



**COEGA DEVELOPMENT CORPORATION (PTY) LTD
CONTRACT No. CDC/377/25**

**UPGRADING OF SECURITY RELATED
INFRASTRUCTURE AT LIVINGSTONE PEPH
HOSPITAL COMPLEX AND ASSOCIATED REFERRAL
PHC FACILITIES**

VOLUME 2 (RETURNABLE DOCUMENTS)

CLOSING DATE: 8 December 2025

CLOSING TIME: 14:00

Classification: PUBLIC

<u>PREPARED FOR:</u> Coega Development Corporation (Pty) Ltd CDC's Main Office Coega Business Centre Cnr. Alcyon Rd and Zibuko St Zone 1 Coega IDZ, Port Elizabeth	<u>PREPARED BY:</u> SVP Quantity Surveyors and Project Managers (Pty) Ltd
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

NAME OF BIDDER: _____

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

VOLUME 1

PART T1: TENDERING PROCEDURES

- T1.1 Invitation to Tender
- T1.2 Tender Data
- T1.3 Functionality Scoring Schedule
- T1.4 Standard Conditions of Tender

PART C3 : SCOPE OF WORKS

- C3 Scope of Works
- C3.2 Drawings & Specifications
- C3.3 Occupational Health & Safety
- C3.4 Baseline Risk Assessment
- C3.5 Project Environmental Specification
- C3.6 Social & Economic & Wage Deliverables
- C3.7 SMME Specification
- C3.8 CIDB B.U.I.L.D Standard for Developing Skills Through Infrastructure Contracts (March 2023)
- C3.9 CIDB B.U.I.L.D Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in GG No. 36190 of 25 February 2013
- C3.10 Planning Specification for Contractors

PART C4 : SITE INFORMATION

- C4 Site Information
- C4.2 Geotechnical Report

VOLUME 2 **RESPONSIVENESS CHECKLIST**

Mandatory Requirements to be submitted
Additional Information required to be submitted by bidders
Tender Document Checklist

- SBD1 Invitation to Bid

PART C1: AGREEMENT AND CONTRACT DATA

- C1.1 Form of Offer and Acceptance
- C1.2.1 Contract Data: Part 1: Data Provided by the Employer
- C1.2.2 Contract Data: Part 2: Data provided by the Contractor
- C1.3 Pro-forma forms to be completed after award
- C1.3.1. Construction Guarantee
- C1.3.2. Agreement in terms of the Occupational Health and Safety Act

PART C2: PRICING DATA

- C2.1 Pricing Instructions
- C2.2 Bill of Quantities
P&G, Builders Work and H&S Bills of Quantities (Section 1 – 8)
Electrical Bills of Quantities (Section 9A, 9B & 9C, 10A, 10B & 10C, 11A, 11B & 11C)
- C2.3 Final Summary

PART T2: RETURNABLE DOCUMENTS

- SBD 4 Bidders Disclosure
- SBD 6.1 Preference Points Claim Form in Terms of The Preferential Procurement Regulations 2022
- C11 Supplier performance evaluation form
- T2.1.1 Form A Schedule of Work
- T2.1.2 Form B Proposed Key Personnel
- T2.1.3 Form C Schedule of proposed sub-contractors
- T2.1.4 Form D Particulars of Electrical Contractor
- T2.1.5 Form E Financial References
- T2.1.6 Form F Estimated Monthly Expenditure
- T2.1.7 Form G Details of Amendments and Qualifications
- T2.1.8 Form H POPIA Consent
- T2.1.9 Form J Schedule of Construction Plant & Equipment
- T2.1.10 Form K SMME and LEP Target Form
- T2.1.11 Form K1 Locality Targeting Form
- T2.1.12 Form L Record of Addenda to Tender Documents
- T2.1.13 Form M Proposed Construction Work Programme and Methodology
- T2.1.14 Form N B-BBEE Validation, CIDB & CSD
- T2.1.15 Form O Preliminary Programme
- T2.1.16 Form P Quality Control Systems and Procedures
- T2.1.17 Form Q Safety Health and environment

ALL PROJECT DRAWINGS AND ALL DRAWINGS FOR WHICH REFERENCE ARE MADE IN BILLS OF QUANTITIES ARE INCLUDED

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

RESPONSIVENESS CHECKLIST

1. MANDATORY REQUIREMENTS TO BE SUBMITTED–

Bidders are required to comply with all mandatory requirements and failure to comply and complete any of the mandatory requirements will result in submissions being deemed null and void and shall be considered “non-responsive” and therefore they will not be considered.

The following will be used to assess the responsiveness of Bidders:

ITEM NO.	DESCRIPTION
1)	Completed and signed SBD1 , in the case of a joint venture (JV) /consortium a separate SBD1 form in respect of each party to the JV must be completed and submitted. Where the SBD1 is completed in the name of the JV, the bid will not be considered further.
2)	Bidders shall be registered with the Construction Industry Development Board (CIDB) and should have an active CIDB Contractor grading of 8GB or higher. 7GB PE and lower are not eligible to bid. The CDC will verify the active grading through the CIDB website.
3)	A signed letter of intent to enter into a JV/Consortium, to be signed by all parties (Where applicable). Completed and Signed Certificate of Authority of Signatory TO BE SIGNED BY ALL BIDDING ENTITIES. Proof of Authority to sign may be submitted in a form of company resolution.
4)	Completed and Signed Attendance Register at the mandatory briefing meeting. The attendance register must be completed in the name of the bidding entity. One person cannot represent more than one bidding company. Failure to attend the compulsory briefing meeting will lead to the bidder's elimination the bid will not be evaluated further.
5)	Fully Completed and Signed Form of Offer.
6)	An original fully completed , priced and signed Bill of Quantities filled in with clearly legible permanent ink. Alternatively, Bidders may complete and print the electronic Bills of Quantities for submission but must initial each page. Failure to submit the hard copy priced Bill of Quantities will be grounds for disqualification.
7)	Completed and signed Bidders Disclosure (SBD4). In the case of a JV joint Venture / Consortium, a separate bidders disclosure form in respect of each party to the JV must be completed and submitted). Where the SBD4 is completed in the name of the JV, the bid will not be considered further.
8)	The Entity must provide certified copies of qualifications for the following resources to fulfil the following roles: (a) Contracts Manager: NQF Level 7 (or higher) qualification in the built environment (b) Site Agent: Minimum NQF Level 6 (or higher) qualification in the in the built environment

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

PROJECT SPECIFIC REQUIREMENTS/ ADDITIONAL INFORMATION

ITEM NO.	DESCRIPTION (All documents below are required and highlighted under functionality)
1)	As per the amended construction codes, companies with less than 51% black shareholding (QSEs & Generics) are to submit a valid SANAS Accredited B-BBEE Verification Certificate (with the full applicable B-BBEE elements) QSEs with at least 51% or 100% black shareholding and EMEs with an annual turnover of R3,0 million or more are required to submit a B-BBEE verification certificate from a SANAS accredited verification agency as they have to comply with the 40% sub-minimum requirement on the QSE Skills Scorecard to avoid being discounted a level. EMEs with a turnover of less than R3,0 million are exempt from complying with the subminimum requirement and may submit an affidavit or a certificate issued by CIPC, confirming their ownership and annual turnover. In case of a Joint Venture (JV) / Consortium, a consolidated B-BBEE certificate would be required, and it must be accompanied by individual B-BBEE Certificates/affidavits of their entities to confirm the type of enterprise.
2)	<p>Supporting documents on project imperatives:</p> <ul style="list-style-type: none"> (a) Plans for promoting and managing safety, health and environmental issues during execution of the project. (b) Plans for monitoring and applying quality assurance principles in the execution of the project. (c) Plans for addressing socio-economic issues (with specifics on numbers to be achieved) which include: <ul style="list-style-type: none"> (i) Maximisation of job opportunities (labour histograms); (ii) Use of local material/local suppliers; and (iii) Training of labour (non-accredited and accredited training)
3)	Provide information that covers the level of education and training, and the positions held of the key staff /personnel (specific to the Contracts Manager, Site Agent and Foreman including in the form of a CV. In order to determine the period of relevant experience for the purpose of allocating scores. The CV must set out, at a minimum, the start and end date of each job/ work assignment with a brief description of the work undertaken during that period. Please provide copies of qualifications. If copies of qualifications are not provided, a score for qualifications will not be allocated. Form T2.1.2B shall be fully completed.
4)	Proof of available capital for the execution of this project in the form of confirmed credit line with banking institution and letters of confirmation of supplier credit. In order for Bank Letters to contribute to the score, the letter must set out a Rand value that the contractor is "good for". An alphabetical rating only - I.e. "A" or "B" etc. will not attract a score.
5)	Bidders must complete and sign the POPI Act form. In the case of a JV / Consortium, a separate form in respect of each party to the JV must be completed.
6)	A Completed and signed SBD 6.1 preference points claim Form in terms of the Preferential Procurement Regulations 2022.
7)	Access/Ownership (availability) of plant and equipment. In case of hiring key plant, a letter confirming the willingness of the hirer to hire equipment to the bidder.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

ITEM NO.	DESCRIPTION (All documents below are required and highlighted under functionality)
8)	An SMME Implementation Plan – for the achievement of the set target of 35% local economic participation
9)	Past performance reports (To qualify for points under comparable projects, bidders are required to submit past performance reports. In the case of a Joint Venture (JV), past performance reports for all JV partners must be provided
10)	<p>Due Diligence In-LoCo Inspection of the Bidder / or JV may be carried out as part of the compliance evaluation. As part of its due diligence obligations, the CDC 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. <p>The existence of projects completed by the bidder/JV as declared</p>

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

TENDER DOCUMENT CHECKLIST

Bidders must complete this document checklist to ensure that all information is completed in the Tender Document.

ITEMS		CHECKED Contractor
1)	Correct Tender Offer of Amount carried forward to Cover Page and Form of Offer and Acceptance in Section C1	
2)	All pages requiring signatures signed by Bidder	
3)	Bills of Quantities (incl. priced P&G, H&S BoQs and electrical BOQ's)	
i)	Section Summaries and Final Summary Completed in BLACK INK	
ii)	Corrections crossed out and initialled	
4)	All returnable Documents and Schedules submitted	
	Authority for Signatory	
A	Schedule of Work carried out by Bidder	
B	Proposed Key Personnel	
C	Schedule of Proposed-Subcontractors	
D	Particulars of Electrical Contractor	
E	Financial References	
F	Estimated Monthly Expenditure	
G	Details of Amendments and Qualifications	
H	Protection Of Personal Information: Consent	
I	Schedule of Construction Plant & Equipment	
K	Form K SMME/QSE/EME CPG Declaration	
	Form K1 Locality Targeting Form	
L	Record of Addenda to Tender Document	
M	Proposed construction work programme and methodology	
N	BBBEE Validation & CIDB Certificate & CSD	
O	Preliminary programme	
P	Quality Control System and Procedures	
Q	Safety, health and Environment	
SBD 1	Invitation to Bid	
SBD 4	Bidders Disclosure form	
SBD 6.1	Preference Points claim form	
C11	Supplier performance evaluation form	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

SBD 1

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)				
BID NUMBER:	CDC/377/25	CLOSING DATE: 8 December 2025	CLOSING TIME:	14h00
DESCRIPTION	UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES			
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)				
CDC's Main Office, Coega Business Centre, Cnr. Alcyon Rd and Zibuko St, Zone 1, Coega IDZ, Port Elizabeth. Bids are to be placed in the Document Control Office at the reception area of CDC's Main Office				
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:	
CONTACT PERSON	Ms Zine Mtanda		CONTACT PERSON	Ms. Zine Mtanda
TELEPHONE NUMBER			TELEPHONE NUMBER	
FACSIMILE NUMBER			FACSIMILE NUMBER	
E-MAIL ADDRESS	dohtenders@coega.co.za		E-MAIL ADDRESS	dohtenders@coega.co.za
SUPPLIER INFORMATION				
NAME OF BIDDER				
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
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS				
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? <input type="checkbox"/> YES <input type="checkbox"/> NO				
DOES THE ENTITY HAVE A BRANCH IN THE RSA? <input type="checkbox"/> YES <input type="checkbox"/> NO				
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? YES <input type="checkbox"/> NO <input type="checkbox"/>				
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? YES <input type="checkbox"/> NO <input type="checkbox"/>				
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? <input type="checkbox"/> YES <input type="checkbox"/> NO				
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.				

**PART B
TERMS AND CONDITIONS FOR BIDDING**

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
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.
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
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.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 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."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

(Proof of authority must be submitted e.g. company resolution)

DATE:

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

PART C1: AGREEMENT AND CONTRACT DATA

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

C1.1 Form of Offer and Acceptance Offer

The **Employer**, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of a contractor for **UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

The Bidder, 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

The Bidder, identified in the Offer signature block, has examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

By the representative of the Bidder, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the Bidder offers to perform all of the obligations and liabilities of the **JBCC Principal Building Agreement** 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 VAT IS:

R (in words)

.....
.....

R (in figures).....

THE OFFERED COST PARAMETERS TO PROVIDE THE WORKS, EXCLUSIVE OF VALUE ADDED TAX, ARE AS SET IN THE CONTRACT DATA.

THE OFFERED STAFF RATES TO PERFORM THE SERVICES, EXCLUSIVE OF VALUE ADDED TAX ARE AS SET OUT IN THE PRICING SCHEDULE.

THE OFFERED PRICES ARE AS STATED IN THE PRICING SCHEDULE.

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 including the Schedule of Deviations (if any) to the Bidder before the end of the agreed period of validity or other period as agreed, whereupon the Bidder becomes the party named as the **Contractor** in the conditions of contract identified in the Contract Data.

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED
REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

Signature(s)

Name(s)

Capacity

**for the
Bidder**

*(Insert name and address of
organisation)*

**Name &
signature of
witness**

Date

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

Acceptance

By signing this part of this Form of Offer and Acceptance, the **Employer** identified below accepts the Bidder'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 Bidder's Offer shall form an agreement between the Employer and the Bidder 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 Form of Offer and Acceptance)

Part C2 Pricing Data

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 listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the Bidder 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.

Deviations from and amendments to the draft contract as well as any changes to the terms of the Offer agreed by the Bidder 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 Bidder shall within Fourteen (14) working days of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), deliver to the Employer's agent (whose details are given in the Contract Data) proof of insurances, Safety, Health and Environmental Plans and any other documentation (except securities/ construction guarantees) 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 by the Contractor and the Employer shall be entitled at his discretion to terminate this agreement.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

The Bidder shall within Twenty-one (21) working days of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), deliver to the Employer's agent (whose details are given in the Contract Data) securities/ construction guarantees to be provided in terms of the conditions of contract identified in the Contract Data. Failure to fulfil this obligation in accordance with those terms shall constitute a repudiation of this agreement by the Contractor and the Employer shall be entitled at his discretion to terminate this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the Bidder receives one fully completed copy of this document, including the Schedule of Deviations (if any). Unless the Bidder (now **Contractor**) within Five (5) 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.

Signature(s)

Name(s)

Capacity

**for the
Employer**

*(Insert name and address of
organisation)*

**Name &
signature of
witness**

Date

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

Schedule of Deviations

1 Subject:

Details:

2

Subject

Details:

3 Subject

Details:

4 Subject

Details:

5 Subject

Details:

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

By the duly authorised representatives signing this agreement, the Employer and the Bidder 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 returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Bidder and the Employer during this process of offer and acceptance.

By the duly authorised representatives signing this agreement, the Employer and the Bidder agree to and accept the foregoing schedule of deviations as the only deviations from the draft contract, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Bidder 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 documents and the receipt by the Bidder of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

Signature(s)

Name(s)

Capacity

**For the
Employer**

.....
(Insert name and address of
organisation

**Name and
signature of
witness**

Date

Signature(s)

Name(s)

Capacity

**For the
Contractor**

.....
(Insert name and address of
organisation

**Name and
signature of
witness**

Date

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

C.1.2.1 Contract Data

The Conditions of Contract are the ***JBCC Series 2000 Principal Building Agreement (Edition 6.2, May 2018)***, published by the Joint Building Contracts Committee Inc. Copies of these documents may be obtained from the **Association of South African Quantity Surveyors (011) 315 4140, the Master Builders Association (011)205 9000, the South African Association of Consulting Engineers (011) 463 2022 or the South African Institute of Architects (011) 486 0684.**

Each item of data given below is cross-referenced to the clause in the JBCC Principal Agreement to which it mainly applies.

Part 1: Data provided by the Employer

JBCC Clause	Data	
A 1.0 [1.1]	Works :	
	Project Name :	UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES
	Reference Number:	CDC/377/25
	Works Description :	Refer to Part C3 - Scope of Work
A 2.0 [1.1]	Site :	
	Erf/ Stand Number	Refer to Part C4 – Site information
	Township/ Suburb	PE Provincial Hospital is in Mount Croix, Gqeberha. Livingstone Hospital is in Korsten, Gqeberha. Protea Flats is in Central, Gqeberha
	Site Address	Refer to document C4 – Site information
	Local Authority	Nelson Mandela Bay Municipality - Gqeberha
A 3.0 [1.1]	Employer :	
	Official Name of Organ of State /Public Sector Body	Coega Development Corporation (Pty) Ltd
	Business registration number	1982/003891/07
	VAT/GST number	403 011 9947
	Country	South Africa
	Employer's representative Name	Visa Barnes
	Telephone number	N/A

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

	E-mail	N/A	
	Mobile number	N/A	
	Postal address	Coega Business Centre, Cnr. Alcyon Rd and Zibuko St, Zone 1, Coega IDZ, Port Elizabeth	
	Physical address	Coega Business Centre, Cnr. Alcyon Rd and Zibuko St, Zone 1, Coega IDZ, Port Elizabeth	
A 4.0 [1.1]	Principal Agent :		
	Name	Sakhiwo FM Consortium (Pty) Ltd represented by SVP Quantity Surveyors & Project Managers (Pty) Ltd	
	Legal entity of above	Sakhiwo FM Consortium (Pty) Ltd	
	Practice number	15165607	
	Country	South Africa	
	Contract Person	N/A	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	N/A	
	Physical address	N/A	
A 5.0 [1.1]	Agent (1) :	Discipline :	Architect
	Name	B4 Architects CC	
	Legal entity of above	B4 Architects CC	
	Practice number	2011/088028/23	
	Country	South Africa	
	Contract Person	N/A	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	N/A	
	Physical address	Unit 12, Bloomingdales Office Park, 34 Ninth Avenue, Walmer, Gqeberha, 6070	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

A 7.0 [1.1]	Agent (2) :	Discipline :	Quantity Surveyor
	Name	SVP Quantity Surveyors & Project Managers (Pty) Ltd	
	Legal entity of above	SVP Quantity Surveyors & Project Managers (Pty) Ltd	
	Practice number	15165607	
	Country	South Africa	
	Contract Person	N/A	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	N/A	
	Physical address	N/A	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

A 7.0 [1.1]	Agent (3) :	Discipline :	Electrical Engineer
	Name	RNA Consulting Engineers (Pty) Ltd	
	Legal entity of above	RNA Consulting Engineers (Pty) Ltd	
	Practice number	2021/724549/07	
	Country	South Africa	
	Contract Person	N/A	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	N/A	
	Physical address	N/A	
A 8.0 [1.1]	Agent (4) :	Discipline :	Civil / Structural Engineer
	Name	Keon Consulting Engineers	
	Legal entity of above	Keon Consulting Engineers	
	Practice number	2017/202137/07	
	Country	South Africa	
	Contract Person	N/A	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	N/A	
	Physical address	N/A	
A 9.0 [1.1]	Agent (5) :	Discipline :	Health and Safety
	Name	Xaks Consulting (Pty) Ltd	
	Legal entity of above	Xaks Consulting (Pty) Ltd	
	Practice number	2016/517864/07	
	Country	South Africa	
	Contract Person	N/A	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	N/A	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

A 10.0 [1.1]	Agent (6) :	Discipline :	Socio Facilitation
	Name	Coega Development Corporation (Pty) Ltd – Human Capital Solutions	
	Legal entity of above	Coega Development Corporation (Pty) Ltd	
	Practice number	1982/003891/07	
	Country	South Africa	
	Contract Person	Zola Nyamanda	
	Telephone number	N/A	
	Mobile Number	N/A	
	E-mail	N/A	
	Postal address	Coega Business Centre, Cnr. Alcyon Rd and Zibuko St, Zone 1, Coega IDZ, Port Elizabeth	
	Physical address	Coega Business Centre, Cnr. Alcyon Rd and Zibuko St, Zone 1, Coega IDZ, Port Elizabeth	

PART B - CONTRACT INFORMATION

JBCC Clause	Data	
B 1.0 [1.1]	Definitions :	
	Bills of quantities: System/Method of measurement	The Bills of Quantities were drawn up in accordance with the measurement system stated in Part C2: Pricing Data
B 2.0 [2.1]	Law, regulations and notices :	
	Law applicable to the works, state country [2.1]	The governing law is the law of the Republic of South Africa. The parties consent to the jurisdiction of the Gqeberha (Port Elizabeth) High Court Office for the purposes of this clause.
B 3.0 [3.2]	Offer and Acceptance :	
	Currency applicable to this agreement [3.2]	South African Rand (ZAR)
[3.3]	Add to the clause: Formal signatures in the Form of Offer and Acceptance are required to render this agreement binding.	
B 4.0 [5.0] [5.2] [5.6]	Documents :	
	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]	3 Sets of complete documents
[5.1]	Documents comprising the agreement	Add the following:

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

		<p>The documents forming the agreement are to be taken as mutually explanatory of one another and for the purpose of interpretation, the priority of the documents shall be in accordance with the following sequence:</p> <p>(a) Form of Offer and Acceptance (b) The Schedule of Deviations (c) This Contract Data; (d) The standard JBCC building agreement Ed 6.2 May 2018. 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) The Drawings (f) The Specifications (g) The Bills of Quantities. If an ambiguity or discrepancy is found in the documents, the Principal Agent shall issue any necessary clarification or instruction</p>				
	Contract drawings	Contract drawings are contained in Part C3.2 (Book 1).				
B 5.0 [6.0] [6.2]	Employer's Agent :					
[6.3]	Authority is delegated to the following agents to issue contract instructions and perform duties for specific aspects of the works [6.2]	Principal Agent Architect Engineers Health & Safety Consultant				
	Principal agent's and agents' interest or involvement in the works other than a professional interest [6.3]	N/A				
B6.0 [10.0]	INSURANCES :					
	Insurances by Contractor	Amount including tax	Deductible amount including tax			
	<table border="1"> <tr> <td>Yes/No?</td> <td>Yes</td> </tr> </table>	Yes/No?	Yes			
Yes/No?	Yes					
[10.1.1]	Contracts works insurance to be effected by: CONTRACTOR	Contract sum plus 20%	with deductible of 5%			
[10.1.2]	Supplementary/special insurance to be effected by: CONTRACTOR	Contract sum plus 20%	with deductible of 5%			
[10.1.3]	Public liability insurance to be effected by: CONTRACTOR	R 5 000 000.00	with deductible of 5%			
[10.1.4]	Removal of lateral support insurance to be effected by: Not applicable	N/A	N/A			
[10.1.5]	Other insurances to be effected by: Not applicable	N/A	N/A			
B7.0 [12.1] [12.1.2]	Obligations of the employer:					
	Existing premises will be in use and occupied [12.1.2]	Yes/No?	Yes			
[12.1.2]	If Yes, description	PE Provincial Hospital and Livingstone Hospital are working hospitals and construction will take place within these premises. Protea Flats are currently occupied, on all other floors, however working area in				

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

		penthouse is vacant. The Contractor will, throughout the entire period of the works, be responsible for the proper and adequate protection of property and the public and ECDOH 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, 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 and for their eventual removal and for making good. All additional temporary fencing hoardings etc. required, not measured in Bills of Quantities must be priced for in the Preliminaries of these Bills of Quantities		
	Restriction of working hours [12.1.2]		Yes/No?	Yes
	If Yes, description	The completion of the project is urgent and work shall be executed during normal working hours i.e. 8h00 until 17h00 daily on week days. 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		
[12.1.3]	Natural features and known services to be preserved by the contractor [12.1.3]		Yes/No?	No
	If Yes, description	N/A		
[12.1.4]	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 shall be defined at Site Handover		
[12.1.10]	Supply of free issue [12.1.10]		Yes/No?	No
	If Yes, description	N/A		
B8.0 [14.0]	Nominated Subcontractor's:			
	Yes/no ?	No	If yes, description of specialisation	
	Specialisation 1		N/A	
B9.0 [15.0]	Selected Subcontractor's:			
	Yes/no ?	No	If yes, description of specialisation	
	Specialisation 1		N/A	
B10.0 [16.0]	Direct Subcontractor's:			
	Yes/no ?	No	If yes, description of extent of works	
[12.1.11]	Extent of works [12.1.11]		N/A	
B11.0 [20.1]	Description of sections:			
	Sectional work completion?		Yes	If yes, description of sections
	Section No.1		Work Package 1 - Livingstone Hospital	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

		Contractor's site establishment / camp, replace existing dilapidated fencing with new high security fencing and flat wrap razor wire, minor renovations to gatehouse, install perimeter lighting, install conduits, sleeves, poles for CCTV cameras and CCTV installation. (Maximum duration 12 Calendar Months including builders' holiday)
	Section No.2	<p>Work Package 2 - Replacement of structural steel staircase at Protea Flats</p> <p>Contractor's site establishment / camp, install temporary fire escape for 11-storey building, remove existing fire escape staircase and metal panels, construct new steel fire escape (11 stories high) (Maximum duration of 6 calendar months including builders' holiday)</p>
	Section No.3	<p>Work Package 3 - Renovations to Protea Flats</p> <p>Repairs to the external envelope of the building, including the roof, internal and external facades.</p> <p>Alterations and full redecoration of the top floor "penthouse" to be suitable for accommodation. electrical installation, install perimeter lighting, install conduits, sleeves and poles for CCTV cameras and CCTV cameras.(Maximum duration of 12 calendar months including builders' holiday)</p>
	Section No. 4	<p>Work Package 4 - PE Provincial Hospital Entrance and Exit Gatehouses and work to Buckingham road & St Croix entrance</p> <p>Contractor's site establishment / camp, construction of 2 x Guard houses (entrance and exit guardhouses), repairs and extensions to existing columns and copings, new mesh fencing infill panels between columns, re-built damaged sections of boundary wall, new gate and fencing to pedestrian entrance, repairs to kerbs and stormwater, new high security mesh fencing and gate and minor works, electrical installation, install perimeter lighting, install conduits, sleeves and poles for CCTV cameras and CCTV cameras.(Maximum duration of 12 calendar months including builders' holiday)</p>
	Section No.5	<p>Work Package 5 - PE Provincial Hospital - St Croix Road, Northwood road, Eastborne Road and section of Northwood road</p> <p>Demolish existing concrete boundary wall in St Croix Road and fence with high security fencing, replace external concrete pavement and repair and repaint electrical substation.</p>

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

		Demolish existing concrete / brick wall boundary wall in Northwood Road and fence with high security fencing and replace external concrete pavement. Demolish existing brick boundary wall around Sandford CHC (Northwood Road and Eastbourne Road) and fence with new high security fencing, construct concrete retaining wall along Eastbourne Road and replace concrete pavement (Maximum duration of 12 calendar months including builders' holiday)
	Refer to scope of works (C3) for detailed scope and sequence of works The Employer retains his contractual right to instruct that the following work package (or any work package) can commence, while working on preceding work package, pending on the budget available within a financial year/s. The Employer further retains his contractual right to change the order of work packages, pending on budget allocation per financial year/s.	
B12.0 [12.1.5]	Possession of site:	
	Intended date of possession of the site Refer B17.0 [12.1.5; 12.2.22]	Possession of site shall be given to the Contractor after submission by the Contractor of the documents indicated in the Form of Offer and Acceptance and approval of the Contractor's Safety, Health and Environmental Plan.
[19.0]	Practical Completion (Works as a whole):	
[19.3]	Yes/No?	Yes
	Period for inspection by the principal agent [19.3]	10 Working days
[12.2.7]	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]	36 (thirty-six) calendar months from possession of site (including annual builders' holidays). <i>The contract duration includes a monthly allowance of 3 working days for adverse weather conditions [23.1.1] during which rainfall exceeds 10mm per day or excessive wind. (Maximum duration of construction per Section / Work package is prescribed)</i>
[24.0]	Penalty:	
[24.1]	Penalty for late completion [24.1]	R 0,01 per R100 of Contract Sum (overall)
[19.0]	Practical Completion (Sectional):	
[19.3]	Yes/No?	Yes. Each work package shall have a sectional commencement- and completion date. The successful bidder will be allowed to work on more than 1 work package in the order prescribed in the Bid Document, commencing with Work package No.1 The Employer retains his contractual right to instruct that the following work package (or any work package) can commence, while working on preceding work package, pending on the budget

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

		available within a financial year/s. The Employer further retains his contractual right to change the order of work packages, pending on budget allocation per financial year/s.	
	Period for inspection by the principal agent [19.3]	10 working days	Work package 1 – Livingstone Hospital
		10 working days	Work package 2 - Replacement of structural steel staircase at Protea Flats
		10 working days	Work Package 3 - Renovations to Protea flats
		10 working days	Work Package 4 - PE Provincial Hospital Entrance and Exit Gatehouses and work to Buckingham road & St Croix entrance
		10 working days	Work Package 5 - PE Provincial Hospital -St Croix Road, Northwood road, Eastborne Road and section of Northwood road
[12.2.7]	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]	12 Calendar months) including builders' holiday.	Work package 1 – Livingstone Hospital
		6 Calendar months including builders' holiday – may commence when Work package 1 commences	Work package 2 - Replacement of structural steel staircase at Protea Flats
		12 Calendar months including builders' holiday - Shall commence on completion of work package 1&2, but not prior to new financial year.	Work Package 3 - Renovations to Protea flats
		12 Calendar months including builders' holiday – May	Work Package 4 - PE Provincial Hospital Entrance and Exit Gatehouses and work to Buckingham road & St Croix entrance

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

		commence on completion of Work package 3, but not prior to new financial year.	
		12 Calendar months including builders' holiday. May commence on completion of Work package 3, but not prior to new financial year.	Work Package 5 - PE Provincial Hospital -St Croix Road, Northwood road, Eastborne Road and section of Northwood road
[24.0]	Penalty: R0.01 per R100 of the contract sum (Overall)		
[24.1]	Penalty for late completion [24.1] per section	R 0,0029 per R100 of Contract Sum	Work package 1 – Livingstone Hospital
		R 0,0010 per R100 of Contract Sum	Work package 2 - Replacement of structural steel staircase at Protea Flats
		R 0,0023 per R100 of Contract Sum	Work Package 3 - Renovations to Protea flats
		R 0,0022 per R100 of Contract Sum	Work Package 4 - PE Provincial Hospital Entrance and Exit Gatehouses and work to Buckingham road & St Croix entrance
		R 0,0016 per R100 of Contract Sum	Work Package 5 - PE Provincial Hospital - St Croix Road, Northwood road, Eastborne Road and section of Northwood road
[12.2.7]	Criteria to achieve practical completion not covered in the definition of practical completion	N/A	
B13.0 [21.0]	Defects liability period:		
	Extended defects liability period: Refer B17.0 [21.13]		Yes/No Yes
	If yes, description of applicable elements	All works	
B14.0 [25.0] [25.2]	Payments:		
	Date of month for issue of regular payment certificates [25.2]	The interim payment certificate is to be issued by the 30 th day of each month	
[25.3.4;26.9.5]	Contract price adjustment / Cost fluctuations [25.3.4; 26.9.5]	The contract value shall be adjusted according to CPAP if the construction period is more than 1 year. The base month for the application of CPAP is the month of closing of the tender.	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

	If yes, method to calculate	Haylett Formula	
	Employer shall pay the contractor within: [25.10]	Thirty (30) Calendar days	
B15.0 [30.0] [30.3.1;30.10]	Dispute resolution:		
	Adjudication [30.6.1; 30.10] Name of nominating body	Yes The parties shall appoint the adjudicator by mutual agreement	
[30.6.2]	Applicable rules for adjudication [30.6.2]	N/A	
[30.7.4;30.10]	Arbitration [30.7.4; 30.10] If Yes, name of nominating body * If No, then dispute will be referred to litigation	<input type="checkbox"/> Yes/No? <input checked="" type="checkbox"/> Yes	The dispute resolution body shall be the Association of Arbitrators (Southern Africa). Arbitration shall be applicable should Adjudication process / outcome be disputed
[30.7.5]	Applicable rules for arbitration [30.7.5]	N/A	
B16.0	JBCC® General Preliminaries - Selections:		
[P2.2]	Provisional bills of quantities [P2.2]	Yes/No?	Yes
[P2.3]	Availability of construction information [P2.3]	Yes/No?	Yes
[P3.1]	Previous work - dimensional accuracy - details of previous contract(s) [P3.1]	None	
[P3.2]	Previous work - defects - details of previous contract(s) [P3.2]	None	
[P3.3]	Inspection of adjoining properties - details [P3.3]	N/A	
[P4.1]	Handover of site in stages - specific requirements [P4.1]	YES - Refer to B11	
[P4.2]	Enclosure of the works - specific requirements [P4.2]	YES – Hoarding to working areas	
[P4.3]	Geotechnical and other investigations - specific requirements [P4.3]	N/A	
[P4.5]	Existing premises occupied - details [P4.5]	Working Areas will not be occupied however PEPH and Livingstone Hospital will remain operational hospitals. Floors 1-10 at Protea flats will be occupied during construction – penthouse will be vacant	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

[P4.6]	Services - known - specific requirements [P4.6]	N/A		
[P8.1]	Water [8.1]	By Contractor	Yes/No?	Yes
		By Employer	Yes/No?	No
		By Employer - metered	Yes/No?	No
[P8.2]	Electricity [8.2]	By Contractor	Yes/No?	Yes
		By Employer	Yes/No?	No
		By Employer - metered	Yes/No?	No
[P8.3]	Ablution and welfare facilities [8.3]	By Contractor	Yes/No?	Yes
		By Employer	Yes/No?	No
[P8.4]	Communication facilities - specific requirements [P8.4]	YES – no specific requirements		
[P11.1]	Protection of the works - specific requirements [P11.1]	YES – no specific requirements		
[P11.2]	Protection / isolation of existing works and works occupied in sections - specific requirements [P11.2]	YES – no specific requirements		
[P11.5]	Disturbance - specific requirements [P11.5]	N/A		
[P11.6]	Environmental disturbance - specific requirements [P11.6]	N/A		

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

B17.0	Changes made to JBCC® documentation
1.1	<p>Definitions</p> <p>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</p> <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 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</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), 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, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975), calculated as simple interest, in respect of debts owing by the State</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>
3.0	<p>Offer and Acceptance</p> <p>Amend 3.3 to read as follows:</p> <p>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]</p>
6.0	<p>Employer's Agents</p> <p>Add the following as 6.7:</p> <p>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</p>
9.0	<p>Indemnities</p> <p>9.2.7: Add the following to the end of the first sentence: "... due to no fault of the contractor"</p>
10.0	<p>Insurances</p> <p>Add the following as 10.1.5.1:</p> <p>Hi Risk Insurance</p>

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

	<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>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> <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</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 possession of the site, but before commencement of the works, submit to the employer proof of such insurance policy, if requested to do so</p> <p>10.1.5.1.4</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>11.0</p>	<p>Securities</p> <p>Amend 11.10 to read as follows:</p> <p>There shall be no lien or right of retention held by any contractor in respect of the works executed on site</p>
<p>12.0</p>	<p>Obligations of the Parties</p>

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

	<p>Amend 12.1.5 to read as follows:</p> <p>Give possession of the site to the contractor within ten (10) working days of the contractor complying with the terms of 12.2.22</p> <p>12.2.2: Not applicable</p> <p>Add the following as 12.2.22:</p> <p>Within fifteen (15) working days of the date of the agreement 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)</p>
19.0	<p>Practical Completion</p> <p>19.5: Delete the words “subject to the contractor’s lien or right of continuing possession of the works where this has not been waived”</p>
21.0	<p>Defects Liability Period and Final Completion</p> <p>Add the following as 21.13:</p> <p>The ninety (90) calendar days defects liability period for the works [21.1] is replaced with a period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements</p>
25.0	<p>Payment</p> <p>25.7.5: Not applicable</p> <p>25.10: Delete the words “and/or compensatory interest”</p> <p>25.14.2: Not applicable</p>
27.0	<p>Recovery of Expense and/or Loss</p> <p>27.1.5: Not applicable</p>
29.0	<p>Termination</p> <p>Add the following after 29.1.3:</p> <p>or where ...</p> <p>29.1.4: 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>29.1.5: The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract</p>
NEW	<p>The contractor shall achieve in the performance of the contract the Contract Skills Development Goals (CSDG) established in the CIDB Standard for Developing Skills through Infrastructure Contracts (published in GN 43495 of 3 July 2020)</p>
NEW	<p>The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) related to the engagement of targeted enterprises as established in the CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts (published in GN 36190 of 25 February 2013)</p>

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

C.1.2.2 Contract Data

The Conditions of Contract are the **JBCC Series 2000 Principal Building Agreement (Edition 6.2, May 2018)**, published by the Joint Building Contracts Committee Inc. Copies of these documents may be obtained from the **Association of South African Quantity Surveyors (011) 315 4140**, the **Master Builders Association (011)205 9000**, the **South African Association of Consulting Engineers (011) 463 2022** or the **South African Institute of Architects (011) 486 0684**.

