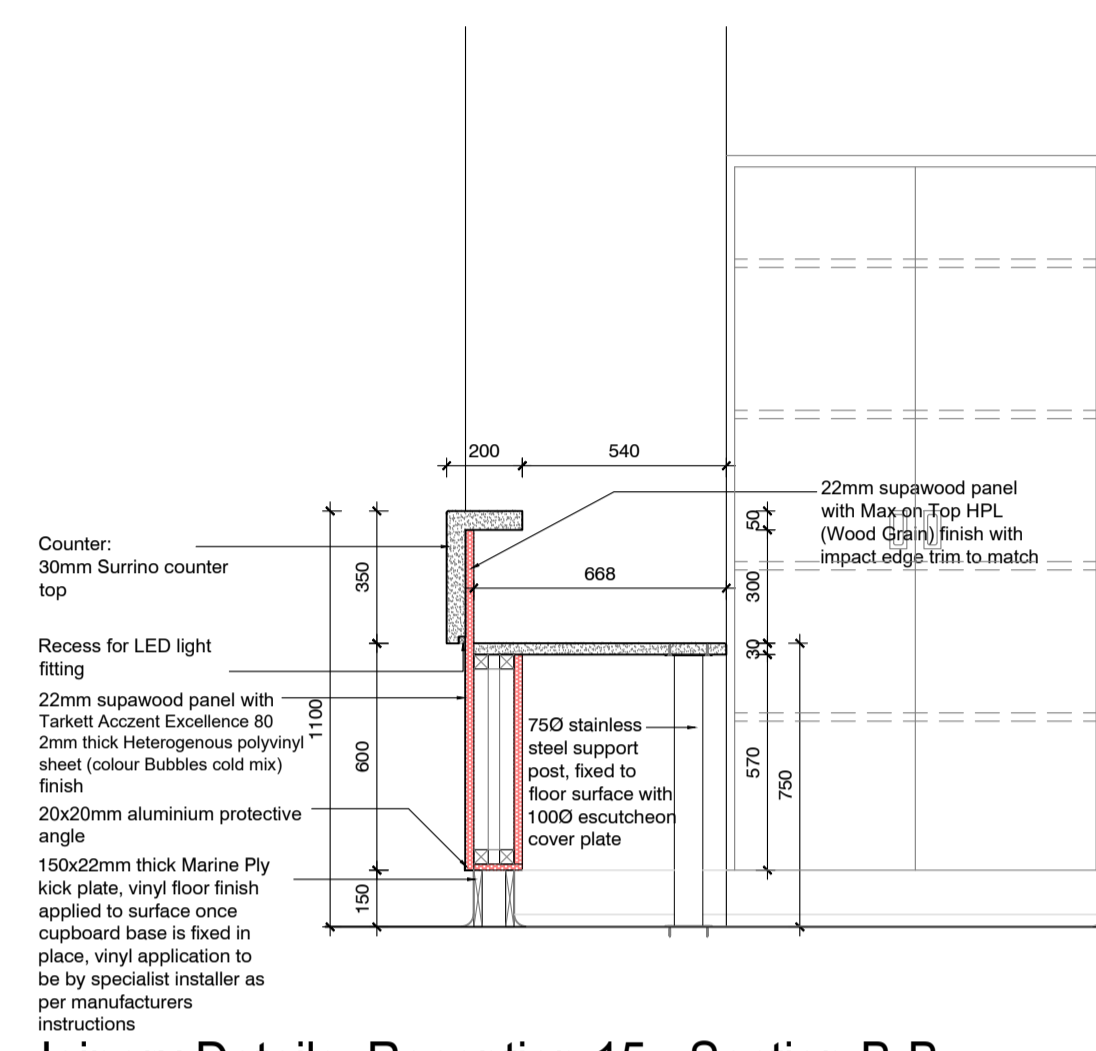
ISSUED FOR: TENDER



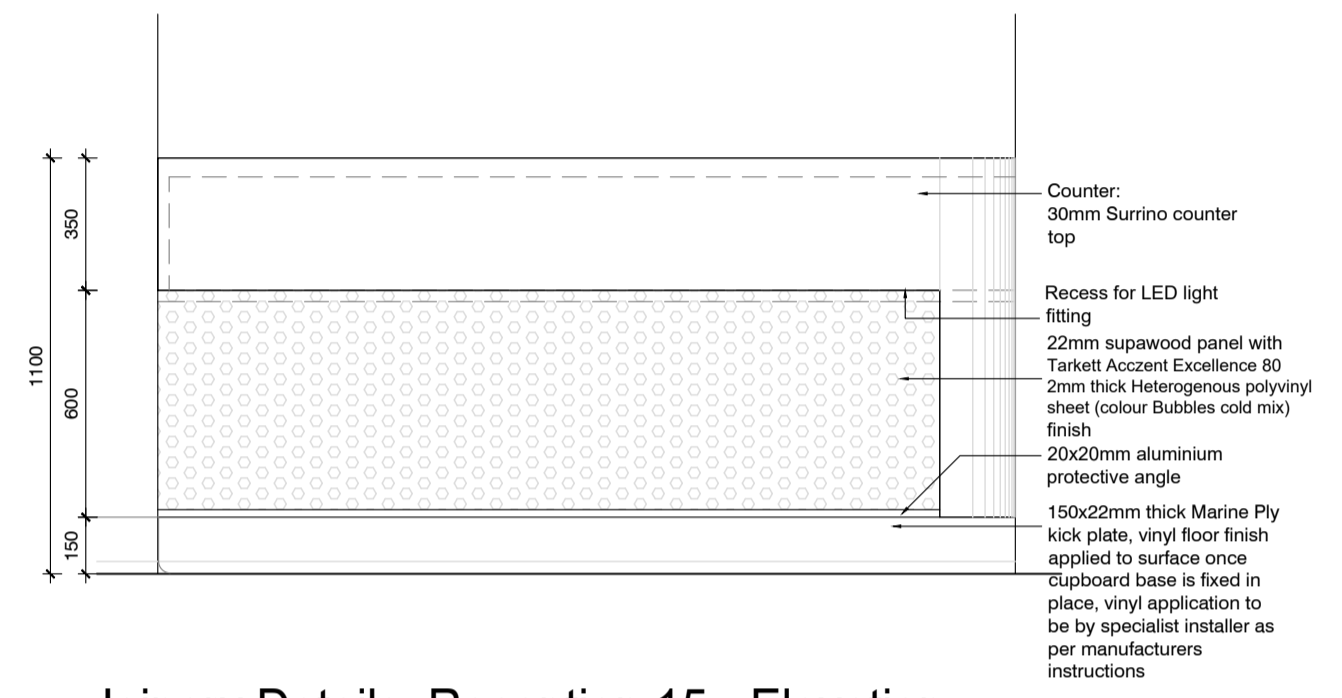
Joinery Details: Reception 15 - Plan
Scale 1:20



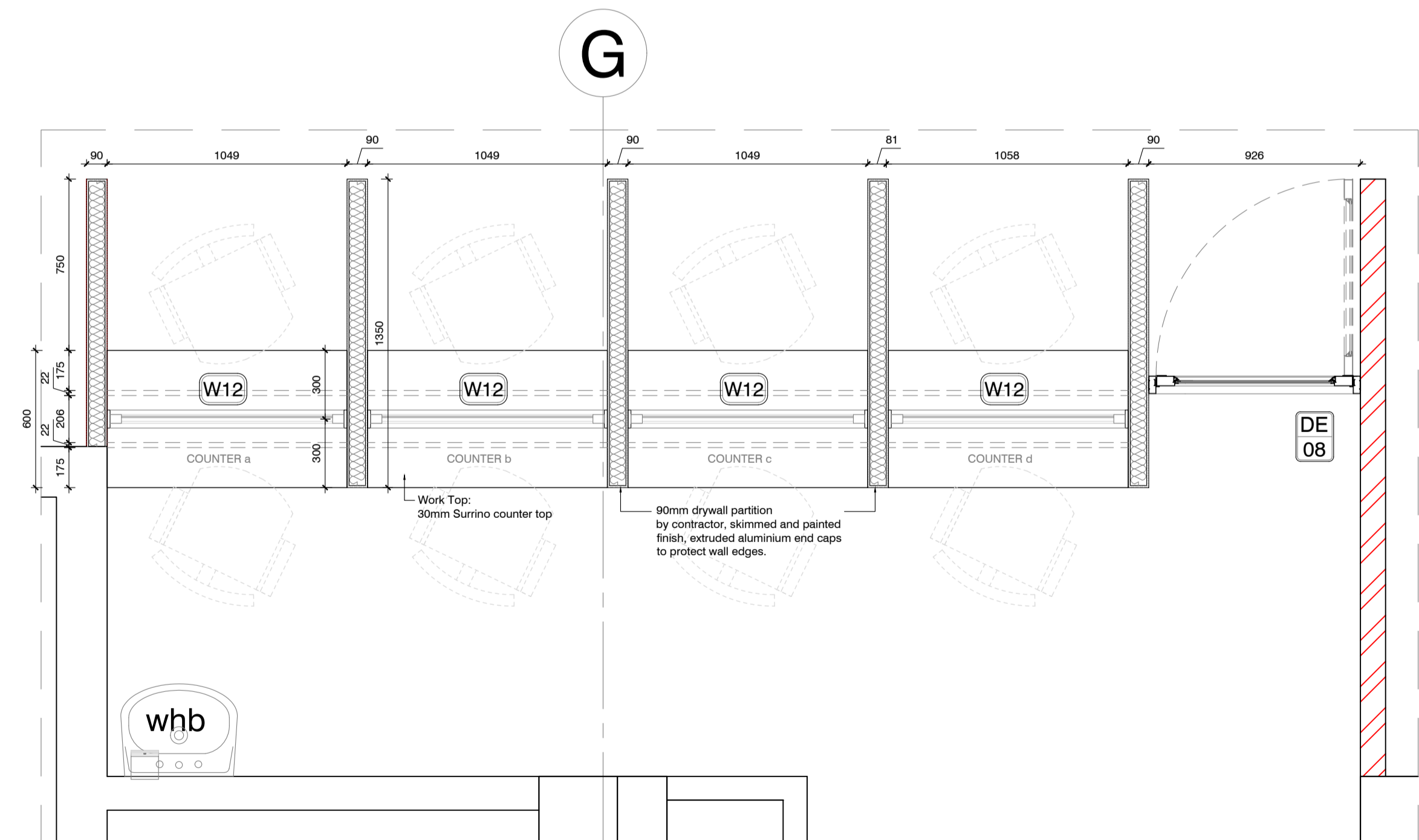
Joinery Details: Reception 15 - Section A-A
Scale 1:20



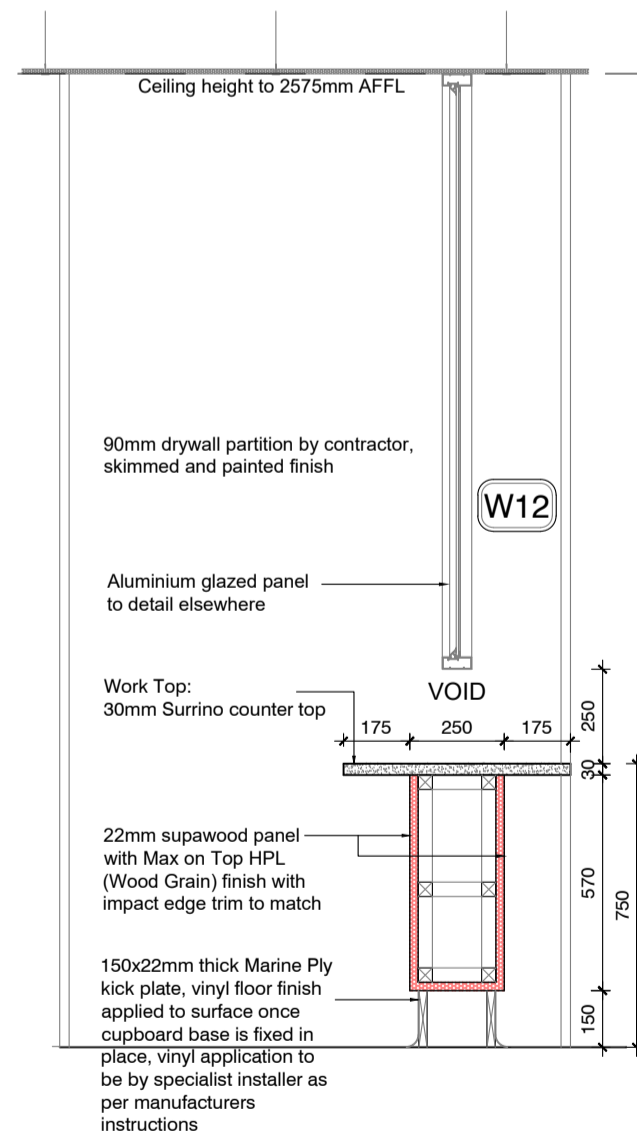
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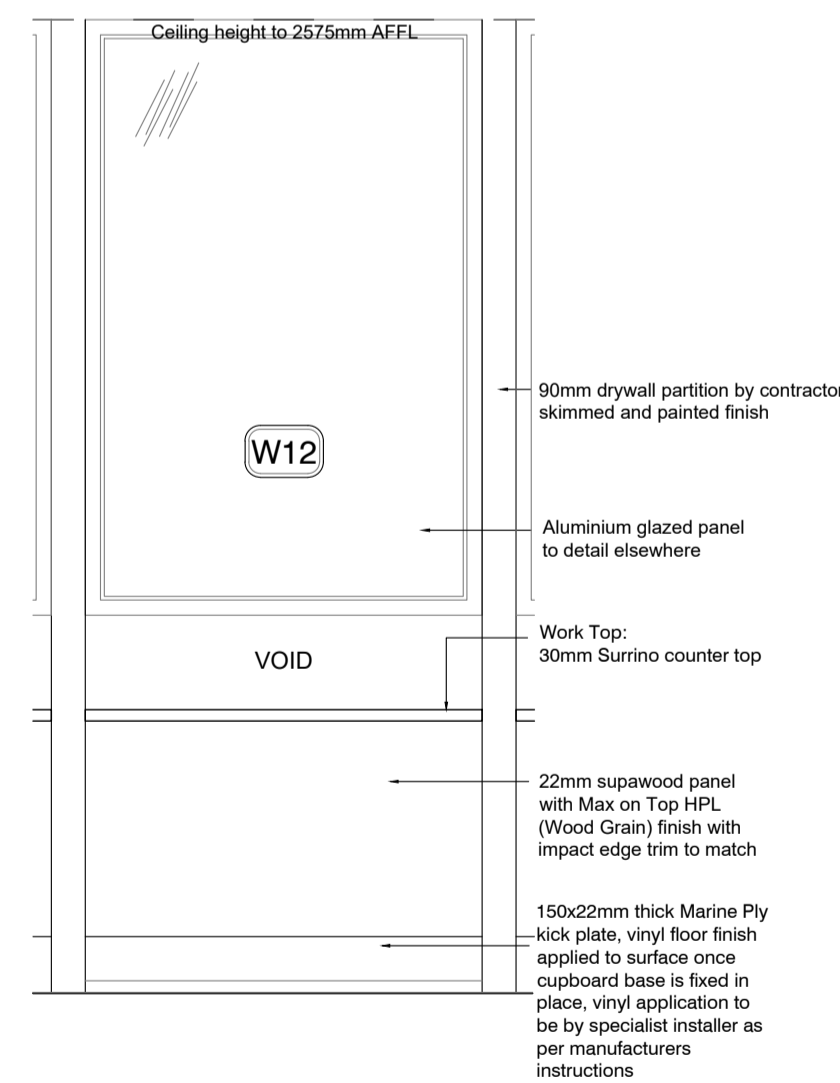
Joinery Details: Reception 15 - Elevation
Scale 1:20



Joinery Details: Admissions Room 38 - Plan
Scale 1:20



Joinery Details: Admissions Room 38 - Section A-A & Elevation
Scale 1:20



- General Notes:**
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 - No setting out is to commence before the positions of the boundary pegs on the site have been verified by a Land Surveyor.
 - Sewer connection to comply with municipal regulations.
 - The Architects reserve the copyright on this drawing.

Municipal Information:

Architects Information:
 Member of the South African Architectural Profession
 SACAP Reg. 3128
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 cell : 041 373 0228
 Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
 18 Park Lane Central Port Elizabeth 6001
 PO Box 6213 Walmer Port Elizabeth 6005
 admin@mdaarchitects.co.za
 Tel: 041 373 0228
 Fax: 041 373 1549

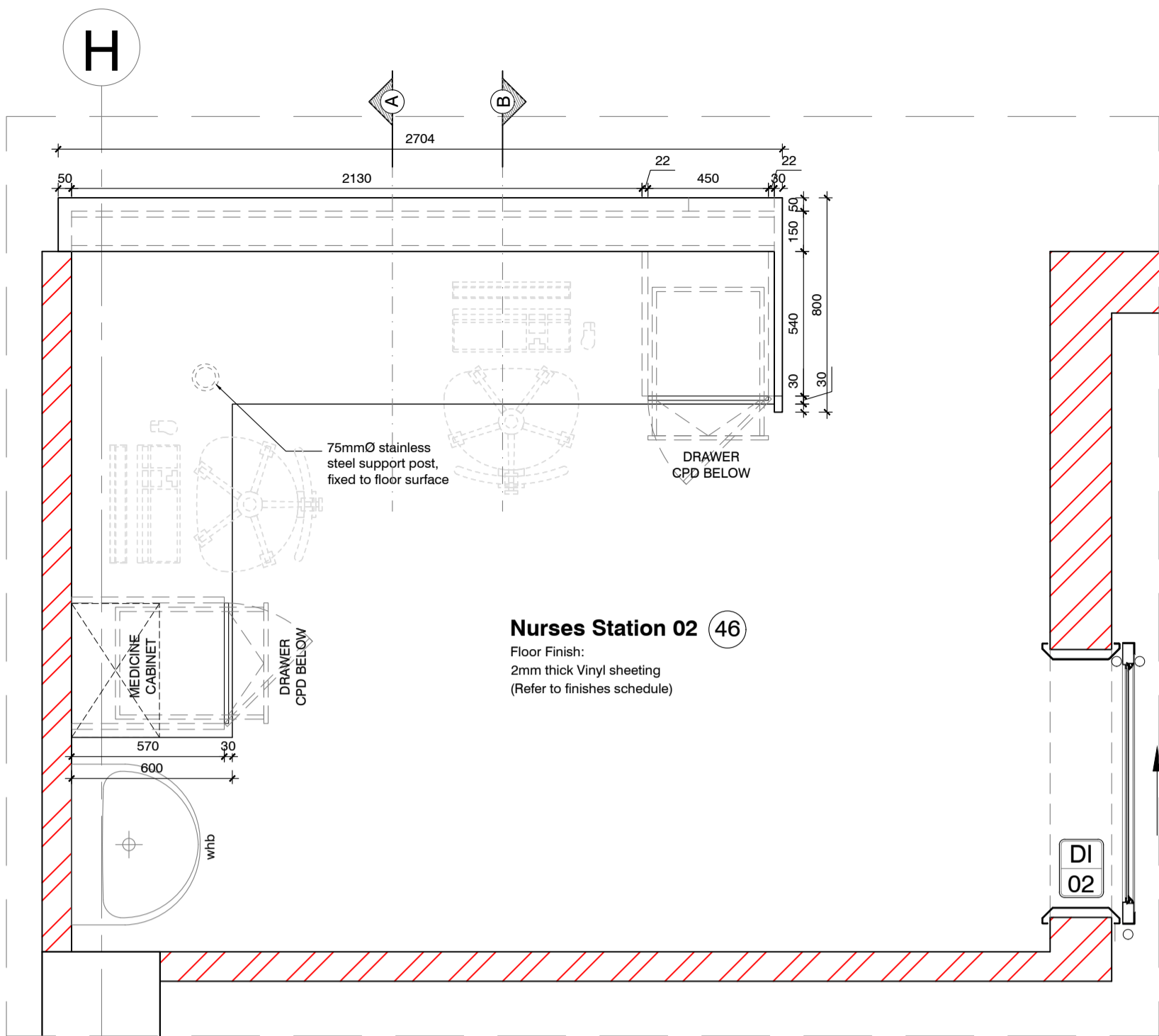
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
 Working Drawings:
 JOINERY DETAILS 05 - TRAUMA UNIT

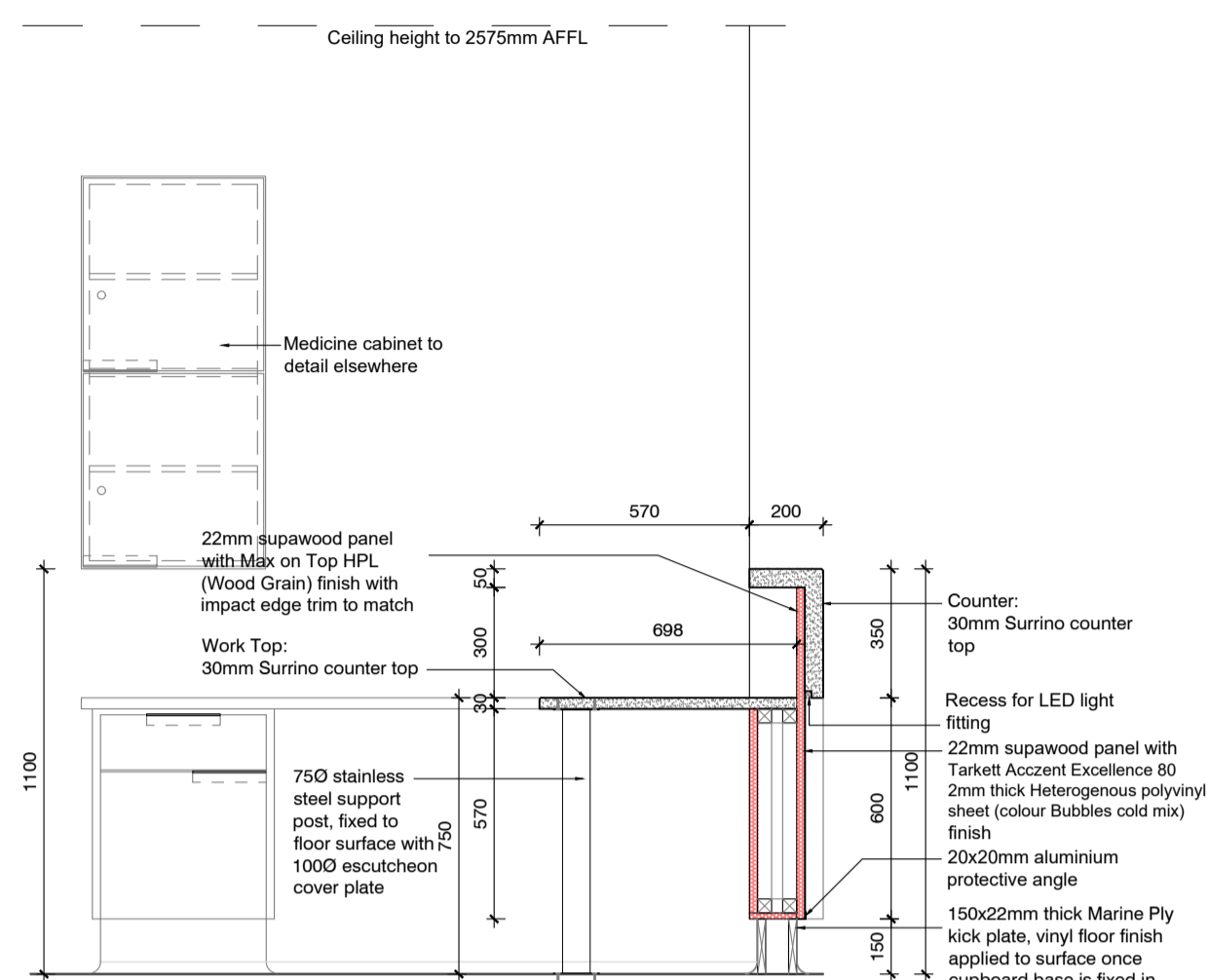
Issue Date: 21-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA477(B)UPH/ Trauma Unit-308	Doc. Status	Final	Rev. No.	3	Rev. Description	X	Revision	A1
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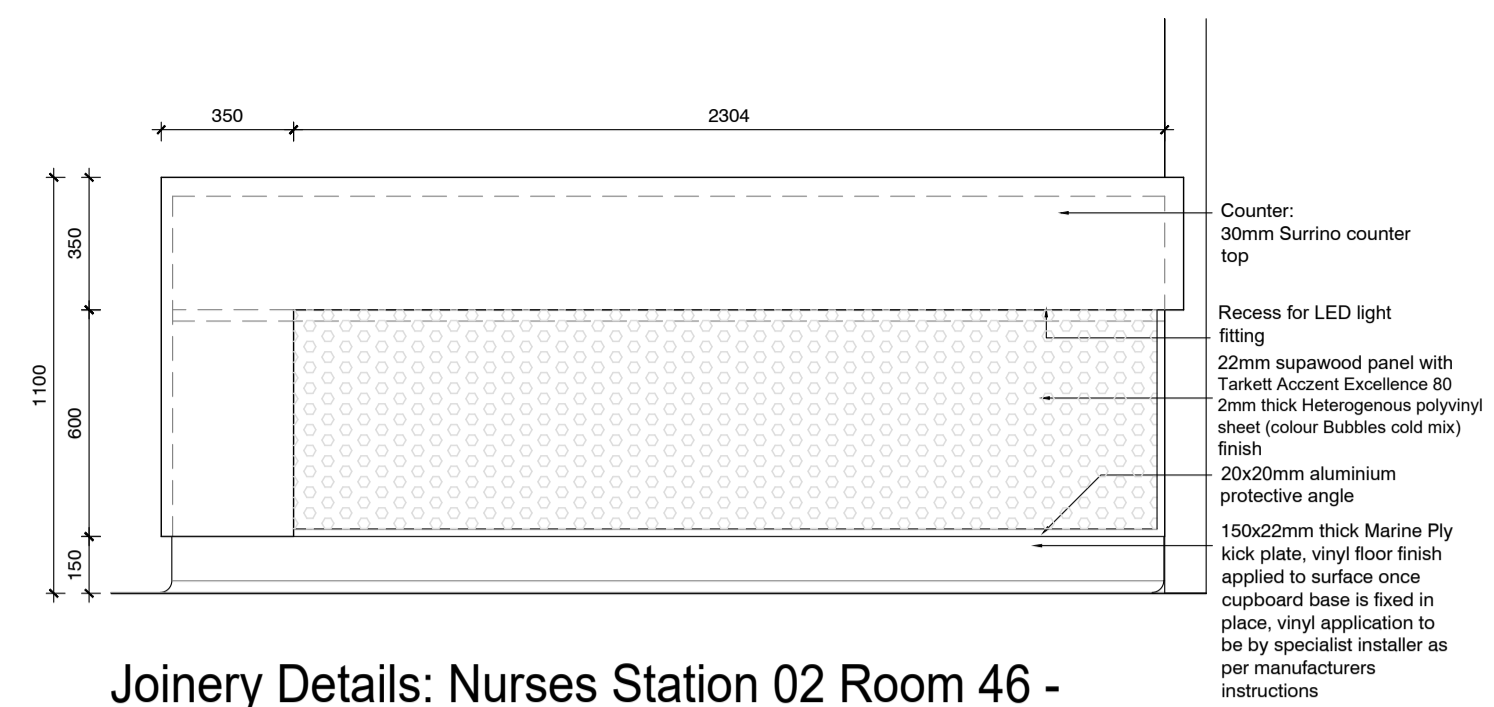
ISSUED FOR: TENDER



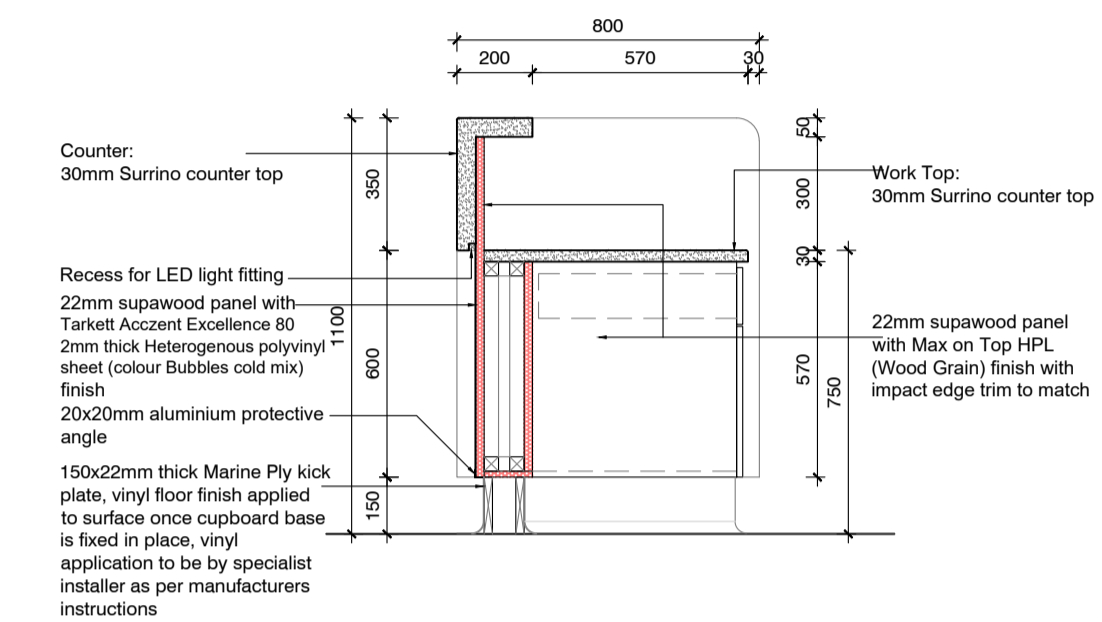
Joinery Details: Nurses Station 02 Room 46 - Plan
Scale 1:20



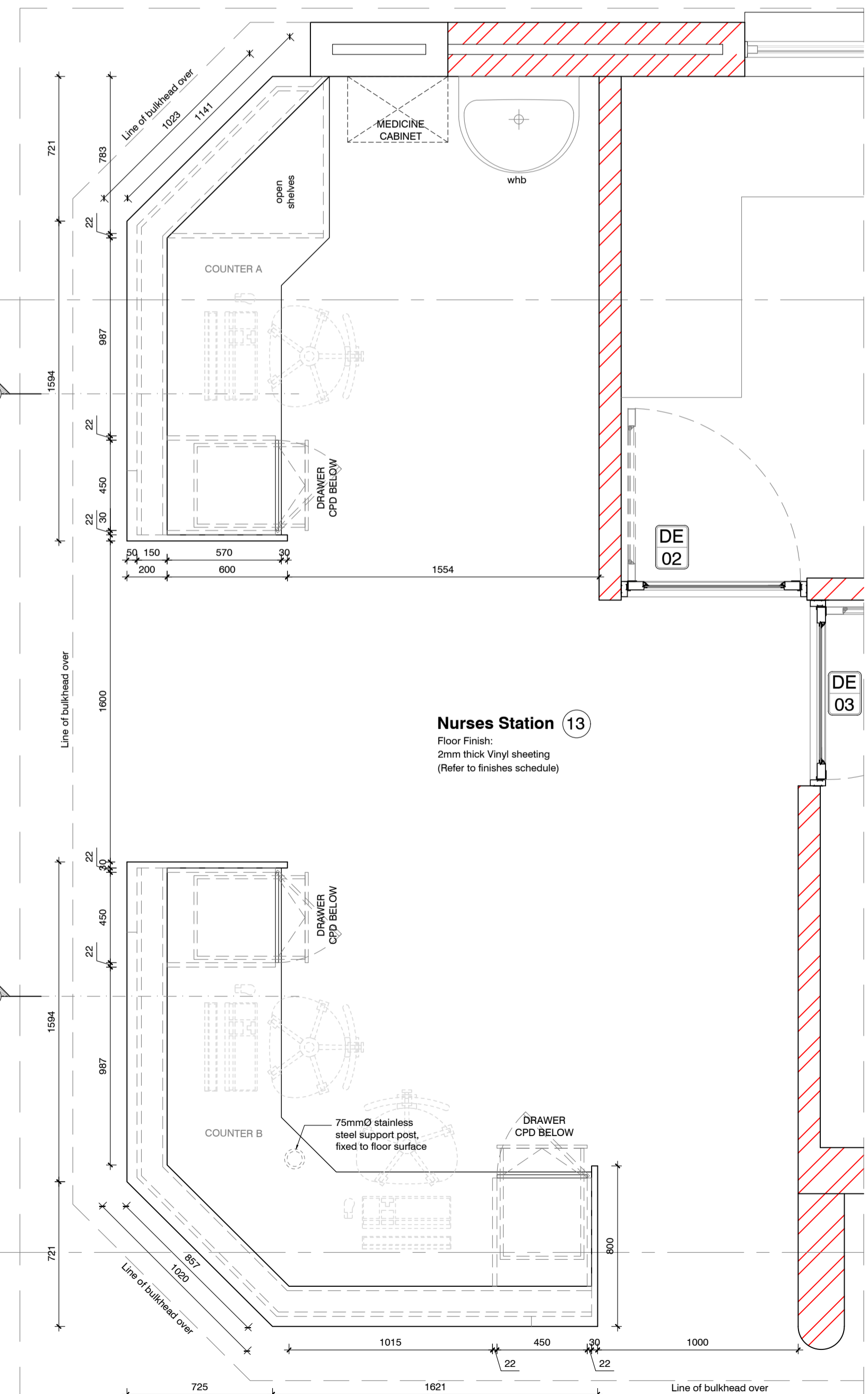
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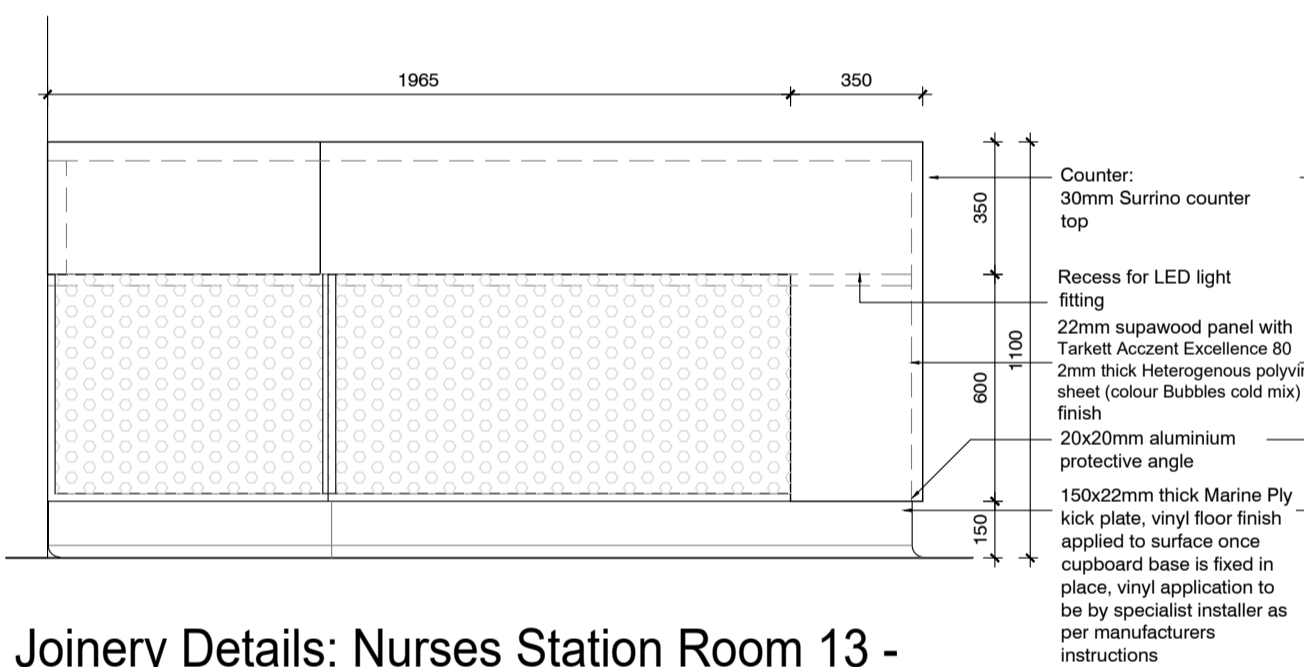
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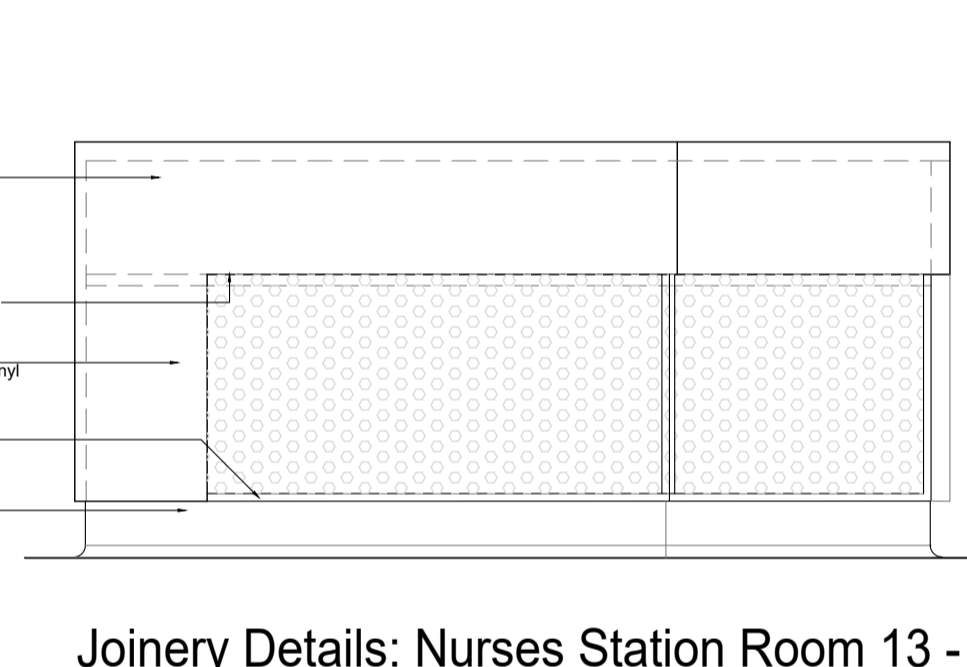
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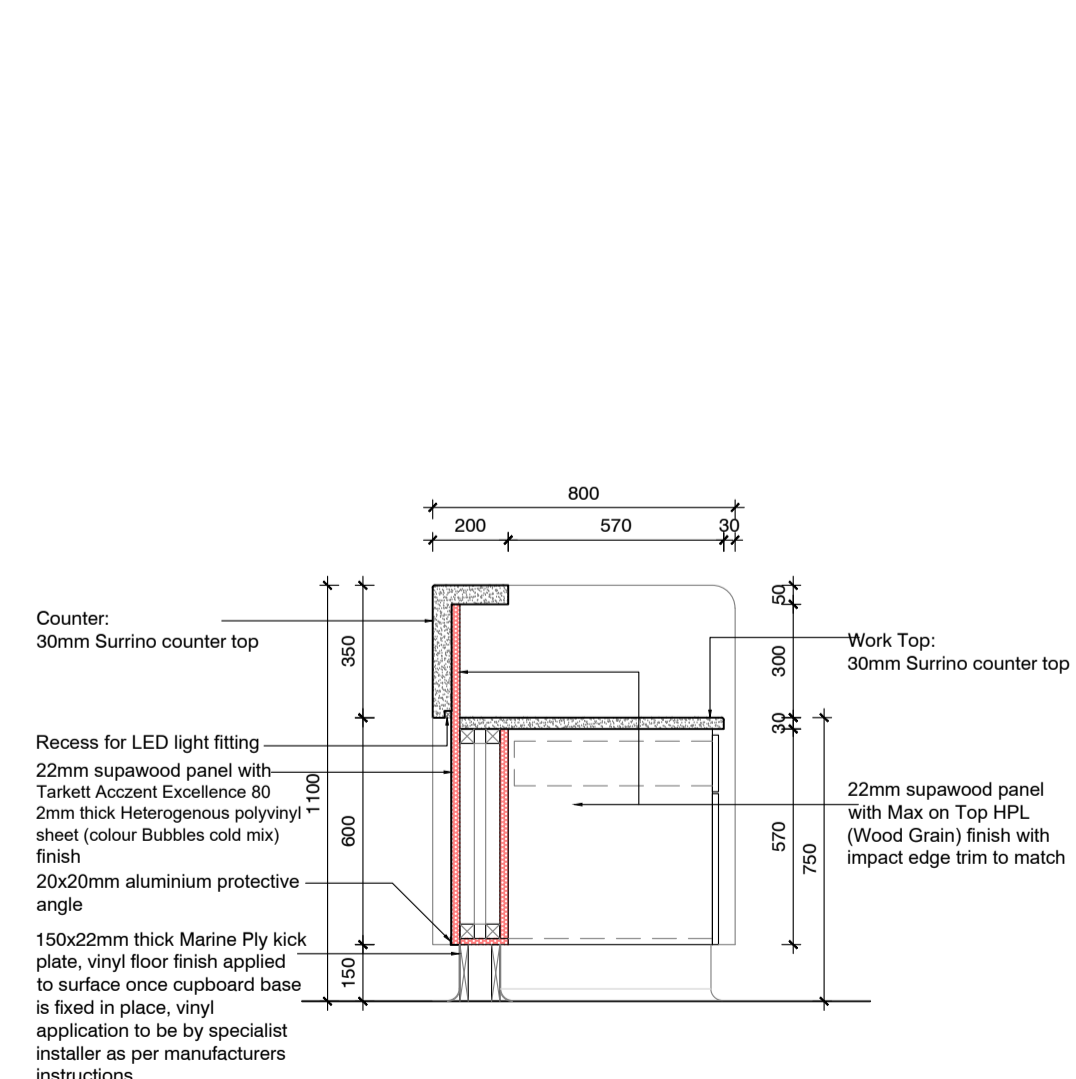
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Scale 1:20



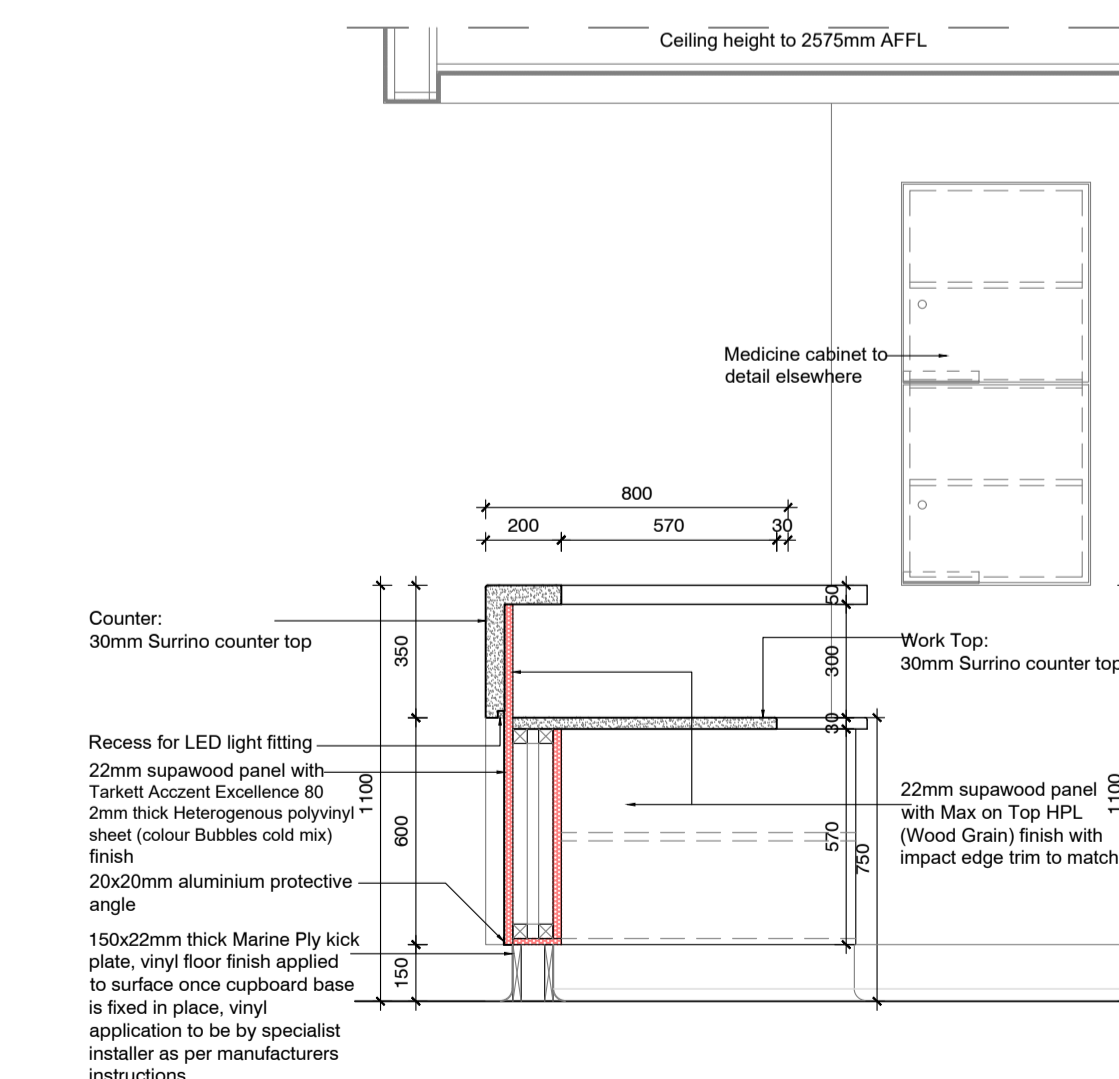
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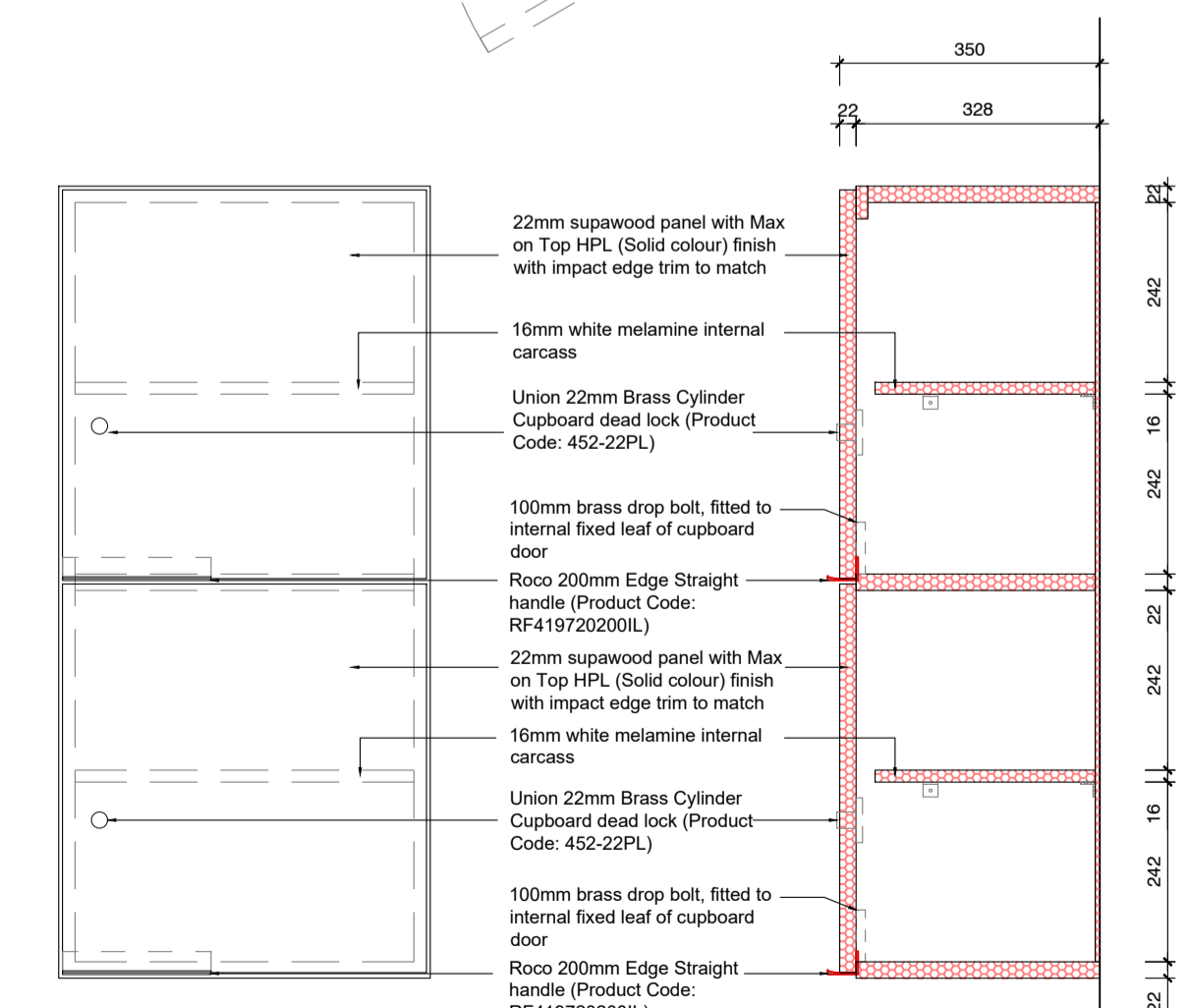
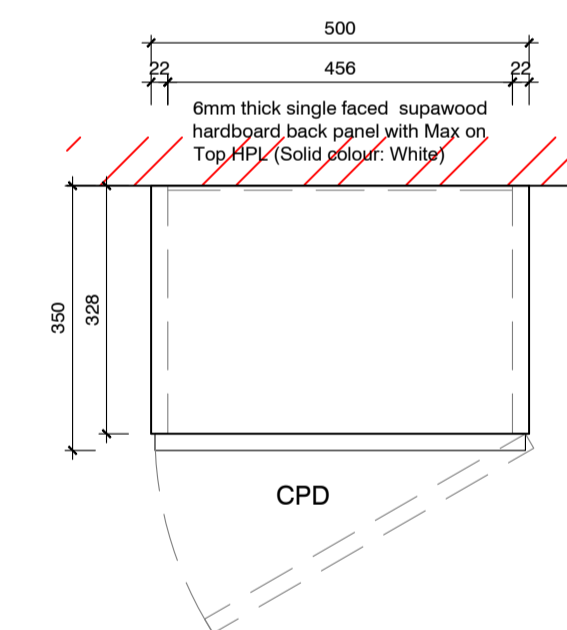
Joinery Details: Nurses Station Room 13 - Counter B Elevation
Scale 1:20



Joinery Details: Nurses Station Room 13 - Section A-A
Scale 1:20



Joinery Details: Nurses Station Room 13 - Section B-B
Scale 1:20



Joinery Details: Schedule 5 & 6 Medicine Cabinet
Scale 1:10

- General Notes:**
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 - Sewer connection to comply with municipal regulations
 - The Architects reserve the copyright on this drawing.

Municipal Information:

Architects Information:
Member of the South African Architectural Profession
SACAP Reg. 3128
PI Insurance: AON South Africa (Pty) Ltd
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cluncan@mdaarchitects.co.za
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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description



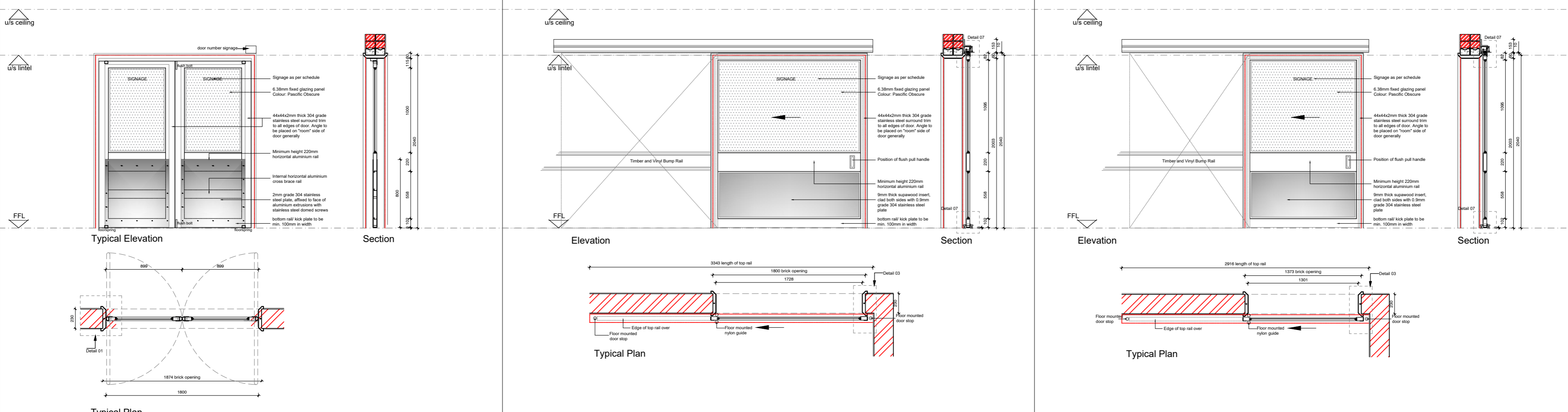
Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Working Drawings:
JOINERY DETAILS 06 - TRAUMA UNIT

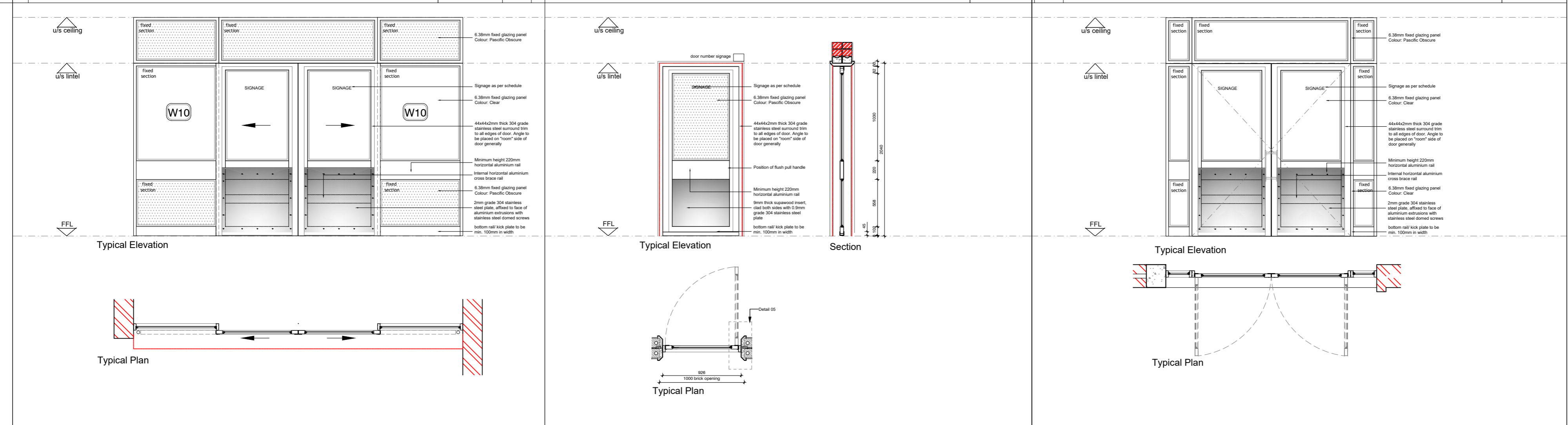
Issue Date: 21-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA477(B)UPH/ Trauma Unit-309
Revision	X 2 of 1

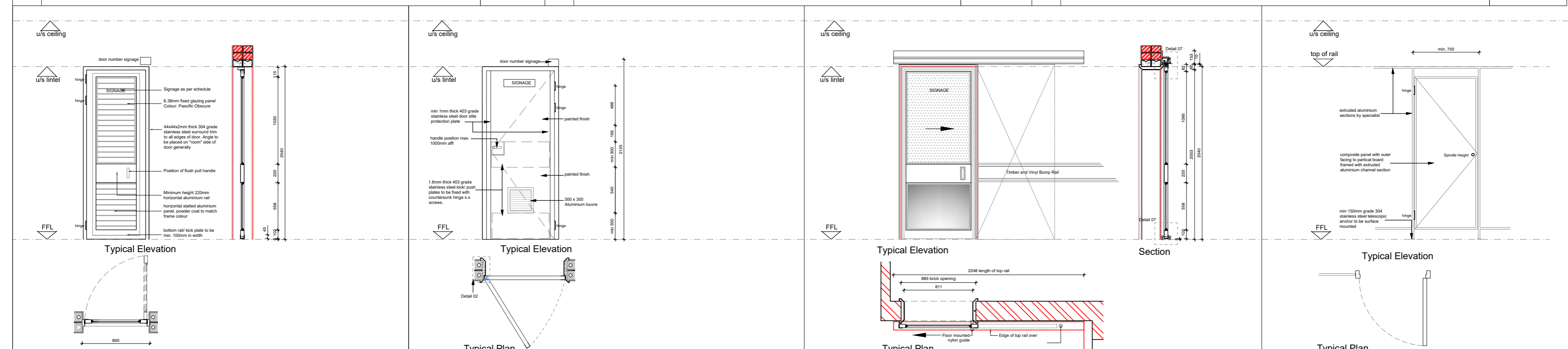
ISSUED FOR: TENDER



QUANTITY	08	LOCATION	QUANTITY	02	LOCATION	QUANTITY	11	LOCATION
FRAME DESCRIPTION	<ul style="list-style-type: none"> 2mm thick 403 grade stainless steel pressed metal frame. Refer to Detail 01 Each frame style to have stainless steel fixing lies at every 3rd brick course stainless steel plate to be fixed with countersunk stainless steel screws and all screws / facings to be countersunk, filled and plugged 	<ul style="list-style-type: none"> Lobby 01 Reception Passage 02 	<ul style="list-style-type: none"> 2mm thick 403 grade stainless steel pressed metal frame. Refer to Detail 01 Each frame style to have stainless steel fixing lies at every 3rd brick course stainless steel plate to be fixed with countersunk stainless steel screws and all screws / facings to be countersunk, filled and plugged 	<ul style="list-style-type: none"> Reusus Room Pediatrics Reusus Room 	<ul style="list-style-type: none"> 2mm thick 403 grade stainless steel pressed metal frame. Refer to Detail 01 Each frame style to have stainless steel fixing lies at every 3rd brick course stainless steel plate to be fixed with countersunk stainless steel screws and all screws / facings to be countersunk, filled and plugged 	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SAN standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SAN standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> Wards Consulting Rooms Treatment Rooms
DOOR DESCRIPTION	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SAN standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	ACCESS CONTROL	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SAN standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SAN standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SAN standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Wards Consulting Rooms Treatment Rooms
GLAZING	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (clear) 	TYPE	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Wards Consulting Rooms Treatment Rooms
DOOR PROTECTION	<ul style="list-style-type: none"> Kick Plate: Height for kick plate to be 800mm, 1.2mm thick 403 grade stainless steel plate. Kick plate to be fixed to both sides of the door with countersunk stainless steel screws at min. 200mm c.c, integral with stainless steel surround to door frame Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	DA	<ul style="list-style-type: none"> Kick Plate: Height for kick plate to be 800mm, 1.2mm thick 403 grade stainless steel plate. Kick plate to be fixed to both sides of the door with countersunk stainless steel screws at min. 200mm c.c, integral with stainless steel surround to door frame Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Kick Plate: Height for kick plate to be 800mm, 1.2mm thick 403 grade stainless steel plate. Kick plate to be fixed to both sides of the door with countersunk stainless steel screws at min. 200mm c.c, integral with stainless steel surround to door frame Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> Kick Plate: Height for kick plate to be 800mm, 1.2mm thick 403 grade stainless steel plate. Kick plate to be fixed to both sides of the door with countersunk stainless steel screws at min. 200mm c.c, integral with stainless steel surround to door frame Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Wards Consulting Rooms Treatment Rooms
GENERAL	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	DA	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Wards Consulting Rooms Treatment Rooms



QUANTITY	02	LOCATION	QUANTITY	09	LOCATION	QUANTITY	01	LOCATION
FRAME DESCRIPTION	<ul style="list-style-type: none"> aluminium extrusions to comply with BS EN 755: 2008: Natural Anodised finish. In accordance with SANS 204: 2011 all rebates are to have rubberised buffers to minimise air leakages surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards 	<ul style="list-style-type: none"> Lobby 01 Transition lobby 03 	<ul style="list-style-type: none"> 2mm thick 403 grade stainless steel pressed metal frame. Refer to Detail 01 Each frame style to have stainless steel fixing lies at every 3rd brick course stainless steel plate to be fixed with countersunk stainless steel screws and all screws / facings to be countersunk, filled and plugged aluminium extrusions to comply with BS EN 755: 2008: Natural Anodised finish. Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards 	<ul style="list-style-type: none"> Room Numbers: 04, 05, 06, 09, 14, 15, 19, 20, 29, 36, 38, 39 	<ul style="list-style-type: none"> aluminium extrusions to comply with BS EN 755: 2008: Natural Anodised finish. In accordance with SANS 204: 2011 all rebates are to have rubberised buffers to minimise air leakages surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards 	<ul style="list-style-type: none"> Walling Area 		
DOOR DESCRIPTION	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	ACCESS CONTROL	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Walling Area 	
GLAZING	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (clear) 	TYPE	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Walling Area
DOOR PROTECTION	<ul style="list-style-type: none"> Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	DD	<ul style="list-style-type: none"> Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Walling Area
GENERAL	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	DD	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Walling Area



QUANTITY	05	LOCATION	QUANTITY	09	LOCATION	QUANTITY	02	LOCATION	QUANTITY	02	LOCATION
FRAME DESCRIPTION	<ul style="list-style-type: none"> aluminium extrusions to comply with BS EN 755: 2008: Natural Anodised finish. In accordance with SANS 204: 2011 all rebates are to have rubberised buffers to minimise air leakages surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards 	<ul style="list-style-type: none"> Ducts 	<ul style="list-style-type: none"> 2mm thick 403 grade stainless steel pressed metal frame with cut out to allow for welding of 3mm stainless steel hinges each frame style to have stainless steel fixing lies at every 3rd brick course stainless steel plate to be fixed with countersunk stainless steel screws and all screws / facings to be countersunk, filled and plugged Refer to detail drawing no 02 	<ul style="list-style-type: none"> Room Numbers: 27, 28, 18, 19, 34, 35, 40, 41, 45, 49 	<ul style="list-style-type: none"> aluminium extrusions to comply with BS EN 755: 2008: Natural Anodised finish. In accordance with SANS 204: 2011 all rebates are to have rubberised buffers to minimise air leakages surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards 	<ul style="list-style-type: none"> Female Ablutions Male Ablutions 					
DOOR DESCRIPTION	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	ACCESS CONTROL	<ul style="list-style-type: none"> selected min. 44mm thickness solid flush door with min 10mm hardwood edges and min. 20mm hardwood rebated meeting styles. door to be faced with tempered smooth hardwood face for selected painted finish - paint surface to be sanded smooth. Imperfections/holes to be plugged and filled. wood primer to be applied to all surfaces 2 finishing coats polyurethane enamel 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> min. 90mm aluminium extrusions to comply with BS EN 755: 2008 Minimum 220mm horizontal mullion to align with bump rail height generally Surface finishes to comply with SAN 999 or SAN 1796. Contractors are to supply AAMSA surface finishing certificates to ensure compliance with SANS standards: Powder Coat White Finish Frame to be enclosed with 2mm thick stainless steel surround, refer to detail 03, 04, 05 and 07 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Female Ablutions Male Ablutions 				
GLAZING	<ul style="list-style-type: none"> not applicable 	TYPE	<ul style="list-style-type: none"> not applicable 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> fixed glazing panels to conform to ISO 9001: 2000 quality management standard and comply with the requirements of SANS 1263 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10400 part N and SABS 0137. AAMSA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (specific obscure) 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Female Ablutions Male Ablutions 				
DOOR PROTECTION	<ul style="list-style-type: none"> not applicable 	DG	<ul style="list-style-type: none"> Kick Plate: Height for kick plate to be 300mm, 1.2mm thick 403 grade stainless steel plate. Kick plate to be fixed to both sides of the door with countersunk stainless steel screws at min. 200mm c.c Push Plate: Height for push plate to be 300mm, 1.2mm thick 403 grade stainless steel plate. Push plate to be fixed to both sides of the door with countersunk stainless steel screws at min. 200mm c.c Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> Door Site Protection: all door site edges to be clad with minimum 1.2mm thick 403 grade stainless steel plates over full height of door. Stainless steel plate to be fixed with countersunk stainless screws at min. 200mm c.c 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Female Ablutions Male Ablutions 			
GENERAL	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements Doors to have opening to receive 300 x 300 double sided aluminium louvre, powder coat finish. 	DG	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements Doors to have opening to receive 300 x 300 double sided aluminium louvre, powder coat finish. 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> Signage: All signage to comply with the sams 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements 	<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Female Ablutions Male Ablutions 			

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- Sewer connection to comply with municipal regulations

Municipal Information:

Province of the EASTERN CAPE
HEALTH

Architects Information:

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Designers Signature: _____

Clients information: _____

Drawing Revisions:

Revision	Date	Drawn	Description	Revision	Date	Drawn	Description

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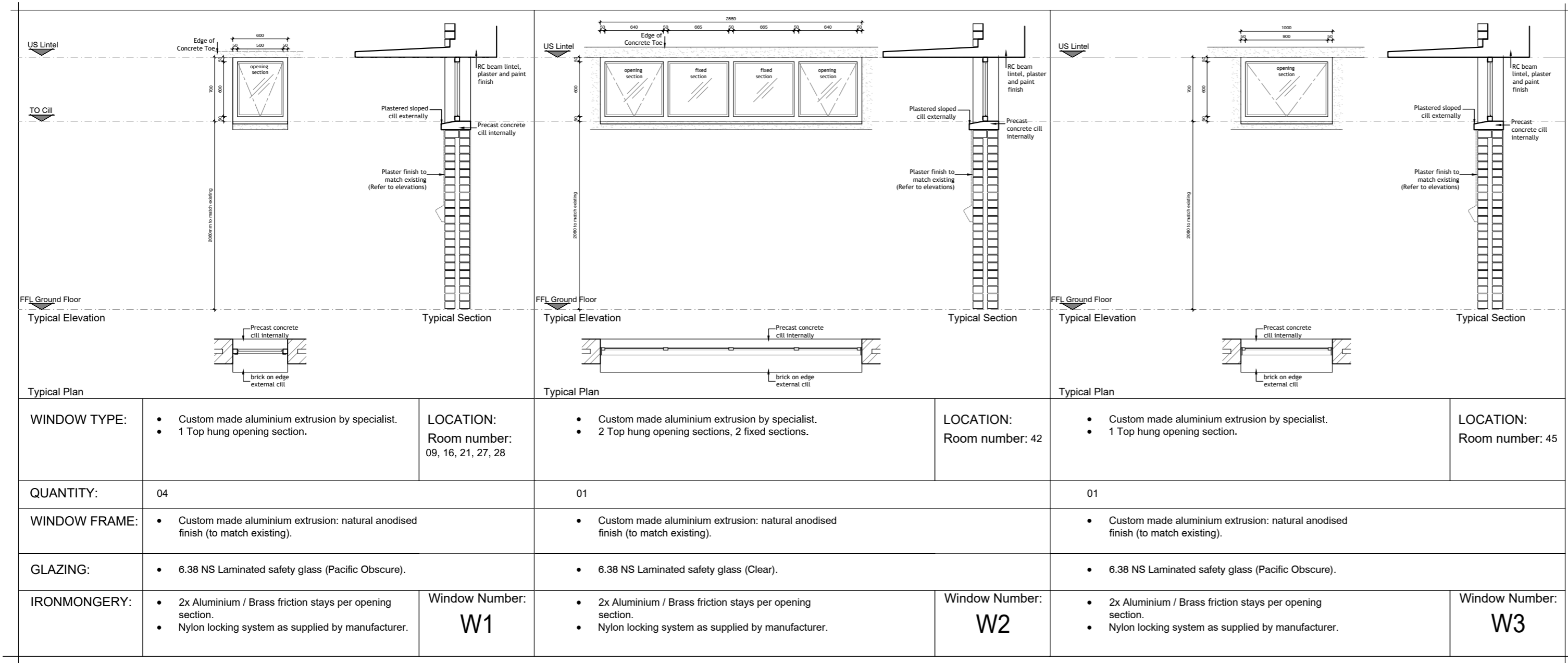
Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Working Drawings:
DOOR SCHEDULE - TRAUMA UNIT

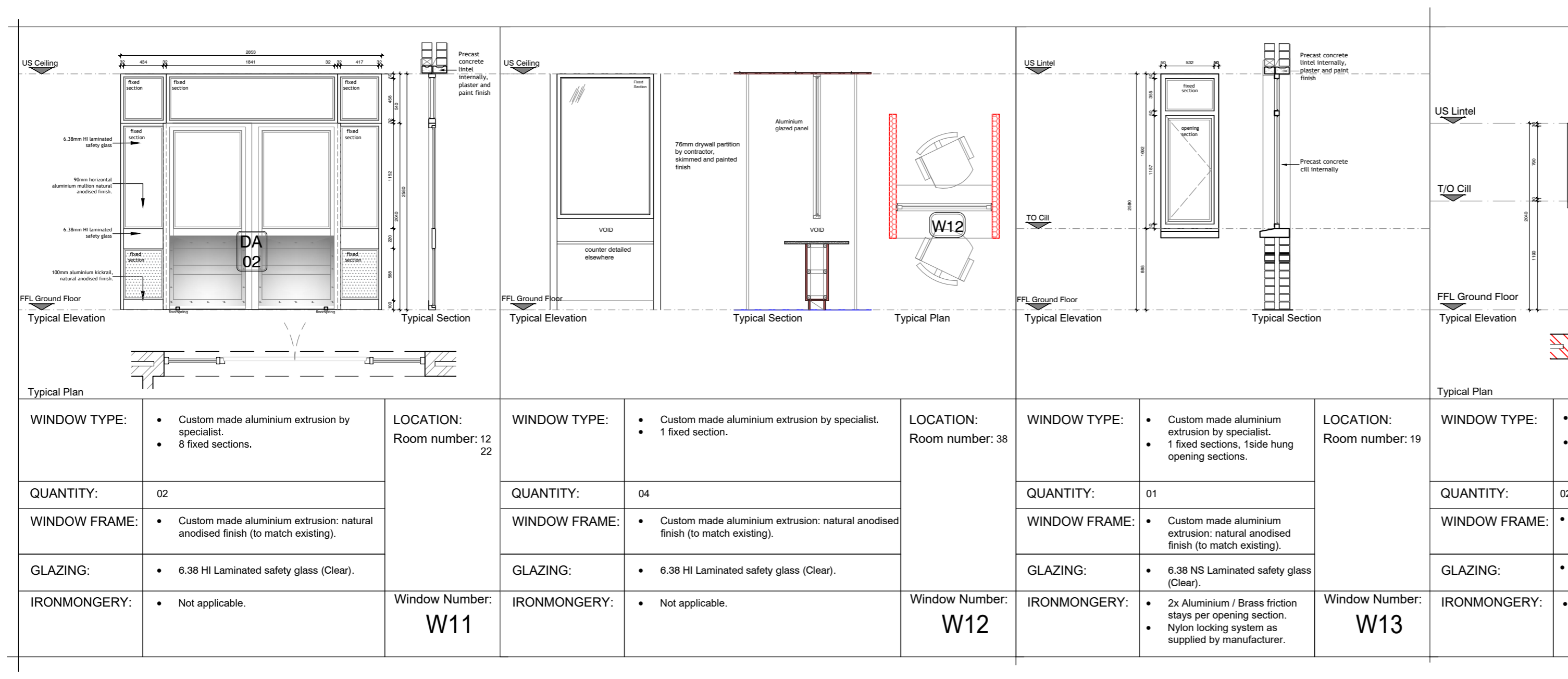
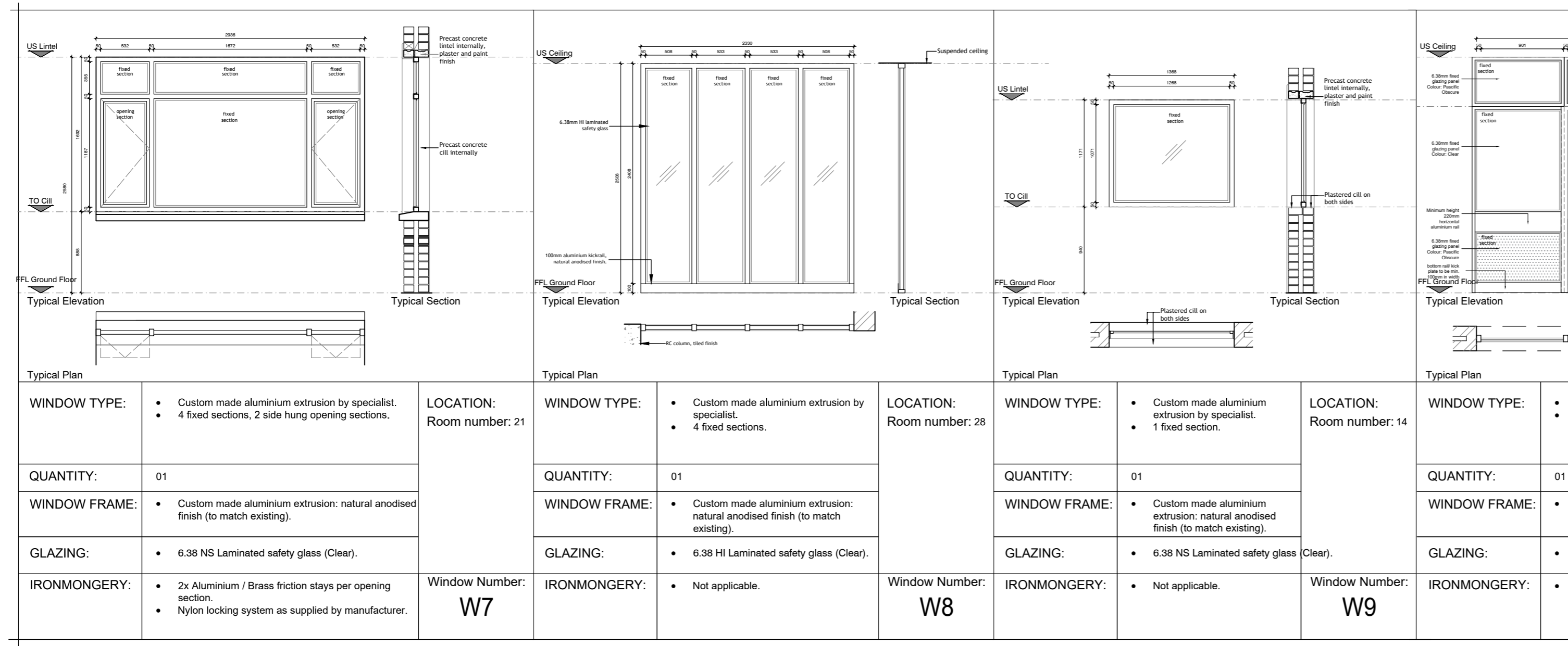
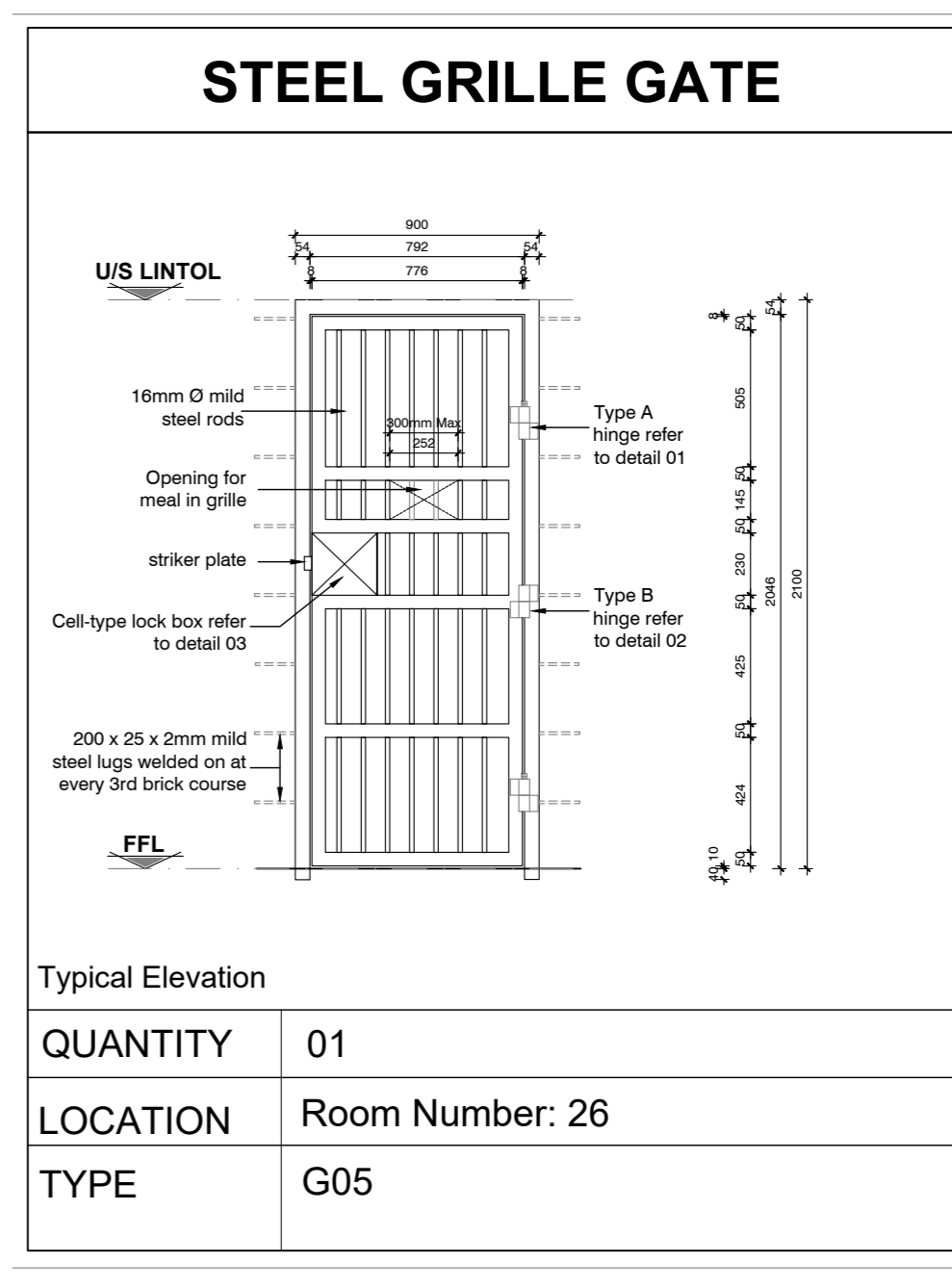
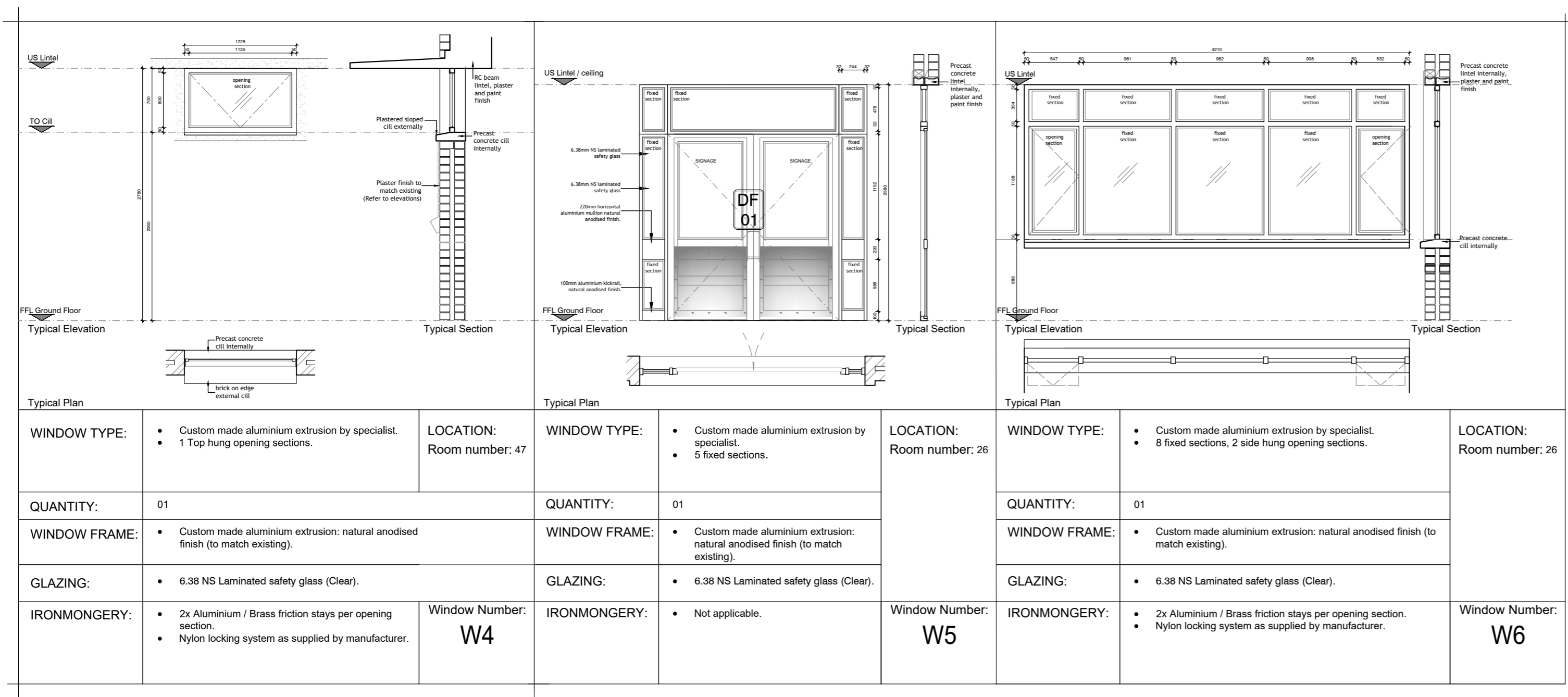
Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B)UPH/TRAUMA UNIT-400

ISSUED FOR: TENDER



GENERAL NOTES:
<ul style="list-style-type: none"> 2mm thick 403 grade stainless steel pressed metal frame with cut out to allow for welding of 20mm stainless steel hinges each frame style to have stainless steel fixing bars at every 3rd brick course stainless steel plate to be fixed with countersunk stainless steel screws and all screws / fixings to be countersunk, filed and plugged
<ul style="list-style-type: none"> min. 10mm aluminium extrusion to comply with BS EN 755:2008 Minimum 200mm horizontal mullion to align with lunge and height generally Surface finishes to comply with SAN 550 or SAN 578. Contractors are to supply AAMA surface finishing certificates to ensure compliance with SANS standards glazing thickness is governed by the SANS 10403 part 4 and SANS 10137 AAMA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (Clear)
<ul style="list-style-type: none"> Fixed glazing panels to conform to ISO 9001:2000 quality management standard and comply with the requirements of SANS 1203 part 1 and 2 as applicable to normal strength, HPR and high impact strengths glazing thickness is governed by the SANS 10403 part 4 and SANS 10137 AAMA certification is to be supplied for all glazing to ensure compliance with SANS standards 10137 and 10400 Glazing thickness: 6.38 HI laminated safety glass (Clear)
<ul style="list-style-type: none"> All glazing to comply with the SANS 10403:2001 requirements Storage should be placed such that it is clearly visible by both site body and disabled persons. All signage is to comply with SANS 11601 requirements Refer to signage schedule MDA.



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- Sewer connection to comply with municipal regulations

Municipal Information:

Province of the EASTERN CAPE
HEALTH

Architects Information:

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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	By	Description

Revision	Date	By	Description

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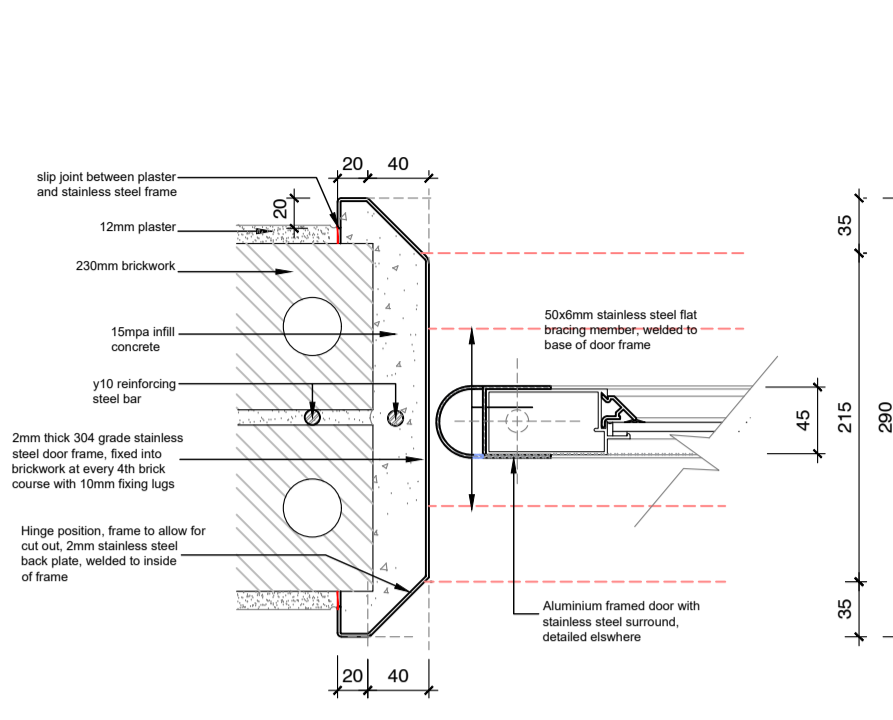
Project Title:
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name:
Working Drawings:
WINDOW AND GATE SCHEDULE - TRAUMA UNIT

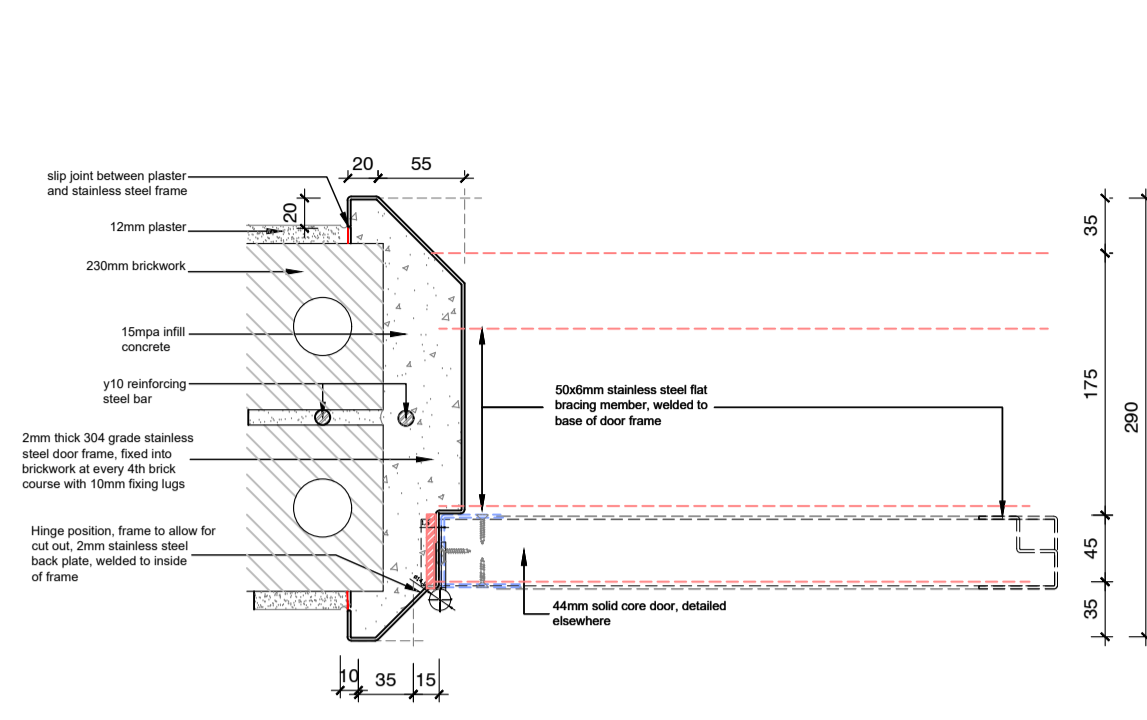
Issue Date: 12-12-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Revision: A1

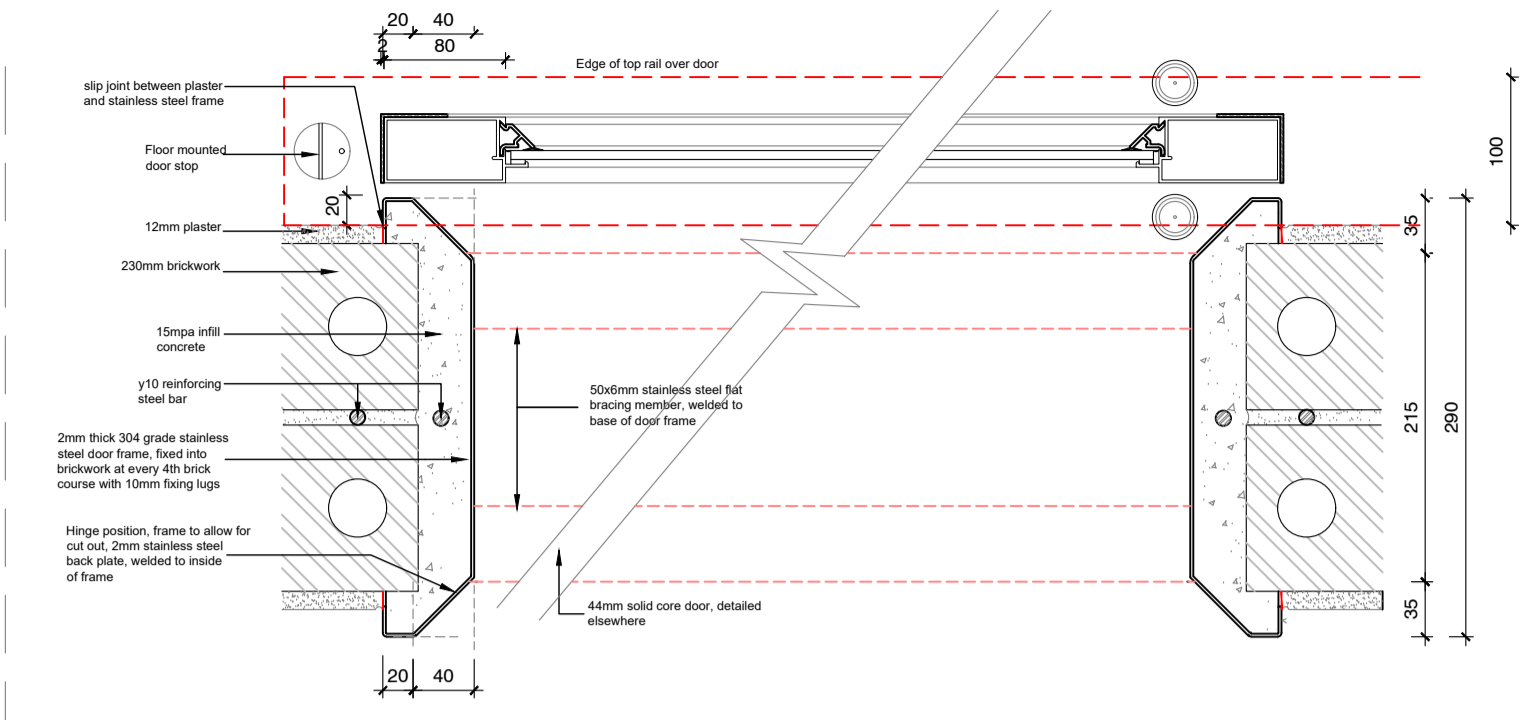
ISSUED FOR: TENDER



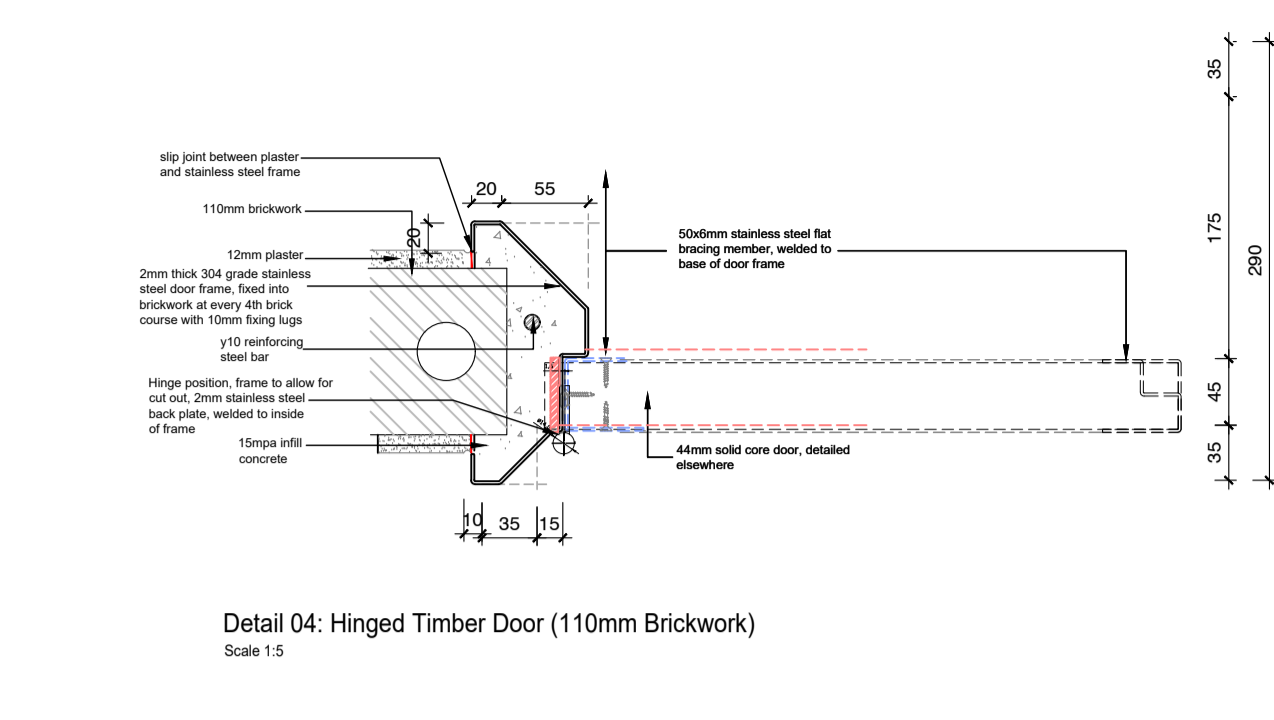
Detail 01: Pivot Hinge Door
Scale 1:5



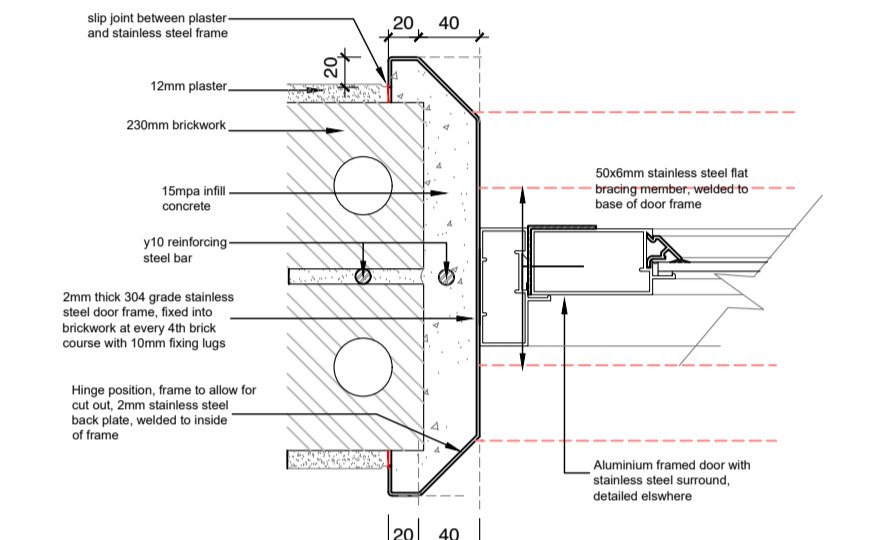
Detail 02: Hinged Timber Door (230mm Brickwork)
Scale 1:5



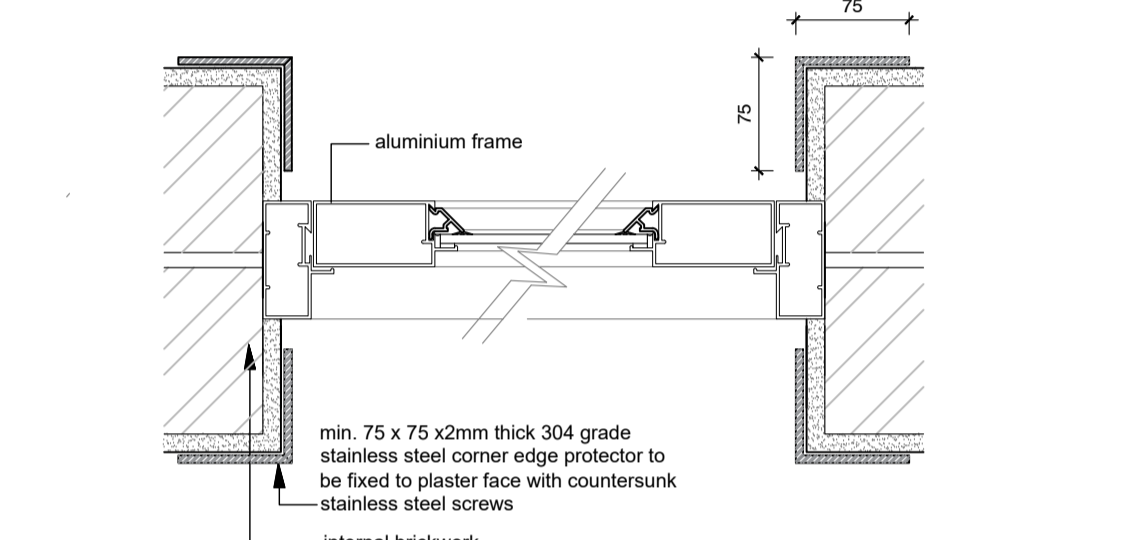
Detail 03: Sliding Door
Scale 1:5



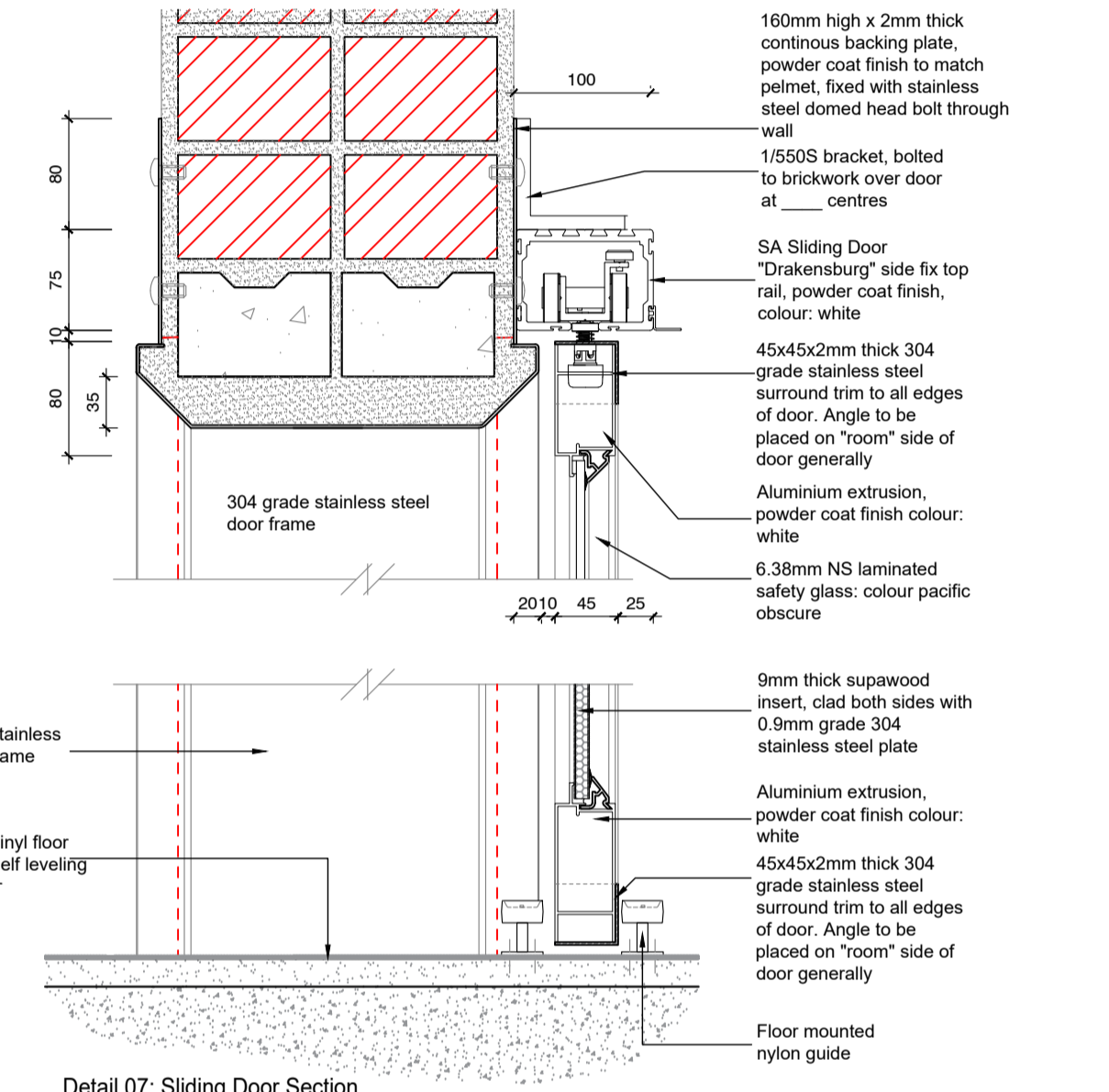
Detail 04: Hinged Timber Door (110mm Brickwork)
Scale 1:5



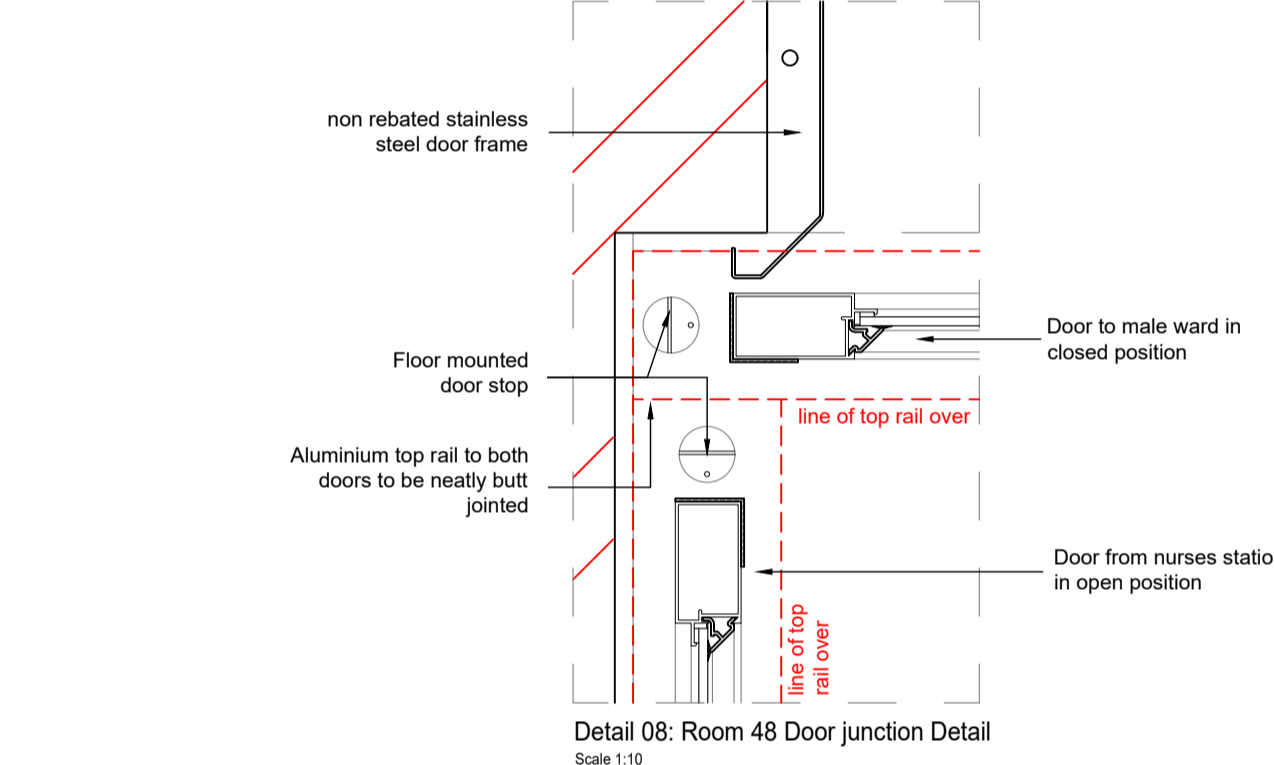
Detail 05: Aluminium Frame to Stainless Steel Frame Detail
Scale 1:5



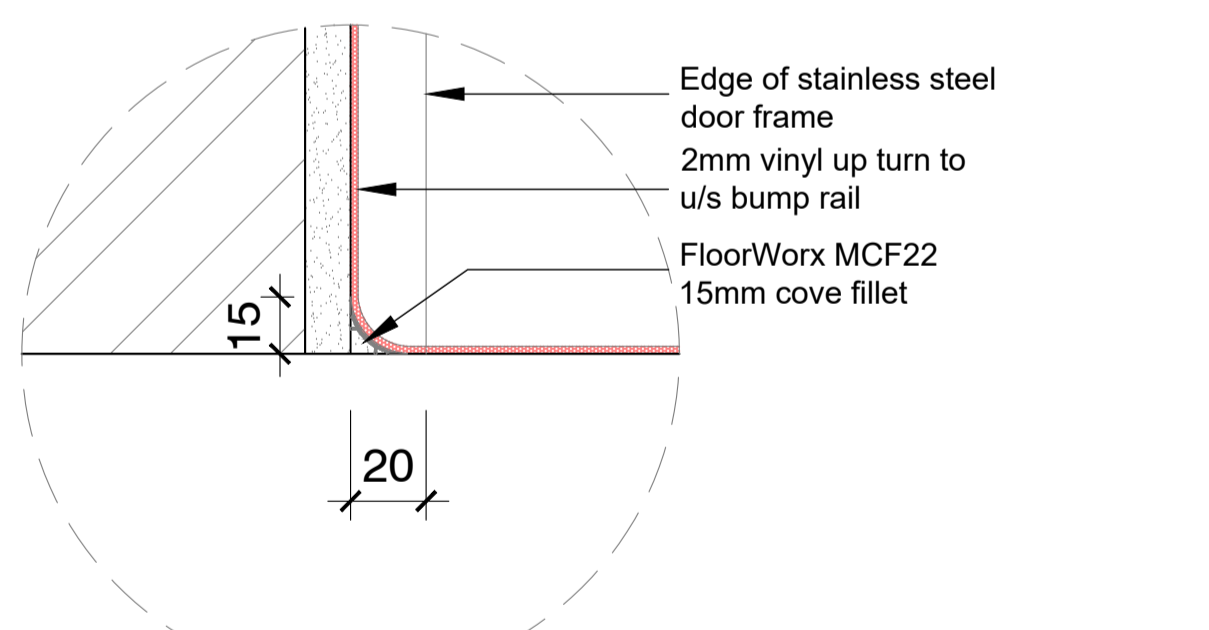
Detail 06: Corner Protection Detail
Scale 1:5



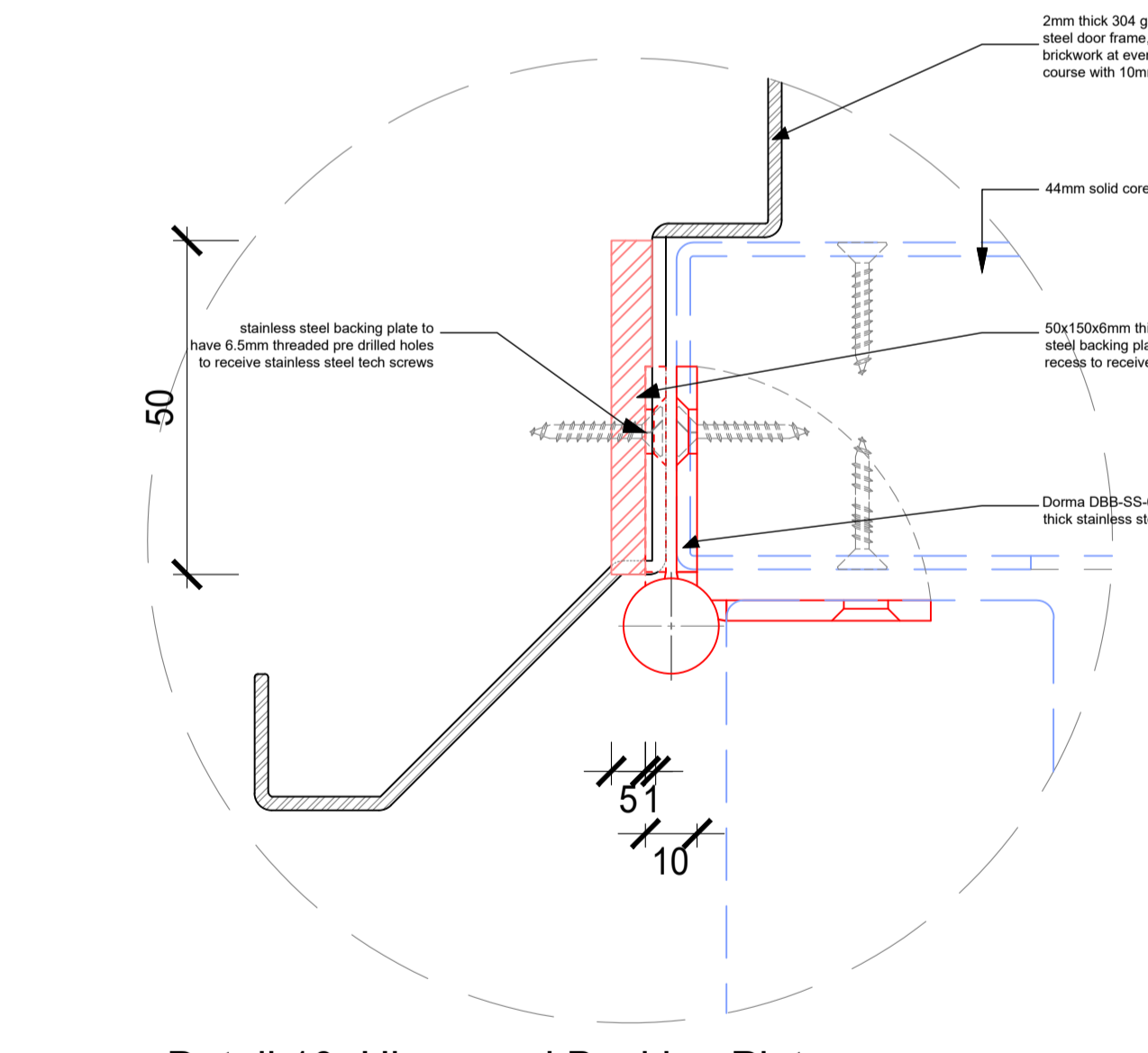
Detail 07: Sliding Door Section
Scale 1:05



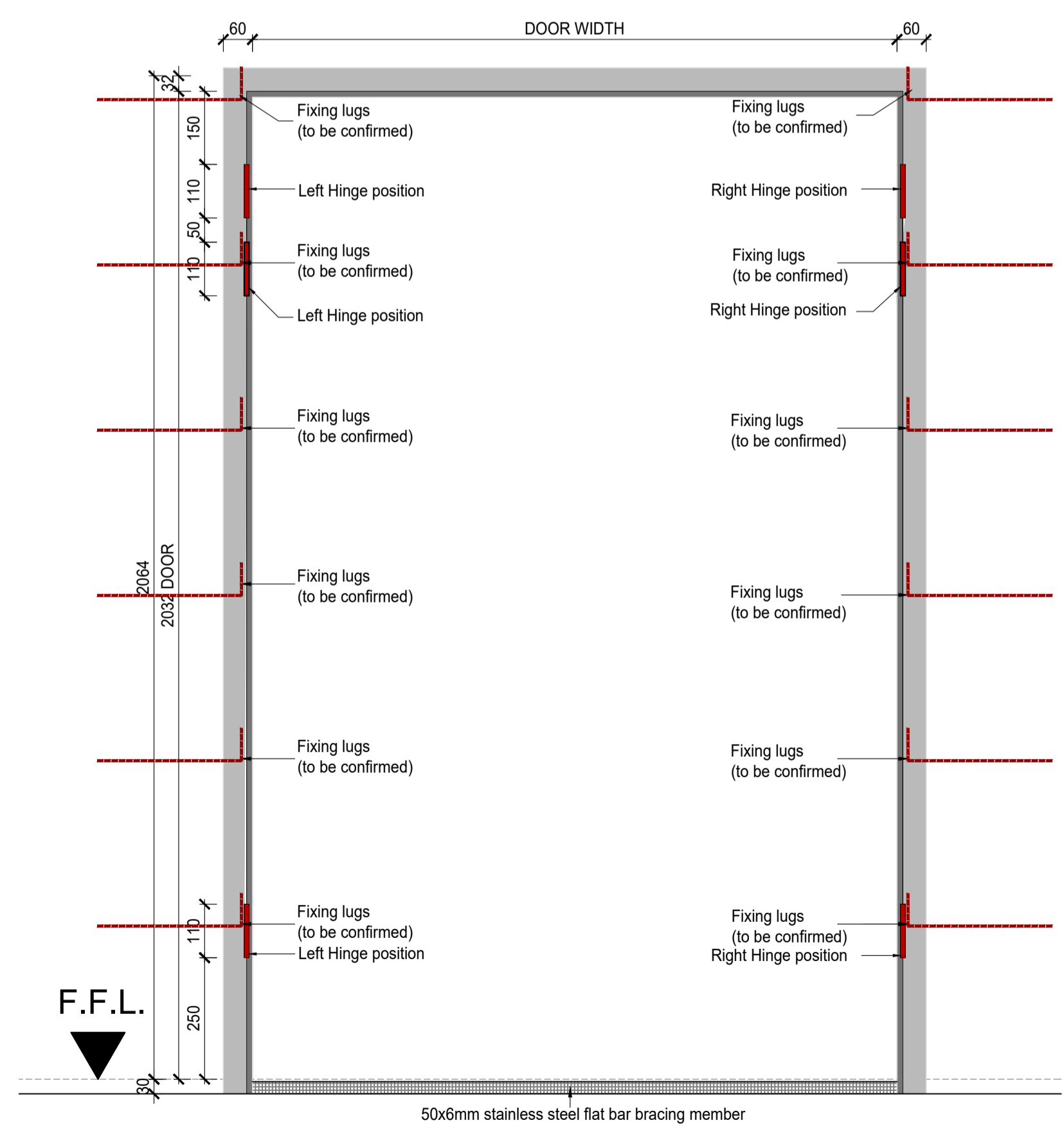
Detail 08: Room 48 Door Junction Detail
Scale 1:10



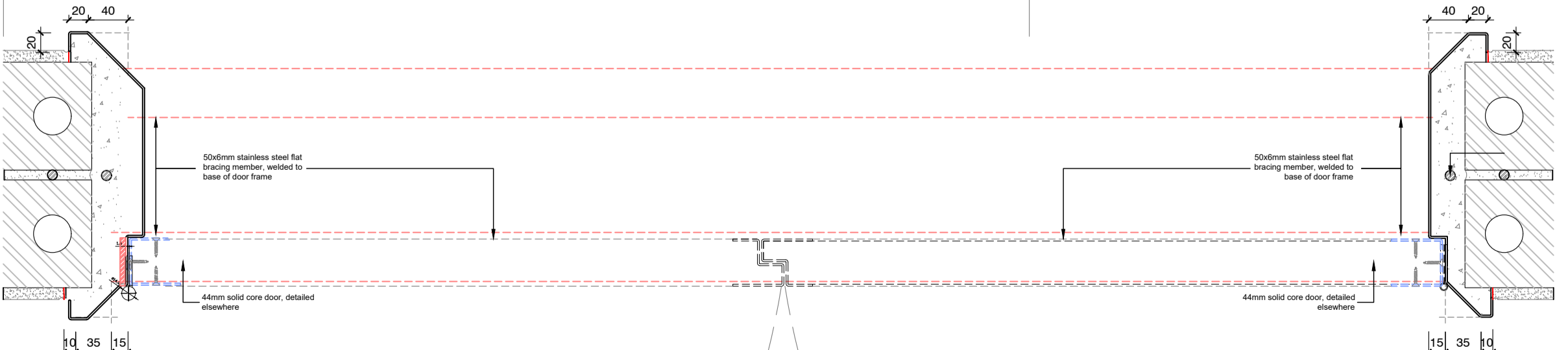
Detail 09: Door frame and Cove
Scale 1:2



Detail 10: Hinge and Backing Plate
Scale 1:1



Typical frame elevation
Scale 1:10



Typical Plan View: Hinged Door Frame
Scale 1:10

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- The Architects reserve the copyright on this drawing.

Municipal Information:

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Designers Signature:

Clients Information:
Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn	Description

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18 Park Lane Central Port Elizabeth 6001
PO Box 6213 Water Port Elizabeth 6005
Tel: 041 373 0228
Fax: 041 373 1549

Project Title:
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Working Drawings:
DOOR FRAME DETAILS - TRAUMA UNIT

Issue Date: 20-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B)UPH/Trauma Unit-402

ISSUED FOR: TENDER

- General Notes:**
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Clients Information:



Drawing Revisions:

Revision	Date	Drawn By	Description



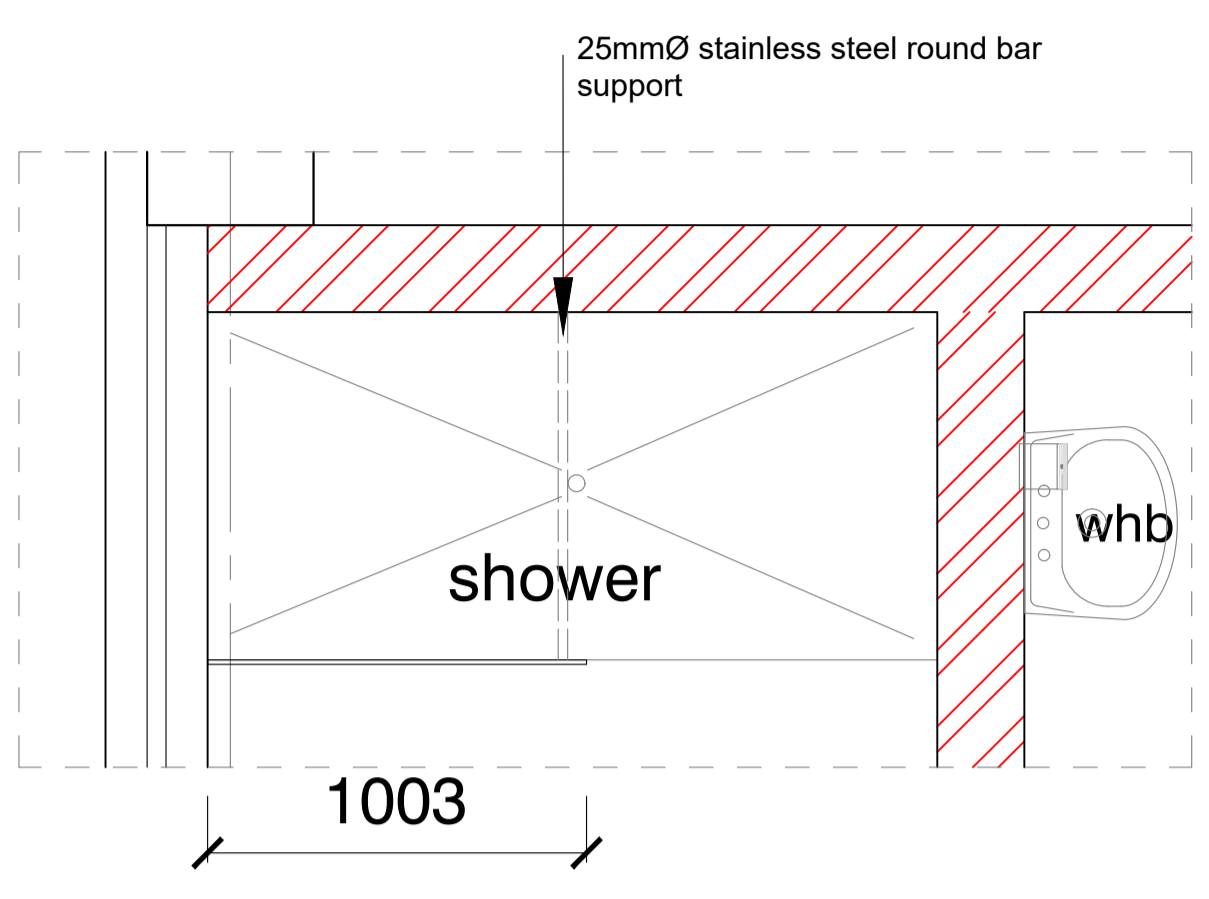
18 Park Lane Central Port Elizabeth 6001
 PO Box 4213 Walmer Port Elizabeth 6005
 Reg: 2006/0620/123
 admin@mdaarchitects.co.za
 Tel: 041 373 0228
 Fax: 041 373 1549

Drawing Name
 Working Drawings:
 SHOWER GLASS DETAILS - TRAUMA UNIT

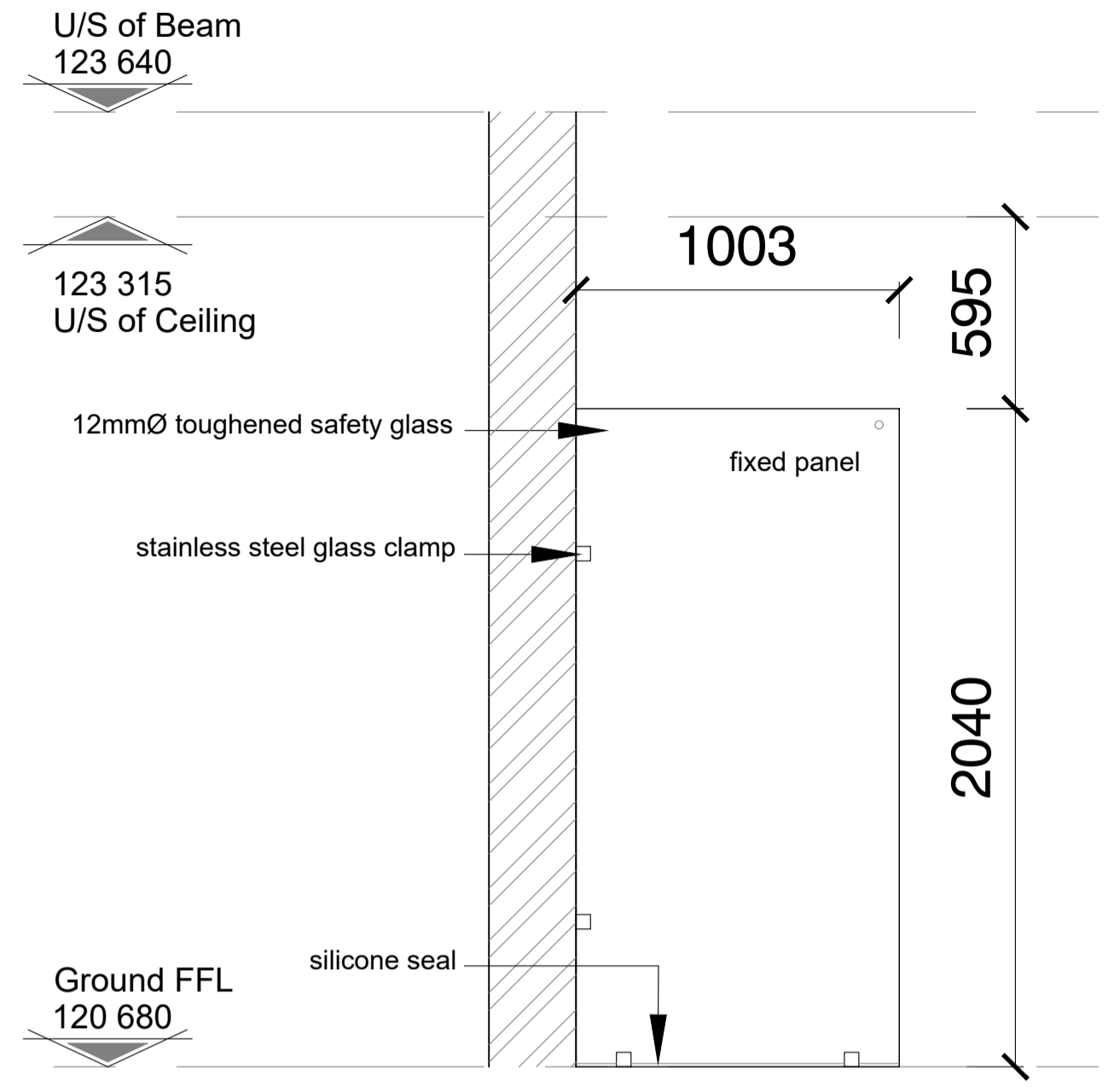
Issue Date: 12-12-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	Drawing Status	No. Sheets	No. of	
			Drawings	Revisions
MDA477(B)UPH/ Trauma Unit-403				

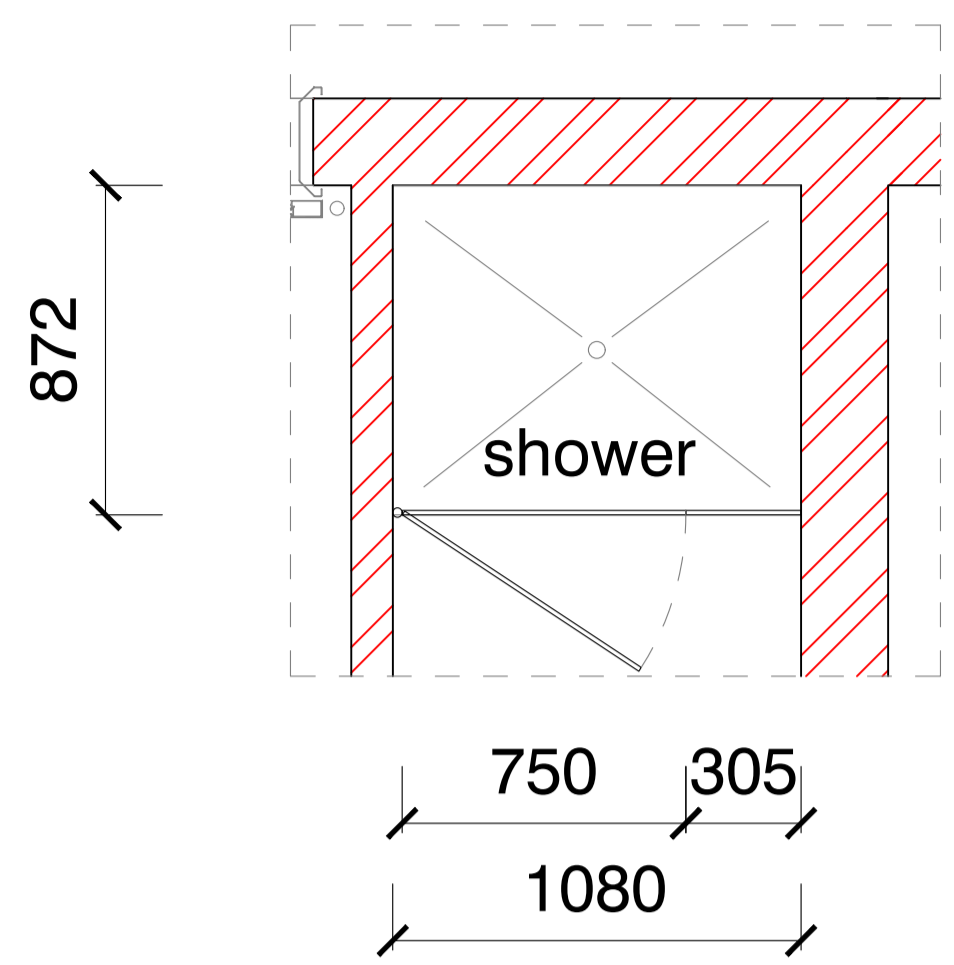
ISSUED FOR TENDER



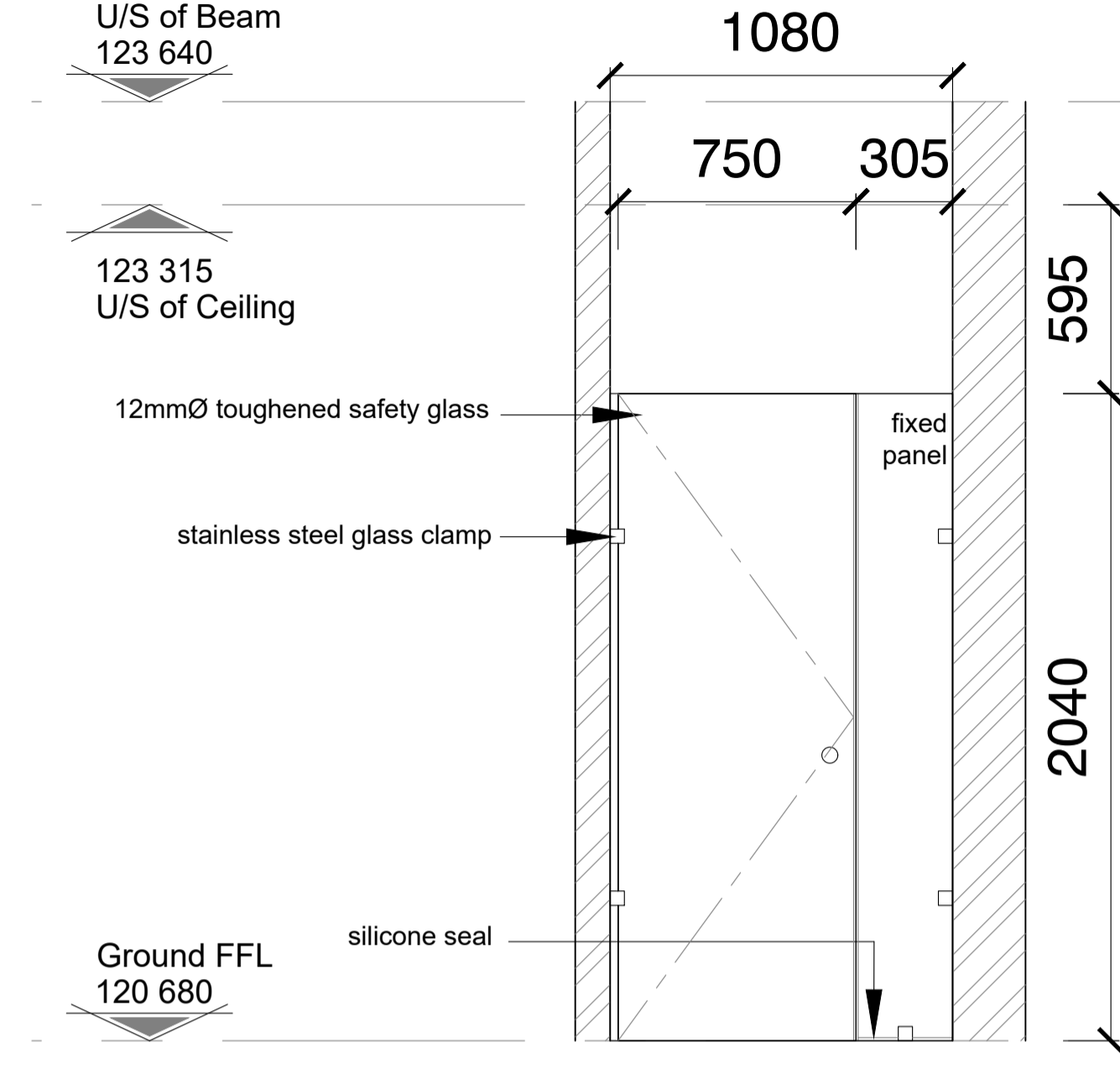
Patient Ablution 09 Typical Plan
 Scale 1:20



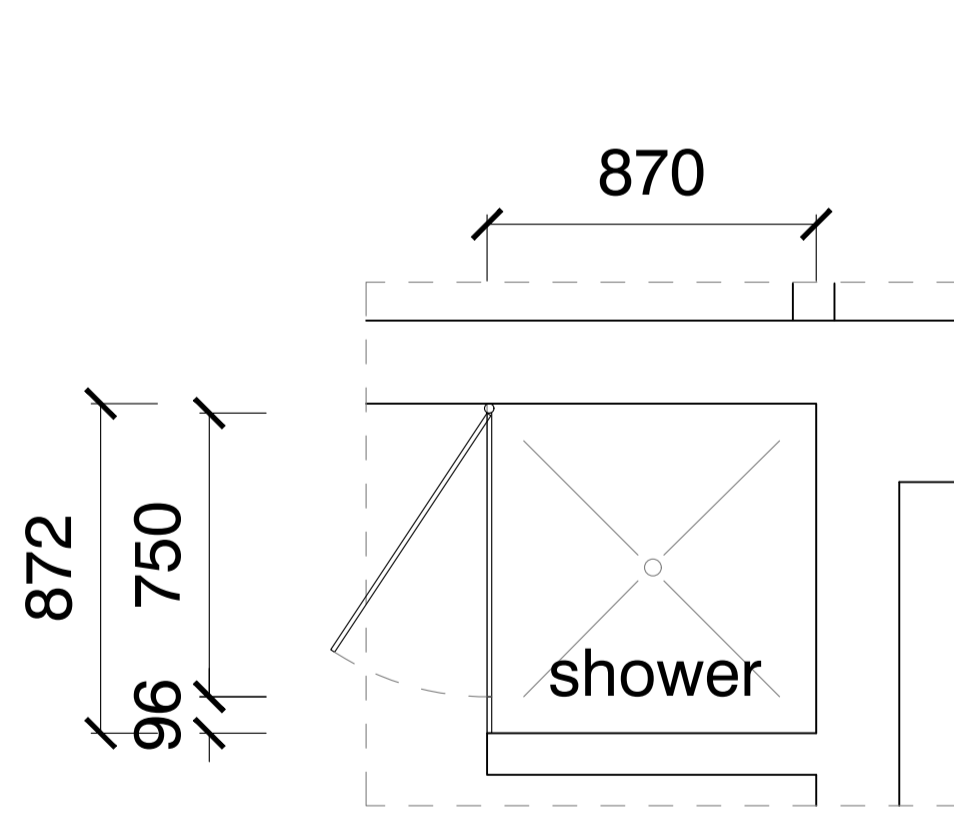
Patient Ablution 09 Elevation
 Scale 1:20



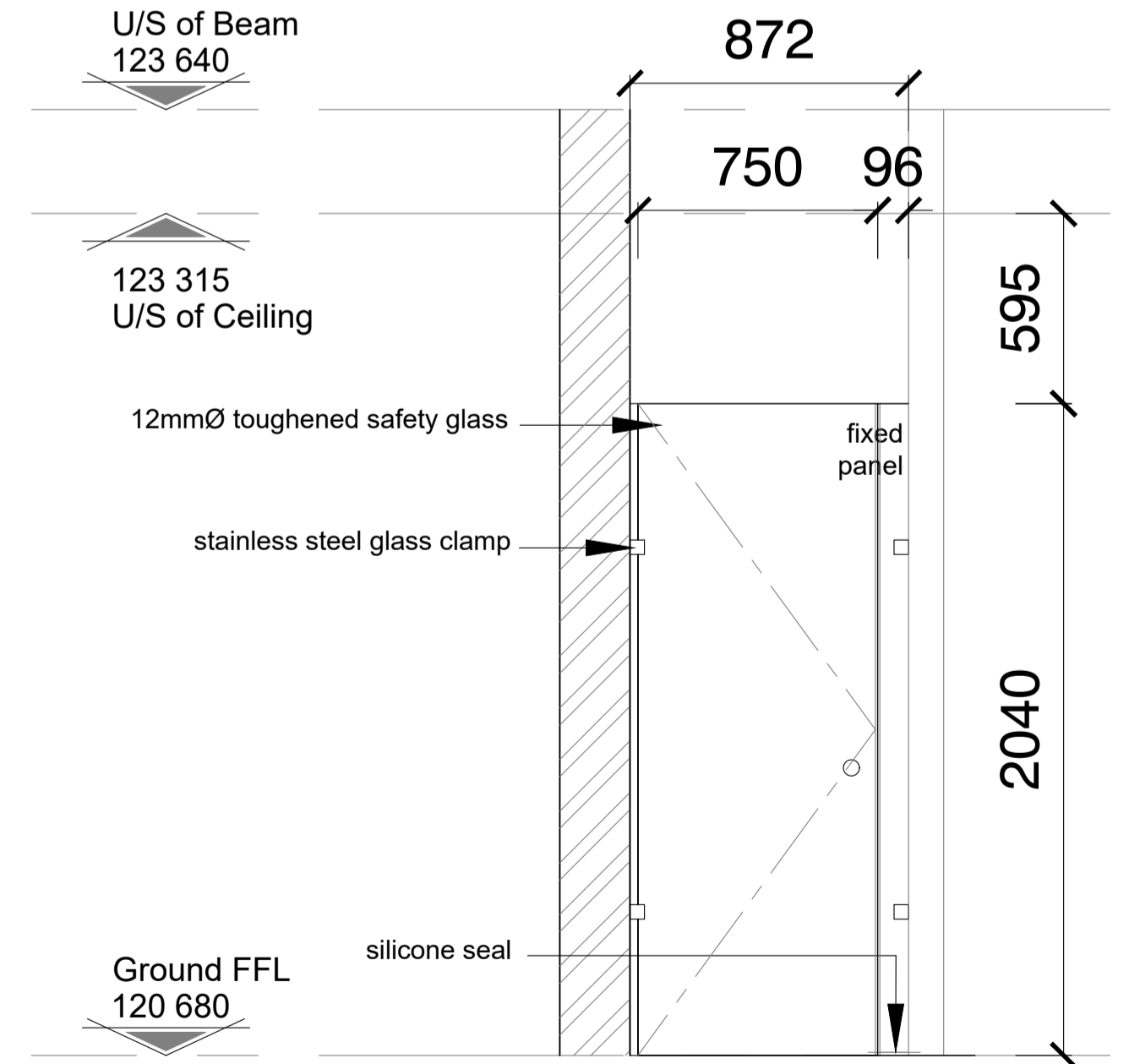
Isolation Short Stay Ward En-Suite 16 Typical Plan
 Scale 1:20



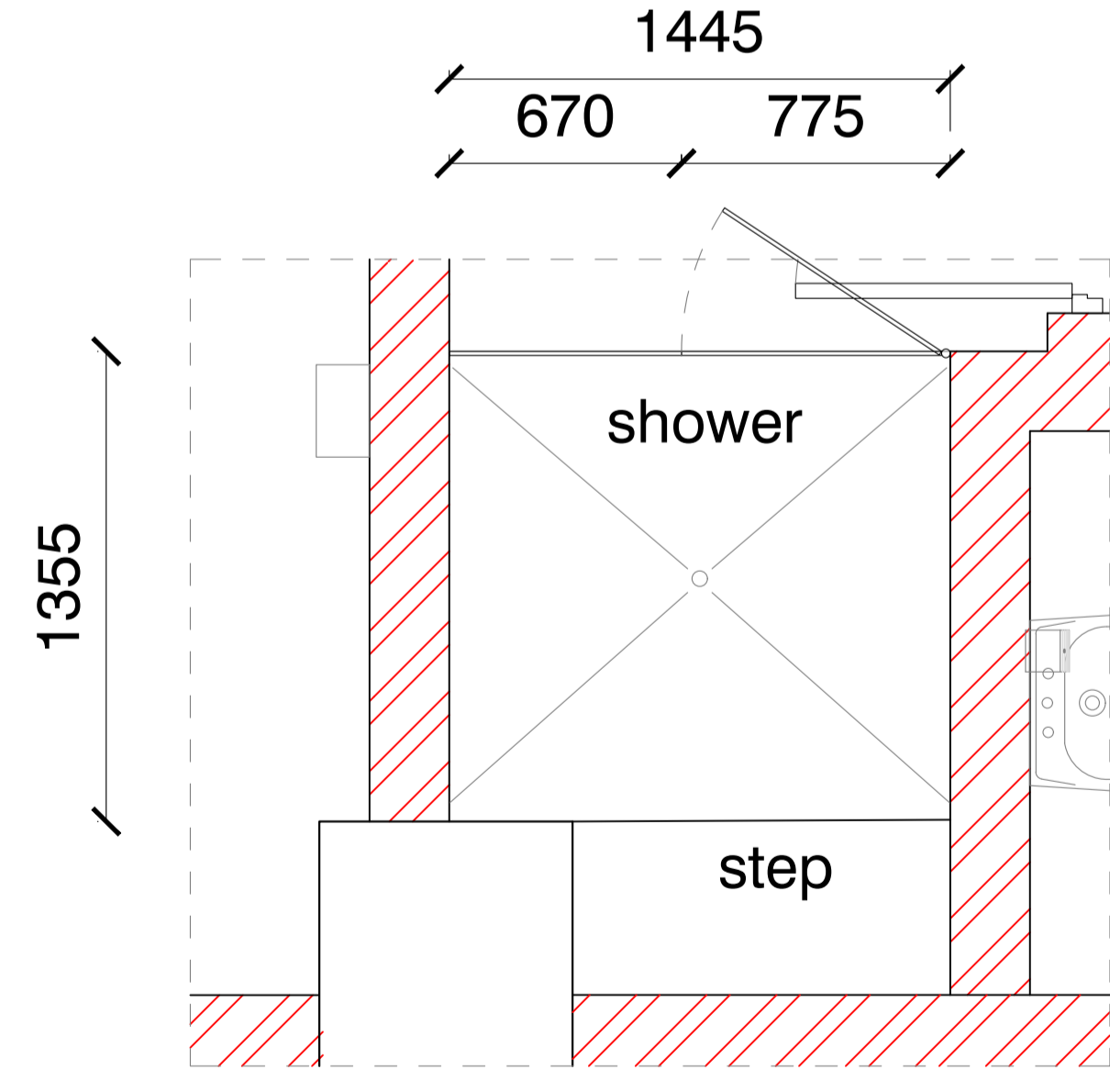
Isolation Short Stay Ward En-Suite 16 Elevation
 Scale 1:20



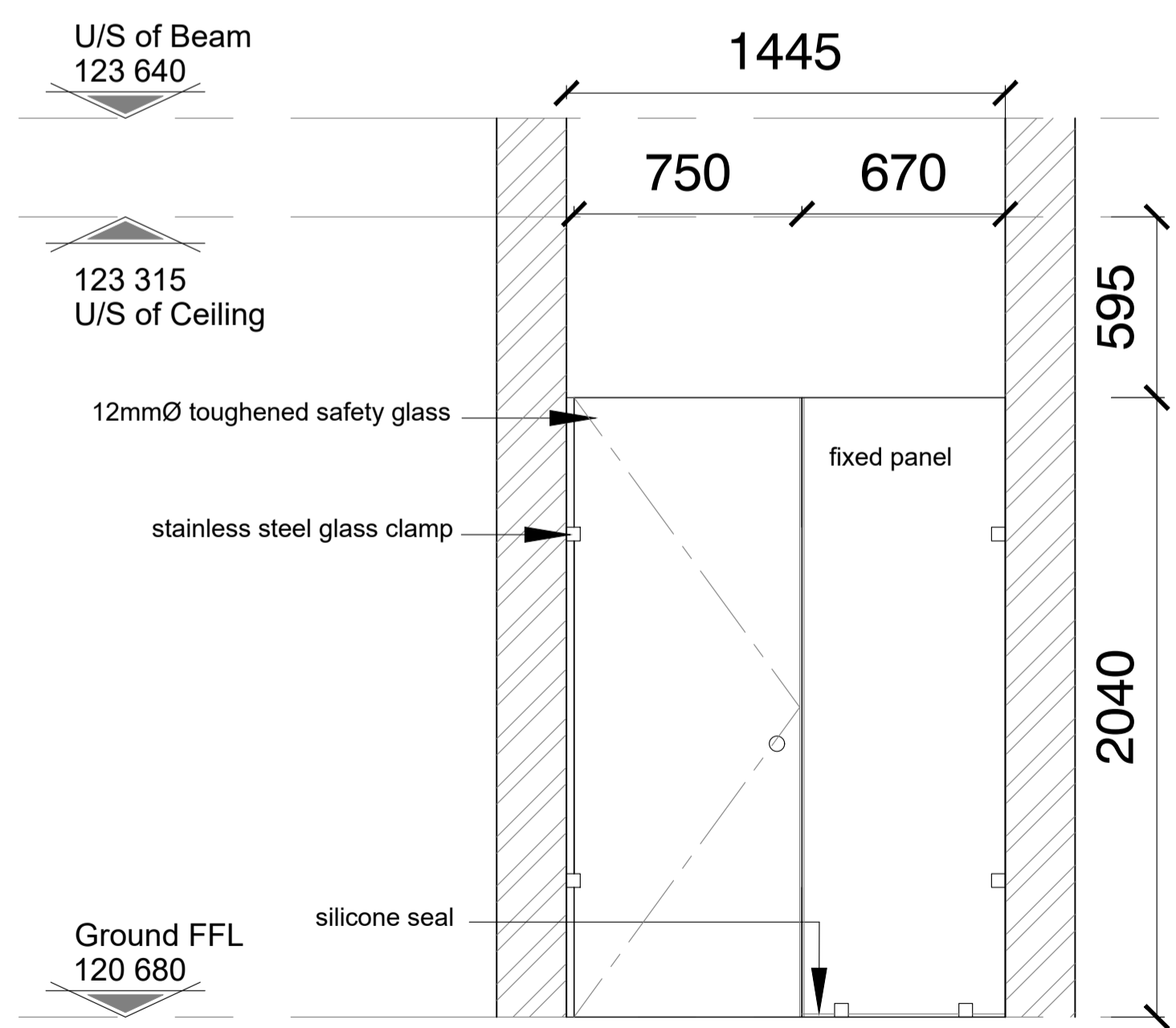
Female Change 40 Typical Plan
 Scale 1:20



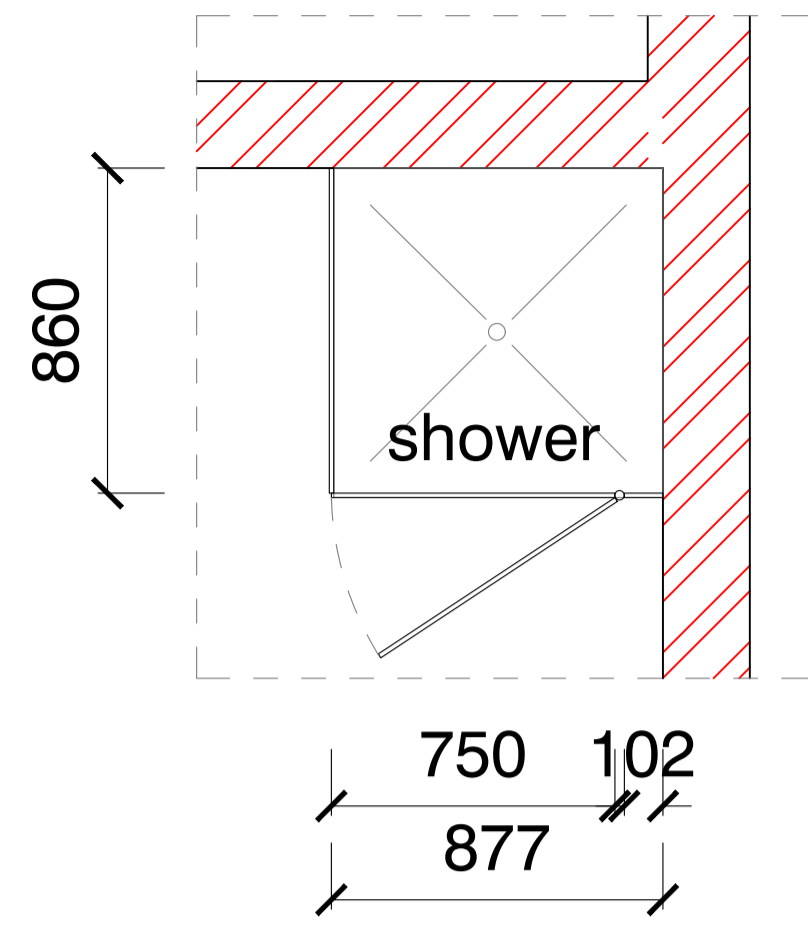
Female Change 40 Elevation
 Scale 1:20



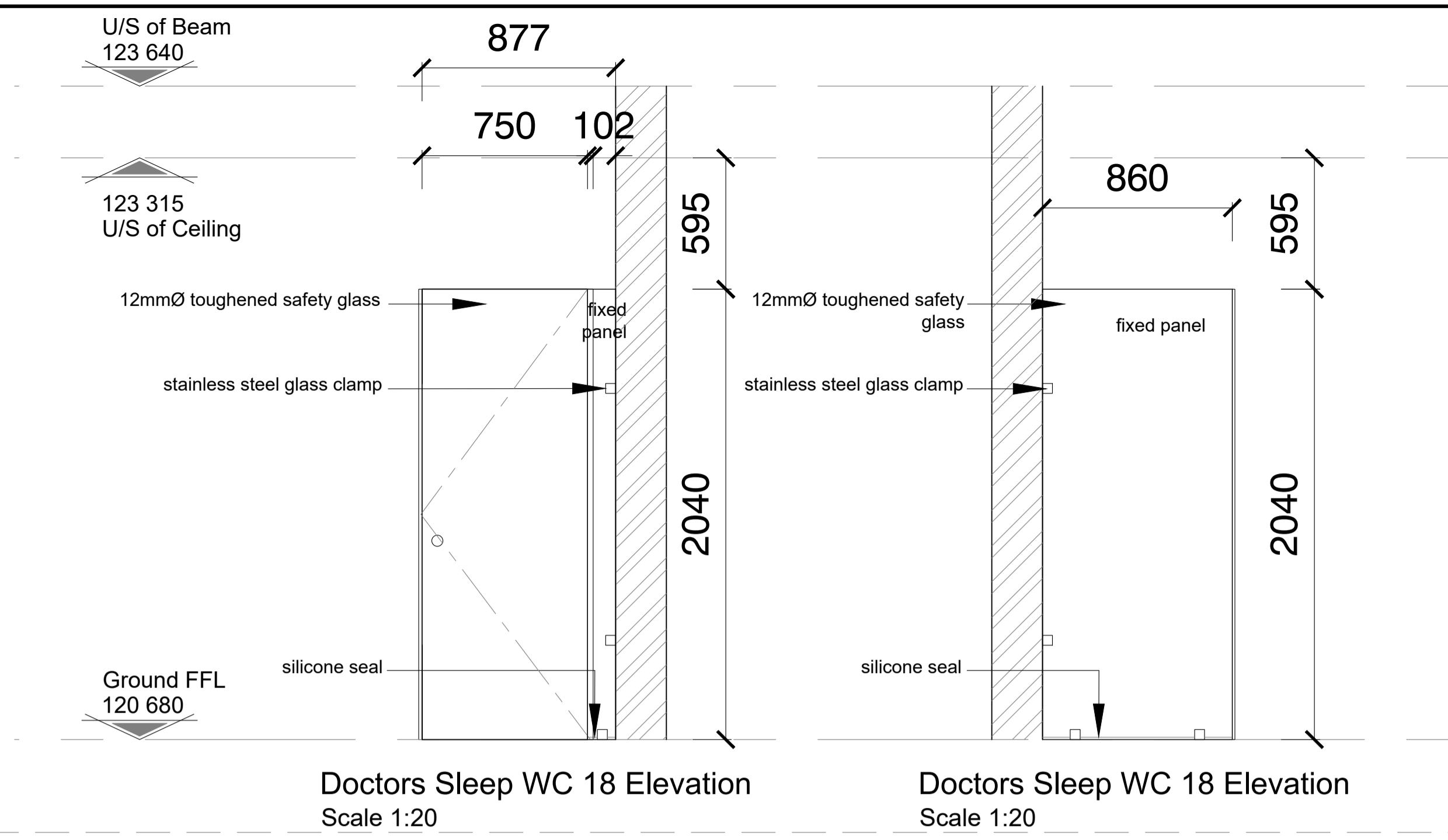
New En-Suite 45 Typical Plan
 Scale 1:20



New En-Suite 45 Elevation
 Scale 1:20

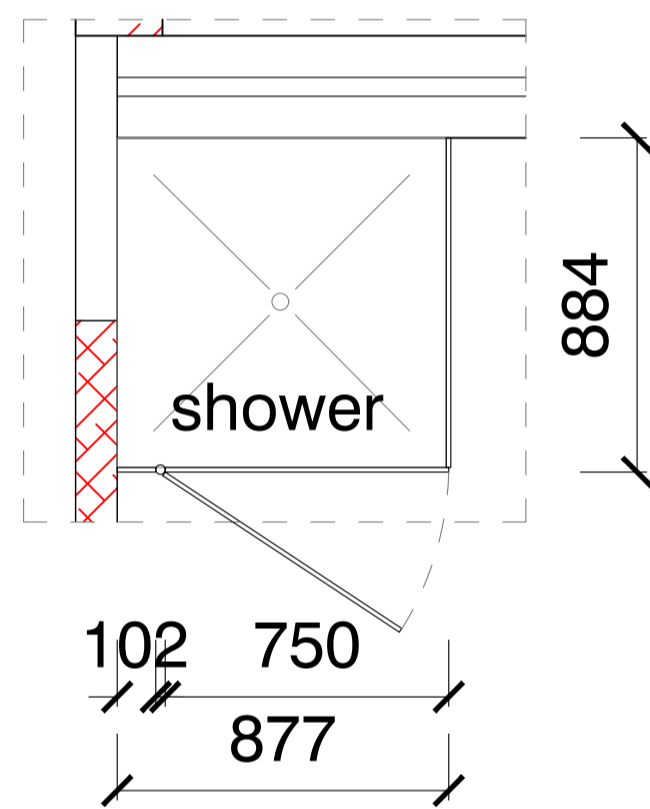


Doctors Sleep WC 18 Typical Plan
Scale 1:20

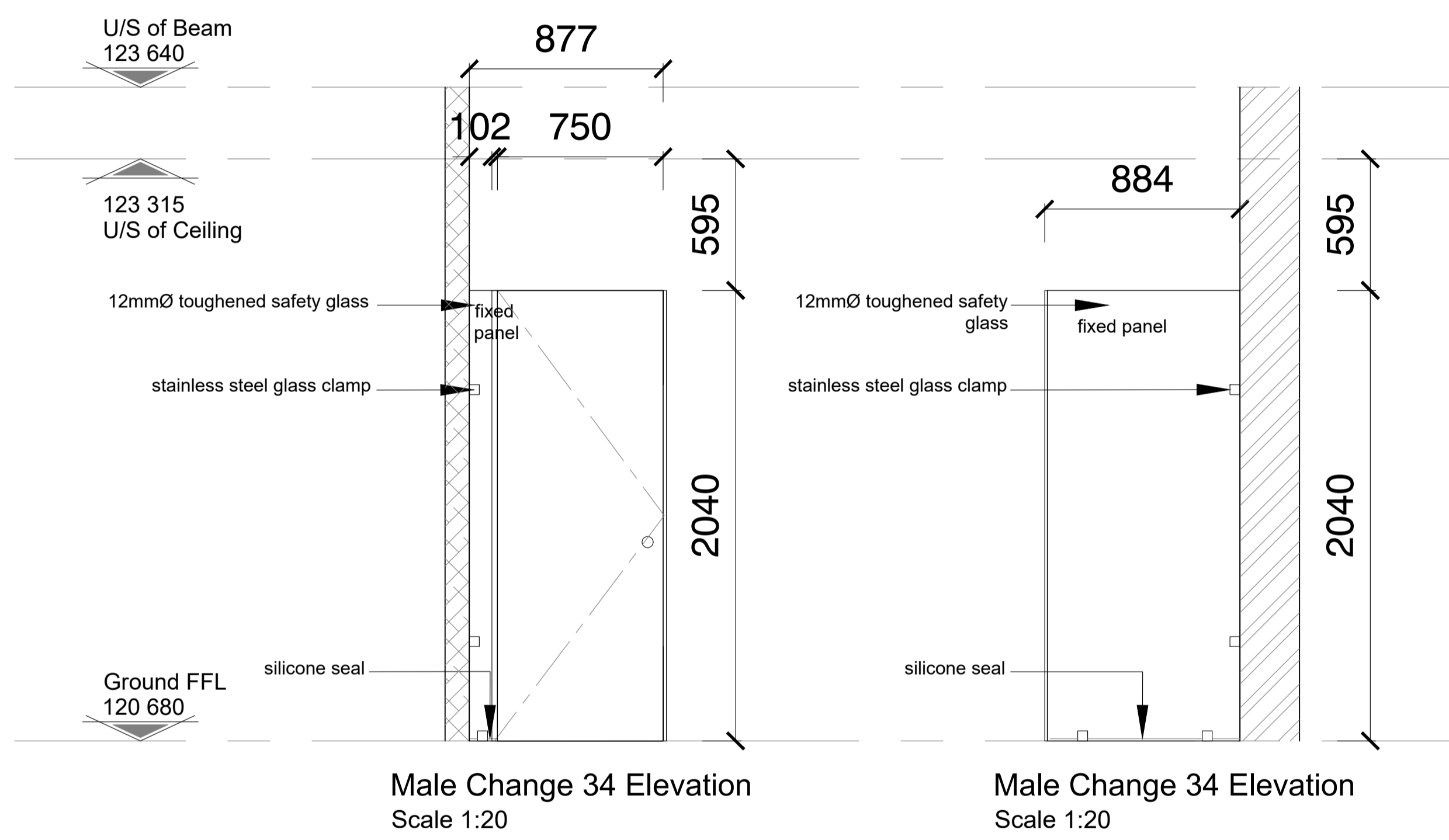


Doctors Sleep WC 18 Elevation
Scale 1:20

Doctors Sleep WC 18 Elevation
Scale 1:20

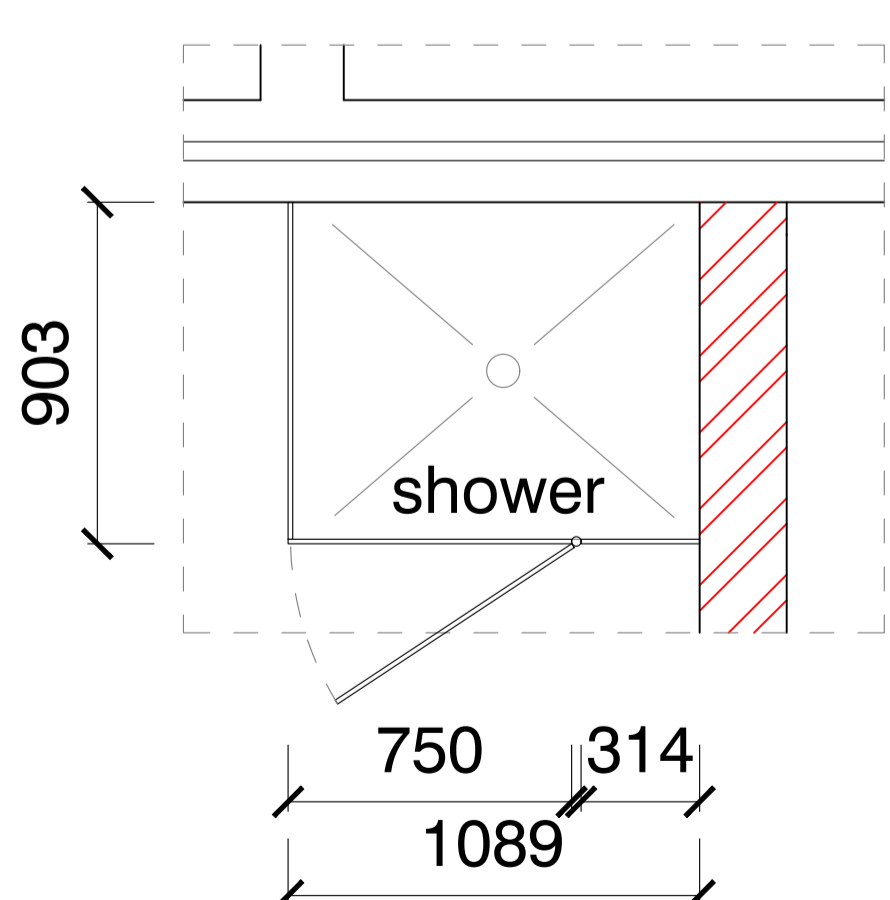


Male Change 34 Typical Plan
Scale 1:20

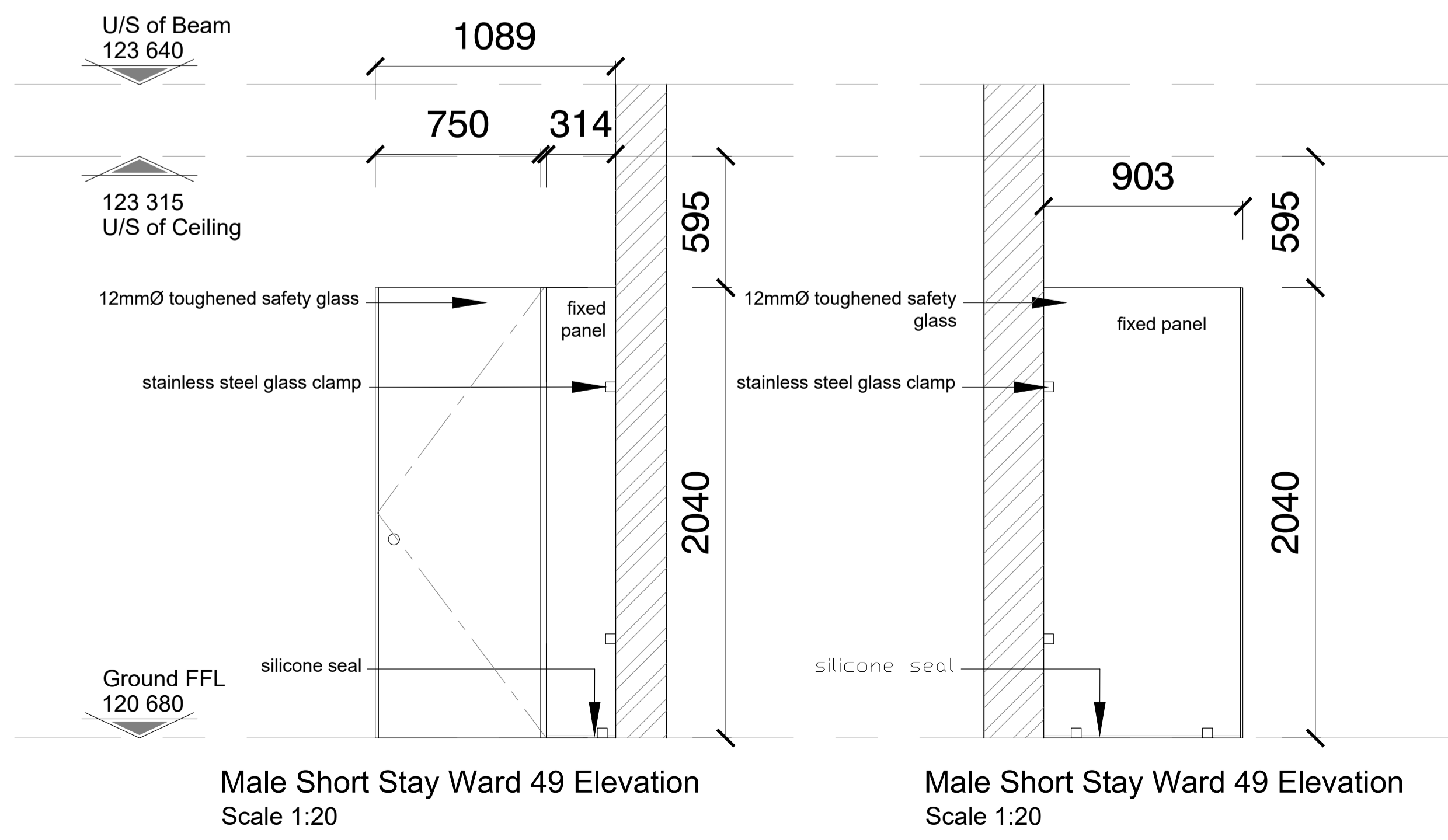


Male Change 34 Elevation
Scale 1:20

Male Change 34 Elevation
Scale 1:20



Male Short Stay Ward 49 Typical Plan
Scale 1:20



Male Short Stay Ward 49 Elevation
Scale 1:20

Male Short Stay Ward 49 Elevation
Scale 1:20

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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

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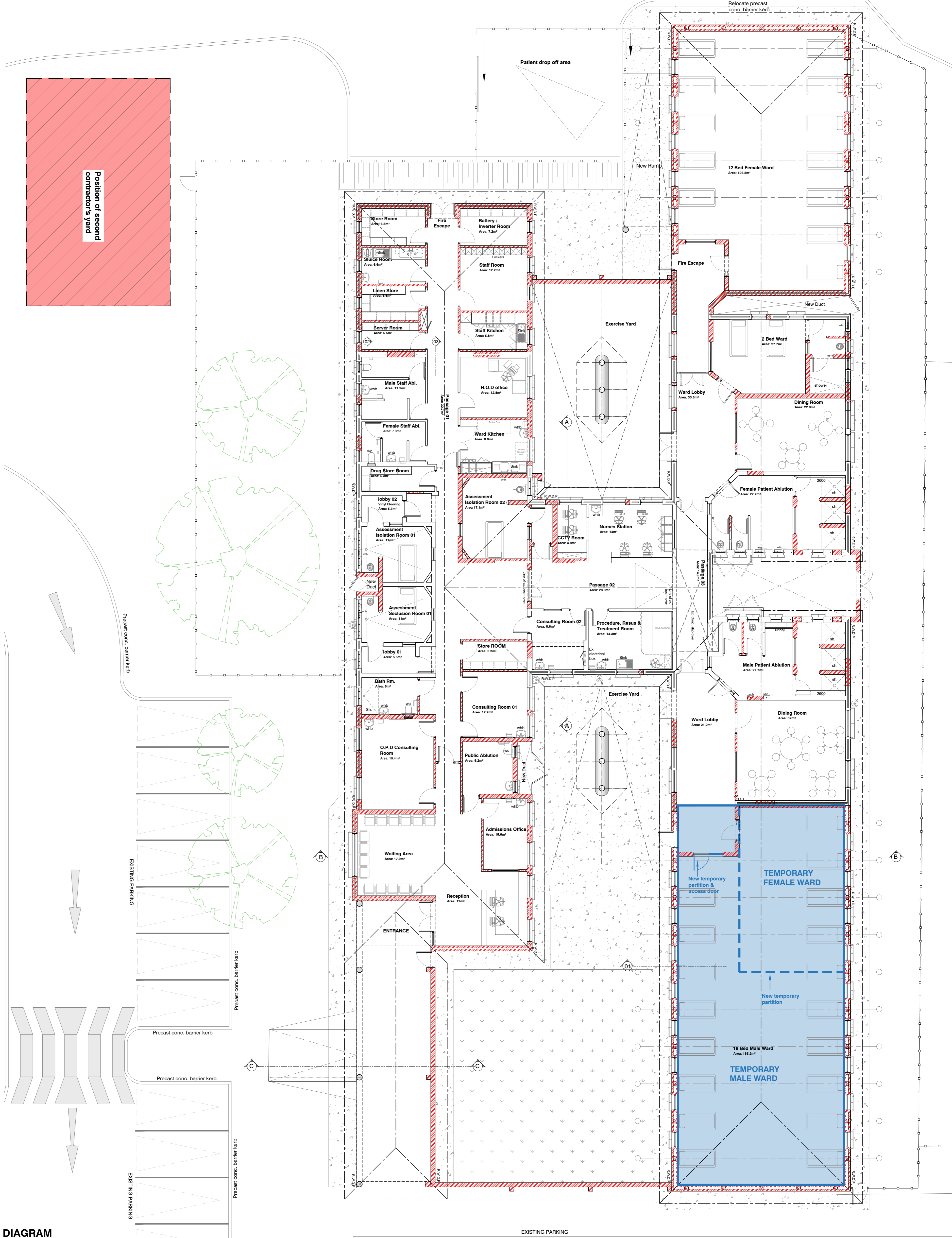
Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Working Drawings:
SHOWER GLASS DETAILS - TRAUMA UNIT

Issue Date: 12-12-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA477(B)UPH/ Trauma Unit-404	Scale	As shown	Sheet No.	1 of 1	Revision	A1
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ISSUED FOR: TENDER



FLOOR PLAN - PHASING DIAGRAM
SCALE 1:100

- PHASE 01 (Non sectional completion phase)**
- Line of security hoarding/ temporary brickwork
 - Erect hoarding to isolate the construction zone.
 - Construct new male ward extension.
 - Build temporary partition wall to create temporary male and female ward.
 - commission and issue temporary c.o.c for occupancy.
 - Hand over ward for decanting by staff and patients.