Each item of data given below is cross-referenced to the clause in the JBCC Principal Agreement to which it mainly applies.

Part 2: Data provided by the Contractor

JBCC Clause	Data			
C1.0	SECURITIES			
[11.0]	Guarantee for construction: Select Option A or B		Select A or B	
[11.1.1]	Option A	Guarantee for construction (variable) by contractor		
[11.1.2]	Option B	Guarantee for construction (fixed) by contractor		
[11.5.1;11.10]	Guarantee for payment by employer - Not applicable			
[11.2.2; 11.3]	Advance payment, subject to a guarantee for advance payment - Not applicable			
C2.0	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	
C3.0	Payment of preliminaries			
[25.0]	Contractor's selection: Select Option A or B		Select A or B	
	Where the contractor does not select an option, Option A shall apply :			
	Payment methods :			
	<u>Option A</u> :			
	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			

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

	<p><u>Option B :</u></p> <p>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</p> <p>Lump sum contract :</p> <p>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</p>	
C4.0	Adjustment of preliminaries [26.9.4]	
[26.9.4]	Contractor's selection: Select Option A or B	Select A or B
	<p>Provision of particulars</p> <p>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</p> <p><u>Option A :</u></p> <p>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</p> <p><u>Option B :</u></p> <p>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</p>	
	<p>Adjustment methods</p> <p>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</p> <p><u>Option A :</u></p> <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>	

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

	<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</p> <p>contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]</p> <p><u>Option B :</u></p> <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>
	<p>Failure to provide particulars within the period stated</p> <p><u>Option A :</u></p> <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%)</p> <p>Value-related - Fifteen per cent (15%)</p> <p>Time-related - Seventy-five per cent (75%)</p> <p>Where the apportionment of the preliminaries per section is not provided, the categorised amounts shall be prorata</p> <p><u>Option B :</u></p> <p>Where the detailed breakdown of preliminaries amounts for Option B is not provided, Option A shall apply</p> <p>Lump sum contract</p> <p>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</p>

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX
AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

**C 1.3 PRO-FORMA FORMS TO BE COMPLETED BY THE SUCCESSFUL BIDDER
(AFTER THE AWARD)**

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

C 1.3.1 CONSTRUCTION GUARANTEE

The **Contractor** shall have the right to choose the Construction Guarantee as stated in the Contract Data

The Construction Guarantee options are:

- i. Variable Construction Guarantee of 10% of the Contract Sum. Yes No

- ii. Fixed construction guarantee (5%) and Payment Reduction (5%) Yes No

A Signed letter of Intent to be submitted with the returnable document

NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to below. No alterations or amendments of the wording of the pro-forma will be accepted.

The security guarantee to be provided shall not contain an expiry date.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

C1.3 CONSTRUCTION GUARANTEE (PRO-FORMA)

GUARANTOR DETAILS AND DEFINITIONS

Guarantor means

Physical address

.....

Guarantor's signatory 1 Capacity

Guarantor's signatory 2 Capacity

Employer means **Coega Development Corporation (Pty) Ltd**

Contractor means

Principal Agent means

Works means

Site means

Agreement means **The JBCC Series 2000 Principal Building Agreement and
Annexures**

Contract Sum means The accepted amount inclusive of tax of R.....

Amount in words.....

Guaranteed Sum means The maximum aggregate amount of R

Amount in words.....

Construction Guarantee (Insert Variable or Fixed).....

AGREEMENT DETAILS

Sections: Total sections (*No or n/a*)

Last section (No / Identification or n/a).....

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

Principal Agent issues: Interim payment certificates, Final payment certificate, Practical completion certificate/s and Final completion certificate/s

VARIABLE CONSTRUCTION GUARANTEE

1.1 Where a variable Construction Guarantee in terms of the Agreement has been selected this 1.0 with 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 Construction Guarantee and up to and including the date of the interim payment certificate certifying in excess of 50% of the contract sum

GUARANTOR'S LIABILITY

1.1.2 Reducing to the Guaranteed Sum (not exceeding 6.0% of the contract sum) in the amount of:
.....
Amount in words.....

PERIOD OF LIABILITY

From and including the day after the date of the aforesaid interim payment certificate and up to and including the date of the only practical completion certificate or last practical completion certificate where there are sections

GUARANTOR'S LIABILITY

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

PERIOD OF LIABILITY

From and including the day after the date of the applicable practical completion certificate and up to and including the date of the only final completion certificate or last final completion certificate where there are sections

GUARANTOR'S LIABILITY

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

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

amount of:

Amount in words.....

PERIOD OF LIABILITY

From and including the day after the date of the applicable final completion certificate and up to and including the date of the final payment certificate where payment is due to the Contractor, whereupon this Construction Guarantee shall expire. Where the final payment certificate reflects payment due to the Employer, this Construction Guarantee shall expire upon payment of the full amount certified

- 1.2 For avoidance of doubt 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 period in question

2.0 FIXED CONSTRUCTION GUARANTEE

- 2.1 Where a fixed Construction Guarantee in terms of the Agreement has been selected this 2.0 with 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

- 1.1.1 Maximum Guaranteed Sum (not exceeding 5.0% of the contract sum) in the amount of:.....
Amount in words.....

PERIOD OF LIABILITY

From and including the date of issue of this Construction Guarantee and up to and including the date of the only final completion certificate or the last final completion certificate where there are sections, upon which this Construction Guarantee shall expire

- 3.0 The Guarantor hereby acknowledges that:
 - 3.1 Any reference in this Guarantee 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 whatsoever to create a suretyship.
 - 3.2 Its obligation under this Guarantee is restricted to the payment of money.
- 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:
 - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Principal Agent in an interim or final payment certificate has not been made in terms of the Agreement and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of 4.1 and that the sum certified has still not been paid therefore the Employer calls up this Construction Guarantee and demands payment of the sum certified from the Guarantor
 - 4.3 A copy of the said payment certificate which entitles the Employer to receive payment in terms of the Agreement of the sum certified in 4.0
- 5.0 Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0 , the Guarantor undertakes to pay the Employer the Guaranteed Sum or the full outstanding balance upon

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

- receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Construction Guarantee stating that:
- 5.1 The Agreement has been terminated due to the Contractor's default and that the Construction Guarantee is called up in terms of 5.0. The demand shall enclose a copy of the notice of termination; or
 - 5.2 A business rescue, provisional sequestration or liquidation OFFICE order has been granted against the Contractor and that the Construction Guarantee is called up in terms of 5.0. The demand shall enclose a copy of the OFFICE order or Practitioner's notice of termination of business rescue or rejection of business rescue plan in terms of the Companies Act
 - 6.0 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4.0 and 5.0 shall not exceed the Guarantor's maximum liability in terms of 1.0 or 2.0
 - 7.0 Where the Guarantor is a registered insurer and has made payment in terms of 5.0, the Employer shall upon the date of issue of the final payment certificate submit an expense account to the Guarantor showing how all monies received in terms of the Construction Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Construction Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund
 - 8.0 Payment by the Guarantor in terms of 4.0 or 5.0 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor
 - 9.0 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer deems fit and the Guarantor shall not have the right to claim his release from this Construction Guarantee on account of any conduct alleged to be prejudicial to the Guarantor
 - 10.0 The Guarantor chooses the physical address as stated above for all purposes in connection herewith
 - 11.0 This Construction Guarantee is neither negotiable nor transferable and shall expire in terms of either 1.1.4 or 2.1, or payment in full of the Guaranteed Sum whichever is the earlier, where after no claims will be considered by the Guarantor. The original of this Construction Guarantee shall be returned to the Guarantor after it has expired
 - 12.0 This Construction Guarantee, with the required demand notices in terms of 4.0 or 5.0, shall be regarded as a liquid document for the purpose of obtaining a OFFICE order
 - 13.0 Where this Construction Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's OFFICES Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's OFFICE of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's OFFICE

Signed at Date

Guarantor's Signatory 1 Guarantor's Signatory 2

Witness Witness
Guarantor's seal or stamp

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

C 1.3.2. AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS (OHSA), ACT (85 OF 1993)

THIS AGREEMENT made at

on this the day of in the year

between Coega Development Corporation (Pty) Ltd (hereinafter called "the Employer") of the one part, herein represented by

in his capacity as

and

(hereinafter called "the Mandatory") of the other part, herein represented by

.....

in his capacity as

WHEREAS the Employer is desirous that certain works be constructed, viz **"UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25"** and has accepted a Tender by the Mandatory for the construction, completion and maintenance of such Works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act and Regulations (OHSA) Act (85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSED AS FOLLOWS:

1. The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.
2. This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Principal Agent requiring him to commence the execution of the Works, to either
 - (a) the date of the Certificate of Practical Completion issued in terms of Sub-Clause 24.4 of the JBCC Series 2000 Principal Building Agreement (Edition 5), or
 - (b) the date of termination of the Contract in terms of Clause 26.6 of the JBCC Series 2000 Principal Building Agreement (Edition 5).
3. The Mandatory declares himself to be conversant with the following:
 - (a) All the requirements, regulations and standards of the Occupational Health and Safety Act and Regulations (OHSA) Act (85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
 - (i) Section 8 : General duties of employers to their employees;
 - (ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;
 - (iii) Section 37 : Acts or omissions by employees or mandatories, and
 - (iv) Sub-section 37(2) relating to the purpose and meaning of this Agreement.
 - (b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

1.3.3 Certificate of Authority for Signatory to Agreement in terms of OHS Act (85 of 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the Board of Directors.

An example is given below:

"By resolution of the Board of Directors passed at a meeting held on 202.....,

Mr/Ms whose signature

appears below, has been duly authorised to sign the AGREEMENT in terms of THE

OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS (OHS) ACT (85 of 1993) on behalf of

.....

SIGNED ON BEHALF OF THE COMPANY :

IN HIS/HER CAPACITY AS :

DATE :

SIGNATURE OF SIGNATORY :

WITNESS: 1 2.

NAME (in capitals): 1 2.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

PART C2: PRICING DATA

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

C2.1 Pricing Instructions

1. The JBCC Series 2000 Principal Building Agreement (Edition 6.2, May 2018) Conditions of Contract, the Special Conditions of Contract, the Specifications, the Model Preambles for Trades and Description of Materials and Workmanship to All Trades and the Drawings shall be read in conjunction with the Bills of Quantities.

2 The Bills of Quantities comprise items covering the Contractor's profit and costs of general liabilities and of the construction of all Temporary and Permanent Works.

Although the Bidder is at liberty to insert a rate of his own choosing for each item in the Bills of Quantities, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bills of Quantities.

3 Descriptions in the Bills of Quantities may differ from those in the Standardized and Project Specifications. The descriptions and specifications in the Bills of Quantities will however take preference over these specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. Except for SANS 1200 A and 1200 AB all measurement and payment clauses (clause 8) of the standard specifications are deleted. The Bills of Quantities have been drawn up generally in accordance with the latest issue of Standard System of Measuring Building Work ¹. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bills of Quantities or, when relevant, to the Standard System of Measuring Building Work, the requirement of the Standard System of Measuring Building Work shall prevail.

4 Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.

5 The amounts and rates to be inserted in the Bills of Quantities shall be the fully inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.

6 An amount or rate shall be entered against each item in the Bills of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bills of Quantities.

The Bidder shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the tendered rates shall apply should work under these items actually be required.

Should the Bidder group a number of items together and tender one sum for such group of items, the single tendered sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed to be nil.

The tendered rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.

¹ The standard system of measurement of building work published by the Association of South African Quantity Surveyors.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

- 7 The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bills of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bills of Quantities and the quantities certified for payment.

Ordering of materials is not to be based on the Bills of Quantities, but only on information issued for construction purposes.

- 8 For the purposes of this Bills of Quantities, the following words shall have the meanings hereby assigned to them:

Unit : The unit of measurement for each item of work as defined in the Standard System of Measuring Builders Work

Quantity : The number of units of work for each item

Rate : The payment per unit of work at which the Bidder tenders to do the work

Amount : The quantity of an item multiplied by the tendered rate of the (same) item

Item or Sum : An amount tendered for an item or sum, the extent of which is described in the Bills of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

- 9 The units of measurement indicated in the Bills of Quantities are metric units. The following abbreviations may appear in the Bills of Quantities:

Item	=	1 off
No	=	Units measured in number
mm	=	millimetre
m	=	metre
km	=	kilometre
m ²	=	square metre
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
t	=	ton (1 000 kg)
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

- 10 The Bidder shall enter extended totals for each summary page and final summary in the Bills of Quantities in black ink.
- 11 These Bills of Quantities contain pages numbered consecutively in each Bill as indicated in the Index. Before the Contractor submits his Tender he should check the number of pages in every Bill and if any are found missing or duplicated, or the figures or writing indistinct, or the Bills of Quantities contain any obvious errors, he should apply to the Principal Agent at once and have same rectified, as no liability whatsoever will be admitted by the Principal Agent in the respect of errors in the Tender due to the foregoing.
- 12 No alteration, erasure or addition is to be made in the text of the Bills of Quantities. Should any alteration, erasure or addition be made, it will not be recognized but the original wording of the Bills of Quantities will be adhered to.
- 13 Quantities where indicated as provisional are measured provisional and are subject to re-measure on completion of the project.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

- 14 The totals (Value Added Tax excluded) on the final summaries are to be transferred to the Final Summary of the Provisional Bills of Quantities in Volume 2 for inclusion in the Total Tender Sum.
- 15 Completed Bills of Quantities for all trades clearly filled in, legible and in permanent ink are to be submitted with the tender offer

16 **Contract Skills Development**

- *The contract skills participation goals are specified in the Socio-economic specification. The value of the Contract skills participation goals,, expressed in Rand, shall be not be less than the contract amount multiplied by a percentage (%) factor given in **Table 2** in the Standard for Skills Development, for the applicable class of works.*

- **Payment to the contractor to accommodate Part/ full occupational qualification and Trade qualification:**

*The contractor shall, in accordance with the socio-economic specification, apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using **Table 3** in the Standard and this cost will be used to determine the value in Rand and will be added to the provisions for training as provided for in the Preliminary & General section in the Bill of Quantities/ Pricing schedules/ Activity schedule.*

- **Payment to the contractor to accommodate Work Integrated Learners and Candidates for Professional Registration:**

*The contractor shall apportion the cost of accommodating work integrated learners (P1 and P2 learners) and candidates for professional registration by using **Table 3** in the Standard and this cost will be used to determine the value in Rand and will be added to the provisions for training as provided for in the Preliminary & General section in the Bill of Quantities/ Pricing schedules/ Activity schedule.*

- **Supervisors and Mentors**

Payment to the contractor for supervision and mentoring Part/ Full occupational qualification and Trade qualification learners:

The employer shall make no provision for an additional payment item for the payment of the supervisor and/ or mentors for the provision of training as provided for in the Preliminary & General section of the Bill of quantities/ Pricing schedules/ Activity schedule for the training of part time/ full time occupational learners and/ or trade qualification learners.

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

- ***Payment to the contractor for supervision and mentoring Work Integrated Learners and Candidates for professional registration:***

*The contractor shall, in accordance with the socio-economic specification, apportion the cost of mentoring work integrated learners (P1 and P2 learners) and candidates for professional registration by using **Table 3** in the Standard and will form part of the cost as provided for in the Preliminary & General section in the Bill of Quantities/ Pricing schedules/ Activity schedules for training.*

17. An analysis of the Bills of Quantities and list of specific detailed quotations as part of returnable documents will be carried out during the Compliance evaluation by the Bid Evaluation Committee with the support of the Built Environment Professional Team, to determine if the check for:
 - 1) 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.
 - 2) If detailed quotations POE (Portfolio of evidence) on specific P&G (Preliminaries & General), OHS (Occupational Health & Safety) and specialist builders' items and installations were submitted in terms the Special Bid Conditions.
18. This review and analysis of the priced Bills of Quantities forms part of the process of balancing the priced Bills of Quantities received from bidders considered for award, which is a suspensive condition for award and contract signing. In the event where the analysis of the Bills of Quantities and In-Loco Inspections find inconsistencies and misrepresentation in terms of what has been declared in the Bid submission, the Bidder may be:
 - 1) eliminated and not be eligible to be evaluated under Stage 2 Price & Specific goals.
 - 2) notified of such inconsistencies and or misrepresentations in writing and allowed 7 (seven) days to rectify and or clarify such.
19. The Tender is to provide the following in respect of the following specialists subcontractor's or suppliers: Failure to provide the information will result in the tender being eliminated/ nonresponsive.
 - 1) CV which includes list of their previous projects regarding the specialist's work with Contactable references.
 - 2) Specialist's bodies of association/ registration if applicableCopy of quotation from specialist subcontractor or suppliers as listed in the mandatory returnable list
20. The Successful Bidder's Priced Bills of Quantities shall be balanced and agreed with the project Quantity Surveyor, prior to signing of contract. The Bidder shall provide all required information and assistance to the Quantity surveyor to complete the "Balanced Bills of Quantities, that will form part of the Contract documents.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

C2.2 BILLS OF QUANTITIES

Item No		Quantity	Rate	Amount
	<p><u>SECTION No. 1: PRELIMINARIES</u></p> <p><u>BILL No 1: PRELIMINARIES</u></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</p> <p>The JBCC Principal Building Agreement contract data form an integral part of this agreement</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, amended as hereinafter described</p> <p>The contractor is deemed to have referred to the above mentioned documents for the full intent and meaning of each clause</p> <p>The clauses in the above mentioned 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 above mentioned documents</p>			
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

Brought Forward			R
<p><u>PREAMBLES FOR TRADES</u></p> <p>The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors 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 General Preambles</p> <p>The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications</p> <p>If any discrepancy in any of the documents forming part of the contract is found, then the contract data and or amendments within the special conditions of contract and herein shall prevail in cases of conflict between any of the documents</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>			
Carried Forward			R
<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

Brought Forward

R

PRICING OF PRELIMINARIES

Contractors are required to price all individual items in the preliminary and general section of the bill of quantities and should not lump the items into a single sum or amount. This fully priced schedule must be included as part of the priced bill of quantities returnable with tender submission

In the event that the contractor, due to causes of his own making, fails to achieve the targets set out in his construction programme and his performance is not in accordance with the contract, payment of the time related Preliminaries will be paid in proportion to the value of the monthly progress payment and not in accordance with the projected cash flow for this item. The principal agent shall review the status quo and revert to paying the contractor in accordance with the contract once the contractor has demonstrated improvement of their performance and the principal agent is satisfied that the contractor is performing diligently.

Similarly the full amount of the fixed portion of the Preliminaries will be paid only once the successful contractor has fully complied with deliverables under this section

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)

SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

A **Clause 1.0 - Definitions and interpretation**

Pricing of bills of quantities

Carried Forward

R

Section No. 1
Bill No. 1
PRELIMINARIES AND GENERAL
Q532B

Brought Forward		R
<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. Value Added Tax (VAT) is to be separately stated on the summary page of these bills of quantities</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>Contractors are reminded that some of the works are to be undertaken under restrictive site conditions, over steep terrain, in dense vegetation, protected environments etc.</p> <p>In addition to the usual rates priced for standard measured items in the bills of quantities, contractors shall provide for all additional plant, labour, equipment, temporary works, temporary access ways and any additional supervision, transport, security, special plant and equipment to navigate restrictive site conditions and all things necessary for the completion of the works within this bills of quantities. The rates or amounts tendered for these items shall also include for the contractors management, attendance, profit, costs for removal and reinstatement of the ground conditions, vegetation, etc. in the state and condition prior to the works being undertaken.</p> <p>In addition to the usual rates priced for compliance with</p>		
Carried Forward		R
<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

Brought Forward			R	
<p>The items in these bills of quantities utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the contractor shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of international best practice</p> <p><u>Legal status of contractor</u></p> <p>If the contractor constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:</p> <ol style="list-style-type: none"> 1. These persons are deemed to be jointly and severally liable to the employer for the performance of this agreement 2. These persons shall notify the employer of their leader who has assigned authority to bind the contractor and each of these persons 3. The contractor shall not alter its composition or legal status without the prior written consent of the employer 				
A	F:..... V:..... T:.....	Item		
B	Clause 2.0 - Law , regulations and notices F:..... V:..... T:.....	Item		
C	Clause 3.0 - Offer and acceptance F:..... V:..... T:.....	Item		
D	Clause 4.0 - Cession and assignment F:..... V:..... T:.....	Item		
	Carried Forward		R	
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B				

	Brought Forward			R
A	<p><u>Clause 5.0 - Documents</u></p> <p>Value Added Tax</p> <p>Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT)</p> <p>Priced document as specification</p> <p>Clause 5.4 is deemed to be deleted</p> <p>The principal agent shall decide which portion of the priced document may be used as a specification of materials and goods or methods, if any</p>			
B	<p><u>Electronic issue of drawings</u></p> <p>Some drawings for this project will be issued electronically and the contractor shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.6]</p> <p>F:..... V:..... T:.....</p>	Item		
C	<p><u>Clause 6.0 - Employer's agents</u></p> <p>Delegated authority</p> <p>The authority of the principal agent to issue contract instructions [17.1] and perform duties for specific aspects of the works is delegated to agents as follows [6.2]. This does not preclude the principal agent from issuing such contract instructions:</p> <p>1. <u>Architect</u></p> <p>1.1 Duties [6.2] :</p> <p>The architect is responsible for the architectural design, functional design and quality inspection of the works</p> <p>1.2 Contract instructions [6.2; 17.1] :</p>			
	Carried Forward			R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

	Brought Forward		R
1.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement			
1.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works			
1.2.3 The site [13.0]			
1.2.4 Compliance with the law , regulations and bylaws [2.1]			
1.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works			
1.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
1.2.7 Removal or re-execution of work			
1.2.8 Removal or substitution of any materials and goods			
1.2.9 Protection of the works			
1.2.10 Making good physical loss and repairing damage to the works [23.2.2]			
1.2.11 Rectification of defects [21.2]			
1.2.12 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion			
	Carried Forward		R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R
1.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums			
1.2.14 Appointment of a subcontractor [14.0; 15.0]			
1.2.15 Work by direct contractors [16.0]			
1.2.16 On suspension or termination, protection of the works , removal of construction equipment and surplus materials and goods [29.0]			
2. <u>Quantity surveyor</u>			
2.1 Duties [6.2] :			
The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the works			
2.2 Contract instructions [6.2; 17.1] :			
2.2.1 No contract instructions delegated to the quantity surveyor			
3. <u>Civil and structural engineer</u>			
3.1 Duties [6.2] :			
The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the works			
3.2 Contract instructions [6.2; 17.1] :			
3.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement			
		Carried Forward	R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R
3.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works			
3.2.3 The site [13.0]			
3.2.4 Compliance with the law , regulations and bylaws [2.1]			
3.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works			
3.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
3.2.7 Removal or re-execution of work			
3.2.8 Removal or substitution of any materials and goods			
3.2.9 Protection of the works			
3.2.10 Making good physical loss and repairing damage to the works [23.2.2]			
3.2.11 Rectification of defects [21.2]			
3.2.12 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion			
3.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums			
4. <u>Mechanical engineer</u>			
	Carried Forward		R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R
<p>4.1 Duties [6.2] :</p> <p>The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the works and, where appointed by the employer for quantity surveying services in respect of the mechanical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions</p> <p>4.2 Contract instructions [6.2; 17.1] :</p> <p>4.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement</p> <p>4.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works</p> <p>4.2.3 Compliance with the law, regulations and bylaws [2.1]</p> <p>4.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works</p> <p>4.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]</p> <p>4.2.6 Removal or re-execution of work</p> <p>4.2.7 Removal or substitution of any materials and goods</p> <p>4.2.8 Protection of the works</p> <p>4.2.9 Making good physical loss and repairing damage to the works [23.2.2]</p> <p>4.2.10 Rectification of defects [21.2]</p>			
	Carried Forward		R
<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

Brought Forward			R
4.2.11 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion			
4.2.12 Expenditure of budgetary allowances , prime cost amounts and provisional sums			
5. <u>Electrical/Electronics engineer</u>			
5.1 Duties [6.2] :			
The electrical engineer is responsible for all aspects of electrical and electronics engineering design and quality inspection of the works and, where appointed by the employer for quantity surveying services in respect of the electrical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions			
5.2 Contract instructions [6.2; 17.1] :			
5.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement			
5.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works			
5.2.3 Compliance with the law , regulations and bylaws [2.1]			
5.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works			
5.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R
5.2.6	Removal or re-execution of work		
5.2.7	Removal or substitution of any materials and goods		
5.2.8	Protection of the works		
5.2.9	Making good physical loss and repairing damage to the works [23.2.2]		
5.2.10	Rectification of defects [21.2]		
5.2.11	A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion		
5.2.12	Expenditure of budgetary allowances, prime cost amounts and provisional sums		
6.	<u>Health and safety consultant</u>		
6.1	Duties [6.2] :		
	The health and safety consultant is responsible for all aspects of health and safety of the works . Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the works . He shall:		
6.1.1	Act as the employer's agent in terms of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended		
6.1.2	Prepare and update the health and safety specification for the works		
6.1.3	Agree with the contractor the health and safety plan for the works		
	Carried Forward		R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R
	6.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the act and regulations		
A	6.1.5 Stop the execution of the works where the agreed specification or plan is not adhered to		
B	F:..... V:..... T:.....	Item	
C	Clause 7.0 - Design responsibility F:..... V:..... T:.....	Item	
<u>Insurances and securities (A8-A11)</u>			
D	Clause 8.0 - Works risk F:..... V:..... T:.....	Item	
E	Clause 9.0 - Indemnities F:..... V:..... T:.....	Item	
F	Clause 10.0 - Insurances Clause 10.1.1 - Contracts Works Insurance 'the contractor shall be responsible for effecting and maintaining the contract works insurance for the full duration of the contract period. The insured amount for the full scope of works shall be 120% of the contract amount Clause 10.1.2 - Supplementary Insurance Clause 10.1.3 - Public Liability Insurance Clause 10.1.4 - Removal of Lateral Support Insurance - N/A Clause 10.1.5 - Other Insurances - N/A F:..... V:..... T:.....	Item	
<u>Clause 11.0 - Securities</u>			
Carried Forward			
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		R

	Brought Forward		R
A	<p>Clause 11.1 - Guarantee for construction</p> <p>F:..... V:..... T:.....</p> <p>The contractor shall provide to the employer a guarantee for construction within fifteen (15) working days of acceptance of the contractor's tender.</p> <p>Clause 11.5 - Guarantee for payment</p> <p>The employer shall not provide to the contractor a guarantee for payment. The contractor shall waive his lien or right of continuing possession of the works [11.10]</p> <p>F:..... V:..... T:.....</p> <p><u>Extension of waiver of lien</u></p> <p>The contractor shall ensure that a waiver of lien is included in all subcontracts and that the works executed on the site are kept free of all liens and other encumbrances at all times [11.10]</p> <p>F:..... V:..... T:.....</p> <p><u>Execution (A12 - A17)</u></p> <p>Clause 12.0 - Obligations of the parties</p> <p>Office accommodation</p> <p>The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation to accommodate 15 people, with table tables and chairs for meetings to be held on the site at each facility. Such offices shall be kept clean and fit for use at all times [12.2.18]</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward		R
A	<p>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 consultant at each facility. No subcontractor or supplier notice boards may be erected unless permission is granted by the principal agent for such notice boards to be erected [12.2.18]</p> <p>F:..... V:..... T:.....</p> <p><u>Statutory and other notices</u></p>	Item	
B	<p>The contractor shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the works by the contractor. The contractor shall pay all deposits or fees in this regard</p> <p>F:..... V:..... T:.....</p>	Item	
C	<p>It is, however, specifically recorded that the employer shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto</p> <p>F:..... V:..... T:.....</p>	Item	
D	<p>Clause 13.0 - Setting out</p> <p>F:..... V:..... T:.....</p>	Item	
E	<p>Clause 14.0 - Nominated subcontractors</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward		R
A	Clause 15.0 - Selected subcontractors F:..... V:..... T:.....	Item	
B	<u>Clause 16.0 - Direct contractors</u> In respect of direct contractors the contractor shall:		
C	1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials F:..... V:..... T:.....	Item	
D	2. Allow the use of personnel welfare facilities, where provided F:..... V:..... T:.....	Item	
E	3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation F:..... V:..... T:.....	Item	
F	4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc. provided by the contractor , in common with others having the like right, while it remains erected on the site [16.1] F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		

	Brought Forward		R
A	<p>Clause 17.0 - Contract instructions</p> <p>Site instructions</p> <p>Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor</p> <p>F:..... V:..... T:.....</p> <p><u>Completion (A18 - A24)</u></p>	Item	
B	Clause 18.0 - Interim completion	N/A	
C	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>	Item	
D	<p>Clause 20.0 - Completion in sections</p> <p>F:..... V:..... T:.....</p>	Item	
E	<p>Clause 21.0 - Defects liability period and final completion</p> <p>The maintenance period shall be 12 months.</p> <p>F:..... V:..... T:.....</p>	Item	
F	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward			R
A	<p><u>Clause 23.0 - Revision of the date for practical completion</u></p> <p>Adverse weather conditions</p> <p>The contract duration includes a monthly allowance of 3 working days for adverse weather conditions [23.1.1] during which rainfall exceeds 10mm per day or excessive wind. These days shall be reflected on the critical path of the construction programme. Where the programmed delays for adverse weather conditions exceed the actual delays incurred the date for practical completion will not be adjusted. Where the actual delays incurred for adverse weather conditions exceed the programmed delays and such delays have impacted on the critical path of the construction programme, the date for practical completion will be adjusted should the requirements of Clause 23.0 be satisfied</p> <p>F:..... V:..... T:.....</p>		Item	
B	<p>Substitution of materials and goods</p> <p>The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2]</p> <p>F:..... V:..... T:.....</p>		Item	
C	<p>Clause 24.0 - Penalty for late or non-completion</p> <p>F:..... V:..... T:.....</p>		Item	
	<p><u>Payment (A25 - A27)</u></p>			
D	<p><u>Clause 25.0 - Payment</u></p>			
	Carried Forward			R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