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Province of the
EASTERN CAPE
HEALTH

Architects Information:

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Designers Signature

Drawing Revisions:

Revision	Date	Drawn	Description	Revision	Date	Drawn	Description

MDA ARCHITECTS

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PO Box 8213 Waterfall Port Elizabeth 6008
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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Ultra-rare Provincial Hospital - 72-hour Assessment

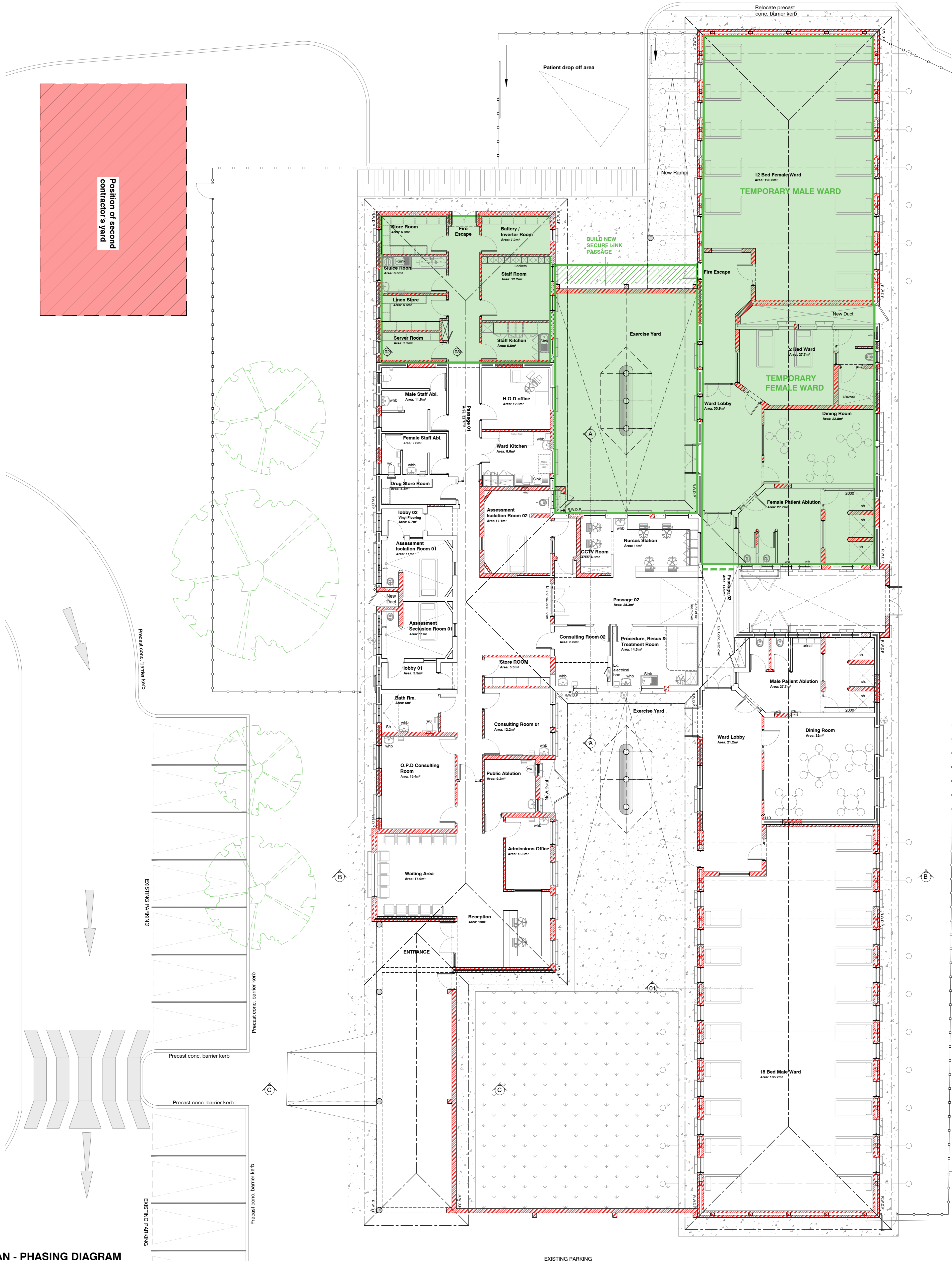
Drawing Name
Working Drawing:
FLOOR PLAN - 72 HOUR ASSESSMENT

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH / 72-HOUR ASSESSMENT-100

Revision: A1

ISSUED FOR: TENDER



FLOOR PLAN - PHASING DIAGRAM
SCALE 1:100

- PHASE 02**
- Line of secure hoarding
 - Phase 2 is a sectional completion phase.
 - Erect hoarding to isolate construction zone.
 - Construct new extensions and complete renovations to existing building.
 - Sectional completion of phase 2 scope of work, commission and inspection for handover to hospital staff.

General Notes:

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- No setting out is to commence before the positions of the boundary pegs on the site have been verified by a Land Surveyor.
- Sewer connection to comply with municipal regulations.

Municipal Information:

Architects Information:

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Designers Signature:

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	By	Description	Revision	Date	By	Description

MDA ARCHITECTS

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Project Title:
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Ultra-herage Provincial Hospital - 72-hour Assessment

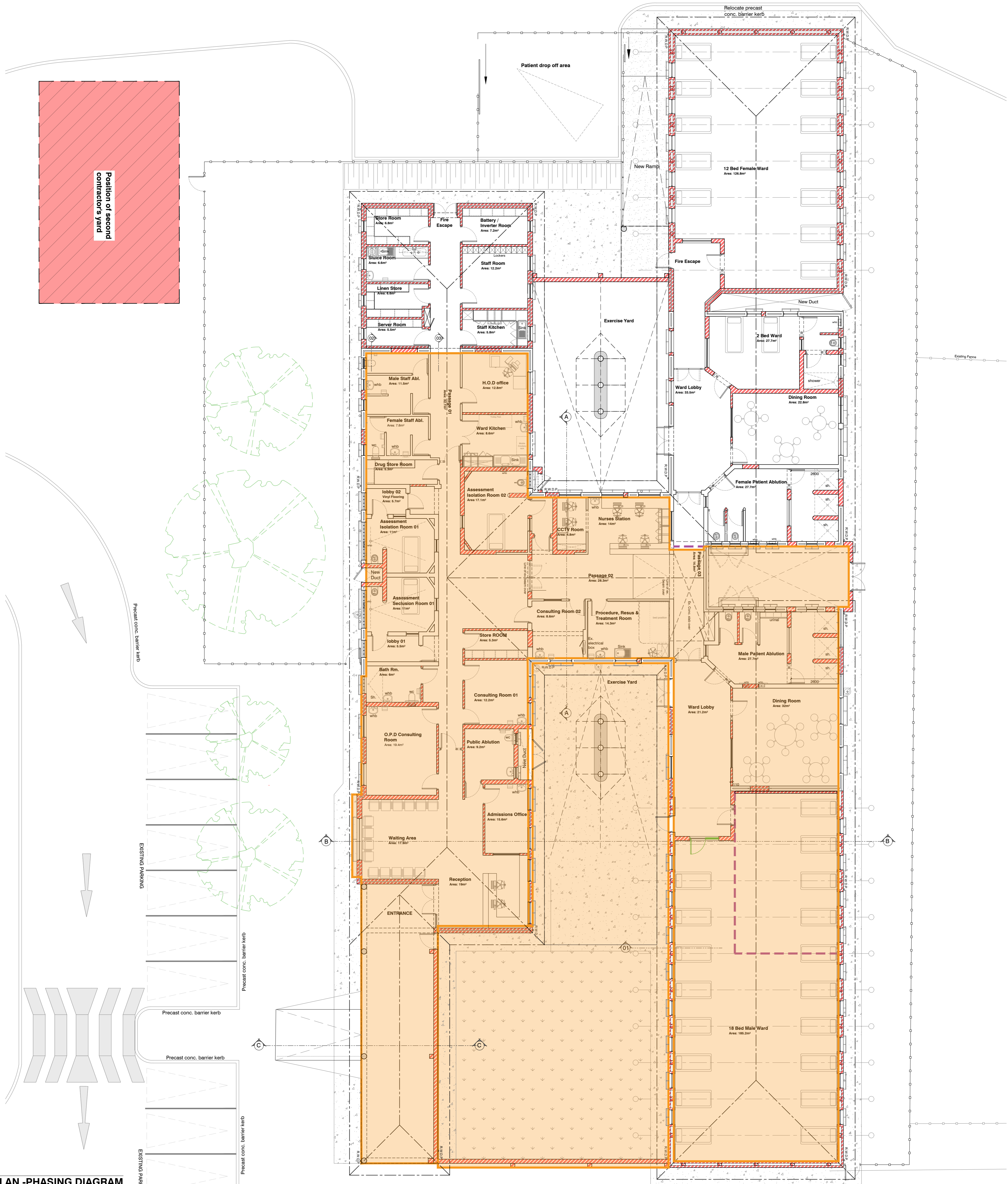
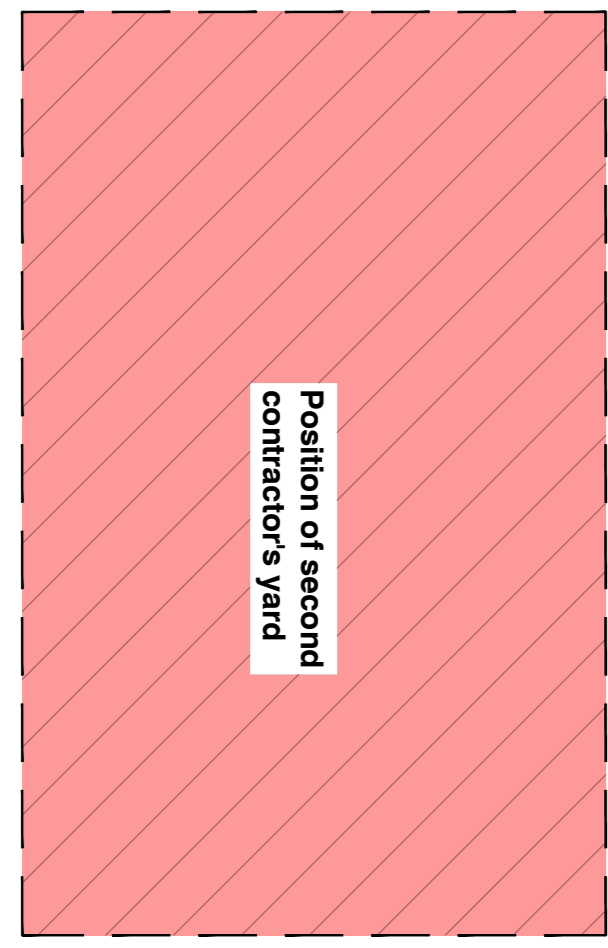
Drawing Name:
 Working Drawing:
 FLOOR PLAN- 72 HOUR PSYCHIATRIC UNIT

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH / 72-HOUR ASSESSMENT-101

Revision: X A1

ISSUED FOR: TENDER



FLOOR PLAN - PHASING DIAGRAM
SCALE 1:100

- PHASE 03**
- Remove hoarding
 - Phase 3 is a sectional completion phase.
 - Erect hoarding to isolate construction zone.
 - Construct new extensions and complete renovations to existing building.
 - Demolition of temporary partition wall
 - Completion of final finishes
 - Commission and inspection for handover of sectional completion to hospital staff.

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Municipal Information:

Province of the EASTERN CAPE
HEALTH

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Drawing Revisions:			Drawing Revisions:			Drawing Revisions:					
Revision	Date	By	Description	Revision	Date	By	Description	Revision	Date	By	Description

MDA ARCHITECTS

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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
Uitenhage Provincial Hospital - 72-hour Assessment

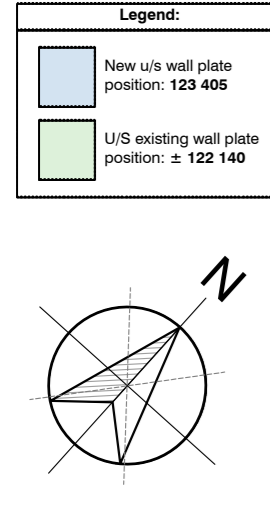
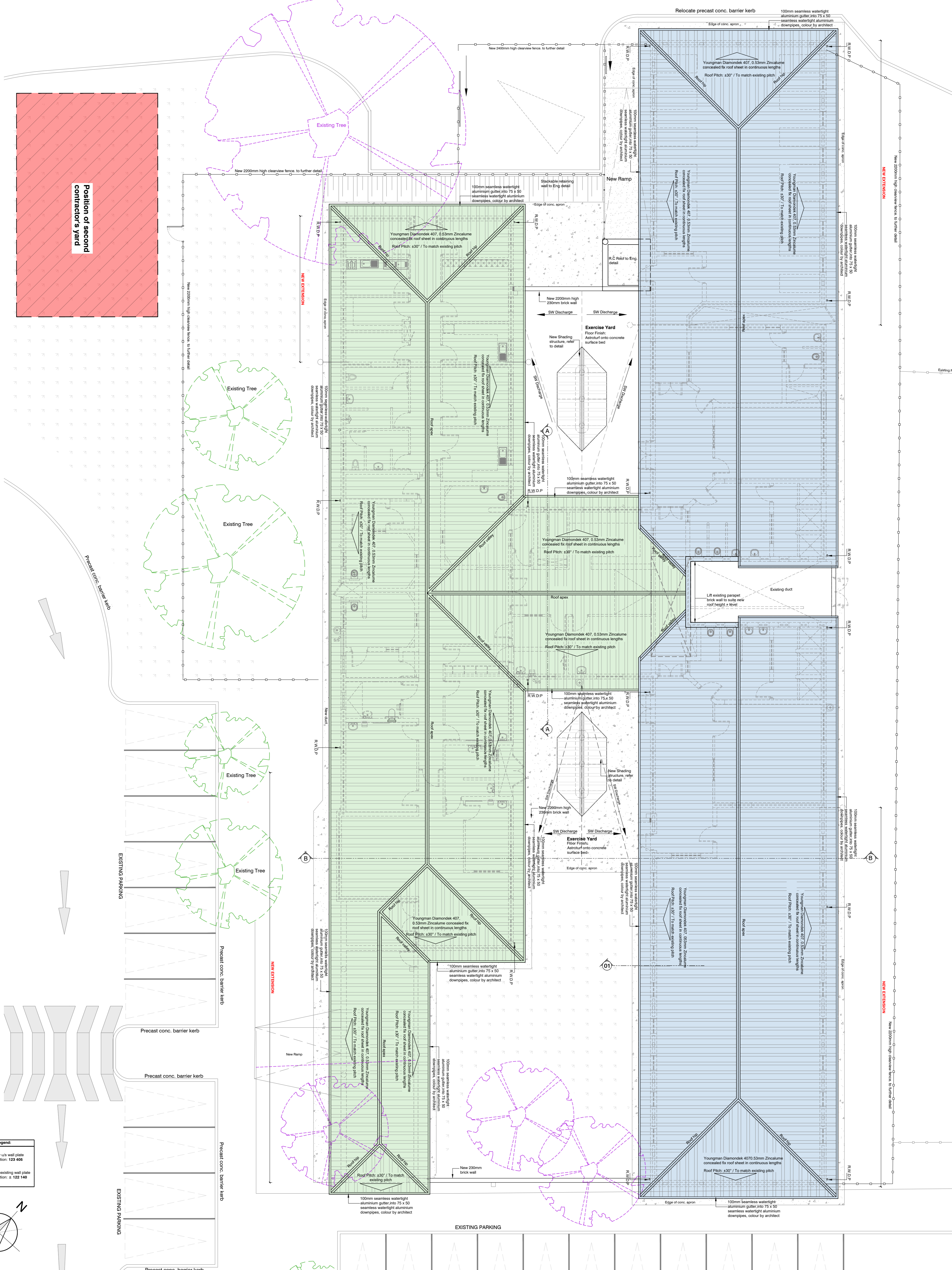
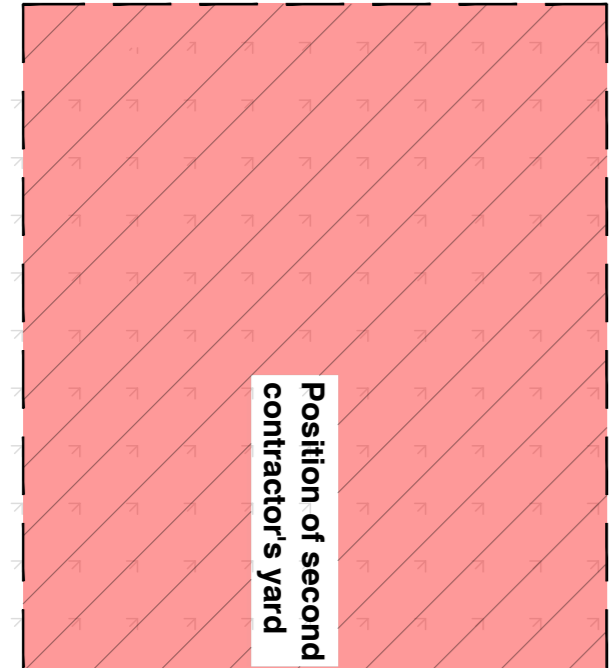
Drawing Name
Working Drawing:
FLOOR PLAN- 72 HOUR ASSESSMENT

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH / 72-HOUR ASSESSMENT-102

Revision: 1

ISSUED FOR: TENDER



ROOF PLAN
SCALE 1:100

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Municipal Information:

Province of the EASTERN CAPE
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Designers Signature

Drawing Revisions:			Drawing Revisions:			Drawing Revisions:					
Revision	Date	By	Description	Revision	Date	By	Description	Revision	Date	By	Description

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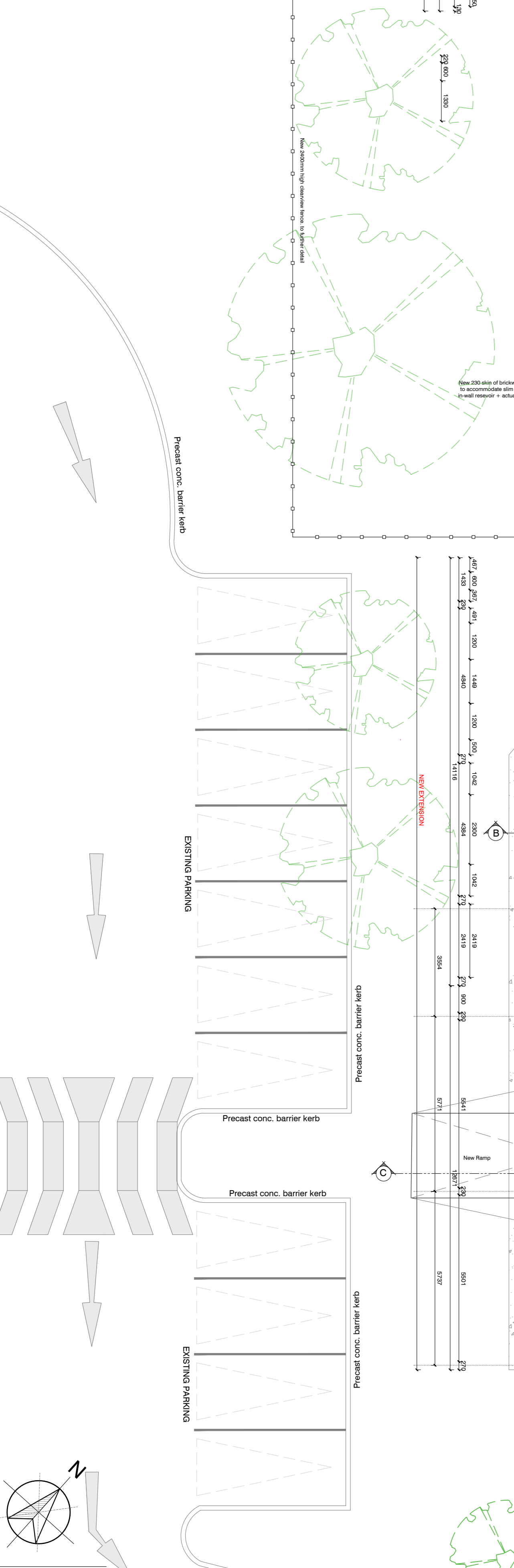
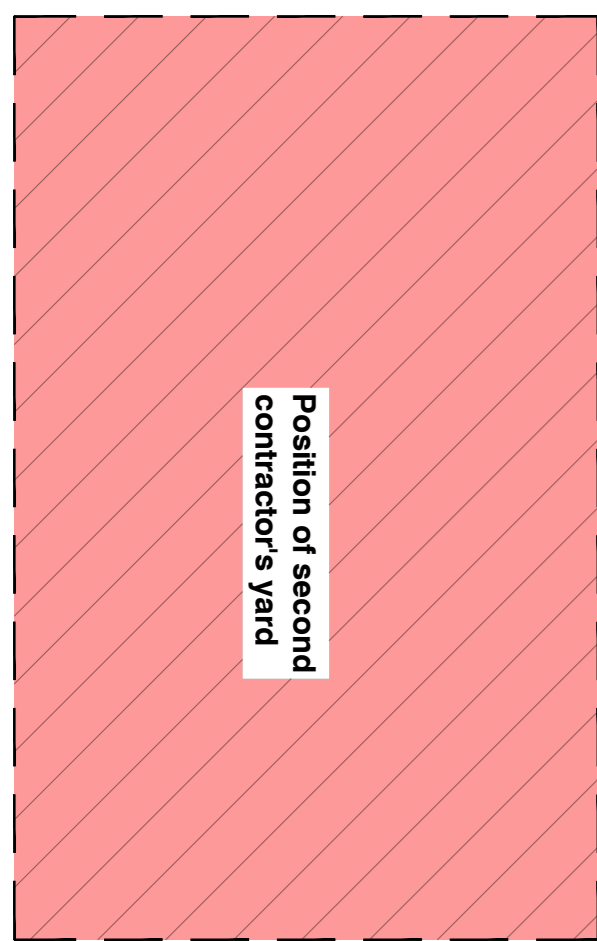
Project Title:
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay (Uthenga Provincial Hospital - 72-hour Assessment)

Drawing Name:
 Working Drawing:
 ROOF PLAN- 72 HOUR ASSESSMENT

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Revision: A1

ISSUED FOR: TENDER



FLOOR PLAN
SCALE 1:100

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HEALTH

Architects Information:

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Province of the EASTERN CAPE
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Drawing Revisions:

Revision	Date	Drawn By	Description

Revision	Date	Drawn By	Description

Revision	Date	Drawn By	Description

Revision	Date	Drawn By	Description

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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
Ulithanga Provincial Hospital - 72-hour Assessment

Drawing Name
Working Drawing
FLOOR PLAN- 72 HOUR ASSESSMENT

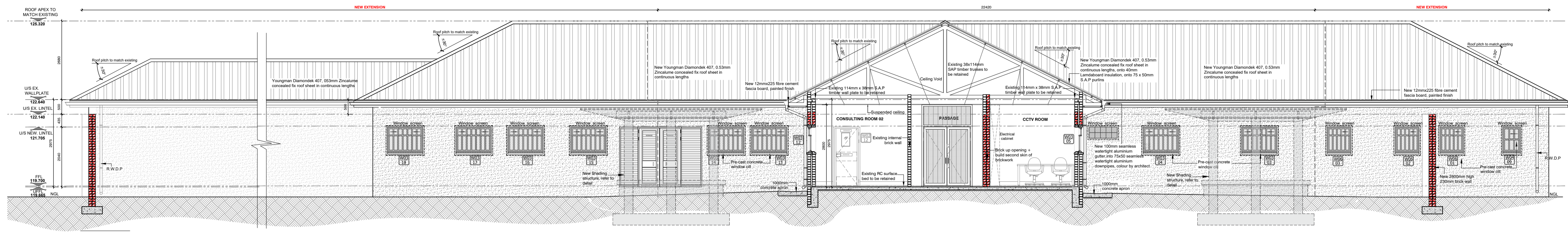
Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Issue Number
MDA477(B) UPH /
72-HOUR ASSESSMENT-202

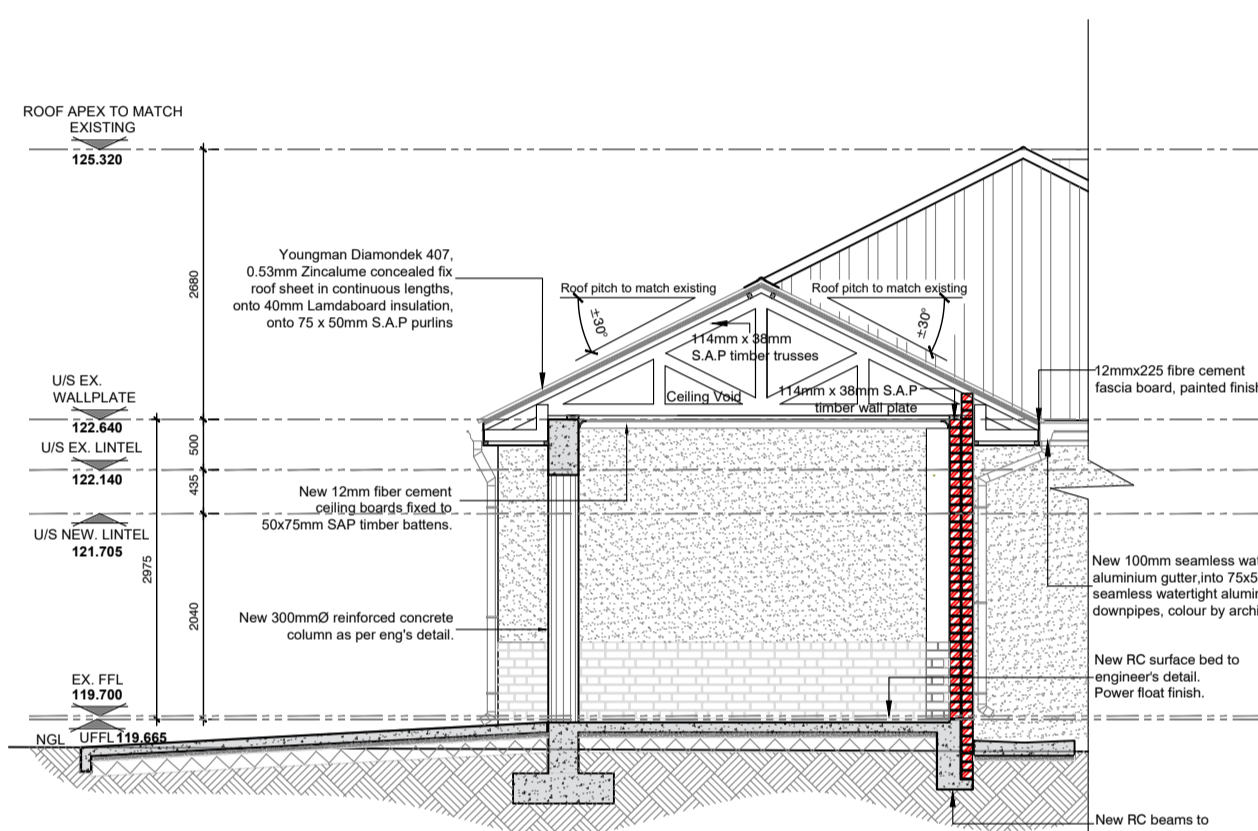
Revision
A1

ISSUED FOR: TENDER

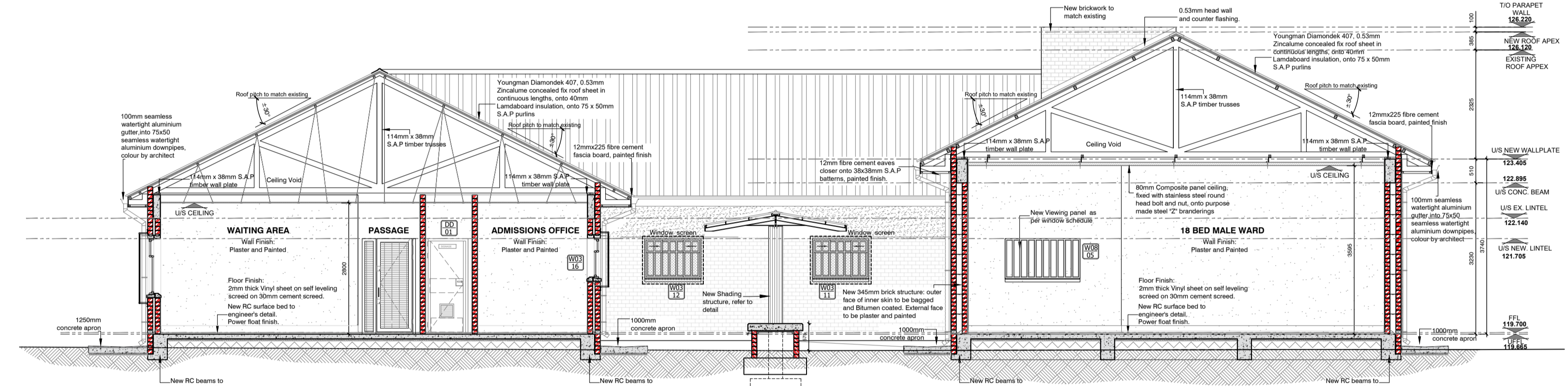




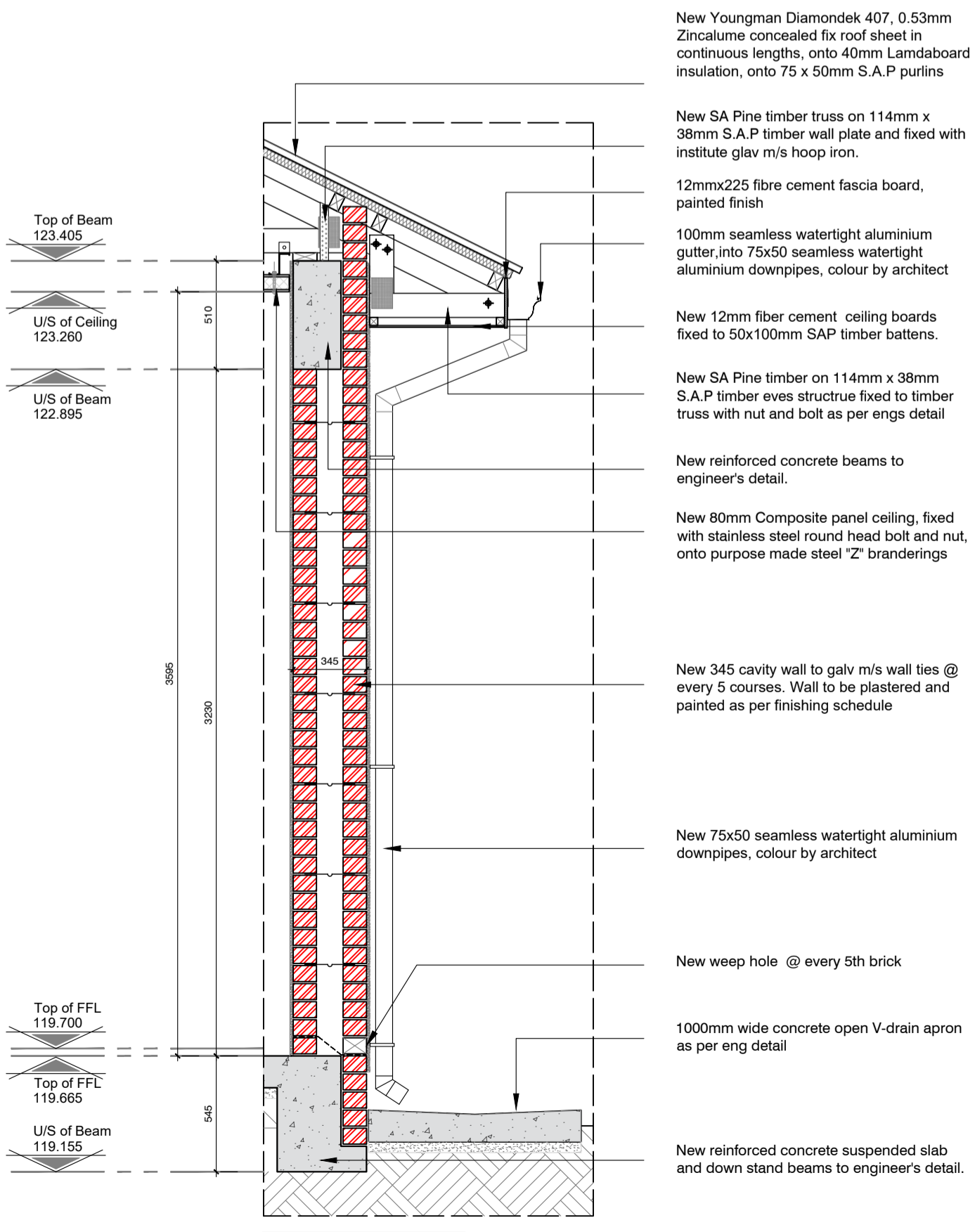
SECTION A-A
SCALE 1:75



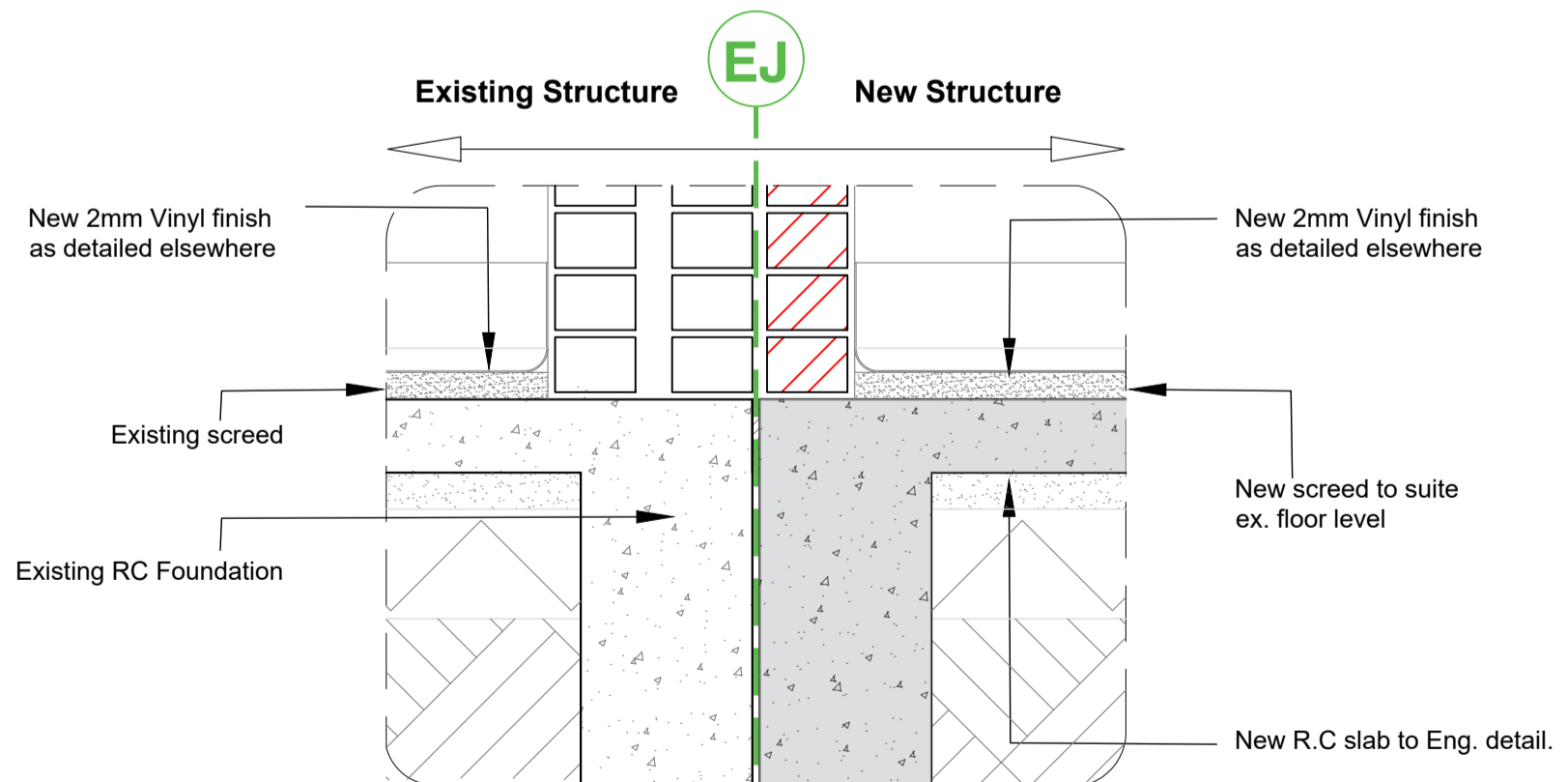
SECTION C-C
SCALE 1:75



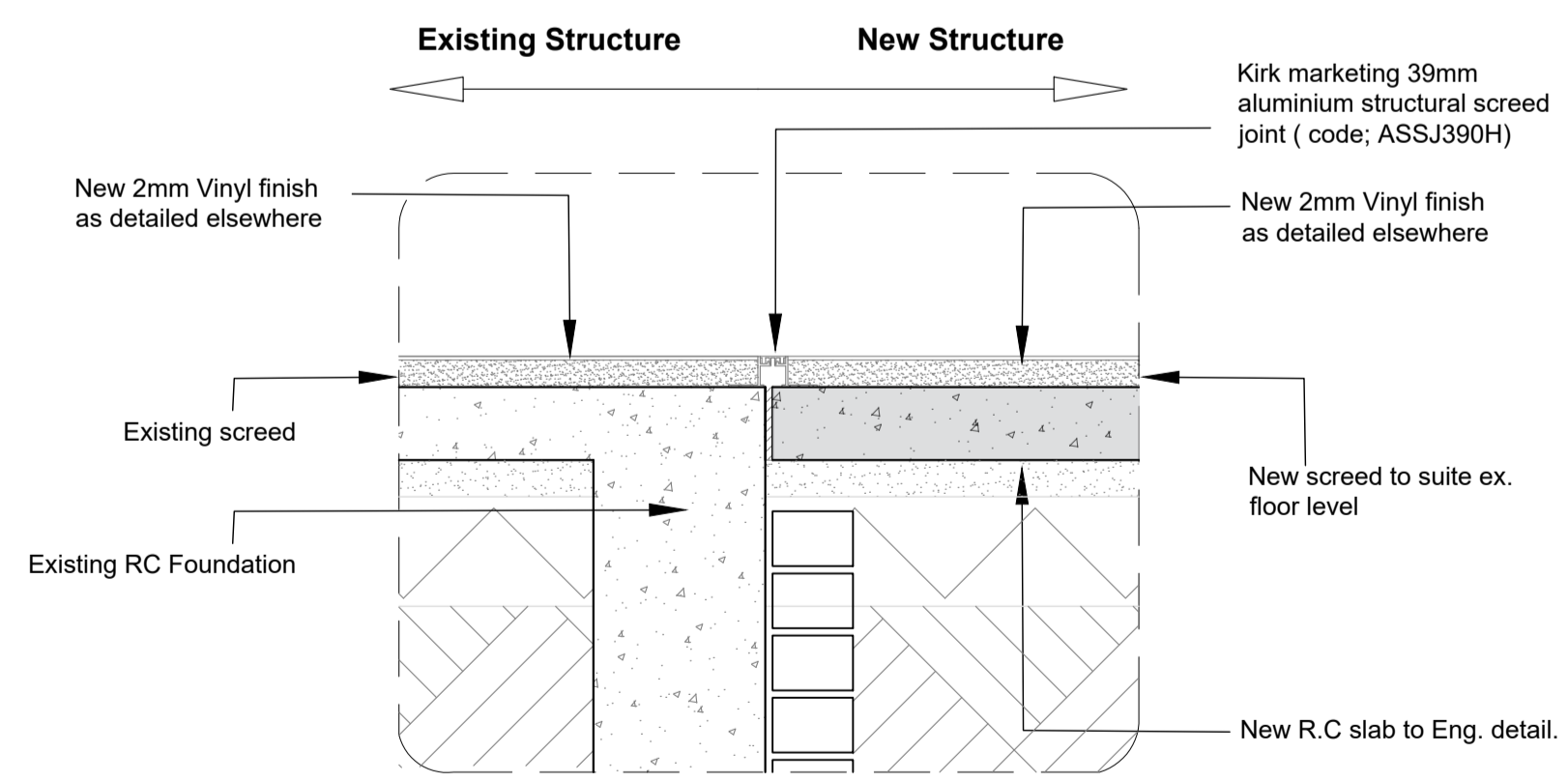
SECTION B-B
SCALE 1:75



PART WALL DETAIL 01
SCALE 1:25



DETAIL 02: STRUCTURAL SCREED JOINT
Scale 1:10



DETAIL 03: STRUCTURAL SCREED JOINT
Scale 1:10

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Clients Information:
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Drawing Revisions:

Revision	Date	Drawn	Description

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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital - 72-hour Assessment

Drawing Name
Working Drawings: SECTIONS & DETAILS

Issue Date: 20-11-2023
Technician: G.D
Checked By: DBA
Drawing Scale: As shown

MDA ARCHITECTS

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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital - 72-hour Assessment

Drawing Name
Working Drawings: SECTIONS & DETAILS

Issue Date: 20-11-2023
Technician: G.D
Checked By: DBA
Drawing Scale: As shown

Drawing Number
MDA477(B) UPH / 72-HOUR ASSESSMENT-203

Revision
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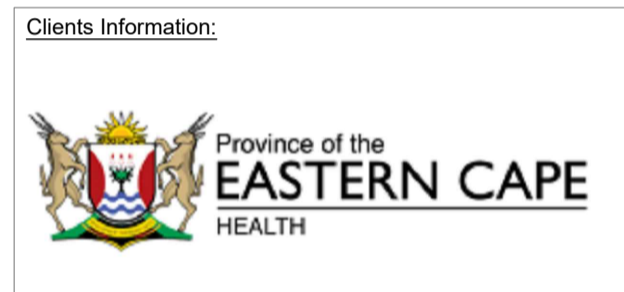
ISSUED FOR TENDER

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Designers Signature



Drawing Revisions:

Revision	Date	Drawn	Description



18 Park Lane Central Port Elizabeth 6001
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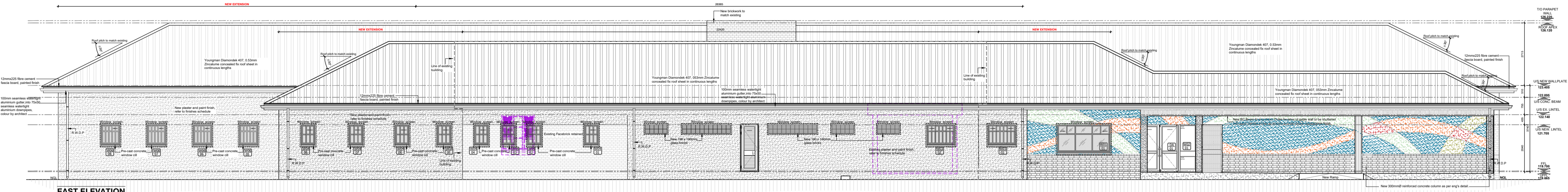
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
 Uitenhage Provincial Hospital - 72-hour Assessment

Drawing Name
 Working Drawings:
 ELEVATIONS - 72 HOUR ASSESSMENT

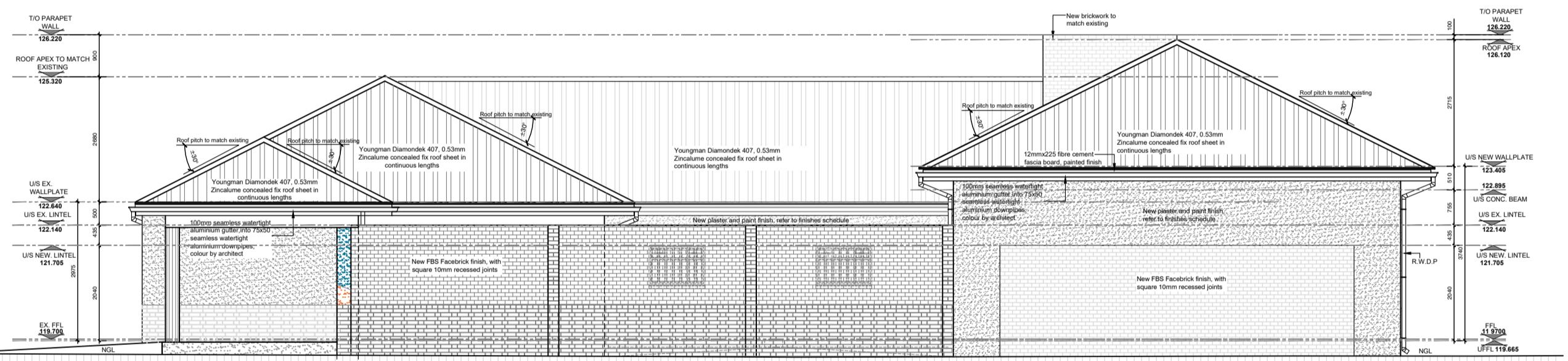
Issue Date: 20-11-2023
Technician: G.D
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA477(B) UPH / 72-HOUR ASSESSMENT-204	Drawn	Checked	Approved

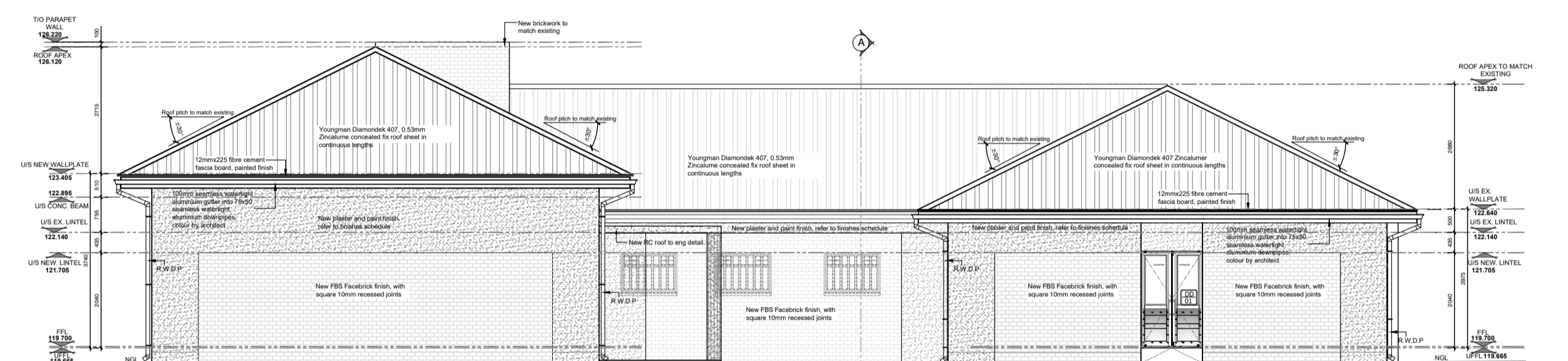
ISSUED FOR TENDER



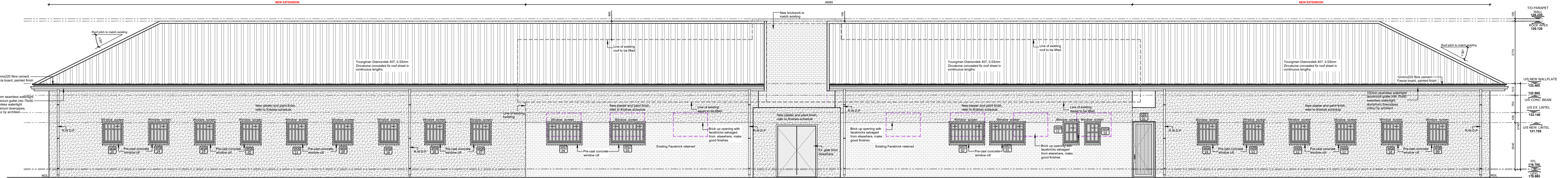
EAST ELEVATION
SCALE 1:100



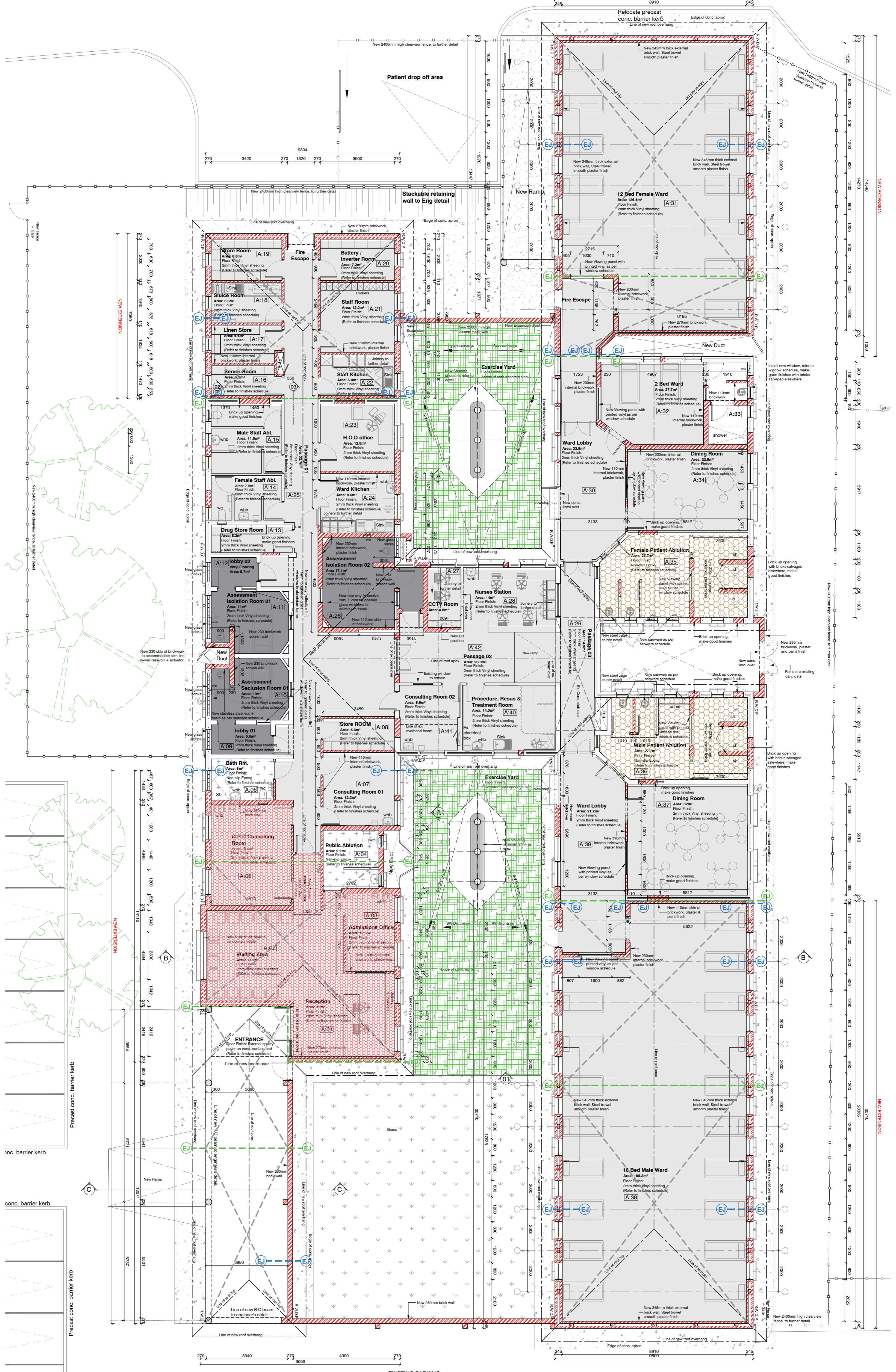
NORTH ELEVATION
SCALE 1:100



SOUTH ELEVATION
SCALE 1:100



WEST ELEVATION
SCALE 1:100



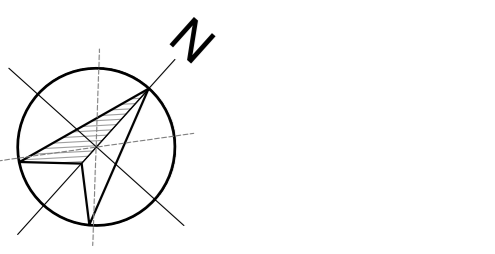
EXPANSION JOINT LEGEND

- Expansion Joint position in the brickwork
- Expansion Joint position in the concrete surface bed: Refer to floor finish expansion joint detailed elsewhere.
- Extent of concrete panel in single pour.

FLOOR FINISH LEGEND

COLOUR	THICKNESS	SPECIFICATION
[Red]	2mm	Tarkett 2mm thick homogeneous IQ Eminent Unisense vinyl floor sheet. Sheet width 2m, with PUR surface treatment. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self leveling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction. Floor is trafficable after 24 hours, placement of furniture only after 72 hours
[Green]	2mm	Tarkett 2mm thick Excellence heterogeneous vinyl floor sheet (Colour: Triangle Wood Chalk). Sheet width 2m, with PUR surface treatment. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self leveling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
[Blue]	8mm	Technical Finishes 8mm Polyscreed RT inclusive of surface preparation in accordance with manufacturers specifications, Lockcoat, 2 coats Solikote UVC
[Yellow]	2,5mm	Tarkett 2,5mm thick homogeneous Granit Safe T vinyl floor sheet. Sheet width 2m, slip resistant R10 grip. Concrete sub surface to be moisture tested as per manufacturers specifications. Vinyl laid onto approved self leveling screed and adhesive. Vinyl to be rolled with 65kg roller in both direction, floor is trafficable after 24 hours, placement of furniture only after 72 hours
[Purple]	8mm	Technical Finishes 8mm decorative Terrazzo Epoxy resin screed on to min 20MPa concrete substrate, moisture content to be less than 5%. Concrete to be primed with Solikote STP. Screed finish to be sealed with Polyscreed Sealcoat. All surface preparations and installations to be completed in strict accordance with manufacturers specifications.
[Orange]		Artificial grass: Easigrass play ette 25mm pile artificial turf onto silica fill over concrete surface bed as per engineers specifications.

NOTES:
 All concrete to be tested for strength and moisture content accordingly
 All substrates to be inspected by specialist floor finish manufacturers prior to laying of any vinyl or specialist screed products. Approval of substrate concrete condition to be provided in writing at time of inspection.
 All specialist surfaces, vinyl and screeds, to be installed by suitably registered specialist installers, per manufacturers specifications and requirements
 Certificates of compliance and guarantees to be provided in every instance for vinyl and screed applications.



FLOOR FINISHES PLAN
 SCALE 1:100

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Project Title:
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
 Uitenhage Provincial Hospital - 72-hour Assessment

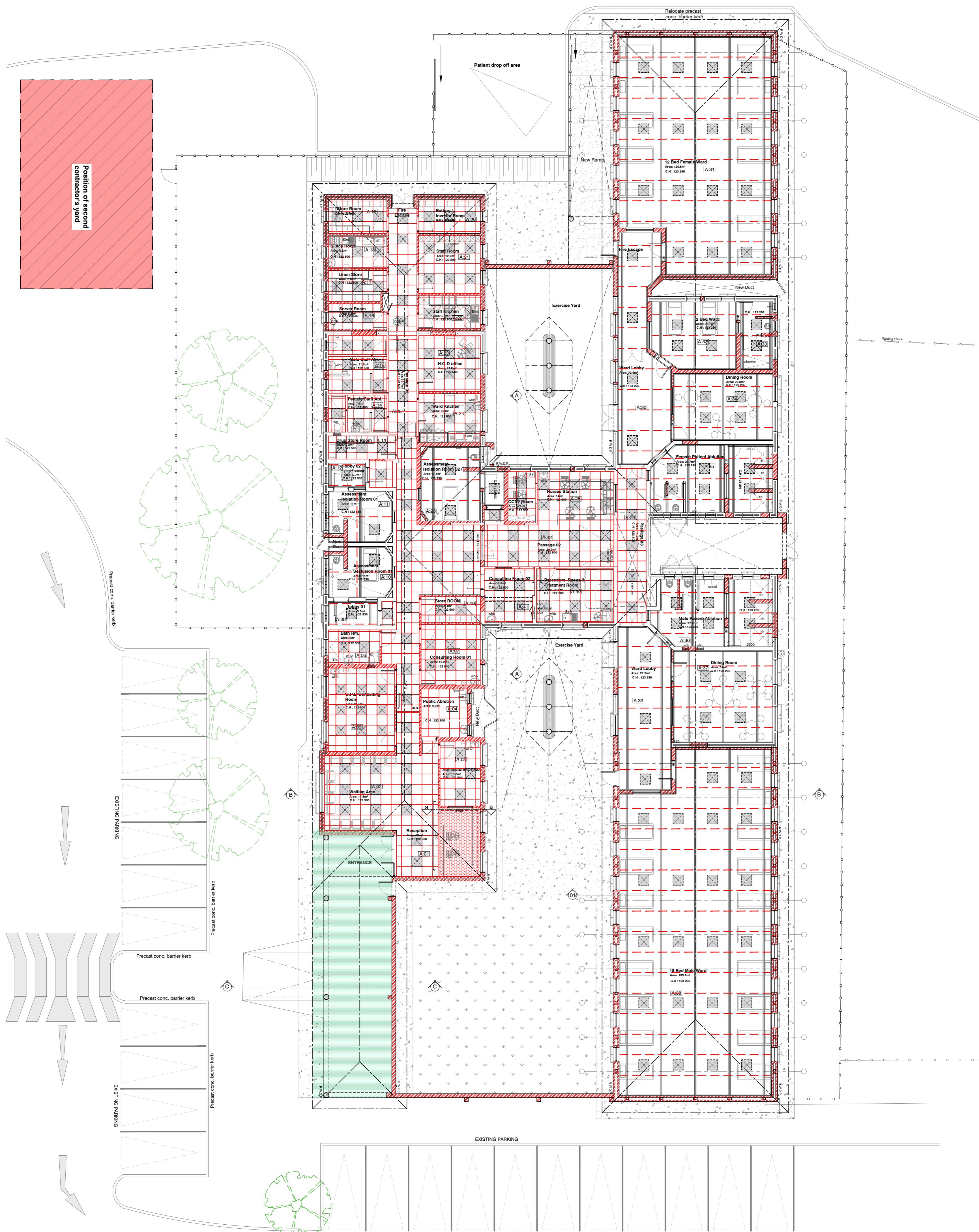
Drawing Name:
 Working Drawing
 FLOOR FINISHES PLAN: 72 HOUR ASSESSMENT

Issue Date: 20-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH / 72-HOUR ASSESSMENT-300

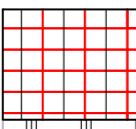

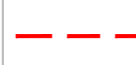
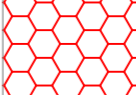


Revision: A1

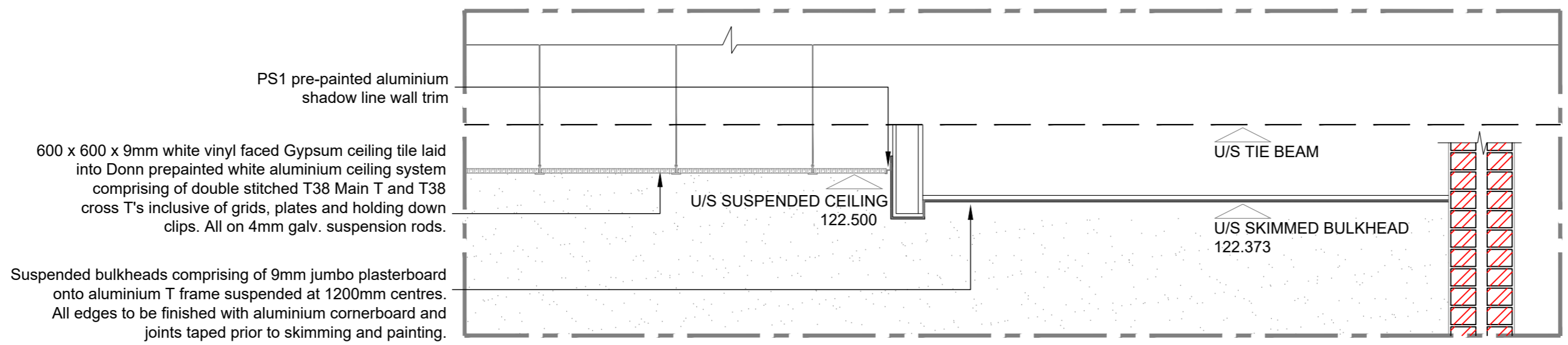
ISSUED FOR: TENDER



CEILING PLAN
Scale 1:100

CEILING PLAN LEGEND

-  600 x 600 x 9mm white vinyl faced Gypsum ceiling tile laid into Donn pre-painted white aluminium ceiling system comprising of double stitched T38 Main T and T38 cross T's inclusive of grids, plates and holding down clips. All on 4mm galv. suspension rods.
-  80mm Composite panel ceiling, fixed with stainless steel round head bolt and nut, onto purpose made steel 'Z' section.
-  H-section jointing strip.
-  Suspended bulkheads comprising of 9mm jumbo plasterboard onto aluminium T frame suspended at 1200mm centres. All edges to be finished with aluminium cornerboard and joints taped prior to skimming and painting.
-  12mm x 225mm Shiplap Fibre cement Shiplap building plank, spcaed at 245 centres with 20mm spacing. Painted finish to boards.
-  600 x 600 Recessed ceiling panel light



BULKHEAD SECTION a-a
Scale 1:20

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Designers Signature

Drawing Revisions:				Drawing Revisions:			
Revision	Date	Drawn By	Description	Revision	Date	Drawn By	Description

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Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
Ulithenge Provincial Hospital - 72-hour Assessment

Drawing Name
Working Drawing:
CEILING LAYOUT PLAN + BULKHEAD SECTION- 72 HOUR ASSESSMENT

Issue Date: 23-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH / 72-HOUR ASSESSMENT-301

Revision: 1

ISSUED FOR TENDER


General Notes:

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- Sewer connection to comply with municipal regulations.
- The Architects reserve the copyright on this drawing.

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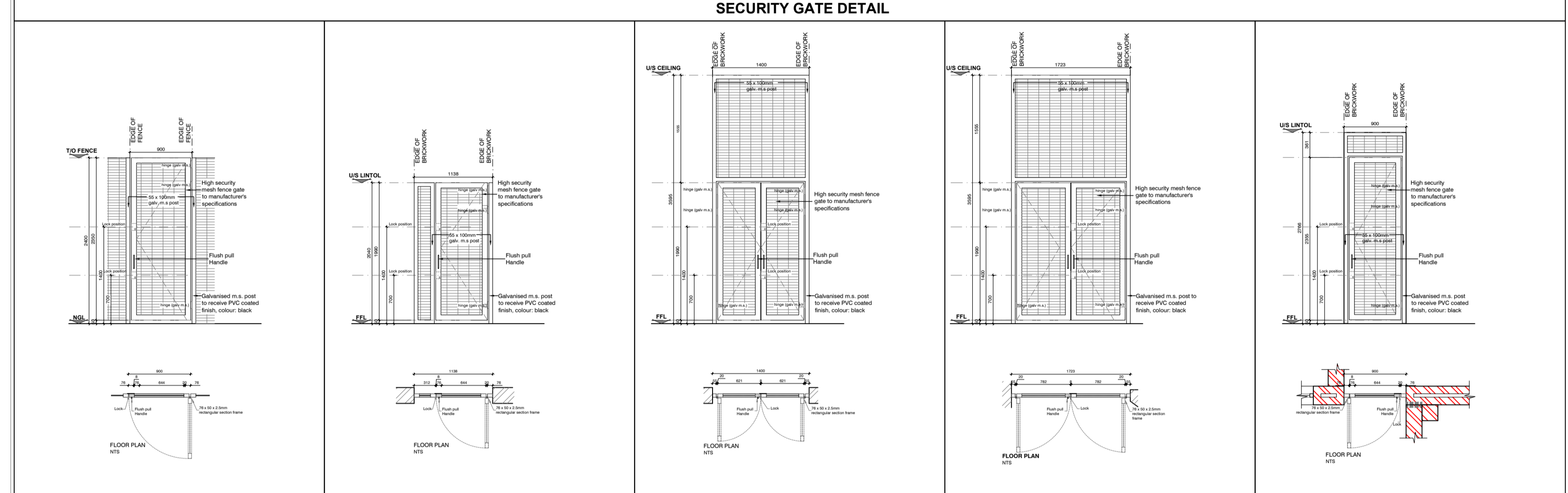
Clients Information:

 Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn	Description

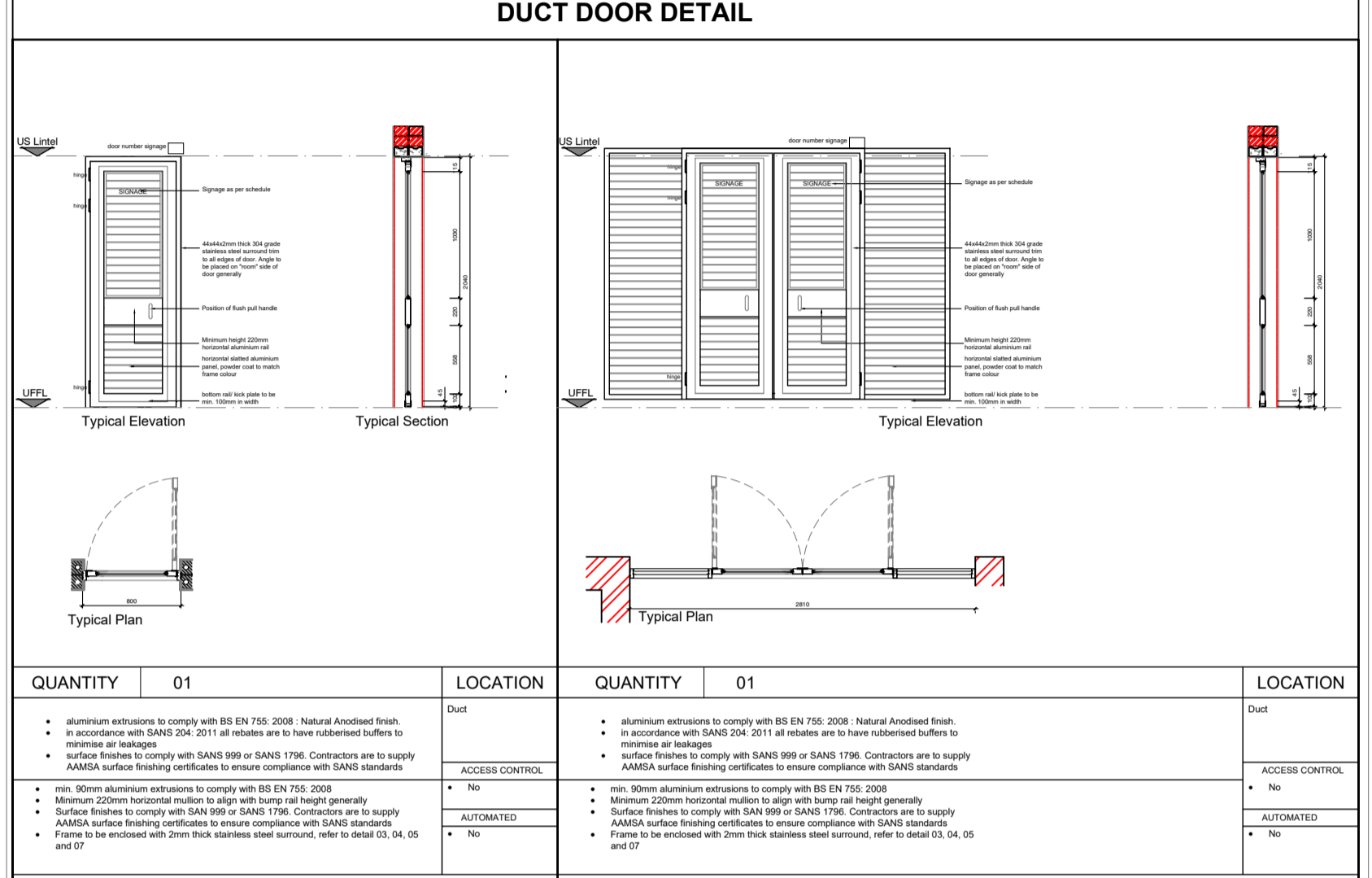
Notes:
 Security gate specialist to take on site measurements prior to manufacturer. No scaling to be done from schedules or floor plans.