	Brought Forward		R
A	<p>Prices submitted</p> <p>Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing</p> <p>Clause 25 amended to read 'The employer shall pay to the contractor the amount certified in interim payment certificate within thirty (30) calendar days of the date of issue of the payment certificate or the contractors tax invoice whichever is the later date'</p> <p>Materials and goods stored off site shall not be included in the amount authorised for payment unless the requirements for an Advanced Payment Guarantee are met</p> <p>F:..... V:..... T:.....</p>	Item	
B	<p>Clause 26.0 - Adjustment of the contract value and final account</p> <p>F:..... V:..... T:.....</p>	Item	
C	<p>Fluctuations in costs</p> <p>All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5]</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward		R
A	<p>Claims from subcontractors</p> <p>The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6]</p> <p>F:..... V:..... T:.....</p>	Item	
B	<p>Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p> <p><u>Suspension and termination (A28 - A29)</u></p>	Item	
C	<p>Clause 28.0 - Suspension by the contractor</p> <p>F:..... V:..... T:.....</p>	Item	
D	<p>Clause 29.0 - Termination</p> <p>F:..... V:..... T:.....</p> <p><u>Dispute resolution (A30)</u></p>		
E	<p>Clause 30.0 - Dispute resolution</p> <p>F:..... V:..... T:.....</p>	Item	
F	<p><u>Agreement</u></p>		
G	<p>The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties</p> <p>F:..... V:..... T:.....</p>	Item	
H	<p><u>Contract data</u></p> <p>Tenderer's selections</p>		
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward		R	
A	Before submission of his tender the contractor is to complete the tenderer's selections in the contract data F:..... V:..... T:.....			
	<u>SECTION B: GENERAL PRELIMINARIES</u>			
	<u>Definitions and interpretation (B1)</u>			
B	Clause 1.1 - Definitions F:..... V:..... T:.....	Item		
C	Clause 1.2 - Interpretation F:..... V:..... T:.....	Item		
	<u>Documents (B2)</u>			
D	Clause 2.1 - Checking of documents F:..... V:..... T:.....	Item		
E	Clause 2.2 -Provisional Bills of quantities Yes F:..... V:..... T:.....	Item		
F	Multiple procurement A portion of the works are also measured in SMME Packages as a separate Section. F:..... V:..... T:.....	Item		
G	Clause 2.3 - Availability of construction information F:..... V:..... T:.....	Item		
H	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:.....	Item		
	Carried Forward		R	
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

Brought Forward			R
<u>Previous work and adjoining properties (B3)</u>			
A	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item	
B	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item	
C	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item	
<u>The site (B4)</u>			
D	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item	
E	Clause 4.2 - Enclosure of the works Hoarding will be required to isolate areas; this hoarding has been allowed for in the Bills of Quantities. F:..... V:..... T:.....	Item	
F	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item	
G	Clause 4.4 - Encroachments The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachment F:..... V:..... T:.....	Item	
H	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item	
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R
A	Clause 4.6 - Services - known F:..... V:..... T:.....	Item	
	<u>Management of contract (B5)</u>		
B	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item	
C	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item	
D	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item	
	<u>Samples, shop drawings and manufacturer's instructions (B6)</u>		
E	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item	
F	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item	
G	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item	
H	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item	
	<u>Deposits and fees (B7)</u>		
I	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		

	Brought Forward		R
	<u>Temporary services (B8)</u>		
A	Clause 8.1 - Water F:..... V:..... T:.....	Item	
B	Clause 8.2 - Electricity F:..... V:..... T:.....	Item	
C	Clause 8.3 - Ablution and welfare facilities Clause 8.3 - Ablution and welfare facilities in compliance to the provisions of the Construction Regulations 2014 issued in terms of the Occupational Health and Safety Act, 1993 as amended: Section (30): Sub-section (1)(a) - Shower facilities after consultation with the employees or the employees representatives, or at least one shower facility for every 15 persons; Sub-section (1)(b) - at least one sanitary facility for each sex and for every 30 workers; Sub-section (1)(c) - changing facilities for each sex and Sub-section (1)(d) - sheltered eating areas F:..... V:..... T:.....	Item	
D	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item	
	<u>Prime cost amounts (B9)</u>		
E	Clause 9.1 - prime cost amounts F:..... V:..... T:.....	Item	
	<u>Attendance on subcontractors (B10)</u>		
F	Clause 10.1 - General attendance F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		

	Brought Forward		R
A	Clause 10.2 - Special attendance F:..... V:..... T:..... General (B11)	Item	
B	Clause 11.1 - Protection of the works F:..... V:..... T:.....	Item	
C	Clause 11.2 - Protection/isolation of existing works and works occupied in sections F:..... V:..... T:.....	Item	
D	Clause 11.3 - Security of the works The contractor shall be briefed on the restrictions of movement, servitudes, access control, buildings in use, security requirements and security clearances and working hours, due to being occupied and under the employers control at all times. The contractor shall not extend his operations into any restricted or undefined areas. Work shall be carried out during normal working hours. Any extended times or approval or overtime work shall be considered and approved by the PA. The contractor shall comply with the employers rules for the control of delivery of materials and goods into the site and for the removal of such items from the site. The Contractor will be responsible for ensuring the security and protection of all material, hand tools, power tools, plant, equipment, machinery, etc. stored on the site. The Contractor will be required to make arrangements with the Employer, through the Principal Agent, for the use of and reimbursement for the security measures currently in force and operational on the site F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		

	Brought Forward		R
A	Clause 11.4 - Notice before covering work F:..... V:..... T:.....	Item	
B	<u>Clause 11.5 - Disturbance</u>		
C	Disturbance All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the construction period or contract value whatsoever F:..... V:..... T:.....	Item	
D	<u>Clause 11.6 - Environmental disturbance</u>		
E	Controlling all forms of pollution The contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the site during the construction period due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc. F:..... V:..... T:.....	Item	
F	The contractor is to ensure that all roads which border the site and are used by the contractor during the execution of the works are kept clean and free of any dirt or debris caused by the execution of the works F:..... V:..... T:.....	Item	
G	Clause 11.7 - Works cleaning and clearing F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		

	Brought Forward		R
A	Clause 11.8 - Vermin F:..... V:..... T:.....	Item	
B	Clause 11.9 - Overhand work F:..... V:..... T:.....	Item	
C	Clause 11.10 - Tenant installations F:..... V:..... T:.....	Item	
D	Clause 11.11 - Advertising F:..... V:..... T:.....	Item	
<u>SECTION C: SPECIFIC PRELIMINARIES</u>			
E	<u>Warranties for materials and workmanship</u> 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 final completion of the contract 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		
F	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 F:..... V:..... T:.....	Item	
Carried Forward			
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B		R

	Brought Forward		R
A	<p><u>Overtime</u></p> <p>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> <p>F:..... V:..... T:.....</p>	Item	
B	<p><u>Cooperation of the contractor for cost management</u></p> <p>It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the contract value does not exceed the budget</p> <p>F:..... V:..... T:.....</p>	Item	
C	<p><u>Health and safety</u></p>		
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward		R
A	<p>Without limiting the generality of the provisions of clause 2.0, the contractor's attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. It is specifically stated that the employer shall prepare a documented health and safety specification for the works and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price the Pricing schedule for Health, Safety and Environment as per the pricing schedule on Section 1 Bill no. 2, 3, 4, 5 & 6.</p> <p>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>F:..... V:..... T:.....</p>	Item	
B	<p><u>The contractor shall:</u></p> <ol style="list-style-type: none"> 1. Comply with the health and safety specification for the works 2. Prepare and agree with the health and safety consultant the health and safety plan for the works 3. Cooperate with the health and safety consultant in all respects 4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification 5. Conform to the conditions contained in the employer's health and safety specification <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward			R
A	<p>Reporting by the Contractor</p> <p>The Contractor is required to complete a CONTRACTOR'S MONTHLY REPORT which is to be submitted together with the Contractor's payment claim.</p> <p>Payment of the Contractor is conditional on this information being accurate and timeously provided.</p> <p>Payment shall be subject to the Contractor giving the Employer a tax invoice for the amount due.</p> <p>The Contractor is to take note of the following requirements -</p> <p>At the bottom of the CONTRACTOR MONTHLY REPORT, the Site Agent, Clerk of Works, CLO or Contractor must sign the document as proof that the people indicated have worked the number of days.</p> <p>F:..... V:..... T:.....</p>		Item	
B	<p>Advertising rights</p> <p>The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in meeting his obligations under this agreement</p> <p>F:..... V:..... T:.....</p>		Item	
	Carried Forward			R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

	Brought Forward		R
A	<p>Confidentiality</p> <p>The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works</p> <p>No information regarding this project shall be published or disclosed without the prior written consent of the employer</p> <p>F:..... V:..... T:.....</p>	Item	
B	<p>Media releases</p> <p>All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer</p> <p>The contractor together with his subcontractors shall not, without the prior written consent of the employer, cause any statement or advertisement connected with this project to be printed, screened or aired by the media</p> <p>F:..... V:..... T:.....</p>	Item	
C	<p>Socio-Economic Deliverables</p> <p>The Tenderer must allow for all costs (including any profit or attendance) associated with the administration, appointment, training and/or payment of the CLO, Built Environment Interns, Training of Local Labour, Students 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	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

	Brought Forward		R
A	<p>SMME Contractors as Sub-Contractors to the Principal Contractor</p> <p>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. A portion of the building work is allocated to SMME Sub-contractors (refer SMME PACKAGES section). 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. The Tenderer must also note that some SMME Packages as specified in the SMME PACKAGES section may consist of various smaller SMME sub-contractors within each specified package (split per link), the cost for this must be included in this item.</p> <p>Any additional costs that the Tenderer may deem applicable due to the use of SMME Sub-contractors, should be allowed for in this item (Preliminaries, OHS, Profit and Attendance, etc.), as no claim for any additional costs attributable 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	
B	<p>SMME Monitoring</p> <p>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 for Monitoring.</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>		

Brought Forward

R

SOCIO-ECONOMIC DELIVERABLES

A It is required that the contractor shall adhere to all Socio-Economic Deliverables as set out in the C3.6

Provision for pricing of all the main contractor's costs as stipulated in the deliverables L1.1, L1.2, L1.3, L1.4, L1.5, L1.6, L2, L3, L4, L5.1, L5.2, L5.3, L5.4, L6.1, L6.2, L7, L8, L9, L10, L11, L12 and L13 excluding the items covered under Section 7, Bill no. 1 Socio-Economic Deliverables, is made under this clause and are deemed to be priced hereunder and no additional claims in this regard shall be entertained

F:..... V:..... T:.....

Item

EMPLOYMENT OF SMME SUB-CONTRACTORS AS A CONDITION OF TENDER

B It is required that the contractor shall sub-contract 35% of the contract value (Excluding VAT, Escalation, Contingencies, HT equipment provisions and Socio-Economic provisions) of the contract including labour and material to EME's and QSE's as stipulated in Volume 2: Form K - SMME Target form

Provision for pricing of all the main contractor's costs as stipulated in Form K - SMME Target form is made under this clause and are deemed to be priced hereunder and no additional claims in this regard shall be entertained

F:..... V:..... T:.....

Item

Carried Forward

R

Section No. 1
Bill No. 1
PRELIMINARIES AND GENERAL
Q532B

Brought Forward

R

OCCUPATIONAL HEALTH AND SAFETY ACT

A 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 and Bills of Quantities in C3.3 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

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.

F:..... V:..... T:.....

Item

Carried Forward

R

Section No. 1
Bill No. 1
PRELIMINARIES AND GENERAL
Q532B

Brought Forward

R

ENVIRONMENTAL HEALTH AND SAFETY

A The contractor shall comply with all the requirements set out in the Environmental Health and Safety Specification

It is required of the contractor to thoroughly study the Environmental Health and Safety Specification in C3.3

The contractor must take note that compliance with the Environmental Health and Safety is compulsory.

Provision for pricing of the Environmental Health and Safety 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.

F:..... V:..... T:.....

Item

Carried Forward

R

Section No. 1
Bill No. 1
PRELIMINARIES AND GENERAL
Q532B

	Brought Forward		R
<u>SUMMARY OF CATEGORIES</u>			
PRELIMINARIES AND GENERAL TOTAL FOR ENTIRE PROJECT - WORK PACKAGE 1 - 5:			
Category : Fixed	R.....		
Category : Value	R.....		
Category : Time	R.....		
TOTAL PRELIMINARIES AND GENERAL - AMOUNT CARRIED TO FINAL SUMMARY:			
	R.....		
	Carried Forward		R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

	Brought Forward		R	
A	<p><u>PRELIMINARIES AND GENERAL COST PER WORK PACKAGE - FAILURE TO PROVIDE COST PER WORK PACKAGE WILL RESULT IN IMMEDIATE DISQUALIFICATION</u></p> <p>PRELIMINARIES AND GENERAL:</p> <p>WORK PACKAGE 1 - LIVINGSTONE HOSPITAL</p> <p>Category : Fixed R.....</p> <p>Category : Value R.....</p> <p>Category : Time R.....</p>	Item		Included
B	<p>PRELIMINARIES AND GENERAL:</p> <p>WORK PACKAGE 2 - REPLACEMENT OF STRUCTURAL STEEL STAIRCASE AT PROTEA FLATS</p> <p>Category : Fixed R.....</p> <p>Category : Value R.....</p> <p>Category : Time R.....</p>	Item		Included
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B</p>			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

	Brought Forward		R	
A	PRELIMINARIES AND GENERAL: WORK PACKAGE 3 - RENOVATIONS TO PROTEA FLATS Category : Fixed R..... Category : Value R..... Category : Time R.....	Item		Included
B	PRELIMINARIES AND GENERAL: WORK PACKAGE 4 - PE PROVINCIAL HOSPITAL ENTRANCE AND EXIT GATEHOUSES AND WORK TO BUCKINGHAM ROAD & ST CROIX ROAD Category : Fixed R..... Category : Value R..... Category : Time R.....	Item		Included
C	PRELIMINARIES AND GENERAL: WORK PACKAGE 5 - PE PROVINCIAL - ST CROIX ROAD, NORTHWOOD ROAD, EASTBORNE ROAD AND SECTION OF NORTHWOOD ROAD Category : Fixed R..... Category : Value R..... Category : Time R.....	Item		Included
	Carried Forward to Summary of Section No. 1		R	
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL Q532B			

Item No		Quantity	Rate	Amount
	<u>SECTION No. 1: HEALTH AND SAFETY BILLS OF QUANTITIES</u>			
	<u>BILL No 2: Health and Safety Bills of Quantities - Work package 1 Livingstone Hospital</u>			
	<u>Important note to Principal Contractor</u>			
	<u>Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act and Regulations, (Act 85 of 1993), read with Construction Regulations 2014, other relevant Regulations, It is imperative for the Contractor to familiarize him/herself on the Client's project specific requirements defined in the Project Specific Health and Safety Specifications when pricing the works. Specific requirements are defined in the Project Specific Health and Safety Specifications Pricing schedule for Health, Safety, Environmental Management</u>			
	<u>HEALTH AND SAFETY</u>			
A	One full time Construction Health and Safety Officer (CHSO) Full time attendance on site of a SACPCMP-registered CHSO from the start of construction until the end of project handover Price per month - No of months = 12	No	12	
B	Competent Health and Safety Representatives should be appointed for the project. Price per month - No of months = 12	No	12	
	Carried Forward			R
	Section No. 1 Bill No. 2 H&S BOQ Work package 1 Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward			R
A	Safety goggles		Item	
B	Hand gloves		Item	
C	Reflector vests		Item	
D	Construction information, warning signage, posters, construction work permit number sign		Item	
E	Allow for fire extinguishers and firefighting equipment		Item	
F	Provision for traffic management		Item	
G	Provision for temporary fencing/hoarding		Item	
H	HIV Aids campaign management		Item	
I	Provision for hand wash station		Item	
	<u>ENVIRONMENTAL</u>			
J	Dust control measure for the prevention of dust nuisance			
	Price per month - No of months = 12	No	12	
K	Provision for spill kits, drip trays		Item	
L	Housekeeping – provide for the waste bins, safe collection and disposal of waste material from site by an approved method.			
	Price per month - No of months = 12	No	12	
	Carried Forward			R
	Section No. 1 Bill No. 2 H&S BOQ Work package 1 Q532B			

Brought Forward

R

BREAKDOWN OF TOTAL COST FOR HEALTH AND SAFETY - WORK PACKAGE 1

Category : Fixed R.....

Category : Time R.....

Carried Forward to Summary of Section No. 1

R

Section No. 1
 Bill No. 2
 H&S BOQ Work package 1
Q532B

Item No		Quantity	Rate	Amount
	<u>SECTION No. 1: HEALTH AND SAFETY BILLS OF QUANTITIES</u>			
	<u>BILL No 3 Health and Safety Bills of Quantities - Work package 2 Structural steel staircase at Protea Flats</u>			
	<u>Important note to Principal Contractor</u>			
	<u>Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act and Regulations, (Act 85 of 1993), read with Construction Regulations 2014, other relevant Regulations, It is imperative for the Contractor to familiarize him/herself on the Client's project specific requirements defined in the Project Specific Health and Safety Specifications when pricing the works. Specific requirements are defined in the Project Specific Health and Safety Specifications Pricing schedule for Health, Safety, Environmental Management</u>			
	<u>HEALTH AND SAFETY</u>			
A	One full time Construction Health and Safety Officer (CHSO) Full time attendance on site of a SACPCMP-registered CHSO from the start of construction until the end of project handover Price per month - No of months = 6	No	6	
B	Competent Health and Safety Representatives should be appointed for the project. Price per month - No of months = 6	No	6	
	Carried Forward			R
	Section No. 1 Bill No. 3 H&S BOQ Work package 2 Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward							
A	Competent first aider should be appointed for the project.						
	Price per month - No of months = 6	No	6				
B	Competent fire fighter should be appointed for the project.						
	Price per month - No of months = 6	No	6				
C	Provision for Health and Safety Management Plans and File	No	1				
D	Provision for fall protection plan and implementation at Protea Flats.						
	Provision for anemometer						
	Provision of fall prevention and fall arrest equipment			Item			
E	Allow for the necessary Workman's Compensation Fund or approved Insurer contributions for the duration of the project with and including renewals			Item			
F	Employee medical certificates of fitness						
	Medical examination to include height work assessment			Item			
G	Emergency Equipment based on the risk exposure and emergency rescue. stretchers, neck brace, first aid kits, fire fighting equipment			Item			
H	Provision for safe access scaffolding.						
	Provision for safe access scaffold staircases to be provided at the Protea Flats. Specialist scaffolding contractor to perform all high-rise access staircase and scaffolding erection and dismantling. Temporary access scaffold staircase to serve as temporary fire escape only until completion of new fire escape staircase. Specialist scaffolding contractor to perform all high-rise scaffolding works, this includes the planning, design, erections, management and inspection. The required temporary scaffold staircase is for Eleven storey high building and providing for safe platform at each floor level to be provided. Eleven storey high access scaffold staircase required (temporary fire escape staircase to be priced in Section 3 Bill no. 1), all other access scaffolding required to be priced at this item			Item			
Carried Forward							R
	Section No. 1 Bill No. 3 H&S BOQ Work package 2 Q532B						

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward		R
A	Mandatory training such as risk assessments, OHS Act, awareness, first aider, working at heights <u>Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:</u>	Item	
B	Hard hats	Item	
C	Overall/work suit (100% Cotton)	Item	
D	Safety boots/shoes (Steel-Toe)	Item	
E	Ear Plugs/Muffs	Item	
F	Dust Mask FFP2	Item	
G	Safety goggles	Item	
H	Hand gloves	Item	
I	Reflector vests	Item	
J	Safety harness	Item	
K	Construction information, warning signage, posters, construction work permit number sign	Item	
L	Allow for fire extinguishers and firefighting equipment	Item	
	Carried Forward		R
	Section No. 1 Bill No. 3 H&S BOQ Work package 2 Q532B		

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward			R
A	Safe lifting equipment for lifting and lowering pipes, lifting tackles and slings		Item	
B	Provision for traffic management		Item	
C	Provision for barricading and hoarding		Item	
D	HIV Aids campaign management		Item	
E	Provision for hand wash station		Item	
<u>ENVIRONMENTAL</u>				
F	Dust control measure for the prevention of dust nuisance			
	Price per month - No of months = 6	No	6	
G	Provision for spill kits, drip trays		Item	
H	Housekeeping – provide for the waste bins, safe collection and disposal of waste material from site by an approved method.			
	Price per month - No of months = 6	No	6	
Carried Forward				
				R
Section No. 1 Bill No. 3 H&S BOQ Work package 2 Q532B				

Brought Forward

R

**BREAKDOWN OF TOTAL COST FOR HEALTH AND
 SAFETY - WORK PACKAGE 2**

Category : Fixed R.....

Category : Time R.....

Carried Forward to Summary of Section No. 1

R

Section No. 1
 Bill No. 3
 H&S BOQ Work package 2
Q532B

Item No		Quantity	Rate	Amount
	<u>SECTION No. 1: HEALTH AND SAFETY BILLS OF QUANTITIES</u>			
	<u>BILL No 4: Health and Safety Bills of Quantities - Work package 3 Renovations to Protea flats</u>			
	<u>Important note to Principal Contractor</u>			
	<u>Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act and Regulations, (Act 85 of 1993), read with Construction Regulations 2014, other relevant Regulations, It is imperative for the Contractor to familiarize him/herself on the Client's project specific requirements defined in the Project Specific Health and Safety Specifications when pricing the works. Specific requirements are defined in the Project Specific Health and Safety Specifications Pricing schedule for Health, Safety, Environmental Management</u>			
	<u>HEALTH AND SAFETY</u>			
A	One full time Construction Health and Safety Officer (CHSO) Full time attendance on site of a SACPCMP-registered CHSO from the start of construction until the end of project handover Price per month - No of months = 12	No	12	
B	Competent Health and Safety Representatives should be appointed for the project. Price per month - No of months = 12	No	12	
	Carried Forward			R
	Section No. 1 Bill No. 4 H&S BOQ Work package 3 Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward							
A	Competent first aider should be appointed for the project.						
	Price per month - No of months = 12	No	12				
B	Competent fire fighter should be appointed for the project.						
	Price per month - No of months =12	No	12				
C	Provision for Health and Safety Management Plans and File	No	1				
D	Provision for fall protection plan and implementation at Protea Flats.						
	Provision for anemometer						
	Provision of fall prevention and fall arrest equipment			Item			
E	Allow for the necessary Workman's Compensation Fund or approved Insurer contributions for the duration of the project with and including renewals			Item			
F	Employee medical certificates of fitness						
	Medical examination to include height work assessment			Item			
G	Emergency Equipment based on the risk exposure and emergency rescue. stretchers, neck brace, first aid kits, fire fighting equipment			Item			
H	Provision for safe access scaffolding to perform of height works on the external envelope of the building, including the roof, internal and external facades.						
	Provision for safe access scaffold staircases to be provided at the Protea Flats. Specialist scaffolding contractor to perform all high-rise access staircase and scaffolding erection and dismantlingt his includes the planning, design, erections, management and inspections. Temporary access scaffold staircase to serve as temporary access staircase for building used by contractors to access the roof for the construction work for the duration of the project. Eleven storey high access scaffold staircase required (temporary access scaffold staircase to be priced in Section 4 Bill no. 1), all other access scaffolding required to be priced at this item			Item			
Carried Forward							
	Section No. 1						
	Bill No. 4						
	H&S BOQ Work package 3						
	Q532B						

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward		R
A	Mandatory training such as risk assessments, OHS Act, awareness, first aider, working at heights <u>Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:</u>	Item	
B	Hard hats	Item	
C	Overall/work suit (100% Cotton)	Item	
D	Safety boots/shoes (Steel-Toe)	Item	
E	Ear Plugs/Muffs	Item	
F	Dust Mask FFP2	Item	
G	Safety goggles	Item	
H	Hand gloves	Item	
I	Reflector vests	Item	
J	Safety harness	Item	
K	Construction information, warning signage, posters, construction work permit number sign	Item	
L	Allow for fire extinguishers and firefighting equipment	Item	
	Carried Forward		R
	Section No. 1 Bill No. 4 H&S BOQ Work package 3 Q532B		

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward			R
A	Safe lifting equipment for lifting and lowering of equipment and materials		Item	
B	Provision for traffic management		Item	
C	Provision for barricading and hoarding		Item	
D	Provision for Asbestos removal works (Registered Asbestos Contractor) compliance with Asbestos Abatement Contractor of 2020 which were amended by Gn. R. 5042 of 2024		Item	
E	Provision for safe demolition of structures		Item	
F	Provision for appropriate PPE		Item	
G	Provision for signage		Item	
H	Provision for additional hand washing stations		Item	
I	HIV Aids campaign management		Item	
J	Provision for hand wash station		Item	
	<u>ENVIRONMENTAL</u>			
K	Dust control measure for the prevention of dust nuisance			
	Price per month - No of months = 12	No	12	
L	Provision for spill kits, drip trays		Item	
M	Housekeeping – provide for the waste bins, safe collection and disposal of waste material from site by an approved method.			
	Price per month - No of months = 12	No	12	
	Carried Forward			R
	Section No. 1 Bill No. 4 H&S BOQ Work package 3 Q532B			

Brought Forward

R

**BREAKDOWN OF TOTAL COST FOR HEALTH AND
SAFETY - WORK PACKAGE 3**

Category : Fixed R.....

Category : Time R.....

Carried Forward to Summary of Section No. 1

R

Section No. 1
Bill No. 4
H&S BOQ Work package 3
Q532B

Item No		Quantity	Rate	Amount
	<p><u>SECTION No. 1: HEALTH AND SAFETY BILLS OF QUANTITIES</u></p> <p><u>BILL No 5: Health and Safety Bills of Quantities - Work package 4 - PE Provincial Hospital Construction of 2 x Guard houses and Repairs to Boundary Wall at Buckingham Road & St Croix Entrance</u></p> <p><u>Important note to Principal Contractor</u></p> <p><u>Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act and Regulations, (Act 85 of 1993), read with Construction Regulations 2014, other relevant Regulations, It is imperative for the Contractor to familiarize him/herself on the Client's project specific requirements defined in the Project Specific Health and Safety Specifications when pricing the works. Specific requirements are defined in the Project Specific Health and Safety Specifications Pricing schedule for Health, Safety, Environmental Management</u></p> <p><u>HEALTH AND SAFETY</u></p>			
A	<p>One full time Construction Health and Safety Officer (CHSO)</p> <p>Full time attendance on site of a SACPCMP-registered CHSO from the start of construction until the end of project handover</p> <p>Price per month - No of months = 12</p>	No	12	
	Carried Forward			R
	<p>Section No. 1 Bill No. 5 H&S BOQ Work package 4 Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward		R	
A	Dust Mask	Item		
B	Safety goggles	Item		
C	Hand gloves	Item		
D	Reflector vests	Item		
E	Construction information, warning signage, posters, construction work permit number sign	Item		
F	Allow for fire extinguishers and firefighting equipment	Item		
G	Provision for traffic management	Item		
H	Provision for temporary fencing and hoarding	Item		
I	Provision for safe temporary work implementation	Item		
J	Provision for safe scaffolding on site	Item		
K	HIV Aids campaign management	Item		
L	Provision for hand wash station	Item		
Carried Forward			R	
Section No. 1 Bill No. 5 H&S BOQ Work package 4 Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward			R
	<u>ENVIRONMENTAL</u>			
A	Dust control measure for the prevention of dust nuisance			
	Price per month - No of months = 12	No	12	
B	Provision for spill kits, drip trays		Item	
C	Housekeeping – provide for the waste bins, safe collection and disposal of waste material from site by an approved method.			
	Price per month - No of months = 12	No	12	
	<u>BREAKDOWN OF TOTAL COST FOR HEALTH AND SAFETY - WORK PACKAGE 4</u>			
	Category : Fixed R.....			
	Category : Time R.....			
	Carried Forward to Summary of Section No. 1			R
	Section No. 1			
	Bill No. 5			
	H&S BOQ Work package 4			
	Q532B			

Item No		Quantity	Rate	Amount
	<u>SECTION No. 1: HEALTH AND SAFETY BILLS OF QUANTITIES</u>			
	<u>BILL No 6: Health and Safety Bills of Quantities - Work package 5 PEPH Replacement of boundary wall with fencing</u>			
	<u>Important note to Principal Contractor</u>			
	<u>Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act and Regulations, (Act 85 of 1993), read with Construction Regulations 2014, other relevant Regulations, It is imperative for the Contractor to familiarize him/herself on the Client's project specific requirements defined in the Project Specific Health and Safety Specifications when pricing the works. Specific requirements are defined in the Project Specific Health and Safety Specifications Pricing schedule for Health, Safety, Environmental Management</u>			
	<u>HEALTH AND SAFETY</u>			
A	One full time Construction Health and Safety Officer (CHSO) Full time attendance on site of a SACPCMP-registered CHSO from the start of construction until the end of project handover Price per month - No of months = 12	No	12	
B	Competent Health and Safety Representatives should be appointed for the project. Price per month - No of months = 12	No	12	
	Carried Forward			R
	Section No. 1 Bill No. 6 H&S BOQ Work package 5 Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward									
A	Competent first aider should be appointed for the project.								
	Price per month - No of months =12	No	12						
B	Competent fire fighter should be appointed for the project.								
	Price per month - No of months = 12	No	12						
C	Provision for Health and Safety Management Plans and File	No	1						
D	Allow for the necessary Workman's Compensation Fund or approved Insurer contributions for the duration of the project with and including renewals			Item					
E	Employee medical certificates of fitness			Item					
F	Emergency Equipment based on the risk exposure and emergency rescue, stretchers, neck brace, first aid kits, firefighting equipment			Item					
	<u>Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:</u>								
G	Hard hats			Item					
H	Overall/work suit (100% Cotton)			Item					
I	Safety boots/shoes (Steel-Toe)			Item					
J	Ear Plugs/Muffs			Item					
K	Dust Mask			Item					
Carried Forward									
	Section No. 1 Bill No. 6 H&S BOQ Work package 5 Q532B								

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward			R
A	Safety goggles		Item	
B	Hand gloves		Item	
C	Reflector vests		Item	
D	Construction information, warning signage, posters, construction work permit number sign		Item	
E	Allow for fire extinguishers and firefighting equipment		Item	
F	Provision for traffic management		Item	
G	Provision for temporary fencing and hoarding		Item	
H	HIV Aids campaign management		Item	
I	Provision for hand wash station		Item	
	<u>ENVIRONMENTAL</u>			
J	Dust control measure for the prevention of dust nuisance			
	Price per month - No of months = 12	No	12	
K	Provision for spill kits, drip trays		Item	
L	Housekeeping – provide for the waste bins, safe collection and disposal of waste material from site by an approved method.			
	Price per month - No of months = 12	No	12	
	Carried Forward			R
	Section No. 1 Bill No. 6 H&S BOQ Work package 5 Q532B			

Brought Forward

R

BREAKDOWN OF TOTAL COST FOR HEALTH AND SAFETY - WORK PACKAGE 5

Category : Fixed R.....

Category : Time R.....

Carried Forward to Summary of Section No. 1

R

Section No. 1
 Bill No. 6
 H&S BOQ Work package 5
Q532B

Bill No	<u>SECTION SUMMARY - SECTION 1 PRELIMINARIES AND GENERAL</u>	Page No		Amount
1	PRELIMINARIES AND GENERAL	40		
2	H&S BOQ Work package 1	44		
3	H&S BOQ Work package 2	49		
4	H&S BOQ Work package 3	54		
5	H&S BOQ Work package 4	58		
6	H&S BOQ Work package 5	62		
	Carried to Final Summary		R	
	Section No. 1 Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION 2 - WORK PACKAGE 1</u></p> <p><u>FENCING TO LIVINGSTONE HOSPITAL</u></p> <p><u>BILL NO. 1</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p>This section consists of the following buildings:</p> <p>Block C: Livingstone Hospital</p> <p>Block G: SMME Packages</p> <p><u>FENCING AT LIVINGSTONE HOSPITAL TO BE REPLACED IN SECTIONS AS PER SEQUENCE PROPOSED BY PRINCIPAL AGENT IN SEQUENCE OF WORKS.</u></p> <p><u>FENCING TO BE ERECTED BEHIND EXISTING FENCING AND CONTRACTOR TO ALLOW FOR SECURITY FOR DURATION OF PROJECT IN AFFECTED AREAS</u></p> <p><u>SITE SURVEY</u></p> <p>A Allow the Amount of R300,000.00 (Three Hundred thousand Rand) for the survey of existing site and services</p> <p>B Profit on above item.</p> <p>C Attendance on ditto.</p> <p><u>HOARDING</u></p>			
		Item		300,000.00
		Item		
		Item		
	Carried Forward		R	
	<p>Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B</p>			

Brought Forward							
<p><u>Reinstate existing PVC coated high security fencing, and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated.</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p>							R
A	<p>New 70 x 44mm x 2mm x 3200mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling</p> <p style="text-align: center;">C : 57 G : 0</p>	No	57				
B	<p>Take out of storage existing security fence panels and reinstate size 3050 x 2400mm high with aperture size (centers) of 76mm x 12mm rigid mesh panels with bends and install to new posts (elsewhere measured). Fence to receive Flatwrap razor wire (elsewhere measured) All bolts and washers required shall be new and of grade 304 stainless steel.</p> <p style="text-align: center;">C : 49 G : 0</p>	No	49				
C	<p>Ditto but for Panel size 1000 x 2400mm high (non-standard size).</p> <p style="text-align: center;">C : 4 G : 0</p>	No	4				
D	<p>Ditto but for Panel size 2000 x 2400mm high (non-standard size).</p> <p style="text-align: center;">C : 4 G : 0</p>	No	4				
Carried Forward							R
<p>Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B</p>							

Brought Forward							
							R
<u>Mass concrete (25Mpa) in:</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							
A	Paving C : 11 G : 0	m3	11				
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>							
B	Paving, ramps C : 75 G : 0	m2	75				
<u>General Formwork</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>							
C	Edges, risers, ends and reveals not exceeding 300mm high or wide C : 476 G : 0	m	476				
D	10mm Sajex or other approved cane fibre filler board in expansion joint between edge of concrete paving and walls in narrow widths not exceeding 150mm wide including tacking to face of wall and polysulphide sealant between concrete and brickwork C : 24 G : 0	m	24				
<u>Movement joints</u>							
E	8 x 40mm Saw cut joints in top of concrete paving C : 24 G : 0	m	24				
<u>REPAIRS TO EXISTING FACE BRICK BOUNDARY WALL AND COLUMNS</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>							
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

Brought Forward							
A	Break down and remove existing damaged face brick wall C : 10 G : 0	m2	10				
<u>Brickwork of clay bricks in 6:1 cement mortar</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i>							
B	One brick walls C : 10 G : 0	m2	10				
<u>Brick reinforcement</u>							
C	High tensile galvanised steel brick reinforcement 150mm wide well lapped at all angles and passings and built into brick walls C : 118 G : 0	m	118				
<u>Beachsand Travertine FBS external face bricks to match existing in stretcher bond with well raked and smoothed square joints (85mm gauge)</u>							
D	Extra over brickwork for face brickwork to brick columns in patching C : 4 G : 0	m2	4				
E	Extra over brickwork for face brickwork to new low level wall in patching C : 6 G : 0	m2	6				
F	Cut brick on edge coping bedded in cement mortar and pointed on top, edge and projecting soffit C : 10 G : 0	m	10				
<u>Sealing of existing boundary wall</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>							
G	Rake out and remove all existing polysuphide joint sealant, joint size 10 x 10mm to ensure joints surfaces are clean, dry, dust and frost free C : 380 G : 0	m	380				
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

Brought Forward							
A	Install 10mm diameter backing cord into the existing joint C : 380 G : 0	m	380				
B	Ensure surfaces are clean, dry, sound and grease-free, apply SikaPrimer -3N onto the surface all in accordance with manufacturer's specifications C : 380 G : 0	m	380				
C	Ensure surfaces are clean, dry and free from loose, weak or foreign substances such as oil, grease, loose particles, laitance, curing compounds, vegetation and algae growth. Apply Sikaflex-11FC multipurpose elastic adhesive and joint sealant all in accordance with manufacturer's specifications C : 380 G : 0	m	380				
<u>REPLACEMENT OF EXISTING STEEL AND CONCRETE PALISADE FENCING</u>							
<u>Demolitions</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>							
D	Break up and remove existing precast concrete kerb, over all size approximately 300 x 150mm wide, including necessary excavations, filling, compaction, roughly levelling ground surface, etc. C : 15 G : 0	m	15				
E	Carefully take down, dismantle, store temporarily and hand back to End User for re-use, existing PVC coated high security fencing consisting of 70 x 44mm x 1.6mm x 3000mm long H-shaped profile secure posts, high security mesh panels, each size 3050 x 2400mm high and complete with all gates, including break down and remove concrete footings, including necessary excavations, filling, compaction, roughly levelling, etc. C : 22 G : 0	m	22				
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward				R
<u>Taking out and removing, grubbing up roots and filling in holes</u>				
A	Tree exceeding 200mm and not exceeding 500mm girth C : 21 G : 0	No	21	
B	Tree exceeding 500mm and not exceeding 1000mm girth C : 3 G : 0	No	3	
C	Tree exceeding 1000mm and not exceeding 1500mm girth C : 5 G : 0	No	5	
D	Tree exceeding 1500mm and not exceeding 2000mm girth C : 5 G : 0	No	5	
E	Tree exceeding 2500mm and not exceeding 3000mm girth C : 2 G : 0	No	2	
<u>Trimming of trees</u>				
F	Allow the Amount of R60,000.00 (Sixty thousand Rand) for the trimming of trees, dense shrubs, bush and tree roots		Item	60,000.00
G	Profit on above item.		Item	
H	Attendance on ditto.		Item	
<u>NEW HIGH SECURITY FENCING TO REPLACE EXISTING STEEL AND CONCRETE PALISADE FENCING</u>				
<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes				

Carried Forward				R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B				

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward				R
A	Ground beams C : 648 G : 0	m2	648	
<u>Extra over excavations in earth for excavation in</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
B	Soft rock C : 8 G : 0	m3	8	
C	Intermediate rock C : 8 G : 0	m3	8	
D	Hard rock C : 4 G : 0	m3	4	
<u>Repairs to gate track</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>				
E	80 x 6mm Galvanised mild steel flat bar with a 8mm diameter solid galvanised mild steel rod continuous welded onto the top of the centre of the track and then weld to be cold galvanised C : 6 G : 0	m	6	
F	65 x 8mm Rawl bolts into existing concrete ground beam C : 8 G : 0	No	8	
<u>Precast concrete kerbs:</u>				
G	150 x 250mm Precast Barrier kerb BK2, in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 400 x 60mm thick under and 125 x 150 x 150mm high unreinforced concrete Class B haunching behind, including necessary excavation C : 15 G : 0	m	15	
Carried Forward				R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B				

Brought Forward

R

GATES

NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes

A Pedestrian swing gate, size 1170mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with a pair of hinges. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm2. Mesh framing to consist of 30 x 4mm flat bar welded to framework and 30 x 4mm flat bar mesh clamping fixed to mesh framing flats. Horizontal and vertical wires shall have a core diameter of 3.96mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 4 bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with two 20mm diameter drop bolts and one 160mm diameter locakble sliding bolt, including 500m razor wire on top of gate. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling **all in accordance with Pedestrian Gate Drawing 314-013-ARC-S003 (Livingstone Hospital Gate 3)**

No

1

C : 1 G : 0

Carried Forward

R

Section No. 2
Bill No. 1
Fencing at Livingstone Hospital
Q532B

	Brought Forward			R
A	<p> Pedestrian swing gate, size 1500mm wide x 2100mm high, formed of SHS 75 x 75 x 5mm gate frame with a pair of hinges. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 30 x 4mm flat bar welded to framework and 30 x 4mm flat bar mesh clamping fixed to mesh framing flats. Horizontal and vertical wires shall have a core diameter of 3.96mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 4 bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with two 20mm diameter drop bolts and one 160mm diameter locakble sliding bolt, including 500m razor wire on top of gate. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Pedestrian Gate Drawing 314-013-ARC-S003 (Livingstone Hospital Gate 1)</u> </p> <p style="text-align: center;">C : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p> Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B </p>			

	Brought Forward			R
A	<p>Double swing gate, size 4700mm wide x 2400mm high, formed of SHS 60 x 80 x 5mm gate frame with two pairs of Securifor gate hinges. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm2. Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Horizontal and vertical wires shall have a core diameter of 3.96mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 50 x 5 bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with two 20mm diameter drop bolts and one barrel bolt lockable drop bolt, including 500m razor wire on top of gate. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Double Swing Gate Drawing 314-013-ARC-S003 (Livingstone Hospital Gate 2)</u></p> <p style="text-align: center;">C : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p>Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B</p>			

	Brought Forward		R
A	<p>Sliding gate, size 6780mm wide x 2100mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate shall be fitted with a locking lug for padlock. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite including 500m razor wire on top of gate. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 314-013-ARC - S003 (Livingstone Hospital Gate 1)</u></p> <p style="text-align: center;">C : 1 G : 0</p> <p><u>CONCRETE GATE BEAM</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i></p>	No	1
	Carried Forward		R
	<p>Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B</p>		

Brought Forward							
R							
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>							
A	Concrete gate beam C : 3 G : 0	m3		3			
<u>Extra over all excavations for carting away</u>							
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor C : 3 G : 0	m3		3			
<u>Risk of collapse of excavations</u>							
C	Sides of trench and hole excavations not exceeding 1,5m deep C : 8 G : 0	m2		8			
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							

<u>30MPa/19 mm Reinforced concrete in</u>							
D	Gate beams C : 3 G : 0	m3		3			
<u>Reinforcement</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>							

<u>Mild steel rod reinforcement to structural concrete work</u>							
E	8mm Diameter bars C : 0.105 G : 0.000	t		0.105			
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>							
F	10mm Diameter bars C : 0.525 G : 0.000	t		0.525			
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward							
A	12mm Diameter bars C : 0.420 G : 0.000 <u>Steel track in concrete beam</u> <i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>	t	0.420				R
B	10 x 100mm galvanised mild steel flat bar cast on edge in concrete ground beam including 10mm diameter lugs welded to flat bar at 500mm centres C : 18 G : 0 <i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>	m	18				
C	Take down, dismantle and remove existing boom housing approximately 1.2m high from existing concrete base C : 4 G : 0 <i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>	No	4				
	<u>Automatic Industrial Vehicle barrier boom gates</u>						
D	Automatic industrial vehicle barrier with swiftdrive as supplied by Turnstar Systems (011 786 1633). Barrier to consist of BLDC, 24V DC, 100W motor, Planetary gearbox with 27.6 V DC, 4.5A, 120W motor power supply. Barrier to include collision detection, dual channel safety loop detector and input for any external sensor, integrates with all access control, ticketing and time & attendance systems, triggered through a normally open dry contact and free exit loop feature built-in as standard. With push button located in security/guard house. Barrier to include 4m barrier arm size 86mm x 43mm x 1.5mm thickness, power coated aluminium with red reflective tape and integrated RGB. Barrier to be bolted to existing concrete base (Installed strictly to manufacturers specifications) C : 1 G : 0	No	1				
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

Brought Forward				R
<u>GABION RETAINING WALLS</u>				
<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin: auto;"/>				
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>				
A	To reduce levels under gabions C : 23 G : 0	m3	23	
B	Embankment behind new gabions C : 135 G : 0	m3	135	
<u>Extra over all excavations for carting away</u>				
C	Extra over all excavations for carting surplus excavated material C : 158 G : 0	m3	158	
<u>Approved G7 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 95% Mod. AASHTO density</u>				
D	To embankment behind gabion wall C : 135 G : 0	m3	135	
E	Bedding under gabion wall C : 11 G : 0	m3	11	
<u>Approved stone filling supplied and carted on by the Contractor</u>				
F	Bedding under gabion wall C : 11 G : 0	m3	11	
G	19mm nominal size crushed stone to allow for drainage behind gabion boxes C : 8 G : 0	m3	8	
<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin: auto;"/>				
Carried Forward				R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B				

Brought Forward				R
<u>Maccaferri gabions or similar approved -SANS 1200DK:1995 (Double twist hexagonal wire mesh to SANS 1580:2005) complete with 76 X 76mm galvanised wire mesh (Including material and delivery)</u>				
A	76 x 76mm Galvanised wire mesh gabion with 2.7mm Class A Galvanised wire (1 x 1 x 1) C : 60 G : 0	m3	60	
B	76 x 76mm Galvanised wire mesh gabion with 2.7mm Class A Galvanised wire (1 x 1 x 1.5m wide) C : 45 G : 0	m3	45	
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
C	Surface preparation for bedding of Gabions C : 45 G : 0	m2	45	
D	Installation of Gabion units (including unfolding, placing, filling, lacing and bracing) C : 105 G : 0	m3	105	
E	Rockfill in gabion units C : 105 G : 0	m3	105	
<i>NOTE: The following items shall be deemed to fall into Work Group No 146 for JBCC CPAP purposes</i>				
<u>Geotextile (Including material, delivery, unrolling, cutting and placing) Continuous Polyester Filament Double Needle-Punched</u>				
F	AG150 - Minimum Energy Absorption - 4.0kN/m (between gabion wall and embankment) C : 159 G : 0	m2	159	
<u>BUILDERSWORK FOR CCTV INSTALLATION</u>				
G	Allow the Amount of R250,000.00 (Two Hundred and Fifty thousand Rand) for the builders work related to CCTV installation	Item		250,000.00
Carried Forward				R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward				R
A	Profit on above item.		Item		
B	Attendance on ditto.		Item		
	<u>ALTERATIONS TO EXISTING SERVER ROOM IN HOSPITAL FOR CCTV INSTALLATION</u>				
C	Allow the Amount of R300,000.00 (Three Hundred thousand Rand) for the alterations to the existing server room in hospital for CCTV installation		Item		300,000.00
D	Profit on above item.		Item		
E	Attendance on ditto.		Item		
	<u>DEMOLITIONS FOR CCTV INSTALLATION CONDUITS AND SLEEVES</u>				
	<u>Breaking up and removing</u>				
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>				
F	Break up and remove existing precast concrete kerb in patching in various areas, over all size approximately 300 x 150mm wide, including necessary excavations, filling, compaction, roughly levelling ground surface, etc. C : 22 G : 0	m	22		
G	Break up and remove existing reinforced concrete paving, aprons, etc.in patching in various areas not exceeding 120mm thick including preparation, roughly levelling ground surfaces, ramming, etc. C : 34 G : 0	m2	34		
H	Break up and remove existing concrete pavers in patching in various areas, not exceeding 60mm thick including preparation, roughly levelling ground surfaces, ramming, etc., store temporarily for re-use C : 55 G : 0	m2	55		
	Carried Forward				R
	Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B				

Brought Forward							
A	Break up and remove existing asphalt in patching in various areas, not exceeding 50mm thick including preparation, roughly levelling ground surfaces, ramming, etc., C : 45 G : 0	m2	45				R
<u>Patching and repairing existing road in various areas</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>							
B	Tack coat of 30% cationic stable grade emulsion (0.45L/m ²) C : 45 G : 0	m2	45				
C	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²) C : 45 G : 0	m2	45				
D	30mm Premix (continuously graded with 60/70 penetration bitumen) on and including RTH 1/4 prime coat and KRS tack coat on base course (elsewhere measured) in patching C : 45 G : 0	m2	45				
<u>Precast concrete kerbs:</u>							
E	300 x 150mm High Figure 8c mountable precast concrete kerb in patching in various areas in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 600 x 150mm thick under, and 200 x 200 x 200mm high unreinforced concrete Class B haunching behind including necessary excavation C : 28 G : 0	m	28				
<u>Concrete paving and aprons in patching in various areas</u>							
<u>Excavate in earth or compacted filling not exceeding 2m deep below natural or reduced ground level</u>							
F	Reduced levels under paving C : 10 G : 0	m3	10				
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

Brought Forward							
<u>Extra over all excavations for carting away</u>							
A	Extra over all excavations for carting surplus excavated material C : 3 G : 0	m3	3				
<u>Compaction of surfaces</u>							
B	Scarify earth surface to a depth of 150mm, breaking down over size material and reconsolidate to 95% modified AASHTO density C : 34 G : 0	m2	34				
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>							
C	Subbase under concrete paving C : 10 G : 0	m3	10				
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							
<u>Reinforced concrete (30Mpa/19mm) in:</u>							
D	Paving C : 3 G : 0	m3	3				
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>							
E	Paving C : 34 G : 0	m2	34				
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>							
<u>General Formwork</u>							
F	Edges, risers, ends and reveals not exceeding 300mm high or wide C : 25 G : 0	m	25				
Carried Forward							R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B							

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward				R
<u>Movement joints</u>				
A	8 x 40mm Saw cut joints in top of concrete paving C : 25 G : 0	m	25	
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>Fabric reinforcement</u>				
B	Type 395 fabric reinforcement in concrete paving C : 34 G : 0	m2	34	
<i>NOTE: The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>One layer of 250 micron "Consol Plastics Gunplas Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>				
C	Under paving C : 36 G : 0	m2	36	
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>Precast concrete kerbs:</u>				
D	150 x 250mm Precast Barrier kerb BK2 in patching in various areas, in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 400 x 60mm thick under and 125 x 150 x 150mm high unreinforced concrete Class B haunching behind, including necessary excavation C : 22 G : 0	m	22	
E	Ditto, but circular on plan not exceeding 4m radius C : 6 G : 0	m	6	
Carried Forward				R
Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B				

	Brought Forward			R
	<u>Re-instated concrete pavers</u>			
A	Take out of storage and re-use existing 60mm thick concrete interlocking paving in patching in various areas, including preparation, roughly levelling ground surfaces, ramming, etc. C : 55 G : 0	m2	55	
	<u>20mm River sand</u>			
B	Under concrete pavers C : 55 G : 0	m2	55	
	<u>CREDIT FOR OLD MATERIAL</u>			
C	The contractor to allow herein for credit for all old materials from the alteration described to become the property of the contractor. C : -1 G : 0	No	-1	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2 Bill No. 1 Fencing at Livingstone Hospital Q532B			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2 WORK PACKAGE 1</u>			
	<u>RENOVATIONS TO EXISTING GATEHOUSE AT MAIN ENTRANCE TO LIVINGSTONE HOSPITAL</u>			
	<u>BILL NO. 2</u>			
	<u>RENOVATIONS</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>			
A	All material become the property of the Contractor and are to be removed by him from the site unless otherwise stated. All debris and rubbish arising from the alterations are to be immediately carted away and the site left clear and unencumbered.	Item		
B	Any breaking up, breaking down, etc. and removal of existing work must be done with the greatest care to prevent any form of structural or other damage to work or items not due to be removed. If any such damage may occur it will be made good by the Contractor on his own expense	Item		
	<u>FLOORS AND FLOOR FINISHES</u>			
C	Take up and remove existing vinyl tiles/vinyl sheeting floor covering from cement screed and prepare screed to receive new vinyl sheeting (elsewhere measured) C : 47 G : 0	m2	47	
	Carried Forward			R
	Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B			

Brought Forward							
<u>EXTERNAL WALLS AND WALL FINISHES</u>							
A	Break down and remove existing damaged facebrick from external facade in patching and prepare to receive new facebrick (elsewhere measured) C : 4 G : 0	m2	4				
<u>DOORS</u>							
<u>Take out and remove existing door frames and doors from walls to be demolished</u>							
B	Take out and remove existing timber door and timber frame, size 813 x 2032mm high, from half brick wall to be demolished C : 3 G : 0	No	3				
<u>Take out and remove existing aluminium door frames and doors from walls to receive new (elsewhere measured)</u>							
C	Take out and remove existing aluminium door and frame, size 883 x 2125mm high, from 270mm cavity walls and prepare to receive new (elsewhere measured) C : 4 G : 0	No	4				
<u>WINDOWS</u>							
<u>Take out and remove existing windows from 270mm cavity walls</u>							
D	Take out and remove window size 946 x 1525mm high from 270mm thick wall and prepare opening to receive new window of same size (elsewhere measured) C : 4 G : 0	No	4				
E	Take out and remove window size 1700 x 1500mm high from 270mm thick wall and prepare opening to receive new window of same size (elsewhere measured) C : 1 G : 0	No	1				
Carried Forward							
							R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		No	1	R
A	Remove existing timber wall kitchen cupboard approximate size 2000 x 300 x 500mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces C : 1 G : 0	No	1	
B	Remove existing timber floor kitchen cupboard approximate size 2000 x 560 x 900mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces C : 1 G : 0	No	1	
C	Remove existing timber built-in desk approximate size 3500 x 700 x 900mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces C : 1 G : 0	No	1	
D	Remove existing lockers approximate size 4000 x 600 x 1800mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces C : 1 G : 0	No	1	
<u>IRONMONGERY</u>				
E	Carefully remove mirror, size 450 x 450mm high from plastered walls, repair finishes C : 1 G : 0	No	1	
F	Take off and remove existing chromium plated toilet roll holders plugged to plastered brick walls C : 1 G : 0	No	1	
G	Take off and remove existing chromium towel rail 700mm long including end brackets plugged to plastered brick walls and repair wall faces C : 1 G : 0	No	1	
H	Take off and remove existing lockset from aluminium door and prepare to receive new C : 4 G : 0	No	4	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

Brought Forward							
R							
<u>Damp-proofing of walls and floors</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>							

<u>One layer of 375 micron black embossed polyethylene damp-proof course (SANS 952-1985 Type B)</u>							
A	In walls, window sills, etc C : 7 G : 0	m2	7				
<u>Joint sealants</u>							
<u>Grey polysulphide sealant, including bond breaker, primer, etc</u>							
B	10mm Wide x 10mm deep in expansion joints C : 13 G : 0	m	13				
<u>Dampproofing of roofs</u>							
<u>One layer dual reinforced Derbigum SP4 torch on waterproofing membrane with glass reinforced. To be installed with a 75mm side laps and 100mm end laps, sealed to primed surface to falls and crossfalls, all in accordance with manufacturer's specifications</u>							
C	On flat concrete roofs to falls in patching C : 86 G : 0	m2	86				
<u>Bituminous aluminium paint on existing waterproofing</u>							
<u>Clean down existing waterproofing, prepare and apply two coats bituminous aluminium paint, all in accordance with manufacturer's specifications</u>							
D	On existing waterproofing C : 86 G : 0	m2	86				
Carried Forward							
R							
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

<p style="text-align: center;">Brought Forward</p> <p><u>be fitted with 45mm full extension ball bearings slides (load capacity 35kg per runner ser on 450mm wide drawer), or similar approved.</u> <u>All internal shelves to be 16mm Melawood WHITE (Peen finish), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)</u> <u>Backing board to units with opening shelving to be 16mm Melawood COLOR AS PER DRAWING (Peen Finish).</u> <u>Backing board to units with closable cupboards/drawers (ie: not visible when cupboard doors are closed) and placed against walls to be 3.5mm white faced hardboard. All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced hardboard around penetration.</u> <u>Low Level Cupboards: All handles to be fingerpull handles fitted to top edges of doors and drawers, in brushed stainless-steel finish, full width of doors and drawers. Cut edges to be deburred.</u> <u>All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs. Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation. Bases to either be finished with 1mm Formica facing to exposed edges, brushed aluminium finish, OR rollup vinyl skirting, refer to floor finishes drawing.</u> <u>All countertops to be 20mm Eezi Quartz slabs (non-standard colour)</u> <u>Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for wet areas) and SILKASIL-C everywhere else</u></p>		R	
<p style="text-align: center;">Carried Forward</p> <p>Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B</p>		R	

Brought Forward							
A	8225 x 600 x 750mm High Desk fixed to wall including shelving, work top etc. all in accordance with <u>Drawing 314-013 JDT-003 Detail JDT1</u> C : 1 G : 0	No	1				R
<u>CEILING, PARTITIONS AND ACCESS FLOORING</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 129 for JBCC CPAP purposes</i>							
<u>Nailed up ceilings</u>							
<u>Sawn S A Pine</u>							
B	Branding for ceiling formed with 75 x 50mm battens at 450mm centres in one direction, with cross branding at intersections and ends of ceiling boards fixed to underside of concrete C : 47 G : 0	m2	47				
<u>9.5mm "Rhino" gypsum plasterboard skimmed ceiling with taped joints and with the whole surface skimmed with "Rhinolite" plaster</u>							
C	Ceilings C : 47 G : 0	m2	47				
<u>Cornice</u>							
D	20 x 15mm Aluminium Trim Cornice C : 52 G : 0	m	52				
<u>FLOOR COVERINGS, WALL LININGS, ETC</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 130 for JBCC CPAP purposes</i>							
<u>Vinyl sheeting</u>							
Carried Forward							R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

Brought Forward				R
<p><u>2.5mm Thick Polyflor NovoCore Original Commercial UV vinyl floor sheeting – all installed strictly to manufacturers specifications (Polyflor 011-609 3500) – Sheet colours to Architects approval.</u></p>				
A	Vinyl floor sheets on floors C : 47 G : 0	m2	47	
<p><u>Sealers</u></p> <p><u>Two coats floor dressing as recommended by the manufacturer of the floor coverings on vinyl flooring (stripping and sealing)</u></p>				
B	On floors C : 47 G : 0	m2	47	
<p><u>IRONMONGERY</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 132 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin: 10px auto;"/> <p><u>Ironmongery to doors</u></p> <p><u>All locks to be on a master and grand master key system</u></p> <p><u>The following in type 1 (Aluminium Door)</u></p>				
C	100 x 44mm Natural anodised sinkless hinges (Code 1040-44) C : 7.5 G : 0.0	Pairs	7.5	
D	Dormakaba Stainless Steel lever handle on rose (Latch) (Code CR001 Latch SS) C : 5.0 G : 0.0	Sets	5.0	
E	Dormakaba cylinder sash lock case size 116.5H x 78D Forend dimensions 168H x 22W, backset 57mm centres 61mm (Code D036S SS) with stainless steel finish C : 5 G : 0	No	5	
F	Dormakaba half knob cylinder (Code DHK004201) C : 5 G : 0	No	5	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	Dormakaba round cylinder escutcheon (Code DCE-002) C : 2.5 G : 0.0	Pairs	2.5	
B	200mm Satin Chrome on brass cabin hook (Code 166) C : 5 G : 0	No	5	
<u>The following in type 2 (Timber Door)</u>				
C	Dormakaba 102 x 75 x 3mm two ball bearing butt hinge, stainless steel finish EN1935 Grade 13, fire rated with 120kg carrying capacity per pair (Code DBB-SS-009) C : 1.5 G : 0.0	Pairs	1.5	
D	Dormakaba lever handle on rose latch (Code CR001 Latch SS) C : 1.0 G : 0.0	Sets	1.0	
E	Dormakaba bathroom sash lock case size 116.5 x 78D Forend dimensions 168H x 22W, backset 57mm centres 61mm (Code D036 SS) with stainless steel finish C : 1 G : 0	No	1	
F	Dormakaba 66mm Euro profile Bathroom / Privacy cylinder (Code D8C006601) C : 1 G : 0	No	1	
G	Dormakaba round cylinder escutcheon (Code DCE-002) C : 1.0 G : 0.0	Pairs	1.0	
H	Dormakaba floor mounted door stop (DDS-SS-017) C : 1 G : 0	No	1	
I	813 x 300 x 1.2mm thick Grade 430 stainless steel kickplate with cylinder cutout left. Stainless Steel Plate to have 6 countersunk holes for screw fixing C : 2 G : 0	No	2	
<u>Bathroom fittings</u>				
J	Franke recessed type toilet roll holder (Code 359635) size 118mm diameter x 110mm manufactured from Grade 304 (18/10) stainless steel, 2mm gauge. Unit with 20mm flange and 2 x M10 treaded rods for bolting the unit through the wall C : 1 G : 0	No	1	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R	
<u>Gun safe</u>				
A Provide the sum of R15,000.00 (Fifteen thousand rand) for gun safes	Item			15,000.00
B Allow for profit if required	Item			
C Allow for attendance	Item			
<u>Signage</u>				
D Provide the sum of R20,000.00 (Twenty thousand rand) for signage	Item			20,000.00
E Allow for profit if required	Item			
F Allow for attendance	Item			
<u>METALWORK</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 134 for JBCC CPAP purposes</i>				

<u>Aluminium doors and windows</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 149 for JBCC CPAP purposes</i>				

All aluminium doors, windows, etc to comply with AAAMSA standards and specifications and to Architect's approval.				
Prices must include for the perimeters of frames to be sealed to the structure with approved sealant.				
<u>All glazing should be in strict accordance with the requirements for SAGGA Glass Installation</u>				
Carried Forward			R	
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

		Brought Forward		R
A	On narrow widths C : 10 G : 0	m2	10	
B	On window sills not exceeding 300mm wide C : 21 G : 0	m	21	
<u>2mm Thick approved skim finishing plaster</u>				
C	2mm Thick skim finishing plaster to plastered walls C : 93 G : 0	m2	93	
<u>Dividing strips</u>				
<u>25mm x 3mm Brass dividing strip cast into screed (flush with floor finish)</u>				
D	On floors C : 3 G : 0	m	3	
<u>TILING</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 144 for JBCC CPAP purposes</i>				
<u>Wall tiling</u>				
<u>300 x 600 x 10mm Thick GWC-4-1 Essence White Matt rectified ceramic wall tiles with 2mm joints between tiles in TAL White grouting fixed to walls with approved tile adhesive to plastered walls and waterproof tile grouting to joints</u>				
E	On walls in splashbacks C : 2 G : 0	m2	2	
<u>INTERNAL PLUMBING AND DRAINAGE</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 148 for JBCC CPAP purposes</i>				
<u>Sanitary fittings</u>				
		Carried Forward		R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

Brought Forward							
<u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u>							R
A	On internal walls C : 93 G : 0	m2		93			
B	On external window sill not exceeding 300mm wide C : 21 G : 0	m		21			
Carried Forward							R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

Brought Forward							
	<u>Surface to be dry, sound and clean. Moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 220 grit paper in the direction of the grain and dust off. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and sand to a smooth finish and dust off. Wash knots and resinous areas with Plascon Lacquer Thinner (ILS1), apply Plascon Woodcare Knot seal (PK2) to all knots and resinous areas and allow 1 hour to dry. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours, apply one coat of Plascon Universal Undercoat (UC1) to achieve continuous film and finish with two full coats of Plascon Waterbased Velvagio Satin (VLO) to achieve complet obliteration allowing 4 hours drying time between coats. Colour to Architects approval</u>						
A	On doors C : 4 G : 0		m2		4		
	<u>Surface to be dry, sound and clean. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours, apply one coat of Plascon Universal Undercoat (UC1) to achieve continuous film and finish with two full coats of Plascon Waterbased Velvagio Satin (VLO) to achieve complet obliteration allowing 4 hours drying time between coats. Colour to Architects approval</u>						
B	On skirtings, rails, bars, etc not exceeding 300mm girth C : 47 G : 0		m		47		
<u>EXTERNAL WATER SUPPLY</u>							
<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>							
<u>EARTHWORKS</u>							
C	For pipes not exceeding 1m deep C : 15 G : 0		m3		15		
Carried Forward							R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

Brought Forward							
							R
<u>Extra over excavations for carting away</u>							
A	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor C : 12 G : 0	m3	12				
<u>BEDDING, BACKFILLING, ETC</u>							
<u>Provide bedding from carted on material from commercial sources including sifting and compaction to 93% MOD AASHTO density for backfilling to</u>							
B	Selected granular material C : 6 G : 0	m3	6				
<u>Fill blanket from carted on material from commercial sources including sifting and compaction to 93% MOD AASHTO density for backfilling to</u>							
C	Selected fill material C : 6 G : 0	m3	6				
<u>Provide main fill blanket from trench excavations in layers not exceeding 150mm thick, compacted to 95% MOD AASHTO density. All excavated material to be free of organic matter and to be mixed in minimum proportions of 30% dark grey intact sandy silt sand of shallower excavations and 30% light grey hard shale and clay material from deeper excavations (maximum size of rocks/stone to be 75mm) for use as backfill for pipe trenches and to be compacted to minimum 95% mod AASHTO densite</u>							
D	Selected fill material C : 3 G : 0	m3	3				
<u>WATER SUPPLIES</u>							
<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 148 for JBCC CPAP purposes							
Carried Forward							R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward			R
A	Sterilizing all water pipes prior to installation in strict accordance to the methods and specifications in SANS10252-1 <u>HDPE pipes Class 12 for use under ground in accordance with SABS 791 with uPVC couplings (Excavation, bedding material, back filling, compaction, etc. elsewhere)</u>		Item
B	40mm Diameter pipe not exceeding 1m deep C : 25 G : 0 <u>Extra over piping for Plasson screwed type fittings</u>	m	25
C	40mm pressure bend, 90 degrees C : 2 G : 0	No	2
D	40mm pressure bend, 45 degrees C : 2 G : 0	No	2
E	40mm pressure bend, 22.5 degrees C : 2 G : 0	No	2
F	40mm tee C : 2 G : 0 <u>Thrust blocks to 22.5 degrees bends</u>	No	2
G	Size extreme 300 x 350 x 300mm high C : 2 G : 0 <u>Thrust blocks to 45 degrees bends</u>	No	2
H	Size extreme 400 x 500 x 175mm high C : 2 G : 0 <u>Thrust blocks to 90 degrees bends</u>	No	2
I	Size extreme 500 x 740 x 250mm high C : 4 G : 0 <u>Valve chambers</u>	No	4
Carried Forward			R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B			

Brought Forward				R
<u>SOIL DRAINAGE</u>				
<u>EARTHWORKS</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>Excavations in earth</u>				
A	For pipes exceeding 1m and not exceeding 2m deep C : 21 G : 0	m3	21	
<u>Extra over excavations for carting away</u>				
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor C : 17 G : 0	m3	17	
<u>BEDDING, BACKFILLING, ETC</u>				
<u>Provide bedding from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>				
C	Selected granular material C : 9 G : 0	m3	9	
<u>Fill blanket from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>				
D	Selected fill material C : 9 G : 0	m3	9	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward				R
A	160mm Bend, 45 degrees C : 2 G : 0 <u>Sundries</u>	No	2	
B	Cast iron "A.B.C" straight or bent cleaning eye, with removable cover, jointed to top of 160mm uPVC pipe and set in and including 15Mpa (20mm stone) mass concrete surround, finished smooth to exposed surfaces and rounded on salient angles C : 1 G : 0	No	1	
C	150mm Diameter cast iron cover and frame placed over cleaning eye with frame cast into concrete C : 1 G : 0 <u>Connect to existing sewer line</u>	No	1	
D	Search, find existing 160mm uPVC pipe, excavate in earth as necessary for and cut in existing pipe in existing manhole not exceeding 2m deep internally C : 1 G : 0 <u>Pre-fabricated manholes</u> <u>Precast concrete manholes, 1000mm internal diameter, complete including all necessary excavations, precast manholes rings, in situ concrete bottom slabs (size 1680mm diameter) laid to falls (min thickness of slab 150mm and maximum thickness 350mm) with 20mm thick concrete topping, 150mm thick medium duty precast roof slab, channels, finishes, cast iron double seal manhole cover and frame, etc. all joints sealed with 1:3 cement sand mix caulked in ring joints</u>	No	1	
E	Manhole exceeding 1m and not exceeding 2m deep C : 1 G : 0 <u>Manhole covers, etc.</u>	No	1	
F	550mm Diameter Type 2A cast iron manhole cover and frame, with frame bedded in 3:1 cement mortar and cover sealed in tallow C : 1 G : 0	No	1	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

Brought Forward						
R						
<u>Excavations in earth</u>						
A	15MPa/19mm Mass concrete encasing around 160mm vertical or raking drain pipe to cleaning eye including all necessary formwork C : 1 G : 0	No	1			
B	15MPa/19mm Mass concrete in precast I.E. marker block set flush with the ground or paving C : 1 G : 0	No	1			
<u>Testing</u>						
C	Pressure testing drainage pipe system			Item		
<u>Extra over excavation for sewer drainage for excavation</u>						
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>						
D	Intermediate rock C : 2 G : 0	m3	2			
E	Hard rock C : 2 G : 0	m3	2			
<u>PREFABRICATED TEMPORARY GUARDHOUSE</u>						
F	Allow the Amount of R125,000.00 (One Hundred and Twenty Five Thousand Rand) for a prefabricated temporary guardhouse, including electrical and temporary waste and water connections			Item		125,000.00
G	Profit on above item.			Item		
H	Attendance on ditto.			Item		
<u>PAVING, KERBS, FENCING AND GATES</u>						
<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>						
Carried Forward						
R						
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B						

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward				R
<u>Patching and repairing existing road</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				

<u>Approved G7 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 95% Mod. AASHTO density</u>				
A	Under road in patching C : 7 G : 0	m3	7	
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>				

<u>Asphalt in patching</u>				
B	Tack coat of 30% cationic stable grade emulsion (0.45L/m ²) C : 24 G : 0	m2	24	
C	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²) C : 24 G : 0	m2	24	
D	30mm Premix (continuously graded with 60/70 penetration bitumen) on and including RTH 1/4 prime coat and KRS tack coat on base course (elsewhere measured) in patching C : 24 G : 0	m2	24	
<u>Signage</u>				
E	Allow the Amount of R20,000.00 (Twenty thousand Rand) for the replacement of existing Signage		Item	20,000.00
F	Profit on above item.		Item	
G	Attendance on ditto.		Item	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