SECURITY GATE DETAIL



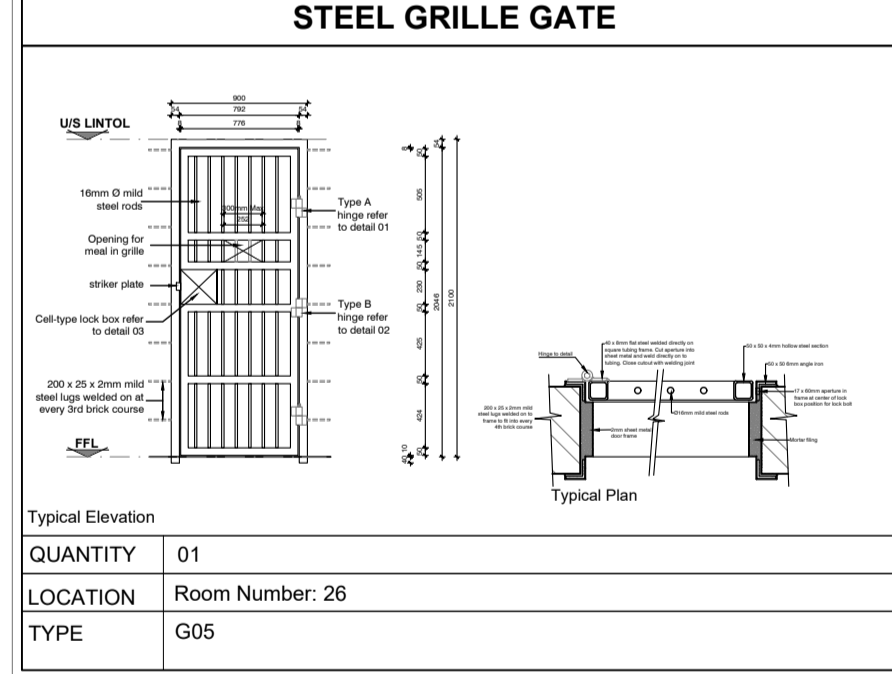
QUANTITY	LOCATION	QUANTITY	LOCATION	QUANTITY	LOCATION	QUANTITY	LOCATION
03	Boundary Fence	12	Room Number: 28(2), 31, 32, 33, 34, 35(2), 36(2), 37, 38	02	Room Number: 30, 39	02	Room Number: 30, 42
Isomeric: <ul style="list-style-type: none"> 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt. 1 Galvanized mild steel heavy duty drop bolt. 3 Galvanized h.d mild steel hinges as supplied by gate manufacturer. Heavy Security Mesh Panels: Mesh panels shall consist of horizontal and vertical wires with apertures size of 76.2mm x 12.7mm c/c. Mesh panels to be manufactured with Zincalu wire, or equally approved.		Isomeric: <ul style="list-style-type: none"> 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt. 1 Galvanized mild steel heavy duty drop bolt. 3 Galvanized h.d mild steel hinges as supplied by gate manufacturer. Heavy Security Mesh Panels: Mesh panels shall consist of horizontal and vertical wires with apertures size of 76.2mm x 12.7mm c/c. Mesh panels to be manufactured with Zincalu wire, or equally approved.		Isomeric: <ul style="list-style-type: none"> 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt. 1 Galvanized mild steel heavy duty drop bolt. 3 Galvanized h.d mild steel hinges as supplied by gate manufacturer. Heavy Security Mesh Panels: Mesh panels shall consist of horizontal and vertical wires with apertures size of 76.2mm x 12.7mm c/c. Mesh panels to be manufactured with Zincalu wire, or equally approved.		Isomeric: <ul style="list-style-type: none"> 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt. 1 Galvanized mild steel heavy duty drop bolt. 3 Galvanized h.d mild steel hinges as supplied by gate manufacturer. Heavy Security Mesh Panels: Mesh panels shall consist of horizontal and vertical wires with apertures size of 76.2mm x 12.7mm c/c. Mesh panels to be manufactured with Zincalu wire, or equally approved.	
TYPE G01		TYPE G02		TYPE G03		TYPE G06	

DUCT DOOR DETAIL



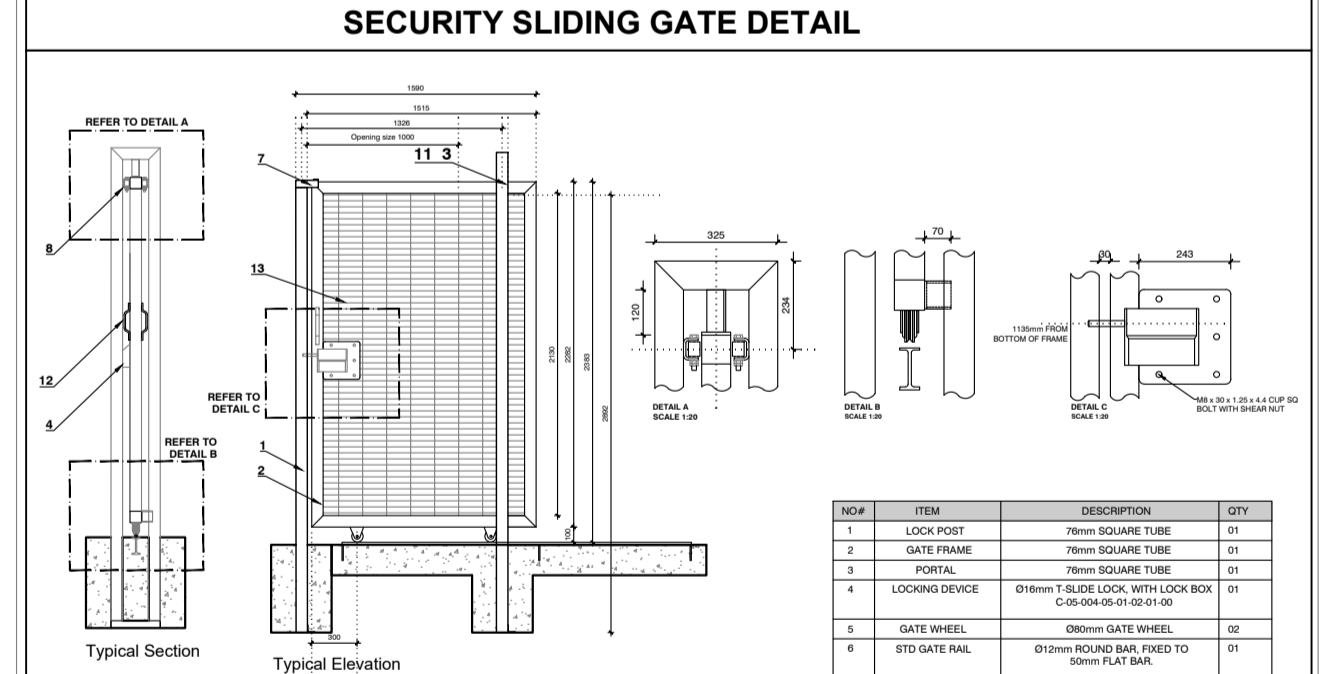
QUANTITY	LOCATION	QUANTITY	LOCATION
01	Duct	01	Duct
Isomeric: <ul style="list-style-type: none"> aluminum extrusions to comply with BS EN 755: 2008. Natural Anodized finish. in accordance with SANS 204: 2011 all isolates are to have rubberized buffers to minimize an impact. isolation bearings with SANS 680 or SANS 1786. Components are to comply with AMSA surface finishing certificate to ensure compliance with SANS standards. with 30mm aluminum extrusions to comply with BS EN 755: 2008. Minimum 100mm to comply with SANS 1040: 2011 all isolates are to have rubberized buffers to minimize an impact. isolation bearings with SANS 680 or SANS 1786. Components are to comply with AMSA surface finishing certificate to ensure compliance with SANS standards. Frame to be finished with 2mm thick stainless steel surface, color to steel 05, 06 and 07. 		Isomeric: <ul style="list-style-type: none"> aluminum extrusions to comply with BS EN 755: 2008. Natural Anodized finish. in accordance with SANS 204: 2011 all isolates are to have rubberized buffers to minimize an impact. isolation bearings with SANS 680 or SANS 1786. Components are to comply with AMSA surface finishing certificate to ensure compliance with SANS standards. with 30mm aluminum extrusions to comply with BS EN 755: 2008. Minimum 100mm to comply with SANS 1040: 2011 all isolates are to have rubberized buffers to minimize an impact. isolation bearings with SANS 680 or SANS 1786. Components are to comply with AMSA surface finishing certificate to ensure compliance with SANS standards. Frame to be finished with 2mm thick stainless steel surface, color to steel 05, 06 and 07. 	
TYPE DK		TYPE DL	

STEEL GRILLE GATE



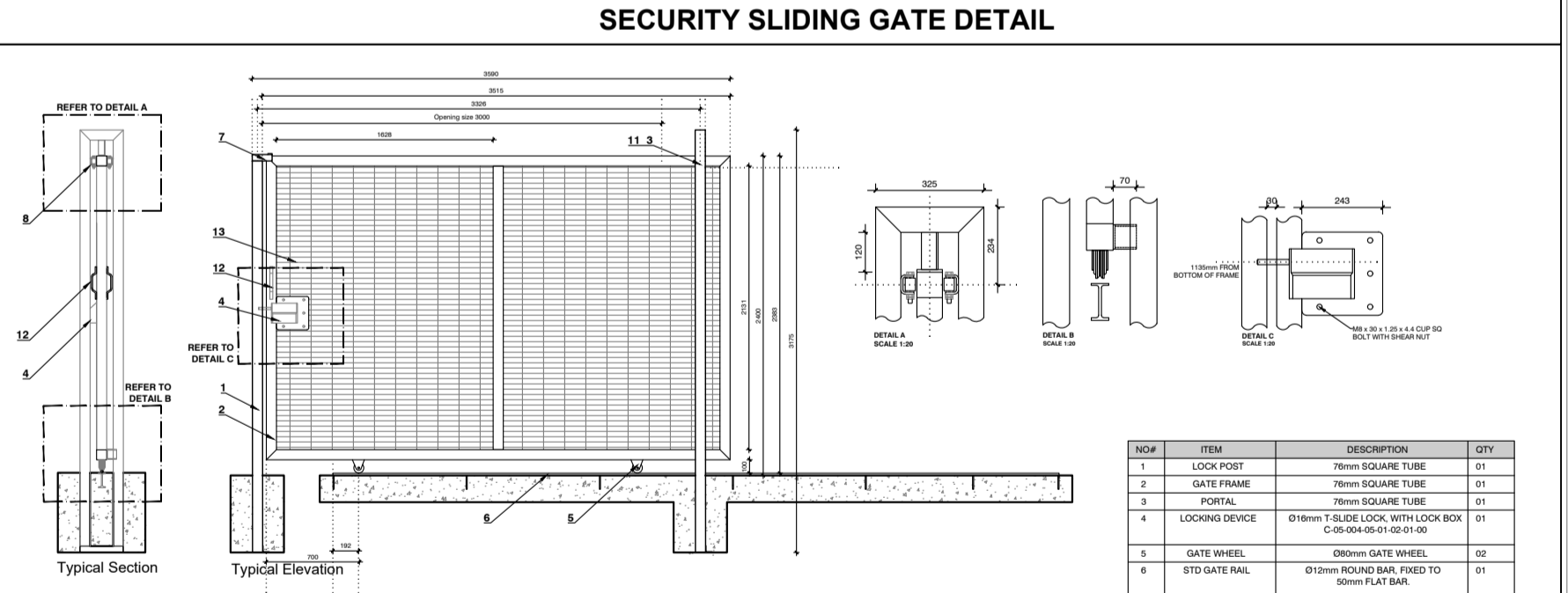
QUANTITY	LOCATION
01	Room Number: 26
TYPE G05	

SECURITY SLIDING GATE DETAIL



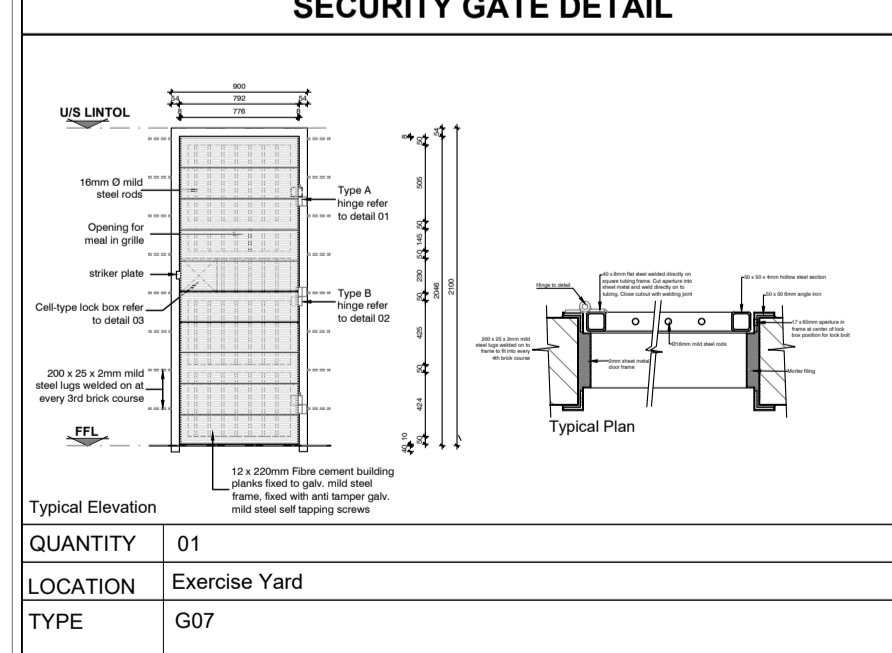
QUANTITY	LOCATION
01	Patient drop off area
TYPE G08	

SECURITY SLIDING GATE DETAIL



QUANTITY	LOCATION
01	Patient drop off area
TYPE G09	

SECURITY GATE DETAIL



QUANTITY	LOCATION
01	Exercise Yard
TYPE G07	

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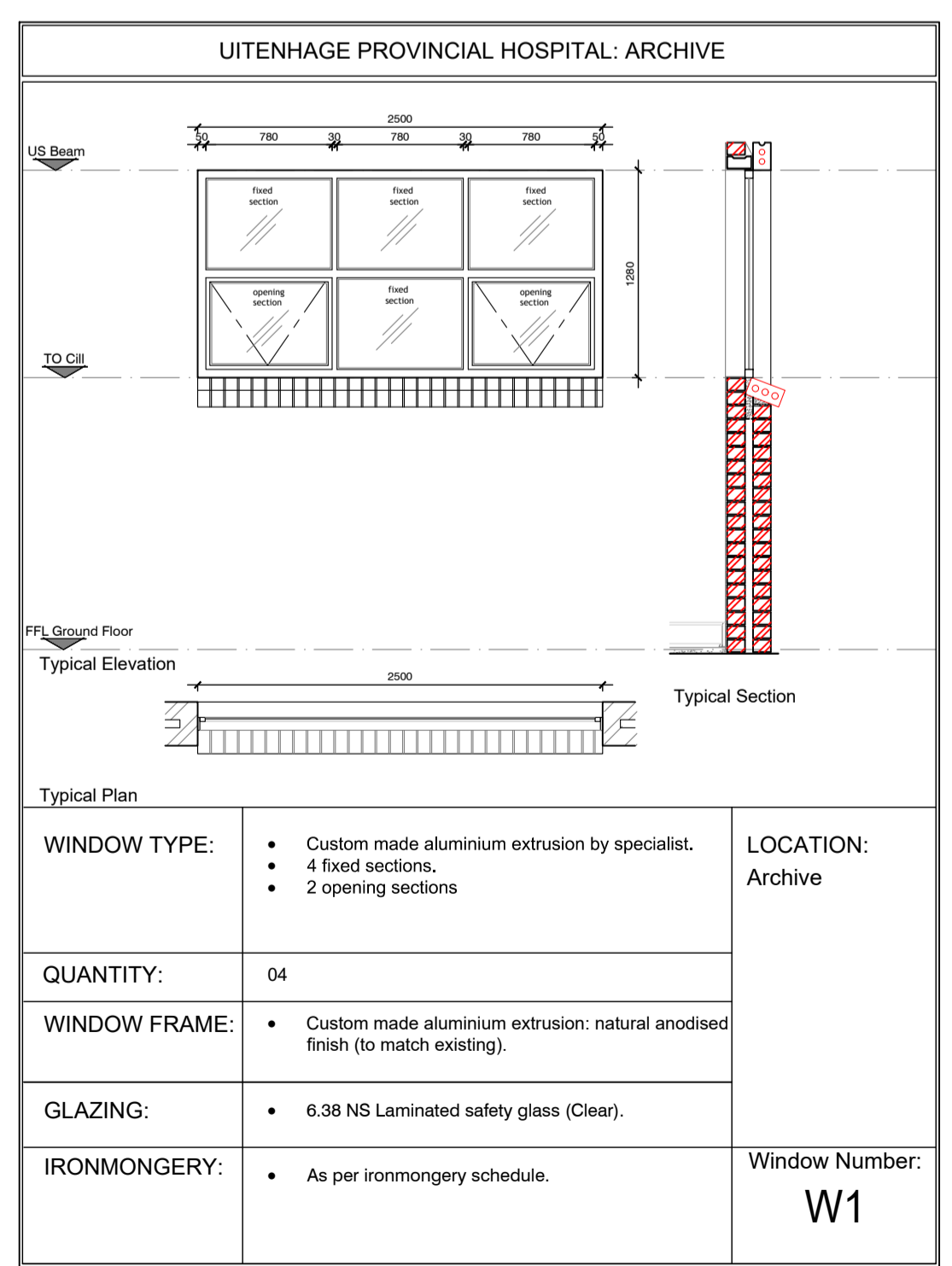
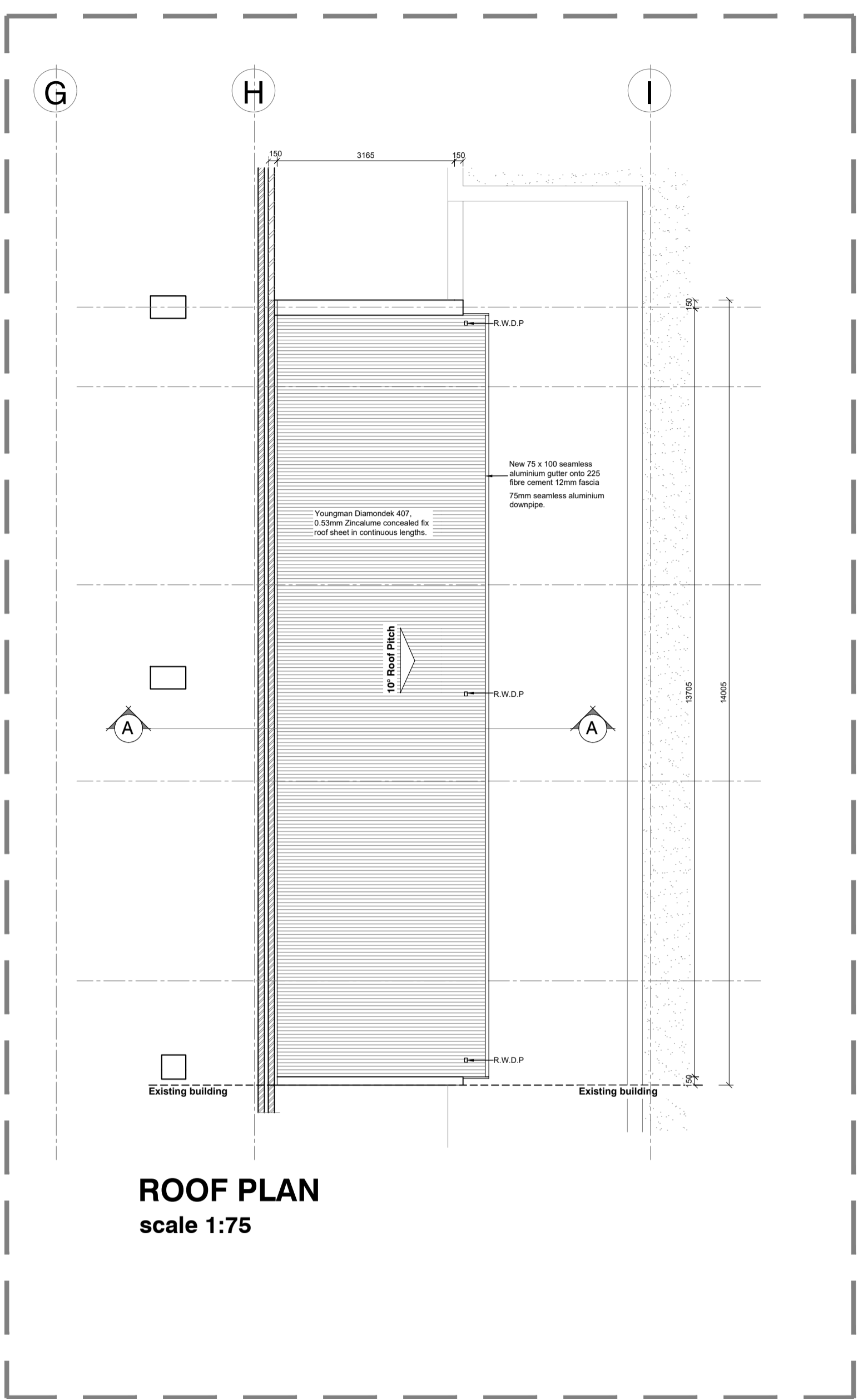
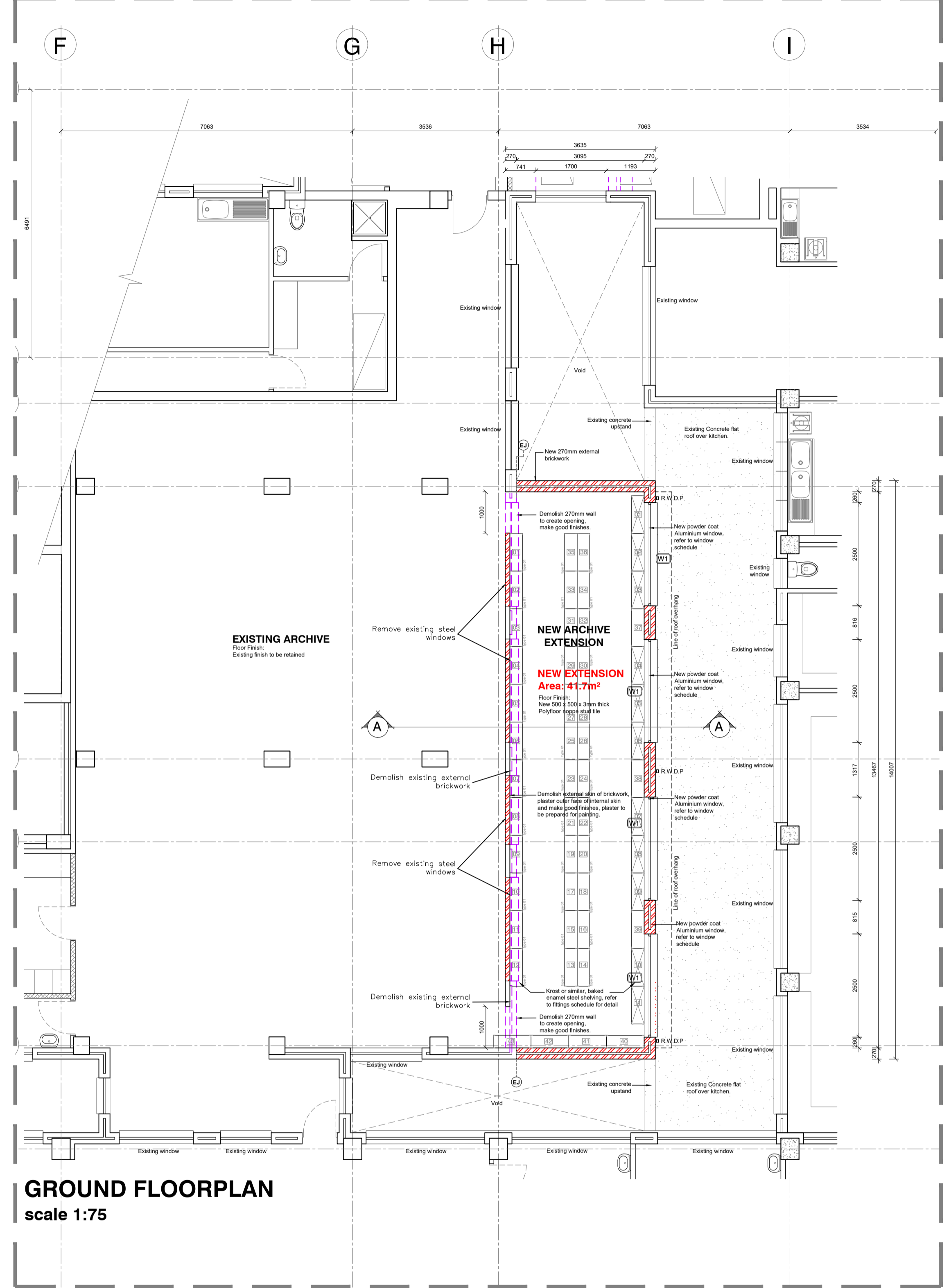
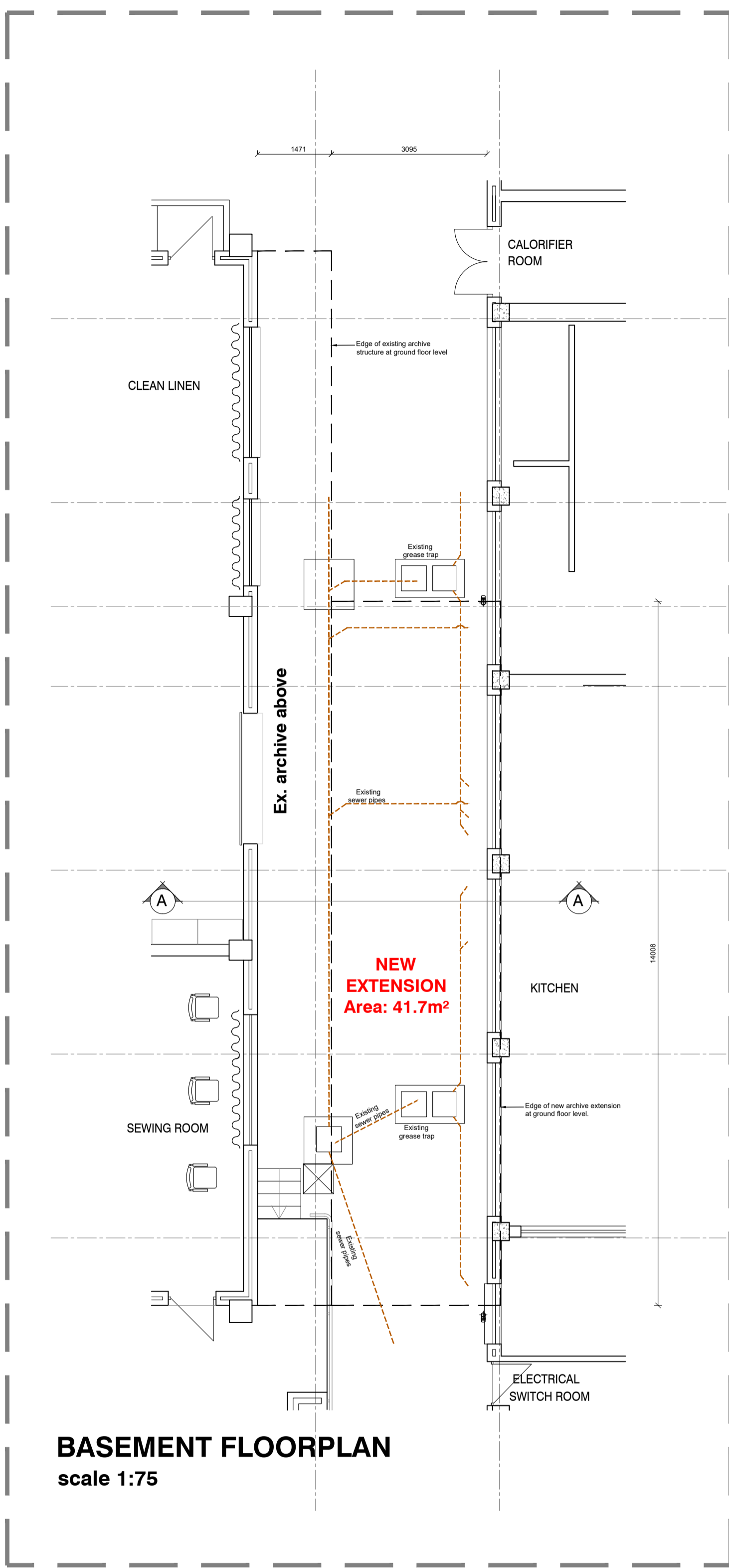
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
 Uitenhage Provincial Hospital - 72-hour Assessment

Drawing Name
 Working Drawing:
 GATE SCHEDULES- 72 HOUR ASSESSMENT

Issue Date: 23-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

Drawing Number: MDA477(B) UPH / 72-HOUR ASSESSMENT-402
Revision: A1

ISSUED FOR: TENDER



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- The Architects reserve the copyright on this drawing.

Municipal Information:

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Revision	Date	Drawn	Description

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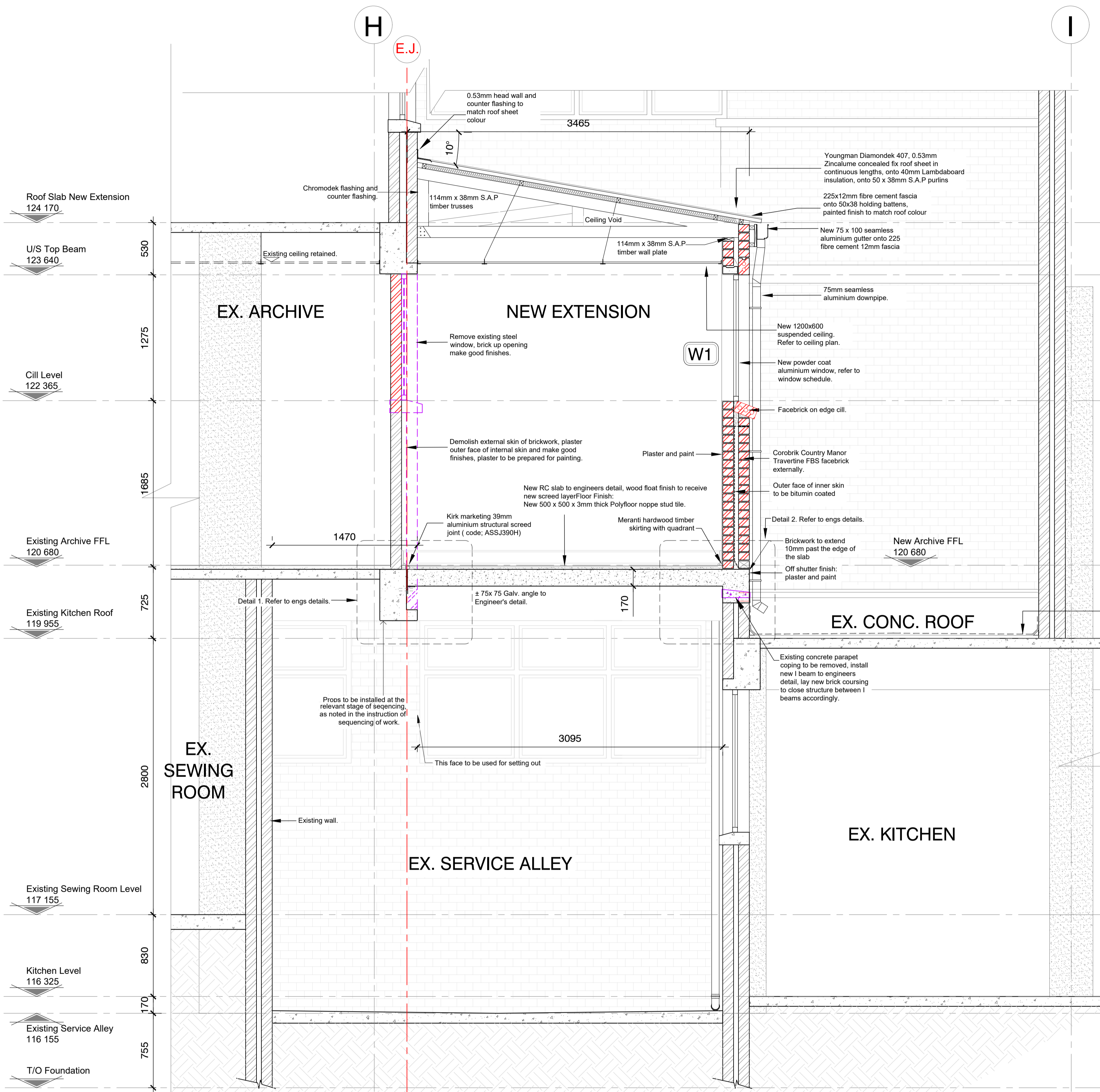
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
 Uitenhage Provincial Hospital: Archive

Drawing Name
 WORKING DRAWINGS:
 FLOORPLANS - ARCHIVE ROOM EXTENSION

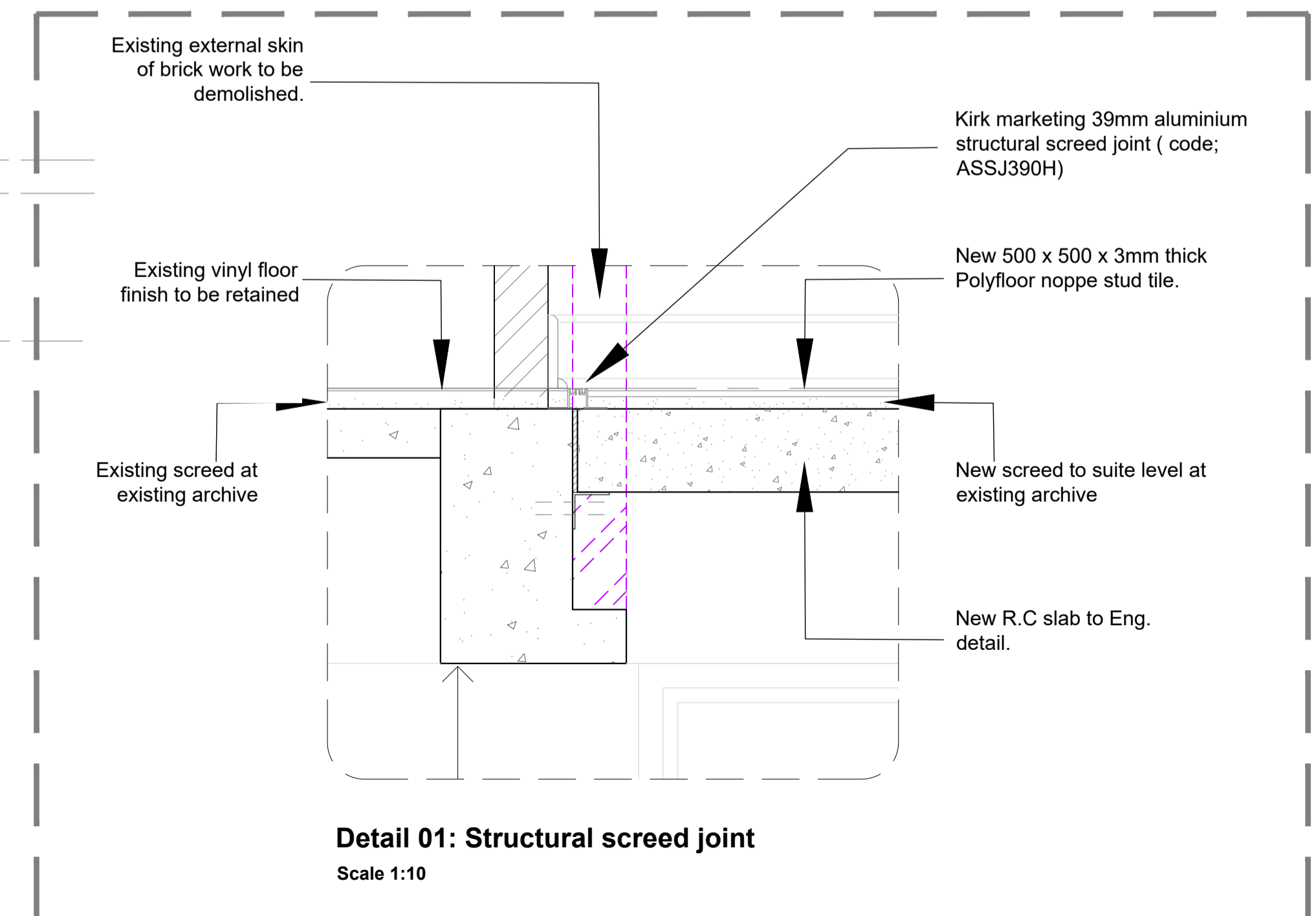
Issue Date: 20-11-2023
 Technician: EM
 Checked By: DBA
 Drawing Scale: As shown

Drawing Number	MDA447(B6)UPH/ARCHIVE-201	Rev.	1	Rev. Status	Revision

ISSUED FOR TENDER



SECTION AA
scale 1:25



Detail 01: Structural screed joint
Scale 1:10

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Clients Information:
Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn	Description

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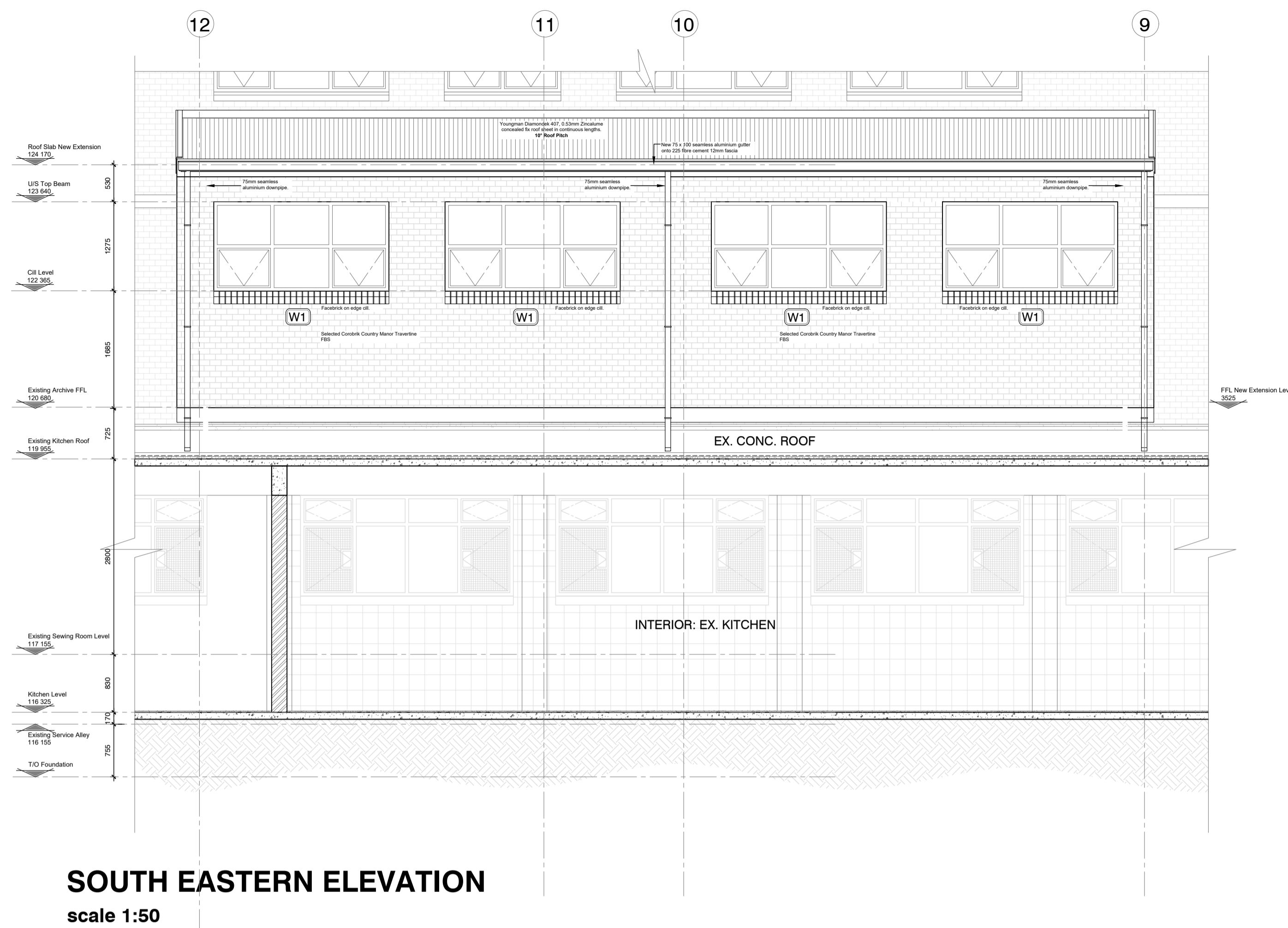
Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
Uitenhage Provincial Hospital: Archive

Drawing Name
WORKING DRAWINGS:
SECTION A-A - ARCHIVE ROOM EXTENSION

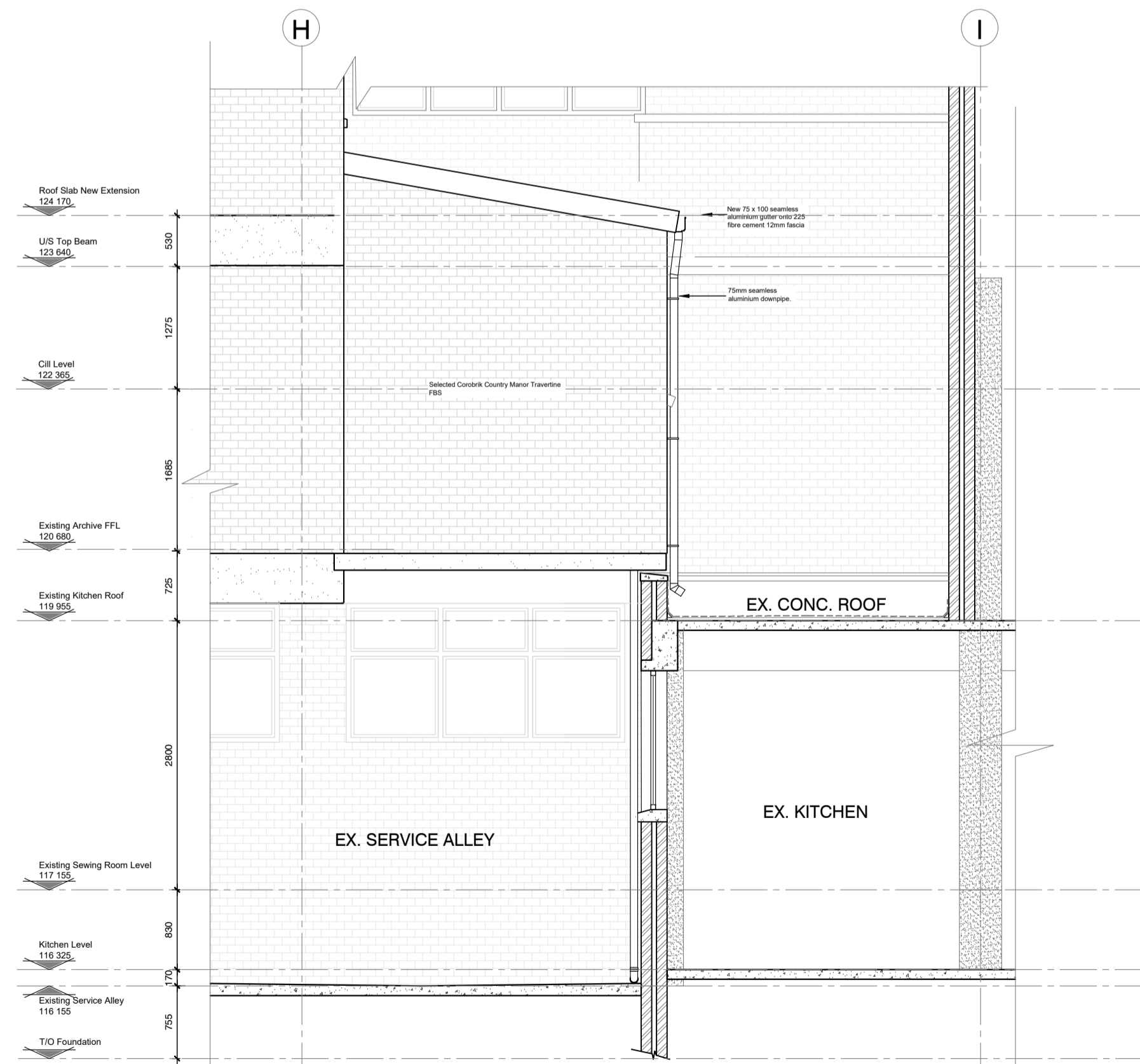
Issue Date: 23-11-2023
Technician: EM
Checked By: DBA
Drawing Scale: As shown

Drawing Number	Revision
MDA447(B6)UPH/ARCHIVE-202	X

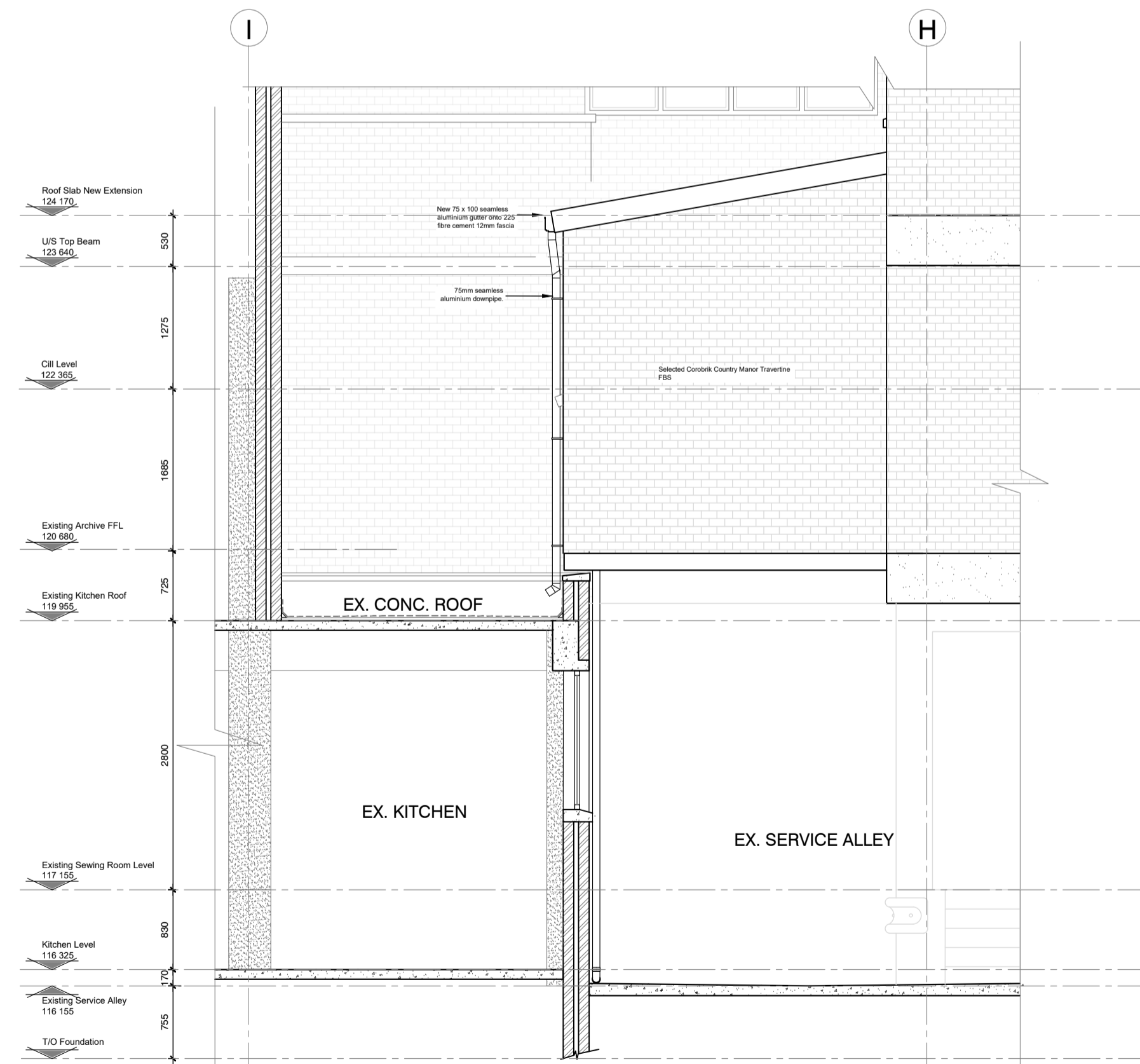
ISSUED FOR: TENDER



SOUTH EASTERN ELEVATION
scale 1:50



SOUTH WESTERN ELEVATION
scale 1:50



NORTH EASTERN ELEVATION
scale 1:50

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Drawing Revisions:

Revision	Date	Drawn By	Description

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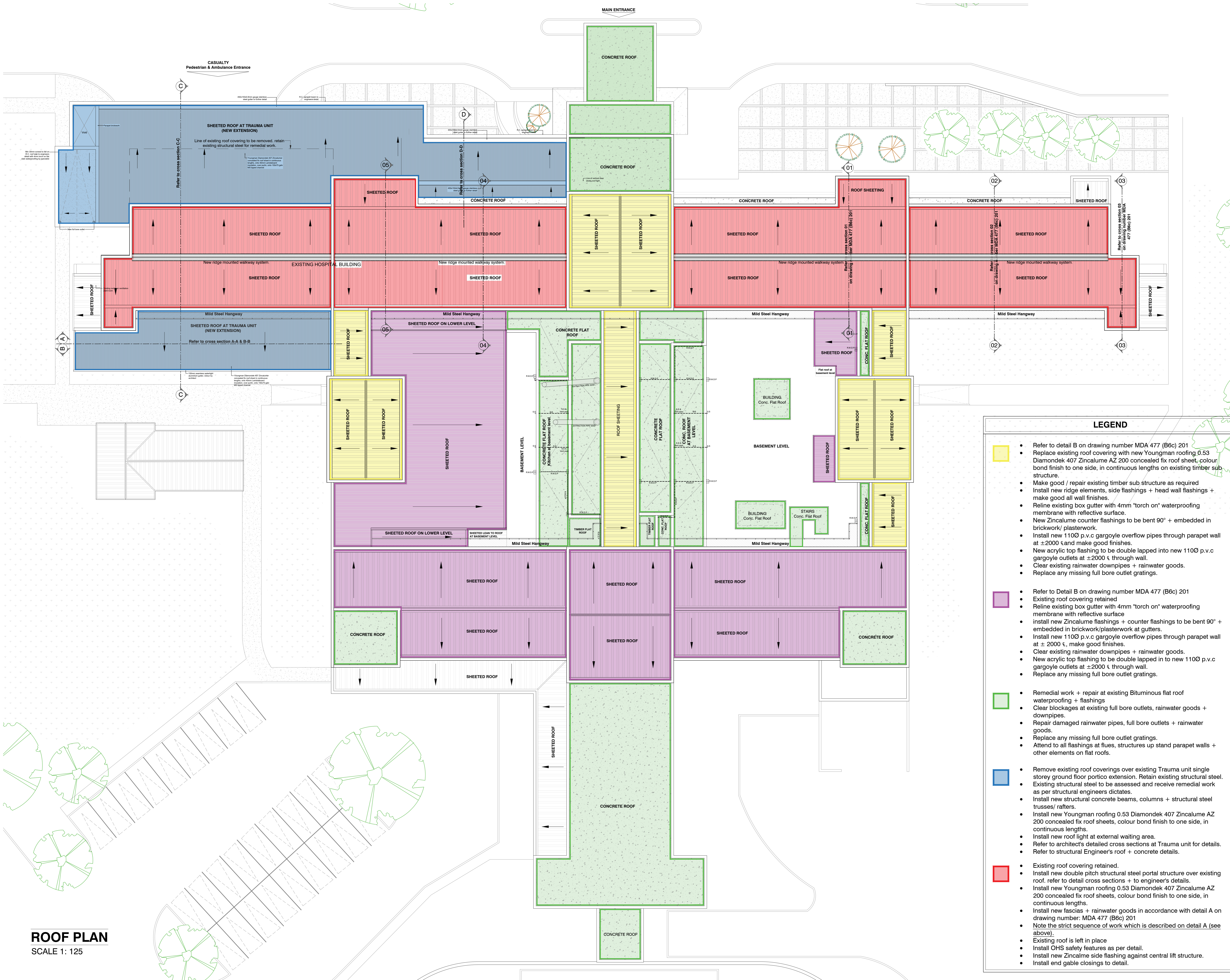
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay
 Uitenhage Provincial Hospital: Archive

Drawing Name
 WORKING DRAWINGS:
 ELEVATIONS - ARCHIVE ROOM EXTENSION

Issue Date: 23-11-2023
 Technician: EM
 Checked By: DBA
 Drawing Scale: As shown

Drawing Number	MDA447(B6)UPH/ARCHIVE-203
Revision	1

ISSUED FOR: TENDER



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Clients Information:

Drawing Revisions:

Revision	Date	Drawn	Description

LEGEND

- Refer to detail B on drawing number MDA 477 (B6c) 201
- Replace existing roof covering with new Youngman roofing 0.53 Diamondek 407 Zincolume AZ 200 concealed fix roof sheet, colour bond finish to one side, in continuous lengths on existing timber sub structure.
- Make good / repair existing timber sub structure as required
- Install new ridge elements, side flashings + head wall flashings + make good all wall finishes.
- Reline existing box gutter with 4mm "torch on" waterproofing membrane with reflective surface.
- New Zincolume counter flashings to be bent 90° + embedded in brickwork/ plasterwork
- Install new 110Ø p.v.c gargoyle overflow pipes through parapet wall at ± 2000 € and make good finishes.
- New acrylic top flashing to be double lapped into new 110Ø p.v.c gargoyle outlets at ± 2000 € through wall.
- Clear existing rainwater downpipes + rainwater goods.
- Replace any missing full bore outlet gratings.

- Refer to Detail B on drawing number MDA 477 (B6c) 201
- Existing roof covering retained
- Reline existing box gutter with 4mm "torch on" waterproofing membrane with reflective surface
- install new Zincolume flashings + counter flashings to be bent 90° + embedded in brickwork/plasterwork at gutters.
- Install new 110Ø p.v.c gargoyle overflow pipes through parapet wall at ± 2000 €, make good finishes.
- Clear existing rainwater downpipes + rainwater goods.
- New acrylic top flashing to be double lapped in to new 110Ø p.v.c gargoyle outlets at ± 2000 € through wall.
- Replace any missing full bore outlet gratings.

- Remedial work + repair at existing Bituminous flat roof waterproofing + flashings
- Clear blockages at existing full bore outlets, rainwater goods + downpipes.
- Repair damaged rainwater pipes, full bore outlets + rainwater goods.
- Replace any missing full bore outlet gratings.
- Attend to all flashings at flues, structures up stand parapet walls + other elements on flat roofs.

- Remove existing roof coverings over existing Trauma unit single storey ground floor portico extension. Retain existing structural steel.
- Existing structural steel to be assessed and receive remedial work as per structural engineers dictates.
- Install new structural concrete beams, columns + structural steel trusses/ rafters.
- Install new Youngman roofing 0.53 Diamondek 407 Zincolume AZ 200 concealed fix roof sheets, colour bond finish to one side, in continuous lengths.
- Install new roof light at external waiting area.
- Refer to architect's detailed cross sections at Trauma unit for details.
- Refer to structural Engineer's roof + concrete details.

- Existing roof is left in place
- Install OHS safety features as per detail.
- Install new Zincolume side flashing against central lift structure.
- Install end gable closings to detail.

ROOF PLAN
SCALE 1: 125

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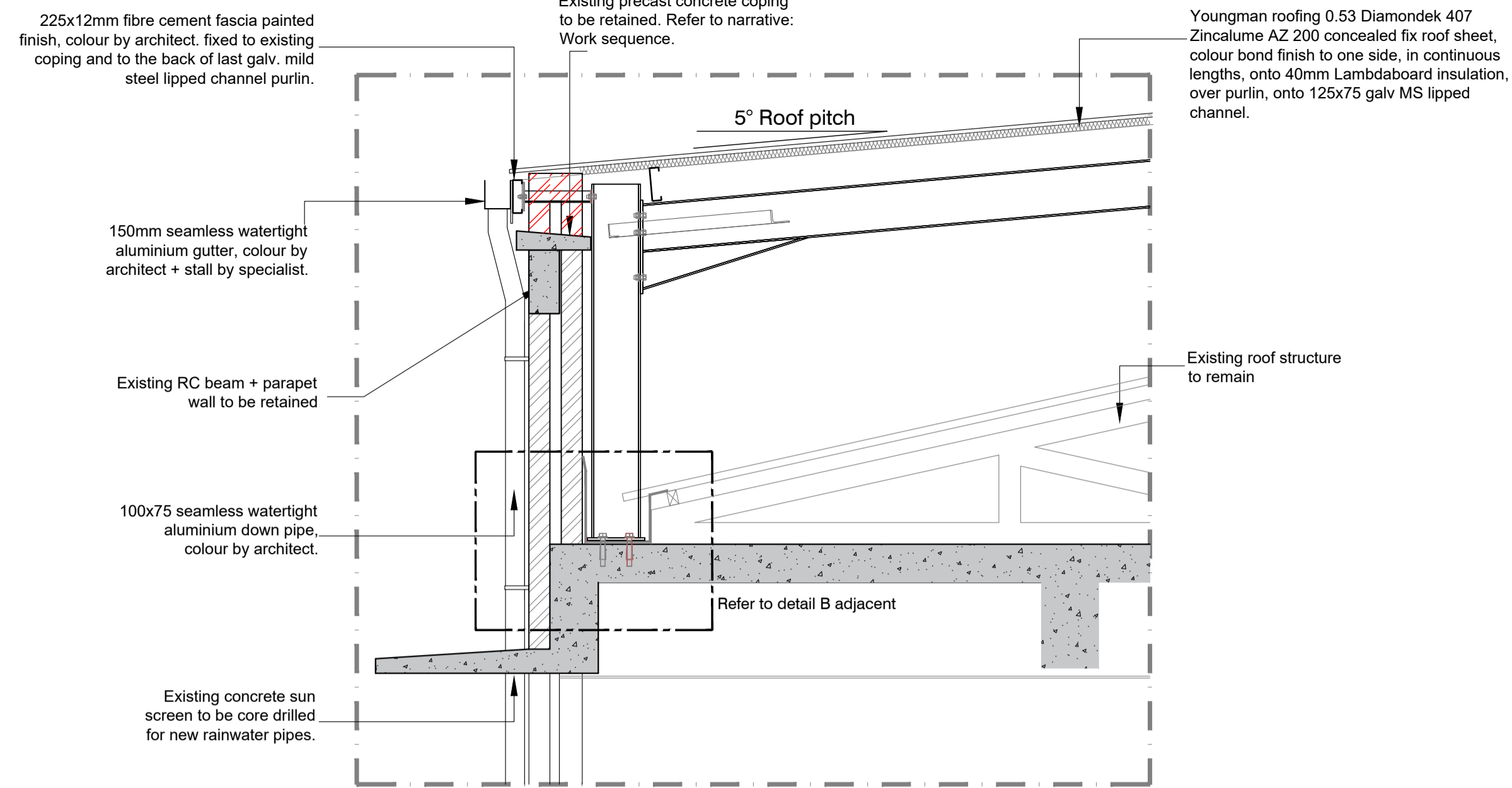
Project Title
 Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
 Working Drawings:
 ROOF PLAN

Issue Date: 23-11-2023
Technician: GD
Checked By: DBA
Drawing Scale: As shown

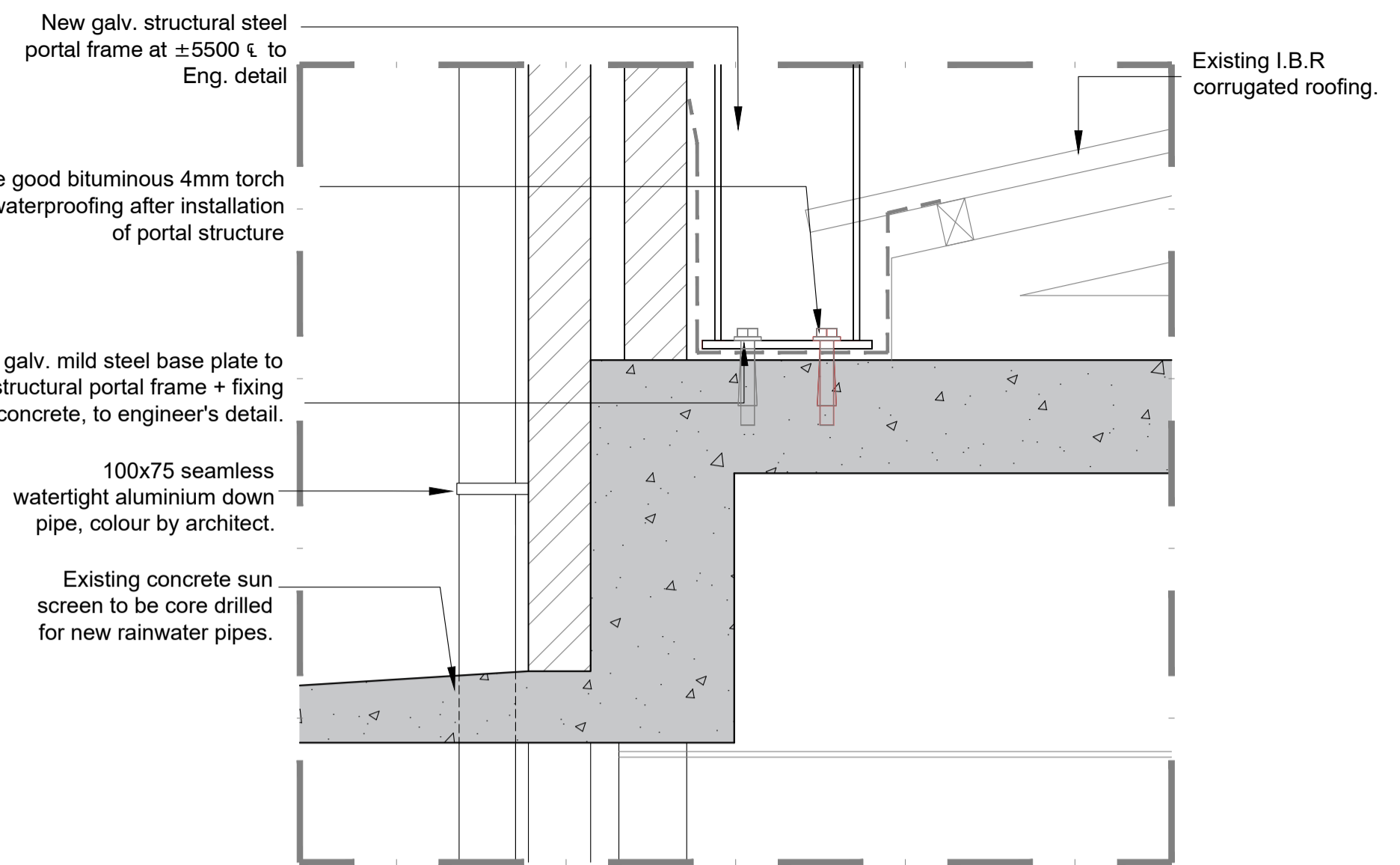
Drawing Number MDA 477(B) UPH / ROOF - 200
 Drawing Status: X
 Revision: A0

ISSUED FOR: TENDER

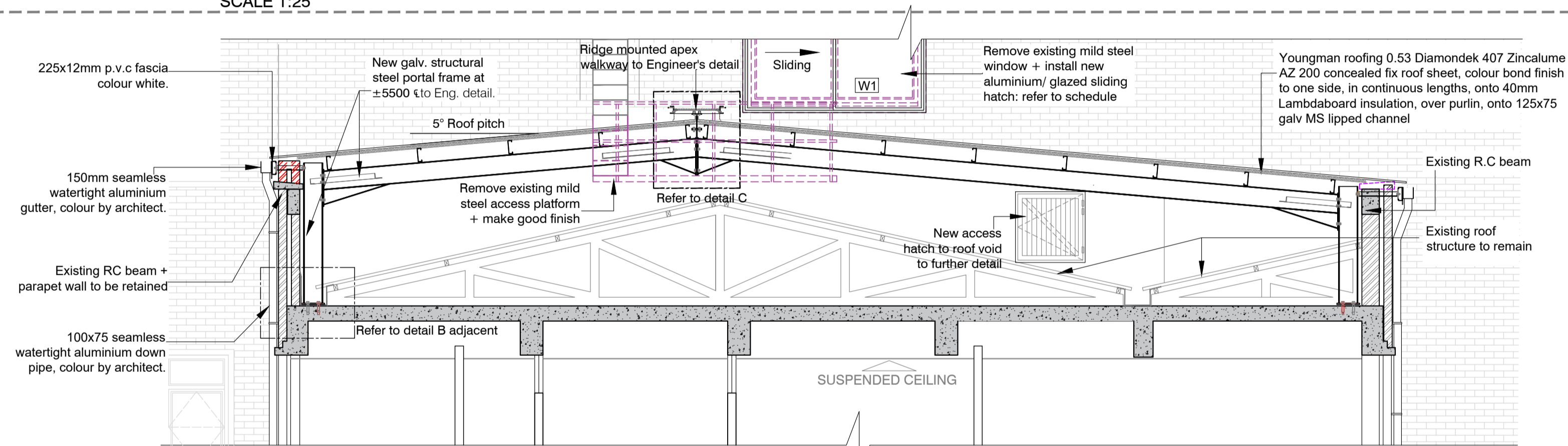


DETAIL A: NEW ROOF STRUCTURE
SCALE 1:25

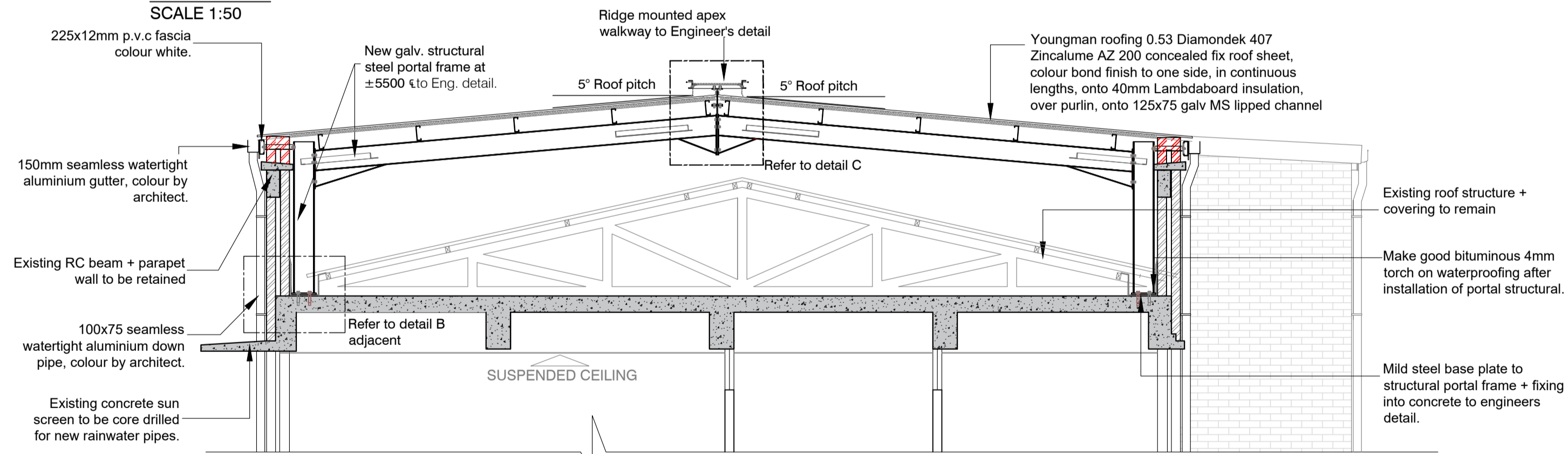
- Narrative: Work Sequence**
1. Existing parapet coping to remain.
 2. Install structural steel
 3. Install purlins: end/ eaves purlin to align with coping edge.
 4. Install fascia + rainwater goods.
 5. Close notch in parapet + coping with a non-shrink grout.
 6. Install insulation layer + roof covering.
 7. Install safety elements as per OHS requirements.



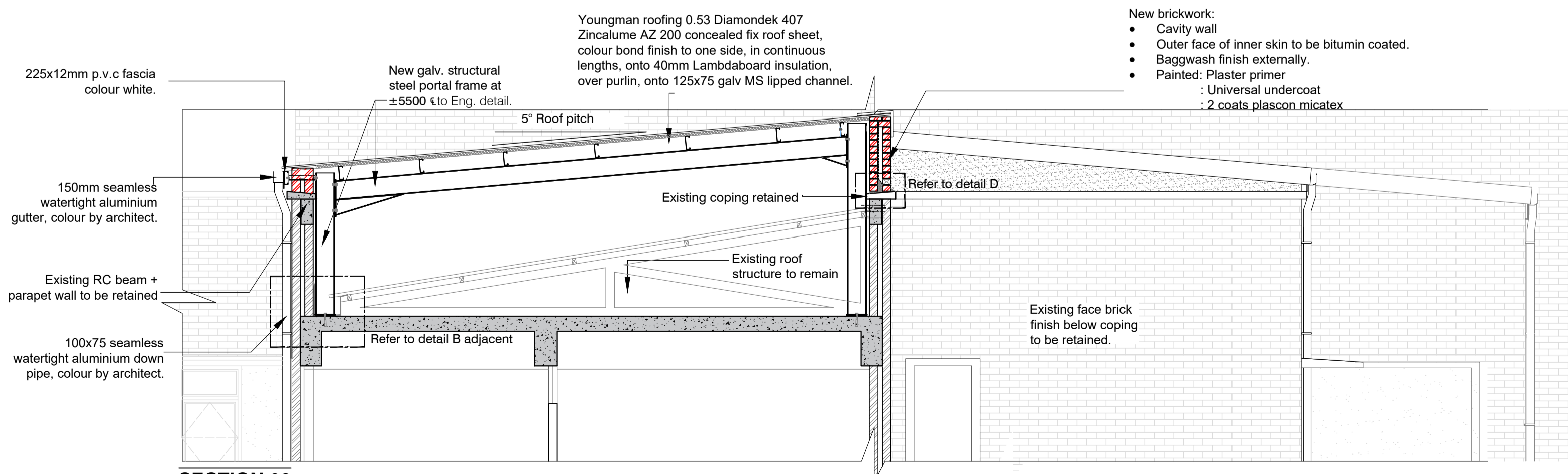
DETAIL B: PORTAL STRUCTURE FIXING
SCALE 1:10



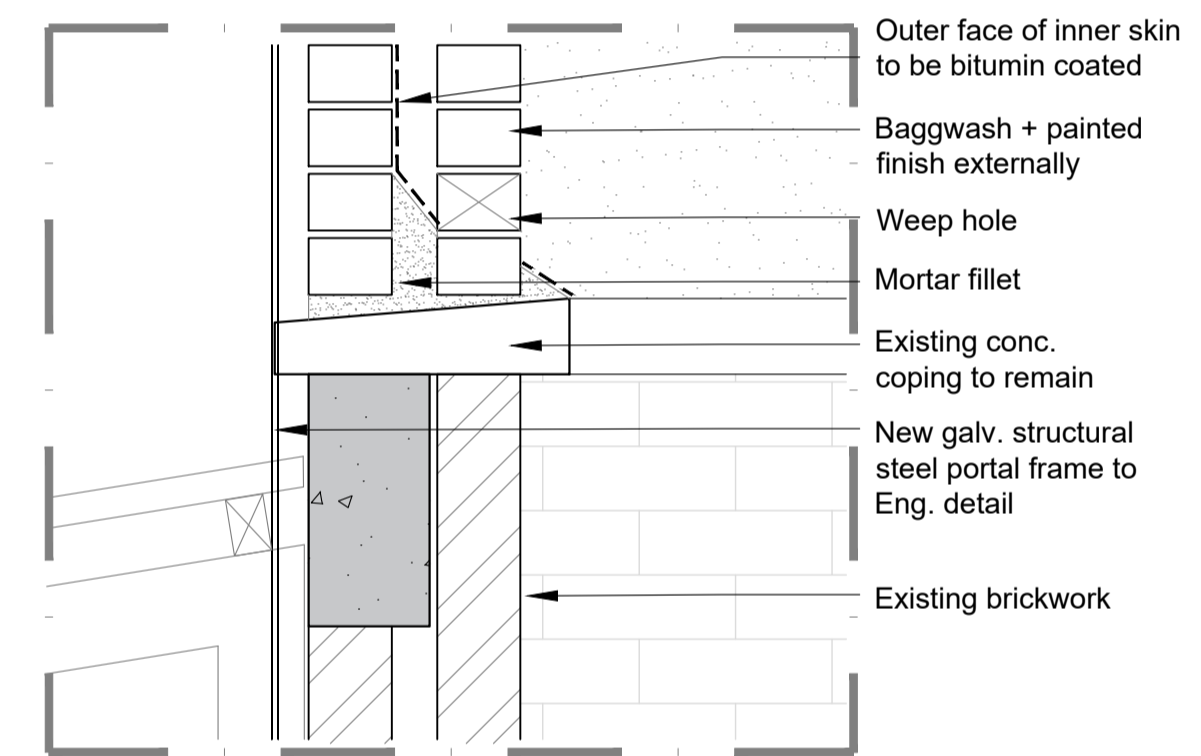
SECTION 01
SCALE 1:50



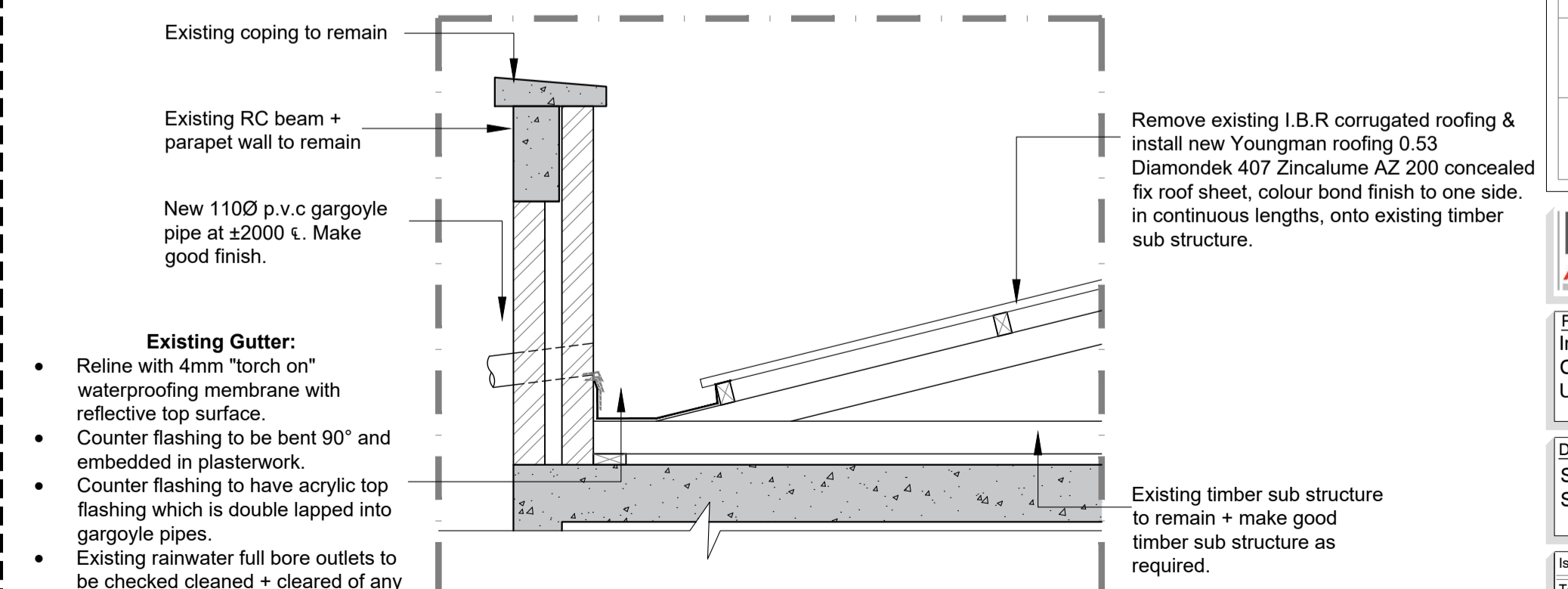
SECTION 02
SCALE 1:50



SECTION 03
SCALE 1:50



DETAIL D: WATER PROOFING / WEEP HOLE DETAIL
SCALE 1:10



DETAIL E: REMOVE ROOF COVERING & INSTALL NEW GARGOYLE OVERFLOWS THROUGH PARAPET STRUCTURE + NEW ROOF COVERING: REFER ROOFS WORKED ON COLOUR ON ROOF PLAN DRAWING NO. MDA 477(B) UPH/ROOF - 200
SCALE 1:20

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Municipal Information:

Architects Information:
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Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

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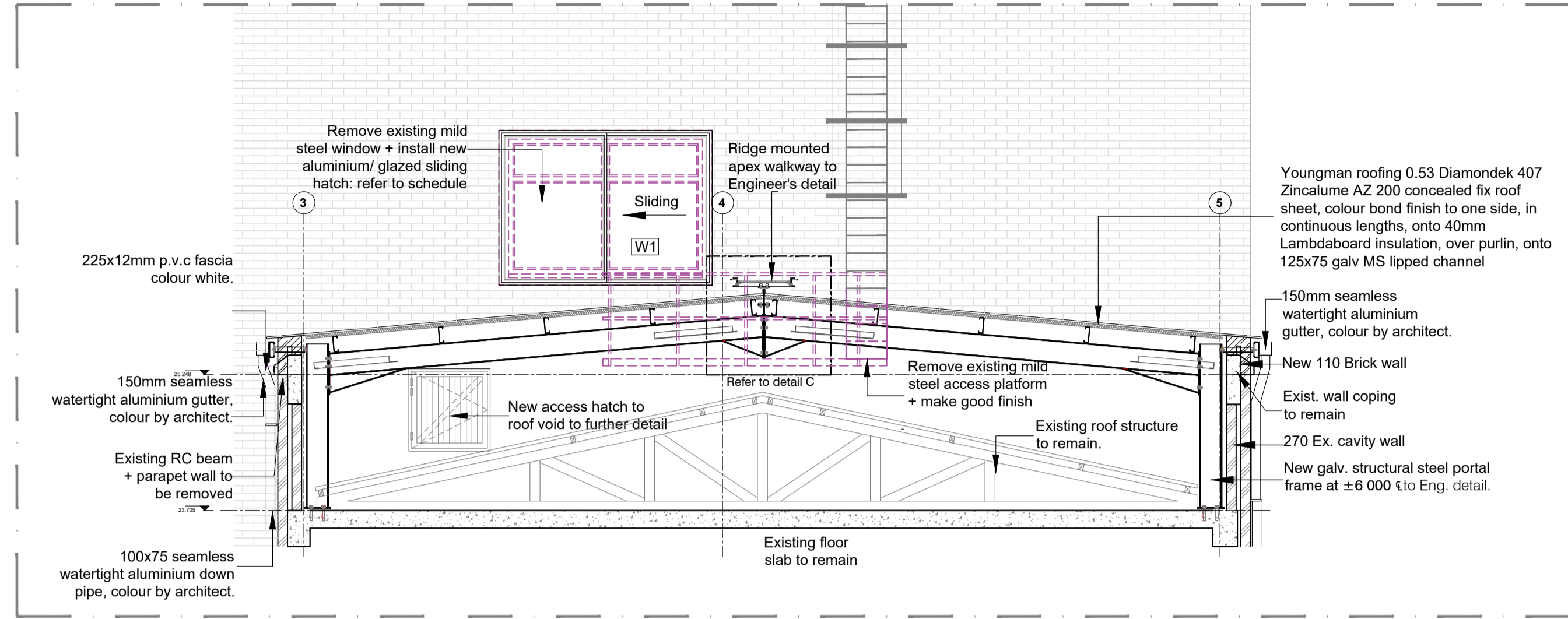
Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

Drawing Name
Sketch Plans:
SECTIONS AND DETAILS

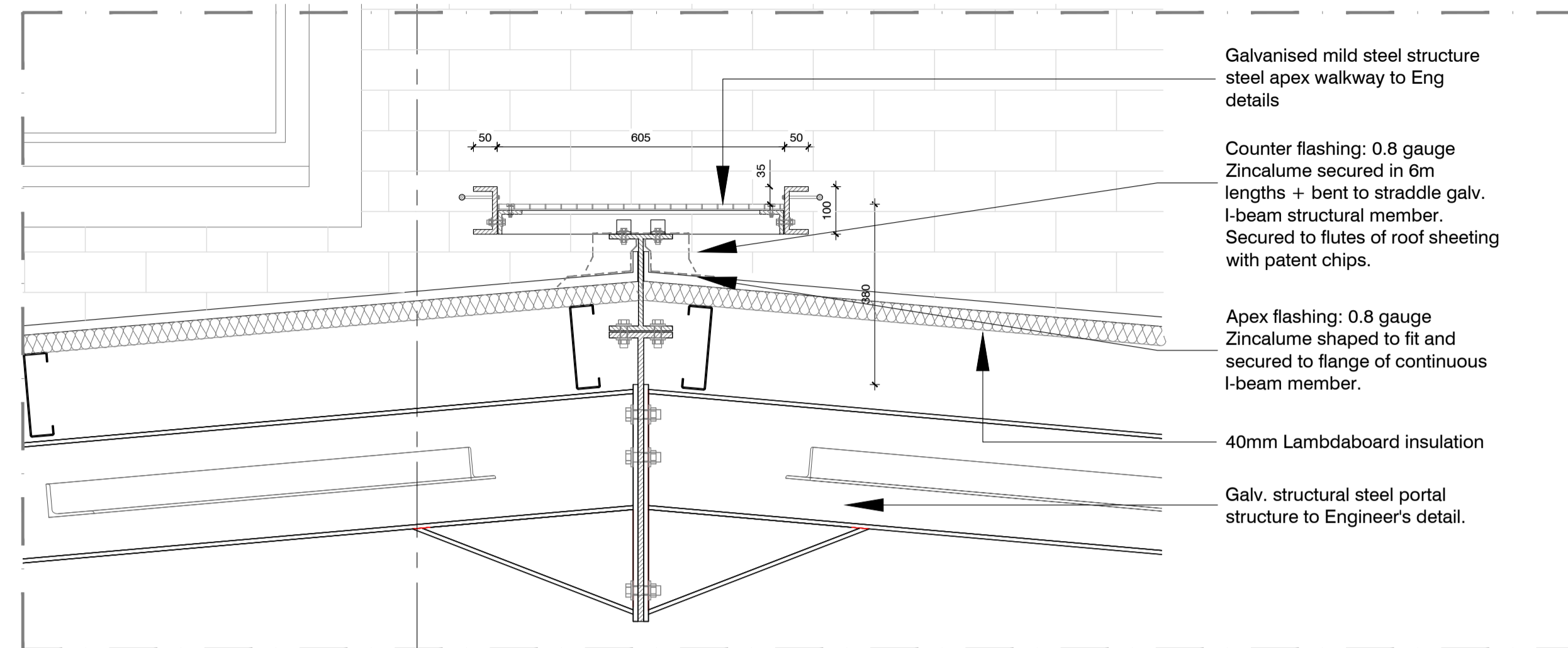
Issue Date: 23-11-2023
Technician: G.D
Checked By: DBA
Drawing Scale: As shown

Drawing Number	MDA 477(B) UPH / ROOF - 201	Scale	As shown	Sheet No.	1 of 1
Revision					

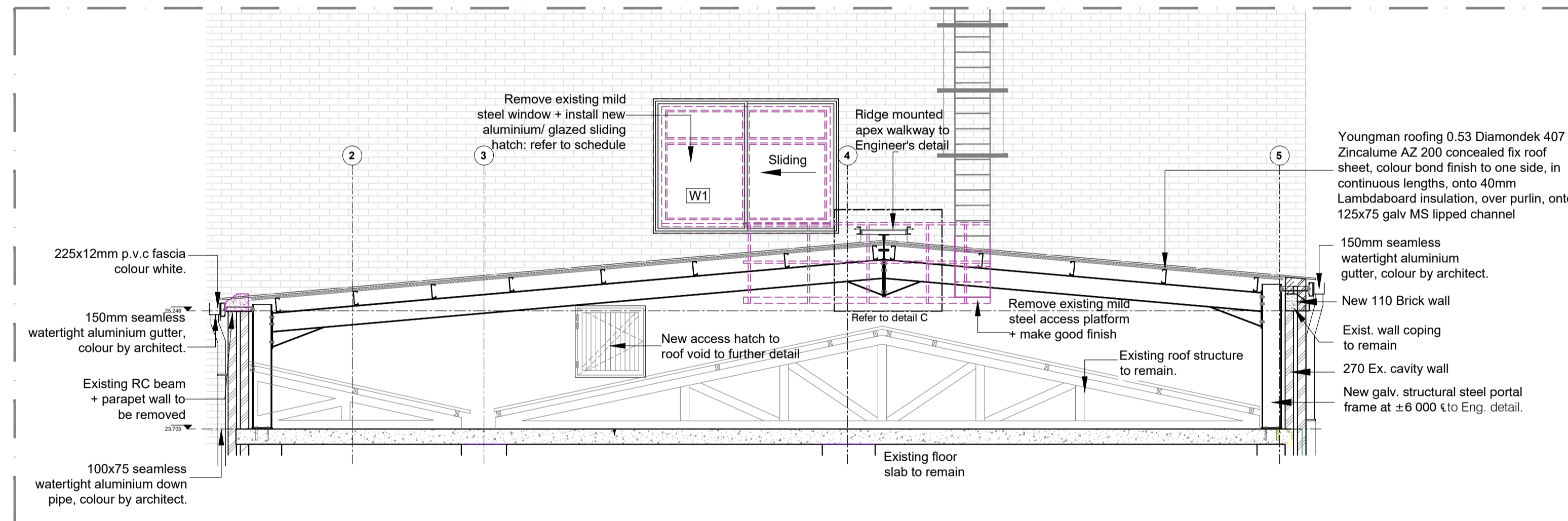
ISSUED FOR:TENDER



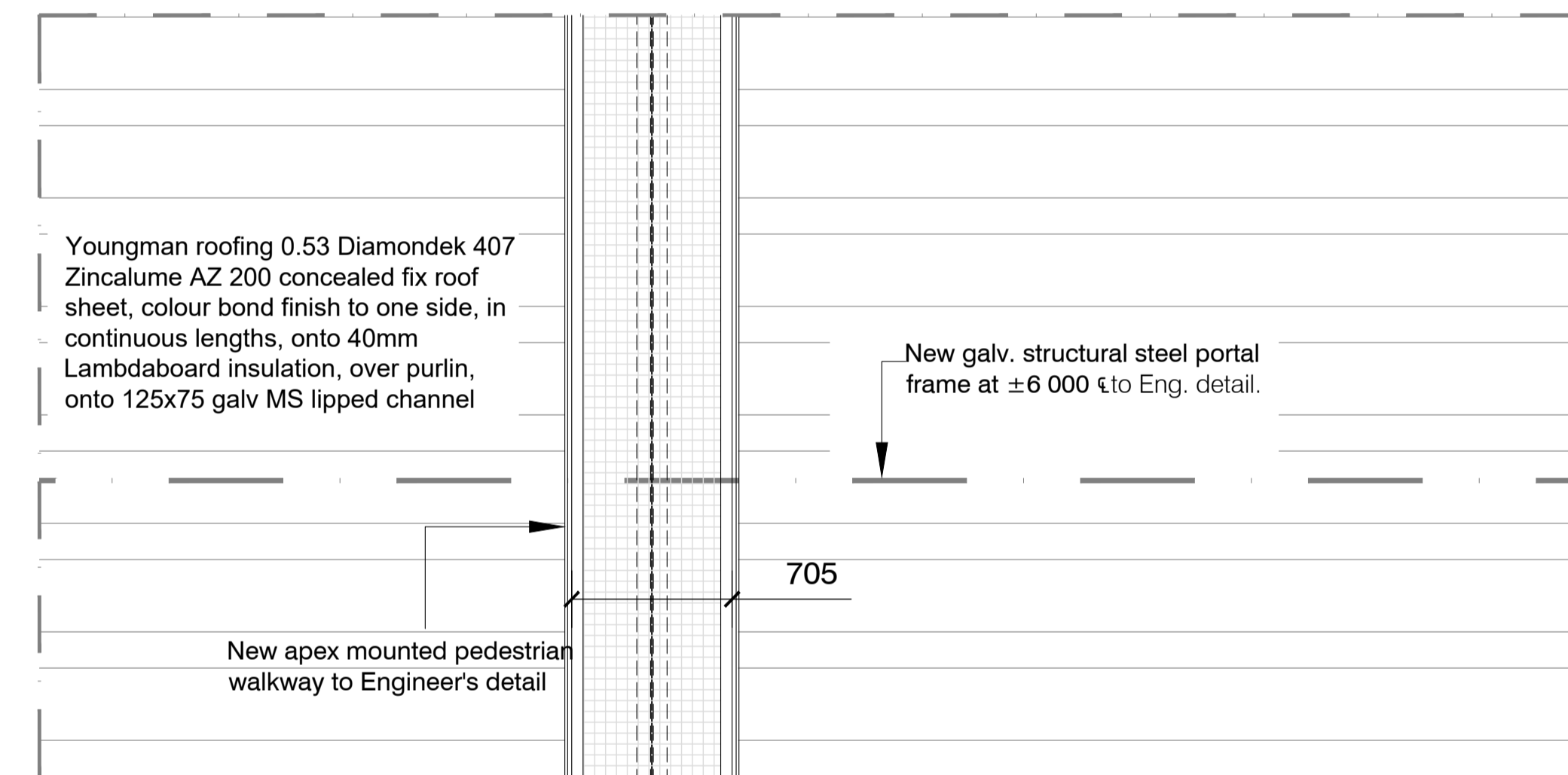
PART SECTION 04
SCALE 1: 50



DETAIL C: ROOFTOP WALKWAY SYSTEM
SCALE 1: 10



PART SECTION 05
SCALE 1: 50



PART ROOF PLAN
SCALE 1: 25

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- This drawing is to be read in conjunction with all other drawings including those of Consultants and/or Bills of Quantities and/or specification issued for this project.
- Scaled dimensions are not to be used for construction. Should there be any discrepancies or lack of dimensions the Architects are to be contacted for clarification.
- Only drawings numbered 200 WD and upwards and showing the latest revisions are to be used for construction. All previously issued drawings are to be destroyed.
- This drawing is only to be used for the project and site for which it was prepared.
- No setting out is to commence before the positions of the boundary pegs on the site have been verified by a Land Surveyor.
- Sewer connection to comply with municipal regulations.
- The Architects reserve the copyright on this drawing.

Municipal Information:

Architects Information:

Member of the South African Architectural Profession
SACAP Reg. 9128
PI Insurance: AGN South Africa (Pty) Ltd
PI Membership No. 25021-ARCP470506
duncan@mdaarchitects.co.za
cell: 041 373 0228

Designers Signature

Clients Information:

Drawing Revisions:

Revision	Date	Drawn By	Description

UITENHAGE PROVINCIAL HOSPITAL: 6th FLOOR ROOF ACCESS

Typical Elevation

Typical Section

Window Number: W1

WINDOW TYPE:	<ul style="list-style-type: none"> Custom made aluminium extrusion by specialist. 1 fixed section. 1 sliding section. 	LOCATION: 6th floor roof access
QUANTITY:	02	
WINDOW FRAME:	Custom made aluminium extrusion; natural anodised finish (to match existing).	
GLAZING:	6.38 NS Laminated safety glass (Clear).	
IRONMONGERY:	As per ironmongery schedule.	Window Number: W1

UITENHAGE PROVINCIAL HOSPITAL: 6th FLOOR ROOF ACCESS

Typical Elevation

Typical Plan

DOOR TYPE:	<ul style="list-style-type: none"> 813 x 44mm thick FLB doors. Door to receive painted finish: Wood primer, Universal Undercoat, 2 coats Plascon Velvagio polyurethane enamel 	LOCATION: 6th floor roof access
QUANTITY:	02	
DOOR FRAME:	<ul style="list-style-type: none"> 19mm hardwood quadrant trim both sides of door frame ex 75 x 100mm meranti hardwood frame with galv lugs at every 5th brick course for building into 270 plastered brick walls. No 3 PVC buffers to closing. Built into plastered brick walls Frame to receive painted finish: Wood primer, Universal Undercoat, 2 coats Plascon/Velvagio polyurethane enamel 	
GLAZING:	N/A	
IRONMONGERY:	As per ironmongery schedule.	Window Number: D1

Signage:
All signage to comply with the sans 10400-S: 2001. Signage should be placed such that it is clearly visible by both able body and disabled persons. All signage is to comply with SANS 1186-1 requirements.
Refer to signage schedule MDA 477 c ...