Brought Forward							
<u>ALTERATIONS TO MAIN GATE TRACK</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>							
A	Break up and remove existing mass concrete gate beam not exceeding 300mm thick including preparation, roughly levelling ground surfaces, ramming, etc.						
	C : 4 G : 0	m2		4			
B	Take off and remove, store temporarily, existing steel gate running track and remove existing concrete footings, including necessary excavations, filling, compaction, roughly levelling, etc.						
	C : 12 G : 0	m		12			
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>							
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>							
C	Concrete gate beam						
	C : 3 G : 0	m3		3			
<u>Extra over all excavations for carting away</u>							
D	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor						
	C : 3 G : 0	m3		3			
<u>Risk of collapse of excavations</u>							
E	Sides of trench and hole excavations not exceeding 1,5m deep						
	C : 14 G : 0	m2		14			
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							
Carried Forward							
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B							

		Brought Forward		R
<u>25MPa/19 mm Reinforced concrete in</u>				
A	Gate beams and portals C : 3 G : 0	m3	3	
<u>Reinforcement</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<u>Mild steel rod reinforcement to structural concrete work</u>				
B	8mm Diameter bars C : 0.030 G : 0.000	t	0.030	
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
C	10mm Diameter bars C : 0.180 G : 0.000	t	0.180	
D	12mm Diameter bars C : 0.090 G : 0.000	t	0.090	
<u>Steel track in concrete beam</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>				
E	Take out of storage and re-install steel gate running track cast on edge in concrete ground beam including 10mm diameter lugs welded to flat bar at 500mm centres C : 12 G : 0	m	12	
<u>NEW HIGH SECURITY FENCING</u>				
		Carried Forward		R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

Brought Forward							
<p><u>PVC coated high security fencing, gates and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated. Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO9001 and Green Building Council. Fencing will receive 500mm high Flatwrap Razor Wire on top</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p>							R
A	<p>70 x 44mm x 2mm x 3200mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling</p> <p style="text-align: center;">C : 6 G : 0</p>	No	6				
B	<p>High security mesh panel size 1875 x 2400mm high (non-standard size) with aperture size (centers) of 76mm x 12mm rigid mesh panels with bends. Core wire (3mm diameter) to be manufactured from Zinca Super wire coated to SANS 10244-2:2003 specification (Min. 275g/m²) coating consisting of 95% Zinc and 5% Aluminium. Panel shall receive additional PVC Coating (3.4mm thick) Anthracite RAL 7021 or Green RAL 6005. Fencing will receive Flatwrap razor wire (elsewhere measured). All bolts and washers required shall be of grade 304 stainless steel.</p> <p style="text-align: center;">C : 1 G : 0</p>	No	1				
C	<p>Ditto, but size 2240 x 2400mm high (non-standard size)</p> <p style="text-align: center;">C : 1 G : 0</p>	No	1				
Carried Forward							R
<p>Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B</p>							

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward					
A	Ditto, but size 2798 x 2400mm high (non-standard size) C : 1 G : 0	No	1			R
B	500mm Galvanised "Flatwrap Razor Wire", tied to top of PVC coated high security mesh panel fence and posts with 3 strands of barb wire C : 7 G : 0	m	7			
<u>GATES</u> <u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i> <hr style="width: 20%; margin: 10px auto;"/>						
Carried Forward						R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B						

	Brought Forward						
A	<p>Sliding gate, size 6500mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate shall be fitted with a locking lug for padlock. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Gate to receive 500mm Galvanised flat wrap razor wire. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 314-013-ARC-001</u></p> <p style="text-align: center;">C : 1 G : 0</p>	No	1	R			
	Carried Forward			R			
	<p>Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B</p>						

Brought Forward				R
<p><u>Ensure that surfaces are dry, sound and clean. Remove dirt and loose particles, remove any oil, grease and surface contaminants using a mutton cloth in conjunction with Plascon Mineral turps (AZH1). Fill holes, gaps and other surface defects with Polycell Polyfilla interior (101002), allow 4 hours to dry and sand smooth with 220 grit sandpaper, dust off and spot prime filled areas with plaster primer and allow 16 hours to dry. Apply one coat of Professional Gypsum and Plaster Primer (PP 700) to achieve continuous film. Allow 16 hours to dry and apply two full coats of Plascon Polvin Super Acrylic (EPL/TAP) to achieve complete obliteration, allowing 1 hour drying between coats. All strictly to manufacturer's detail specification or equal approved</u></p>				
A	On existing gypsum plaster ceilings C : 26 G : 0	m2	26	
B	On existing cornices C : 49 G : 0	m	49	
<p><u>Surface to be dry, sound and clean. Moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 220 grit paper in the direction of the grain and dust off. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and sand to a smooth finish and dust off. Wash knots and resinous areas with Plascon Lacquer Thinner (ILS1), apply Plascon Woodcare Knot seal (PK2) to all knots and resinous areas and allow 1 hour to dry. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours, apply one coat of Plascon Universal Undercoat (UC1) to achieve continuous film and finish with two full coats of Plascon Waterbased Velvagio Satin (VLO) to achieve complete obliteration allowing 4 hours drying time between coats. Colour to Architects approval</u></p>				
C	On existing doors C : 7 G : 0	m2	7	
Carried Forward				R
<p>Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B</p>				

Brought Forward							
A	<p>On existing skirtings, rails, bars, etc not exceeding 300mm girth C : 46 G : 0</p> <p><u>Bituminous aluminium paint on existing waterproofing</u></p> <p><u>Clean down existing waterproofing, prepare and apply two coats bitumous aluminium paint, all in accordance with manufacturer's specifications</u></p>	m	46				R
B	<p>On existing waterproofing C : 71 G : 0</p> <p><u>NEW HIGH SECURITY FENCING</u></p> <p><u>PVC coated high security fencing, gates and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated. Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO9001 and Green Building Council. Fencing will receive 500mm high Flatwrap Razor Wire on top</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p>	m2	71				
C	<p>70 x 44mm x 2mm x 3200mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling C : 23 G : 0</p>	No	23				
Carried Forward							R
<p>Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B</p>							

	Brought Forward			R
A	<p> Pedestrian swing gate, size 1500mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with a pair of hinges. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 30 x 4mm flat bar welded to framework and 30 x 4mm flat bar mesh clamping fixed to mesh framing flats. Horizontal and vertical wires shall have a core diameter of 3.96mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 4 bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with two 20mm diameter drop bolts and one 160mm diameter locakble sliding bolt. Top of gate to receive 500mm Galvanised flat wrap razor wire. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Pedestrian Gate Drawing 314-013-ARC-002</u> </p> <p style="text-align: center;">C : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p> Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B </p>			

	Brought Forward			R
A	<p>Sliding gate, size 3900mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate shall be fitted with a locking lug for padlock. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Top of gate to receive 500mm Galvanised flat wrap razor wire. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 314-013 ARC-003</u></p> <p style="text-align: center;">C : 2 G : 0</p> <p><u>CONCRETE GATE BEAM</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i></p>	No	2	
	Carried Forward			R
	<p>Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B</p>			

Brought Forward				R
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>				
A	Concrete gate beam C : 1 G : 0	m3	1	
<u>Extra over all excavations for carting away</u>				
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor C : 1 G : 0	m3	1	
<u>Risk of collapse of excavations</u>				
C	Sides of trench and hole excavations not exceeding 1,5m deep C : 15 G : 0	m2	15	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				

<u>30MPa/19 mm Reinforced concrete in</u>				
D	Gate beams C : 1 G : 0	m3	1	
<u>Reinforcement</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				

<u>Mild steel rod reinforcement to structural concrete work</u>				
E	8mm Diameter bars C : 0.020 G : 0.000	t	0.020	
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
F	10mm Diameter bars C : 0.050 G : 0.000	t	0.050	
Carried Forward				R
Section No. 2 Bill No. 2 Renovations to existing guardhouses Q532B				

SECTION SUMMARY - SECTION 2 WORK PACKAGE 1 - FENCING AT LIVIN

Bill No		Page No	Amount
1	Fencing at Livingstone Hospital	94	
2	Renovations to existing guardhouses	145	
Carried to Final Summary			R
Section No. 2 Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 WORK PACKAGE 2</u></p> <p><u>REPLACEMENT OF STEEL STAIRCASE AT PROTEA FLATS</u></p> <p><u>BILL NO. 1</u></p> <p><u>RENOVATIONS</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>TEMPORARY FIRE ESCAPE STAIRCASE</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/>			
	Carried Forward		R	
	<p>Section No. 3 Bill No. 1 Renovations Q532B</p>			

	Brought Forward		R
A	<p><u>Bidder to take cognisance that work will be done on the external facade of the 11 storey building by installing a new fire escape staircase. Bidders to familiarise themselves with temporary access staircase requirements and required access scaffolding to all external working areas as indicated in the Health and Safety Specification annexed to the Bid Document and sequence of works and price accordingly for all working areas, fall protection, etc. as well as all other Health and Safety requirements. No further claims in this regard will be entertained.</u></p> <p><u>Temporary fire escape staircase</u></p> <p>Provide temporary staircase, to serve as fire escape for 11 storey building, for duration of the dismantling, removing existing steel fire escape staircase and metal screens (elsewhere measured), until construction of new steel fire escape and metal screens (elsewhere measured) is completed and approved by the engineer/principal agent. Temporary fire escape staircase to be in accordance with Health and Safety regulations as specified in the Project Health and Safety specifications and signed off by OHS Consultant and relevant Engineer, prior to use. Temporary fire escape staircase to be used as temporary fire escape only and not as access for any construction activities.</p> <p><u>RENOVATIONS</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>FLOORS AND FLOOR FINISHES</u></p>	Item	
B	<p>All material become the property of the Contractor and are to be removed by him from the site. All debris and rubbish arising from the alterations are to be immediately carted away and the site left clear and unencumbered.</p>	Item	
	Carried Forward		R
	<p>Section No. 3 Bill No. 1 Renovations Q532B</p>		

	Brought Forward			R
A	Any breaking up, breaking down, etc. and removal of existing work must be done with the greatest care to prevent any form of structural or other damage to work or items not due to be removed. If any such damage may occur it will be made good by the Contractor on his own expense		Item	
	<u>FLOORS AND FLOOR FINISHES</u>			
B	Cut through concrete floor not exceeding 120mm thick for column footing size 250 x 250mm wide, cut existing mesh (if any) on centre, bend up and preserve and remove existing concrete floor	No	2	
C	Cut through concrete floor not exceeding 120mm thick for column footing size 500 x 500mm wide, cut existing mesh (if any) on centre, bend up and preserve and remove existing concrete floor	No	4	
	<u>EXTERNAL WALLS AND WALL FINISHES</u>			
D	Carefully break open and form 400 x 340 x 230mm deep openings in one and half brick wall and prepare to receive concrete pads (elsewhere measured) for fixing of steel from new steel staircase to existing walls (steel staircase elsewhere measured) at each intermediate landing of 10-storey steel fire escape staircase	No	33	
	<u>DISMANTLE EXISTING STEEL FIRE ESCAPE AND SCREEN AND REMOVE FROM SITE</u>			
	Carried Forward			R
	Section No. 3 Bill No. 1 Renovations Q532B			

Brought Forward		R	
<p><u>NOTE: Prospective bidders are to inspect the existing Steel fire escape staircase and steel screens on site to familiarize themselves with the scope and complexity of work to remove the structure, as no further costs pertaining to this, shall be entertained.</u> <u>All works are required to be done within the OHS specification provided by relevant consultant. No works shall commence prior to the written approval (by the Principal Agent and OHS Consultant), of the methodology of works provided by successful contractor.</u> <u>The removal of the steel works to be priced in items below in full:</u></p>			
A	Break down and remove existing steel fire escape, overall size approximately 6m x 3m x 33m high. Consisting of 11 x landings each approximately 2 x 4m wide, 11 x flight of stairs (2.5m x 2m wide measured flat on plan), 80m x 1.2m high metal balustrade both sides of risers, complete with all fixing brackets and bolts, etc.	No	1
B	Break down and remove metal screen, overall size 6m x 33m high fixed to concrete walls at vertical sides, consisting of square tubing, vertical and horizontal framework and solid bar vertical inserts, complete with all fixing brackets and bolts, etc.	No	1
C	One coat 1:4 cement plaster in patching to repair plastered face of brick walls where steel fire escape and metal screen were removed	m2	42
<u>BUDGETARY ALLOWANCE</u>			
D	Allow R100,000.00 (One Hundred Thousand Rand) for work or cost which cannot be entirely foreseen, defined or detailed at tender stage. This amount shall be used at the discretion of the Implementing Agent/Project Manager if required.	Item	100,000.00
<u>CREDIT FOR OLD MATERIAL</u>			
E	The contractor to allow herein for credit for all old materials from the alteration described to become the property of the contractor.	No	-1
Carried Forward to Summary of Section No. 3			R
Section No. 3			
Bill No. 1			
Renovations			
Q532B			

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 3 WORK PACKAGE 2</u></p> <p><u>REPLACEMENT OF STEEL STAIRCASE AT PROTEA FLATS</u></p> <p><u>BILL NO 2</u></p> <p><u>EARTHWORKS</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Nature of material to be excavated</u></p> <p>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>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>Carried Forward</p>		R	
<p>Section No. 3 Bill No. 2 Earthworks Q532B</p>			

Brought Forward

R

Excavation for working space in rock

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

Filling

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

Testing

Prices for filling are to include for all necessary density tests in accordance with SABS 1200D

Subterranean water

No information regarding subterranean water is available. The tenderer must acquaint himself of the presence and depth of subterranean water and allow therefor in his prices

EARTHWORKS

***NOTE:** The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes*

EXCAVATION, FILLING, ETC

Excavation in earth or compacted filling not exceeding 2m deep

A Concrete bases for steel staircase

m3

2

Carried Forward

R

Section No. 3
Bill No. 2
Earthworks
Q532B

Brought Forward			R
<u>Extra over all excavations for carting away</u>			
A	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	2
<u>Risk of collapse of excavations</u>			
B	Sides of trench and hole excavations not exceeding 1,5m deep	m2	5
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 93% Mod. AASHTO density</u>			
C	Backfilling to trenches, holes, etc	m3	1
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>			

<u>30MPa/19mm concrete</u>			
D	Concrete bases for steel staircase	m3	2
<u>Rough formwork to sides</u>			
E	Concrete bases	m2	2
<u>REINFORCEMENT</u>			
<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>			

<u>Mild steel rod reinforcement to structural concrete work</u>			
F	8mm Diameter bars	t	0.035
Carried Forward			R
Section No. 3 Bill No. 2 Earthworks Q532B			

Brought Forward				R
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
A	10mm Diameter bars	t	0.070	
B	12mm Diameter bars	t	0.105	
C	16mm Diameter bars	t	0.340	
<u>EXTERNAL PLASTER</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i>				

<u>One coat 1:5 cement plaster on brickwork</u>				
D	On concrete bases	m2	5	
<u>PAINTWORK</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i>				

<u>Clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) and apply two coats Plascon Professional Hygiene Low Sheen (PHL)THL paint:</u>				
E	Concrete bases	m2	5	
Carried Forward to Summary of Section No. 3				R
Section No. 3				
Bill No. 2				
Earthworks				
Q532B				

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 WORK PACKAGE 2</u></p> <p><u>REPLACEMENT OF STEEL STAIRCASE AT PROTEA FLATS</u></p> <p><u>BILL NO 3</u></p> <p><u>CONCRETE FORMWORK AND REINFORCEMENT</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (C2.1 Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Type of cement</u></p> <p>All cement used in concrete work is to be OPC cement, no cement containing fly ash will be allowed</p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Representative/Agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Representative/Agent. (Test cubes are measured separately)</p>			
	Carried Forward		R	
	<p>Section No. 3 Bill No. 3 Concrete formwork and reinforcing Q532B</p>			

	Brought Forward		R
<p><u>Breeze concrete</u></p> <p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); 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>Lightweight concrete</u></p> <p>Lightweight concrete shall have a density of 600kg/m³ for the top 50mm and 400kg/m³ for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p> <p><u>Formwork</u></p> <p>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</p> <p>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</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p>			
	Carried Forward		R
<p>Section No. 3 Bill No. 3 Concrete formwork and reinforcing Q532B</p>			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 WORK PACKAGE 2</u></p> <p><u>REPLACEMENT OF STEEL STAIRCASE AT PROTEA FLATS</u></p> <p><u>BILL NO 4</u></p> <p><u>STRUCTURAL STEELWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of L shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 134 for JBCC CPAP purposes</i></p> <p style="text-align: center;">_____</p> <p><u>WORKSHOP DRAWINGS</u></p> <p>A Preparation of workshop drawings for steel fire escape staircase for approval by Structural Engineer before manufacturing</p>			
	Carried Forward		R	
	<p>Section No. 3 Bill No. 4 Structural steel Q532B</p>			

Brought Forward			R
<p><u>STEEL FIRE ESCAPE STAIRCASE FOR 11 STOREY BUILDING ERECTED ON OUTSIDE OF BUILDING ALL IN ACCORDANCE WITH DRAWING J117-S10 REV B AND DRAWING 305-019-DET-002 ANNEXED TO BACK OF BILLS OF QUANTITIES</u></p> <p><u>The following in welded and bolted galvanised steel columns, beams, stringers etc. (Steel grade S335JR)</u></p>			
A	200 x 75mm Parallel flange channel	t	9.308
B	120 x 120 x 4mm Square hollow section column	t	2.048
C	100 x 50 x 6mm Channel	t	1.652
D	80 x 80 x 8mm Angle section	t	1.772
E	Galvanized angle and flat sections in connections, brackets, etc.	t	0.596
<u>Sundries</u>			
F	240 x 240 x 10mm Thick galvanised base plate	No	2
G	380 x 240 x 10mm Thick galvanised base plate	No	2
H	240 x 240 x 20mm Thick non-shrink grout between concrete and underside of base plate	No	2
I	380 x 240 x 20mm Thick non-shrink grout between concrete and underside of base plate	No	2
<u>Galvanised Nuts and bolts, etc.</u>			
J	M16 Grade 8.8 bolts	No	1,696
K	M16 Chemical anchors 120mm long	No	8
L	M20 Chemical anchors 120mm long	No	8
Carried Forward			R
<p>Section No. 3 Bill No. 4 Structural steel Q532B</p>			

	Brought Forward					
	<p><u>Galvanised mild steel balustrade and handrail overall height 979mm high, consisting of 2 no. equal sections approximately 1414mm wide. Balustrade frame to be formed from 50 x 50mm steel angle consisting of a top rail, bottom rail and vertical sides, bolted to top of steel stair stringer (elsewhere measured), including high density galvanised mesh fencing infill panels, with apertures size 76 x 25mm approximate panel size 1400 x 900mm high, fixed to frame, including handrail consisting of 60 x 10mm thick flat steel bar and 2 no. 50 x 25 x 5mm unequal angles welded with short leg to u/s of handrail and top of balustrade frame. Bolt through angle to fix balustrade to handrail, including 60 x 10mm thick flat bar bolted between handrail at each landing. All welds to be continuous and all holes, drilled and welding to be complete before galvanising, all in accordance to Drawing 305-019 DET-002 Stair Balustrade Details annexed at the back of these Bills of Quantities</u></p>			R		
A	Raking balustrade and handrail fixed to steel stairs, size 1414mm wide and 979mm high	No	33			
	Carried Forward			R		
	Section No. 3 Bill No. 4 Structural steel Q532B					

	Brought Forward					
	<p><u>Galvanised mild steel balustrade and handrail overall height 979mm high, approximately 1380mm wide. Balustrade frame to be formed from 50 x 50mm steel angle consisting of a top rail, bottom rail and vertical sides, bolted to top of steel stair stringer (elsewhere measured), including high density galvanised mesh fencing infill panels, with apertures size 76 x 25mm approximate panel size 1380 x 900mm high, fixed to frame, including handrail consisting of 60 x 10mm thick flat steel bar and 2 no. 50 x 25 x 5mm unequal angles welded with short leg to u/s of handrail and top of balustrade frame. Bolt through angle to fix balustrade to handrail, including 60 x 10mm thick flat bar bolted between handrail at each landing. All welds to be continuous and all holes, drilled and welding to be complete before galvanising, all in accordance to Drawing 305-019 DET-002 Stair Balustrade Details annexed at the back of these Bills of Quantities</u></p>				R	
A	Horizontal balustrade and handrail fixed to intermediate landings, size 1380mm wide x 979mm high	No	11			
	Carried Forward				R	
	Section No. 3 Bill No. 4 Structural steel Q532B					

Brought Forward							
	<u>Galvanised mild steel balustrade and handrail overall height 979mm high, approximately 1880mm wide. Balustrade frame to be formed from 50 x 50mm steel angle consisting of a top rail, bottom rail and vertical sides, bolted to top of steel stair stringer (elsewhere measured), including high density galvanised mesh fencing infill panels, with apertures size 76 x 25mm approximate panel size 1880 x 900mm high, fixed to frame, including handrail consisting of 60 x 10mm thick flat steel bar and 2 no. 50 x 25 x 5mm unequal angles welded with short leg to u/s of handrail and top of balustrade frame. Bolt through angle to fix balustrade to handrail, including 60 x 10mm thick flat bar bolted between handrail at each landing. All welds to be continuous and all holes, drilled and welding to be complete before galvanising, all in accordance to Drawing 305-019 DET-002 Stair Balustrade Details annexed at the back of these Bills of Quantities</u>						R
A	Horizontal balustrade and handrail fixed to floor level landings, size 1880mm wide x 979mm high		No		11		
	<u>Galvanised mild steel handrail with overall height 100mm high. Handrail consisting of 60 x 10mm thick flat steel bar, including an 8mm flat bar with a 50mm upstand welded on one side to the u/s of the handrail to and welded to a 40 x 180 x 6mm thick wall plate on the other side to create a 200mm offset from the wall, including a 6mm support flange, bolted to wall. All welds to be continuous and all holes, drilled and welding to be complete before galvanising, all in accordance to Drawing 305-019 DET-002 Stair Balustrade Details annexed at the back of these Bills of Quantities</u>						
B	Horizontal handrail fixed to wall		m		22		
C	Raking handrail fixed to wall		m		33		
	<u>THE FOLLOWING IN GALVANIZED WELDED METAL FENCE PANELS WITH FRAME</u>						
	Carried Forward						R
	Section No. 3 Bill No. 4 Structural steel Q532B						

	Brought Forward					
						R
	<p><u>Purpose made galvanised steel panels for side of 11 storey steel staircase, approximate size 1040 x 2990mm high, consisting of 50 x 50mm steel angle frame bolted to 100 x 50mm steel channel (measured elsewhere), including high density galvanised mesh fencing infill panels, with apertures size 76 x 25mm, fixed to frame with approved system clips. All welds to be continuous and all holes, drilled and welding to be complete before galvanising, all in accordance to Drawing 305-019 DET-002 Stair Balustrade Details annexed at the back of these Bills of Quantities</u></p>					
A	Fencing panels to steel staircase, size 1040mm wide x 2990mm high	No	24			
	<p><u>Purpose made galvanised steel panels approximate size 2280 x 2990mm high, fixed to side of 10 storey steel staircase, consisting of 50 x 50mm steel angle frame bolted to 100 x 50mm steel channel (measured elsewhere), including high density galvanised mesh fencing infill panels, with apertures size 76 x 25mm, fixed to frame with approved system clips. All welds to be continuous and all holes, drilled and welding to be complete before galvanising, all in accordance to Drawing 305-019 DET-002 Stair Balustrade Details annexed at the back of these Bills of Quantities</u></p>					
B	Fencing panels to steel staircase, size 2280mm wide x 2990mm high	No	13			
	Carried Forward to Summary of Section No. 3					R
	Section No. 3					
	Bill No. 4					
	Structural steel					
	Q532B					

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 WORK PACKAGE 2</u></p> <p><u>REPLACEMENT OF STEEL STAIRCASE AT PROTEA FLATS</u></p> <p><u>BILL NO 5</u></p> <p><u>PAINTWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin: 10px auto;"/> <p><u>ON METALWORK</u></p> <p><u>Ensure surfaces are clean and dry. Apply Plascon Galvanised Iron Cleaner (GIC1) to all bare galvanised areas. Surface to be dry, sound and clean. Allow to react for 1 minute and rinse off with tap water using bristle brush or Scotch Brite pads to remove all surface contaminants, until surface is water break-free. Prime with one coat of Plascon Galvanised Iron Primer (GIP1) to achieve continuous film and allow 24 hours to dry, apply one coat Plascon Universal Undercoat (UC1) to achieve continuous film and allow 16 hours to dry. Finish with two coats of Plascon Velvaglo Water Based (VLW/TVW) to achieve complete obliteration allowing 4 hours drying time between coats</u></p>			
A	Structural steel staircase	m2	812	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3 Bill No. 5 Painting Q532B			

SECTION SUMMARY - SECTION 3 WORK PACKAGE 2 STEEL STAIRCASE A

Bill No		Page No	Amount
1	Renovations	150	
2	Earthworks	154	
3	Concrete formwork and reinforcing	158	
4	Structural steel	165	
5	Painting	166	
Carried to Final Summary			R
Section No. 3 Q532B			

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO. 1</u></p> <p><u>RENOVATIONS</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>Bidder to take cognisance that work in Work Package 3 will be done on the external facade of the 10 storey building, work on the roof of the 11 storey building and internal work in penthouse flat on top floor of 11 storey building. Bidders to familiarise themselves with temporary access staircase requirements and required access scaffolding to all external working areas as indicated in the Health and Safety Specification annexed to the Bid Document and sequence of works and price accordingly for all working areas, fall protection, etc. as well as all other Health and Safety requirements. No further claims in this regard will be entertained.</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p style="text-align: right;">Carried Forward</p> <p>Section No. 4 Bill No. 1 Renovations Q532B</p>			R

Brought Forward				R
<u>Take out and remove existing door frames and doors from walls to be replaced with new doors and frame</u>				
A	Take out and remove existing timber door and timber frame, size 813 x 2032mm high from half brick wall and prepare opening to receive new fire door and frame size 883 x 2032mm (fire door measured elsewhere)	No	1	
B	Take out and remove existing timber door and timber frame, size 813 x 2032mm high from one brick wall and prepare opening to receive new timber door and timber frame size 813 x 2032mm (elsewhere measured)	No	1	
<u>Take out and remove existing door frames and doors from walls to be replaced with new fittings</u>				
C	Take out and remove existing timber door and timber frame, size 883 x 2100mm high from 440mm solid brick wall and prepare opening to receive new door of same size (measured elsewhere)	No	1	
<u>Break out and remove existing doors and frames and brick up openings</u>				
D	Break out timber frame and timber door, size approximately 813 x 2032mm high, with lock, etc, from one brick wall, prepare top of existing brickwork and brick up opening with brickwork in cement mortar, finish off with plaster to both sides in patching and paint primer and undercoat to receive final coats (measured elsewhere) including necessary cutting, temporary support, neat flush intersections of new to existing finishes, etc.	No	1	
<u>Break opening through one brick wall for new door</u>				
E	Break opening, size 600 x 1800mm high, through one brick wall for new galvanized steel frame (measured elsewhere) , repair reveals and lintels with brickwork in cement mortar as well as plastered finish to both sides in patching and paint primer and undercoat to receive final coats (measured elsewhere) including necessary cutting, temporary support , neat flush intersections of new to existing finishes, etc.	No	1	
Carried Forward				R
Section No. 4 Bill No. 1 Renovations Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	Take out and remove existing aluminium curtain wall and door, size 3245 x 2350mm high overall from 270mm cavity brick wall and prepare opening to receive new aluminium curtain wall and door of the same size (elsewhere measured)	No	1	
B	Take out and remove existing aluminium curtain wall and door, size 3555 x 2350mm high overall from 270mm cavity brick wall and prepare opening to receive new aluminium curtain wall and door of the same size (elsewhere measured)	No	1	
C	Take out and remove existing aluminium curtain wall, size 12489 x 2350mm high overall from 270mm cavity brick wall and prepare opening to receive new aluminium curtain wall and door of the same size (elsewhere measured)	No	1	
<u>WINDOWS</u>				
D	Remove existing sealant around all external aluminium windows and prepare to receive new sealant (elsewhere measured)	m	3,626	
E	Remove existing damaged glass panels from aluminium windows (various floors in occupied residences), and prepare to receive new glass (elsewhere measured) - (Lead time of 6 weeks to be allowed on programme to notify occupants of flats to arrange for access and working time in the specific unit/flat)	m2	28	
F	Remove existing glass panels from steel window sashes, fixed with putty and prepare to receive new glass (elsewhere measured)	m2	3	
G	Service existing residential type steel window frame, size 2980 x 700mm high, including all necessary bending, servicing of hinges and replacing of ironmongery, etc. (replacement of broken glass measured elsewhere)	No	1	
Carried Forward				R
Section No. 4 Bill No. 1 Renovations Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward				R
A	Take out and remove existing aluminium window, size 600 x 900mm high, with sills, lintels, etc. from 270mm cavity wall, prepare opening to receive new aluminium window of the same size (new window measured elsewhere) repair reveals and lintels with plastered finish to both sides in patching and paint primer and undercoat to receive final coats (measured elsewhere) including necessary cutting, temporary support, neat flush intersections of new to existing finishes, etc.	No	1	
B	Take out and remove existing aluminium window, size 1000 x 2350mm high, with sills, lintels, etc. from 270mm cavity wall, prepare opening to receive new aluminium window of the same size (new window measured elsewhere) repair reveals and lintels with plastered finish to both sides in patching and paint primer and undercoat to receive final coats (measured elsewhere) including necessary cutting, temporary support, neat flush intersections of new to existing finishes, etc.	No	2	
<u>Take out and remove existing steel windows to be replaced</u>				
C	Take out and remove existing steel window, size 1000 x 900mm high, with sills, lintels, etc. from 270mm cavity wall, prepare opening to receive new aluminium window of the same size (new window measured elsewhere) repair reveals and lintels with plastered finish to both sides in patching and paint primer and undercoat to receive final coats (measured elsewhere) including necessary cutting, temporary support, neat flush intersections of new to existing finishes, etc.	No	1	
<u>Break out and remove existing steel window and brick up opening</u>				
D	Break out steel window, size approximately 762 x 928mm high, and brick up opening with 270mm thick brickwork, repair plaster both sides including necessary cutting, temporary support, preparation of top of existing brick work to receive new brickwork, cutting toothing, neat flush intersections of new to existing finishes, etc.	No	1	
Carried Forward				R
Section No. 4 Bill No. 1 Renovations Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		R
A	Carefully disconnect and remove existing 1135 litre asbestos water tank, approximately 1400mm diameter wide from inside the lift plant room area and prepare to receive new tank (measured elsewhere) <u>removal and disposal all in accordance and compliance with Asbestos Abatement Contractor of 2020</u>	No 1
B	Take off and remove existing timber fascia and barge boards, not exceeding 300mm wide, from roof timbers	m 64
C	Take off and remove existing galvanised gutters from existing timber roof structure and prepare to receive new gutters (measured elsewhere)	m 48
D	Take off and remove existing 75mm diameter galvanised downpipes from existing brickwork and prepare to receive new downpipes (measured elsewhere)	m 28
E	Carefully take down and remove existing timber roof structure, purlins, etc. and prepare to receive new (measured elsewhere)	m2 80
F	Carefully take down and remove existing 225 x 76mm timber beams, including 175 x 76mm joists from roof structure and prepare to receive new (measured elsewhere)	m 170
G	Carefully take out existing fullbore inlet and cover from concrete and prepare to receive new (measured elsewhere)	No 10
H	Clean out all existing cast iron fullbore water inlets, to be free of all vegetation and dirt	No 10
I	Clean out existing halfround open stormwater channels approximately 200mm wide and 100mm deep on roof and balcony areas to be free of all vegetation and dirt to receive new waterproofing (elsewhere measured)	m 53
Carried Forward		R
Section No. 4 Bill No. 1 Renovations Q532B		

Brought Forward		R
<u>TIMBER FITTINGS</u>		
A	Remove existing timber floor cupboard approximate size 1050 x 300 x 2100mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces	No 1
B	Remove existing timber floor cupboard approximate size 1625 x 500 x 2100mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces	No 1
C	Remove existing timber floor cupboard approximate size 1625 x 600 x 2100mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces	No 1
D	Remove existing timber floor cupboard approximate size 2758 x 600 x 2100mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces	No 1
E	Remove existing timber floor cupboard approximate size 3178 x 600 x 2100mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces	No 1
F	Remove existing timber floor cupboard with worktop approximate size 7200 x 500 x 910mm high overall, from plastered wall and concrete floor with cement plaster screed and repair wall and floor faces	No 1
G	Remove existing timber shelving approximately 400mm wide including wallbands and steel brackets from plastered wall and repair wall faces	m 28
H	Remove existing timber pelmet 22 x 300mm high including brackets from plastered wall and repair wall faces	m 22
I	Carefully take out, remove and store temporarily boardroom table size 1800 x 900mm , and reinstate after completion or hand over to client	No 2
Carried Forward		R
Section No. 4 Bill No. 1 Renovations Q532B		

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	Carefully take out, remove and store temporarily dining room chairs, and reinstate after completion or hand over to client	No	12	
B	Carefully take out, remove and store temporarily two-seater couch size approximately 1800 x 900mm, including temporary storage, and hand over to client	No	2	
C	Carefully take out, remove and store temporarily TV Unit/ Sideboard unit size approximately 1500 x 900mm, including temporary storage, and hand over to client	No	2	
D	Carefully take out, remove and store temporarily side table size approximately 900mm diameter, including temporary storage, and hand over to client	No	1	
<u>IRONMONGERY</u>				
E	Carefully remove mirror, size 450 x 450mm high from plastered walls, repair finishes	No	3	
F	Take off and remove existing glazed soap holders from tiled walls	No	6	
G	Take off and remove existing chromium plated toilet roll holders plugged to plastered brick walls	No	3	
H	Take off and remove existing chromium towel rail 700mm long including end brackets plugged to plastered brick walls and repair wall faces	No	5	
<u>METALWORK</u>				
I	Remove existing rubber overmolding from steel handrail approximately 100mm wide and prepare to receive new paint (elsewhere measured)	m	129	
Carried Forward				R
Section No. 4 Bill No. 1 Renovations Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward		R
	<u>SUNDRIES</u>		
A	Allow the amount of R50,000.00 (Fifty Thousand Rand) for repairs to the steel lid of the lift motor room area	Item	50,000.00
B	Profit on above item.	Item	
C	Attendance on ditto.	Item	
D	Allow the amount of R50,000.00 (Fifty Thousand Rand) for the removal of all detritus material, junk, mesh screen, anchors and plugs from the roof area	Item	50,000.00
E	Profit on above item.	Item	
F	Attendance on ditto.	Item	
G	Allow the amount of R25,000.00 (Twenty Five Thousand Rand) for localised minor repairs to existing balustrading on roof	Item	25,000.00
H	Profit on above item.	Item	
I	Attendance on ditto.	Item	
J	Allow R50,000.00 (Fifty Thousand Rand) for plumbing repairs (connections and leaks) to vertical stacks	Item	50,000.00
K	Profit on above item.	Item	
L	Attendance on ditto.	Item	
M	Allow R15,000.00 (Fifteen Thousand Rand) for the removal of dead pigeons and pigeon faeces within the roof and ceiling voids	Item	15,000.00
N	Profit on above item.	Item	
O	Attendance on ditto.	Item	
	Carried Forward		R
	Section No. 4 Bill No. 1 Renovations Q532B		

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward		R
<u>BUDGETARY ALLOWANCE</u>			
A	Allow R250,000.00 (Two Hundred and Fifty Thousand Rand) for work or cost which cannot be entirely foreseen, defined or detailed at tender stage. This amount shall be used at the discretion of the Implementing Agent/Project Manager if required	Item	250,000.00
<u>CREDIT FOR OLD MATERIAL</u>			
B	The contractor to allow herein for credit for all old materials from the alteration described to become the property of the contractor.	No	-1
Carried Forward to Summary of Section No. 4			R
Section No. 4 Bill No. 1 Renovations Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 2</u></p> <p><u>CONCRETE FORMWORK AND REINFORCEMENT</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (C2.1 Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Type of cement</u></p> <p>All cement used in concrete work is to be OPC cement, no cement containing fly ash will be allowed</p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Representative/Agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Representative/Agent. (Test cubes are measured separately)</p>			
	Carried Forward		R	
	<p>Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcing Q532B</p>			

	Brought Forward		R
<p><u>Breeze concrete</u></p> <p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); 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>Lightweight concrete</u></p> <p>Lightweight concrete shall have a density of 600kg/m³ for the top 50mm and 400kg/m³ for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p> <p><u>Formwork</u></p> <p>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</p> <p>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</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p>			
	Carried Forward		R
<p>Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcing Q532B</p>			

	Brought Forward			R
	<p>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"</p> <p><u>REINFORCED CONCRETE</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin: 10px auto;"/> <p><u>25 MPa/19 mm concrete in</u></p>			
A	<p>Roof slabs cast on permanent Bond-Dek formwork (formwork elsewhere measured) (Bidder should take cognisance of the fact that concrete should be pumped for work on the 11th floor and should price accordingly, no further claims will be entertained in this regard)</p>	m3	7	
B	<p>Ring Beams (Bidder should take cognisance of the fact that concrete should be pumped for work on the 11th floor and should price accordingly, no further claims will be entertained in this regard)</p>	m3	2	
	<p><u>30 MPa/19 mm concrete in</u></p>			
C	<p>Ramps (Bidder should take cognisance of the fact that concrete should be pumped for work on the 11th floor and should price accordingly, no further claims will be entertained in this regard)</p>	m3	1	
	Carried Forward			R
	<p>Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcing Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Concrete pads cast in openings in brickwork (openings measured elsewhere) for fixing steel beam roof structure for watertank (11th storey) (No. 4 size 350 x 230 x 350mm) (Bidder should take cognisance of the fact that concrete should be pumped for work on the 11th floor and should price accordingly, no further claims will be entertained in this regard)	m3	1
<u>TEST BLOCKS</u>			
B	Making and testing set of three 150 x 150 x 150 mm strength test cubes	No	8
<u>CONCRETE SUNDRIES</u>			
<u>Existing concrete surface beds, slab, etc.</u>			
C	Scrabble existing internal concrete floor surface to expose aggregate to receive new concrete ramp (measured elsewhere)	m2	2
D	Ditto, but to vertical side of existing concrete step 150mm high	m	2
E	Scrape open crack in existing concrete slab and remove all debris, fill crack with Sika Injection-201 or similar approved product and prepare surface to receive paint (measured elsewhere)	m	20
<u>Wet to dry epoxy or similar approved bonding agent</u>			
F	On existing scabbled concrete ramp	m2	2
G	Ditto, but to vertical side of existing concrete step 150mm high	m	2
<u>Finishing top surface of concrete smooth with a wood float in</u>			
H	Ramp	m2	2
I	Roof slabs	m2	44
Carried Forward			R
Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcing Q532B			

Brought Forward			R
<u>FORMWORK</u>			
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>			
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>			
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>			
<u>Rough formwork to sides and soffits</u>			
A	Ring beams	m2	11
B	Sloping edges, risers, ends and reveals not exceeding 300mm high	m	2
<u>Rough formwork to sides of:</u>			
C	Concrete pads	m2	1
<u>Boxing in rough formwork to form:</u>			
D	Boxing in rough formwork to form 650 x 650mm opening in concrete slabs	m	5
<u>Sundries</u>			
E	Drilling holes 150mm deep in existing concrete slab or step to receive 10mm diameter bars	No	8
F	Y10 dowel bars 150mm long grouted into existing concrete slab	No	4
G	Y10 dowel bars 300mm long, once bent, grouted into existing concrete slab	No	4
<u>Brick wall and concrete pad joint</u>			
H	450mm long Galvanised hoop irons size 38 x 2mm fastened onto concrete pad with and including Hilti nails either side of pad built into brickwork	No	148
Carried Forward			R
Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcing Q532B			

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward				R
A	16mm Diameter bars	t	0.03	
B	20mm Diameter bars	t	0.06	
	<u>Fabric reinforcement</u>			
C	Type 311 fabric reinforcement in concrete roof slabs	m2	44	
Carried Forward to Summary of Section No. 4 Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcing Q532B				R

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO. 3</u></p> <p><u>MASONRY</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Sizes in descriptions</u></p> <p>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>Wall ties</u></p> <p>Descriptions of solid walls (except if built in English bond) and cavity walls shall be deemed to include metal wall ties complying with SABS 28 and of the butterfly or of the modified PWD type, of the required length with each end built at least 75mm deep into brickwork, spaced at not more than 1m centres alternatively to every third course of brickwork</p> <p><u>Cavity walls etc</u></p> <p>Descriptions of cavity walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole</p>			
	Carried Forward		R	
	<p>Section No. 4 Bill No. 3 Masonry Q532B</p>			

Brought Forward			R
<u>Face bricks</u>			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<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			

<u>SUPERSTRUCTURE</u>			
<u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i>			

<u>Brickwork of clay bricks in 6:1 cement mortar</u>			
A	Half brick walls	m2	4
B	Half brick wall lining to be bonded onto existing brickwork at end including tie-inns every 2nd course	m2	7
C	Half brick wall lining in patching to be bonded onto existing brickwork at end including tie-inns every 2nd course	m2	60
<u>BRICKWORK SUNDRIES</u>			
<u>Joints formed of jointex</u>			
D	10mm Jointex in vertical joint built in vertically between brick walls not exceeding 300mm wide	m	20
<u>Brick reinforcement</u>			
E	75mm Wide reinforcement built in horizontally	m	61
F	150mm Wide reinforcement built in horizontally	m	20
Carried Forward			R
Section No. 4 Bill No. 3 Masonry Q532B			

	Brought Forward				
	<u>Prestressed concrete lintels</u>				R
A	115mm Wide lintels in lengths not exceeding 3m	m	10		
	<u>FACE BRICKWORK</u>				
	<u>External facings in approved face bricks (FBX) (allow a PC Amount of R8,500.00 per thousand bricks delivered to site, excluding VAT), face bricks in stretcher bond with well raked and smoothed joints (85mm gauge). Colour and type to Architect's approval</u>				
B	Extra over brickwork for face brickwork in patching (9th & 10th storey external facade)	m2	42		
	Carried Forward to Summary of Section No. 4				R
	Section No. 4				
	Bill No. 3				
	Masonry				
	Q532B				

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 4</u>			
	<u>WATERPROOFING</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>			
	<hr style="width: 20%; margin: 0 auto;"/>			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>Ensure that surfaces are dry, sound and clean, and apply SikaTop Seal-107 Za or similar approved to plastered surfaces all in strict accordance with manufacturer's instructions</u>			
A	On existing plastered internal walls in patching	m2	280	
B	On newly plastered internal walls in patching	m2	70	
	<u>ABE Flexothane 27 polyurethane sealing compound installed as per manufacturers specifications</u>			
C	Around aluminium windows (external facade)	m	3,626	
	Carried Forward			R
	Section No. 4 Bill No. 4 Waterproofing Q532B			

Brought Forward			R
<u>JOINT SEALANTS, ETC</u>			
A	All joints/surrounds to wash hand basin to be sealed with Sikaflex -11 FC+ (colour white).	m	16
<u>Substrate to be clean, dry and sound, insert a suitable backing rod and insert Sikaflex Pro-3 joint sealants into the joint and ensure it is firmly tooled against the joint sides installed as per manufacturers specifications</u>			
B	To existing concrete roof expansion joints (balcony area and flats roof)	m	219
<u>MOISTURE BARRIER TO FLOOR</u>			
<u>Two coats Vaporite moisture barrier to substrate and allow to dry, evenly apply a slurry coat consisting of equal parts by volume of Bondite Primer and Levelite F30 using a broom or brush and allow to dry, all in accordance with manufacturer's specifications</u>			
C	Floors	m2	202
<u>DAMP-PROOFING OF ROOFS</u>			
<u>One layer dual reinforced Derbigum SP4 torch on waterproofing membrane with glass reinforced. To be installed with a 75mm side laps and 100mm end laps, sealed to primed surface to falls and crossfalls, all in accordance with manufacturer's specifications</u>			
D	On flat concrete roofs to falls	m2	88
E	On flat concrete roofs to falls in patching	m2	105
F	On flat marine ply timber boarded roof	m2	305
G	Vertically to turn-ups (200mm high turn-ups)	m2	66
H	Horizontally top top of upstand beams (350mm girth)	m2	66
Carried Forward			R
Section No. 4 Bill No. 4 Waterproofing Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward			R
A	Open stormwater channels on roof (500mm girth)	m2	27
B	To vertical edge of roof (maximum 1000mm girth)	m2	30
C	Chimney capping	m2	2
<u>DAMP-PROOFING OF TANKS</u>			
<u>One layer dual reinforced Derbigum SP4 torch on waterproofing membrane with glass reinforced. To be installed with a 75mm side laps and 100mm end laps, sealed to primed surface to falls and crossfalls, all in accordance with manufacturer's specifications</u>			
D	On tank floors	m2	42
E	On tank walls	m2	80
<u>BITUMINOUS ALUMINIUM PAINT ON WATERPROOFING</u>			
<u>Prepare and apply two coats bitumous aluminium paint, all in accordance with manufacturer's specifications</u>			
F	On new waterproofing	m2	662
G	On new waterproofing to channels	m2	27
<u>Clean down existing waterproofing, prepare and apply two coats bitumous aluminium paint, all in accordance with manufacturer's specifications</u>			
H	On existing waterproofing	m2	195
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 4			
Waterproofing			
Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 5</u>			
	<u>ROOF COVERINGS, ETC</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 124 for JBCC CPAP purposes			
	<u>RAINWATER DISPOSAL</u>			
	<u>Seamless Aluminium guttering secured to fibre cement fascia board with 20 x 3mm dual purpose brackets at 600mm centres using gutter bolts, including a 50 x 20mm high overflow spiggot, including expanded aluminium mesh leaf guard set over gutter with 100 x 75 Industrial aluminium downpipe (elsewhere measured) installed strictly according to manufacturer's specifications</u>			
A	150 x 150mm Eaves gutters to falls, with front edge, on and including 25.8 x 2.38mm aluminium gutter brackets fixed to fascia at 500mm centres and gutter pop-riveted to front of bracket	m	24	
B	Extra over eaves gutter for outlet with nozzle for 100 x 75mm pipe	No	3	
	Carried Forward			R
	Section No. 4 Bill No. 5 Roof covering Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	100 x 75 mm Rainwater downpipes, fixed to walls, straps at 1500mm centres using nail plugs, with downpipes riveted and silicon sealed to gutter outlets	m	7	
B	Extra over for shoe	No	3	
<u>Cast Iron rainwater downpipe</u>				
C	160mm Cast iron rainwater downpipe fixed to brick walls (11 storeys)	m	33	
D	160mm Cast iron bend	No	2	
E	160mm Cast iron junctions	No	8	
<u>Fullbores</u>				
F	100mm Diameter Saint Gobain fullbore side outlet (Code 3585)	No	10	
<u>BUDGETARY ALLOWANCE</u>				
G	Allow R100,000.00 (One Hundred Thousand Rand) for work or cost which cannot be entirely foreseen, defined or detailed at tender stage. This amount shall be used at the discretion of the Implementing Agent/Project Manager if required		Item	100,000.00
Carried Forward to Summary of Section No. 4				R
Section No. 4				
Bill No. 5				
Roof covering				
Q532B				

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 6</u></p> <p><u>CARPENTRY AND JOINERY</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions</u></p> <p>The term "planted on" shall mean the nailing of one timber member to another</p> <p>The term "screwed on" shall mean the countersunk screwing of one timber member to another</p> <p>The term "screwed on and pelleted" shall mean the screwing of one timber member to another with the heads of screws sunk and pelleted</p> <p>The term "plugged" shall mean the countersunk screwing of a timber member to and including plastic plugs in brickwork or concrete</p>			
	Carried Forward		R	
	<p>Section No. 4 Bill No. 6 Carpentry and Joinery Q532B</p>			

	Brought Forward			R
	<p>The term "plugged and pelleted" shall mean the screwing of a timber member to and including plastic plugs in brickwork or concrete with heads of screws sunk and pelleted</p> <p>Shelving, etc. described as screwed to steel must be fixed from underside and prices are to include for countersunk drilling through the steel for screw fixing</p> <p>Descriptions of floors, ceilings, joinery, etc shall be deemed to include for all square cutting</p> <p>Descriptions of items given in lineal metre shall be deemed to include for mitres, stopped ends, fitted intersections, etc</p> <p>Descriptions of rounded angles, rebates, grooves, chamfers, moulded edges, etc shall be deemed to include for angles, ends, etc</p> <p><u>Timber</u></p> <p>All softwood to be South African Pine</p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 126 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p><u>EAVES, VERGES, ETC</u></p> <p><u>Pressed fibre cement</u></p>			
A	<p>15 x 225mm Nutec Fascia board bolted to steel purlins (elsewhere) with corrosion proof gutter bolts at maximum 1000mm centres butt jointed with and including standard fascia jointing plates at all joints</p>	m	139	
	<p><u>ROOFS, ETC</u></p> <p><u>Stocklam Grade 7 timber beams, etc.</u></p>			
B	<p>100 x 400mm Timber beam</p>	m	69	
	Carried Forward			R
	<p>Section No. 4 Bill No. 6 Carpentry and Joinery Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	225 x 76mm Timber beams, including 175 x 76mm joists	m	190
B	76 x 50mm Timber upstand to edge of roof	m	20
<u>Marine plywood boards to be installed as timber decking roof sheeting</u>			
C	18mm Thick boards fixed to timber beams (elsewhere measured)	m2	625
D	21mm Thick boards fixed to timber beams (elsewhere measured)	m2	58
<u>DOOR FRAMES, ETC FIXED TO BRICKWORK OR PARTITIONING WALLS</u>			
<u>Wrought Meranti</u>			
E	44 x 12mm Architrave	m	30
F	114 x 32mm Rebated door frame including 69 x 12mm beading	m	15
G	90 x 44mm Rebated door frame	m	10
<u>PELMET</u>			
H	22 x 350mm Solid SA Pine pelmet fixed to wall above and adjacent to window	m	3
<u>SKIRTINGS</u>			
I	22 x 69mm Standard SA Pine skirting plugged	m	150
J	13 x 69mm Hardwood skirting plugged including 19 x 19mm hardwood quadrant	m	31
<u>DOORS, ETC</u>			
Carried Forward			R
Section No. 4 Bill No. 6 Carpentry and Joinery Q532B			

<p style="text-align: right;">Brought Forward</p> <p><u>finish), full length of door.</u></p> <p><u>All casework and drawer fronts to be 16mm Melamine faced board with 2mm high impact edging to all exposed edges.</u></p> <p><u>All cupboards to be lockable with UNION 452-25PL (brass cylinder cupboard locks or similar approved.</u></p> <p><u>All drawers to be fitted with UTA 45mm full extension ball bearings slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.</u></p> <p><u>Backing board to units with open shelving to be 16mm Melamine faced board to match shelving colour</u></p> <p><u>Backing board to units with closable cupboards to be 3.5mm white faced hardboard</u></p> <p><u>Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.</u></p> <p><u>All handles to be Raiel Milano grip flat handles in Matt Chrome.</u></p> <p><u>All bases to be solid SA Pine, treated for moisture resistance prior to fixing with intermediary studs at max 450ccs. Bases to be painted 1 coat Plascon pink wood primer (UC2) prior to installation.</u></p> <p><u>Kickplates to be 97 x 2mm Aluminium flat bar (raw finish) glued to timber base backing.</u></p> <p><u>All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. All exposed edges to be finished with POST FORMED END TRIM in colour to be confirmed. All junctions in tops to be flush jointed (no steel joiner strips to be used)</u></p> <p><u>All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square/ rectangular / circular and to be closed up neatly with 4mm white faced Masonite board cut to square around penetration.</u></p>	<p style="text-align: right;">R</p>	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 4 Bill No. 6 Carpentry and Joinery Q532B</p>	<p style="text-align: right;">R</p>	

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		R
A	<p>JDT008 - 1504 x 600 x 900mm High floor cupboard, comprising bottom panel, side panel, fixed shelves, one double door and worktop all from 16mm Melamine faced board and/or water resistant Bison Board V313 with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with Sikaflex FC-11, all in accordance with <u>Drawings 305-019-JDT-008</u></p>	No 1
B	<p>JDT009 - 1271 x 600 x 2650mm High floor cupboard, comprising bottom panel, side panel, dividing panel, fixed shelves, one double doors per cupboard and top panel from 16mm Melamine faced board with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with SikaSII-C, all in accordance with <u>Drawing 305-019-JDT-009</u></p>	No 1
C	<p>JDT010 - 1316 x 600 x 900mm High floor cupboard, comprising bottom panel, side panel, fixed shelves and worktop all from 16mm Melamine faced board and/or water resistant Bison Board V313 with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with Sikaflex FC-11, all in accordance with <u>Drawings 305-019-JDT-010</u></p>	No 1
D	<p>JDT011 - 1000 x 255 x 2312mm High shelving cupboard, comprising bottom panel, side panel, divider panel, six fixed shelves per cupboard and top panel from 16mm Melamine faced board with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with SikaSII-C, all in accordance with <u>Drawing 305-019- JDT-011</u></p>	No 1
E	<p>JDT012 - 883 x 400 x 2100mm High floor cupboard shelving unit, comprising bottom panel, side panel, five fixed shelves and top panel, including 63mm Cavity infill, all from 16mm Melamine faced board with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with SikaSII-C, all in accordance with <u>Drawing 305-019-JDT-012</u></p>	No 1
Carried Forward		R
<p>Section No. 4 Bill No. 6 Carpentry and Joinery Q532B</p>		

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		R
A	<p>JDT013 - 4593 x 375 x 2350mm High double shelving cupboard, comprising bottom panel, side panel, divider panel, six fixed shelves per cupboard and top panel from 16mm Melamine faced board with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with SikaSII-C, all in accordance with <u>Drawing 305-019- JDT-013</u></p>	No 1
B	<p>JDT014 - 1300 x 420 x 900mm High floor cupboard, comprising bottom panel, side panel and nine drawers and worktop, all from 16mm Melamine faced board with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with Sikaflex FC-11, all in accordance with <u>Drawings 305-019-JDT-014</u></p>	No 1
C	<p>JDT015 - 2800 x 600 x 2600mm High double floor cupboard, comprising bottom panel, side panel, dividing panel, fixed shelves and three double doors per cupboard and top panel from 16mm Melamine faced board with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with SikaSII-C, all in accordance with <u>Drawing 305-019-JDT-015 & 015a</u></p>	No 1
D	<p>JDT016 - 730 x 380 x 357mm High wall vanity cupboard, comprising bottom panel, side panel, one shelf and worktop all from 16mm Melamine faced board and/or water resistant Bison Board V313 with 2mm PVC high impact edging on 100 x 22mm solid SA pine base, sealed all around with Sikaflex FC-11, all in accordance with <u>Drawings 305-019-JDT-016</u></p>	No 1
Carried Forward to Summary of Section No. 4		R
Section No. 4		
Bill No. 6		
Carpentry and Joinery		
Q532B		

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 7</u></p> <p><u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete</p> <p>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 elsewhere</p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 129 for JBCC CPAP purposes</i></p> <p><u>INSULATION</u></p>			
	Carried Forward		R	
	<p>Section No. 4 Bill No. 7 Ceilings, Partitioning and Access Flooring Q532B</p>			

	Brought Forward			R
A	<p><u>135mm Thick Isover Aerolite flexible non-combustible lightweight fibre Glasswool thermal ceiling insulation (nominal density 12kg/m3) closely fitted with ends butted firmly between tie beams and laid loose on top of branding between roof timbers. All strictly to manufacturer's specifications</u></p> <p>Ceiling insulation</p>	m2	184	
	<p><u>SUSPENDED CEILINGS</u></p> <p><u>Note:</u></p> <p>Electrical light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance must be made accordingly for their support inclusive of any flexibility inseting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof)</p> <p><u>SUSPENDED SKIMMED CEILINGS</u></p> <p><u>Gyproc Rhinoboard plasterboard ceiling 6.4mm fixed to 38 x 38 timber branding (measured elsewhere) at 400mm centers in one direction onto which Rhinoboard is fixed, printed side up, at right angles to the roof structure. All joints to be covered with Gyproc Rhino tape and then plasterd with a 3-6mm coat of Gyproc Rhinolite or Gyproc cretestone plaster applied as per manufacturer instructions complete with SABISA certificate</u></p>			
B	<p>Plasterboard skimmed ceilings</p>	m2	184	
	<p><u>CEILINGS TO EAVES OVERHANGS</u></p>			
	Carried Forward			R
	<p>Section No. 4 Bill No. 7 Ceilings, Partitioning and Access Flooring Q532B</p>			

Brought Forward				R
<p><u>12mm Thick Nutec screw-up fiber cement ceiling to eaves overhang complete with H-profile PVC joining strips fixed to 25 x 38mm SA Pine branderling (elsewhere measured) fixed to timber purlins. Install all strictly to manufacturer's specifications. Colour to Architect's approval.</u></p>				
A	Fibre cement ceilings	m2	54	
<p><u>NAILED UP CEILINGS</u></p>				
<p><u>SA Pine branderling fixed to timber purlins</u></p>				
B	25 x 38mm SA Pine branderling	m2	54	
C	38 x 38mm SA Pine branderling	m2	184	
<p><u>CORNICES</u></p>				
D	20 x 15mm Shadowline plaster trim cornices, plugged.	m	231	
<p><u>PARTITIONING SYSTEMS</u></p>				
<p><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 138 for JBCC CPAP purposes</p>				
<p><u>Drywall gypsum board partition systems</u></p>				
<p>Drywall partitioning shall comprise galvanised steel top and bottom tracks and natural anodised aluminium head channel, vertical studs at maximum 600mm centres, friction fitted or pop-riveted to top and bottom tracks with 0,6mm galvanised steel sheeting on one side and covered on both sides with 12,5mm gypsum plasterboard, screwed to studding with 25mm Drywall screws at maximum 220mm centres</p>				
Carried Forward				R
<p>Section No. 4 Bill No. 7 Ceilings, Partitioning and Access Flooring Q532B</p>				

Brought Forward		R
<p>Boards are to have staggered butt joints and the joints are to be finished with 48mm wide tape and two coats jointing compound applied in strict accordance with the manufacturer's instructions</p> <p>All screw heads are to be spotted and all areas of jointing compound shall receive one coat plaster primer before finishing</p> <p>Finishes to partitioning are measured elsewhere</p> <p>Partitions are to be constructed of Gypsum plasterboard fixed to steel framing as per Rhino Drywall System 3, using 2 layer plasterboard to each side of studding. All studding, fixing and boarding to be in accordance with the manufacturer's instructions as detailed. It is essential that suitable 230 x 50mm SA Pine framing pieces be fixed between studs where required for the fixing of sanitary fittings etc.</p> <p>All services are to be fitted inside the partitions before the cladding to the second face is fitted in position. Showers and any other wet work areas to be covered with moisture resistant boards and fire walls to be covered with Rhino fire stop boards. Allowance to be made for additional timber for fixing of services inside and outside of partitions</p> <p><u>Gyprox X Roc" Drywall steel stud partitioning</u></p>		
Carried Forward		R
<p>Section No. 4 Bill No. 7 Ceilings, Partitioning and Access Flooring Q532B</p>		

	Brought Forward			R
	<p><u>Gypwall Firestop drywall, consisting of 2 layers Gyproc Firestop fixed to both sides of the framework using sharp point screws 3.5mm diameter x 25mm (for base layer) and 3.5mm diameter x 42mm (for face layer) at maximum 220mm centres. Base layer of 15mm Gyproc Firestop and Face layer of 12.5mm Gyproc Firestop. All joints to be staggered on framework of Donn Ultrasteel studs 63.4mm x 35mm friction fitted into top and bottom Donn Ultrasteel track 63.5mm x 25mm at 600mm centres. Apply Gyproc Rhinotape to all joints and Donn corner bead to all external corners. Install Isover Cavitybatt 63mm thick, in cavity. Apply two coats of RhinoGlide jointing compound to all joints, angles and accessories. Skim the entire surface using one layer of Gyproc RhinoLite. All in accordance to the manufacturer's recommendations and Architects approval.</u></p>			
A	Drywall 2600mm high	m	57	
B	Extra over partition 2600mm high for vertical abutment	No	18	
	<u>Doors</u>			
C	Extra over partition for forming opening for double door size 1290 x 2032mm high including additional framing, etc (door, door frame, ironmongery, etc measured elsewhere)	No	10	
	<u>FIRE BLANKET</u>			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 129 for JBCC CPAP purposes</i>			
	<u>Install fire blanket with minimum weight of 430gr/m2 and 0.96kg, maximum temperature 550°C</u>			
D	Fire blanket size 1200 x 1200mm	No	1	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
	Bill No. 7			
	Ceilings, Partitioning and Access Flooring			
	Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 8</u></p> <p><u>FLOOR COVERINGS, WALL LININGS, ETC</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 130 for JBCC CPAP purposes</i></p> <p><u>VINYL SHEETING</u></p> <p><u>2mm Thick Polyflor NovoCore Original Residential UV vinyl floor sheeting – all installed strictly to manufacturers specifications (Polyflor 011-609 3500) – Sheet colours to Architects approval.</u></p>			
A	Seamless vinyl floor sheets on floors	m2	144	
	Carried Forward			R
	<p>Section No. 4 Bill No. 8 Floorcovering Q532B</p>			

Brought Forward			R
	<u>Polyflor Palettone PuR or equal approved life long polish free homogeneous vinyl floor sheeting 2,0mm thick, laid in acrylic adhesive spread with a notched trowel, joints welded with a fully flexible coloured Polyflor Welding Rod to provide a smooth, hygienic sealed finish and rolled with 68kg articulated floor roller, on well prepared cement screed (elsewhere) to match required level with a hygrometer reading showing a moisture content of less than 70% – all installed strictly to manufacturers specifications (Polyflor 011-609 3500) – Sheet and welding rod colours to Architects approval.</u>		
A	Seamless vinyl floor sheets on floors	m2	25
	<u>Polyflor Quattro PuR or equal approved vinyl floor sheeting 2,0mm thick, laid in acrylic adhesive spread with a notched trowel, joints welded with a fully flexible coloured Polyflor Welding Rod to provide a smooth, hygienic sealed finish and rolled with 68kg articulated floor roller, on well prepared cement screed (elsewhere) to match required level with a hygrometer reading showing a moisture content of less than 70% – all installed strictly to manufacturers specifications (Polyflor 011-609 3500) – Sheet and welding rod colours to Architects approval.</u>		
B	Seamless vinyl safety floor sheets on floors	m2	22
<u>SKIRTINGS, NOSINGS, ETC</u>			
<u>Vinyl covered skirting fixed with and including adhesive</u>			
C	Polyflor MC210C 50 x 100mm set in coved skirting over 20 x 20mm cove former (elsewhere measured)	m	38
D	"Polyflor Polycove CF 20" cove former, size 20mm high x 20mm wide	m	38
E	Sika Sikacryl-S to seal top edge of skirting	m	14
<u>SEALERS</u>			
Carried Forward			R
Section No. 4 Bill No. 8 Floorcovering Q532B			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 9</u>			
	<u>IRONMONGERY</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 132 for JBCC CPAP purposes</i>			
	<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>			
	<u>IRONMONGERY TO DOORS</u>			
	<u>All locks to be on a master and grand master key system - 2 keys to be provided for each lock</u>			
	<u>The following ironmongery are measured according to the type (combination) to be used as per Dormakaba - all in accordance with Protea Flats Ironmongery schedule Rev5 annexed at the back of the Bills of Quantities</u>			
	<u>The following in Hardware set 01</u>			
A	Dormakaba Stainless steel 102 x 75 x 3mm double ball bearing butt hinge (Code: DBB-SS-009)	No	2	
B	Dormakaba Stainless steel cylinder deadlock, 116.5 x 78mm case, 168 x 22mm forend and 57mm backset (Code: D037D SS)	No	2	
	Carried Forward			R
	Section No. 4 Bill No. 9 Ironmongery Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Dormakaba Satin nickel 40.5mm Euro-profile E-SP 5 pin single cylinder master keyed (Code: DSC204101 MK)	No	2
B	Dormakaba Stainless steel narrow stile cylinder escutcheon (Code: DCE-002 SS)	No	2
C	Dormakaba Stainless steel 120 x 40mm rectangular flush pull handle (Code: DFP-SS-025)	No	2
D	Dormakaba Stainless steel adjustable roller bolt (Code: DBC-SS-022)	No	2
<u>The following in Hardware set 02</u>			
E	Dormakaba Stainless steel 102 x 75 x 3mm double ball bearing butt hinge (Code: DBB-SS-009)	No	5
F	Dormakaba Stainless steel bathroom sash lock, 102 x 78mm case, 155 x 22mm forend and 57mm backset with 57mm centres (Code: D035S SS)	No	3
G	Dormakaba Stainless steel lever handle on 170 x 170mm plate with bathroom/WC furniture RH (Code: TH120 BP WC RH SS)	No	6
H	Dormakaba Stainless steel hat and coat hook (Code: DHC-SS-030A)	No	3
I	Dormakaba Stainless steel floor mounted door stop (Code: DDS-SS-017)	No	3
<u>The following in Hardware set 03</u>			
J	Dormakaba Stainless steel 102 x 75 x 3mm double ball bearing butt hinge (Code: DBB-SS-009)	No	18
K	Dormakaba Stainless steel sash lock, 116.5 x 78mm case, 168 x 22mm forend and 57mm backset (Code: D036S SS)	No	12
L	Dormakaba Satin nickel 63mm Euro-profile E-SP 5 pin double cylinder (Code: DDC206301 MK)	No	12
Carried Forward			R
Section No. 4 Bill No. 9 Ironmongery Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Dormakaba Stainless steel lever handle on 170 x 170mm plate with cylinder cut out (Code: TH120 BP Cyl SS)	No	24
B	Dormakaba Stainless steel floor mounted door stop (Code: DDS-SS-017)	No	12
<u>The following in Hardware set 04</u>			
C	Dormakaba Silver parallel arm hold open EN 3-6 with adjustable strength and hydrolic speed control, tested to EN 1154 (Code TS83 PA HO)	No	1
D	Dormakaba Standard stainless steel 325mm straight tubular pull handle BTB (Code: DPH206 BTB)	No	2
E	Dormakaba Stainless steel floor mounted door stop (Code: DDS-SS-017)	No	2
F	Anodized aluminium single magnetic lock with 600lbs holding force	No	1
G	Anodized aluminium L-bracket for 600lbs maglock	No	1
H	Access control by specialist consisting of 1 x biometric/card reader, 1 x 1-button intercom, 1 x touch free door release, 1 x emergency break glass unit and 1 x wall mounted audio only handset	No	1
I	Dormakaba Stainless steel cylinder deadlock, 116.5 x 78mm case, 168 x 22mm forend and 57mm backset (Code: D037D SS)	No	1
J	Dormakaba Stainless steel narrow stile cylinder escutcheon (Code: DCE-002 SS)	No	2
K	Dormakaba Satin nickel 63mm Euro-profile E-SP 5 pin double cylinder (Code: DDC206301 MK)	No	1
Carried Forward			R
Section No. 4 Bill No. 9 Ironmongery Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Dormakaba Brushed stainless steel pull handle on 170 x 170 x 1.2mm thick grade 430 stainless steel plate with cylinder cut out right, plate to have 4 x countersunk holes for screw fixing (Code: DHP-430-CR-SF 170X170)	No	12
B	Dormakaba Patent Screws & Nuts (Code: M5)	No	96
C	Dormakaba Patent Screws & Nuts (Code: M4)	No	12
D	Stainless steel floor mounted door stop (Code: DDS-SS-017)	No	24
<u>BATHROOM FITTINGS</u>			
E	Allure stainless steel toilet roll holder (Code AL584)	No	3
F	Allure stainless steel vertical spare toilet roll holder (Code AL584)	No	3
G	Allure stainless steel wall mounted toilet brush (AL 634)	No	3
H	Allure 600mm stainless steel single towel rail (Code: AL 264), installed strictly to manufacturers specifications	No	3
I	Allure 800mm stainless steel double towel rail (Code: AL 404), installed strictly to manufacturers specifications	No	2
J	Allure glass shelf size 550 x 140mm wide (Code: AL 054), with polished stainless steel finish, installed strictly to manufacturers specifications	No	3
K	Allure stainless steel bath soap rack (Code: AL 564)	No	3
L	Franke medius robe hook, size 54 x 55 x 54mm, (Code: FRA-2120189), installed strictly to manufacturers specification	No	3
<u>PINNING BOARDS</u>			
Carried Forward			R
Section No. 4 Bill No. 9 Ironmongery Q532B			