Project Title
Improvements, Alterations and Additions at Health Care Facilities in Nelson Mandela Bay Uitenhage Provincial Hospital

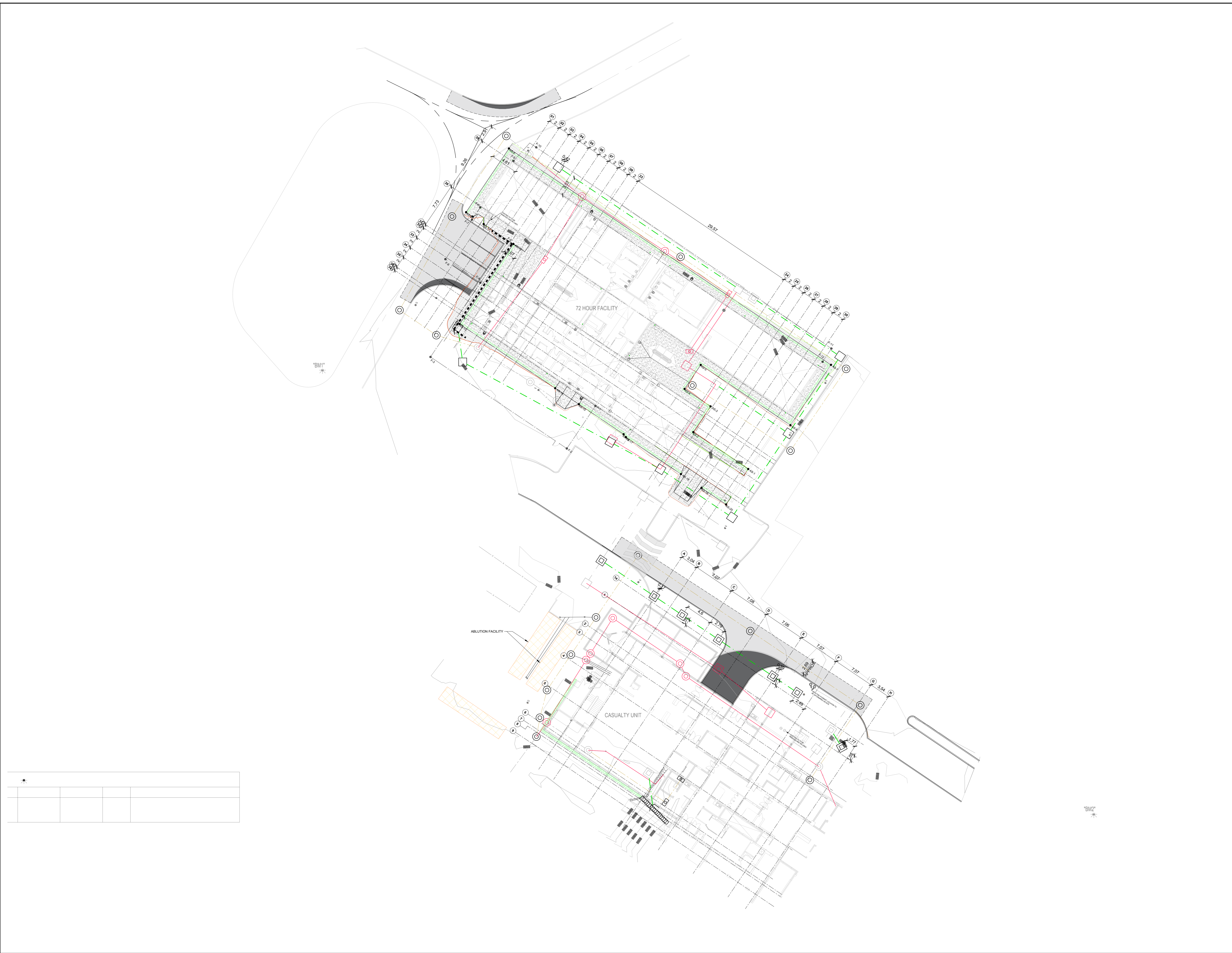
Drawing Name
Sketch Plans:
ROOF SAFETY WALKWAY DETAIL

Issue Date: 23-11-2023
Technician: G.D.
Checked By: DBA
Drawing Scale: As shown

Revision

MDA 477(B) UPH / ROOF - 202	Rev. Status	1. Update	2. Revision	3. Revision	4. Revision	5. Revision	6. Revision	7. Revision	8. Revision	9. Revision	10. Revision	11. Revision	12. Revision	13. Revision	14. Revision	15. Revision	16. Revision	17. Revision	18. Revision	19. Revision	20. Revision	

ISSUED FOR: TENDER



LEGEND

EXISTING FEATURES

- FIRE HYDRANT TO BE RELOCATED
- SEWER PIPE (TO BE ABANDONED)
- SEWER MANHOLE (TO BE ABANDONED)
- MUNICIPAL SEWER PIPE (UNDER CONSTRUCTION)
- MUNICIPAL SEWER MANHOLE (UNDER CONSTRUCTION)
- SEWER CONNECTION (UNDER CONSTRUCTION)
- STORMWATER PIPE (TO BE ABANDONED)
- STORMWATER MANHOLE (TO BE ABANDONED)
- STORMWATER GRID INLET (TO BE ABANDONED)
- RODDING EYE
- STORMWATER PIPE (UNDER CONSTRUCTION)
- STORMWATER MANHOLE (UNDER CONSTRUCTION)
- STORMWATER GRID INLET (UNDER CONSTRUCTION)
- FENCELINE
- ELECTRICAL LINE

PROPOSED FEATURES

- RELOCATED FIRE HYDRANT
- SEWER PIPE
- SEWER CONNECTION
- SEWER MANHOLES
- RODDING EYE
- SANITARY GULLY
- STORMWATER PIPE
- STORMWATER MANHOLE
- SINGLE GRID INLET
- RAIN WATER DOWN PIPE
- ROAD SURFACE
- SAW CUT AND RESURFACE
- BENCH MARK
- FENCELINE
- PROPOSED RETAINING WALL

- GENERAL NOTES**
1. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1020 SPECIFICATIONS FOR CIVIL ENGINEERING.
 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WITH ANY EXCAVATIONS.
 3. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
 4. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
 5. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
 6. PIPE SIZE AS PER LAYOUT PLAN.
 7. PIPES TO BE INSTALLED ACCORDING TO THE SETTING OUT COORDINATES.
 8. WATER LINES TO BE TESTED UNDER ENGINEER'S SUPERVISION AND WITNESSED BY WATER SUB-SILO PRIOR TO CONNECTION TO EXISTING WATER MAINS.

No.	APPROVED	AMENDMENTS	DATE
P1	ISSUED FOR TENDER		2024/02/15
P0	ISSUED FOR PROPOSAL		2023/11/27
SURVEYED	IBHAYI GEOMATICS		2023/08
DRAWN	F. ALLY		2024/02/12
DESIGNED	F. ALLY		2024/02/12
CHECKED	C. BEZUIDENHOUT		2024/02/15
APPROVED			
	PR REGISTRATION NO.		DATE

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TEL: 041 583 1984
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PROJECT TITLE

UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.

DRAWING TITLE

OVERALL LAYOUT CIVIL INSTALLATION

SCALE	SHEET SET	SHEET SIZE
1 : 200	SHEET 1 OF 1 SHEETS	A0
DRAWING No.	1746-6-GEN-001	REVISION
		P1

SCALES:
Horizontal 1:50
Vertical 1:10

DATUM 115.000m MSL

DISTANCE (m)	0.000	6.976	34.211	777	433.12	57.292	25.302	80.866	108.434
GROUND LEVEL	119.123	119.085	118.455	118.811	118.817	118.055	118.055	118.018	118.018
DEPTH TO MH INVERT	1.620	1.520	1.195	1.195	1.195	1.195	1.195	1.201	1.201
PIPE INVERT LEVEL	118.503	118.565	118.260	118.260	118.260	118.260	118.260	118.260	118.260
SLOPE / LENGTH	0.50%	0.50%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
REFERENCE	A-1	A-2	A-3	MOD. GR4	A-4	A-5	A-6	A-7	EX. SMH1

LONGSECTION A-1 TO EX. SMH1
FROM 0.000 TO 108.434

SCALES:
Horizontal 1:50
Vertical 1:10

DATUM 115.000m MSL

DISTANCE (m)	0.000	4.465	11.904	23.321	28.991	39.725
GROUND LEVEL	119.123	119.217	119.240	119.273	119.284	119.275
DEPTH TO MH INVERT	0.875	0.880	0.875	0.875	0.875	0.875
PIPE INVERT LEVEL	118.248	118.337	118.365	118.400	118.409	118.400
SLOPE / LENGTH	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
REFERENCE	C-1	C-2	C-3	C-4	C-5	C-6

LONGSECTION C-1 TO C-6
FROM 0.000 TO 39.725

SCALES:
Horizontal 1:50
Vertical 1:10

DATUM 115.000m MSL

DISTANCE (m)	0.000	36.569
GROUND LEVEL	119.173	119.076
DEPTH TO MH INVERT	0.875	1.203
PIPE INVERT LEVEL	118.298	118.298
SLOPE / LENGTH	0.42%	1:160.1 36.57m
REFERENCE	B-1	EX. GR1

LONGSECTION B-1 TO EX. GR1
FROM 0.000 TO 36.569

SCALES:
Horizontal 1:50
Vertical 1:10

DATUM 115.000m MSL

DISTANCE (m)	0.000	14.724
GROUND LEVEL	119.203	119.055
DEPTH TO MH INVERT	0.875	1.195
PIPE INVERT LEVEL	118.328	118.328
SLOPE / LENGTH	1:100.2 14.72m	
REFERENCE	EX. GR3	A-5

LONGSECTION EX. GR3 TO A-5
FROM 0.000 TO 14.724

STORMWATER PARTICULARS (STRUCTURES)					
STRUCTURE NAME	Y	X	COVER LEVEL (mMSL)	INVERT LEVEL (MMSL) DEPTH (m)	INVERT ELEVATION (m)
C-1	-3735036.672	37689.269	120.137	119.262 0.875	INV OUT 119.256
C-2	-3735033.896	37685.155	120.217	119.237 0.980	INV IN 119.237 INV OUT 119.237
C-3	-3735027.758	37676.062	120.240	119.182 1.058	INV IN 119.182 INV OUT 119.182
C-4	-3735023.629	37669.936	120.273	119.145 1.127	INV IN 119.145 INV OUT 119.145
C-5	-3735020.458	37665.236	120.354	119.117 1.236	INV IN 119.117 INV OUT 119.117
EX. C-6	-3735014.455	37656.338	120.431	119.063 1.863	INV IN 119.063 INV OUT 118.866
A-1	-3734975.145	37632.187	120.178	118.563	INV OUT 118.560
A-2	-3734981.063	37633.018	119.550	118.533 1.050	INV IN 118.530 INV OUT 118.530
A-3	-3734994.529	37657.836	119.455	118.389 1.066	INV IN 118.389 INV OUT 118.389
EX. GR4	-3734999.103	37666.277	119.811	118.72 1.470	INV IN 118.720 INV OUT 118.341
A-4	-3735007.188	37678.290	119.817	118.269 1.549	INV IN 118.269 INV OUT 118.269
A-5	-3734993.066	37687.782	119.155	118.183 0.972	INV IN 118.183 INV OUT 118.183
A-6	-3734980.128	37696.480	118.556	118.106 0.450	INV IN 118.106 INV OUT 118.106
EX. SMH1	-3734970.345	37681.926	119.131	117.93 1.201	INV IN 117.930 INV OUT 118.018
B-1	-3734948.295	37649.123	119.173	118.288 0.875	INV OUT 118.288
EX. GR1	-3734948.295	37649.123	119.076	118.07 1.203	INV OUT 118.070
EX. GR3	-3734948.295	37649.123	119.253	118.33 1.273	INV OUT 118.330
A-5	-3734948.295	37649.123	119.155	118.183 0.972	INV IN 118.183 INV OUT 118.205
C-1A	-3735045.836	37696.747		119.856	119.777
SMH3	-3735042.952	37694.984			119.748
EX. GR4	-3735045.836	37696.747	119.811	118.72 1.470	INV IN 118.720 INV OUT 118.341
EX. GR3	-37349847.853	37675.563	119.253	118.330	INV OUT 118.330
C-3	-3735027.758	37676.062	120.240	119.182 1.058	INV IN 119.182 INV OUT 119.182
EX. SMH2	-3735032.663	37676.021	120.479	119.43 1.049	INV IN 119.430 INV OUT 119.430
EX. C-6	-3735014.455	37656.338	120.431	118.866 1.868	INV IN 119.063 INV OUT 118.866
EX. GR6	-37350003.607	37663.395	120.068	118.785 1.283	INV IN 118.785 INV OUT 118.785
EX. GR8	-3735018.296	37653.839	120.388	118.895 1.493	INV OUT 118.895
EX. C-6	-3735014.455	37656.338	120.431	118.866	INV IN 118.866 INV OUT 118.866

LEGEND

EXISTING FEATURES

- FIRE HYDRANT TO BE RELOCATED
- SEWER PIPE (TO BE ABANDONED)
- SEWER MANHOLE (TO BE ABANDONED)
- MUNICIPAL SEWER PIPE (UNDER CONSTRUCTION)
- MUNICIPAL SEWER MANHOLE (UNDER CONSTRUCTION)
- SEWER CONNECTION (UNDER CONSTRUCTION)
- SEWER CONNECTION (UNDER CONSTRUCTION)
- STORMWATER PIPE (TO BE ABANDONED)
- STORMWATER MANHOLE (TO BE ABANDONED)
- STORMWATER GRID INLET (TO BE ABANDONED)
- RODDING EYE
- STORMWATER PIPE (UNDER CONSTRUCTION)
- STORMWATER MANHOLE (UNDER CONSTRUCTION)
- STORMWATER GRID INLET (UNDER CONSTRUCTION)
- FENCELINE
- ELECTRICAL LINE

PROPOSED FEATURES

- RELOCATED FIRE HYDRANT
- SEWER PIPE
- SEWER CONNECTION
- SEWER MANHOLES
- RODDING EYE
- SANITARY GULLY
- STORMWATER PIPE
- STORMWATER MANHOLE
- SINGLE GRID INLET
- RAIN WATER DOWN PIPE
- ROAD SURFACE
- SAW CUT AND RESURFACE
- BENCH MARK
- FENCELINE
- PROPOSED RETAINING WALL

GENERAL NOTES

- ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SAWS 1200 SPECIFICATIONS FOR CIVIL ENGINEERING.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WITH ANY EXCAVATIONS. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
- ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
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No	APPROVED	AMENDMENTS	DATE

NO	ISSUED FOR TENDER	DATE
P0	ISSUED FOR TENDER	2024/02/15
SURVEYED	BPAYI GEOMATICS	2023/08
DRAWN	F. ALLY	2024/02/12
DESIGNED	F. ALLY	2024/02/12
CHECKED	C. BEZUIDENHOUT	2024/02/15
APPROVED		
PR REGISTRATION NO.		DATE

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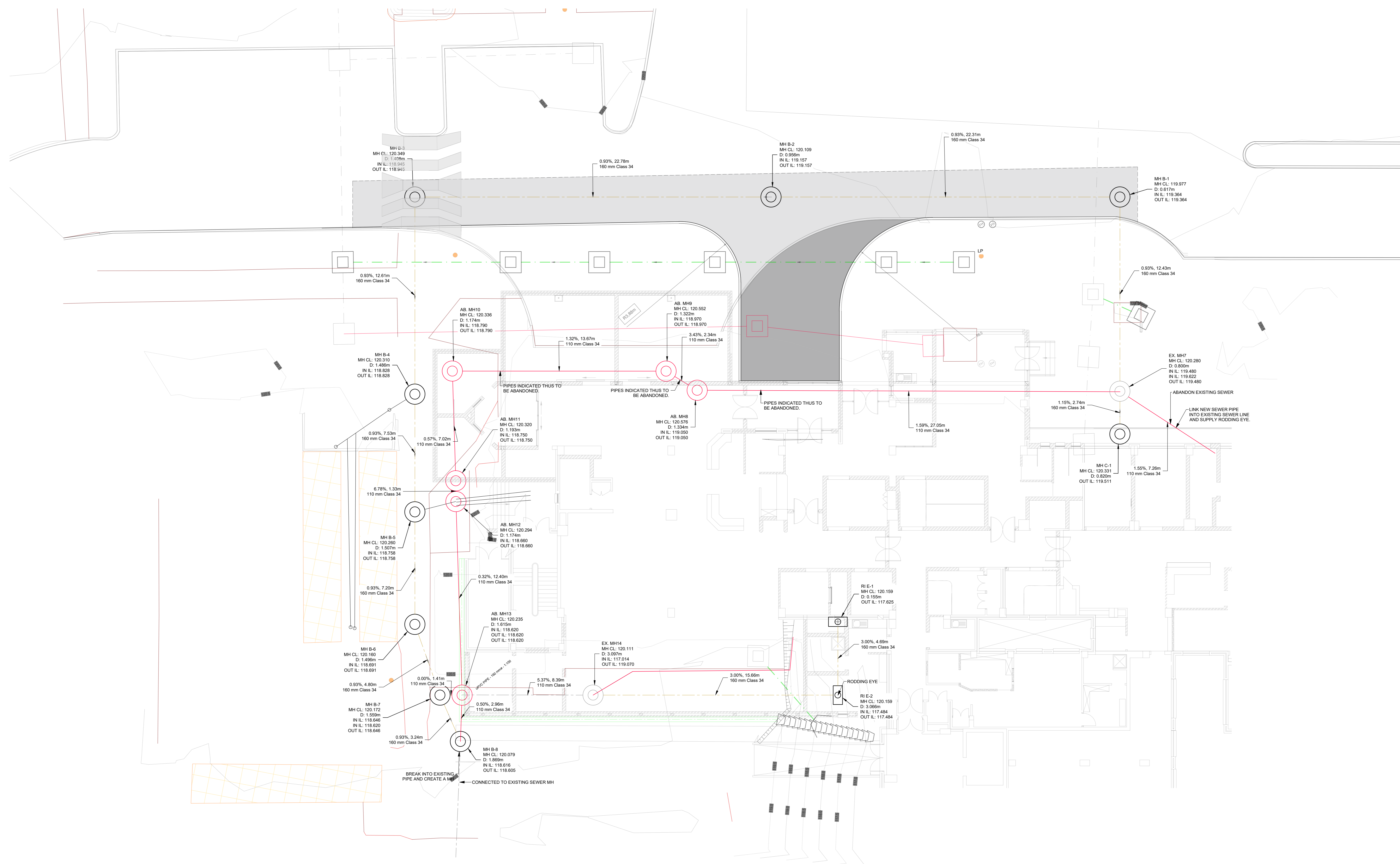
TEL: 041 583 1084
EMAIL: info@lukhozi.co.za
WEB: www.lukhozi.co.za

CLIENT: Province of the EASTERN CAPE HEALTH

PROJECT TITLE
UPGRADE & ADDITIONS TO Uitenhage Provincial Hospital IN NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.

DRAWING TITLE
PROPOSED STORMWATER NETWORK: LONGSECTIONS (SHEET 1)

SCALE	SHEET SET	SHEET SIZE
1:100	SHEET 1 OF 1 SHEETS	A0
DRAWING NO.	REVISION	
1746-6-STW-003	P01	



LEGEND	
EXISTING FEATURES	
	FIRE HYDRANT TO BE RELOCATED
	SEWER PIPE (TO BE ABANDONED)
	SEWER MANHOLE (TO BE ABANDONED)
	MUNICIPAL SEWER PIPE (UNDER CONSTRUCTION)
	MUNICIPAL SEWER MANHOLE (UNDER CONSTRUCTION)
	SEWER CONNECTION (UNDER CONSTRUCTION)
	STORMWATER PIPE (TO BE ABANDONED)
	STORMWATER MANHOLE (TO BE ABANDONED)
	STORMWATER GRID INLET (TO BE ABANDONED)
	RODDING EYE
	STORMWATER PIPE (UNDER CONSTRUCTION)
	STORMWATER MANHOLE (UNDER CONSTRUCTION)
	STORMWATER GRID INLET (UNDER CONSTRUCTION)
	FENCELINE
	ELECTRICAL LINE
PROPOSED FEATURES	
	RELOCATED FIRE HYDRANT
	SEWER PIPE
	SEWER CONNECTION
	SEWER MANHOLE
	RODDING EYE
	SANITARY GULLY
	STORMWATER PIPE
	STORMWATER MANHOLE
	SINGLE GRID INLET
	RAIN WATER DOWN PIPE
	ROAD SURFACE
	SAW CUT AND RESURFACING
	BENCH MARK
	FENCELINE
	PROPOSED RETAINING WALL

- GENERAL NOTES**
- ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 SPECIFICATIONS FOR CIVIL ENGINEERING.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WITH ANY EXCAVATIONS.
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 - PIPES TO BE INSTALLED ACCORDING TO THE SETTING OUT COORDINATES.
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No	APPROVED	AMENDMENTS	DATE
PS1	ISSUED FOR TENDER		2024/02/15
PO	ISSUED FOR PROPOSAL		2023/11/27
SURVEYED	IBHAYI GECMATING		2023/08
DRAWN	F. ALLY		2024/02/12
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CHECKED	C. BEZUIDENHOUT		2024/02/15
APPROVED			

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 EMAIL: info@lukhozi.co.za
 WEB: www.lukhozi.co.za



CLIENT

Province of the EASTERN CAPE HEALTH

PROJECT TITLE

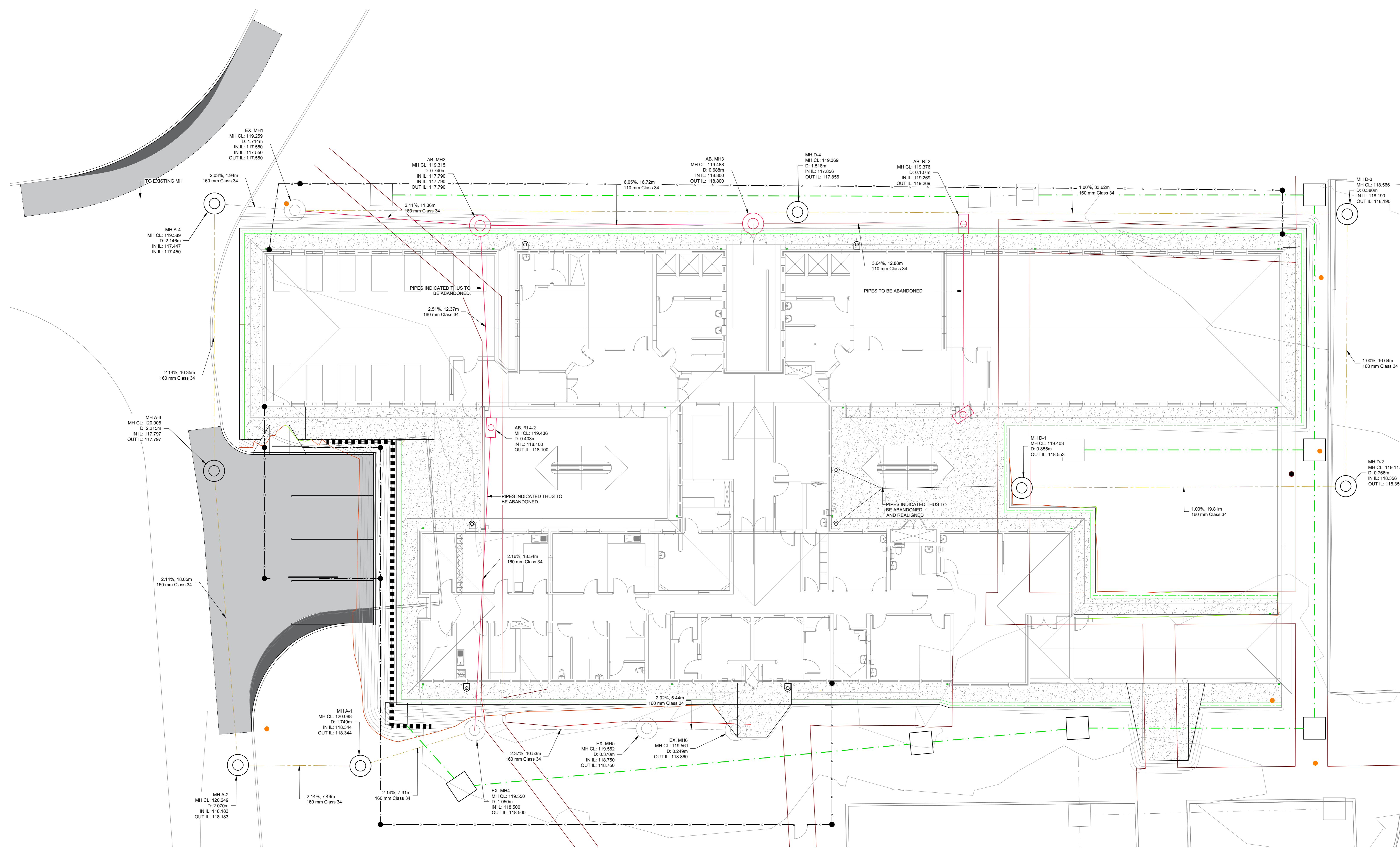
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND BASEMENT STORES WATERPROOFING.

DRAWING TITLE

PROPOSED SEWER NETWORK: CASUALTY UNIT LAYOUT

SCALE	SHEET SET	SHEET SIZE
1:100	SHEET 1 OF 1 SHEETS	A0
DRAWING No.	REVISION	
1746-6-SEW-001		P1

PROJECT: 1746-6-Upgrade Provincial Hospital/Op Design & Drawings/05 Sewer/17 Nov 2023/1746-6-CIVIL LAYOUTS (2024.02.15-1.34) (Modelling-work) (dwg)



LEGEND

EXISTING FEATURES

- Fire Hydrant (to be Relocated)
- Sewer Pipe (to be Abandoned)
- Municipal Sewer Pipe (to be Abandoned)
- Municipal Sewer Manhole (under Construction)
- Municipal Sewer Manhole (under Construction)
- Sewer Connection (under Construction)
- Sewer Connection (under Construction)
- Stormwater Pipe (to be Abandoned)
- Stormwater Manhole (to be Abandoned)
- Stormwater Grid Inlet (to be Abandoned)
- Rodding Eye
- Stormwater Pipe (under Construction)
- Stormwater Manhole (under Construction)
- Stormwater Grid Inlet (under Construction)
- Fenceline
- Electrical Line

PROPOSED FEATURES

- Relocated Fire Hydrant
- Sewer Pipe
- Sewer Connection
- Sewer Manholes
- Rodding Eye
- Sanitary Gully
- Stormwater Pipe
- Stormwater Manhole
- Single Grid Inlet
- Rain Water Down Pipe
- Road Surface
- Saw Cut and Resurface
- Bench Mark
- Fenceline
- Proposed Retaining Wall

- GENERAL NOTES**
- ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 SPECIFICATIONS FOR CIVIL ENGINEERING.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WITH ANY EXCAVATIONS.
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No	APPROVED	AMENDMENTS	DATE
PS1	ISSUED FOR TENDER		2024/02/15
PO	ISSUED FOR PROPOSAL		2023/11/27
SURVEYED	IBHAYI GEOMATICS		2023/08
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TEL: 041 303 1884
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CLIENT

Province of the EASTERN CAPE HEALTH

PROJECT TITLE

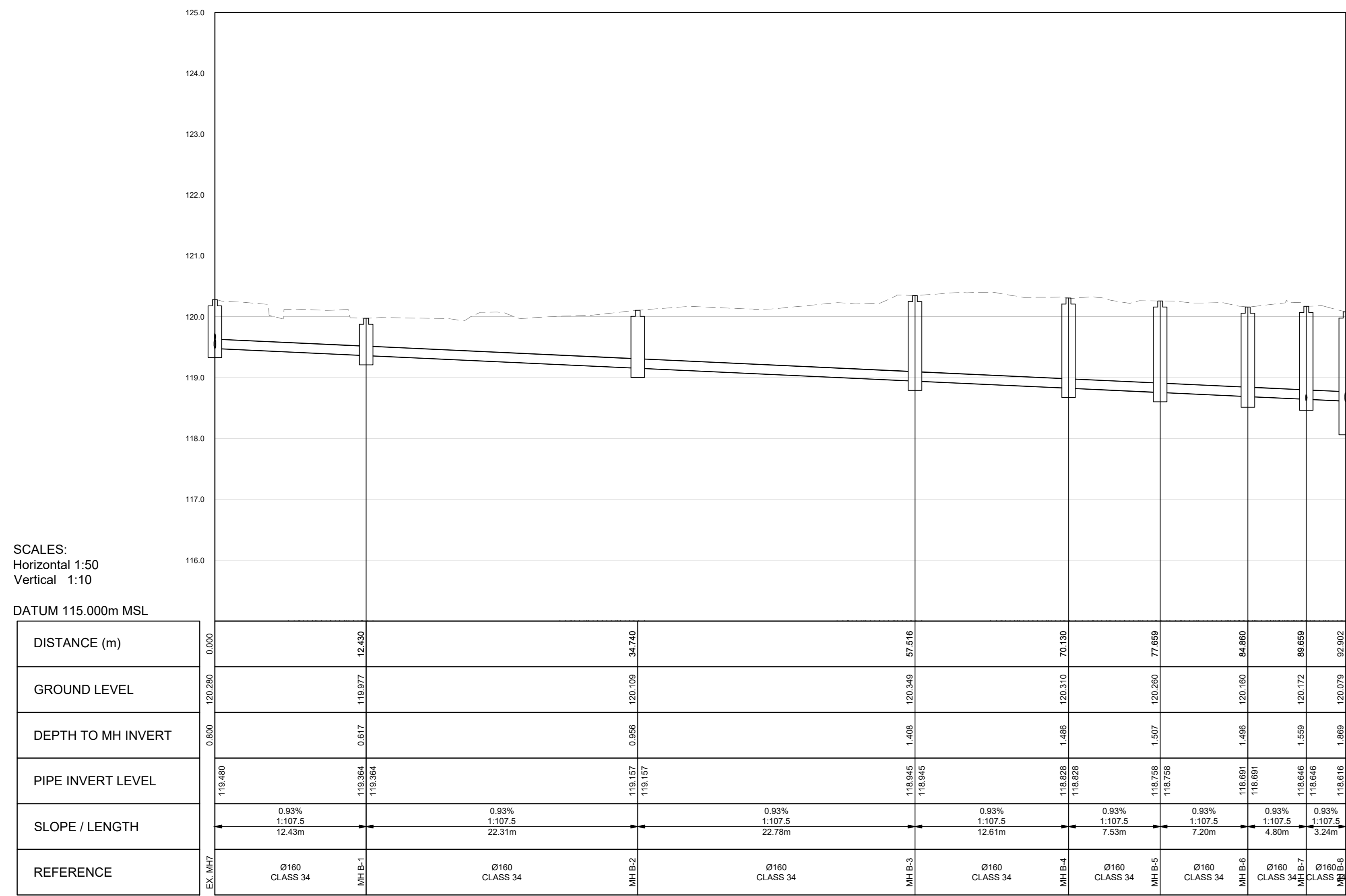
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.

DRAWING TITLE

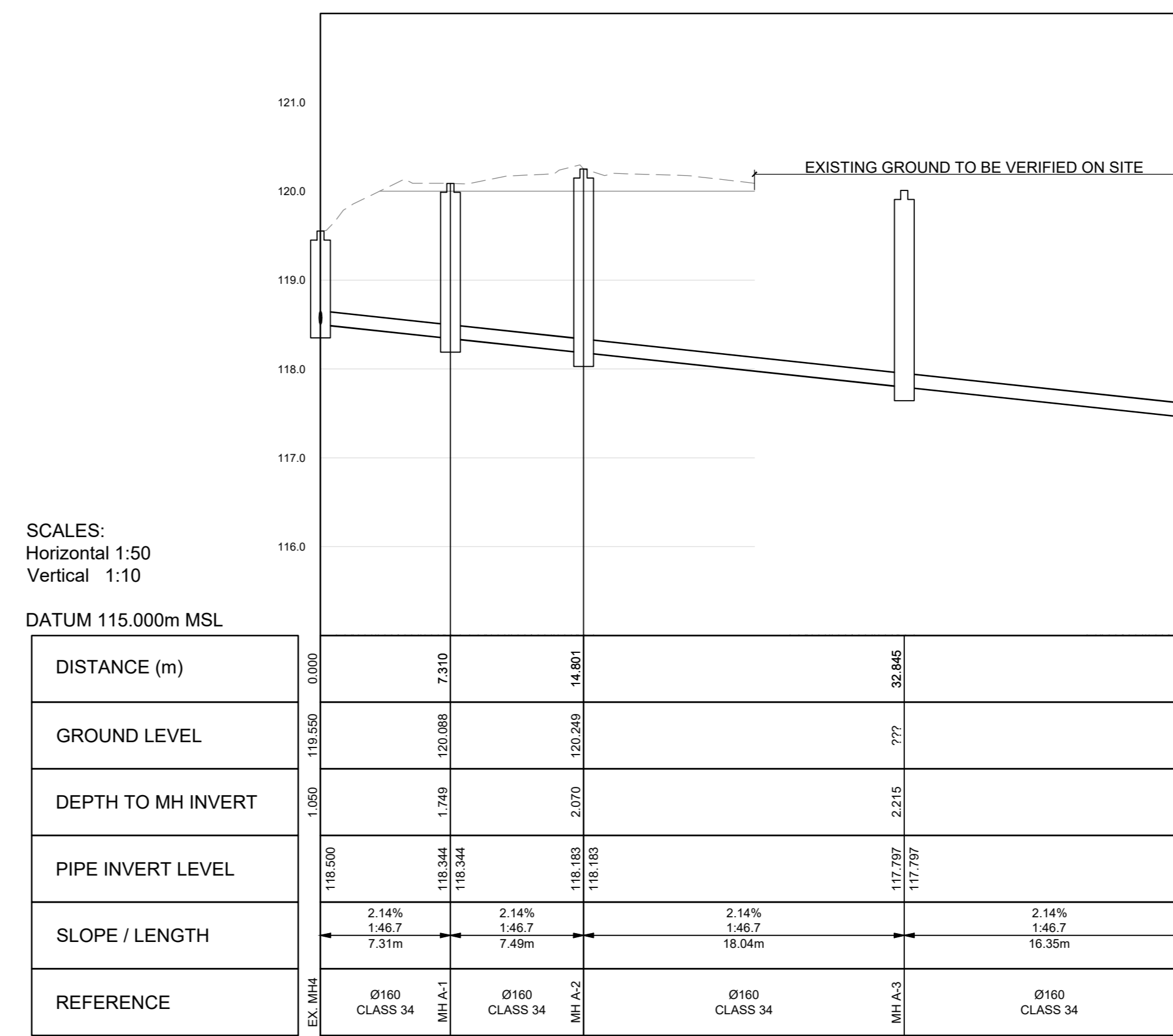
PROPOSED SEWER NETWORK: 72 HOUR FACILITY LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A0
DRAWING No:	REVISION	
1746-6-SEW-002	P1	

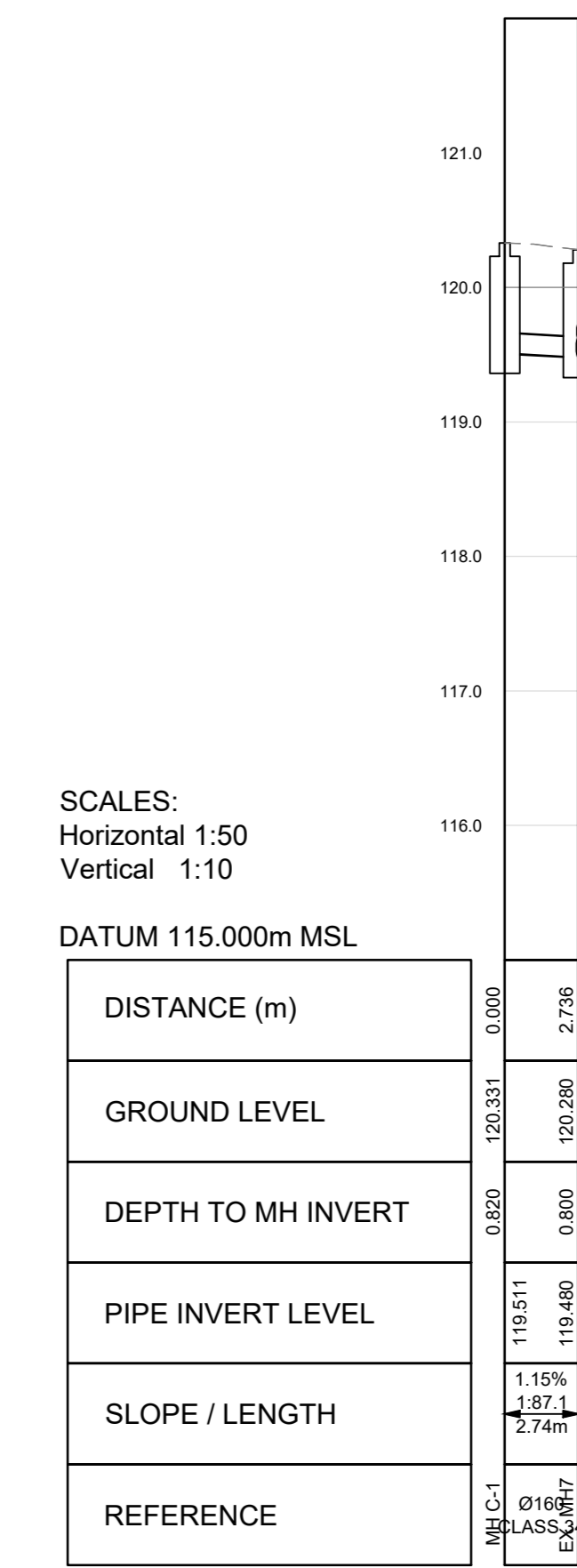
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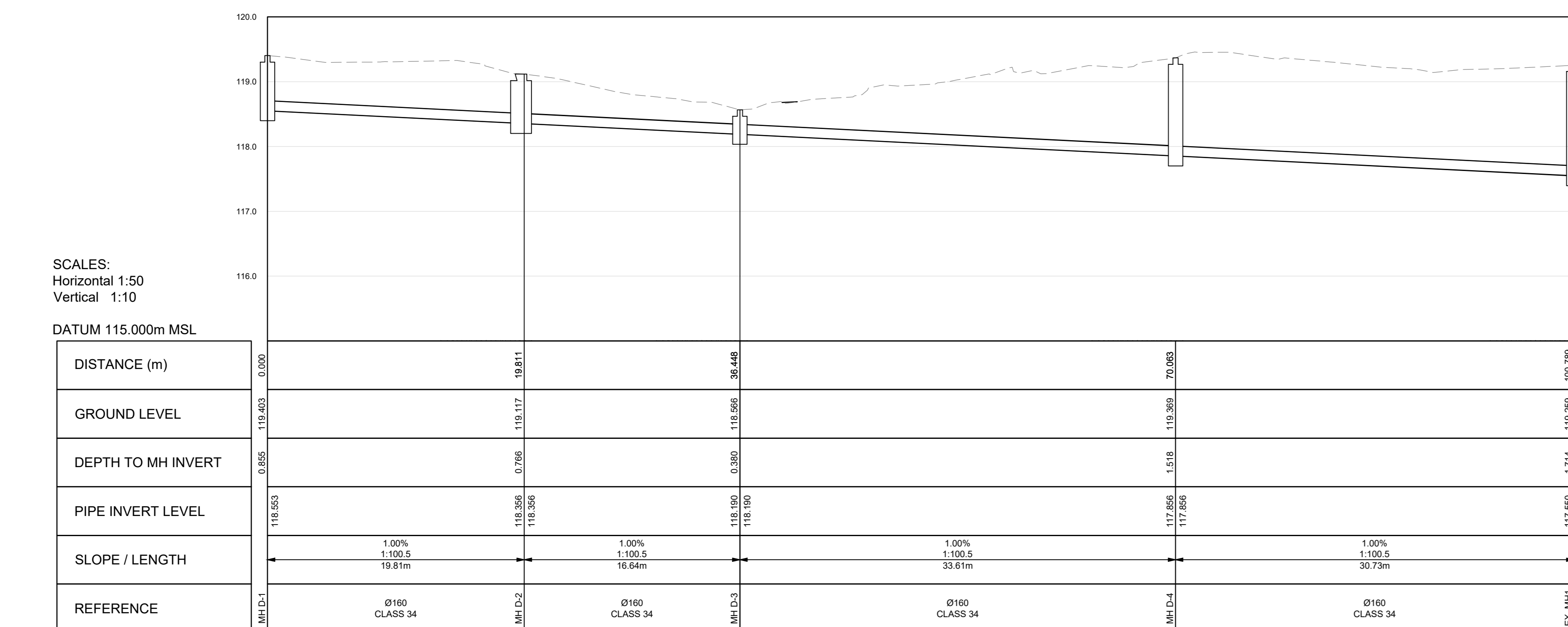
LONGSECTION EX MH7 TO MH B-8
FROM 0.000 TO 92.902



LONGSECTION EX MH4 TO MH A-4
FROM 0.000 TO 49.192



LONGSECTION MH C-1 TO EX MH7
FROM 0.000 TO 2.736



LONGSECTION MH D-1 TO EX MH1
FROM 0.000 TO 100.789

STRUCTURE NAME	Y	X	COVER LEVEL (mMSL)	INVERT LEVEL (mmsl)	DEPTH (m)	INVERT ELEVATION (m)
MH A-1	-3734978.562	37928.596	120.088	118.344	1.749	INV IN 118.344 INV OUT 118.344
MH A-2	-3734972.340	37822.408	120.249	118.183	2.070	INV IN 118.183 INV OUT 118.183
MH A-3	-3734956.599	37831.230	120.008	117.797	2.215	INV IN 117.797 INV OUT 117.797
MH A-4	-3734943.047	37840.371	119.589	117.447	2.146	INV IN 117.447 INV OUT 117.450
MH D-1	-3734985.017	37671.637	119.403	119.403	0.855	INV IN 119.403 INV OUT 118.553
MH D-2	-3734995.980	37688.138	119.117	118.356	0.766	INV IN 118.356 INV OUT 118.356
MH D-3	-3734982.221	37697.492	118.566	118.190	0.380	INV IN 118.190 INV OUT 118.190
MH D-4	-3734963.368	37669.662	119.363	117.856	1.518	INV IN 117.856
MH A-4	-3734943.047	37840.371	119.589	117.447	2.146	INV IN 117.447 INV OUT 117.450
EX MH2	-3734953.234	37653.089	119.315	117.790	0.740	INV IN 117.790 INV OUT 119.465
MH C-1	-3735051.363	37691.385	120.331	119.511	0.820	INV IN 119.511
EX MH7	-3735049.095	37692.915	120.280	119.477	0.803	INV IN 119.477 INV OUT 119.465
EX MH7	-3735049.095	37692.915	120.280	119.477	0.803	INV IN 119.477 INV OUT 119.350
MH B-1	-3735038.791	37699.867	119.977	119.350	0.627	INV IN 119.350 INV OUT 119.338
MH B-1	-3735038.791	37699.867	119.977	119.364	0.617	INV IN 119.364 INV OUT 119.364
MH B-2	-3735028.313	37681.372	120.109	119.157	0.956	INV IN 119.157 INV OUT 119.157
MH B-3	-3735013.575	37662.491	120.349	118.945	1.408	INV IN 118.945 INV OUT 118.945
MH B-4	-3735024.031	37655.437	120.310	118.828	1.488	INV IN 118.828 INV OUT 118.828
MH B-5	-3735030.274	37651.226	120.260	118.758	1.507	INV IN 118.758 INV OUT 118.758
MH B-6	-3735036.242	37647.199	120.160	118.691	1.469	INV IN 118.691 INV OUT 118.691
MH B-7	-3735040.890	37646.001	120.172	118.646	1.529	INV IN 118.646 INV OUT 118.646
MH B-8	-3735044.081	37645.423	120.079	118.516	1.497	INV IN 118.516 INV OUT 118.950

LEGEND

EXISTING FEATURES

- FIRE HYDRANT TO BE RELOCATED
- SEWER PIPE (TO BE ABANDONED)
- SEWER MANHOLE (TO BE ABANDONED)
- MUNICIPAL SEWER PIPE (UNDER CONSTRUCTION)
- MUNICIPAL SEWER MANHOLE (UNDER CONSTRUCTION)
- SEWER CONNECTION (UNDER CONSTRUCTION)
- SEWER CONNECTION (UNDER CONSTRUCTION)
- STORMWATER PIPE (TO BE ABANDONED)
- STORMWATER MANHOLE (TO BE ABANDONED)
- STORMWATER GRID INLET (TO BE ABANDONED)
- RODDING EYE
- STORMWATER PIPE (UNDER CONSTRUCTION)
- STORMWATER MANHOLE (UNDER CONSTRUCTION)
- STORMWATER GRID INLET (UNDER CONSTRUCTION)
- FENCELINE
- ELECTRICAL LINE

PROPOSED FEATURES

- RELOCATED FIRE HYDRANT
- SEWER PIPE
- SEWER CONNECTION
- SEWER MANHOLES
- RODDING EYE
- SANITARY GULLY
- STORMWATER PIPE
- STORMWATER MANHOLE
- SINGLE GRID INLET
- RAIN WATER DOWN PIPE
- ROAD SURFACE
- SAW CUT AND RESURFACE
- BENCH MARK
- FENCELINE
- PROPOSED RETAINING WALL

GENERAL NOTES

- ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 SPECIFICATIONS FOR CIVIL ENGINEERING.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WORK WITH ANY EXCAVATIONS.
- THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
- ALL MATERIALS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
- PIPE SIZE AS PER LAYOUT PLAN.
- PIPES TO BE INSTALLED ACCORDING TO THE SETTING OUT COORDINATES.
- WATER LINES TO BE TESTED UNDER ENGINEER'S SUPERVISION AND WITNESSED BY WATER SUB-SALO PRIOR TO CONNECTION TO EXISTING WATER MAINS.

No	APPROVED	AMENDMENTS	DATE

PO	ISSUED FOR TENDER	DATE

PR REGISTRATION NO. DATE

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LUKHOZI

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FAX: 041 363 1884
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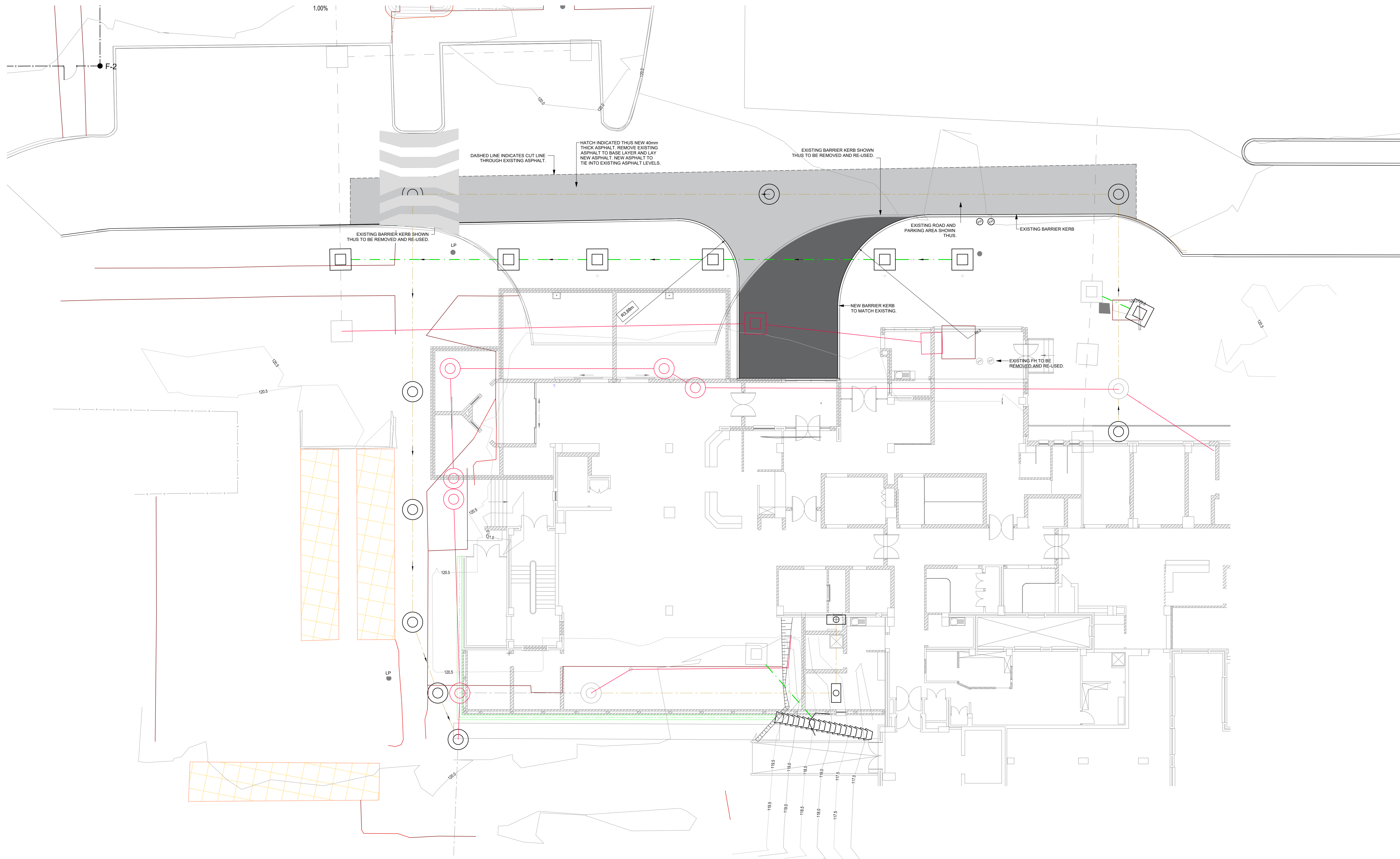
PROJECT TITLE

UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL II NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.

DRAWING TITLE

PROPOSED SEWER NETWORK: LONGSECTIONS (SHEET 1)

SCALE	SHEET NO	SHEET SIZE
1:100	SHEET 1 OF 1 SHEETS	A0
DRAWING No.	REVISION	
1746-6-SEW-003		



LEGEND	
EXISTING FEATURES	
	FIRE HYDRANT TO BE RELOCATED
	SEWER PIPE (TO BE ABANDONED)
	MUNICIPAL SEWER PIPE (TO BE ABANDONED)
	MUNICIPAL SEWER PIPE (UNDER CONSTRUCTION)
	MUNICIPAL SEWER MANHOLE (UNDER CONSTRUCTION)
	SEWER CONNECTION (UNDER CONSTRUCTION)
	STORMWATER PIPE (TO BE ABANDONED)
	STORMWATER MANHOLE (TO BE ABANDONED)
	STORMWATER GRID INLET (TO BE ABANDONED)
	RODDING EYE
	STORMWATER PIPE (UNDER CONSTRUCTION)
	STORMWATER MANHOLE (UNDER CONSTRUCTION)
	STORMWATER GRID INLET (UNDER CONSTRUCTION)
	FENCELINE
	ELECTRICAL LINE
PROPOSED FEATURES	
	RELOCATED FIRE HYDRANT
	SEWER PIPE
	SEWER CONNECTION
	SEWER MANHOLES
	RODDING EYE
	SANITARY GULLY
	STORMWATER PIPE
	STORMWATER MANHOLE
	SINGLE GRID INLET
	RAIN WATER DOWN PIPE
	ROAD SURFACE
	SAW CUT AND RESURFACE
	BENCH MARK
	FENCELINE
	PROPOSED RETAINING WALL

- GENERAL NOTES**
1. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 SPECIFICATIONS FOR CIVIL ENGINEERING.
 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WITH ANY EXCAVATIONS.
 3. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
 4. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
 5. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
 6. PIPE SIZE AS PER LAYOUT PLAN.
 7. PIPES TO BE INSTALLED ACCORDING TO THE SETTING OUT COORDINATES.
 8. WATER LINES TO BE TESTED UNDER ENGINEER'S SUPERVISION AND WITNESSED BY WATER SUB-SILO PRIOR TO CONNECTION TO EXISTING WATER MAINS.

No	APPROVED	AMENDMENTS	DATE
PO	ISSUED FOR TENDER		2024/02/15
SURVEYED	IBHAYI GEOMATICS		2023/08
DRAWN	F. ALLY		2024/02/12
DESIGNED	F. ALLY		2024/02/12
CHECKED	C. BEZUIDENHOUT		2024/02/15
APPROVED			
	PR REGISTRATION NO.		DATE

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EMAIL: info@lukhozi.co.za
WEB: www.lukhozi.co.za

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE

UPGRADE & ADDITIONS TO Uitenhage PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.

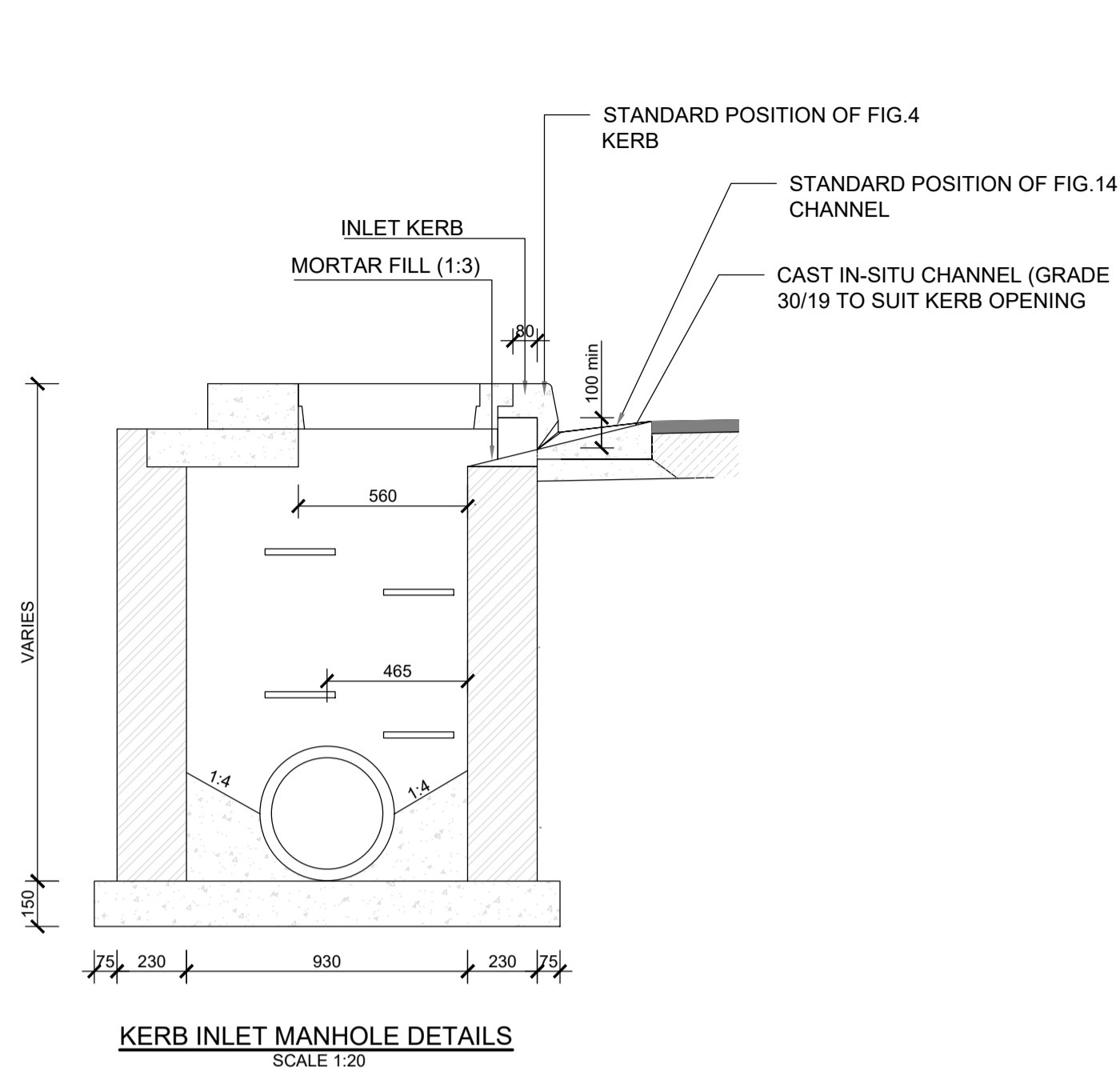
DRAWING TITLE

PROPOSED ROADS AND PARKING: CASUALTY UNIT LAYOUT

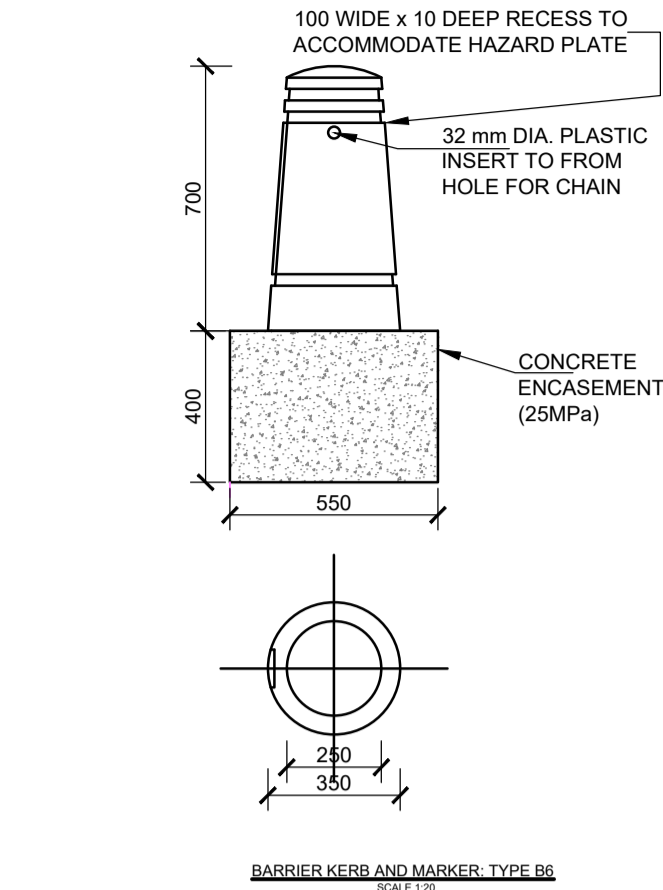
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1 : 100	SHEET 1 OF 1 SHEETS	A0

DRAWING No.	REVISION	DATE
1746-6-RDS-001	P0	

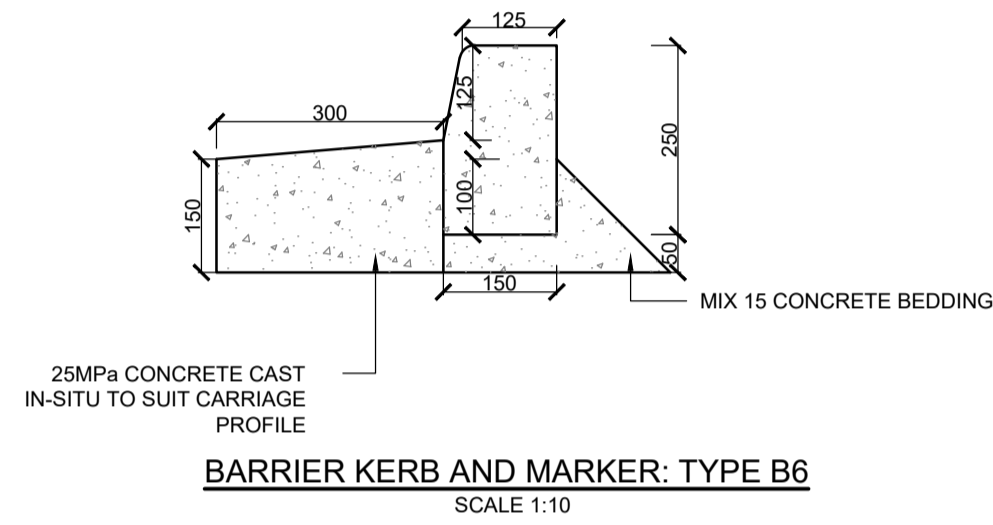
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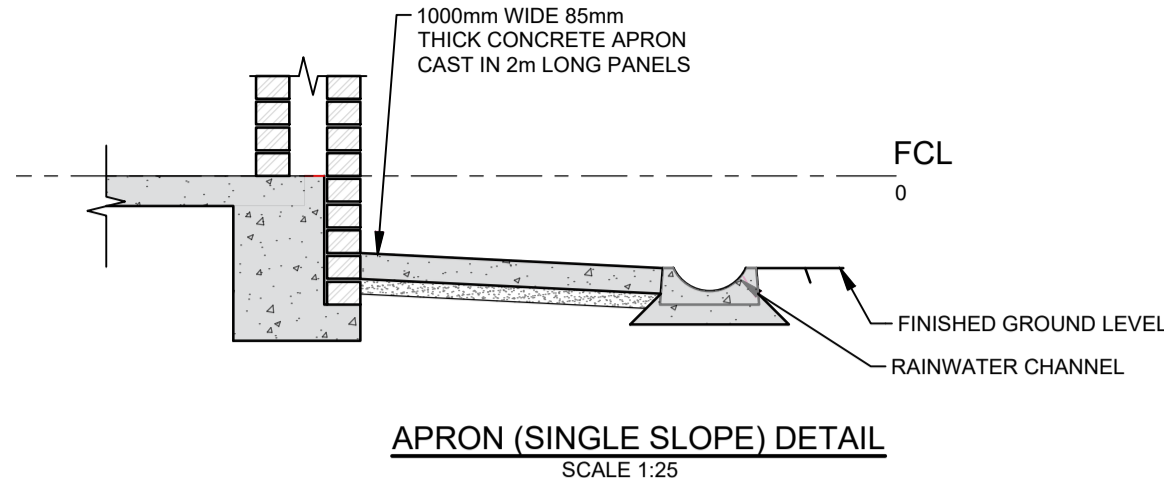
KERB INLET MANHOLE DETAILS
SCALE 1:20



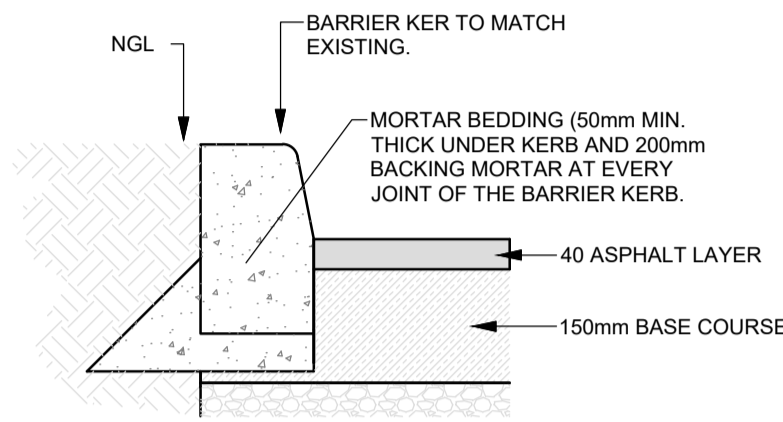
BARRIER KERB AND MARKER: TYPE B6
SCALE 1:10



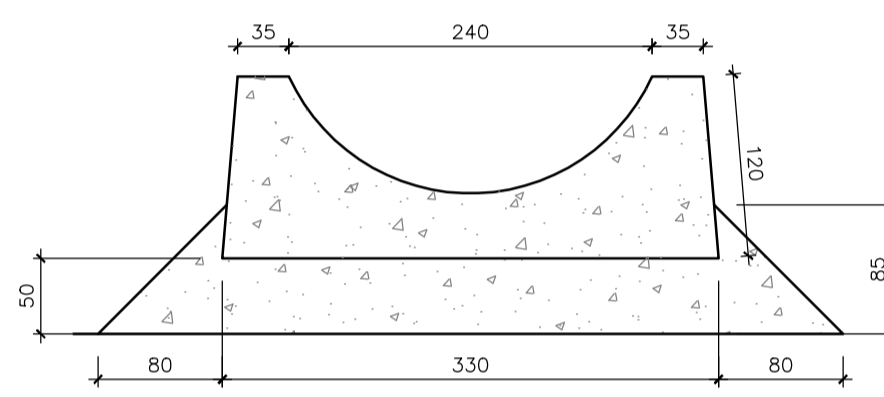
BARRIER KERB AND MARKER: TYPE B6
SCALE 1:10



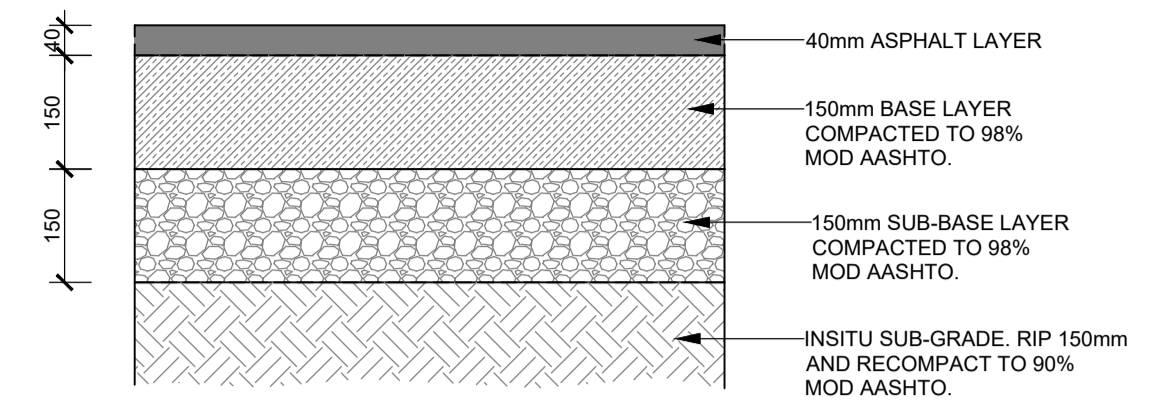
APRON (SINGLE SLOPE) DETAIL
SCALE 1:25



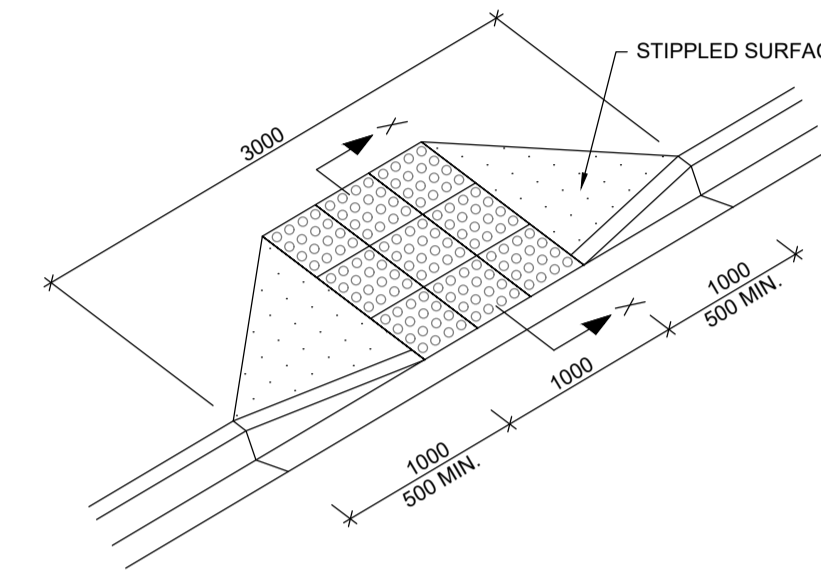
REINSTATEMENT OF EXISTING BARRIER KERB
SCALE 1:10



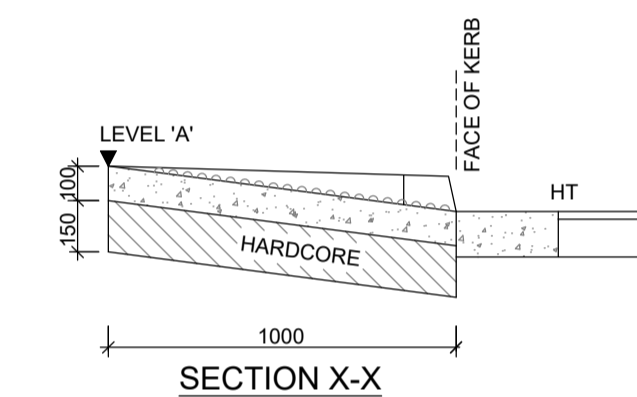
RAINWATER CHANNEL (SMALL)
SCALE 1:5



TYPICAL LAYER WORKS UNDER NEW ASPHALT AREAS
SCALE 1:10

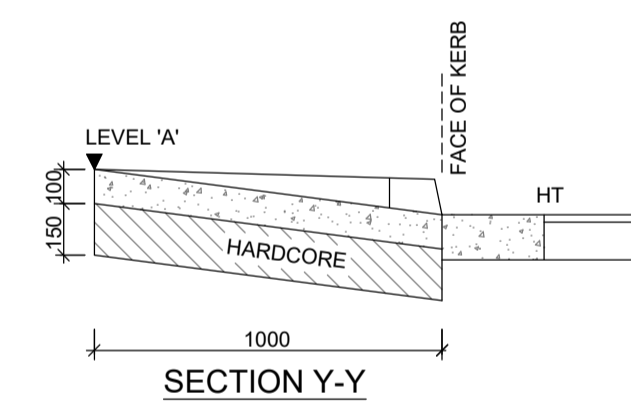


PEDESTRIAN SLOPE CONSTRUCTED WITH BUBBLE BLOCKS - SEE DWG. PSMK 8/8

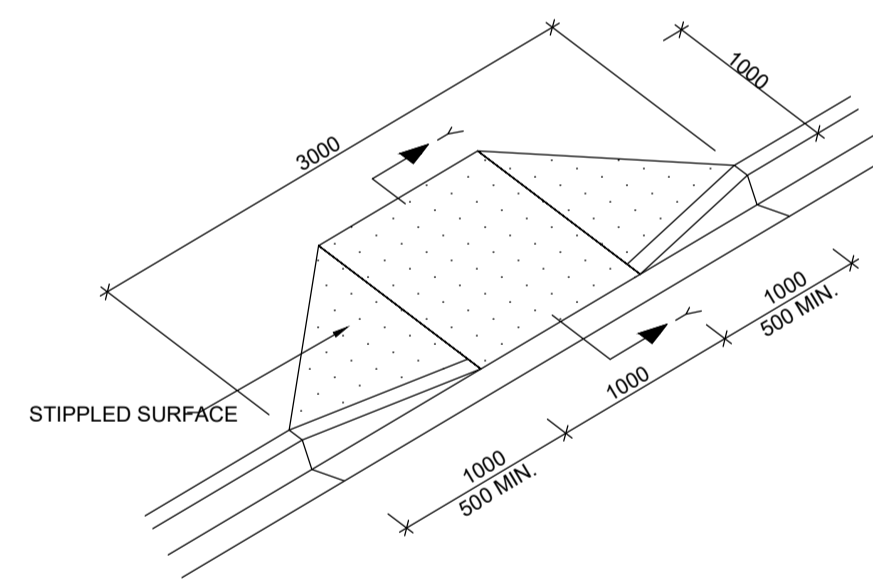


SECTION X-X

PEDESTRIAN SLOPE FOR BARRIER KERB



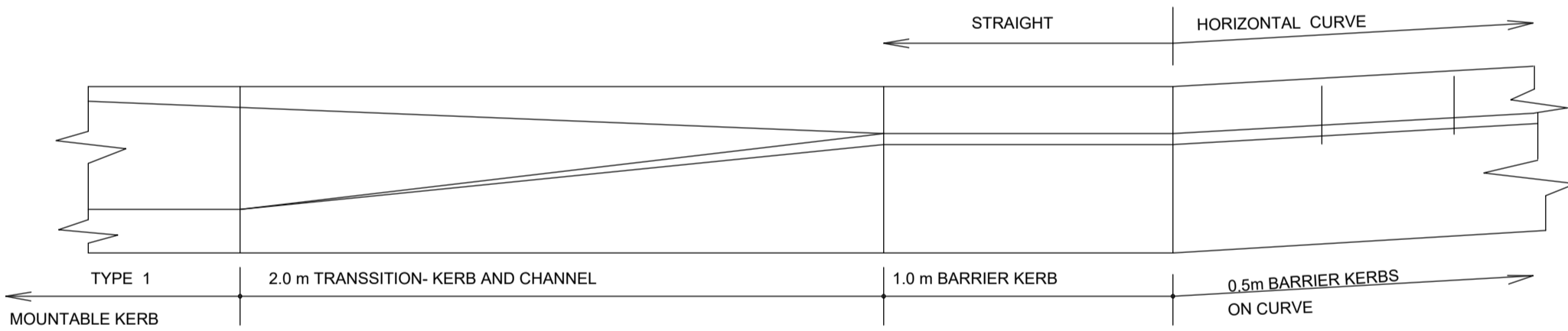
SECTION Y-Y



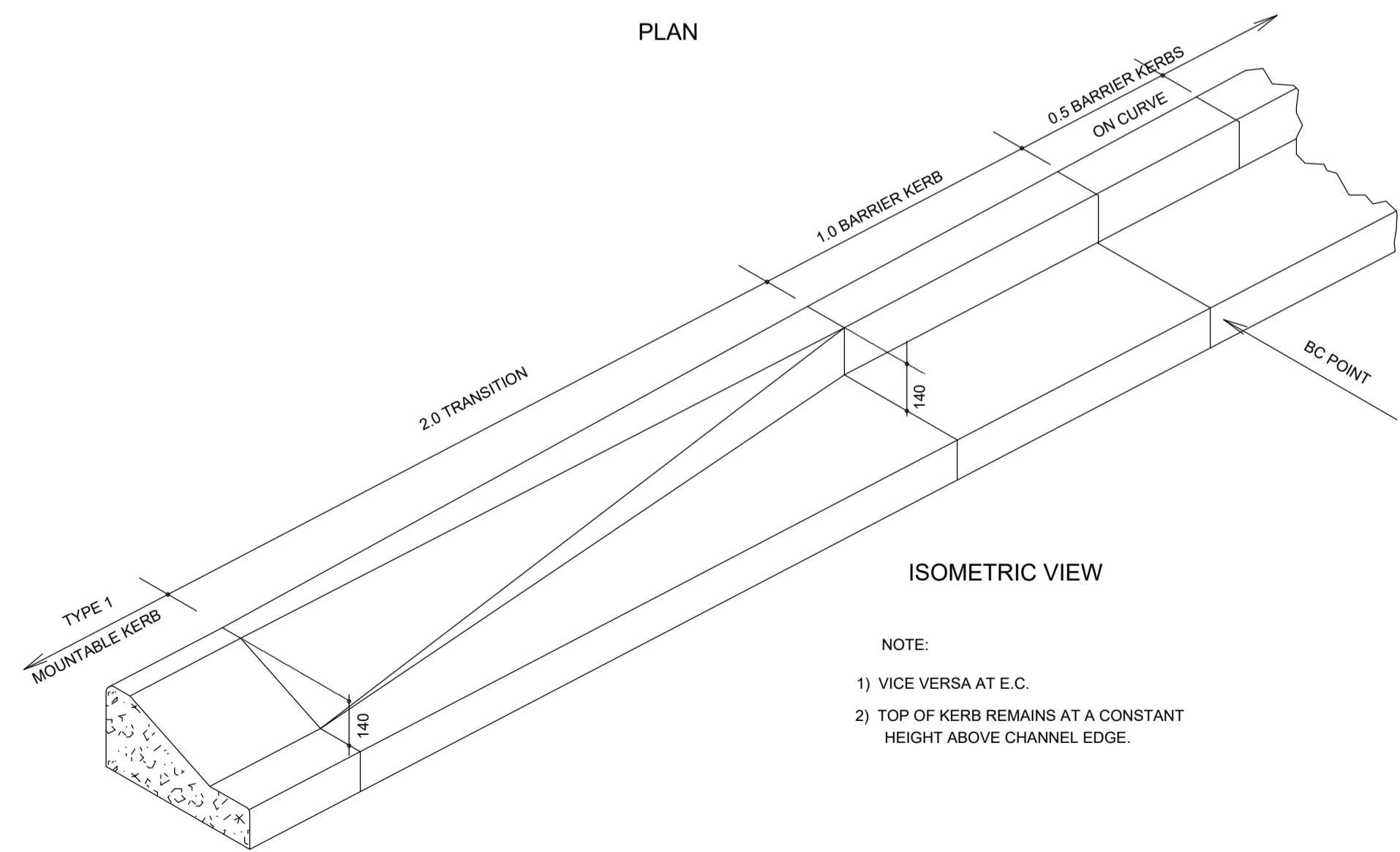
PEDESTRIAN SLOPE - WOOD-FLOATED FINISH

PEDESTRIAN SLOPE FOR BARRIER KERB

- NOTES:**
1. IN-SITU MATERIAL BENEATH HARDCORE TO BE COMPACTED TO 90% OF MODIFIED AASHTO MAXIMUM DENSITY.
 2. HARDCORE SHALL BE SUBBASE (S5) QUALITY MATERIAL COMPACTED TO 93% OF MODIFIED AASHTO MAXIMUM DENSITY.
 3. CONCRETE TO BE CLASS 25/19, BRASS BROOM STIPPLE FINISH.
 4. THE ENGINEER WILL SPECIFY LEVEL 'A' RELATIVE TO LEVEL OF TOP ADJACENT KERB AND MAY ORDER A 25MM RISE AT FACE OF KERB LINE.
 5. THE PEDESTRIAN SLOPE TRANSITION MAY BE SHORTENED TO BE A MINIMUM OF 0.5M TO SUIT EXISTING STREET FURNITURE AT RADII OF INTERSECTION.



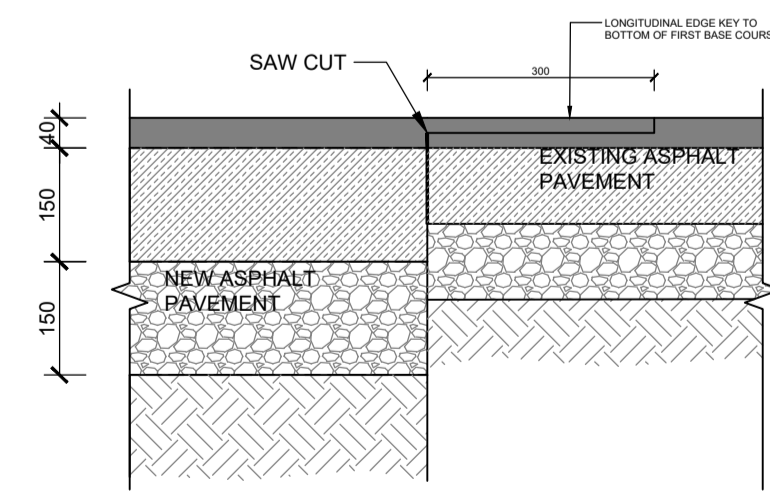
PLAN



ISOMETRIC VIEW

- NOTE:**
- 1) VICE VERSA AT E.C.
 - 2) TOP OF KERB REMAINS AT A CONSTANT HEIGHT ABOVE CHANNEL EDGE.

TRANSITION KERB DETAIL
NTS



SAW CUT JOINT
SCALE 1:10

LEGEND:

No	APPROVED	AMENDMENTS	DATE

P0 - ISSUED FOR TENDER 2024/02/15

ROLE	NAME	DATE
SURVEYED	IBHAYI GEOMATICS	2023/08
DRAWN	M. PHALADI	2024/02/12
DESIGNED	F. ALLY	2024/02/12
CHECKED	C. BEZUIDENHOUT	2024/02/15

APPROVED
PR REGISTRATION NO. DATE---

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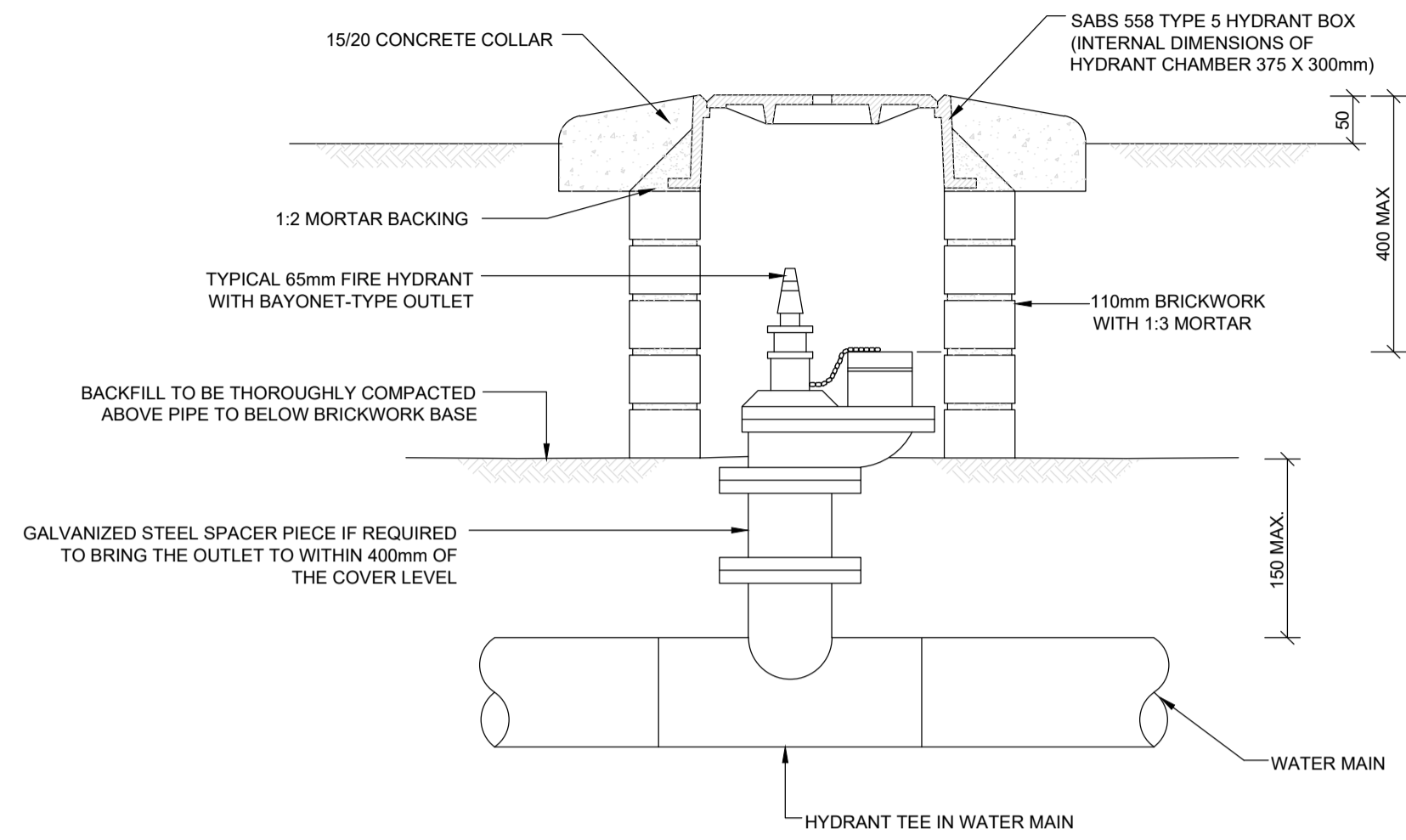
CLIENT
Province of the EASTERN CAPE HEALTH

PROJECT TITLE
UPGRADE & ADDITIONS TO UITENHAGE PROVINCIAL HOSPITAL IN NELSON MANDELA METRO TO 72 HOUR ASSESSMENT AREA, CASUALTY & OPD, ARCHIVING, ROOF REPLACEMENT AND REMEDIAL WORKS AND BASEMENT STORES WATERPROOFING.

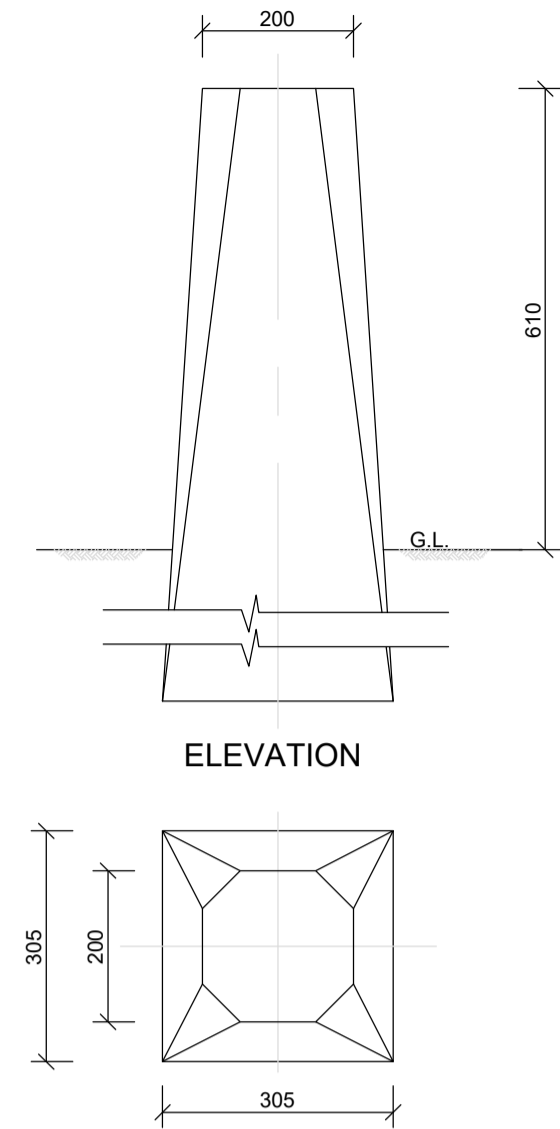
DRAWING TITLE
PROPOSED ROADS AND PARKING SECTIONS AND TYPICAL DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1
DRAWING No.	1746-06-RDS-010	REVISION P0

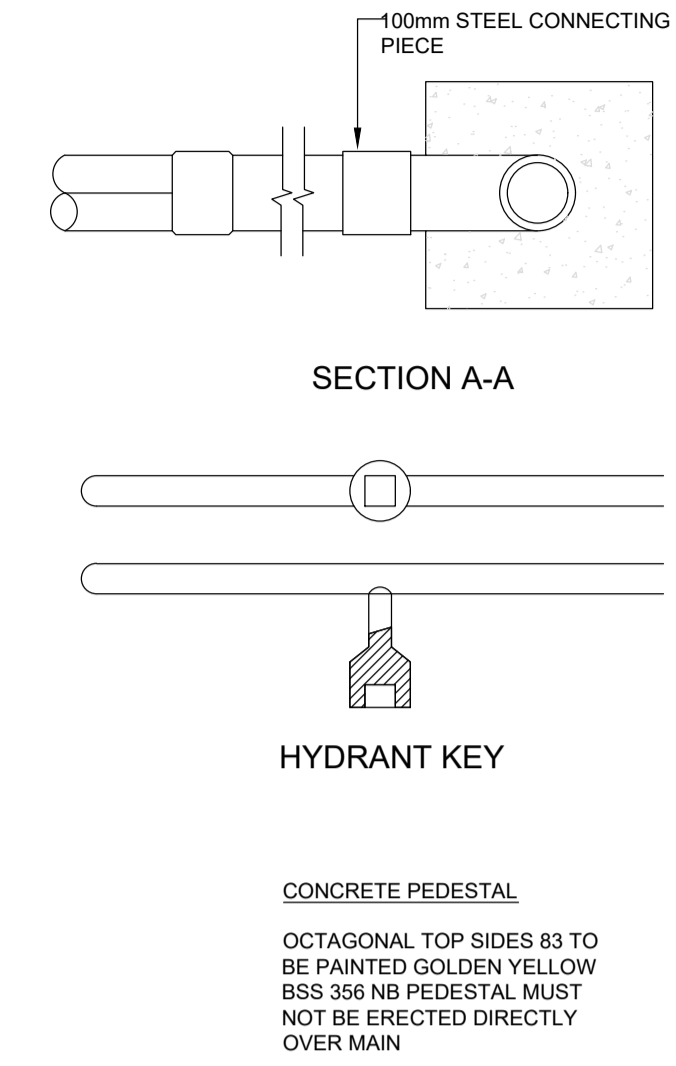
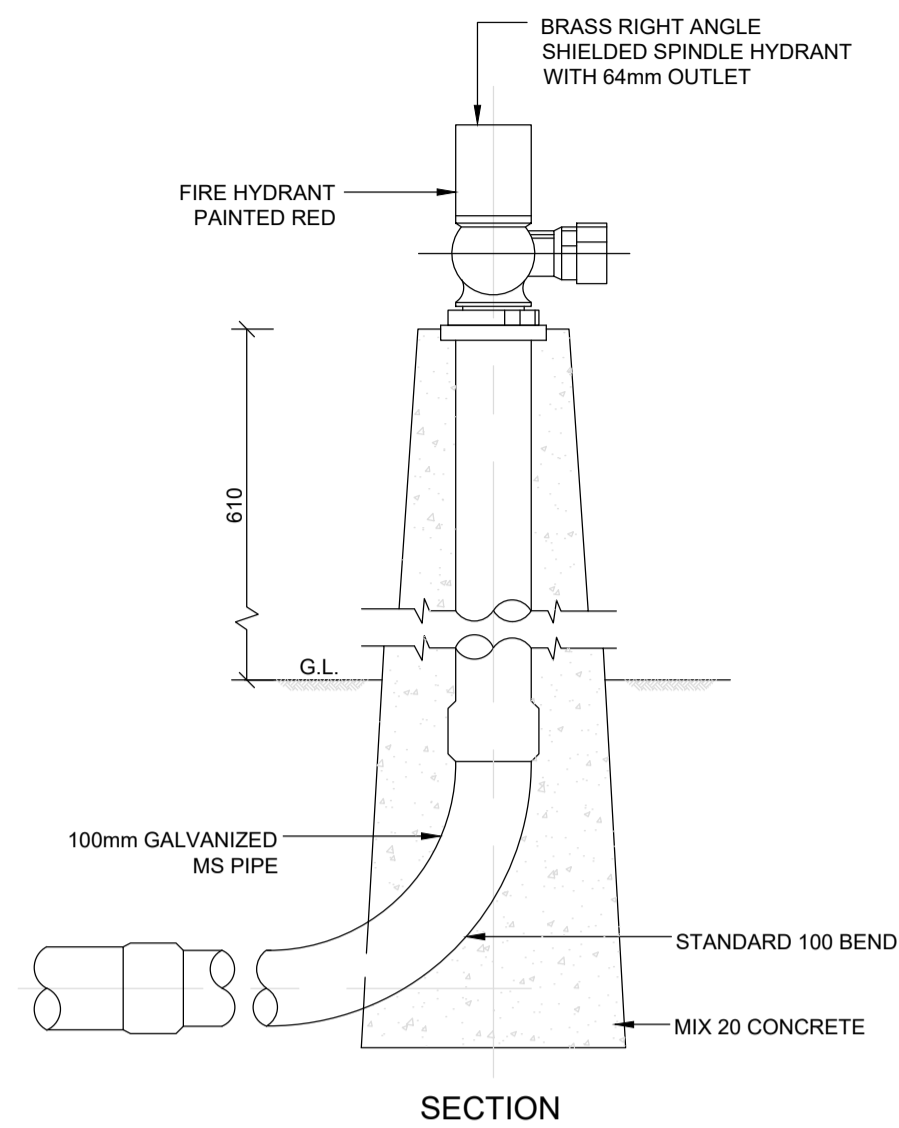
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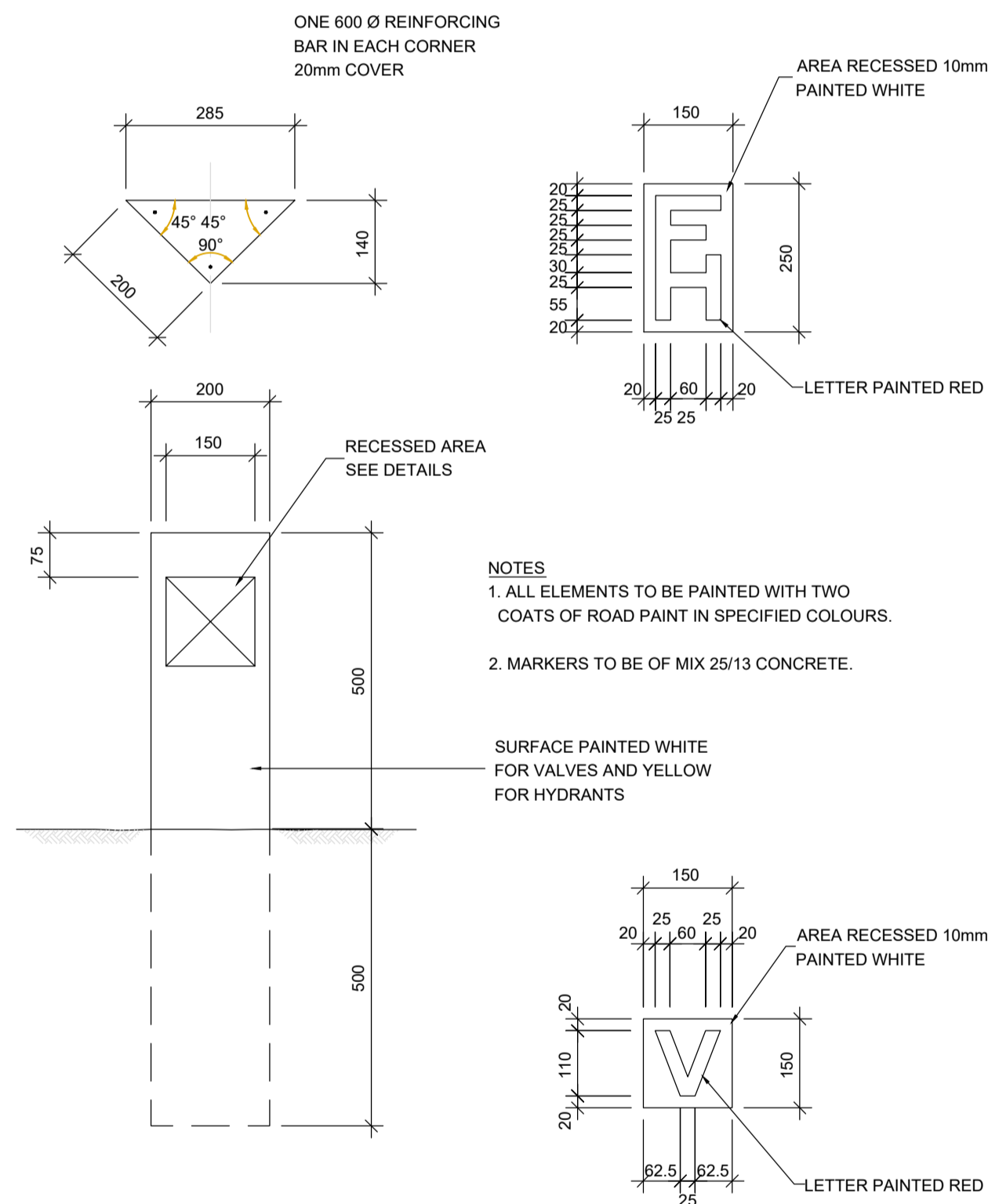
DETAIL OF HYDRANT CHAMBER (ALTERNATIVE)
1:10



DETAIL OF FIRE HYDRANT
1:10



NOTES:
1. ALL FIRE HYDRANTS ARE TO BE RELOCATED.



DETAIL OF VALVE AND HYDRANT MARKERS
1:10

LEGEND:

No	APPROVED	AMENDMENTS	DATE
P0	-	ISSUED FOR TENDER	2024/02/15
SURVEYED	IBHAYI GEOMATICS		2023/08
DRAWN	M. PHALADI		2024/02/12
DESIGNED	F. ALLY		2024/02/12
CHECKED	C. BEZUIDENHOUT		2024/02/15
APPROVED			
	PR REGISTRATION NO.		DATE---

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 TEL: 041 363 1984
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CLIENT

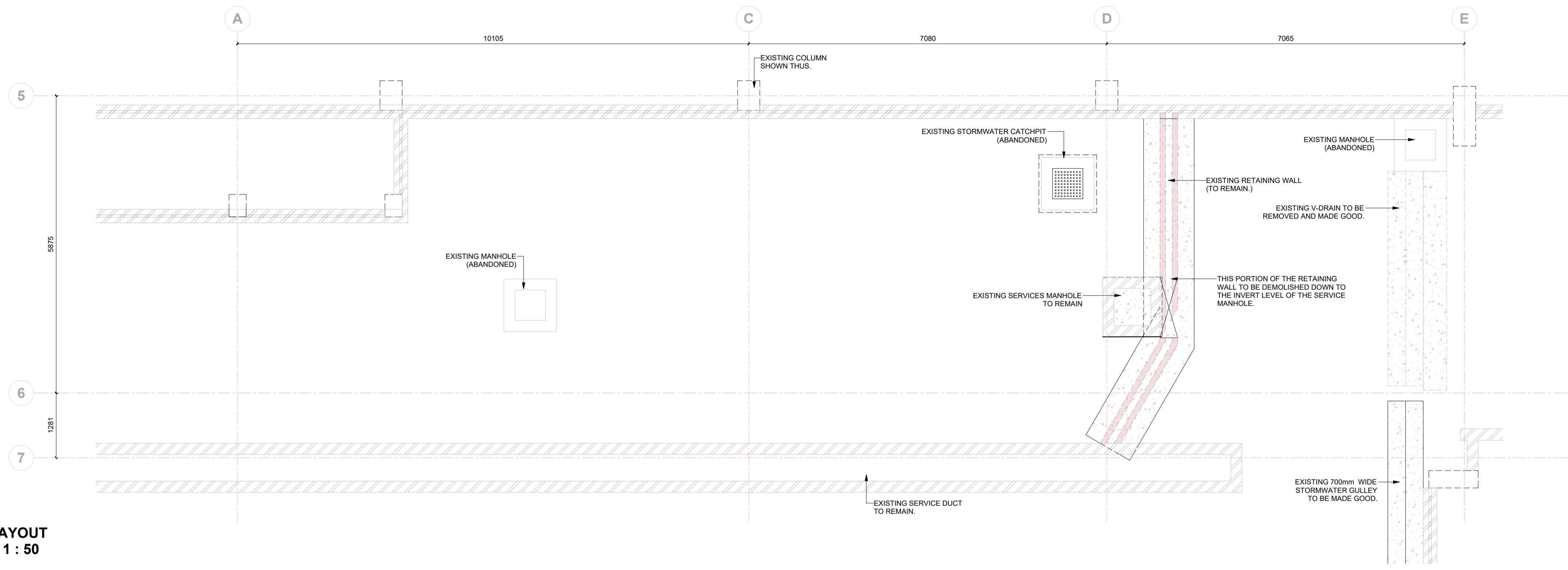
 Province of the
EASTERN CAPE
 HEALTH

PROJECT TITLE
IMPROVEMENTS, ALTERATIONS AND ADDITIONS AT HEALTH CARE FACILITIES IN NELSON MANDELA BAY - UITENHAGE PROVINCIAL HOSPITAL

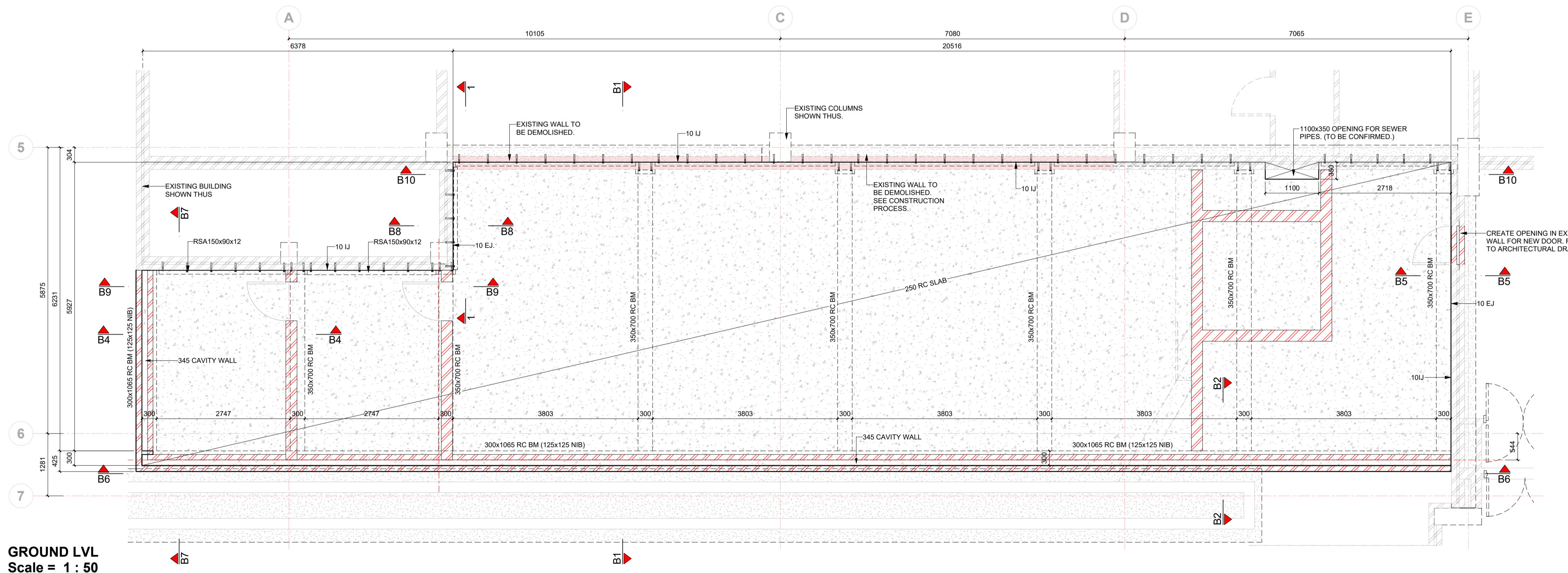
DRAWING TITLE
WATER AND FIRE RETICULATION: TYPICAL DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1
DRAWING No.	REVISION	
1746-06-WAT-010	P0	

P:\P1746-6 ML\Uitenhage Provincial Hospital\04 Design & Drawings\08 General\1746-06-TYPICAL DETAILS (2024.02.14 - 12.05).dwg 2024/02/15 08:25 PM



BASE LAYOUT
Scale = 1 : 50



GROUND LVL
Scale = 1 : 50

- General concrete notes:**
- Beam depth includes slab thickness
 - The contractor is to maintain steel in the correct position after placing and during concreting
 - Stone, sand, and cement to be to the satisfaction of the consulting engineer.
 - No concrete is to be poured until the consulting engineer has inspected the steel.
 - Any breaks in the concrete will be made following the engineer's instructions.
 - No structural alterations are to be made without the approval of the consulting engineer.
 - The structure has been designed for the following conditions:
(a) Safe ground pressure 200 kN/sq m
(b) Live load on slab 5.0 kN/sq m
 - All drawings are to be read in conjunction with the architectural and civil engineering drawings.
 - The design on this drawing remains the property of Lukhozi consulting engineers - copyright is reserved.
 - All dimensions are to be checked on-site before work is put in hand. Any discrepancy must immediately be reported to the engineer.
 - This drawing is not to be scaled.
 - Roof sheet to architect's details.

- Concrete strength**
- Foundations 20 Mpa cube strength at 28 days
 - Columns 30 Mpa cube strength at 28 days
 - Beams and slabs 30 Mpa cube strength at 28 days

TO	ISSUED FOR TENDER	2023-11-30	
PO	PRELIMINARY FOR MEASUREMENT	2023-09-28	
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			DATE
DRAWN	I.NEL / C.S		DATE
DESIGNED	L.COETZER		DATE
CHECKED	L.COETZER		DATE
APPROVED			DATE
	PR REGISTRATION NO.	201570266	DATE

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PR REGISTRATION NO.		201570266	DATE
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LUKHOZI

LUKHOZI CONSULTING ENGINEERS (PTY) LTD

KWA LUKHOZI, QUARTZITE DRIVE,
THE QUARRY, SELBORNE, 5201

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EMAIL: e@lukhozi.co.za
WEB: www.lukhozi.co.za

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE

**UITENHAGE PROVINCIAL HOSPITAL
CASUALTY UNIT - ENTRANCE**

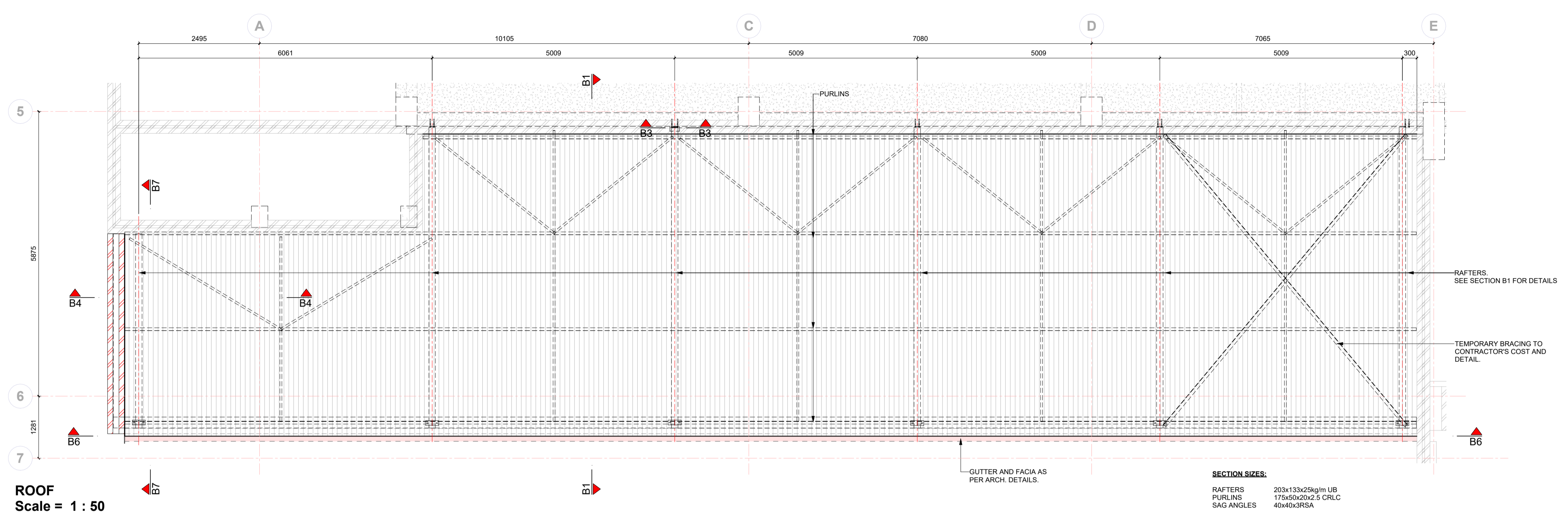
DRAWING TITLE

**STRUCTURAL INSTALLATION
BASE LAYOUT AND GROUND LEVEL
LAYOUT**

SCALE	SHEET SET	OF	SHEET SIZE
1 : 50	SHEET		A1
DRAWING No.	1746-6-02-S-001		REVISION
			T0

28 Feb 2024 19:32:24

P:\P\1746-6-02-S-001-Uitenhage Provincial Hospital\04 Design & Drawings\07 Structural\Drawings\01 Working Drawings\Casualty Unit - Ward RVT



ROOF
Scale = 1 : 50

SECTION SIZES:
 RAFTERS 203x133x25kg/m UB
 PURLINS 175x50x20x2.5 CRLC
 SAG ANGLES 40x40x3RSA

- General concrete notes:**
- Beam depth includes slab thickness
 - The contractor is to maintain steel in the correct position after placing and during concreting
 - Stone, sand, and cement to be to the satisfaction of the consulting engineer.
 - No concrete is to be poured until the consulting engineer has inspected the steel.
 - Any breaks in the concrete will be made following the engineer's instructions.
 - No structural alterations are to be made without the approval of the consulting engineer.
 - The structure has been designed for the following conditions:
 (a) Safe ground pressure 200 kN/sq m
 (b) Live load on slab 5.0 kN/sq m
 - All drawings are to be read in conjunction with the architectural and civil engineering drawings.
 - The design on this drawing remains the property of Lukhozi consulting engineers - copyright is reserved.
 - All dimensions are to be checked on-site before work is put in hand. Any discrepancy must immediately be reported to the engineer.
 - This drawing is not to be scaled.
 - Roof sheet to architect's details.

- Concrete strength**
- Foundations 20 Mpa cube strength at 28 days
 - Columns 30 Mpa cube strength at 28 days
 - Beams and slabs 30 Mpa cube strength at 28 days

TO	ISSUED FOR TENDER	2023-11-30	
PO	PRELIMINARY FOR MEASUREMENT	2023-09-28	
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			DATE
DRAWN	I.NEL / C.S		DATE
DESIGNED	L.COETZER		DATE
CHECKED	L.COETZER		DATE
APPROVED			DATE
	PR REGISTRATION NO. 201570266		DATE

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WEB www.lukhozi.co.za

CLIENT

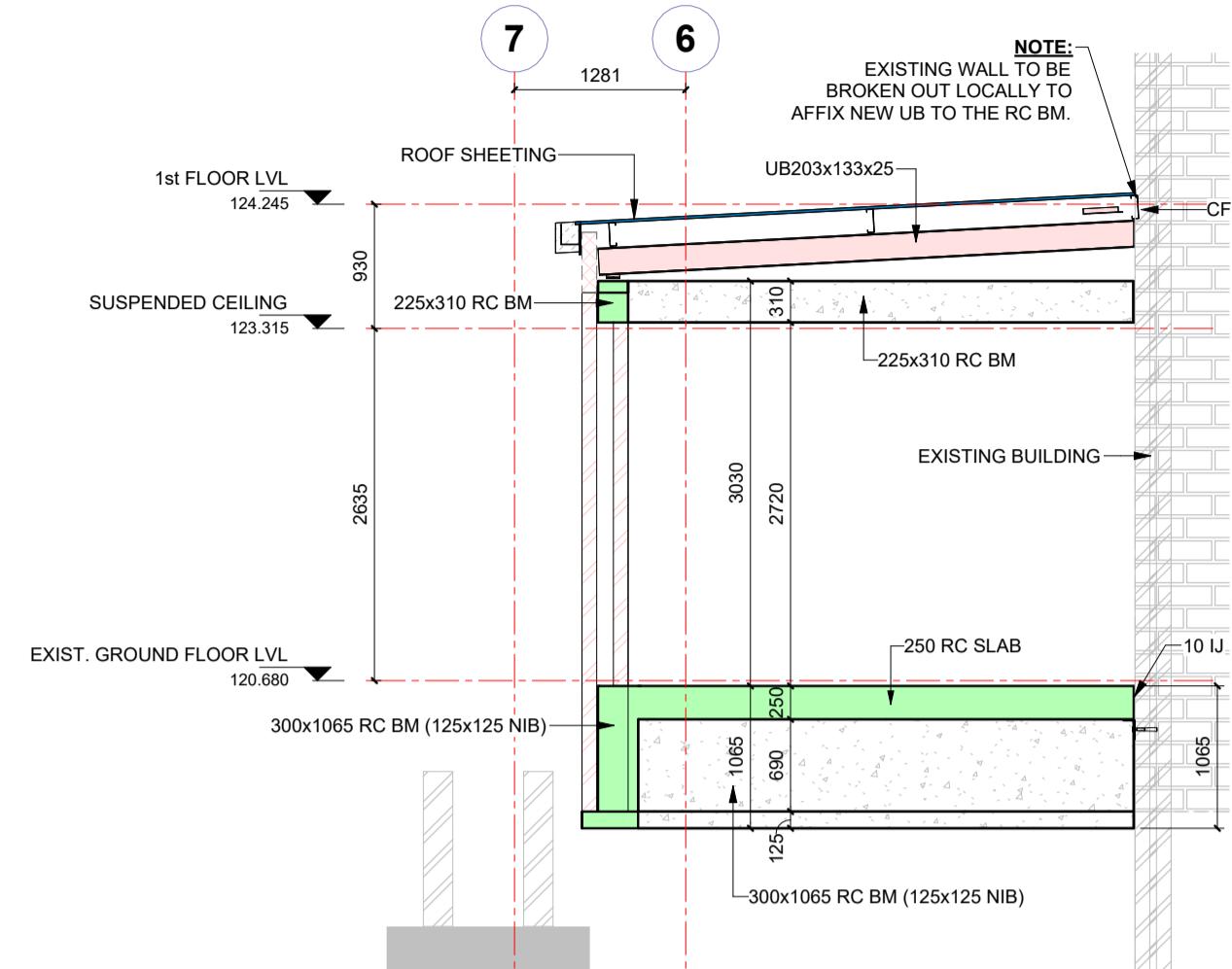
Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE
**UITENHAGE PROVINCIAL HOSPITAL
CASUALTY UNIT - ENTRANCE**

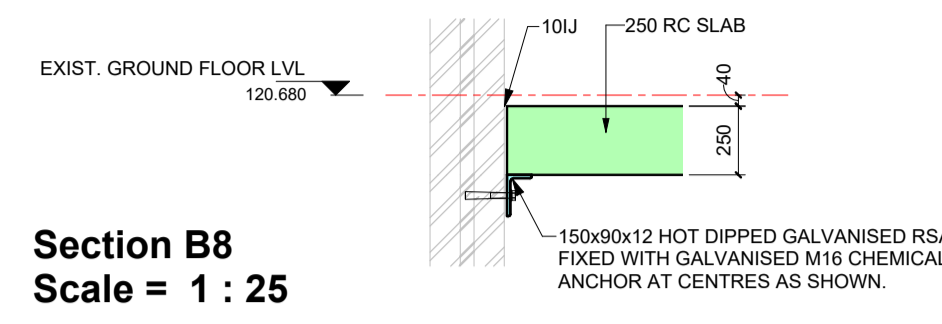
DRAWING TITLE
**STRUCTURAL INSTALLATION
ROOF PLAN**

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DRAWING No.	1746-6-02-S-003		REVISION
			T0

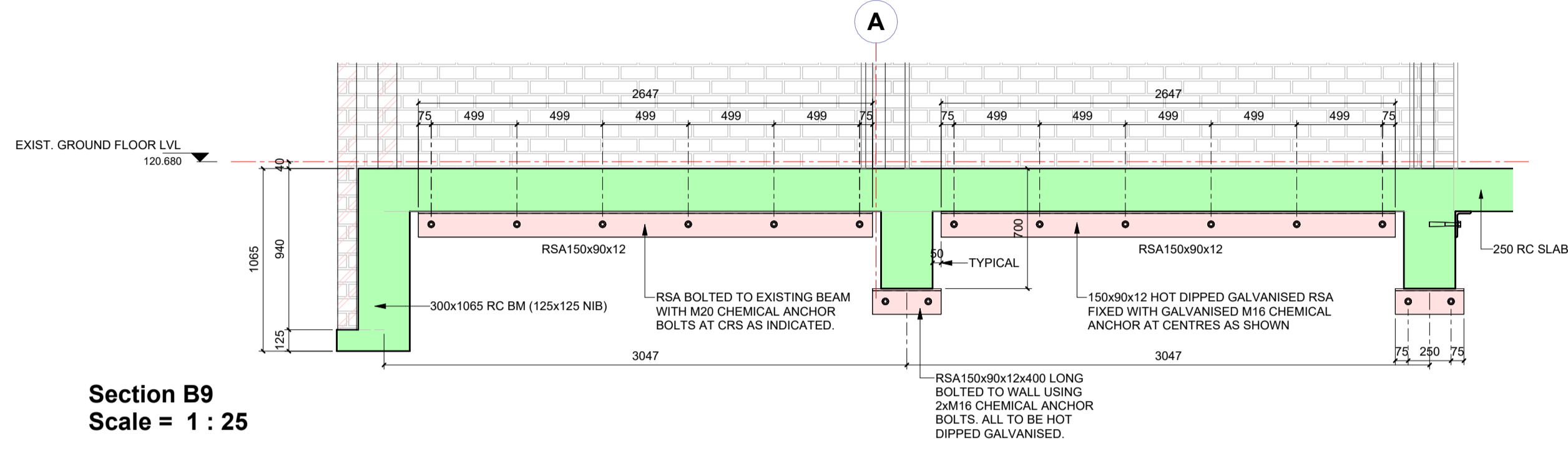
28 Feb 2024 10:32:25
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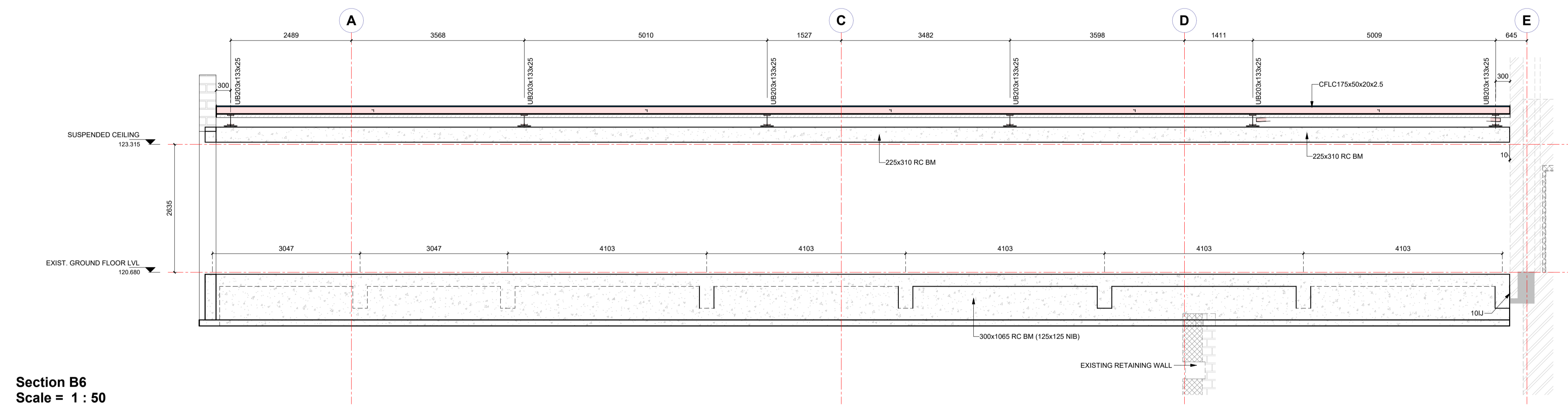
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Scale = 1 : 50



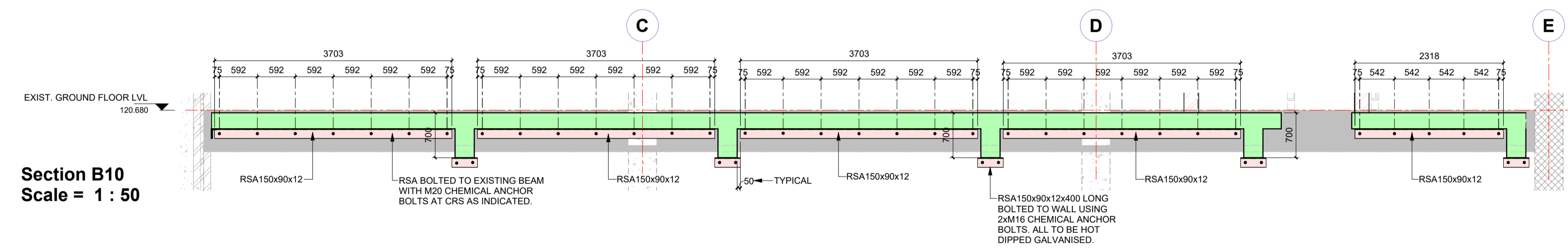
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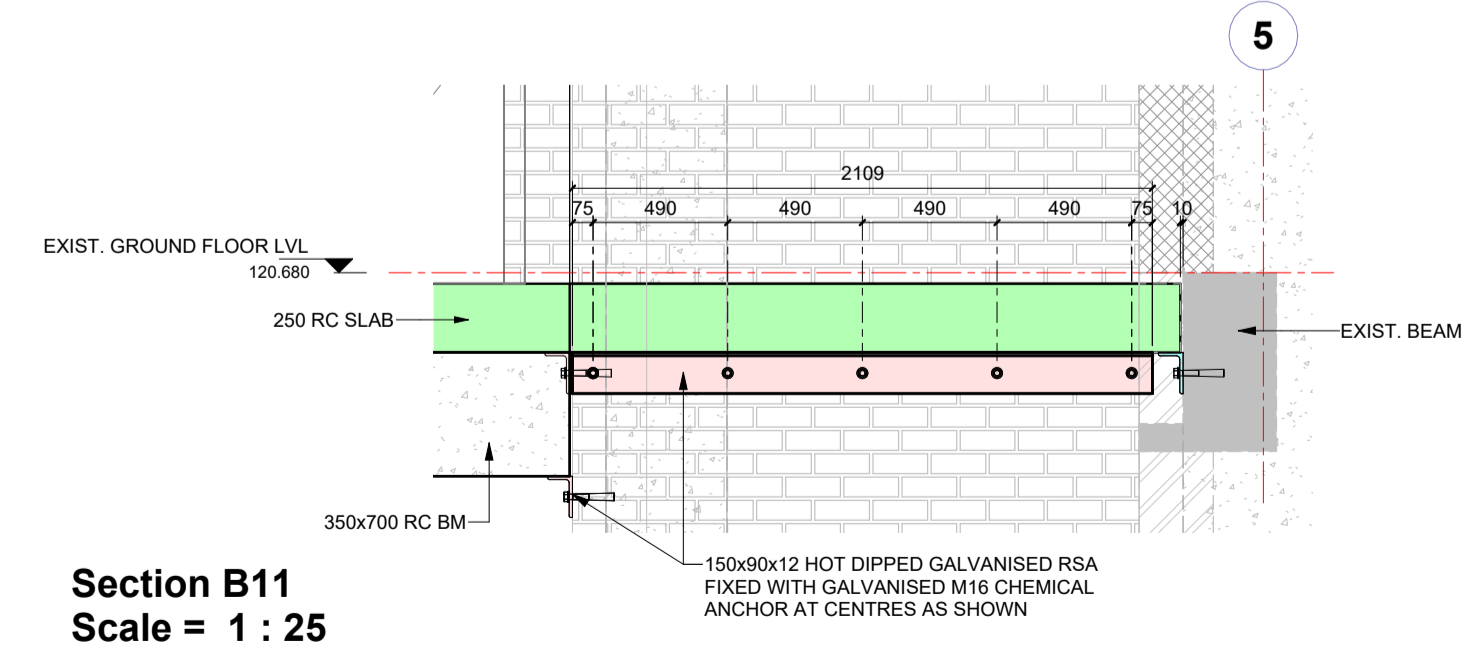
Section B9
Scale = 1 : 25



Section B6
Scale = 1 : 50



Section B10
Scale = 1 : 50



Section B11
Scale = 1 : 25

- General concrete notes:**
- Beam depth includes slab thickness
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 - Roof sheet to architect's details.

- Concrete strength**
- Foundations 20 Mpa cube strength at 28 days
 - Columns 30 Mpa cube strength at 28 days
 - Beams and slabs 30 Mpa cube strength at 28 days

TO	ISSUED FOR TENDER	2023-11-30
PO	PRELIMINARY FOR MEASUREMENT	2023-09-28
NO	APPROVED	AMENDMENTS
		DATE
SURVEYED		DATE
DRAWN	IN	DATE
DESIGNED	L.COETZER	DATE
CHECKED	L.COETZER	DATE
APPROVED		DATE
	PR REGISTRATION NO. 201570266	DATE

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EMAIL: e@lukhozi.co.za
WEB: www.lukhozi.co.za

CLIENT

Province of the **EASTERN CAPE** HEALTH

PROJECT TITLE

UITENHAGE PROVINCIAL HOSPITAL CASUALTY UNIT - ENTRANCE

DRAWING TITLE

STRUCTURAL INSTALLATION SECTIONS - SHEET 2

SCALE	SHEET SET	OF	SHEET SIZE
As indicated	SHEET		A1
DRAWING No.	1746-6-02-S-005		REVISION
			T0

P:\P\1746-6-02-S-005-Uitenhage Provincial Hospital\04 Design & Drawings\07 Structures\01 Working Drawings\01 Casualty Unit - Ward R\VF 23 Feb 2024 10:32:27

20 Nov 2023 22:47:23

GENERAL NOTES

CONCRETE STRENGTH

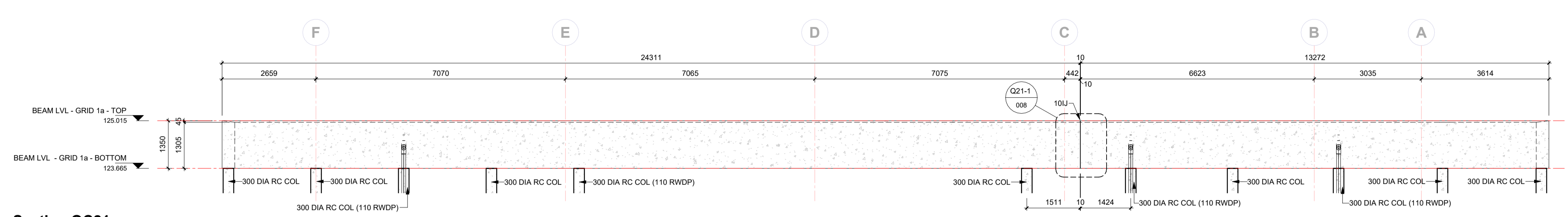
(A) FOUNDATIONS 20 Mpa cube strength at 28 days
 (B) COLUMNS 30 Mpa cube strength at 28 days
 (C) BEAMS AND SLABS 30 Mpa cube strength at 28 days
 (D) ...

CONCRETE COVER TO REINFORCING

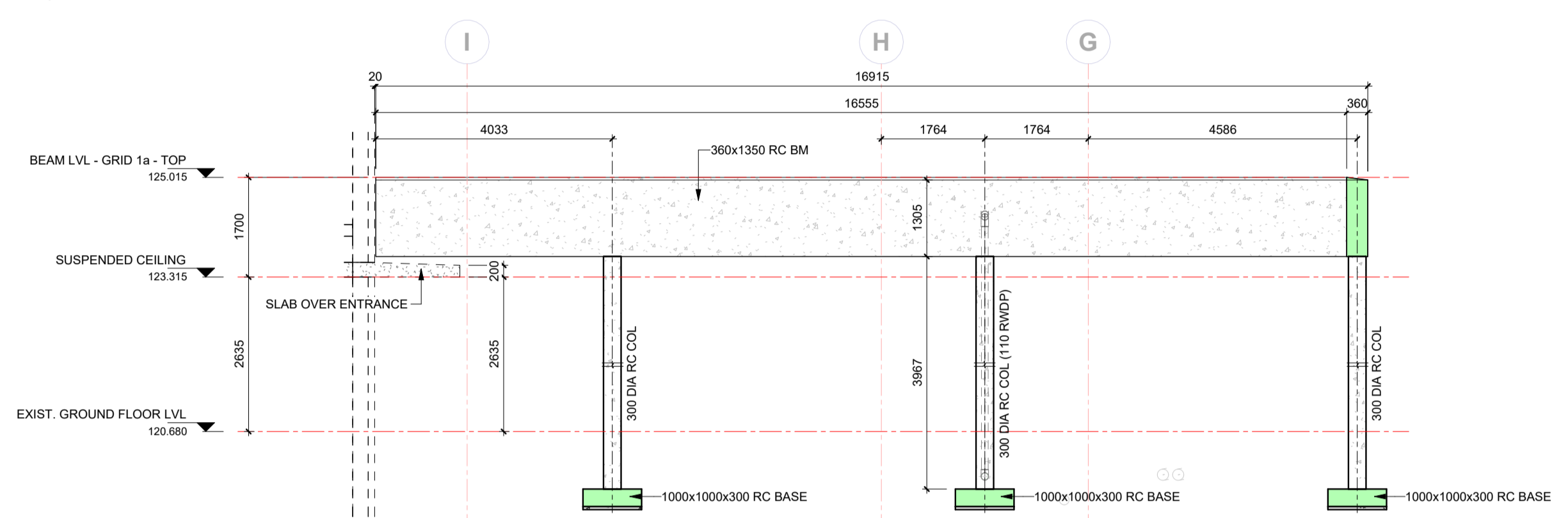
(A) SLAB 15 mm
 (B) BEAMS 30 mm
 (C) COLUMNS 30 mm
 (D) RETAINING WALLS 40 mm
 (E) BASES 50 mm

NOTE:

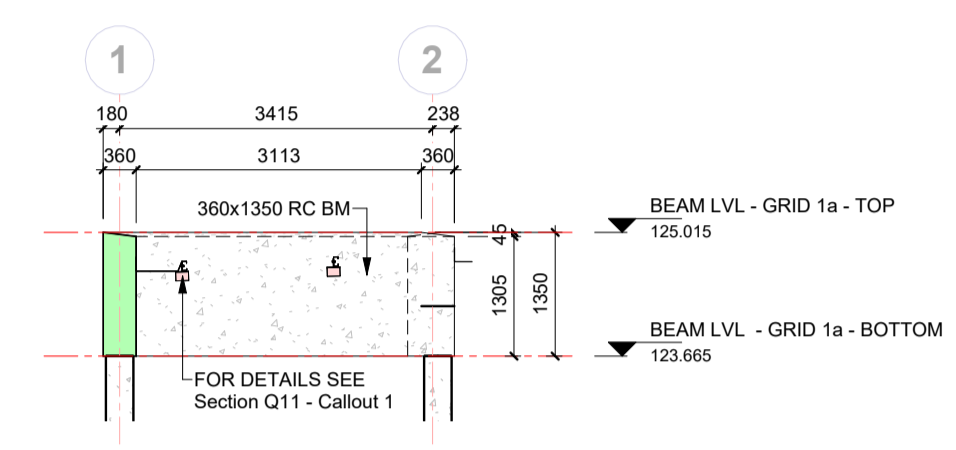
1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER
4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER
5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTIONS
6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER
7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
 (A) SAFE GROUND PRESSURE 200 kN/m²
 (B) LIVE LOAD ON SLABS 5.0 kN/m²
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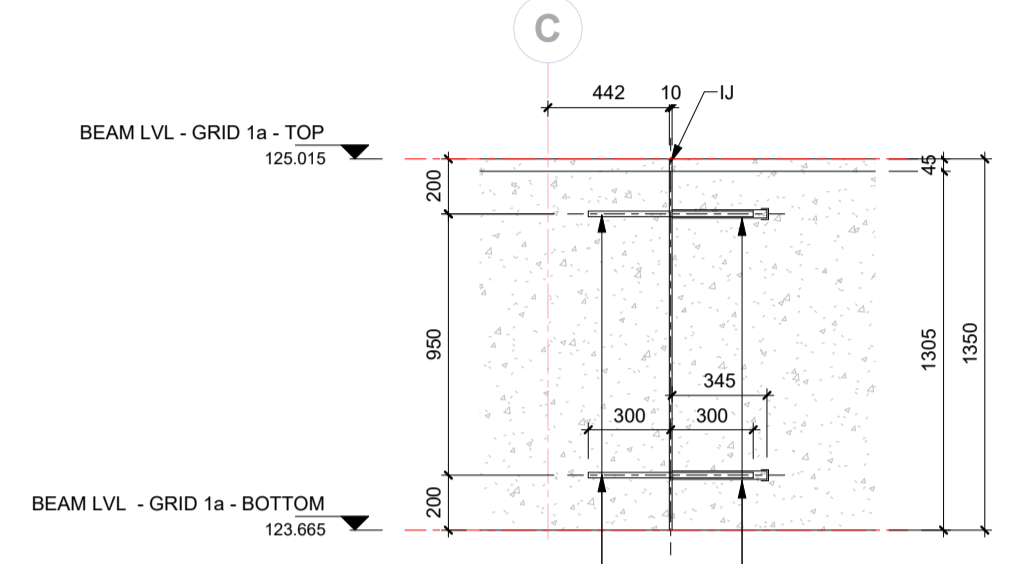
Section QC21
1 : 75



Section QC22
1 : 75



Section QC20
1 : 75



600 LONG R20 DOWEL BAR
 2 DOWEL BARS TOP AND BOTTOM

METHOD:
 CAST INTO CONCRETE R20 MS BAR (300mm).
 INSERT CONDUIT PIPE OVER THE CAST-IN DOWELS AND MAKE SURE CONDUIT CAN MOVE FREELY OVER DOWEL BARS.
 CAST 2nd PORTION OF BEAM

Section QC21 - Callout 1
1 : 25

P1	FOR INTERNAL CHECKING		2023-11-08
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			
	PR REGISTRATION NO.	201570266	DATE

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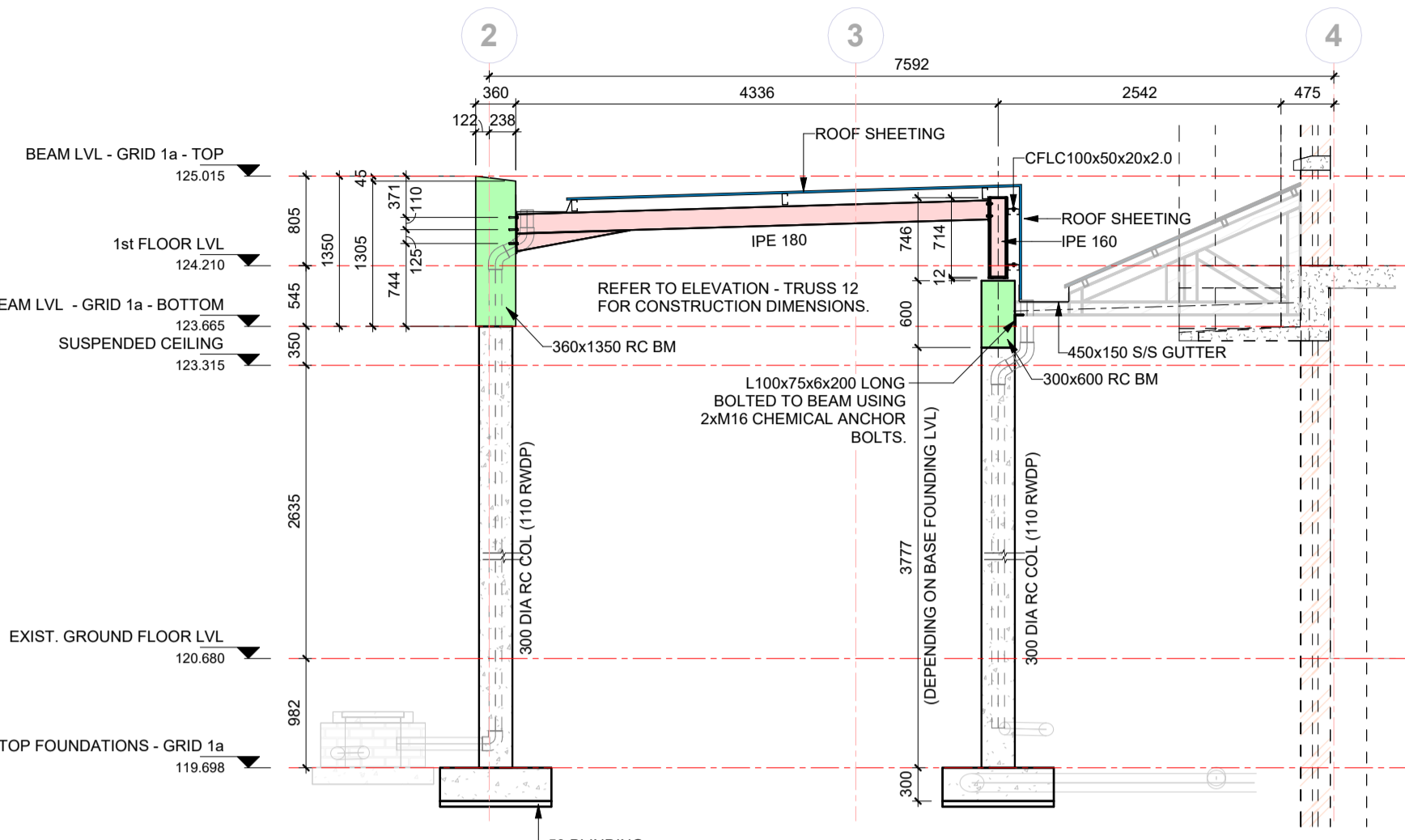
PROJECT TITLE

**UITENHAGE PROVINCIAL
HOSPITAL - NELSON MANDELA**

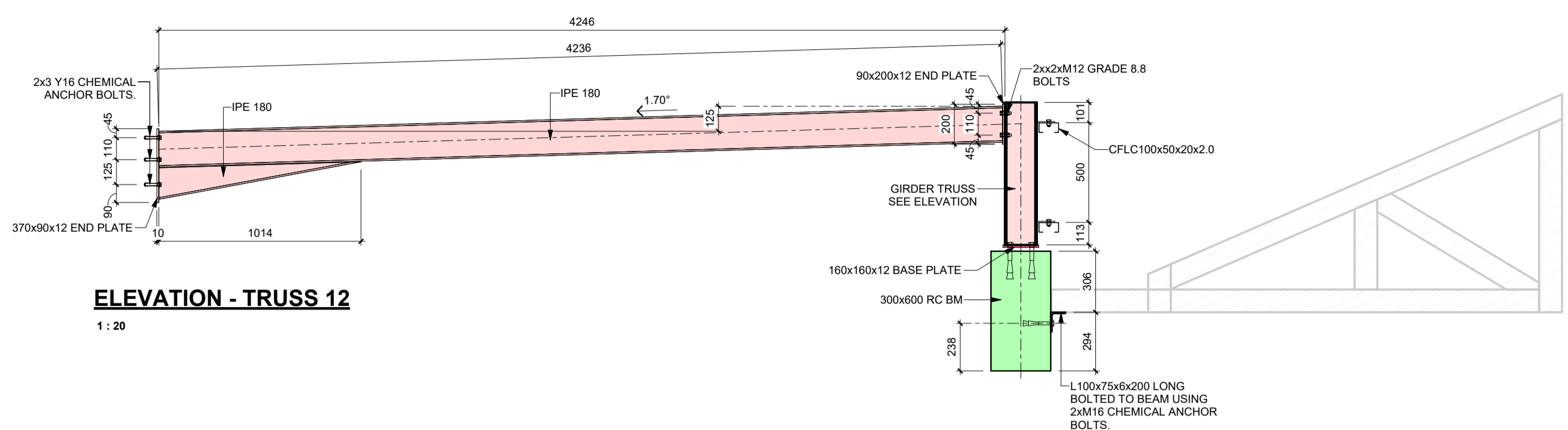
DRAWING TITLE

**STRUCTURAL INSTALLATION
TRAUMA CENTRE ENTRANCE - BEAM
OVER ENTRANCE**

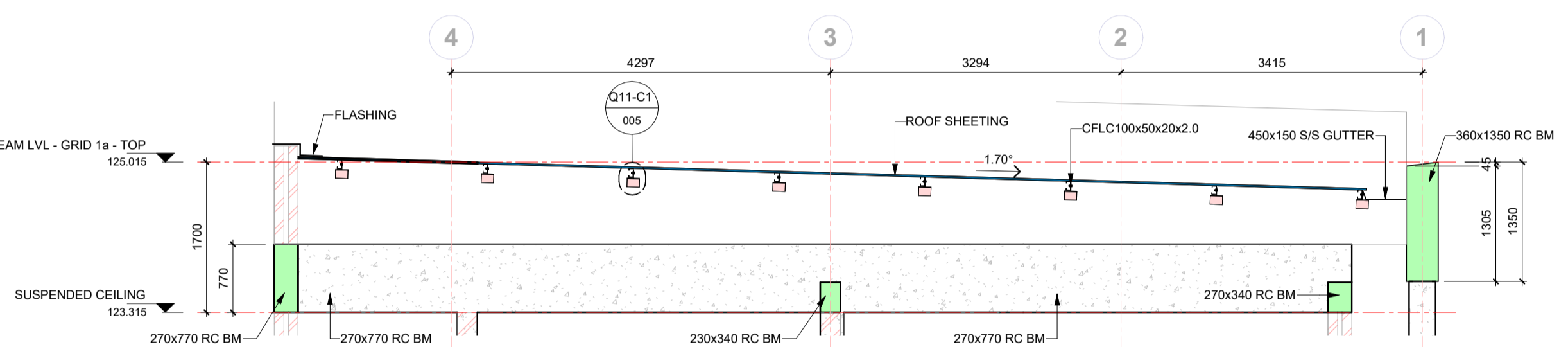
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As indicated	SHEET OF	A1
DRAWING No.	1746-6-02-S-008	REVISION
		P1



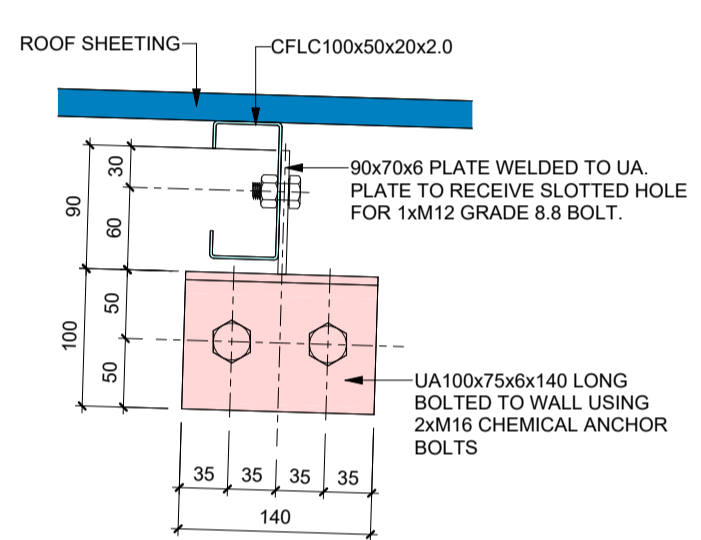
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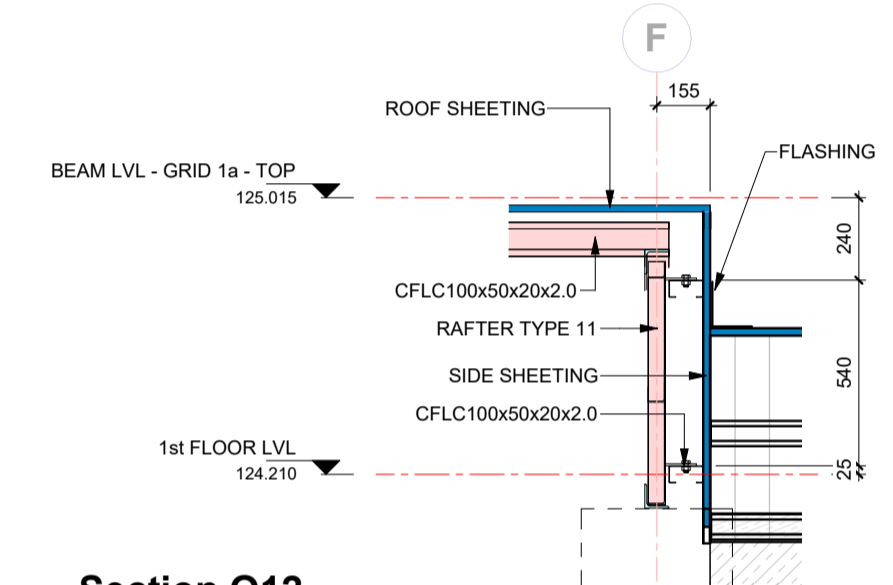
ELEVATION - TRUSS 12
1:20



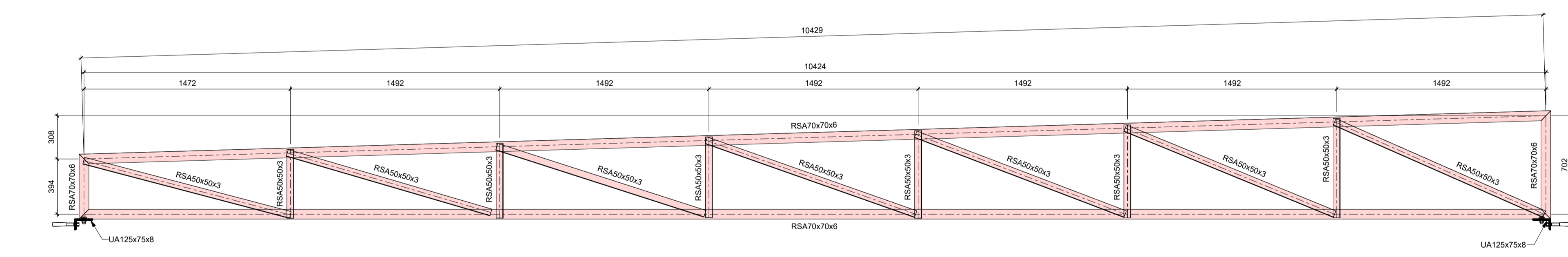
Section Q11
1:50



Section Q11 - Callout 1
1:5



Section Q12
1:20



ELEVATION - TRUSS 11
1:20

- GENERAL NOTES**
1. ALL STEEL TO BE GRADE S355JR
 2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS
 3. ALL SPICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER
 4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE
 5. STRUCTURE TO BE STABILISED BY TEMPORARY BRACING AND PROPS DURING ERECTION
 6. NO CLADDING TO BE FIXED UNTIL ALL BRACING HAS BEEN INSTALLED AND STRUCTURE PROPERLY SECURED
 7. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANISED
 8. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC
 9. ALL STEELWORK EXPOSED TO THE ELEMENTS TO BE SHOT BLASTED AND THEREAFTER TO RECEIVE: EPOXY ZINC RICH PRIMER
 10. EPOXY MICACEOUS IRON OXIDE BARRIER POLYURETHANE COLOUR TO BE APPROVED BY THE ENGINEER
 11. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE
 12. FIGURED DIMENSIONS ONLY TO BE USED. DRAWING IS NOT TO BE SCALED
 13. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT
 14. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEER'S CONCRETE DRAWINGS AS WELL AS THE ARCHITECT'S DRAWINGS
 15. ALL BOLTS ARE M16 GRADE 8.8 UNLESS STATED OTHERWISE
 16. ALL WELDS ARE 6MM FILLET WELDS UNLESS STATED OTHERWISE
 17. BR ROOF SHEETS TO BE 0.6MM THICK (TO CLIENT'S SPEC)
 18. FLASHING TO BE 0.8MM THICK (TO CLIENT'S SPEC)

NO	APPROVED	AMENDMENTS	DATE
P1		FOR INTERNAL CHECKING	2023-11-08
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			
PR REGISTRATION NO.		201570266	DATE

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Province of the EASTERN CAPE HEALTH


PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE
STRUCTURAL INSTALLATION

TRAUMA CENTRE ENTRANCE - ROOF SECTIONS - SHEET 3

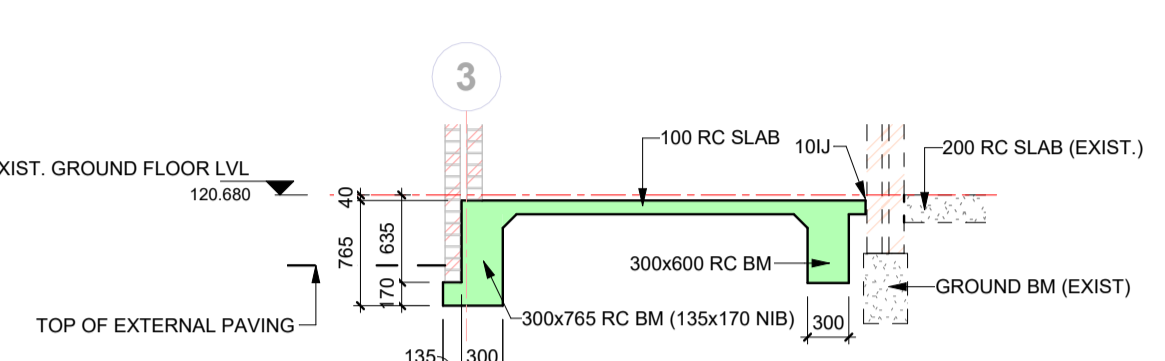
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As indicated	SHEET OF	A1

DRAWING No.	REVISION
1746-6-02-S-005	P1

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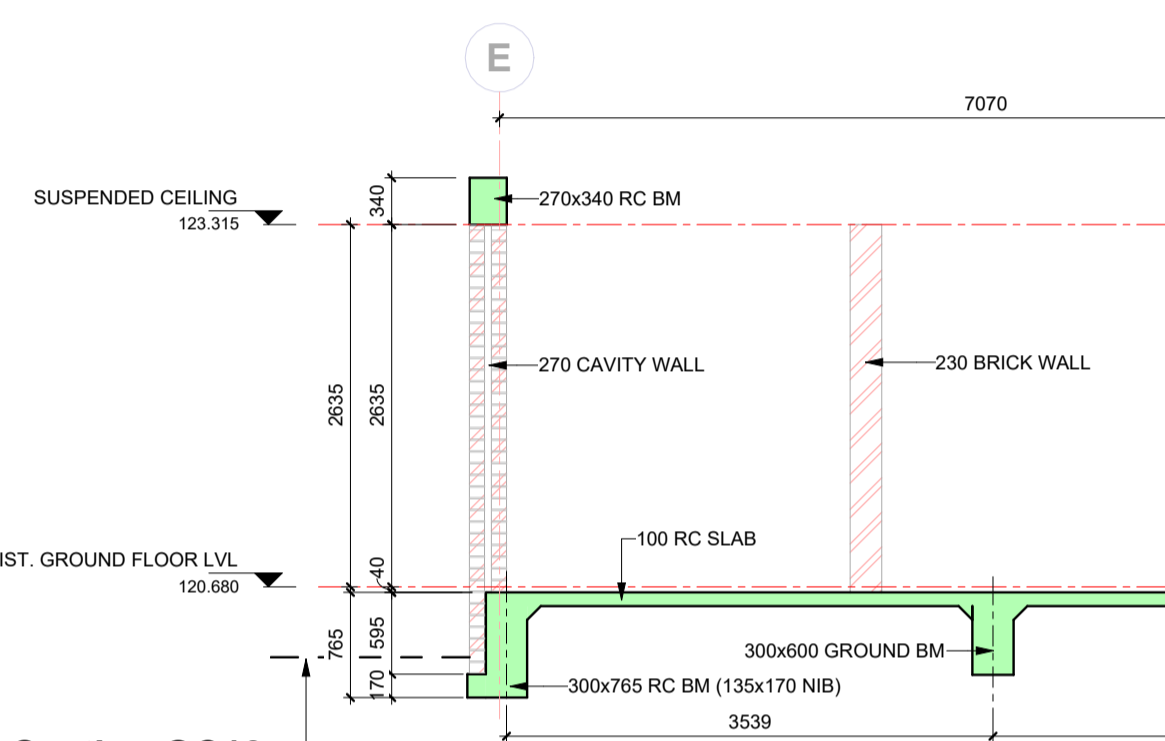
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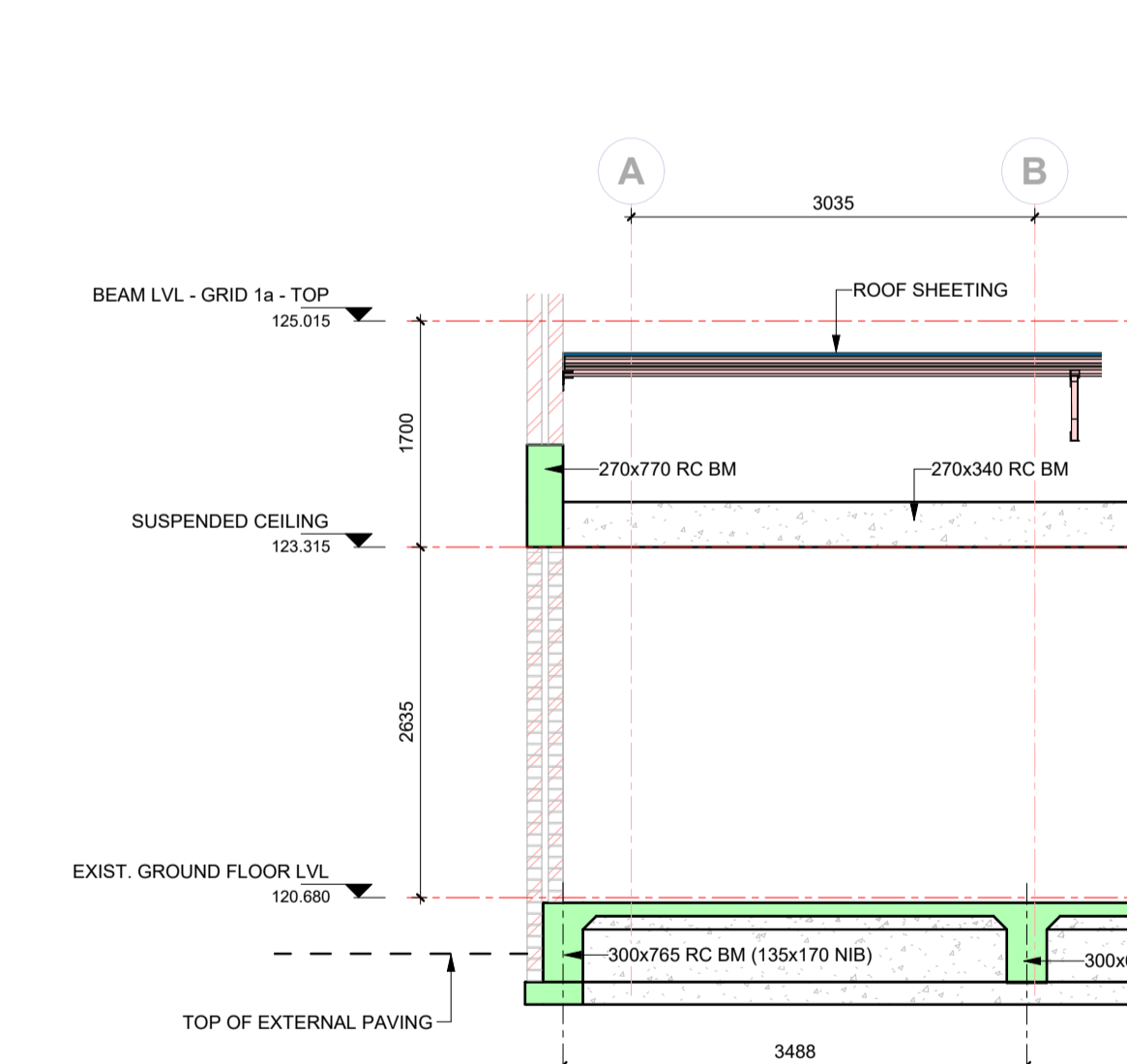
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Section QC13

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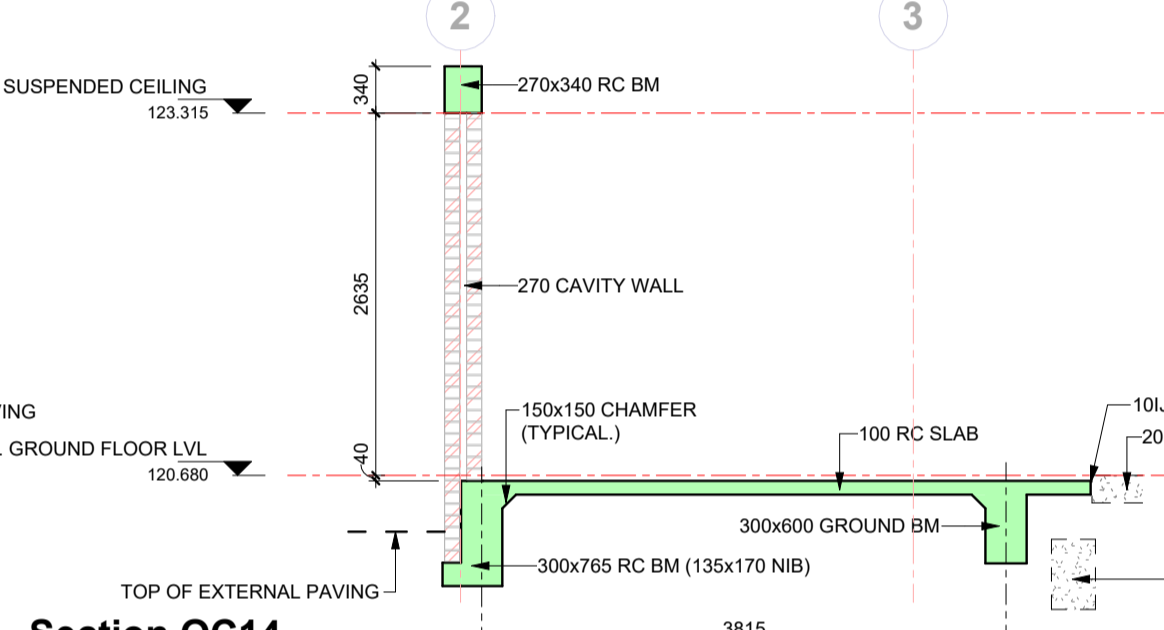
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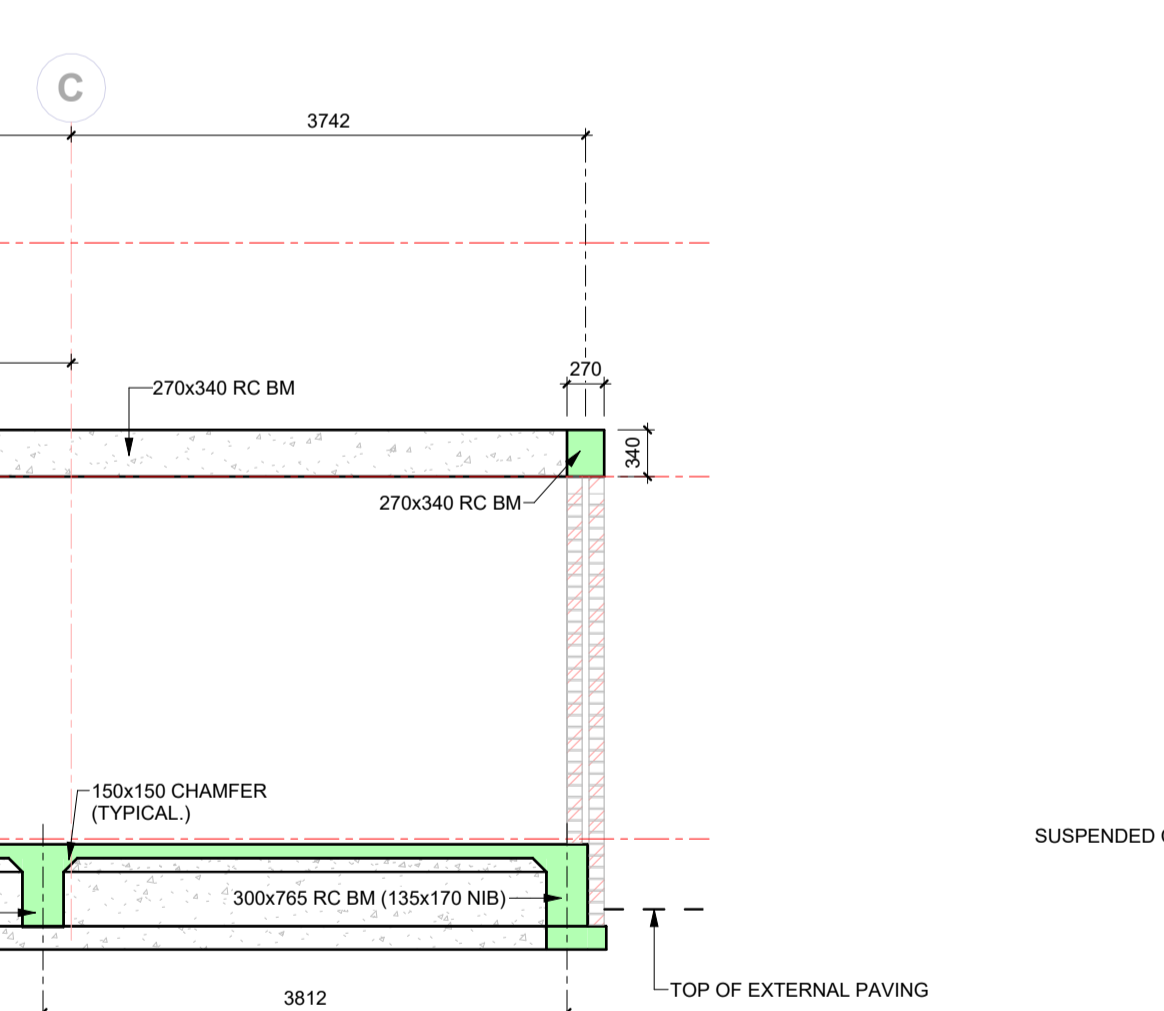
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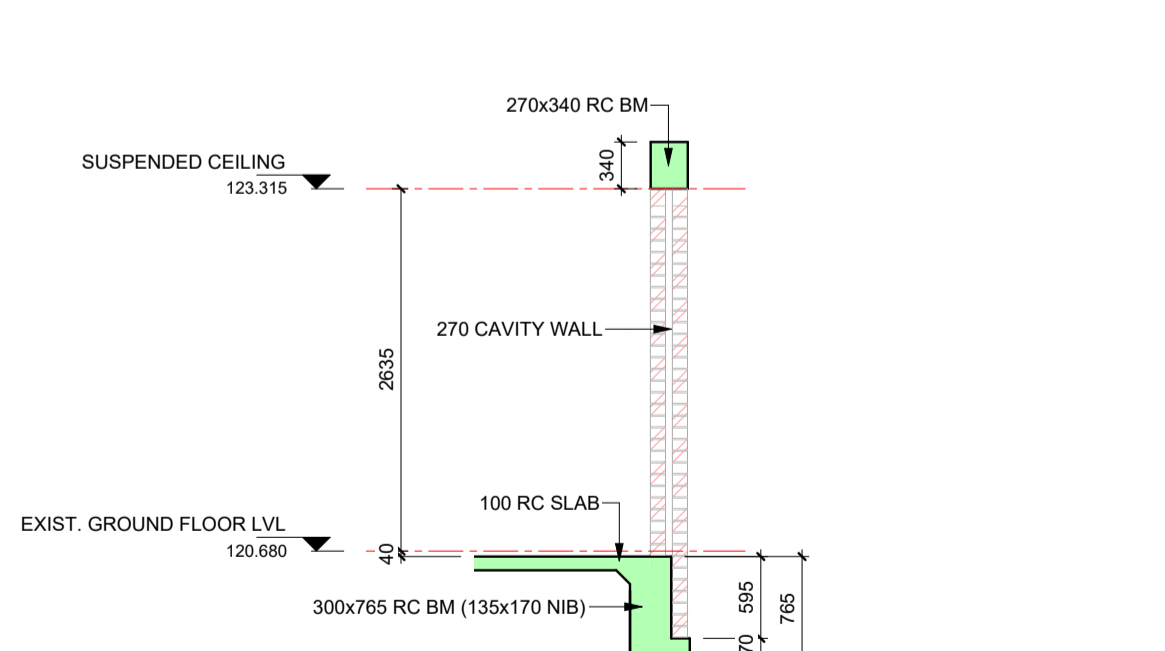
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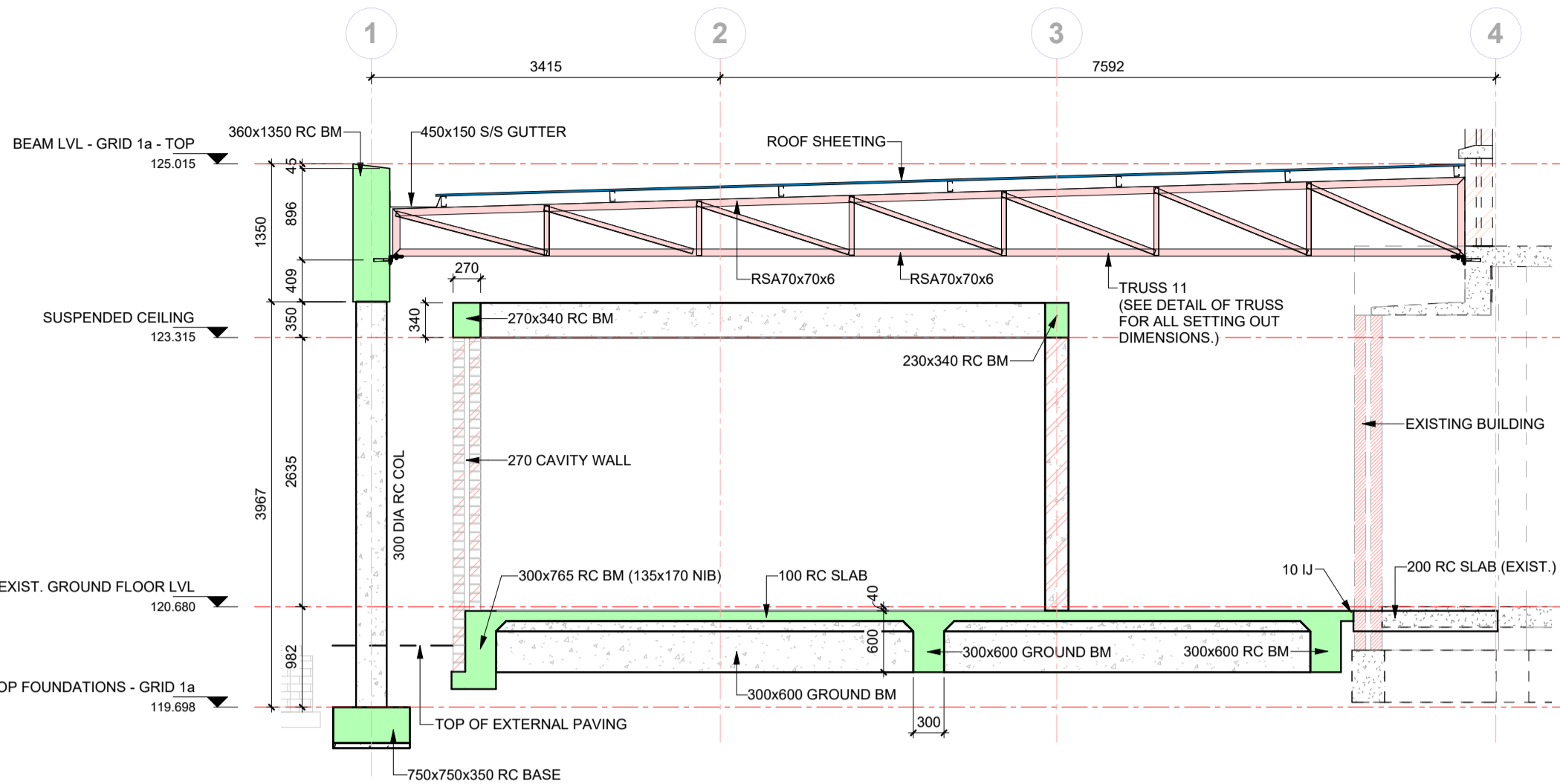
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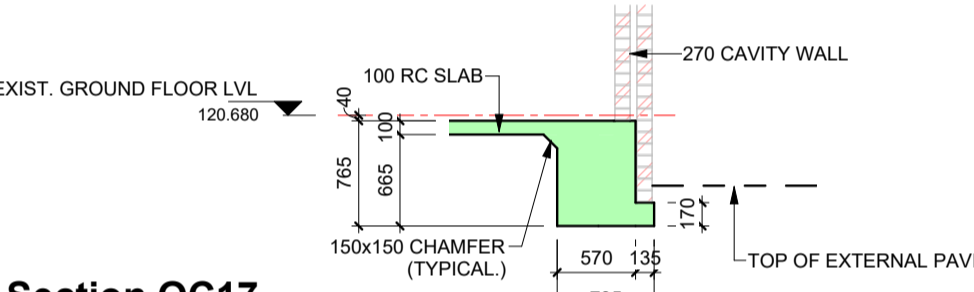
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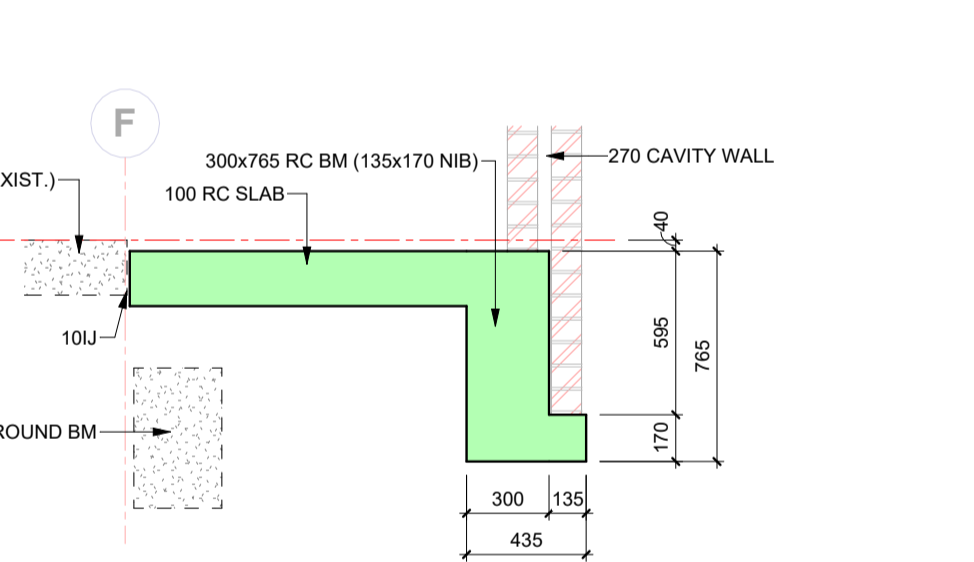
Section QC16

1 : 50



Section QC17

1 : 50



GENERAL NOTES

- CONCRETE STRENGTH**
- (A) FOUNDATIONS 20 Mpa cube strength at 28 days
 - (B) COLUMNS 30 Mpa cube strength at 28 days
 - (C) BEAMS AND SLABS 30 Mpa cube strength at 28 days
 - (D) ...
- CONCRETE COVER TO REINFORCING**
- (A) SLAB 15 mm
 - (B) BEAMS 30 mm
 - (C) COLUMNS 30 mm
 - (D) RETAINING WALLS 40 mm
 - (E) BASES 50 mm
- NOTE**
1. BEAM DEPTH INCLUDES SLAB THICKNESS
 2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
 3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER
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 - (B) LIVE LOAD ON SLAB 5.0 kN/m²
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 11. THIS DRAWING IS NOT TO BE SCALED.