Brought Forward			R
<p><u>Vitrex System 2300 (011 826 6549) or equally approved pin boards with "Flortime Premier" carpet to pinning board</u></p>			
A	Standard 1500mm x 1000mm pin board all installed strictly to manufacturer's specifications, plugged	No	1
<p><u>WRITING BOARDS</u></p>			
<p><u>Vitrex System 2200 (011 826 6549) or equally approved white boards</u></p>			
B	White writing board 1500 x 1000mm high installed strictly to manufacturer's specifications	No	1
<p><u>BLINDS</u></p>			
<p><u>Block out roller blinds complete with tracks, pelmets and working mechanisms. Size of blinds to be measured to fit within the window reveal and fixed to underside of lintel. Controlled by hand operated lift and tilt cords. Installed strictly to manufacturer's specification and colour and sample to be pre-approved by Architect</u></p>			
C	Blind size 600 x 900mm high	No	3
D	Blind size 1000 x 900mm high	No	1
E	Blind size 2000 x 900mm high	No	2
F	Blind size 1000 x 2350mm high	No	2
G	Blind size 2260 x 2350mm high	No	1
H	Blind size 3245 x 2350mm high	No	1
I	Blind size 3555 x 2350mm high	No	1
J	Blind size 12489 x 2350mm high	No	1
Carried Forward			R
<p>Section No. 4 Bill No. 9 Ironmongery Q532B</p>			

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward			R
<u>4mm Thick aluminium composite board with vinyl sticker. Board to be wall mounted (Way finding signage).</u>			
A	800 x 300mm Sign with vinyl sticker	No	2
<u>Green backing plate, with white pictogrammes. Engraving to be filled in, coloured white. Plate to be wall mounted (Fire escape directional signage).</u>			
B	300 x 150mm Sign plate with Pictogram Type E2	No	2
C	300 x 150mm Sign plate with Pictogram Type E3	No	3
D	450 x 150mm Sign plate with Pictogram Type E19	No	1
<u>Green backing plate, with white pictogrammes. Engraving to be filled in, coloured white. Plate to be suspended from ceiling (Fire escape directional signage).</u>			
E	300 x 150mm Sign plate with Pictogram Type E1 on either side	No	2
F	300 x 150mm Sign plate with Pictogram Type E3 on either side	No	2
G	450 x 150mm Sign plate with Pictogram Type E18 on either side	No	1
Carried Forward to Summary of Section No. 4			R
Section No. 4 Bill No. 9 Ironmongery Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 10</u></p> <p><u>STRUCTURAL STEELWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of L shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p><i>NOTE:</i> <i>The following items shall be deemed to fall into Work Group No 134 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p><u>WORKSHOP DRAWINGS</u></p>			
A	Preparation of workshop drawings for steel trusses for approval by Principal Agent before manufacturing	Item		
	Carried Forward		R	
	Section No. 4 Bill No. 10 Structural Steel Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Preparation of workshop drawings for access panels and cat ladders for approval by Principal Agent before manufacturing		Item
<u>STEEL TRUSSES, ETC.</u>			
<u>Galvanised welded beams, purlins, rafters, etc.</u>			
B	254 x 146 x 31mm (31.3 kg/m) I-beam	t	0.820
C	305 x 165 x 40mm (40.3 kg/m) I-beam	t	0.360
D	200 x 75mm Parallel flange channel	t	0.410
<u>The following in galvanised welded bracing, sag rods, gusset plates, etc. bolted to steel structure, etc.</u>			
E	80 x 80 x 6mm Angle section bracing	t	0.200
F	100 x 100 x 10mm Angle section	t	0.150
<u>The following in welded and bolted galvanised steel columns</u>			
G	114 x 4.0mm Circular hollow section column	t	0.132
<u>Sundries</u>			
H	250 x 250 x 10mm Thick galvanised base plate	No	4
I	250 x 250 x 20mm Thick non-shrink grout between concrete and underside of base plate	No	4
J	200 x 400 x 10mm Thick galvanised cap plate	No	4
K	Galvanized angle and flat sections in connections, brackets, etc.	t	0.250
<u>Galvanised Nuts and bolts, etc.</u>			
L	M20 Chemical anchors 120mm long	No	8
Carried Forward			R
Section No. 4 Bill No. 10 Structural Steel Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward			R	
A	M16 Chemical anchors 120mm long	No	56	
B	M16 Grade 8.8 bolts	No	4	
<u>THE FOLLOWING IN NO. 3 ACCESS PANELS (SIZE 750 x 750mm) OVER WATER TANKS AND LIFT MOTOR ROOM</u>				
<u>4.5mm Thick galvanised chequer plate</u>				
C	720 x 720mm Plate, with 25mm edge bent 90 degrees (38.6kg/m ²), complete with opening size 60 x 10mm for locking mechanism	No	3	
<u>The following in galvanised welded frames etc. bolted to concrete structure, etc.</u>				
D	50 x 50 x 6mm Angle section frame	t	0.033	
<u>Galvanised Nuts and bolts, etc.</u>				
E	150mm Long fishtail lugs, from 50 x 8mm thick galvanised flat bar, welded to angle frame (elsewhere measured) at 300mm centres and other end cast into concrete beam (elsewhere measured)	No	36	
<u>Locking mechanism for access panels</u>				
F	Allow the amount of R15,000.00 (Fifteen Thousand Rand) for locking mechanisms and hinges for three access panels over water tank		Item	15,000.00
G	Profit on above item.		Item	
H	Attendance on ditto.		Item	
<u>THE FOLLOWING IN NO. 2 ACCESS CAT LADDERS (SIZE 2700 x 400mm)</u>				
Carried Forward			R	
Section No. 4 Bill No. 10 Structural Steel Q532B				

Brought Forward			R
<u>The following in galvanised welded frames, rungs etc. bolted to concrete structure, etc.</u>			
A	65 x 10mm Thick galvanised flat stringer bars (5.1kg/m) fixed to wall with M16 chemical anchors (elsewhere measured)	t	0.054
B	20mm Diameter galvanised rung bars (2.47kg/m) welded to 65 x 10mm galvanised flat stringers (elsewhere measured)	t	0.018
<u>Sundries</u>			
C	220 x 50 x 6mm Thick galvanised brackets, made from flat bar with a 90 degree bend, welded to 65 x 10mm stringer (elsewhere measured), including 18mm diameter hole for M16 chemical anchor (elsewhere measured)	No	16
<u>Galvanised Nuts and bolts, etc.</u>			
D	M16 Chemical anchors 120mm long	No	16
Carried Forward to Summary of Section No. 4			R
Section No. 4 Bill No. 10 Structural Steel Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 11</u></p> <p><u>METALWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p>Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/> <p><u>STEEL FRAMED, TIMBER SLATTED DUCT DOOR</u></p>			
	Carried Forward		R	
	<p>Section No. 4 Bill No. 11 Metalwork Q532B</p>			

Brought Forward

R

ROTATING COWLS

***NOTE:** The following items shall be deemed to fall into
 Work Group No 136 for JBCC CPAP purposes*

**Hot dipped galvanised rotating cowl to top of
 chimney flue installed as per manufacturers
 specifications**

A	Cowl size 350 x 500mm high extreme	No	1	
---	------------------------------------	----	---	--

Carried Forward to Summary of Section No. 4

R

Section No. 4
 Bill No. 11
 Metalwork
Q532B

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 12</u>			
	<u>PLASTERING</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i>			

	<u>GRANOLITHIC</u>			
	<u>Untinted granolithic on concrete</u>			
A	32mm thick on floors	m2	20	
B	75mm High coved skirting against walls	m	28	
	<u>SCREEDS</u>			
	<u>1:3 Cement plaster screeds on concrete</u>			
C	30mm Thick on floors with steel trowelled finish	m2	296	
D	Average 80mm Thick on concrete roofs with steel trowelled finish to falls and currents	m2	193	
	Carried Forward			
	Section No. 4 Bill No. 12 Plastering Q532B			R

Brought Forward				R
<u>EXTERNAL PLASTER</u>				
<u>One coat 1:5 cement plaster on brickwork</u>				
A	On existing walls	m2	45	
B	On existing chimney capping	m2	2	
C	On narrow widths in patching	m2	7	
<u>SUNDRIES</u>				
D	3mm Aluminium straight edge trim in floors (Code: ASE030)	m	10	
E	30x45mm Aluminium stair nosing (Code: APRN450), fixed to existing step, with luminescent non slip insert (Code: ALNSRN37) glued in place and installed strictly to manufacturers recommendations.	m	4	
Carried Forward to Summary of Section No. 4				
Section No. 4 Bill No. 12 Plastering Q532B				R

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 13</u>			
	<u>TILING</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 144 for JBCC CPAP purposes			
	<hr style="width: 20%; margin-left: 0;"/>			
	<u>WALL TILING</u>			
	<u>300 x 600 x 10mm Thick GWC-4-1 Essence White Matt rectified ceramic wall tiles with 2mm joints between tiles in TAL White grouting fixed to walls with approved tile adhesive to plastered walls and waterproof tile grouting to joints</u>			
A	On walls	m2	38	
B	On narrow widths	m2	2	
C	In splashbacks	m2	3	
	<u>200 x 200 x 6mm Thick GWC 197 Gloss White ceramic wall tiles wit 2mm joints between tiles in TAL White grouting, in suitable tiling adhesive.</u>			
D	On walls	m2	3	
	Carried Forward			R
	Section No. 4 Bill No. 13 Tiling Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

	Brought Forward				R
A	In splashbacks	m2	5		
	<u>SUNDRIES</u>				
B	Aluminium square edge trim around tiles	m	92		
	<u>FLOOR TILING</u>				
	<u>Provide the PC amount of R1000,00/m² supplied and delivered to site for Mosaic tiles, install with Tal tile adhesive as recommended by tile manufacturer on well-prepared screed (elsewhere measured) to suit required level. Finish all joints with COPROX waterproof grout. All strictly to manufacturer's specifications. Colour and type to Architect's approval</u>				
C	On shower floors	m2	2		
	<u>Provide the PC amount of R450,00/m² supplied and delivered to site for non-slip balcony tiles, install with Tal tile adhesive as recommended by tile manufacturer on well-prepared screed (elsewhere measured) to suit required level. Finish all joints with COPROX waterproof grout. All strictly to manufacturer's specifications. Colour and type to Architect's approval</u>				
D	On balcony floor	m2	103		
Carried Forward to Summary of Section No. 4					R
Section No. 4					
Bill No. 13					
Tiling					
Q532B					

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 14</u></p> <p><u>INTERNAL PLUMBING AND DRAINAGE</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SANITARY FITTINGS</u></p> <p><u>NOTE:</u> All sanitary fittings shall be sealed next to walls, fitting sides and shelves with an approved type non-fungal sustaining white silicon</p> <p style="text-align: center;">_____</p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Concrete pipes</u></p> <p>Pipes shall be jointed with interlocking joints</p>			
	Carried Forward		R	
	<p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>			

	Brought Forward		R
<p><u>UPVC pipes and fittings</u></p> <p>Soil, waste and vent pipes and fittings shall be tempered, chemical resistant pipes with butt welded joints</p> <p><u>UPVC pressure pipes and fittings</u></p> <p>Pipes for water and fire supply shall be High Impact uPVC of the Class stated</p> <p>Pipes shall have cast iron clamped joints. Fittings shall be galvanised mild steel with clamped joints</p> <p><u>Copper pipes</u></p> <p>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, Capillary solder fittings shall comply with ISO 2016.</p> <p><u>Fixing of pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls etc, casting in, building in or suspending not exceeding 1m below suspension level</p> <p><u>Lead pipes and fittings</u></p> <p>All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel</p>			
<p style="text-align: right;">Carried Forward</p> <p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>			R

<p style="text-align: center;">Brought Forward</p> <p><u>Reducing fittings</u></p> <p>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></p> <p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p> <p><u>Exposed concrete surfaces</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster</p> <p><u>Excavations</u></p> <p>No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling</p> <p>"Soft rock" and "Hard rock" shall be as defined in "Earthworks"</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions and the Engineer's drawings.</p>		R	
<p style="text-align: center;">Carried Forward</p> <p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>		R	

Brought Forward			R	
<p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:</p> <p style="margin-left: 40px;"> SABS 1200 L: Medium-pressure pipelines SABS 1200LD: Sewers SABS1200LE: Stormwater drainage </p> <p>Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches)</p> <p>Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)</p> <p><u>Flush pans</u></p> <p>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></p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <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>Petrolatum anti-corrosion tape</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>				
Carried Forward			R	
<p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>				

Brought Forward				R
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>Paper lagging</u>				
Prices for piping must include for all piping not exceeding 30mm to be wrapped with two layers of stout brown paper and tied with wire prior to building in				
<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 148 for JBCC CPAP purposes				
<hr style="width: 20%; margin: 0 auto;"/>				
<u>QUALITY CONTROL AND TESTING</u>				
NOTE: IT IS A STRICT CONDITION OF THIS PLUMBING CONTRACT THAT THE CONTRACTOR SHOULD CONDUCT QUALITY CONTROL TESTS AND INSPECTIONS ON AN ONGOING BASIS				
<u>SANITARY FITTINGS</u>				
<u>White glazed vitreous china</u>				
<u>B1 Wash hand basin</u>				
A Cobra Welcome medium round vitreous china basin with one taphole, overflow or chainstay hole, size 430 x 390mm wide (code: 709100WH), to be hung in accordance with manufacturer's specifications	No	3		
B Cobra Seine chrome single-lever plain basin mixer with temprature control cartridge, 1/2" BSP female inlets. Mixer to be fitted with angle valves (code: 832-10)	No	3		
C Angle regulating valves (code: 232-10/N)	No	6		
Carried Forward				R
Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Cobra unslotted basin waste with 62mm diameter flange, 75mm long shank and 1 1/4" BSP male outlet connection including click type integral plug (code: COB-309-32)	No	3
B	40mm Du Bois PVC trap	No	3
<u>BTH1 Bath</u>			
C	Duravit No.1 built-in Bathtub Built-In, size 1700 x 750mm wide (Code: B001905) complete with support frame for D-Code bathtubs, Bathtub anchors and Duravit Bathtub Filler	No	1
D	Duravit No.1 Chrome bath spout tap (code: B006019)	No	1
E	Nile concealed bath/shower single lever mixer (code: NL-956) with swivel outlet 1/2" BSP female inlet including sink mixer swivel outlet and 400mm long flexible inlets	No	1
F	Angle regulating valves (code: 232-10/N)	No	2
G	Cobra stainless steel square shower waste (Code: 373SQ/CP), including shower P-trap and square chrome-plated 115 x 115mm grid 50mm outlet.	No	1
<u>SH1 Shower</u>			
H	Cobra stainless steel square shower waste (Code: 373SQ/CP), including shower P-trap and square chrome-plated 115 x 115mm grid 50mm outlet.	No	2
I	Cobra shower arm 143mm long (Code: 027ZM-SHORT), fixed to wall and male connection end	No	2
J	Cobra round shower head (code: 076ZM-RND)	No	2
K	Nile concealed bath/shower single lever mixer (code: NL-956) with swivel outlet 1/2" BSP female inlet including sink mixer swivel outlet and 400mm long flexible inlets	No	2
Carried Forward			R
Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward			R
<p><u>Underground pipes to be in uPVC SANS 791 2004 with rubber ring joints DPI Durodrain system class 34. Above ground soil and waste pipes to be in uPVC to SABS 967 with rubber ring joints and "Mupro" rubber lined pipe clamps. Pipe work testing to 1.5m water HD to be carried out in stages as work proceeds. The contractor shall mark on site the location of openings and chases for approval of the structural engineer.</u></p>			
<u>uPVC pipes class 9</u>			
A	40mm Pipe in walls	m	18
B	50mm Pipe in walls	m	22
C	50mm Vent Pipe	m	4
D	110mm Vent Pipe	m	3
E	110mm Pipes in walls	m	14
<u>Extra over uPVC pipes for fittings:</u>			
F	40mm Bend	No	24
G	40mm Access bend	No	2
H	40mm Junction	No	2
I	40mm Access junction	No	2
J	50mm Bend	No	36
K	50mm Access bend	No	2
L	50mm Junction	No	2
M	50mm Access junction	No	2
N	110mm Bend	No	12
Carried Forward			R
<p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	110mm Junction	No	1	
B	110mm Tee	No	2	
C	110mm Access bend	No	3	
D	110mm Straight pan connector	No	3	
<u>TESTING</u>				
E	Testing waste pipe system		Item	
<u>WATER SUPPLY</u>				
<u>Class 2 copper pipes for compression fittings in accordance with SABS 460</u>				
F	15mm Pipes chased into brick walls	m	126	
G	22mm Pipes chased into brick walls	m	16	
H	28mm Pipes chased into brick walls	m	10	
I	35mm Pipes chased into brick walls	m	3	
J	15mm Pipes fixed to concrete ceiling with M10 rubber lined hanger brackets including M10 threaded rod not exceeding 500mm long and M10 drop-in anchor	m	61	
K	22mm Pipes fixed to concrete ceiling with M10 rubber lined hanger brackets including M10 threaded rod not exceeding 500mm long and M10 drop-in anchor	m	36	
L	28mm Pipes fixed to concrete ceiling with M10 rubber lined hanger brackets including M10 threaded rod not exceeding 500mm long and M10 drop-in anchor	m	30	
M	35mm Pipes fixed to concrete ceiling with M10 rubber lined hanger brackets including M10 threaded rod not exceeding 500mm long and M10 drop-in anchor	m	83	
<u>Extra over for fittings</u>				
Carried Forward				R
Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B				

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward			R
<u>Extra over Class 2 copper pipes for brass capillary soldered fittings</u>			
A	15mm Fittings	No	221
B	22mm Fittings	No	47
C	28mm Bends	No	14
D	28mm Tees	No	3
E	35mm to 15mm Tees	No	18
F	35mm Bends	No	13
G	15mm Brass Shut-off valve jointed to copper pipe including adaptors	No	6
H	22mm Brass Shut-off valve jointed to copper pipe including adaptors	No	6
I	28mm Brass Shut-off valve jointed to copper pipe including adaptors	No	2
J	35mm Brass Shut-off valve jointed to copper pipe including adaptors	No	1
<u>ELECTRIC WATER HEATERS</u>			
<u>"Kwikot Megaflo" geyser mounted in ceilings</u>			
K	200Litre "Megaflo" horizontally mounted electric water heater	No	1
L	Kwikot KwikTray code GSTP-1650 polyethylene tray size 1350 x 600mm with 50mm PVC adaptor for 40mm overflow pipe and fix in position.	No	1
M	40mm PVC overflow pipe fixed to timber roof trusses.	m	5
N	Extra for 40mm PVC bend.	No	2
Carried Forward			R
Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B			

	Brought Forward				R
A	38mm Sawn softwood boarding for geyser platform formed of 38 x 228mm boards butt-jointed and nailed to truss tie beams.	m2	2		
B	28mm Pressure reducing valve jointed to copper pipe including adaptors	No	2		
C	28mm Balancing valve jointed to copper pipe including adaptors	No	2		
<u>HEAT- AND CIRCULATION PUMPS</u>					
<u>HEAT PUMPS:</u>					
<p><u>Heat pumps shall be of the air-to-water, water-to-water or air-to-air, Refrigerant to water heat exchangers shall be corrosion resistant and suitable for use with the local water at high temperature and flow velocities. Shell and tube condensers are preferred for air to water applications. Heat pumps shall be completely self-contained units with stainless steel or epoxy powder coated casings and cladding, suitable for permanent outdoor use where required. Condenser and condenser piping circuits shall be properly insulated. A condensate drip pan of stainless steel 430 shall be fitted and piped to the nearest building drain, allowing for defrost cycles. Heat pumps shall be selected for a maximum compressor running operation of 20 hours per day. Reverse cycle automatically controlled defrost shall be provided as standard. Defrost shall be demand controlled and not timer controlled. The heat pump shall be suitable for operating with ambient wet bulb temperatures as low as -10°C and as high as 35°C. Heat pumps for central heating hot water shall heat the water to 60°C (or as specified) and shall be selected to ensure correct functioning with water inlet temperature as low as 40°C and as high as 50°C. Where indicated, high temp 80 - 85°C heat pumps, are to be supplied with a sanitation cycle for elimination of harmful bacteria. Heat pumps with a coefficient of performance (COP) of less than 3.0 at ambient wet bulb temperature of 10°C with secondary circuit inlet temperature 40°C will not be acceptable. Each heat pump shall be fitted with a</u></p>					
	Carried Forward				R
<p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>					

<p style="text-align: center;">Brought Forward</p> <p><u>control and fault indication panel to provide status indication on fault occurrence and operation mode. A flow switch shall be fitted to the water or air secondary circuit and the heat pump control interlocked with the flow switch. Heat pumps shall be fitted with head pressure control set at ensuring constant 60°C water supply temperature at all possible water inlet temperatures and flows. Compressors shall be well known products of an approved manufacturer. Motor windings shall be suitable for the temperatures experienced in heat pump applications, particularly hermetically sealed units. CH.PWD.XI 4.13 Operating pressures and temperatures shall comply with the manufacturer's recommendations. Provision shall be made in the refrigerant circuits for liquid collection during periods of not being in use. The compressor shall be interlocked with the evaporator fan/s and the flow switch to prevent operation unless these elements are functional. Time delay relay shall be incorporated in the control system of each heat pump to prevent simultaneous start up. Each refrigerant circuit shall be fitted with a sight glass, replaceable filter drier, manual liquid shut-off valve, high- and low-pressure switches and pressure gauges. The following operating and safety controls shall be provided: a) High and low refrigerant pressure, manual reset type, safety switch, b) Low ambient air temperature safety switch, c) Current overload protection on compressor(s), pump(s), and fans, d) Compressor short cycling on low demand, Crankcase heaters shall be fitted where application and unit size warrants the use thereof. Where a standby heater is required with a heat pump application the standby heater shall be switched on automatically on heat pump failure with heating called for. Suction- and discharge pressure gauges shall be provided on the instrument panel. Noise levels shall be under 60db. Easily detachable/ openable panels of rigid construction giving access to all working parts of the unit shall be provided. All valves, fittings, etc for a complete operational system are not indicated, but must be included in the price. Set of temperature gauges included on the send and return pipes. All spare parts for the heat pumps should be available from local South African</u></p>		R	
<p style="text-align: center;">Carried Forward</p> <p>Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B</p>		R	

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Service existing 5kg CO2 fire extinguisher including hanger fixed to and including timber backing board.	No	2
<u>FIRE EQUIPMENT, ETC ON WALL MOUNTED HANGERS</u>			
B	Fire hose reel to SABS 543 complete with 20mm diameter rubber hose 30m long, chromium plated stopcock, shut-off nozzle and wall bracket	No	1
C	4.5kg CO2 fire extinguisher including hanger fixed to and including timber backing board.	No	6
<u>WATER SUPPLIES TO FIRE APPLIANCES</u>			
<u>Galvanised steel pipes</u>			
D	25mm Pipes fixed to walls with M10 rubber lined hanger brackets including M10 threaded rod not exceeding 500mm long and M10 drop-in anchor	m	15
E	25mm Pipes fixed to concrete ceiling with M10 rubber lined hanger brackets including M10 threaded rod not exceeding 500mm long and M10 drop-in anchor	m	30
<u>Extra over galvanised steel pipes for steel fittings</u>			
F	25mm Fittings	No	12
G	65 x 32mm Reducing socket	No	6
H	32 x 25mm Reducing socket	No	4
I	65 x 25 x 25mm Reducing tee	No	4
<u>INTERNAL FIRE HYDRANTS</u>			
<u>Hot dipped galvanised screwed steel pipes and fittings as described</u>			
J	80mm Diameter pipe 2500mm long	No	1
K	80 x 65mm Diameter reducing socket	No	1
Carried Forward			R
Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	80mm Diameter long radius bend female threaded	No	1
	<u>Hydrant hose and fittings</u>		
B	65mm Diameter hydrant hose 30m long complete with couplings, clack washer, lip seal, hand wheel and valve spanner	No	1
	<u>Pressure testing of fire hydrant</u>		
C	Pressure testing of fire hydrant at highest point		Item
	<u>TESTING</u>		
D	Pressure testing water pipe system		Item
	<u>MECHANICAL VENTILATION</u>		
	<u>Galvanised sheet metal ducting and fittings</u>		
E	100mm Diameter round sheet metal ducting	m	10
F	100mm Diameter short radius 90 degree elbow	No	4
G	150 x 150 mm rectangular to 100 mm diameter round fan transfer.	No	2
H	200mm Diameter round sheet metal ducting	m	35
	<u>Flexible ducting and fittings</u>		
I	100mm Diameter Insulated Flexible Ducting	m	4
	<u>Extraction fan</u>		
J	EAF 1 Axial in line silent fan, 160 / 100; Q = 25 l/s @ 42 Pa & 21 dB	No	2
K	Axial in line supply air fan TD Silent 800/200 Q = 165 l/s @ 150 Pa, dB < 21, 0.05 kW 1 PH	No	2
Carried Forward			R
Section No. 4 Bill No. 14 Internal Plumbing and Drainage Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
<u>Grill</u>			
A	150 x 150 mm EGA Grill. Pressed steel construction powder coated white, complete with mounting brackets.	No	2
<u>Fan controller</u>			
B	2 pole fan controller, on / off wired remotely and installed in conduit and round box provided by others	No	2
<u>Sleeve</u>			
C	150 x 150 mm internal sleeve for EGA grill	No	2
<u>Diffuser</u>			
D	Extract Air Diffuser 200mm diameter ceiling diffuser	No	4
E	250 x 250 x 250mm exhaust disc diffuser plenum with 200mm Diameter Side entry	No	4
F	45 degree slash cut exhaust including vermin proofing	No	1
<u>NEW TANK TO ROOF</u>			
<u>Low profile vertical storage JoJo tank, fitted inside lift motor room on the building roof</u>			
G	1500 Litre tank, diameter 1410mm x 1200mm high	No	1
<u>PUMP, PIPEWORK, FITTINGS AND CONNECTIONS TO NEW TANK TO ROOF</u>			
H	Allow the amount of R20,000.00 (Twenty Thousand Rand) for pumps, pipework, fittings and connections for the water tank		Item 20,000.00
I	Profit on above item.		Item
J	Attendance on ditto.		Item
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 14			
Internal Plumbing and Drainage			
Q532B			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 15</u>			
	<u>GLAZING</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 150 for JBCC CPAP purposes</i>			

	<u>GLAZING TO EXISTING ALUMINIUM WINDOWS</u>			
	<u>Lead time of 6 weeks to be allowed on programme to notify occupants of flats to arrange for access and working time in the specific unit/flat</u>			
	<u>6.38mm Clear normal strength PVB Laminated safety glass</u>			
A	Panes exceeding 0,1 and not exceeding 0,5 square metre in area	m2	7	
B	Panes exceeding 0,5 and not exceeding 1 square metre in area	m2	11	
	Carried Forward			R
	Section No. 4 Bill No. 15 Glazing Q532B			

Brought Forward							
<u>6.38mm Obscure normal strength PVB Laminated safety glass</u>							
A	Panels exceeding 0,1 and not exceeding 0,5 square metre in area	m2	10				
<u>GLAZING TO EXISTING STEEL WINDOWS</u>							
<u>6.38mm Clear normal strength PVB Laminated safety glass</u>							
B	Panels exceeding 0,1 and not exceeding 0,5 square metre in area	m2	2				
C	Panels exceeding 0,5 and not exceeding 1 square metre in area	m2	1				
<u>PANELS, MIRRORS, ETC</u>							
<u>10mm Silvered float glass copper backed mirrors with bevelled edges all around, including Aluminium straight edge trim as frame, plugs in brickwork or concrete</u>							
D	Mirror, size 500 x 850mm	No	5				
Carried Forward to Summary of Section No. 4							
Section No. 4 Bill No. 15 Glazing Q532B							
							R

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>BILL NO 16</u></p> <p><u>PAINTWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin: 10px auto;"/> <p><u>PAINTWORK TO PLASTERED SURFACES</u></p> <p><u>Spot prime bare and repaired areas with Plascon Professional Gypsum and Plaster primer (PP 700) and allow to dry for 16 hours, finish with two coats of Plascon Professional Superior Low Sheen (PEM 1000/TLS) with 1 hour drying time between coats. All to manufacturer's detail specification or equal approved. Colour to Architects approval</u></p>			
A	On existing internal plastered walls	m2	664	
B	On newly plastered internal walls	m2	154	
	Carried Forward			R
	<p>Section No. 4 Bill No. 16 Painting Q532B</p>			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward			R
<p><u>Spot prime bare and repaired areas with Plascon Professional Gypsum and Plaster primer (PP 700) and allow to dry for 16 hours, finish with two coats of Plascon Kitchen & Bathrooms (KBM/TKM) with 2 hours drying time between coats. All to manufacturer's detail specification or equal approved. Colour to Architects approval</u></p>			
A	On existing plastered internal walls	m2	124
B	On newly plastered internal walls	m2	38
<p><u>Clean down, prepare and apply one coat Plascon Professional High Alkali Plaster Primer (PP950) and apply two coats Plascon Professional Aquarista (PHB 800 / THB) paint:</u></p>			
C	On existing external plastered walls	m2	3,735
<p><u>Spot prime bare and repaired areas with Plascon Professional Gypsum and Plaster primer (PP 700) and allow to dry for 16 hours, finish with two coats of Plascon Professional Superior Low Sheen (PEM 1000/TLS) with 1 hour drying time between coats. All to manufacturer's detail specification or equal approved. Colour to Architects approval</u></p>			
D	On existing concrete ceilings	m2	60
<p><u>ON FIBRE CEMENT</u></p>			
<p><u>Prepare and prime with Plascon Plaster Primer (PP700) and apply two coats Plascon Wall and All paint on:</u></p>			
E	On fibre cement fascia and barge boards	m2	40
F	Fibre cement ceilings at eaves	m2	54
G	Existing fibre cement ceilings	m2	44
<p><u>ON PLASTER BOARD</u></p>			
Carried Forward			R
<p>Section No. 4 Bill No. 16 Painting Q532B</p>			

Brought Forward							
	<u>Prepare surfaces and remove all loose material. Apply one coat professional Gypsum and Plaster primer (PP 700) to achieve a continuous film and allow to dry for 16 hours, finish with two coats of Plascon Polvin Super Acrylic (EPL/TAP) with 1 hour drying time between coats. All to manufacturer's detail specification or equal approved. Colour White.</u>						
A	Skimmed ceilings and bulkheads	m2					
					176		
	<u>Prepare surfaces and remove all loose material. Apply one coat professional Gypsum and Plaster primer (PP 700) to achieve a continuous film and allow to dry for 16 hours, finish with two coats of Plascon Kitchen & Bathrooms (KBM/TKM) with 2 hours drying time between coats. All to manufacturer's detail specification or equal approved. Colours to Architect's approval.</u>						
B	Skimmed ceilings	m2					
					14		
	<u>Prepare surfaces and remove all loose material. Apply one coat professional Gypsum and Plaster primer (PP 700) to achieve a continuous film and allow to dry for 16 hours, finish with two coats of Professional Superior Low Sheen (PEM 1000/TLS) with 2 hours drying time between coats. All to manufacturer's detail specification or equal approved. Colours to Architect's approval.</u>						
C	On drywall partitioning	m2					
					296		
	<u>ON METALWORK</u>						
	<u>Sigmacover 350 grey NDFT 100 micron primer, Sigmacover 350 NDFT 100 micron intermediate coat and Sigmadur 550 NDFT 50 Micron RAL colours (Total NDFT = 250 micron)</u>						
D	Structural steel roof structure	m2					
					58		
Carried Forward							
Section No. 4							
Bill No. 16							
Painting							
Q532B							

Brought Forward			R
<p><u>Ensure surfaces are clean and dry. Apply Plascon Galvanised Iron Cleaner (GIC1) to all bare galvanised areas. Surface to be dry, sound and clean. Allow to react for 1 minute and rinse off with tap water using bristle brush or Scotch Brite pads to remove all surface contaminants, until surface is water break-free. Prime with one coat of Plascon Galvanised Iron Primer (GIP1) to achieve continuous film and allow 24 hours to dry, apply one coat Plascon Universal Undercoat (UC1) to achieve continuous film and allow 16 hours to dry. Finish with two coats of Plascon Velvagio Water Based (VLW/TVW) to achieve complete obliteration allowing 4 hours drying time between coats</u></p>			
A	On new door frames	m2	23
B	Structural steel catladder	m2	18
C	Galvanised steel door frame for duct door not exceeding 300mm girth	m	19
<p><u>Clean down, prepare and apply Plascon Galvanised Iron Cleaner (GIC1) to all bare galvanised areas. Surface to be dry, sound and clean. Allow to react for 1 minute and rinse off with tap water using bristle brush or Scotch Brite pads to remove all surface contaminants, until surface is water break-free. Prime with one coat of Plascon Galvanised Iron Primer (GIP1) to achieve continuous film and allow 24 hours to dry, apply one coat Plascon Universal Undercoat (UC1) to achieve continuous film and allow 16 hours to dry. Finish with two coats of Plascon Velvagio Water Based (VLW/TVW) to achieve complete obliteration allowing 4 hours drying time between coats</u></p>			
D	On existing window frames (measured flat both sides)	m2	30
Carried Forward			R
<p>Section No. 4 Bill No. 16 Painting Q532B</p>			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward			R
<p><u>Surface to be dry, sound and clean with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 22- grit paper in the direction of the grain. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and allow 6 - 8 hours to dry, then sans smooth. Wash knots and resinous areas with Lacquer Thinners (ILS 1) and coat with Woodcare Knot Seal (PK 2). Apply one coat Plascon Wood Primer (UC 2) and one coat of Plascon Universal Undercoat (UC 1) with an overcoating time of 16 hours, and finish with two coats of Plascon Waterbased Velvaglo (VLW/TVW) with 4 hours drying time between coats,or equal approved. Colour to Architects approval</u></p>			
A	On doors	m2	110
B	On timber pelmet	m2	2
C	On door frames not exceeding 300mm girth	m	10
<p><u>Remove loose and peeling paint by scraper or hand sanding, feather edges and dust off. Surface to be dry, sound and clean with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 22- grit paper in the direction of the grain. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and allow 6 - 8 hours to dry, then sans smooth. Wash knots and resinous areas with Lacquer Thinners (ILS 1) and coat with Woodcare Knot Seal (PK 2). Apply one coat Plascon Wood Primer (UC 2) and one coat of Plascon Universal Undercoat (UC 1) with an overcoating time of 16 hours, and finish with two coats of Plascon Waterbased Velvaglo (VLW/TVW) with 4 hours drying time between coats,or equal approved. Colour to Architects approval</u></p>			
D	On existing doors	m2	47
E	On existing door frames not exceeding 300mm girth	m	66
Carried Forward			R
<p>Section No. 4 Bill No. 16 Painting Q532B</p>			