NO	APPROVED	AMENDMENTS	DATE
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DESIGNED			
CHECKED			
APPROVED			
PR REGISTRATION NO. 201570266		DATE	

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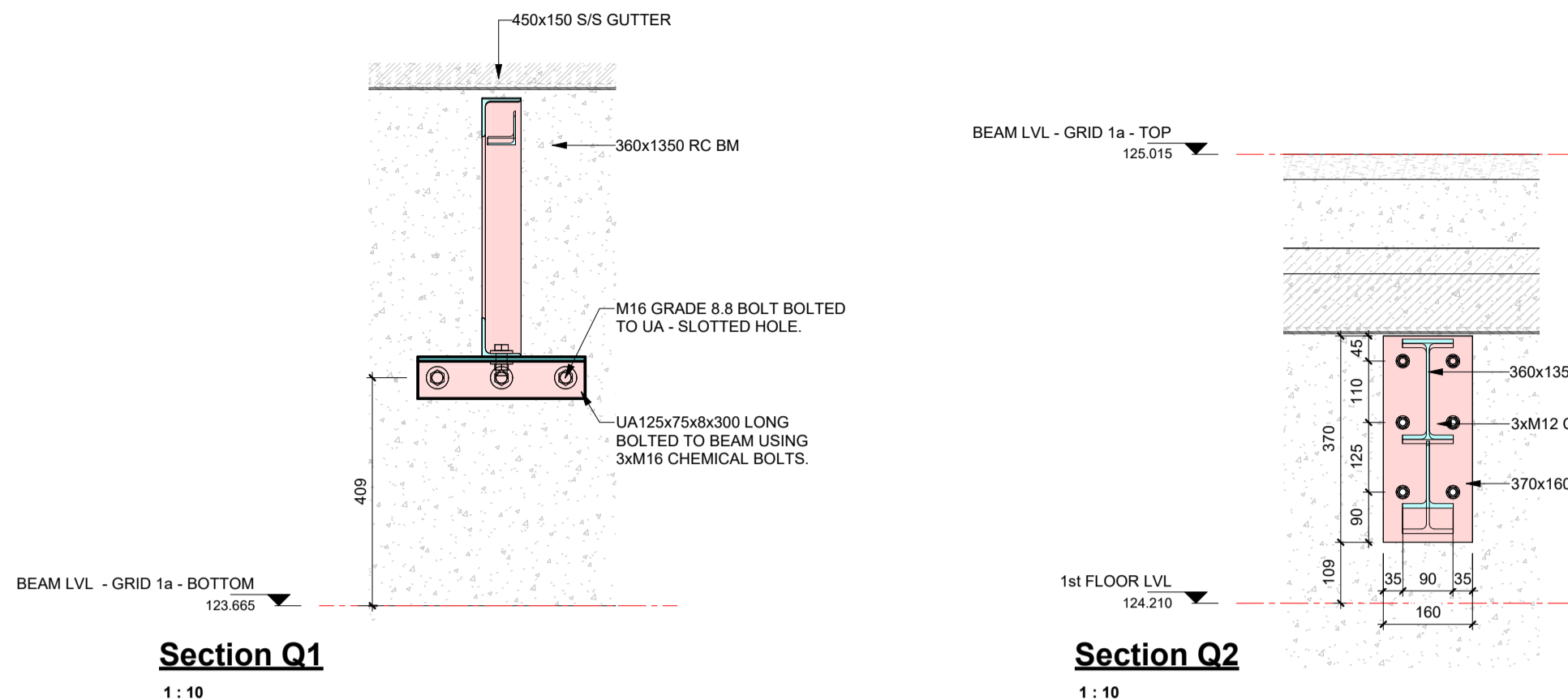
PROJECT TITLE

UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE

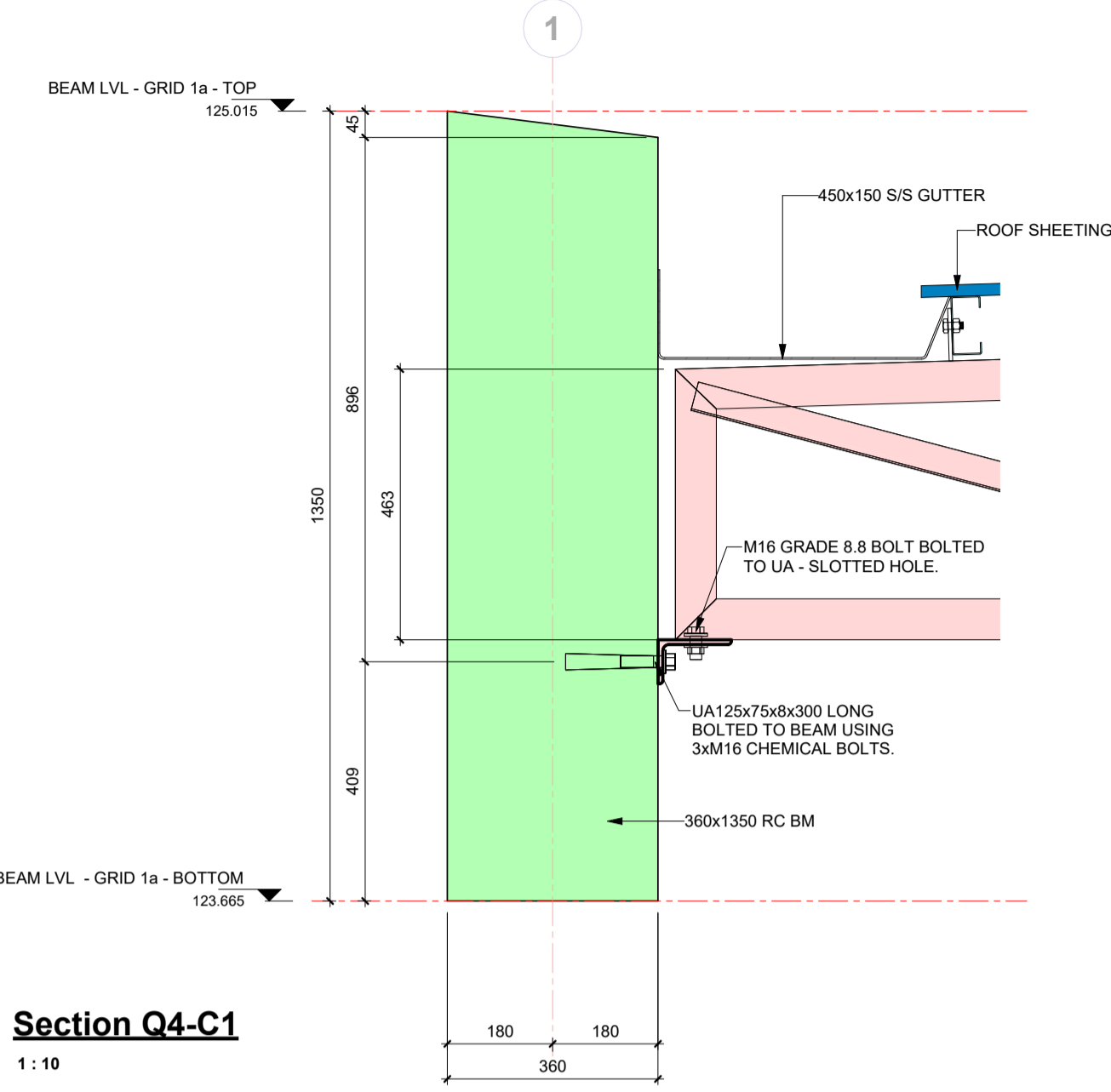
STRUCTURAL INSTALLATION TRAUMA CENTRE ENTRANCE GROUND FLOOR - SECTIONS - SHEET 1

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As indicated	SHEET OF	A1
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1746-6-02-S-006	P1	

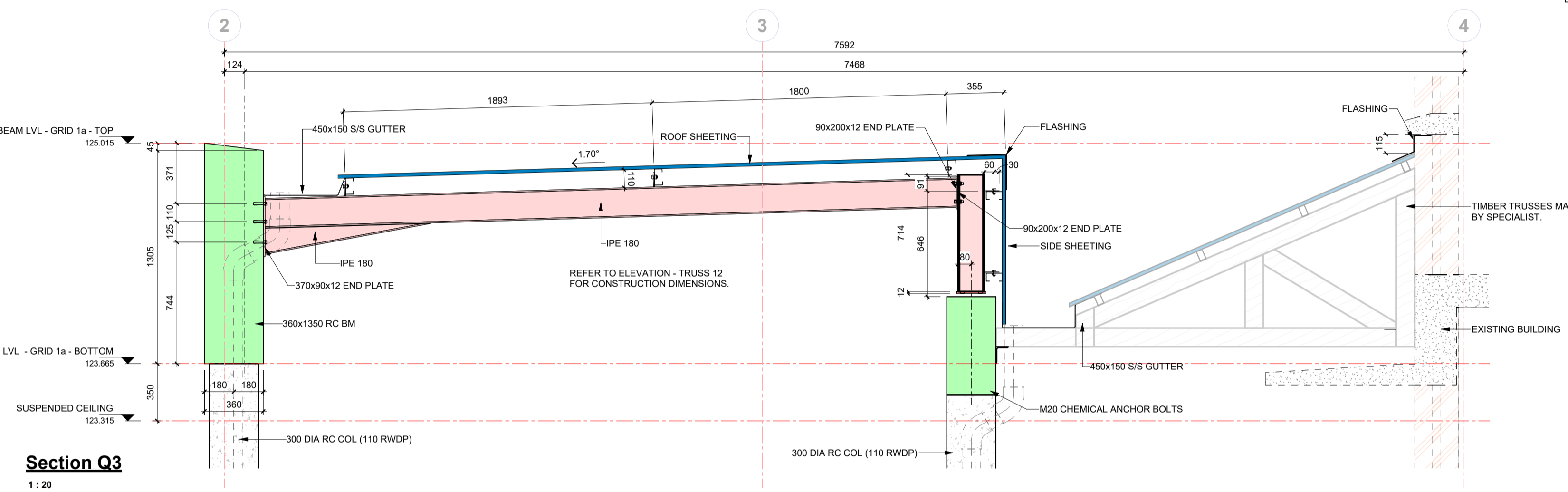


Section Q1
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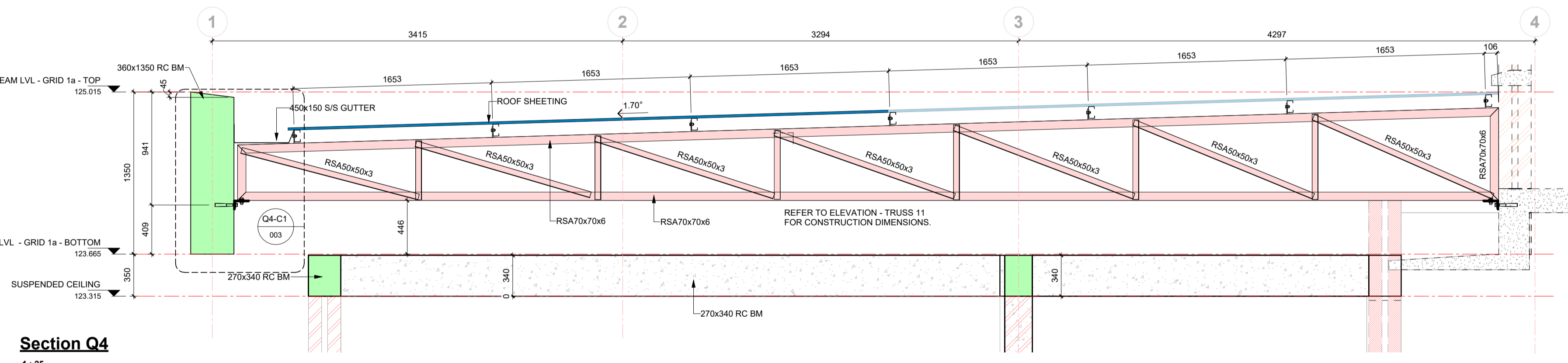
Section Q2
1 : 10



Section Q4-C1
1 : 10



Section Q3
1 : 20



Section Q4
1 : 25

GENERAL NOTES

CONCRETE STRENGTH

(A) FOUNDATIONS 20 Mpa cube strength at 28 days
 (B) COLUMNS 30 Mpa cube strength at 28 days
 (C) BEAMS AND SLABS 30 Mpa cube strength at 28 days
 (D) ...

CONCRETE COVER TO REINFORCING

(A) SLAB 15 mm
 (B) BEAMS 30 mm
 (C) COLUMNS 40 mm
 (D) RETAINING WALLS 40 mm
 (E) BASES 50 mm

NOTE:

- BEAM DEPTH INCLUDES SLAB THICKNESS
- CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
- STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER
- NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER
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P1		FOR INTERNAL CHECKING	2023-11-08

PR REGISTRATION NO. 201570266 DATE

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CLIENT

Province of the EASTERN CAPE HEALTH

PROJECT TITLE

UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE

STRUCTURAL INSTALLATION TRAUMA CENTRE ENTRANCE - ROOF SECTIONS - SHEET 1

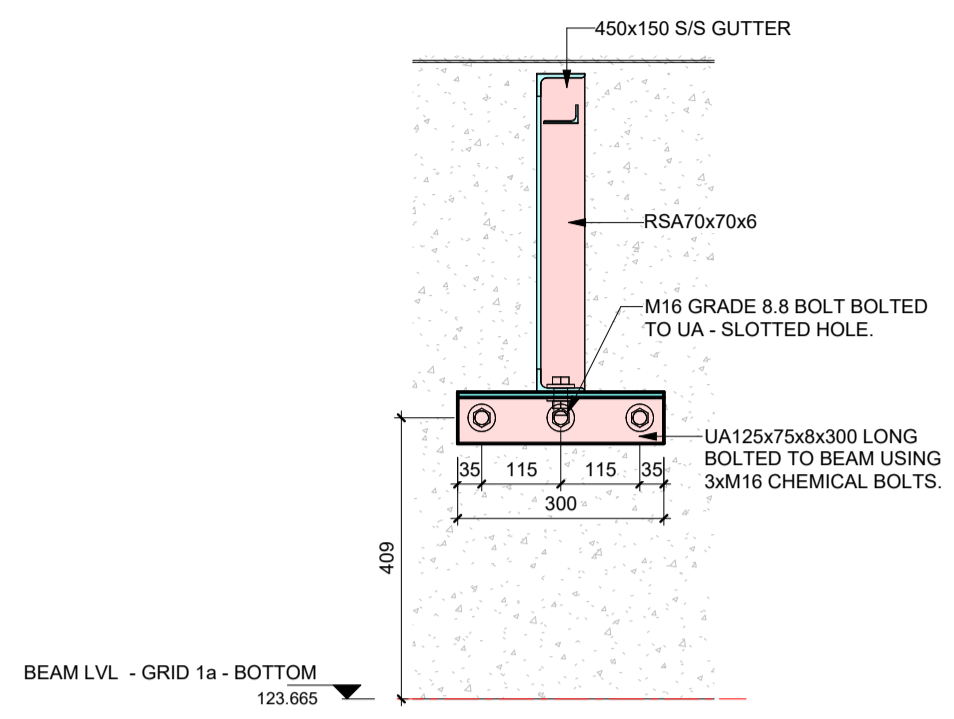
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DRAWING No.	REVISION	
1746-6-02-S-003	P1	

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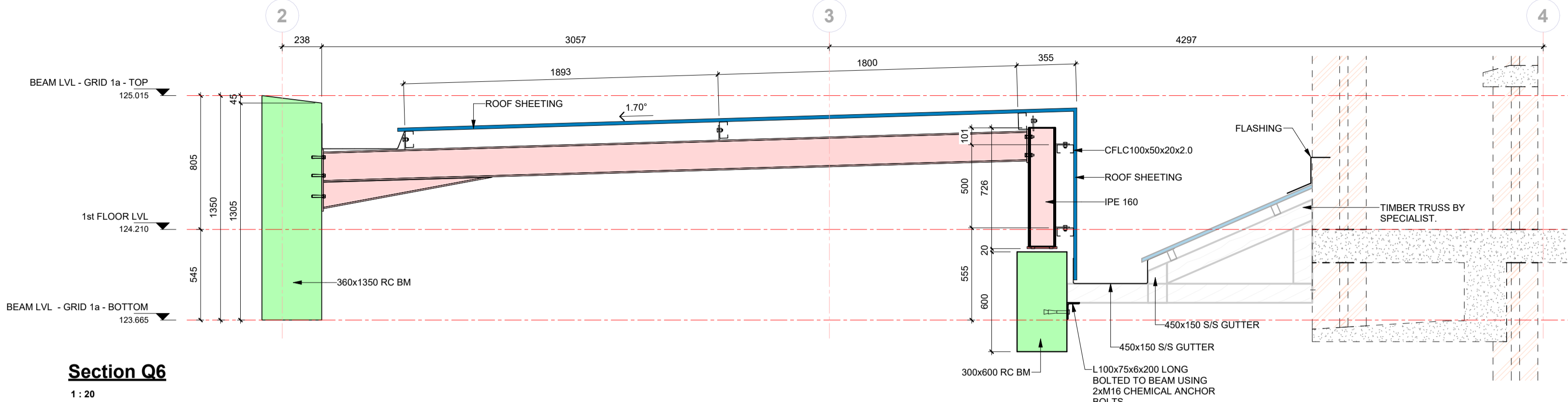
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GENERAL NOTES

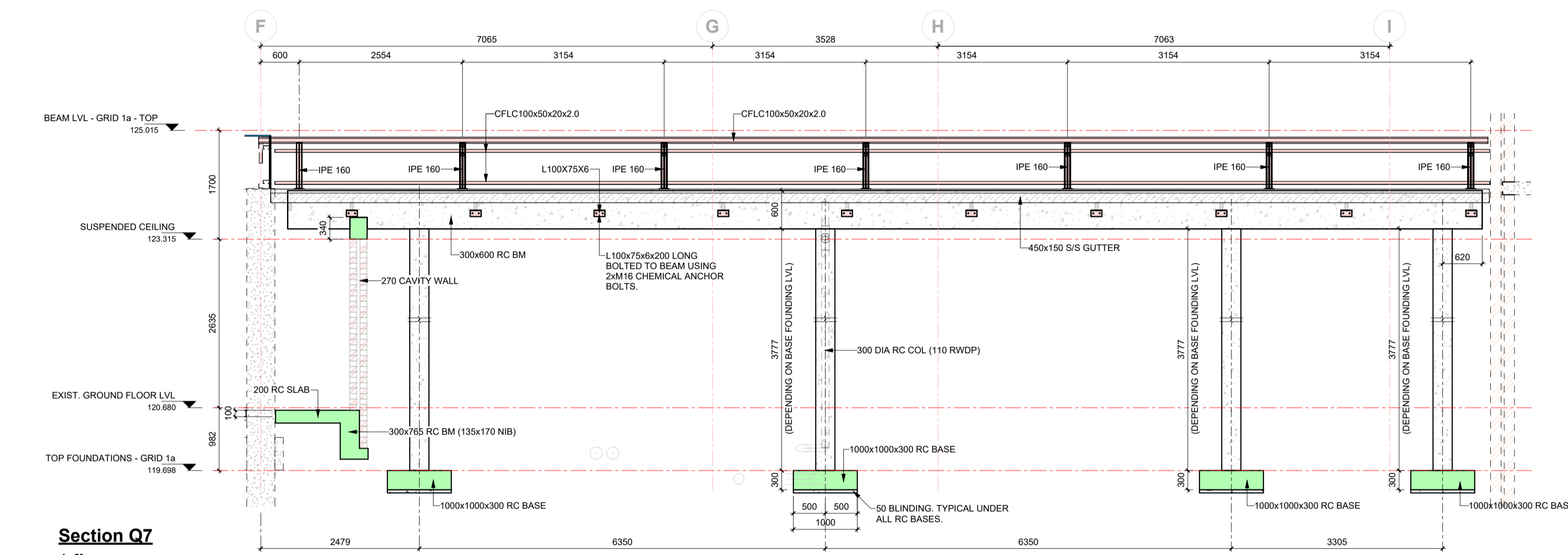
1. ALL STEEL TO BE GRADE S355JR
2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS
3. ALL SPICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER
4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE
5. STRUCTURE TO BE STABILISED BY TEMPORARY BRACING AND PROPS DURING ERECTION
6. NO CLADDING TO BE FIXED UNTIL ALL BRACING HAS BEEN INSTALLED AND STRUCTURE PROPERLY SECURED
7. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANISED
8. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, OIL, ETC
9. ALL STEELWORK EXPOSED TO THE ELEMENTS TO BE SHOT BLASTED AND THEREAFTER TO RECEIVE:
EPOXY ZINC RICH PRIMER
EPOXY MICACEOUS IRON OXIDE BARRIER
POLYURETHANE COLOUR TO BE APPROVED BY THE ENGINEER
10. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE
11. FIGURED DIMENSIONS ONLY TO BE USED. DRAWING IS NOT TO BE SCALED.
12. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT
13. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEER'S CONCRETE DRAWINGS AS WELL AS THE ARCHITECT'S DRAWINGS
14. ALL BOLTS ARE M16 GRADE 8.8 UNLESS STATED OTHERWISE
15. ALL WELDS ARE 6MM FILLET WELDS UNLESS STATED OTHERWISE
16. BR ROOF SHEETS TO BE 0.9MM THICK (TO CLIENT'S SPEC)
FLASHING TO BE 0.8MM THICK (TO CLIENT'S SPEC)



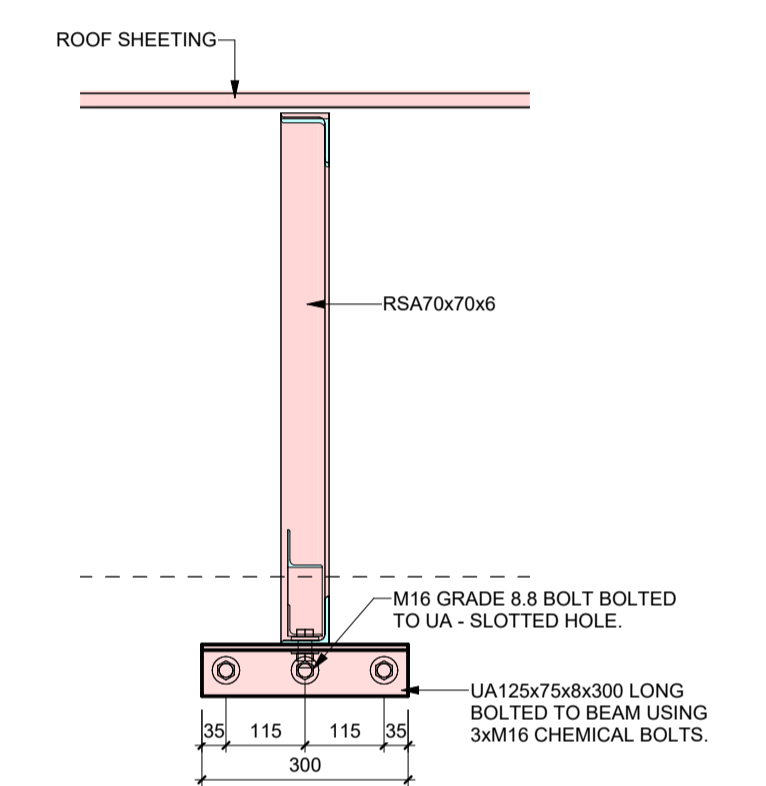
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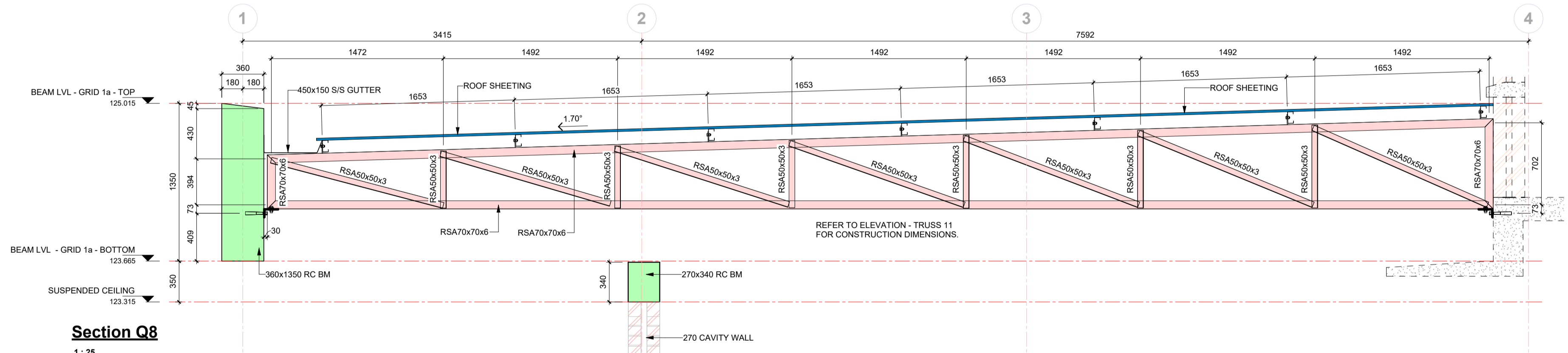
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1:20



Section Q7
1:50



Section Q9
1:10



Section Q8
1:25

P1 FOR INTERNAL CHECKING 2023-11-08			
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			
PR REGISTRATION NO. 201570266		DATE	

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CLIENT

Province of the EASTERN CAPE HEALTH

PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE
STRUCTURAL INSTALLATION

TRAUMA CENTRE ENTRANCE - ROOF SECTIONS - SHEET 2

SCALE	SHEET SET	SHEET SIZE
As indicated	SHEET OF	A1
DRAWING No.	1746-6-02-S-004	REVISION
		P1



GROUND FLOOR LAYOUT - PART 2
Scale = 1 : 50

KEY PLAN - PART 2.
Scale = 1 : 500

GENERAL NOTES

CONCRETE STRENGTH
 (A) FOUNDATIONS: 30 Mpa cube strength at 28 days
 (B) COLUMNS: 30 Mpa cube strength at 28 days
 (C) BEAMS AND SLABS: 30 Mpa cube strength at 28 days
 (D)

CONCRETE COVER TO REINFORCING
 (A) SLAB: 25 mm
 (B) BEAMS: 30 mm
 (C) COLUMNS: 30 mm
 (D) RETAINING WALLS: 40 mm
 (E) BASES: 50 mm

NOTE:
 1. BEAM DEPTH INCLUDES SLAB THICKNESS
 2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
 3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER
 4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER
 5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTIONS
 6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER
 7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
 (A) SAFE GROUND PRESSURE: 200 kN/m²
 (B) LIVE LOAD ON SLAB: 5.0 kN/m²
 8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS
 9. THE DESIGN ON THIS DRAWING REMAINS THE PROPERTY OF LUKHOZI CONSULTING ENGINEERS. COPYRIGHT IS RESERVED.
 10. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND. ANY DISCREPANCY MUST IMMEDIATELY BE REPORTED TO THE ENGINEER.
 11. THIS DRAWING IS NOT TO BE SCALED.

P2	LC	ISSUED FOR INFORMATION	20-11-2023
P1	LC	ISSUED FOR INFORMATION	17-11-2023
P0	LC	ISSUED FOR INFORMATION	03-10-2023

NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN			
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APPROVED			

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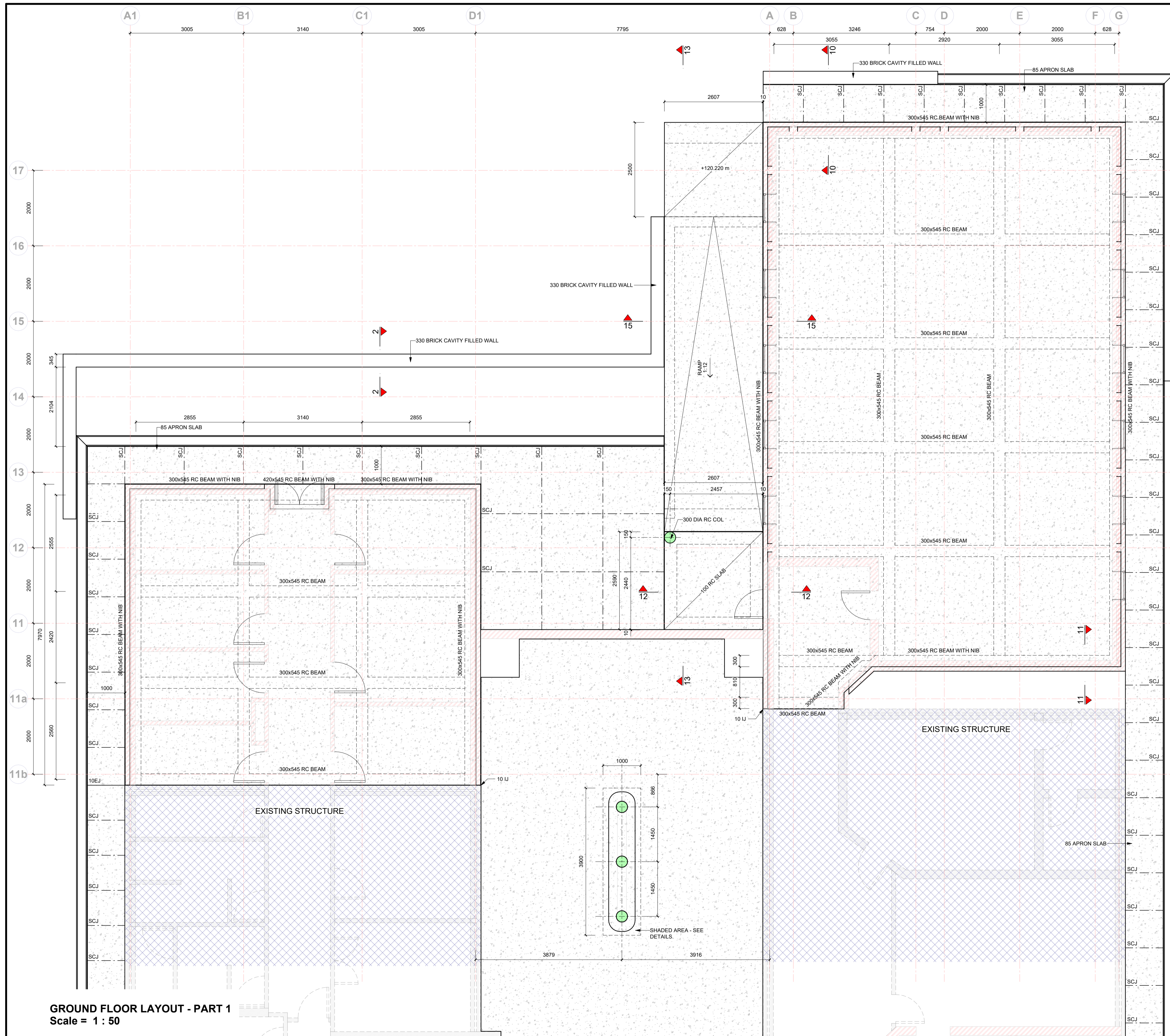
PROJECT TITLE
 UITENHAGE PROVINCIAL
 HOSPITAL - NELSON MANDELA

DRAWING TITLE
 STRUCTURAL INSTALLATION
 72 HOUR ASSESSMENT FACILITY
 GROUND FLOOR LAYOUT - PART 2

SCALE	SHEET SET	SHEET SIZE
As indicated	SHEET 2 OF 2	A1

DRAWING No.	REVISION
1746-6-02-S-S-001-2	P2

P:\P1746-6-02-S-S-001-2\Structural\01 Working Drawings\03 72 Hour Assessment Facility\1746-6-S-72 Hour Assessment Facility.dwg



GROUND FLOOR LAYOUT - PART 1
Scale = 1 : 50

KEY PLAN - PART 1.
Scale = 1 : 500

GENERAL NOTES

- CONCRETE STRENGTH
 (A) FOUNDATIONS: 30 Mpa cube strength at 28 days
 (B) COLUMNS: 30 Mpa cube strength at 28 days
 (C) BEAMS AND SLABS: 30 Mpa cube strength at 28 days
 (D)
- CONCRETE COVER TO REINFORCING
 (A) SLAB: 25 mm
 (B) BEAMS: 30 mm
 (C) COLUMNS: 30 mm
 (D) RETAINING WALLS: 40 mm
 (E) BASES: 50 mm
- NOTE:
 1. BEAM DEPTH INCLUDES SLAB THICKNESS
 2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING.
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 5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTIONS.
 6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
 7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
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NO	APPROVED	AMENDMENTS	DATE
P2	LC	ISSUED FOR INFORMATION	20-11-2023
P1	LC	ISSUED FOR INFORMATION	17-11-2023
P0	LC	ISSUED FOR INFORMATION	03-10-2023

PR REGISTRATION NO. 201570266 DATE


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CLIENT

Province of the EASTERN CAPE HEALTH

PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE
**STRUCTURAL INSTALLATION
 72 HOUR ASSESSMENT FACILITY
 GROUND FLOOR LAYOUT - PART 1**

SCALE	SHEET SET	SHEET SIZE
As indicated	SHEET 1 OF 2	A1

DRAWING No.	REVISION
1746-6-02-S-S-001-1	P2

GENERAL NOTES

CONCRETE STRENGTH
 (A) FOUNDATIONS: 30 Mpa cube strength at 28 days
 (B) COLUMNS: 30 Mpa cube strength at 28 days
 (C) BEAMS AND SLABS: 30 Mpa cube strength at 28 days
 (D) _____
 (E) _____

CONCRETE COVER TO REINFORCING
 (A) SLAB: 25 mm
 (B) BEAMS: 30 mm
 (C) COLUMNS: 30 mm
 (D) RETAINING WALLS: 40 mm
 (E) BASES: 50 mm

- NOTE:
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 11.

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P1	LC	ISSUED FOR INFORMATION	17-11-2023
P0	LC	ISSUED FOR INFORMATION	03-10-2023
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			
		PR REGISTRATION NO. 201570266	DATE

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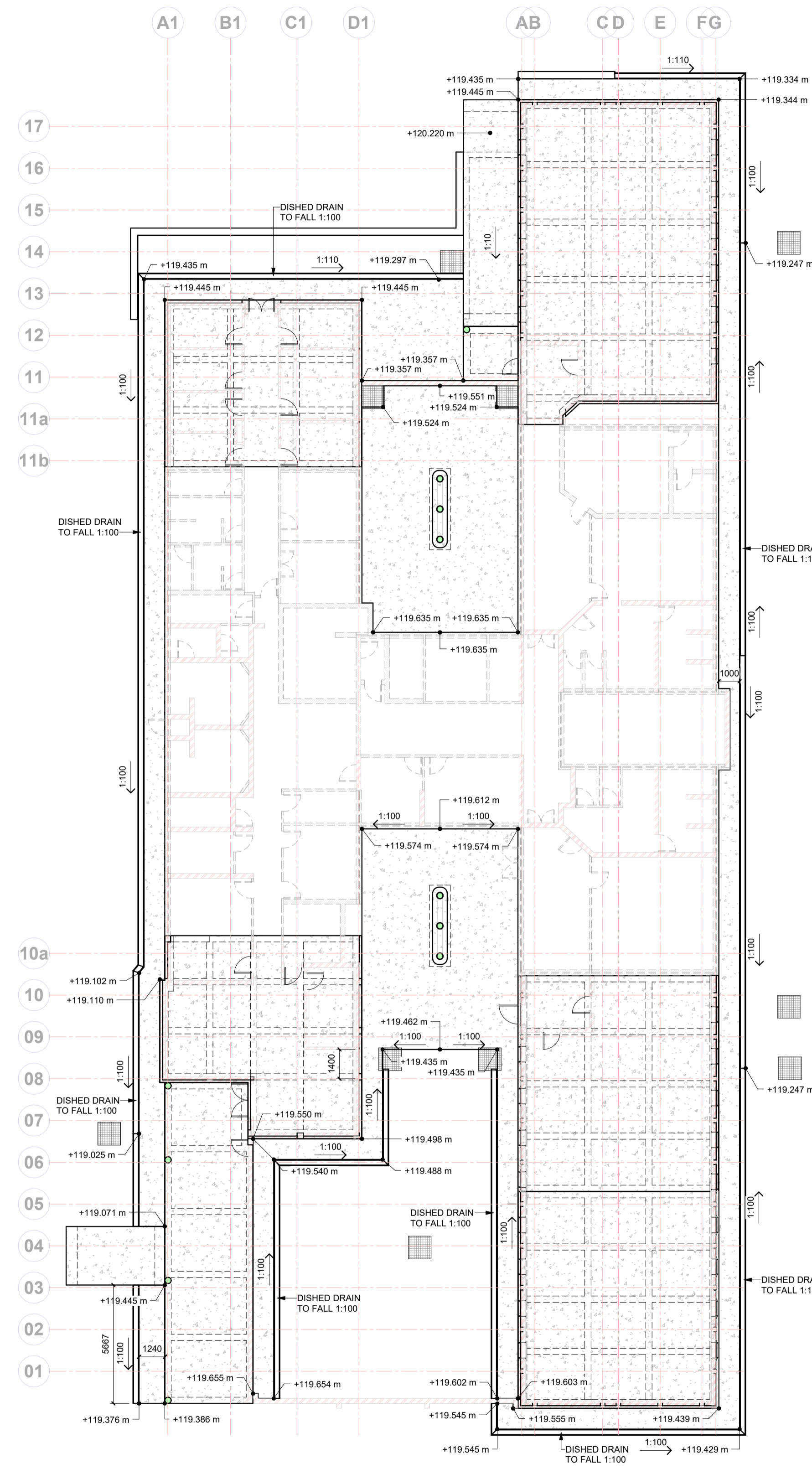
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PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

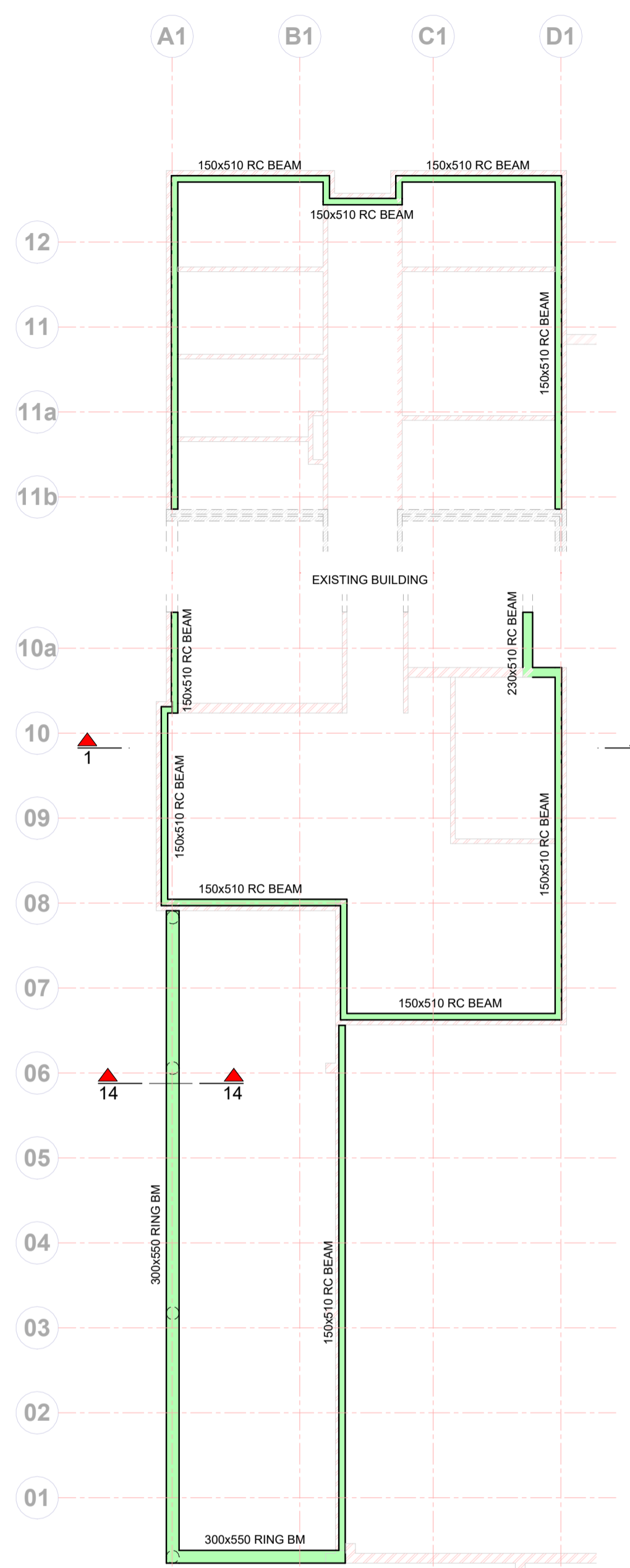
DRAWING TITLE
**STRUCTURAL INSTALLATION
 72 HOUR ASSESSMENT FACILITY
 LAYOUT SHOWING EXTERNAL SLABS AND LEVELS.**

SCALE	SHEET SET	SHEET SIZE
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DRAWING No.	REVISION	
1746-6-02-S-S-001-3	P2	

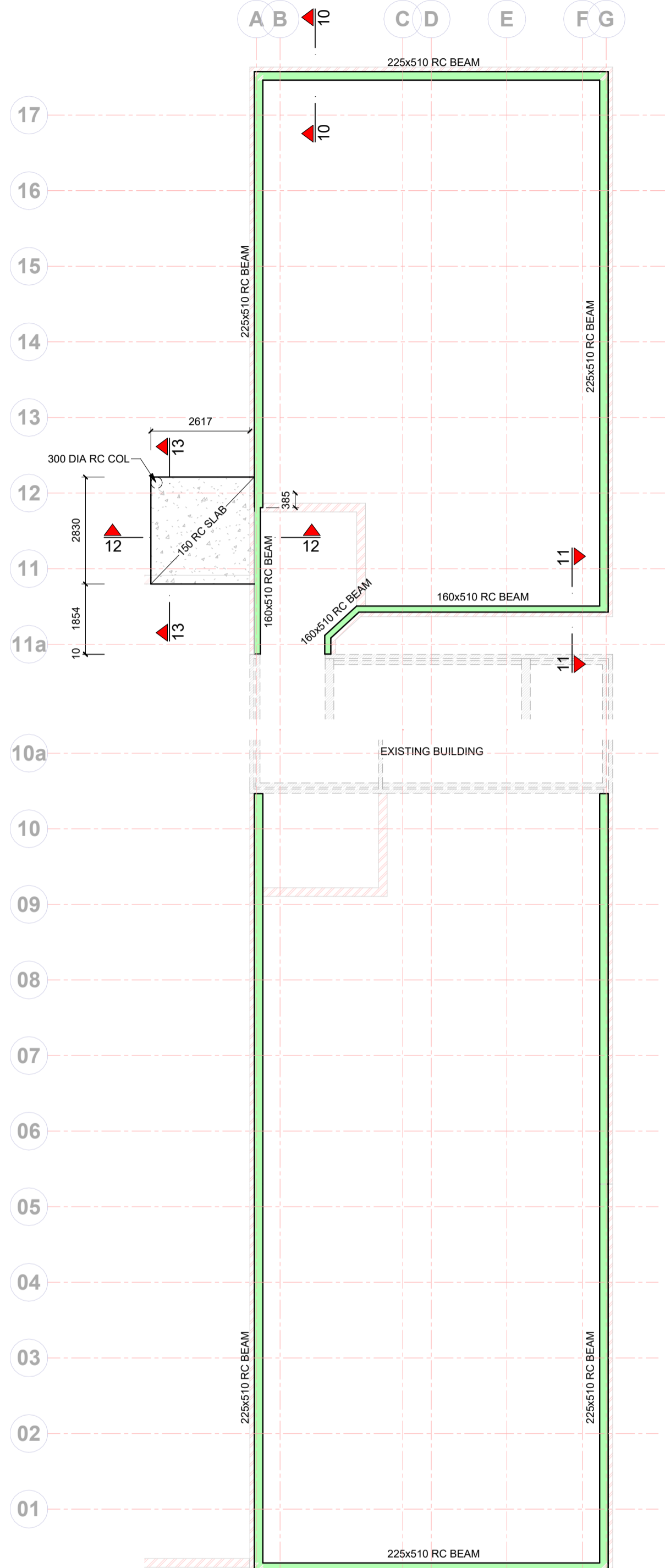


LAYOUT SHOWING EXTERNAL SLABS
 Scale = 1 : 150

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RING BEAM LAYOUT - PART 1
Scale = 1 : 100



RING BEAM LAYOUT - PART 2
Scale = 1 : 100

GENERAL NOTES

- CONCRETE STRENGTH
- (A) FOUNDATIONS: 30 Mpa cube strength at 28 days
- (B) COLUMNS: 30 Mpa cube strength at 28 days
- (C) BEAMS AND SLABS: 30 Mpa cube strength at 28 days
- (D)

- CONCRETE COVER TO REINFORCING
- (A) SLAB: 25 mm
- (B) BEAMS: 30 mm
- (C) COLUMNS: 30 mm
- (D) RETAINING WALLS: 40 mm
- (E) BASES: 50 mm

- NOTE:
1. BEAM DEPTH INCLUDES SLAB THICKNESS
 2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING.
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 7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
 - (A) SAFE GROUND PRESSURE: 200 kN/m²
 - (B) LIVE LOAD ON SLAB: 5.0 kN/m²
 8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS.
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P1	LC	ISSUED FOR INFORMATION	17-11-2023
P0	LC	ISSUED FOR INFORMATION	03-10-2023

NO	APPROVED	AMENDMENTS	DATE

PR REGISTRATION NO. 201570266 DATE

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CLIENT

**Province of the
EASTERN CAPE
HEALTH**

PROJECT TITLE

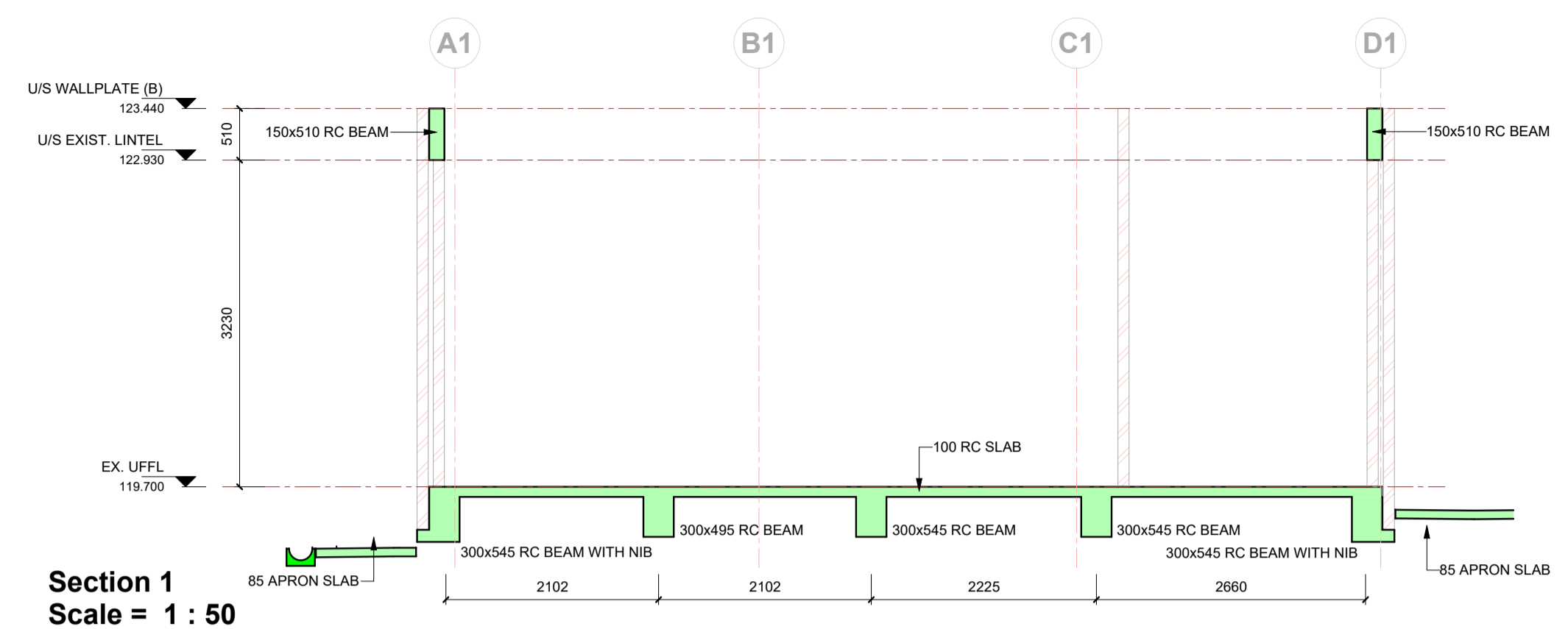
**UITENHAGE PROVINCIAL
HOSPITAL - NELSON MANDELA**

DRAWING TITLE

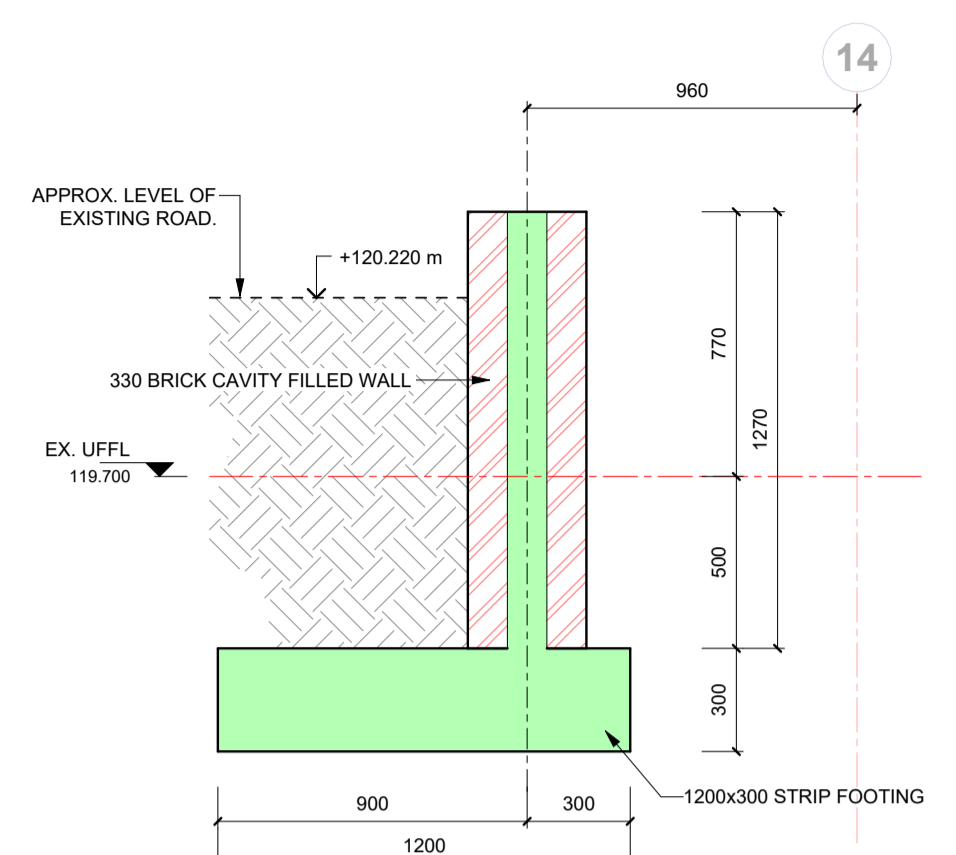
**STRUCTURAL INSTALLATION
72 HOUR ASSESSMENT FACILITY
RING BEAM LAYOUT**

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DRAWING No.	REVISION	
1746-6-02-S-S-001-4	P2	

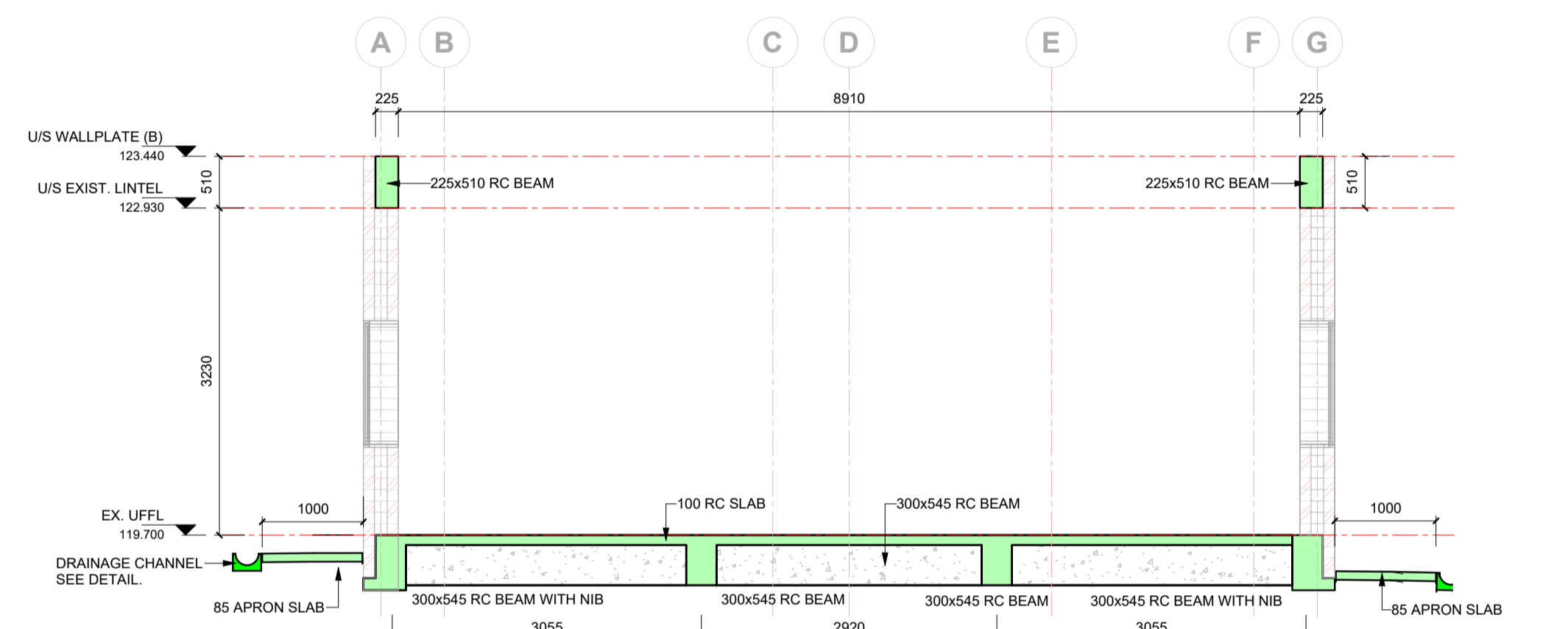
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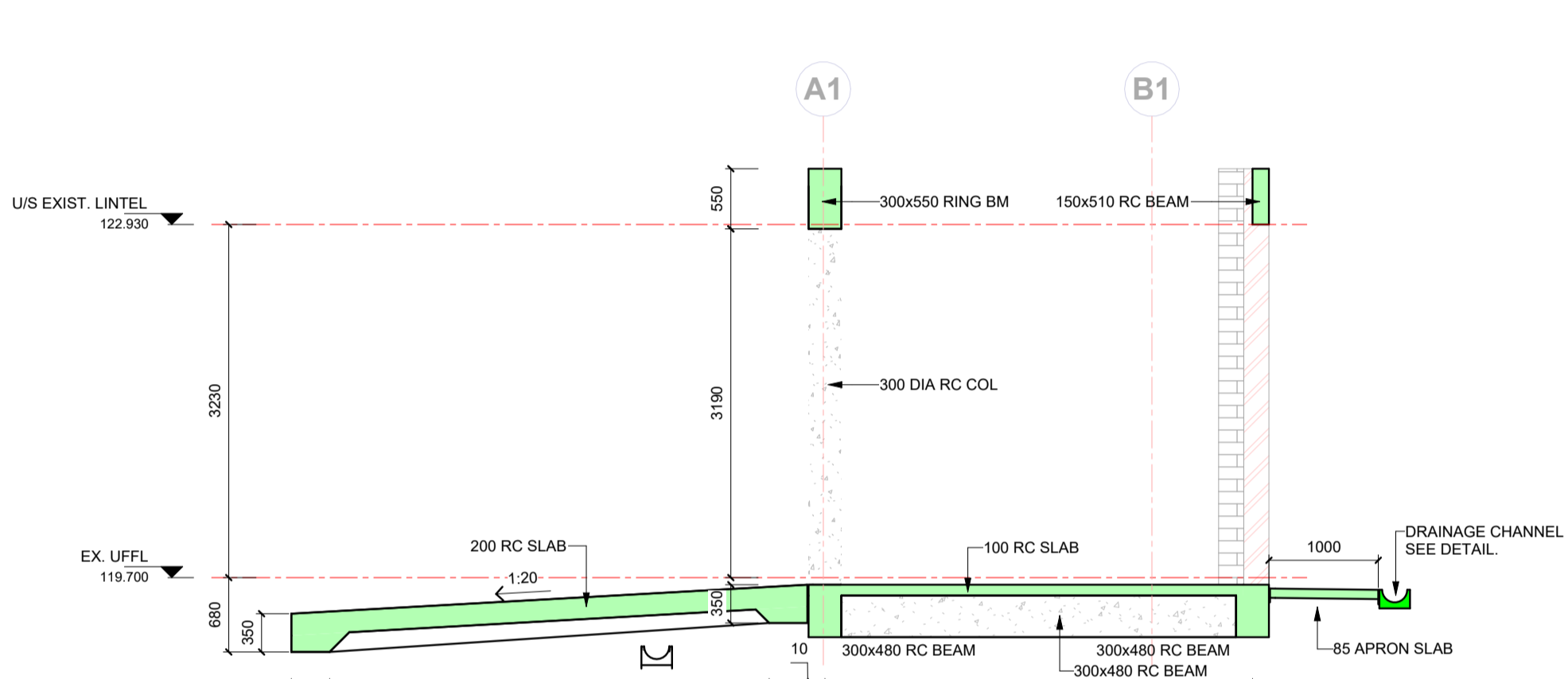
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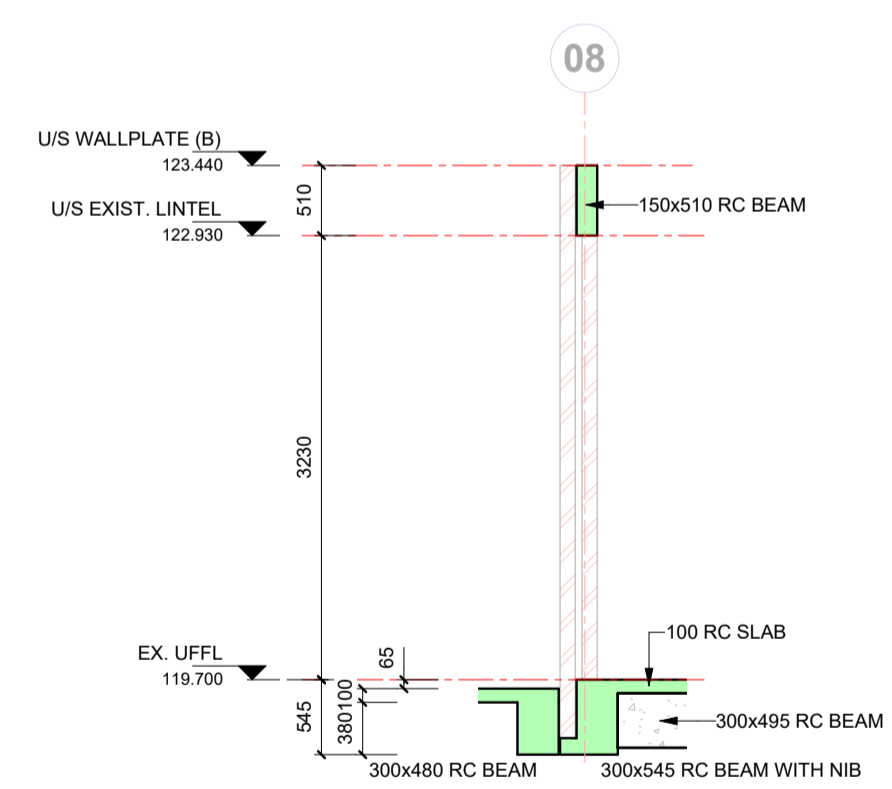
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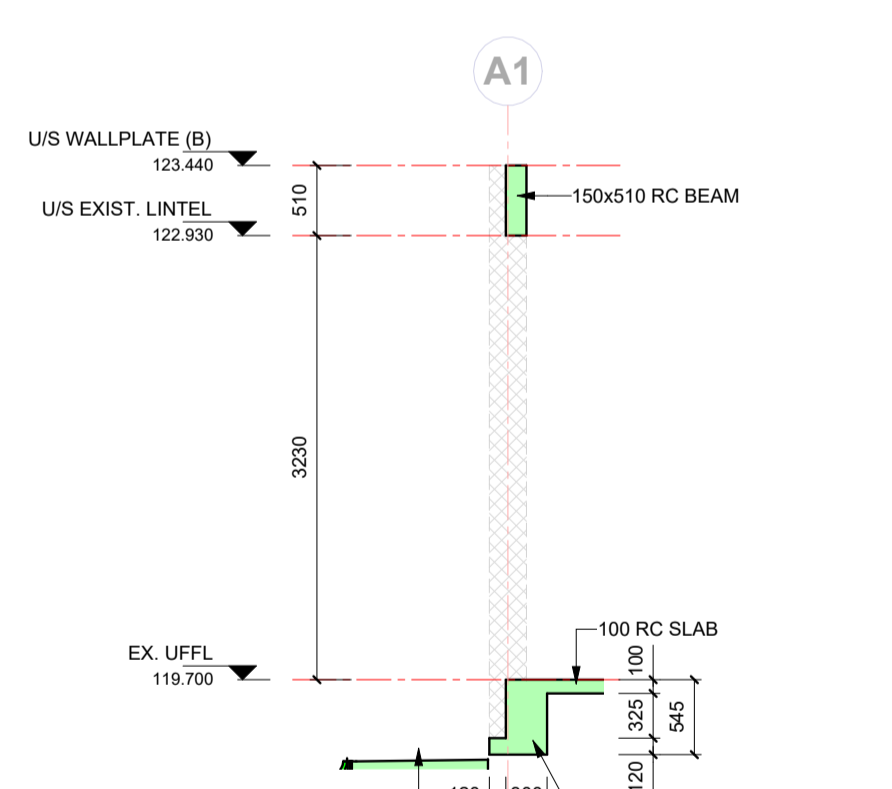
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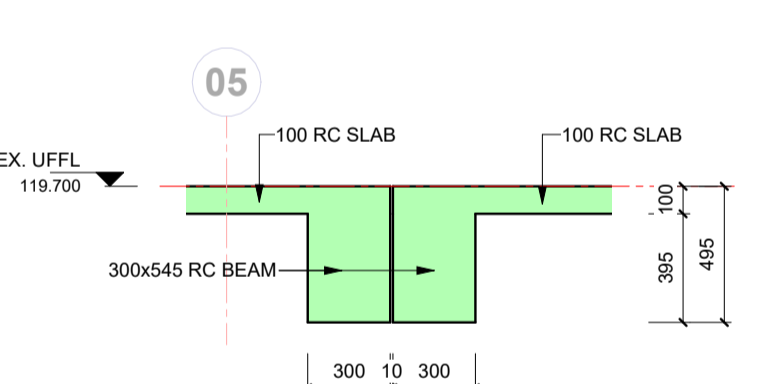
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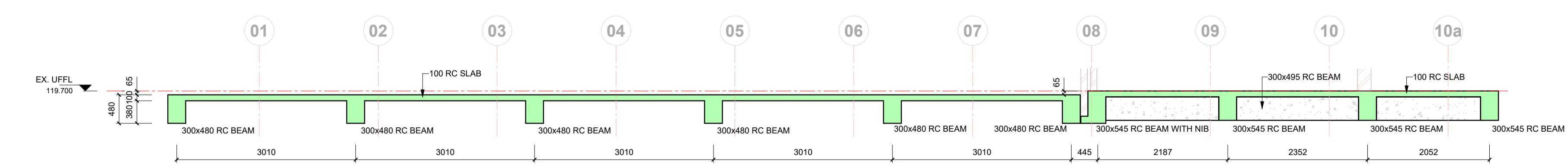
Section 5
Scale = 1 : 50



Section 6
Scale = 1 : 50



Section 7
Scale = 1 : 25



Section 8
Scale = 1 : 50

GENERAL NOTES

- CONCRETE STRENGTH
 (A) FOUNDATIONS: 30 Mpa cube strength at 28 days
 (B) COLUMNS: 30 Mpa cube strength at 28 days
 (C) BEAMS AND SLABS: 30 Mpa cube strength at 28 days
 (D) ...
- CONCRETE COVER TO REINFORCING
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P1	LC	ISSUED FOR INFORMATION	17-11-2023
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NO	APPROVED	AMENDMENTS	DATE

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CLIENT

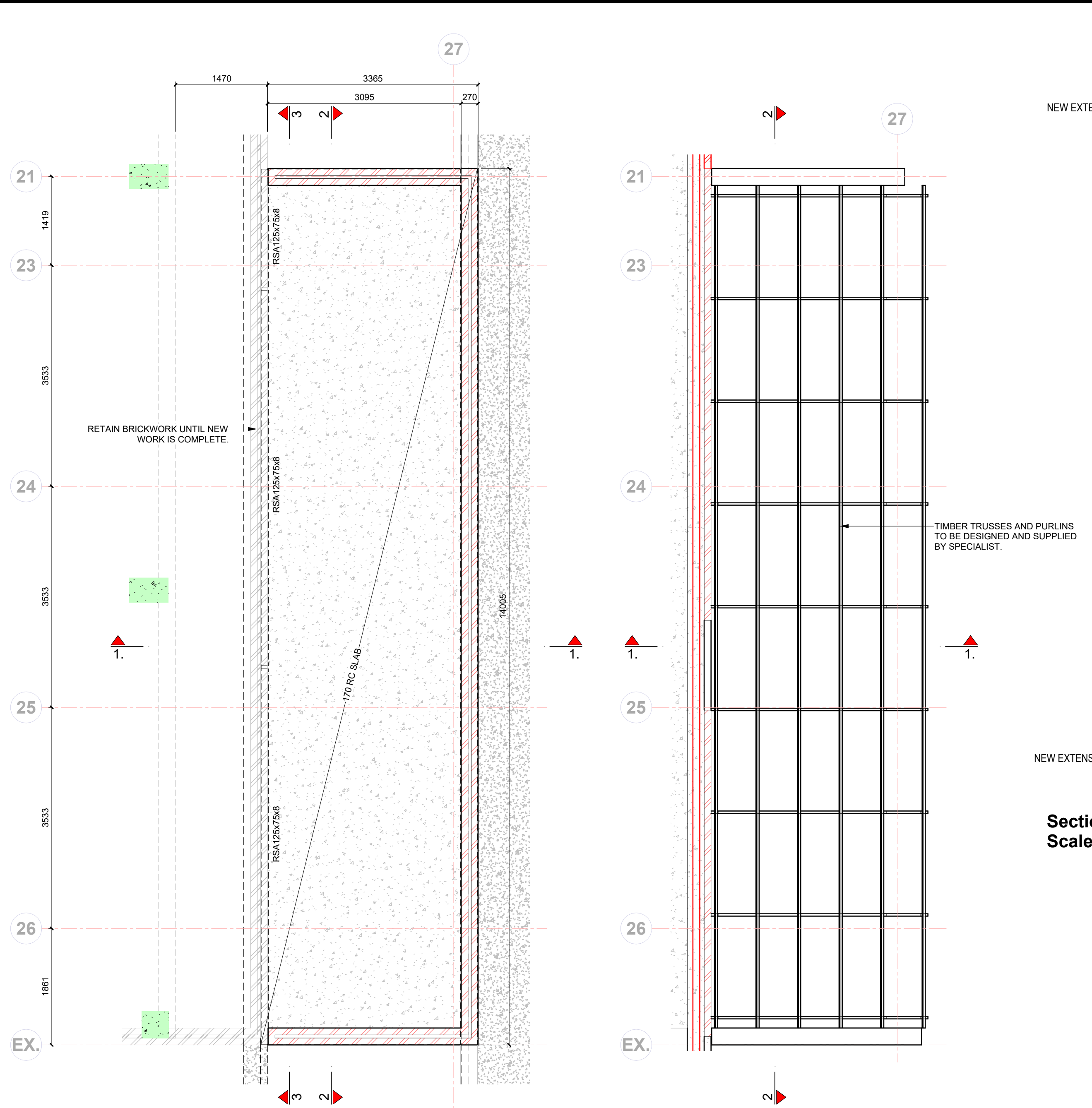
 Province of the
EASTERN CAPE
 HEALTH

PROJECT TITLE
**UITENHAGE PROVINCIAL
 HOSPITAL - NELSON MANDELA**

DRAWING TITLE
**STRUCTURAL INSTALLATION
 72 HOUR ASSESSMENT FACILITY
 SECTIONS - SHEET 1**

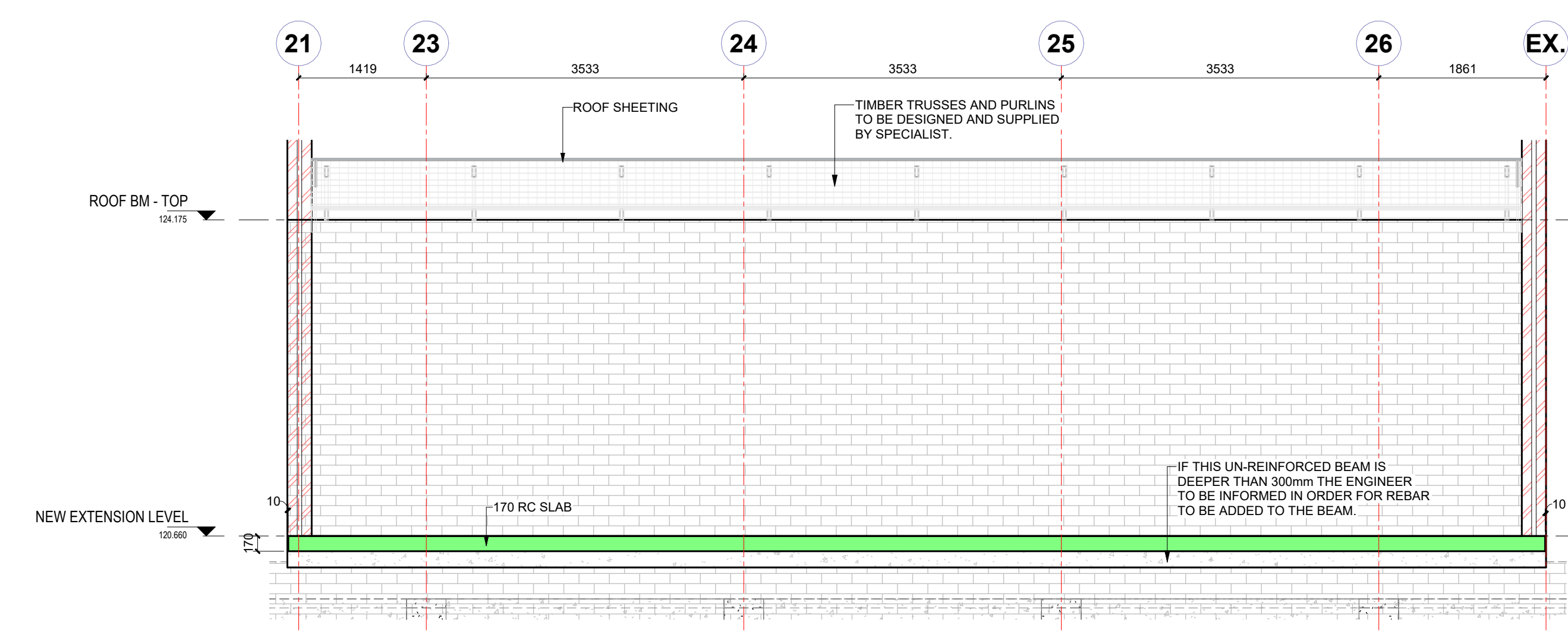
SCALE As indicated	SHEET SET SHEET 1 OF 2	SHEET SIZE A1
DRAWING No. 1746-6-02-S-S-001-10	REVISION P2	

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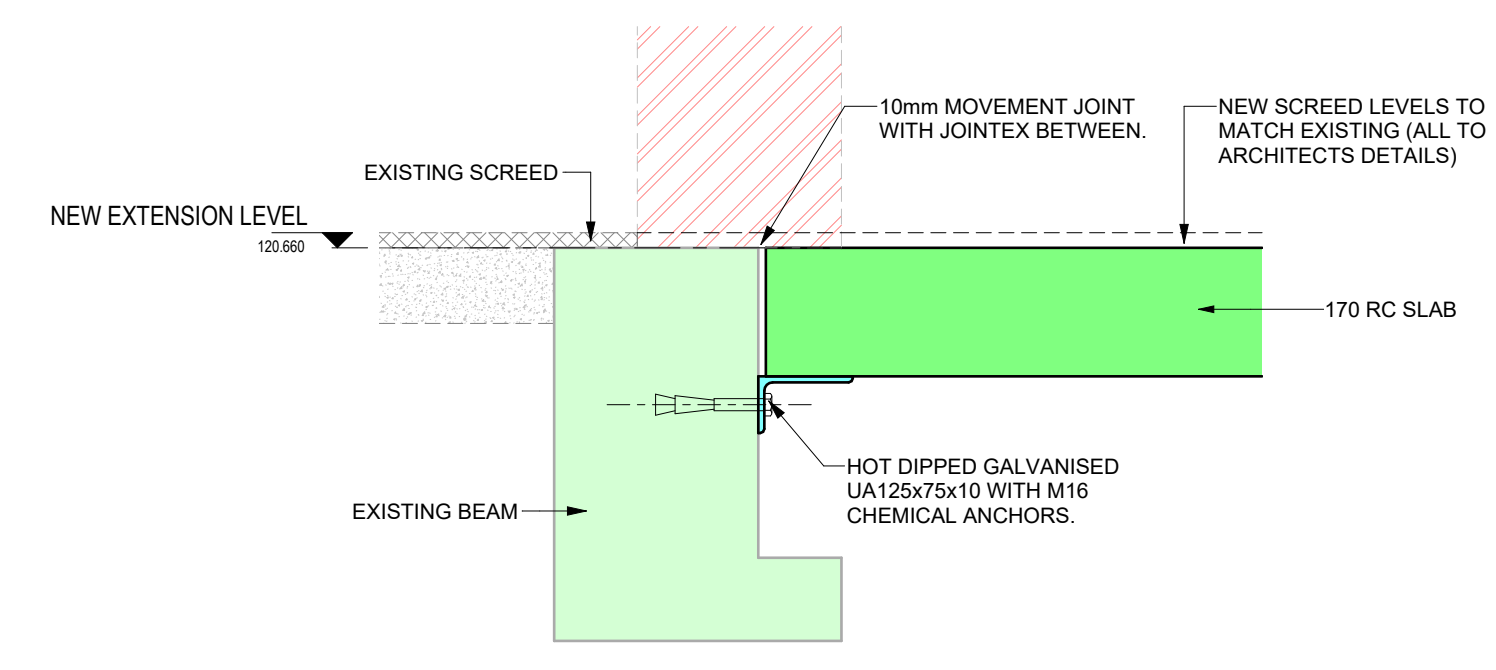


NEW EXTENSION LEVEL
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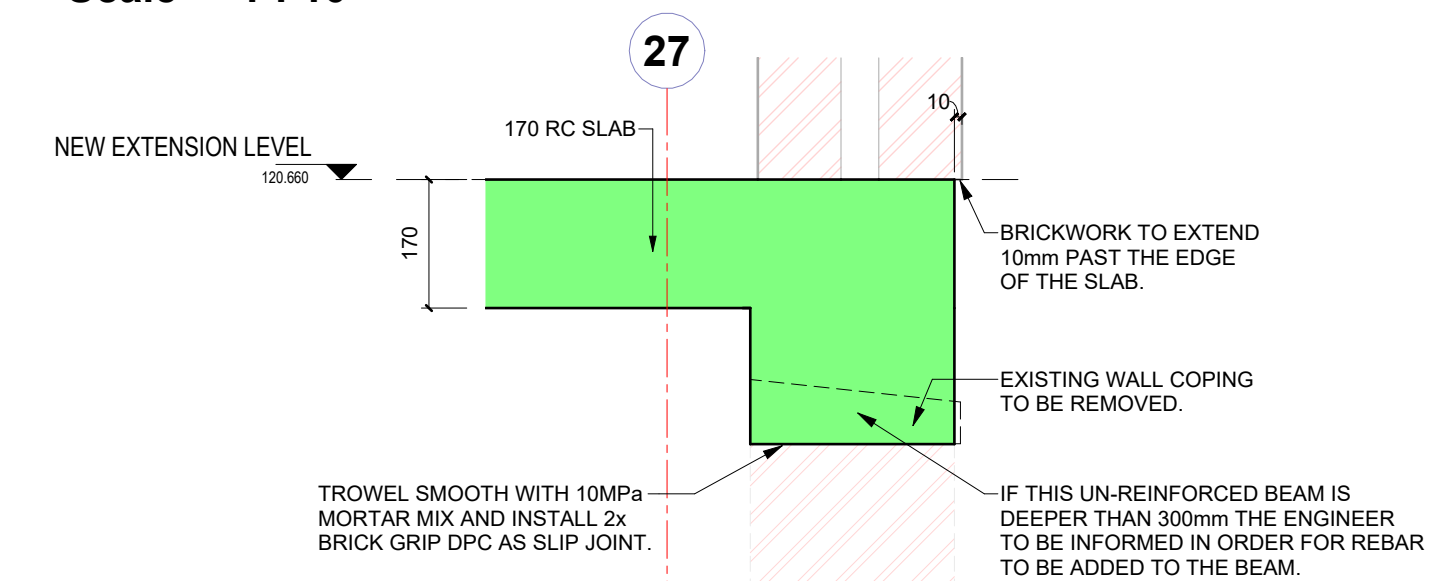
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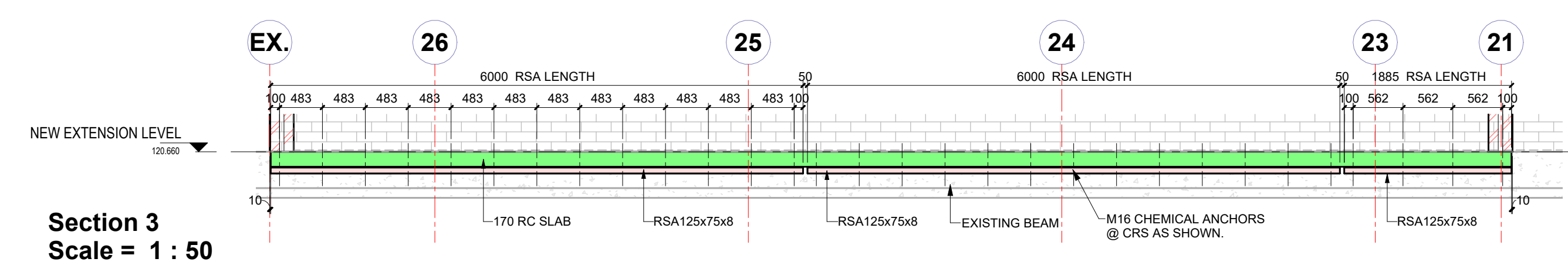
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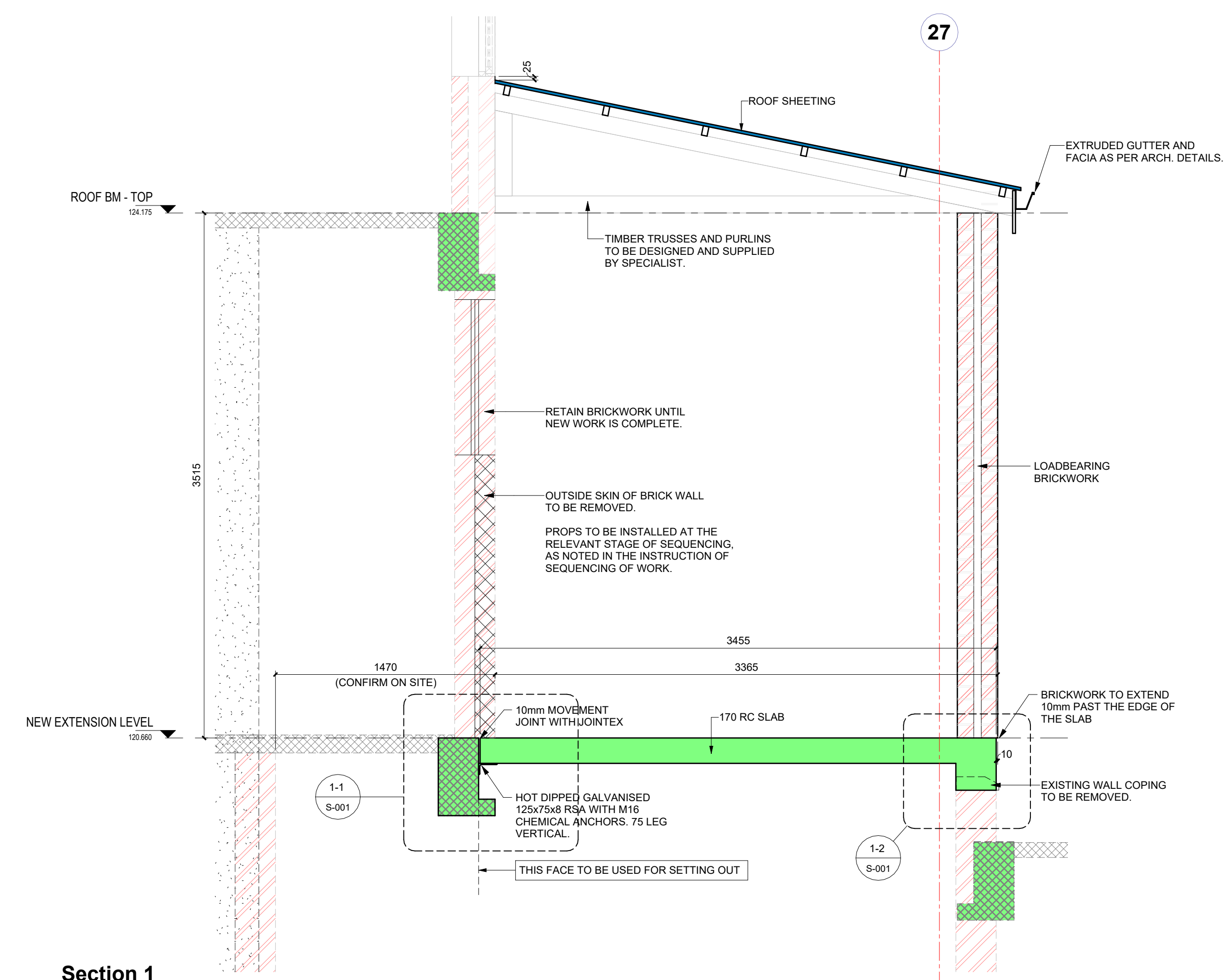
Section 1 - Callout 1
Scale = 1 : 10



Section 1 - Callout 2
Scale = 1 : 10



Section 3
Scale = 1 : 50



Section 1
Scale = 1 : 25

- INSTRUCTION OF SEQUENCING OF WORK**
- DEMOLISH EXISTING WALL COPING (GRID 27). SEE SECTION 1 - CALLOUT 2.
 - TROWEL WALL AND INSTALL BRICK GRIP DPC AS PER SECTION 1 - CALLOUT 2.
 - DEMOLISH EXTERNAL BRICK SKIN - SEE SECTION 1 AND INSTALL SUPPORTS FOR WINDOWS AS REQUIRED.
 - INSTALL RSA ANGLE, BOLTING THE ANGLE TO THE EXISTING BEAM AS PER SECTION 1 - CALLOUT 1.
 - ERECT SHUTTERING FOR FLOOR SLAB AND BEAM.
 - FIX FLOOR SLAB REBAR AND CAST CONCRETE.
 - REMOVE SHUTTERING UNDER FLOOR SLAB AFTER 10 DAYS (MIN.)
 - REMOVE PORTION OF BRICK WALL AS REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
 - REBUILD EXTERNAL SKIN OF BRICK THAT WAS REMOVED. (NOTE 3)

- General concrete notes:**
- Beam depth includes slab thickness
 - The contractor is to maintain steel in the correct position after placing and during concreting
 - Stone, sand, and cement to be to the satisfaction of the consulting engineer
 - No concrete is to be poured until the consulting engineer has inspected the steel.
 - Any breaks in the concrete will be made following the engineer's instructions.
 - No structural alterations are to be made without the approval of the consulting engineer.
 - The structure has been designed for the following conditions:
 - (a) Safe ground pressure 200 kn/sq m
 - (b) Live load on slab 5.0 kn/sq m
 - All drawings are to be read in conjunction with the architectural and civil engineering drawings.
 - The design on this drawing remains the property of Lukhozi consulting engineers - copyright is reserved.
 - All dimensions are to be checked on-site before work is put in hand. Any discrepancy must immediately be reported to the engineer.
 - This drawing is not to be scaled.
 - Roof sheet to architect's details.