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward				R
	<u>Stop, fill, sand down and prepare wood surface.</u> <u>Apply one coat wood primer, one coat universal</u> <u>undercoat and two coats semi-gloss, chip resistant</u> <u>Enamel paint:</u>				
A	On new skirtings	m	150		
B	On existing window sill	m	16		
Carried Forward to Summary of Section No. 4					R
Section No. 4 Bill No. 16 Painting Q532B					

Item No		Quantity	Rate		Amount
	<p><u>SECTION NO. 4 WORK PACKAGE 3</u></p> <p><u>RENOVATIONS TO EXISTING PROTEA FLATS</u></p> <p><u>EXTERNAL WORKS</u></p> <p><u>BILL NO 17</u></p> <p><u>GENERAL SITE WORKS</u></p> <p><u>PREAMBLES</u></p> <p><u>Tenderers are advised to study the "South African Bureau of Standards Standardized Specification for Civil Engineering Construction" (SABS 1200) before pricing this Bill, as these specifications shall apply to this Contract.</u></p> <p><u>Nature of ground</u></p> <p>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>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>NEW ASPHALT SURFACE</u></p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
	Carried Forward			R	
	<p>Section No. 4 Bill No. 17 External works Q532B</p>				

Brought Forward								
							R	
		<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 95% Mod. AASHTO density</u>						
A	Subbase under roads	m3	30					
		<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>						
B	Subbase under roads	m3	30					
		<u>Approved weed killer (Certificate to be provided before payment)</u>						
C	Hyvar X or other equally approved soil herbicide at a rate of 50 gram/m2 under paving etc.	m2	200					
		<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>						
		<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>						
		<u>Asphalt</u>						
D	Tack coat of 30% cationic stable grade emulsion (0.45L/m ²)	m2	200					
E	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²)	m2	200					
F	40mm Asphalt surfacing - 60/70 penetrating B12 road grade bitumen to be medium continuously graded and compacted to above stated thickness	m2	200					
		<u>CARPORT</u>						
		<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>						
		<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>						
		<u>EXCAVATIONS</u>						
		<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>						
		Carried Forward						R
Section No. 4 Bill No. 17 External works Q532B								

Brought Forward			R
<u>Excavate in pickable material not exceeding 2m deep below natural or reduced ground level</u>			
A	Columns bases	m3	1
<u>Extra over all excavations for carting away</u>			
B	Extra over all excavations for carting surplus excavated material and spreading, levelling and lightly compacting on site where directed average 500m from the excavations (Measured nett- no allowance made for bulking)	m3	1
<u>Risk of collapse of excavations</u>			
C	Allow for risk of collapse to sides of excavations to column bases, trenches, etc. from ground level to not exceeding 1.5m deep	m2	2
<u>Earth filling obtained from the excavations compacted to 95% Modified AASHTO density</u>			
D	Backfilling to trenches, holes, etc.	m3	1
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>			
<hr style="width: 20%; margin: 0 auto;"/>			
<u>REINFORCED CONCRETE</u>			
<u>25MPa/19mm concrete</u>			
E	Columns bases	m3	1
<u>REINFORCEMENT</u>			
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>			
<hr style="width: 20%; margin: 0 auto;"/>			
<u>Mild steel reinforcement</u>			
F	8mm Diameter bars	t	0.03
Carried Forward			R
Section No. 4 Bill No. 17 External works Q532B			

Brought Forward							
							R
<u>High tensile steel reinforcement to structural concrete work</u>							
A	10mm Diameter bars	t	0.12				
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 124 for JBCC CPAP purposes</i>							
<u>Global Roofing Solutions 686mm cover IBR 686 profile roll-formed in continuous lengths from 0.53mm thick AZ150 spelter G550 COLORPLUS® Thunderstorm finish topcoat and Cool Grey backing coat roof sheeting, fixed to steel intermediate purlins at MAX 2100mm centres and eaves and ridge purlins at MAX 1800mm centres (final spacing to be calculated by an Engineer) using Hex Flange Head + EPDM Seal self-drilling No. 3 drill point, No. 12-14 x 65mm long fasteners (fastener lengths may vary depending on the insulation used or requirements). Purlin fixed to second, fourth and sixth crest of each sheet and at all crests at sheet ends, all following the manufacturer's specifications by a GRS approved contractor.</u>							
B	Roof sheeting with pitch not exceeding 25 degrees, fixed to steel purlins	m2	65				
<u>0.53mm thick AZ150 spelter G550 COLORPLUS® flashing with Thunderstorm finish topcoat and Cool Grey backing coat roof sheeting all in strict accordance with manufacturer's specification. Colours and type to Architect</u>							
C	Head wall flashing concealed fix 375mm girth two times bent along girth and notched on site to suit roof profile	m	13				
D	Counter flashing 185mm girth two times bent along girth. Including cutting into brick/concrete wall and sealed with Sikaflex-FC approved soft sealer, fixed in accordance with manufacturer's specifications. Complete with metal and poly closer without any joints	m	13				
Carried Forward							R
Section No. 4 Bill No. 17 External works Q532B							

Brought Forward			R
<u>GALVANISED STEEL COLUMNS & BEAMS</u>			
<i>NOTE: The following items shall be deemed to fall into Work Group No 134 for JBCC CPAP purposes</i>			

<u>Galvanised welded beams, purlins, rafters, etc.</u>			
A	100 x 100 x 4mm Square hollow section columns	t	0.139
B	225 x 75 x 20 x 2.5mm Cold formed lipped channel beam	t	0.202
C	175 x 75 x 20 x 2.5mm Cold formed lipped channel purlins, with and including angle section cleats bolted on	t	0.608
D	50 x 50 x 5mm Angle section bracing	t	0.087
E	Angle and flat sections in connections, brackets, hinge joints, etc.	t	0.255
<u>Sundries</u>			
F	300 x 300 x 12mm Thick base plate	No	3
G	300 x 300 x 25mm Thick non-shrink grout between concrete and underside of base plate	No	3
H	M16 Diameter grade 8.8 bolts	No	66
I	M20 U- bolt 240mm wide and 475mm long	No	6
<u>PAINTWORK, ETC TO NEW WORK</u>			
<i>NOTE: The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i>			

<u>ON METAL</u>			
Carried Forward			R
Section No. 4 Bill No. 17 External works Q532B			

Brought Forward			R
<p><u>Apply Plascon Galvanised Iron Cleaner (GIC 1) to all bare galvanised areas. Surface to be dry, sound and clean. Apply Plascon Galvanised Iron Cleaner (GIC 1) to all bare galvanised areas. Allow to react for 1 minute and rinse off with tap water using bristle brush or Scotch Brite pads to remove all surface contaminants, until surface is water break-free. Prime with one coat of Galvanised Iron Primer (GIP 1) with an overcoating time of 2 hours. Apply undercoat and finish with two coats of Wall & All (WAA) with 2 hours drying time between coats, for a maintenance cycle of 7 years in a C5 - coastal/marine environment. Colour to Architects approval.</u></p>			
A	On steel columns, beams, angles	m2	70
<p><u>ON FIBRE CEMENT</u></p> <p><u>Prepare and prime with plaster primer (Thinned 1:5 with mineral turpentine) and two coats exterior quality premium polyurethane alkyd paint</u></p>			
B	On fibre cement fascia and barge boards	m2	11
<p><u>BUILDERSWORK FOR CCTV INSTALLATION AND PERIMETER LIGHTING</u></p>			
C	Allow the Amount of R50,000.00 (Fifty thousand Rand) for the builders work related to CCTV installation		Item
			50,000.00
D	Profit on above item.		Item
E	Attendance on ditto.		Item
<p>Carried Forward to Summary of Section No. 4</p>			R
<p>Section No. 4 Bill No. 17 External works Q532B</p>			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4 WORK PACKAGE 3</u>			
	<u>RENOVATIONS TO EXISTING PROTEA FLATS</u>			
	<u>BILL NO 18</u>			
	<u>TEMPORARY SECURITY FENCING (HOARDING)</u>			
	<u>Demolitions</u>			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>			
A	Carefully, take down, dismantle and store temporarily for re-use, existing palisade fencing panels 1650mm high, fixed to brick columns (3 palisade panels)	m	13	
	<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>			
	<u>Site clearance</u>			
B	Allow for clearing site for the width of 1 000 mm where fencing runs are to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling	m	114	
	<u>TEMPORARY MILD STEEL WELDMESH FENCE</u>			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>			
	<u>Timber posts</u>			
C	100mm Diameter timber gumpole, 2400mm long embedded in 450 x 450 x 900 mm mass concrete (15 MPa) base	No	40	
	Carried Forward			R
	Section No. 4 Bill No. 18 Fencing and hoarding Q532B			

Brought Forward

Reinstate existing palisade panels

NOTE: The following items shall be deemed to fall into
 Work Group No 136 for JBCC CPAP purposes

A Take out of storage existing palisade fence panels
 1650mm high and re-instate in original position between
 brick columns (3 palisade panels)

m

13

R

Carried Forward to Summary of Section No. 4

Section No. 4
 Bill No. 18
 Fencing and hoarding
Q532B

R

SECTION SUMMARY - SECTION 4 WORK PACKAGE 3 RENOVATIONS TO P

Bill No		Page No	Amount
1	Renovations	185	
2	Concrete, Formwork and Reinforcing	192	
3	Masonry	195	
4	Waterproofing	198	
5	Roof covering	200	
6	Carpentry and Joinery	209	
7	Ceilings, Partitioning and Access Flooring	214	
8	Floorcovering	217	
9	Ironmongery	225	
10	Structural Steel	229	
11	Metalwork	235	
12	Plastering	238	
13	Tiling	240	
14	Internal Plumbing and Drainage	257	
15	Glazing	259	
16	Painting	266	
17	External works	274	
18	Fencing and hoarding	277	
	Carried to Final Summary		R
	Section No. 4 Q532B		

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 1</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	This section consists of the following buildings:			
	Block D: Entrance Gate House			
	Block E: Exit Gate House			
	Block G: SMME Packages			
	<u>FOUNDATIONS</u>			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>			
	<u>EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth or compacted filling not exceeding 2m deep</u>			
A	Reducing levels under buildings D : 10 E : 10 G : -10	m3	10	
B	Trenches D : 18 E : 18 G : -18	m3	18	
C	Column bases D : 2 E : 2 G : -2	m3	2	
	Carried Forward			R
	Section No. 5 Bill No. 1 Foundations Q532B			

Brought Forward				R
<u>Extra over excavations in earth for excavation in</u>				
A	Soft rock	m3	3	
	D : 3 E : 3 G : -3			
B	Hard rock	m3	2	
	D : 2 E : 2 G : -2			
<u>Extra over all excavations for carting away</u>				
C	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	23	
	D : 22 E : 23 G : -22			
<u>Risk of collapse of excavations</u>				
D	Sides of trench and hole excavations not exceeding 1,5m deep	m2	65	
	D : 65 E : 65 G : -65			
<u>Keeping excavations free of water</u>				
E	Keeping excavations free of water		Item	
<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site in layers of 150mm thick compacted to 93% Mod AASHTO density</u>				
F	Backfilling to trenches, holes, etc	m3	7	
	D : 7 E : 7 G : -7			
<u>Compaction of surfaces</u>				
G	Compaction of ground surface under surface beds etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	23	
	D : 23 E : 23 G : -23			
Carried Forward				R
Section No. 5 Bill No. 1 Foundations Q532B				

Brought Forward				R
<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site in layers of 150mm thick compacted to 95% Mod AASHTO density</u>				
A	Under floors, steps, pavings, etc D : 3 E : 3 G : -3	m3		3
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>				
B	Under solid floors D : 3 E : 3 G : -3	m3		3
<u>Approved G7 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 95% Mod. AASHTO density</u>				
C	Under solid floors D : 3 E : 3 G : -3	m3		3
<u>50mm Thick coarse river sand filling supplied by the contractor</u>				
D	Under floors etc D : 23 E : 23 G : -23	m2		23
<u>Soil insecticide in accordance with SANS 5859</u>				
E	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming (Certificate to be supplied before payment is made) D : 23 E : 23 G : -23	m2		23
<u>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</u>				
<u>UNREINFORCED CONCRETE</u>				
Carried Forward				R
Section No. 5 Bill No. 1 Foundations Q532B				

Brought Forward				R
<u>10MPa/19mm concrete</u>				
A	Blinding under strip footings and column bases on excavated surfaces D : 1 E : 1 G : -1	m3	1	
<u>REINFORCED CONCRETE</u>				
<u>25MPa/19mm concrete</u>				
B	Strip footings D : 4 E : 4 G : -4	m3	4	
C	Column bases D : 1 E : 1 G : -1	m3	1	
D	Stub columns in foundations D : 1 E : 1 G : -1	m3	1	
<u>Rough formwork to sides</u>				
E	Stub columns in foundations D : 2 E : 2 G : -2	m2	2	
<u>REINFORCEMENT</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<u>Mild steel rod reinforcement to structural concrete work</u>				
F	8mm Diameter bars D : 0.053 E : 0.053 G : -0.050	t	0.056	
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
G	10mm Diameter bars D : 0.105 E : 0.105 G : -0.110	t	0.100	
H	12mm Diameter bars D : 0.158 E : 0.158 G : -0.160	t	0.156	
Carried Forward				R
Section No. 5 Bill No. 1 Foundations Q532B				

Brought Forward				R
A	16mm Diameter bars D : 0.131 E : 0.131 G : -0.130	t	0.132	
B	20mm Diameter bars D : 0.079 E : 0.079 G : -0.080	t	0.078	
<u>MASONRY</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i>				
<u>Brickwork (14Mpa nominal compressive strength) in 5:1 cement mortar</u>				
C	Half brick walls D : 3 E : 3 G : -3	m2	3	
D	One brick walls D : 7 E : 7 G : -7	m2	7	
E	270mm Cavity walls formed of two half brick skins and 50mm cavity filled with 15 MPa concrete, including wire ties D : 18 E : 18 G : -18	m2	18	
<u>Brickwork reinforcement</u>				
F	75mm Wide reinforcement built in horizontally in foundations D : 459 E : 459 G : -459	m	459	
G	150mm Wide reinforcement built in horizontally in foundations D : 82 E : 82 G : -82	m	82	
<u>Joints formed of jointex</u>				
H	10mm Jointex in vertical joint built in vertically between brick walls not exceeding 300mm wide D : 8 E : 8 G : -8	m	8	
Carried Forward				R
Section No. 5 Bill No. 1 Foundations Q532B				

	Brought Forward				R
	<u>Grey polysulphide sealant, including bond breaker, primer, etc</u>				
A	10mm Wide x 10mm deep in expansion joints D : 8 E : 8 G : -8	m	8		
	<u>FACE BRICKWORK</u>				
	<u>External facings in approved face bricks (FBX) (allow a PC Amount of R8,500.00 per thousand bricks delivered to site, excluding VAT),pointed with tinted horizontal and vertical joints with cement mortar to match colour of face bricks and seal with ABE Durasil S sealant</u>				
B	Extra over brickwork for face brickwork, in foundations D : 11 E : 11 G : -11	m2	11		
	Carried Forward to Summary of Section No. 5				R
	Section No. 5 Bill No. 1 Foundations Q532B				

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 2</u>			
	<u>CONCRETE FORMWORK AND REINFORCEMENT</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>CONCRETE</u>			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>			
	<hr/>			
	<u>REINFORCED CONCRETE</u>			
	<u>30MPa/19 mm concrete in</u>			
A	Surface beds on waterproofing D : 3 E : 3 G : -3	m3	3	
	<u>TEST BLOCKS</u>			
B	Making and testing set of three 150 x 150 x 150 mm strength test cubes D : 4 E : 4 G : -4	No	4	
	<u>CONCRETE SUNDRIES</u>			
	<u>Finishing top surface of concrete smooth with a wood float in</u>			
C	Surface beds D : 17 E : 17 G : -17	m2	17	
	Carried Forward			R
	Section No. 5 Bill No. 2 Concrete Formwork and reinforcing Q532B			

Brought Forward							
Finishing top surfaces of concrete to an evenly brushed non-slip surface							
A	Surface beds D : 6 E : 6 G : -6	m2	6				
<u>MOVEMENT JOINTS</u>							
<u>Isolation joint formed of bitumen impregnated soft board or jointex</u>							
B	10mm Thick jointex between horizontal concrete and brick surfaces not exceeding 300 mm high or wide D : 23 E : 23 G : -23	m	23				
<u>Saw cut joints</u>							
C	6 x 40mm Saw cut joints in top of concrete surface bed D : 17 E : 17 G : -17	m	17				
<u>FORMWORK</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>							
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>							
<u>Rough formwork to sides</u>							
D	Edges, risers, ends and reveals not exceeding 300mm high D : 7 E : 7 G : -7	m	7				
<u>REINFORCEMENT</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>							
<u>Fabric reinforcement</u>							
E	Type 245 fabric reinforcement in concrete surface beds, slabs, etc. D : 23 E : 23 G : -23	m2	23				
Carried Forward to Summary of Section No. 5							
Section No. 5 Bill No. 2 Concrete Formwork and reinforcing Q532B							

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO. 3</u>			
	<u>MASONRY</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>SUPERSTRUCTURE</u>			
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes			

	<u>Brickwork of clay bricks in 6:1 cement mortar</u>			
A	Half brick walls D : 7 E : 7 G : -7	m2	7	
B	Half brick walls in beamfilling D : 3 E : 3 G : -3	m2	3	
C	270mm Cavity walls formed of two half brick skins and 50mm cavity including wire ties D : 40 E : 41 G : -40	m2	41	
	<u>BRICKWORK SUNDRIES</u>			
D	Splayed mortar fillet one course high in 50mm cavity of cavity wall D : 35 E : 32 G : -35	m	32	
E	Closing 50mm cavity of cavity wall vertically with brickwork half brick wide D : 17 E : 15 G : -17	m	15	
	Carried Forward			R
	Section No. 5 Bill No. 3 Masonry Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

		Brought Forward		R
A	Closing 50mm cavity of hollow wall horizontally with one course of brickwork D : 19 E : 17 G : -17		m	19
	<u>Joints formed of jointex</u>			
B	10mm Jointex in vertical joint built in vertically between brick walls not exceeding 300mm wide D : 21 E : 21 G : -21		m	21
	<u>Brick reinforcement</u>			
C	75mm Wide reinforcement built in horizontally D : 696 E : 696 G : -696		m	696
	<u>Prestressed concrete lintels</u>			
D	115mm Wide lintels in lengths not exceeding 3m D : 14 E : 14 G : -14		m	14
E	115mm Wide lintels in lengths exceeding 3m and not exceeding 4,5m D : 7 E : 7 G : -7		m	7
	<u>Bagging and sealing the outer face of the inner skin of walls with 1:6 cement and sand mixture to receive bitumen emulsion waterproofing coating (elsewhere measured)</u>			
F	To cavity walls D : 40 E : 41 G : -40		m2	41
	<u>High density fibre cement sills in single lengths bedded in class I mortar including metal fixing lugs etc:</u>			
G	15 x 150mm Wide sills set flat and slightly projecting. D : 7 E : 8 G : -7		m	8
	<u>FACE BRICKWORK</u>			
		Carried Forward		R
Section No. 5 Bill No. 3 Masonry Q532B				

Brought Forward				R
<p><u>External facings in approved face bricks (FBX) (allow a PC Amount of R8,500.00 per thousand bricks delivered to site, excluding VAT),pointed with tinted horizontal and vertical joints with cement mortar to match colour of face bricks and seal with ABE Durasil S sealant</u></p>				
A	Extra over brickwork for face brickwork D : 40 E : 41 G : -40	m2	41	
B	Extra over brickwork for face brickwork in beamfilling D : 3 E : 3 G : -3	m2	3	
C	Cut brick on edge sill bedded sloping and jointed in cement mortar and pointed on top, edge and projecting soffit including cutting and fitting between reveals and splay cutting brickwork under D : 7 E : 8 G : -7	m	8	
D	Face brick on edge lintol 110mm wide on soffit , bedded and jointed in cement mortar and pointed on face and soffits as described including cutting and fitting between reveals D : 9 E : 9 G : -9	m	9	
E	Fair raking cutting D : 10 E : 10 G : -10	m	10	
<p>Carried Forward to Summary of Section No. 5</p>				R
<p>Section No. 5 Bill No. 3 Masonry Q532B</p>				

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 4</u>			
	<u>WATERPROOFING</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>			

	<u>One layer of 375 micron black embossed polyethylene damp-proof course (SANS 952-1985 Type B)</u>			
A	In walls, window sills, etc D : 10 E : 10 G : -10	m2	10	
	<u>Primer and two coats Brixal bitumen emulsion waterproof coating</u>			
B	On cavity walls D : 40 E : 41 G : -40	m2	41	
	<u>One layer of 250 micron "Consol Plastics Gunplas Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>			
C	Under surface beds D : 24 E : 24 G : -24	m2	24	
	<u>JOINT SEALANTS, ETC</u>			
	Carried Forward			R
	Section No. 5 Bill No. 4 Waterproofing Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 5</u></p> <p><u>ROOF COVERINGS, ETC</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>Guarantees</u></p> <p>The roof covering and cladding is to be carried out strictly in accordance with the manufacturer's instruction. On completion the roof covering and accessories are to be inspected by the Manufacturer who is to provide a 5 year guarantee against defective materials and faulty workmanship</p> <p>The roof is to be guaranteed weather tight for a period of 12 month period, calculated from the handed over date of the completed project</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 124 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: auto; margin-right: auto;"/>			
	Carried Forward		R	
	<p>Section No. 5 Bill No. 5 Roof covering Q532B</p>			

Brought Forward							
	<u>0.55mm Thick Klip-tite™ profile roll-formed in continuous lengths from certified ZincAL® AZ150 coated steel G550 0.55mm (Heavy Industrial) with a ColorPLUS® finish to one side and a standard backing coat and fixed to steel purlins using KL700 clips and class 3 fasteners, in strict accordance with manufacturer's specifications by a GRS approved contractor, A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by manufacturer</u>						
A	Roof sheeting in patching with pitch not exceeding 25 degrees, fixed to timber purlins D : 42 E : 42 G : -42						
		m2	42				
	<u>0.55m Thick flashings shall be manufactured from Zincal® AZ150 0.55mm coated steel with a ColorPLUS® finish to one side with a Cool Grey backing coat and fixed to steel purlins (measured elsewhere) by way of S10 brackets or, sliding brackets at apex where roof sheets are 30m or longer, all in strict accordance with manufacturer's specification. Colours and type to Architect</u>						
B	Ridge capping, 550mm girth (FK73), three times bent along girth and notched on site to suit profile, complete with metal and poly closer (H2) D : 7 E : 7 G : -7						
		m	7				
	<u>RAINWATER DISPOSAL</u>						
	<u>0.8mm Ogee profiled pre-coated seamless aluminium gutters including matching rivet-fixed mitres and end caps internally sealed using Silicon Mastic, hung by nail fixed internal aluminium hangers at 600mm centres installed strictly according to manufacturer's specifications</u>						
C	150 x 100mm Eaves gutters to falls, with front edge, on and including gutter brackets fixed to steel roofs D : 14 E : 14 G : -14						
		m	14				
D	Extra over eaves gutter for outlet with nozzle for 75 x 50mm pipe D : 4 E : 4 G : -4						
		No	4				
	Carried Forward						
	Section No. 5 Bill No. 5 Roof covering Q532B						

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward								
A	75 x 50mm Rainwater downpipes, fixed to walls with pre-painted downpipe cleats using nail-in anchor fixings	m	12					
	D : 12 E : 12 G : -12							
B	Extra over for shoe	No	4					
	D : 4 E : 4 G : -4							
Carried Forward to Summary of Section No. 5							R	
Section No. 5 Bill No. 5 Roof covering Q532B							R	

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 6</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 126 for JBCC CPAP purposes</i>			
	<hr/>			
	<u>SAWN SA PINE</u>			
A	38 x 114mm Wall plate D : 10 E : 10 G : -10	m	10	
B	76 x 228mm SA Pine beam (Grade 7) D : 7 E : 7 G : -7	m	7	
C	50 x 76mm Purlins D : 56 E : 56 G : -56	m	56	
	<u>GANGNAIL ROOF TRUSSES</u>			
	Carried Forward			R
	Section No. 5 Bill No. 6 Carpentry and Joinery Q532B			

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

		Brought Forward		R
A	Extra for apex mitre D : 4 E : 4 G : -4	No	4	
<u>DOOR FRAMES, ETC FIXED TO BRICKWORK</u>				
<u>Wrought Meranti</u>				
B	44 x 12mm Architrave D : 10 E : 10 G : -10	m	10	
C	19mm Quadrant D : 5 E : 5 G : -5	m	5	
D	140 x 32mm Rebated door frame including 94 x 12mm beading D : 10 E : 10 G : -10	m	10	
<u>DOORS, ETC</u>				
<u>FL&B Doors</u>				
E	44mm Thick Hardwood framed, ledged and braced batten door size 813 x 2032mm with and including 6mm plywood flush panel to inside D : 1 E : 1 G : -1	No	1	
F	50 x 100mm Hardwood rebated and splayed weatherboard screwed to door and bedding in thick white lead D : 1 E : 1 G : -1	m	1	
<u>SKIRTINGS</u>				
<u>Hardwood skirting</u>				
G	19 x 94mm Skirting plugged with 19mm quadrant bead D : 19 E : 19 G : -19	m	19	
<u>PURPOSE MADE CUPBOARDS AND WORK TOPS</u>				
		Carried Forward		R
Section No. 5 Bill No. 6 Carpentry and Joinery Q532B				

Brought Forward

Worktops

A 3760 x 600 x 750mm High Life Seal Formica 32mm
 thick worktop fixed to wall with mild steel brackets, all in
 accordance with **Drawing 305-026 JP-02 and JD-002-
 Type BB**

D : 1 E : 0 G : 0

No 1

B 4500 x 600 x 750mm High Life Seal Formica 32mm
 thick worktop fixed to wall with mild steel brackets, all in
 accordance with **Drawing 305-026 JP-03 and JD-002-
 Type BB**

D : 0 E : 1 G : 0

No 1

R

Carried Forward to Summary of Section No. 5

Section No. 5
 Bill No. 6
 Carpentry and Joinery
Q532B

R

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 7</u>			
	<u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 129 for JBCC CPAP purposes			
	<hr/>			
	<u>INSULATION</u>			
	<u>"Sisalation FR430" heavy industrial grade aluminium foil based insulation</u>			
A	Insulation laid taut over trusses (at approximately 1000mm centres) and fixed concurrent with roof purlins including galvanised steel straining wires D : 42 E : 42 G : -42	m2	42	
	<u>150mm Thick Isover Aerolite (011 360 8200) flexible non-combustible lightweight fibre Glasswool thermal ceiling insulation (Minimum R value required 3.34m2K/W) closely fitted with ends butted firmly between tie beams and laid loose on top of branding between roof timbers. All strictly to manufacturer's specifications.</u>			
B	Ceiling insulation D : 17 E : 17 G : -17	m2	17	
	<u>NAILED UP CEILINGS</u>			
	Carried Forward			R
	Section No. 5 Bill No. 7 Ceilings, partitioning and access flooring Q532B			

Brought Forward					
<u>Sawn S A Pine</u>					
A	Brandering for ceiling formed with 38 x 38mm battens at 400mm centres in one direction, with cross brandering at intersections and ends of ceiling boards D : 17 E : 17 G : -17	m2	17		
<u>6,4mm "Rhino" gypsum plasterboard with taped joints and with the whole surface skimmed with "Rhinolite" plaster</u>					
B	Ceilings D : 17 E : 17 G : -17	m2	17		
<u>Rhino Gypsum plasterboard cornice</u>					
C	75 mm Coved cornices D : 23 E : 23 G : -23	m	23		
<u>Trap door</u>					
D	Extra over ceiling for 600 x 600mm trap door of 38 x 50mm wrought softwood rebated framing with one 38 x 50mm sawn softwood cross brander covered with ceiling board and fitted flush in opening D : 1 E : 1 G : -1	No	1		
Carried Forward to Summary of Section No. 5					
Section No. 5 Bill No. 7 Ceilings, partitioning and access flooring Q532B					
				R	

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 8</u></p> <p><u>FLOOR COVERINGS, WALL LININGS, ETC</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 130 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>VINYL SHEETING</u></p> <p><u>2.5mm Thick Polyflor NovoCore Original Commercial UV vinyl floor sheeting – all installed strictly to manufacturers specifications (Polyflor 011-609 3500) – Sheet colours to Architects approval.</u></p>			
A	<p>Vinyl floor sheets on floors</p> <p style="padding-left: 20px;">D : 17 E : 17 G : -17</p>	m2	17	
	<p><u>SEALERS</u></p> <p><u>Two coats floor dressing as recommended by the manufacturer of the floor coverings on vinyl flooring (stripping and sealing)</u></p>			
B	<p>On floors</p> <p style="padding-left: 20px;">D : 17 E : 17 G : -17</p>	m2	17	
	<p>Carried Forward to Summary of Section No. 5</p>			R
	<p>Section No. 5 Bill No. 8 Floorcovering Q532B</p>			

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 9</u>			
	<u>IRONMONGERY</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 132 for JBCC CPAP purposes</i>			
	<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>			
	<u>IRONMONGERY TO DOORS</u>			
	<u>All locks to be on a master and grand master key system</u>			
	<u>The following in type 1 (Aluminium Door)</u>			
A	Alufab 2040 200mm Aluminium sinkless hinges D : 8 E : 4 G : -8	No	4	
B	Dormakaba Stainless Steel lever handle on rose with cylinder escutcheons (Code CR001 Cyl SS) D : 2.0 E : 1.0 G : -2.0	Sets	1.0	
C	Dormakaba cylinder sash lock case size 116.5H x 78D Forend dimensions 168H x 22W, backset 57mm centres 61mm (Code D036S SS) with stainless steel finish D : 2 E : 1 G : -2	No	1	
D	Dormakaba 65mm Five pin Euro-profile double cylinder key with satin nickel finish (Code DDC056501 KD 65mm) D : 2 E : 1 G : -2	No	1	
	Carried Forward			
	Section No. 5 Bill No. 9 Ironmongery Q532B			R

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	Barrel bolt 150 x 32mm SC on brass D : 2 E : 1 G : -2	No	1	
B	Necked bolt 150 x 32mm SC on brass D : 2 E : 1 G : -2	No	1	
C	Halcast 401SC Doorstop and holder D : 2 E : 1 G : -2	No	1	
<u>The following in type 2 (Timber Door)</u>				
D	Dormakaba 102 x 75 x 3mm two ball bearing butt hinge, stainless steel finish EN1935 Grade 13, fire rated with 120kg carrying capacity per pair (Code DBB-SS-009) D : 1.0 E : 1.0 G : -1.0	Pairs	1.0	
E	Dormakaba lever handle on rose latch (Code CR001 Latch SS) D : 1.0 E : 1.0 G : -1.0	Sets	1.0	
F	Dormakaba bathroom sash lock case size 102H x 78D Forend dimensions 155H x 22W, backset 57mm centres 57mm (Code D035S SS) with stainless steel finish D : 1 E : 1 G : -1	No	1	
G	Dormakaba Bathroom WC indicator (Red and white) and turnknob (Code DWC-005) stainless steel finish D : 1.0 E : 1.0 G : -1.0	Sets	1.0	
H	Dormakaba hat and coat hook (Code DHC-SS-030A) stainless steel D : 1 E : 1 G : -1	No	1	
<u>BATHROOM FITTINGS</u>				
I	Franke recessed type toilet roll holder (Code 359635) size 118mm diameter x 110mm manufactured from Grade 304 (18/10) stainless steel, 2mm gauge. Unit with 20mm flange and 2 x M10 treaded rods for bolting the unit through the wall D : 1 E : 1 G : -1	No	1	
Carried Forward				R
Section No. 5 Bill No. 9 Ironmongery Q532B				

Brought Forward							
R							
<u>"Hi-Tec Stainless Products"</u>							
A	32mm Diameter grade 304 stainless steel triple mounted cranked general purpose rail (Code 25), plugged and screwed to walls with stainless steel screws	No	1				
	D : 1 E : 1 G : -1						
B	32mm Diameter grade 304 stainless steel straight long leg rail 750mm long, code 9LL, plugged and screwed to walls with stainless steel screws	No	1				
	D : 1 E : 1 G : -1						
<u>LOCKERS</u>							
C	5P-slanted industrial locker size 627 x 500 x 1900mm high manufactured from 1.2 and 2mm heavy duty quality steel, epoxy coated in blue and grey texture with 4 compartments and shelf, each compartment fitted with 3 point lever lock. Locker mounted on 50mm plinth epoxy powder coated in RAL 9011 black from "Metmeister" or equally approved	No	2				
	D : 2 E : 2 G : -2						
<u>PINNING BOARDS</u>							
<u>Vitrex System 2300 (011 826 6549) or equally approved pin boards with "Flortime Premier" carpet to pinning board</u>							
D	Standard 1000mm x 1000mm pin board all installed strictly to manufacturer's specifications, plugged (Boa010)	No	1				
	D : 1 E : 1 G : -1						
<u>GUN SAFE</u>							
E	Provide the sum of R15,000.00 (Fifteen thousand rand) for gun safes		Item			15,000.00	
F	Allow for profit if required		Item				
G	Allow for attendance		Item				
Carried Forward							
R							
Section No. 5 Bill No. 9 Ironmongery Q532B							

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward		R	
<u>SIGNAGE</u>				
A	Provide the sum of R20,000.00 (Twenty thousand rand) for signage	Item		20,000.00
B	Allow for profit if required	Item		
C	Allow for attendance	Item		
Carried Forward to Summary of Section No. 5			R	
Section No. 5 Bill No. 9 Ironmongery