Concrete strength

Foundations	20 Mpa cube strength at 28 days
Columns	30 Mpa cube strength at 28 days
Beams and slabs	30 Mpa cube strength at 28 days

PO	ISSUED FOR APPROVAL	29-09-2023
NO	APPROVED	AMENDMENTS
SURVEYED	IN	DATE
DRAWN	L. COETZER	DATE
DESIGNED	L. COETZER	DATE
CHECKED	L. COETZER	DATE
APPROVED		DATE 21-02-2024

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TEL: 043 721 1321
EMAIL: e@lukhozi.co.za
WEB: www.lukhozi.co.za

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE

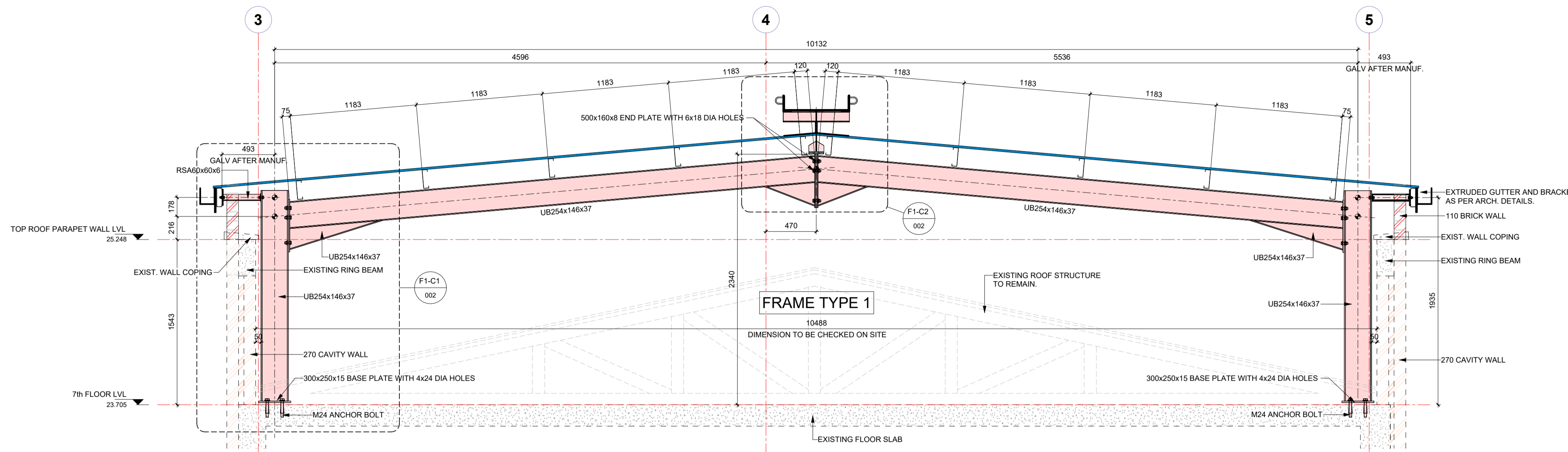
UITENHAGE PROVINCIAL HOSPITAL
72 HOUR OBSERVATION UNIT

DRAWING TITLE

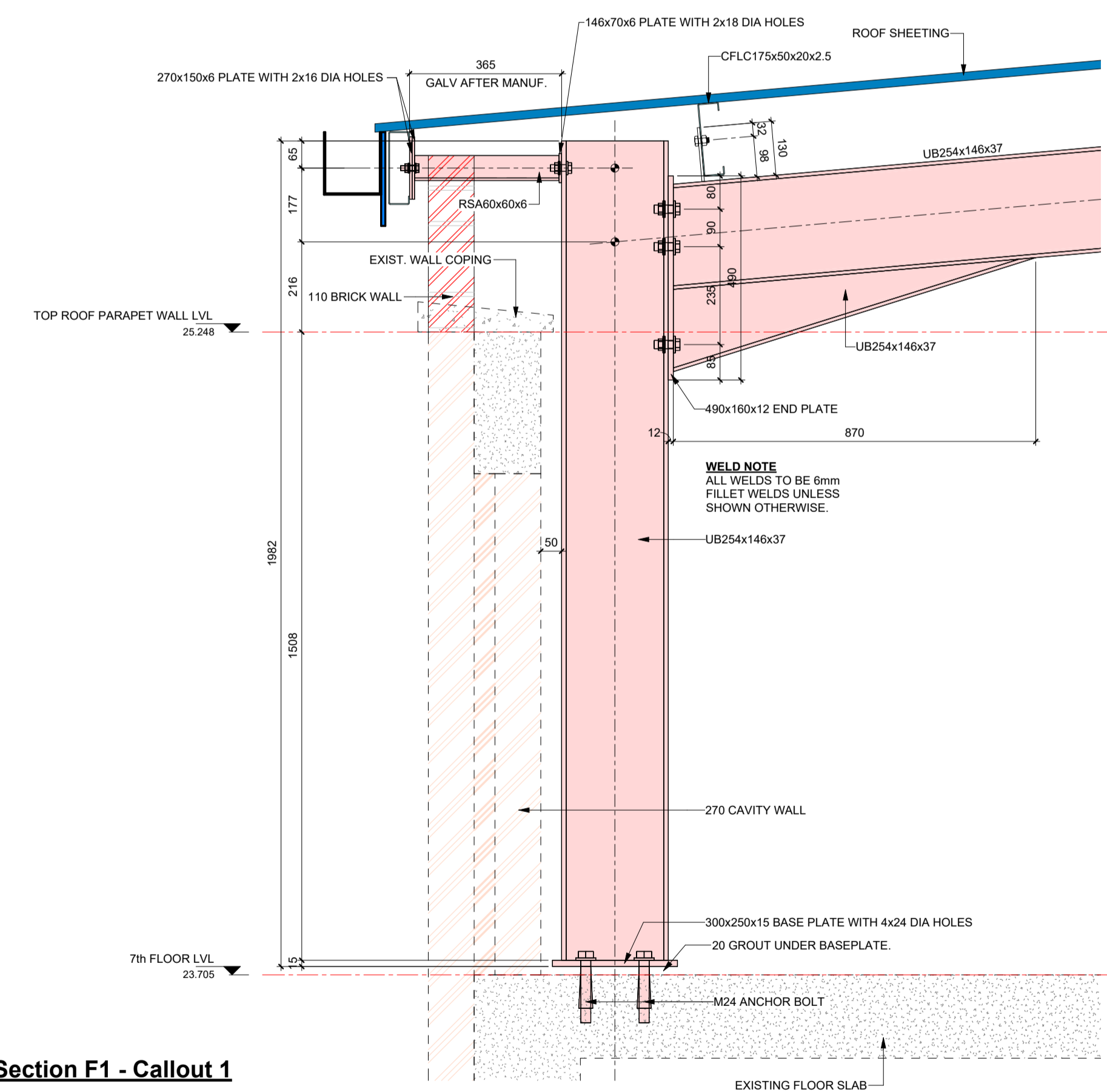
STRUCTURAL INSTALLATION
STRUCTURAL PLAN AND SECTIONS

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As indicated	SHEET OF	A1
DRAWING No.	1746-6-02-S-001	REVISION
		P0

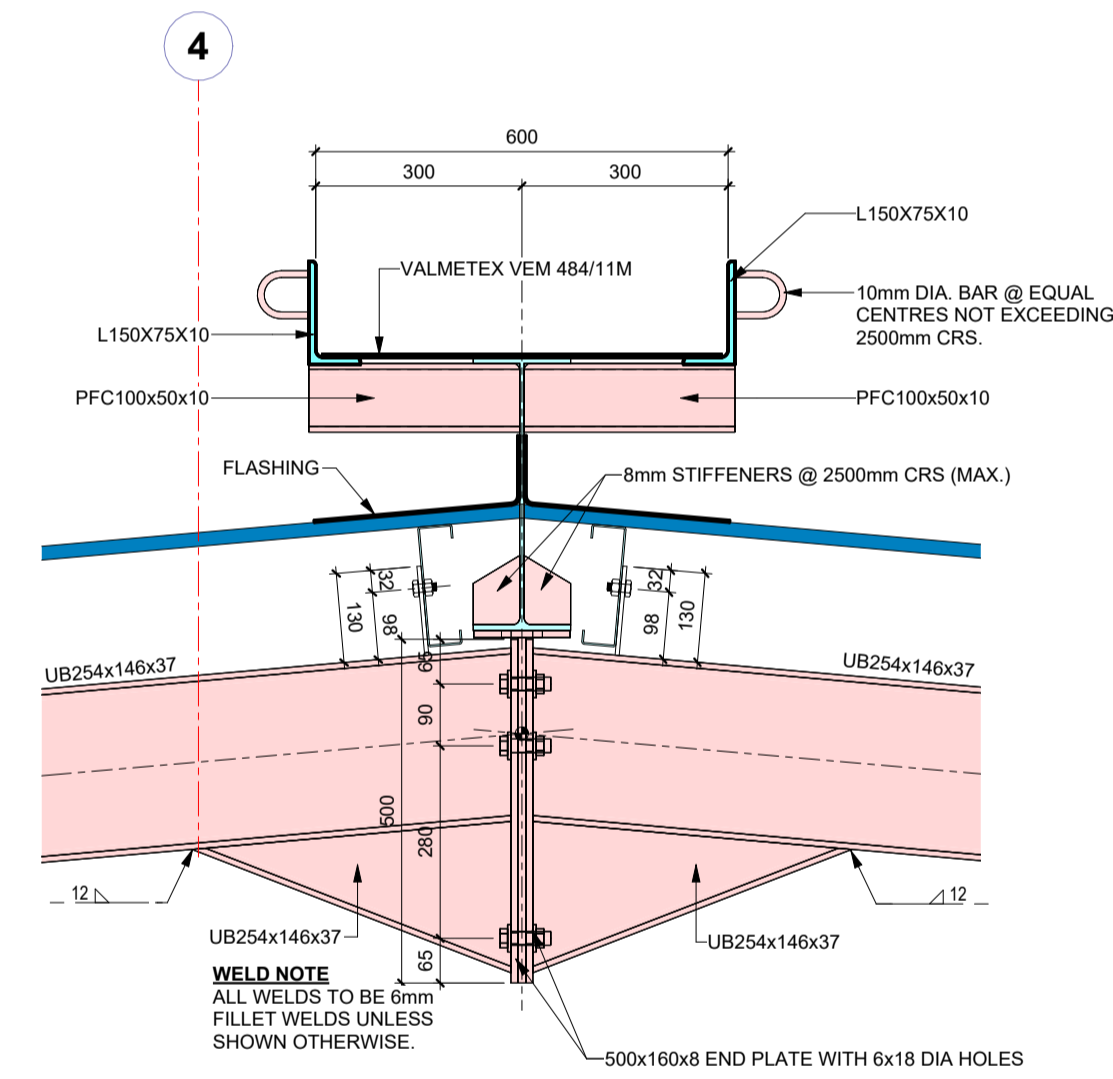
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Section F1
1: 25



Section F1 - Callout 1
1: 10



Section F1 - Callout 2
1: 10

- GENERAL STRUCTURAL STEEL NOTES**
- ALL STEEL TO BE GRADE S355JR.
 - ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
 - ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
 - STRUCTURE TO BE STABILISED BY TEMPORARY BRACING AND PROPS DURING ERECTION.
 - NO CLADDING TO BE FIXED UNTIL ALL BRACING HAS BEEN INSTALLED AND STRUCTURE PROPERLY SECURED.
 - ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANISED.
 - ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
 - ALL STEELWORK EXPOSED TO THE ELEMENTS TO BE SHOT BLASTED AND THEREAFTER TO RECEIVE:
 - EPOXY ZINC RICH PRIMER
 - EPOXY MICACEOUS IRON OXIDE BARRIER
 - POLYURETHANE COLOUR TO BE APPROVED BY THE ENGINEER.
 - ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE. FIGURED DIMENSIONS ONLY TO BE USED. DRAWING IS NOT TO BE SCALED.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEER'S CONCRETE DRAWINGS AS WELL AS THE ARCHITECT'S DRAWINGS.
 - ALL BOLTS ARE M16 GRADE 8.8 UNLESS STATED OTHERWISE.
 - ALL WELDS ARE 6mm FILLET WELDS UNLESS STATED OTHERWISE.
 - BR ROOF SHEETS TO BE 0.8mm THICK (TO CLIENT'S SPEC)
 - FLASHING TO BE 0.8mm THICK (TO CLIENT'S SPEC)

NO	APPROVED	AMENDMENTS	DATE
P1		INTERNAL CHECKING	2023-11-11
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			

PR REGISTRATION NO. 201670266 DATE

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EMAIL pm@lukhozi.co.za
WEB www.lukhozi.co.za

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE

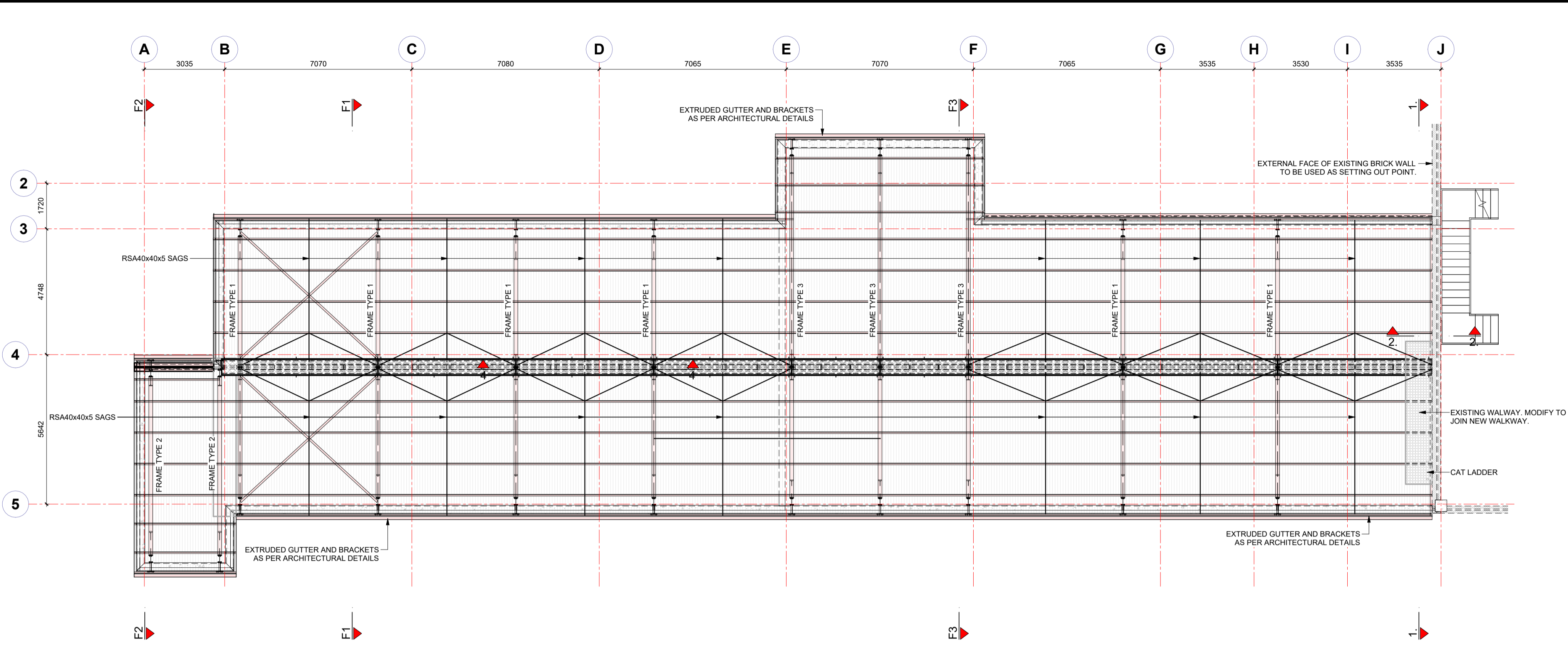
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE

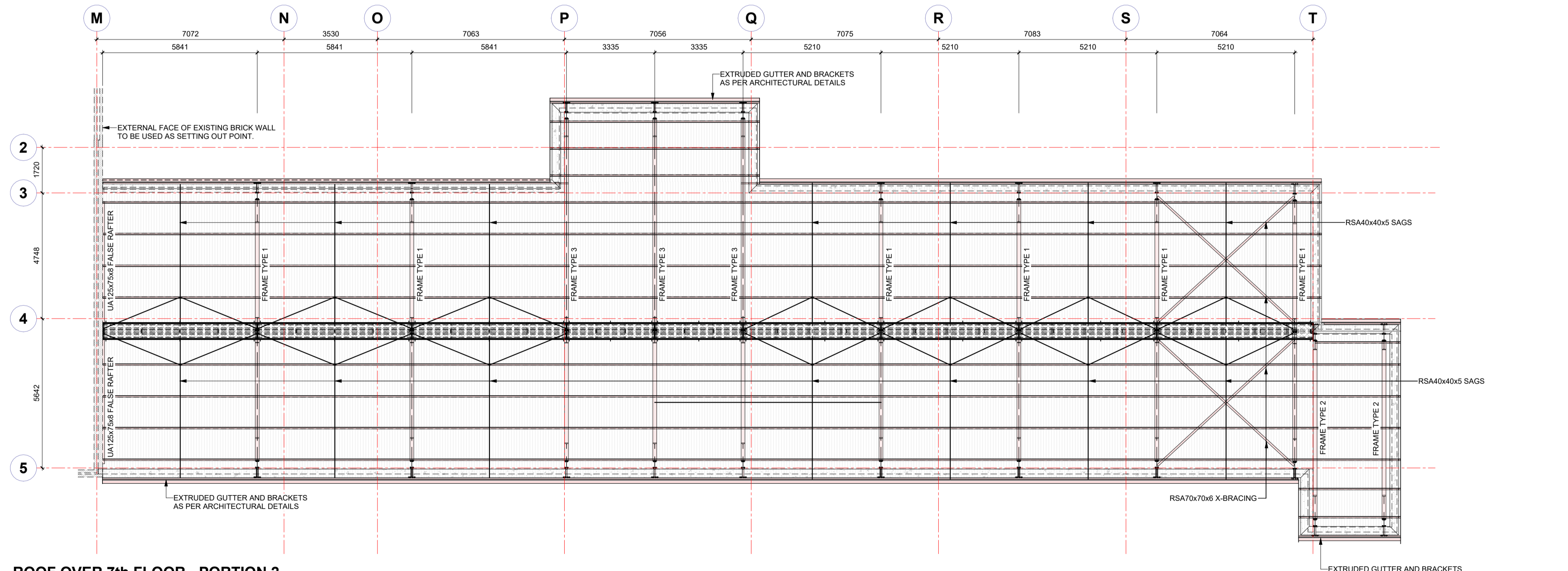
**STRUCTURAL INSTALLATION
ROOFS OVER 7th FLOOR
FRAME TYPE F1 - SHEET 1**

SCALE	SHEET SET	OF	SHEET SIZE
AS SHOWN	SHEET		A1
DRAWING No.	1746-6-04-S-002		REVISION P1

E:\REVIT_MODEL\UITENHAGE_HOSPITAL - ROOF AT 7TH FLOOR.rvt 2023/11/21 09:33:27



ROOF OVER 7th FLOOR - PORTION 1
1 : 100



ROOF OVER 7th FLOOR - PORTION 2
1 : 100

NOTE
THE FRAMES FOR PORTION 2 ARE THE SAME AS FOR PORTION 1 WITH ALL THE SECTIONS AND DETAILS.

- GENERAL STRUCTURAL STEEL NOTES**
- ALL STEEL TO BE GRADE S355JR.
 - ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
 - ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
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 - ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANISED.
 - ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
 - ALL STEELWORK EXPOSED TO THE ELEMENTS TO BE SHOT BLASTED AND THEREAFTER TO RECEIVE: EPOXY ZINC RICH PRIMER EPOXY MICACEOUS IRON OXIDE BARRIER POLYURETHANE COLOUR TO BE APPROVED BY THE ENGINEER.
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 - ALL WELDS ARE 6MM FILLET WELDS UNLESS STATED OTHERWISE.
 - BR ROOF SHEETS TO BE 0.8MM THICK (TO CLIENT'S SPEC)
 - FLASHING TO BE 0.8MM THICK (TO CLIENT'S SPEC)

P1	INTERNAL CHECKING	2023-11-11	
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			
PR REGISTRATION NO. 201670266			DATE

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CLIENT

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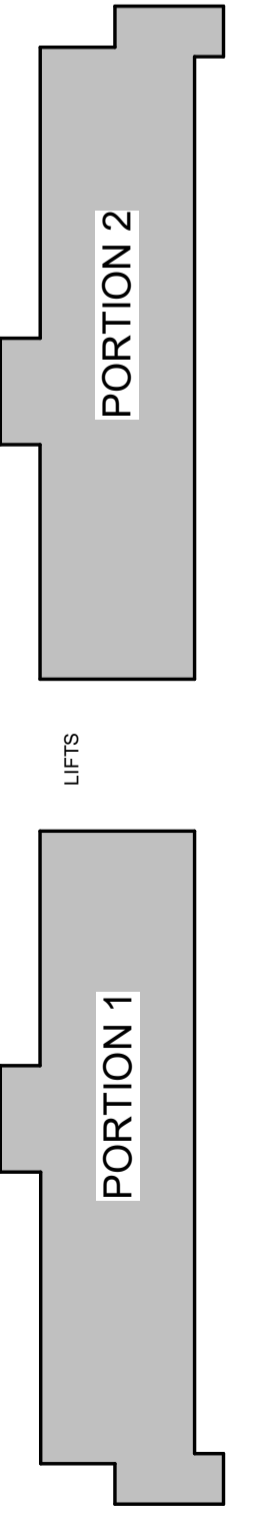
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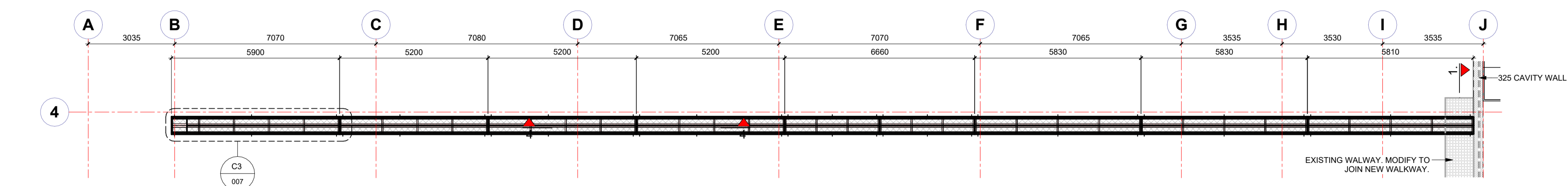
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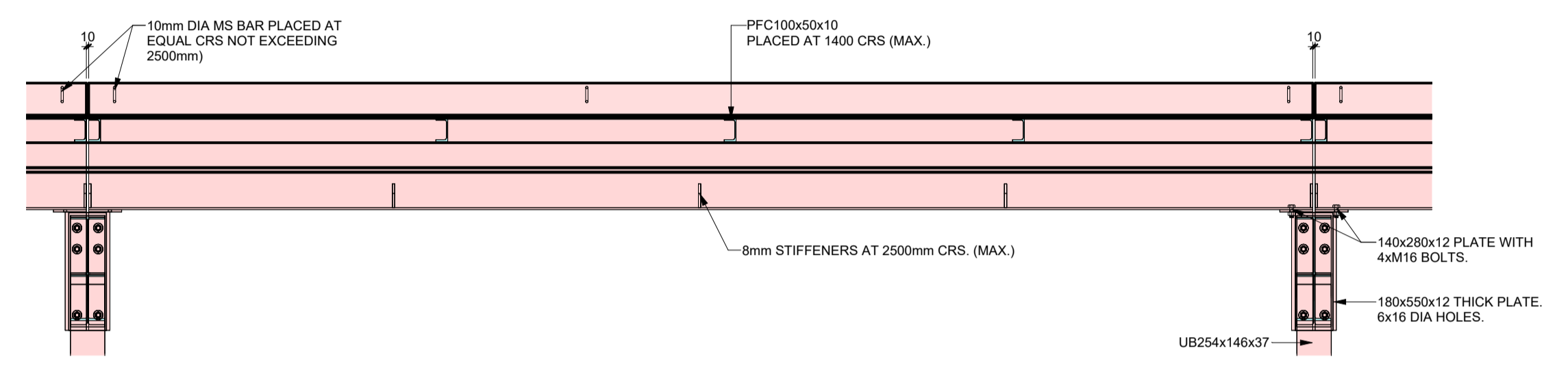
STRUCTURAL INSTALLATION ROOFS OVER 7th FLOOR PLANS

SCALE	SHEET SET	OF	SHEET SIZE
AS SHOWN	SHEET		A1
DRAWING No.	1746-6-04-S-001		REVISION
			P1

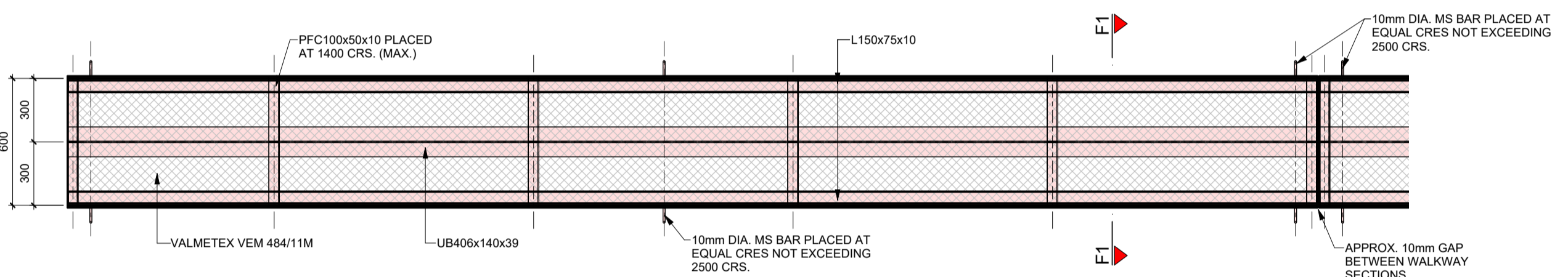




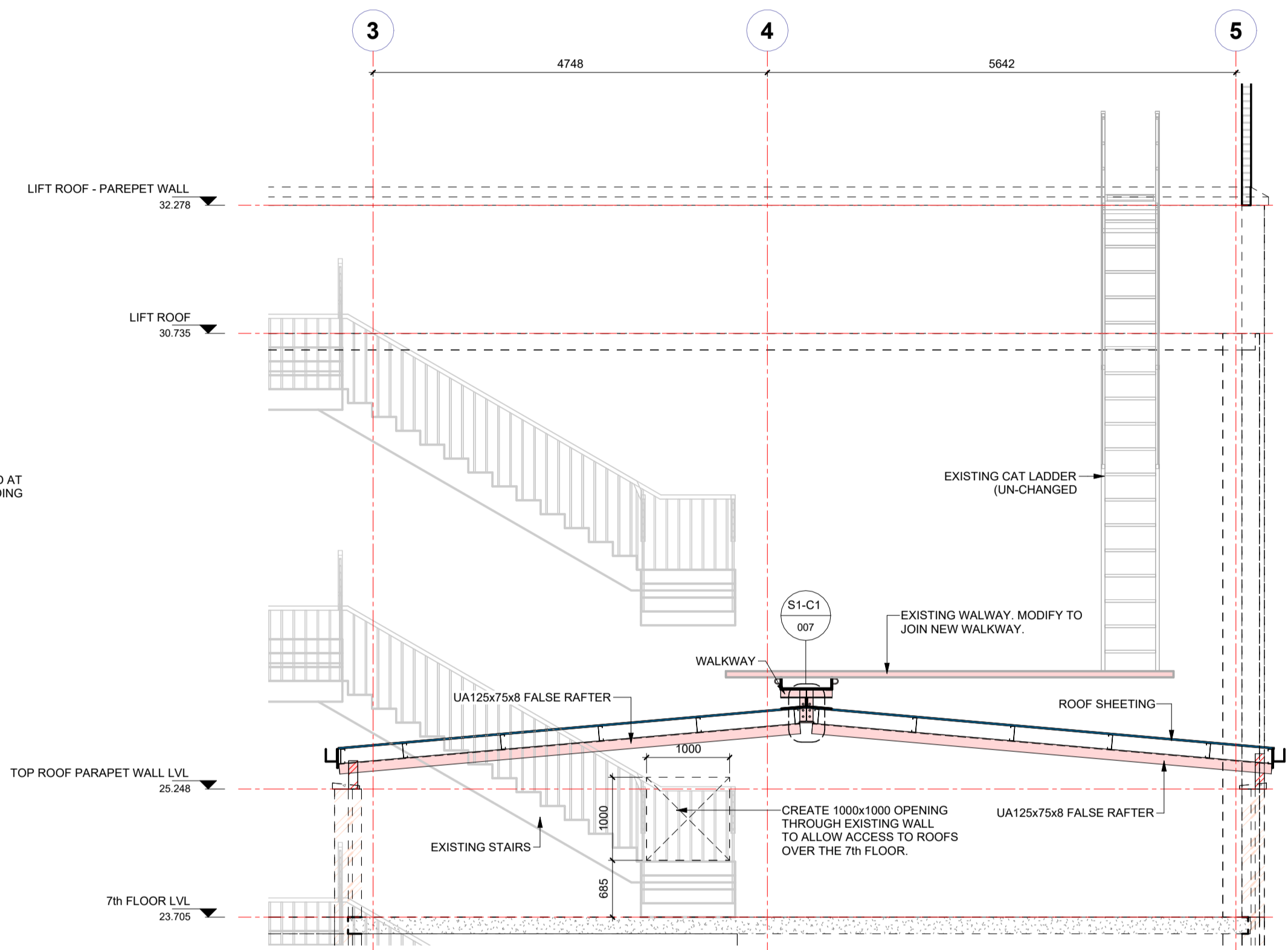
ROOF OVER 7th FLOOR - PORTION 1 - WALKWAY LAYOUT
1: 100



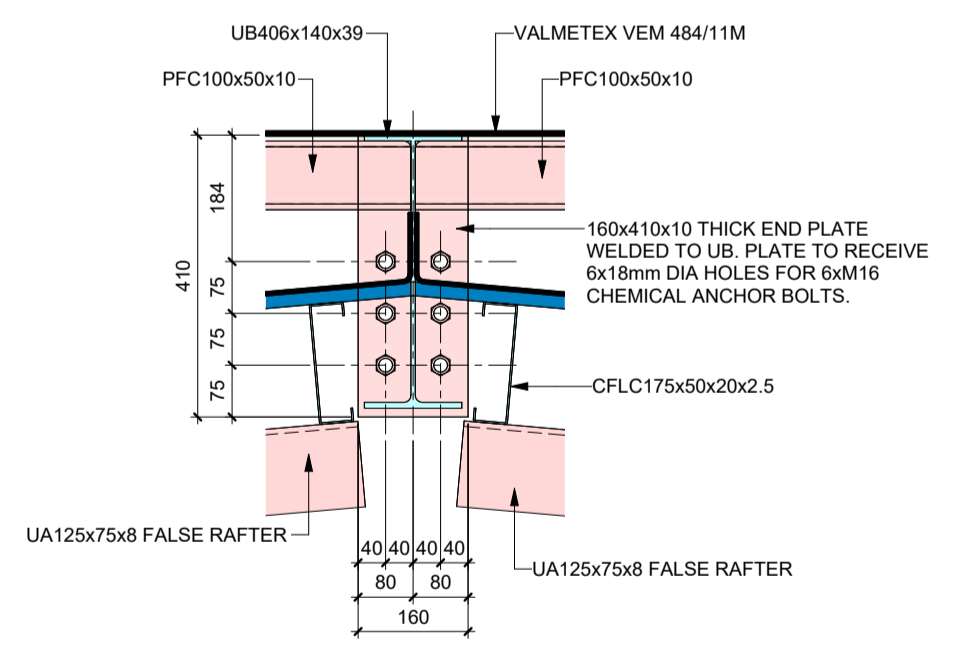
WALKWAY - TYPICAL ELEVATIONAL SECTION
1: 20



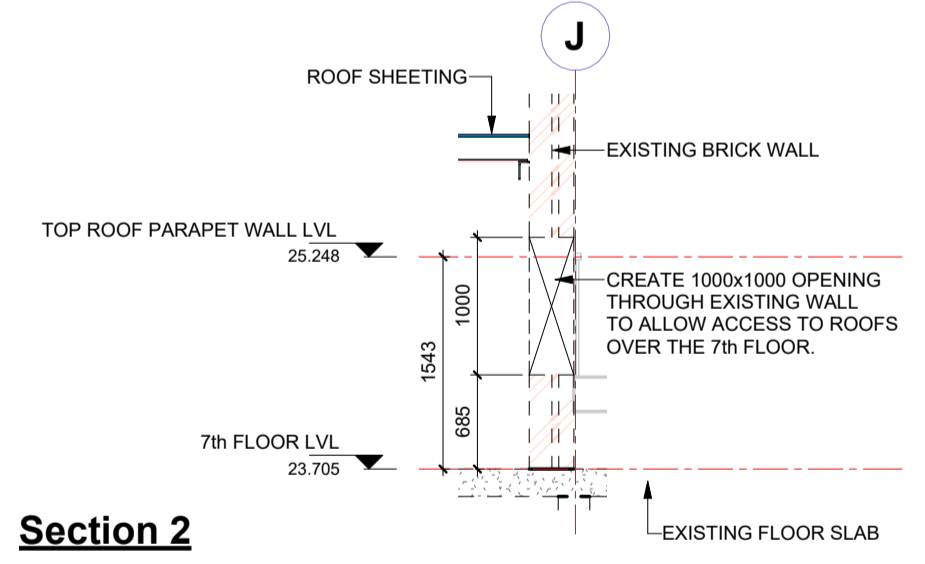
Callout C3
1: 20



Section 1
1: 50



Section 1 - Callout 1
1: 10



Section 2
1: 50

- GENERAL STRUCTURAL STEEL NOTES**
1. ALL STEEL TO BE GRADE S355JR.
 2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
 3. ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
 5. STRUCTURE TO BE STABILISED BY TEMPORARY BRACING AND PROPS DURING ERECTION.
 6. NO CLADDING TO BE FIXED UNTIL ALL BRACING HAS BEEN INSTALLED AND STRUCTURE PROPERLY SECURED.
 7. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANISED.
 8. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
 9. ALL STEELWORK EXPOSED TO THE ELEMENTS TO BE SHOT BLASTED AND THEREAFTER TO RECEIVE: EPOXY ZINC RICH PRIMER, EPOXY MICACEOUS IRON OXIDE BARRIER POLYURETHANE COLOUR TO BE APPROVED BY THE ENGINEER.
 10. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE. DRAWING IS NOT TO BE SCALED.
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 13. ALL BOLTS ARE M16 GRADE 8.8 UNLESS STATED OTHERWISE.
 14. ALL WELDS ARE 6MM FILET WELDS UNLESS STATED OTHERWISE.
 15. BR ROOF SHEETS TO BE 0.8MM THICK (TO CLIENT'S SPEC).
 16. FLASHING TO BE 0.8MM THICK (TO CLIENT'S SPEC).

P1	INTERNAL CHECKING	2023-11-11
NO	APPROVED	AMENDMENTS
		DATE
SURVEYED		
DRAWN		
DESIGNED		
CHECKED		
APPROVED		
	PR REGISTRATION NO. 201670266	DATE

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CLIENT

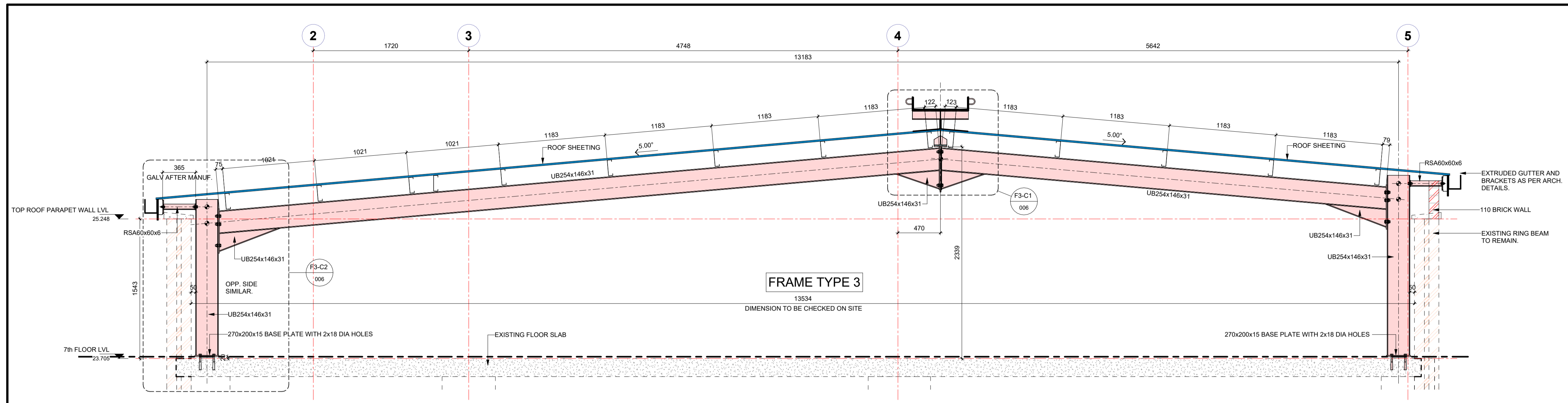
Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE
**STRUCTURAL INSTALLATION
ROOFS OVER 7th FLOOR
GENERAL DETAILS**

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AS SHOWN	SHEET		A1
DRAWING No.	1746-6-04-S-007		REVISION
			P1

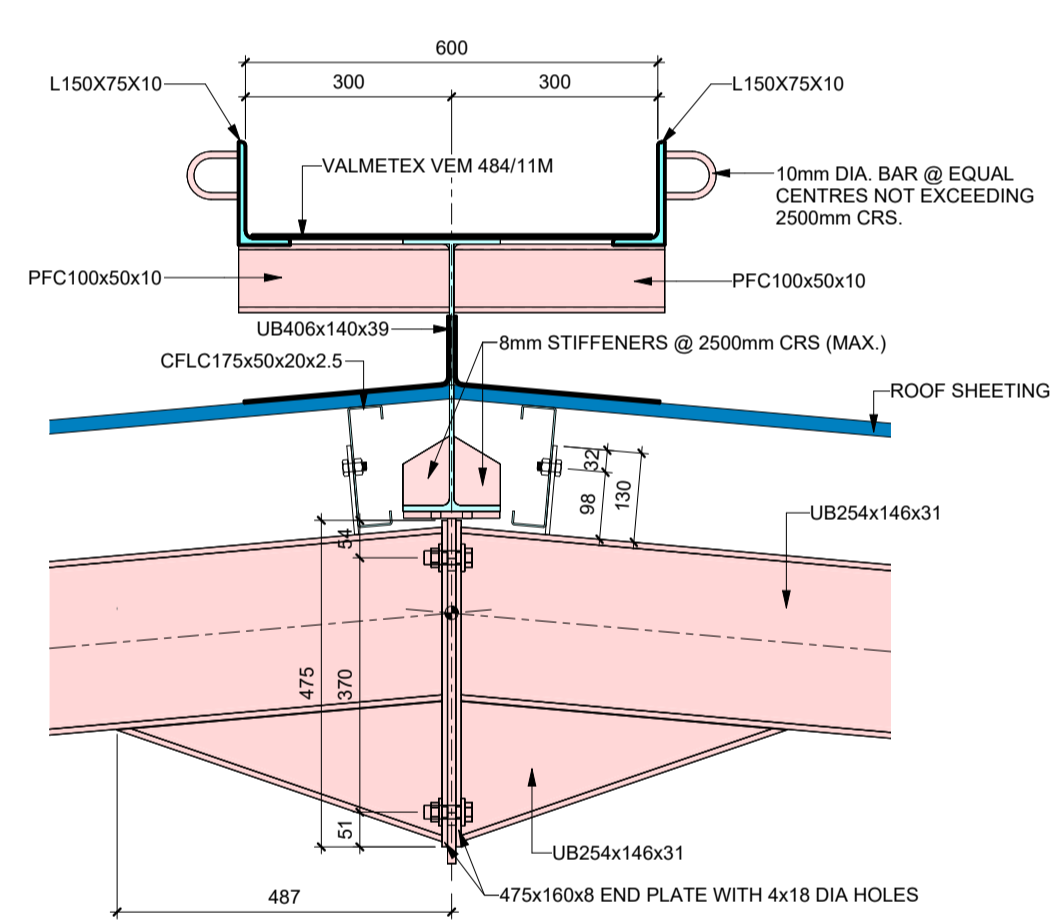
E:\REVIT_MODEL\UITENHAGE_HOSPITAL - ROOF AT 7th FLOOR.rvt 2023/11/21 09:34:27



- GENERAL STRUCTURAL STEEL NOTES**
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 -

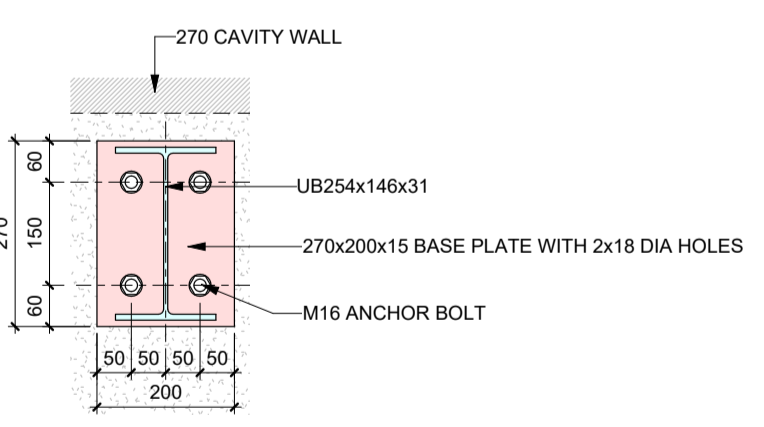
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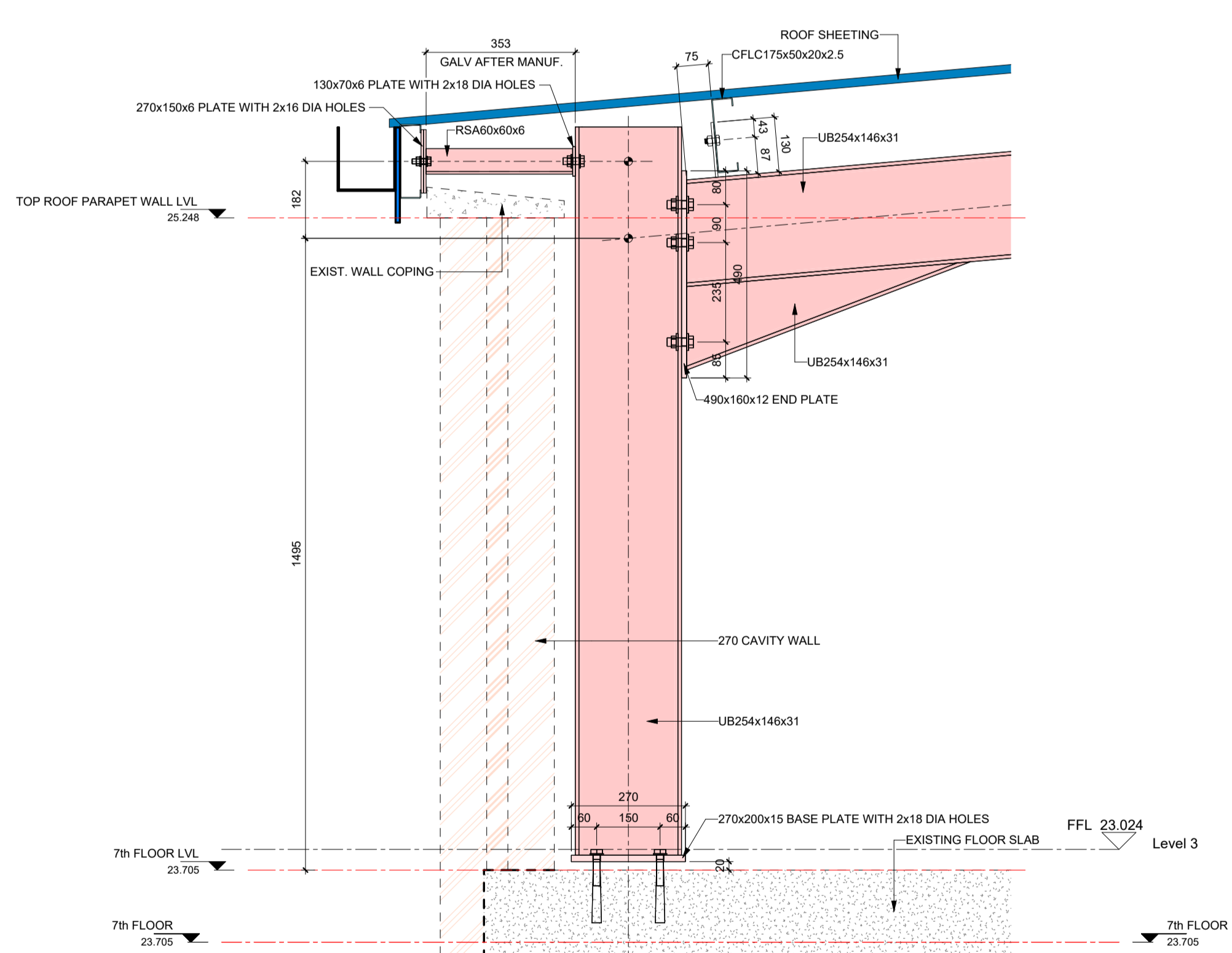
Section F3 - Callout 1

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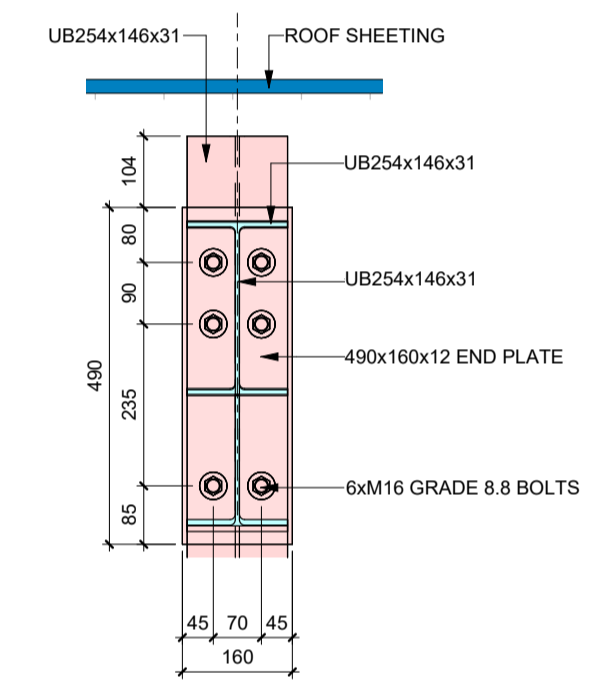
FRAME TYPE 3 - BASEPLATE

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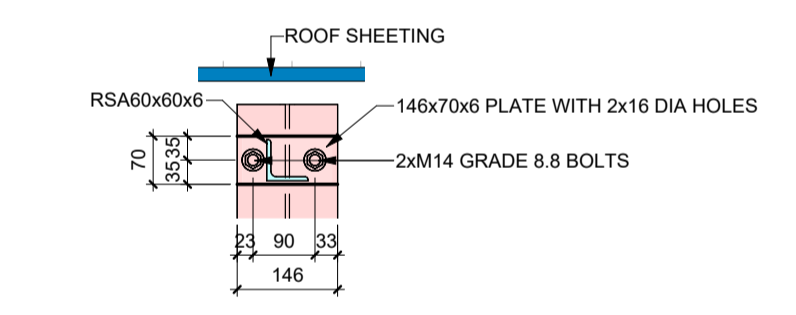
Section F3 - Callout 2

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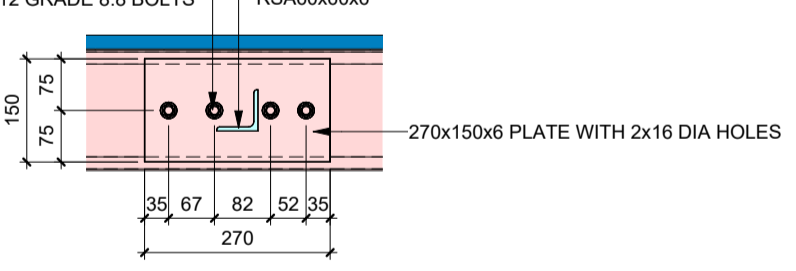
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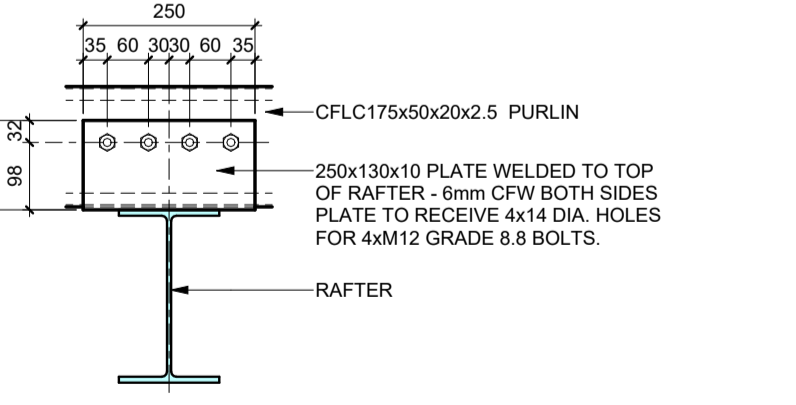
Section F3-2

1:10



Section F3-3

1:10



TYPICAL PURLIN CLEAT DETAIL

1:10

NO	APPROVED	AMENDMENTS	DATE
P1		INTERNAL CHECKING	2023-11-11
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			

PR REGISTRATION NO. 201670266 DATE

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CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE

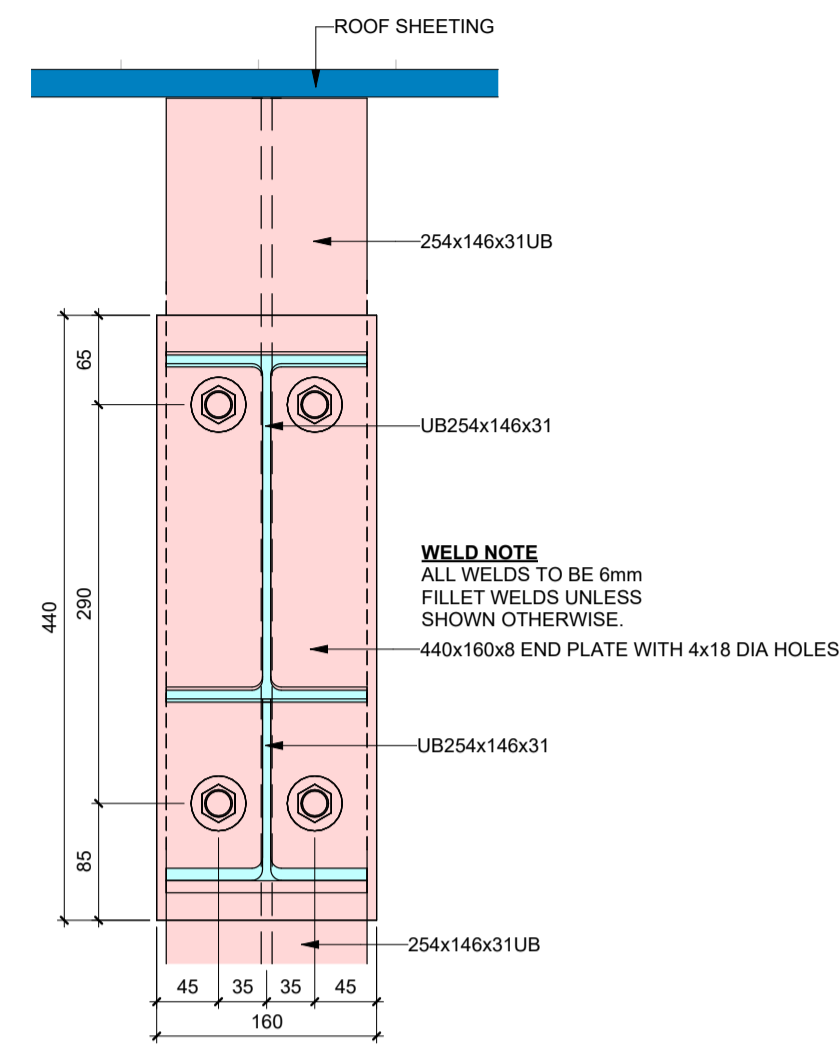
UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE

**STRUCTURAL INSTALLATION
ROOFS OVER 7th FLOOR
FRAME F3 - SHEET 1**

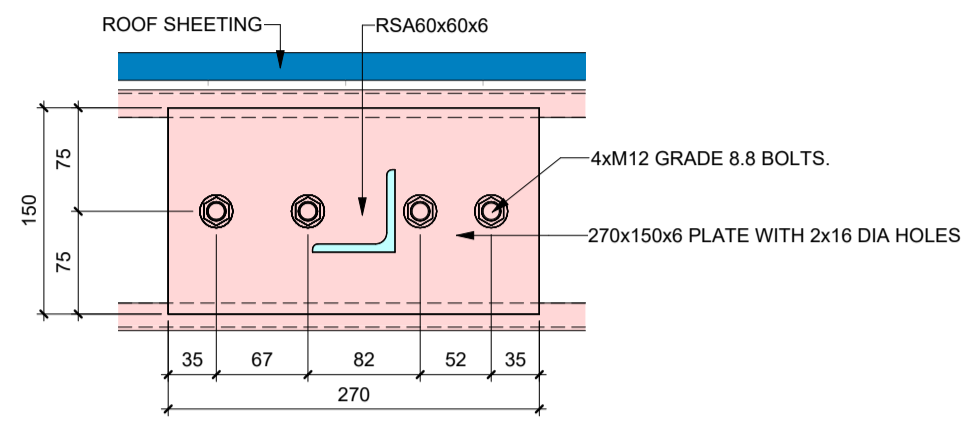
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET OF	A1
DRAWING No.	1746-6-04-S-006	REVISION P1

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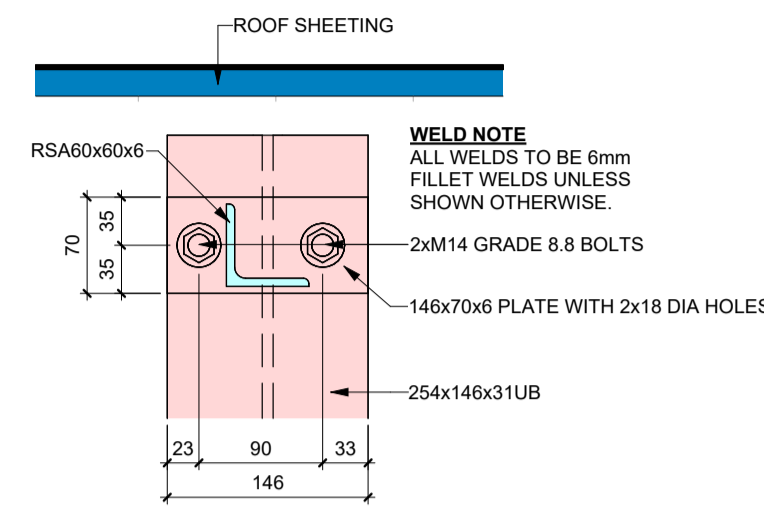
Section F2-1

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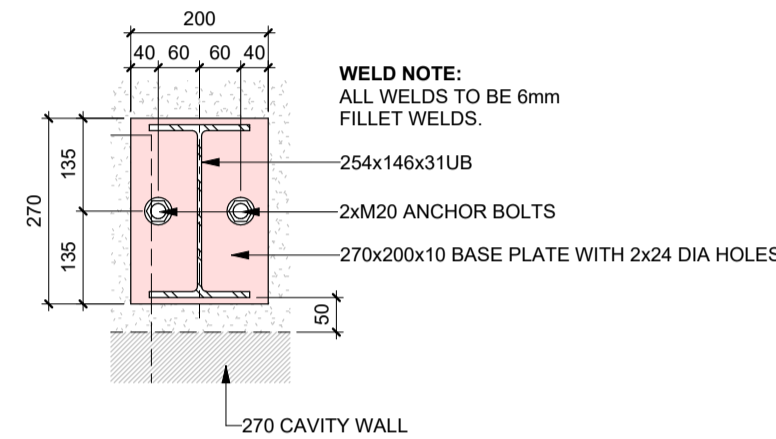
Section F2-2

1 : 5



Section F2-3

1 : 5



FRAME TYPE 2 - BASEPLATE

1 : 10

GENERAL STRUCTURAL STEEL NOTES

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2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
3. ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
5. STRUCTURE TO BE STABILISED BY TEMPORARY BRACING AND PROPS DURING ERECTION.
6. NO CLADDING TO BE FIXED UNTIL ALL BRACING HAS BEEN INSTALLED AND STRUCTURE PROPERLY SECURED.
7. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANISED.
8. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
9. ALL STEELWORK EXPOSED TO THE ELEMENTS TO BE SHOT BLASTED AND THEREAFTER TO RECEIVE:
EPOXY ZINC RICH PRIMER
EPOXY MICACEOUS IRON OXIDE BARRIER
POLYURETHANE COLOUR TO BE APPROVED BY THE ENGINEER.
10. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE.
11. FIGURED DIMENSIONS ONLY TO BE USED, DRAWING IS NOT TO BE SCALED.
12. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT.
13. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECT'S DRAWINGS.
14. ALL BOLTS ARE M16 GRADE 8.8 UNLESS STATED OTHERWISE.
15. BR ROOF SHEETS TO BE 0.8MM THICK (TO CLIENT'S SPEC).
16. FLASHING TO BE 0.8MM THICK (TO CLIENT'S SPEC).

P1	INTERNAL CHECKING	2023-11-11	
NO	APPROVED	AMENDMENTS	DATE
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			
PR REGISTRATION NO. 201670266		DATE	

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LUKHOZI

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GOEBERHA, 6045

TEL 041 363 1984
EMAIL pa@lukhozi.co.za
WEB www.lukhozi.co.za

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT TITLE

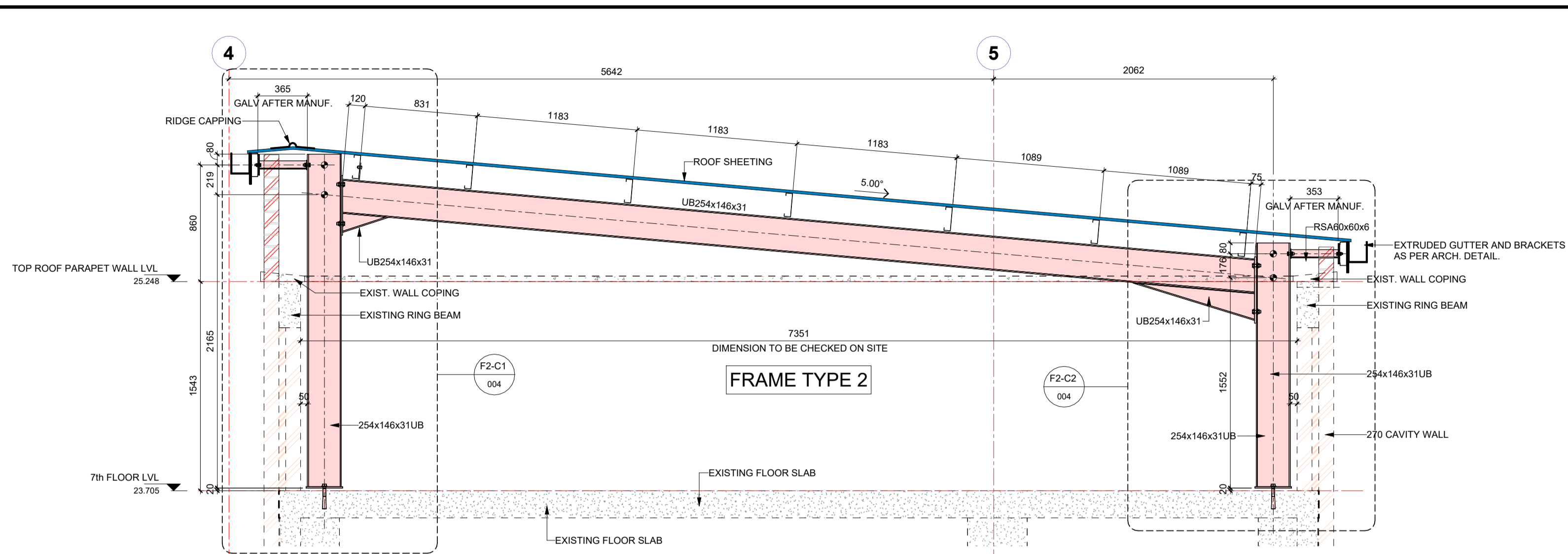
**UITENHAGE PROVINCIAL
HOSPITAL - NELSON MANDELA**

DRAWING TITLE

**STRUCTURAL INSTALLATION
ROOFS OVER 7th FLOOR
FRAME F2 - SHEET 2**

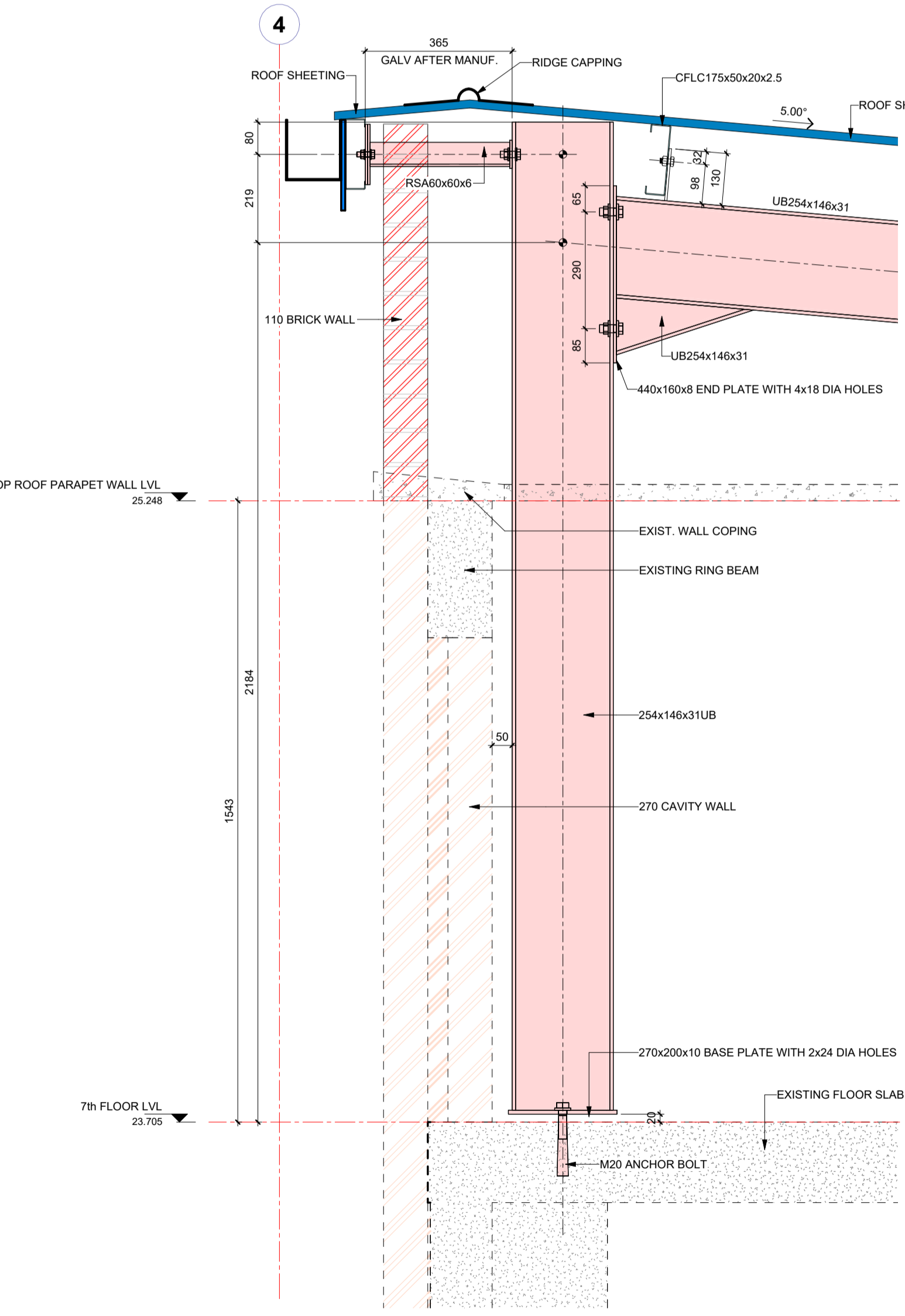
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AS SHOWN	SHEET OF	A1
DRAWING No.	REVISION	
1746-6-04-S-005	P1	

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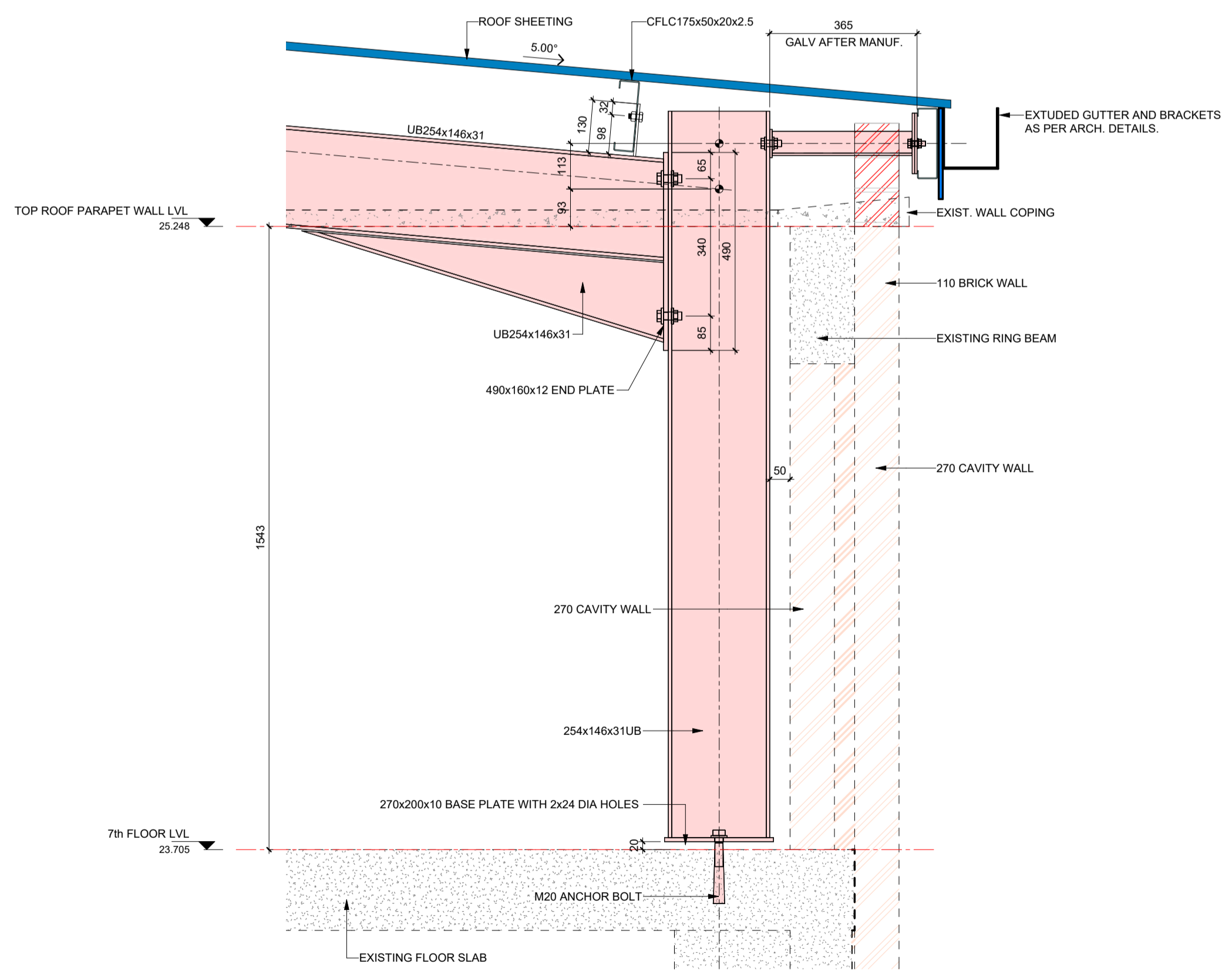
Section F2

1:25



Section F2 - Callout 1

1:10



Section F2 - Callout 2

1:10

- GENERAL STRUCTURAL STEEL NOTES:**
1. ALL STEEL TO BE GRADE S355JR.
 2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
 3. ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
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 12. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECT'S DRAWINGS.
 13. ALL BOLTS ARE A16 GRADE 8.8 UNLESS STATED OTHERWISE.
 14. ALL WELDS ARE 6MM FILLET WELDS UNLESS STATED OTHERWISE.
 15. BR ROOF SHEETS TO BE 0.8MM THICK (TO CLIENT'S SPEC)
 16. FLASHING TO BE 0.8MM THICK (TO CLIENT'S SPEC)

NO	APPROVED	AMENDMENTS	DATE
P1		INTERNAL CHECKING	2023-11-11
SURVEYED			
DRAWN			
DESIGNED			
CHECKED			
APPROVED			

PR REGISTRATION NO. 201670266 DATE

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CLIENT

Province of the EASTERN CAPE HEALTH

PROJECT TITLE

UITENHAGE PROVINCIAL HOSPITAL - NELSON MANDELA

DRAWING TITLE

**STRUCTURAL INSTALLATION
ROOFS OVER 7th FLOOR
FRAME F2 - SHEET 1**

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET OF	A1
DRAWING No.	REVISION	
1746-6-04-S-004	P1	

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ANNEXURE B – CIDB ENTERPRISE DEVELOPMENT CO- ORDINATOR

Enterprise Development Co-Ordinator

The Contractor is to price for an Enterprise Development Co-Ordinator, under the Enterprise Development Co-Ordinator item in the Preliminaries section of the Bills of Quantities.

2. The Enterprise Development Co-Ordinator shall

- Develop a project specific Enterprise Development plan to improve the targeted enterprises performance in the identified development areas and shall allocate resources to monitor progress in relation to improved performance; and
- Submit to the Employer's representative a monthly enterprise development report (Proforma -ED105P) which documents all mentoring activities that have taken place during the month and the progress made in improving the targeted enterprise's performance in the agreed developmental area, counter signed by the targeted enterprise.

3. Competence Criteria for the Enterprise Development Co-Ordinator

The enterprise development co-ordinator shall have the following competencies:

- Minimum experience of 5 years in the construction industry at Managerial Level as a Site agent, Contracts Manager, Business Development Manager or Enterprise Development Manager.
- Minimum experience of 2 years in training and development in Building or Construction; and
- National Diploma or B Degree in the Built Environment or Business Management

ANNEXURE C – CIDB B.U.I.L.D TEMPLATE FORMS



Annexure 1 Form A1 List of Recognised Skills Development Agencies

CIDB Recognised Skills Development Agencies								
No.	Name of SDA	SDA Registration Number	Status	Recognition Date End	Province	Contact Person	Contact Number	Email Address
01	CIDB SDA	SDA/ZA/16/00001	Active	01/04/2025	National	Pranveer Hariparsadh	012 482 7230	pranveerh@cidb.org.za
02						Thabelo Ramaru	012 482 7249	thabelor@cidb.org.za
03								
04								

FOR ILLUSTRATIVE PURPOSES

Annexure 2 - Form A2 Baseline Training Plan

CIDB SKILLS STANDARD
BASELINE TRAINING PLAN

Contractor Details				
Contractor Name:	123Building and construction			
CRS Number:	0000000			
Estimated start date	1 April 2021			
Estimated Completion date	2 May 2022			
Size of Organisation	Small (1-49 employees)	Medium (50-149 employees)	Large (≥150 employees)	
			✓	

Contractor Contact Details	
Name of Contact Person	Mr Xolani Smith
Designation of Contact Person	Construction Manager
Contact Details	Cell Number: XXX XXXX XXX
	Landline Number: XXX XXXX XXX
	Email address: Smith@123building.co.za



Construction Skills Development Goal (CSDG) Baseline Training Plan					
Training Method	Number of Employed Learners	Number of Unemployed Learners	Area/s of Specialisation/Trade	Duration of Placement	Total Notional Cost
Method 1: Skills Programme	1	3	Scaffolding	3 months	R57 000
Method 2: FET College Graduates/ Apprenticeship	0	2	Bricklaying and Plastering	12 months	R92 000
Method 3: P1 and P2 learners or a 240 credit qualification	0	0	-	-	-
Method 4: Candidacy with 360 credit qualification	0	1	Project Management	9 months	R184 500
Total	1	6			R333 500

Note: Refer to Table 3 in the Standard for Developing Skills through Infrastructure Contracts Government Gazette 43495 of 3 July 2020 for the notional costs

Contractor's
Representative
Name: _____

Designation: _____

Signature: _____

Date: _____

Employer's
Representative
Name: _____

Designation: _____

Signature: _____

Date: _____



Annexure 4 - Form A4 Supervisor Agreement

Supervisor/Learner Agreement

Memorandum of understanding between Supervisor and Learner

The Contractor is responsible for the effective management of the learning opportunities provided through the cidb *Standard for the Development of Skills through Infrastructure Contracts* (cidb Skills Standard). The attainment of successful learning outcomes and professional development of the learners is largely dependent on the relationship between the assigned Supervisor and the Learner. As a participant in the implementation of the cidb Skills Standard you agree to the Supervisor relationship and commit to endeavour through the challenges of a construction project to give value to the training programme.

The Responsibilities of a Supervisor to the Learner include:

- stimulating a passion for construction,
- sharing technical and practical knowledge,
- fostering the development of technical and leadership skills,
- facilitating networking within the working community,
- instilling an expectation of personal growth and learning by the Learner,
- developing knowledge and understanding in the areas of health, safety, environment, quality and production,
- inculcating professionalism and a desire for continual improvement by the Learner,
- creating a nurturing relationship that instils a sense of discipline and professional pride,
- giving constructive feedback and
- signing the Learners logbook.

Supervisor's name _____

Signature: _____ Date: _____

The Responsibilities of a Learner are:

- adhere to the Host Employer's onsite rules and policies,
- have an expectation of personal growth and learning,
- to be enthusiastic and motivated,
- to be open and accept supervision from the Supervisor and other colleagues,
- to develop a thorough understanding of health, safety, environment, quality and production,
- to have a positive attitude,
- to display a strong sense of discipline and to be conscious of time management,
- to operate within the team,
- to take the time to learn and practice new skills,

to make time to fill in your logbook and obtain the Supervisor's signature for completed tasks.

Intern's Name: _____ ID No: _____

Signature: _____ Date: _____

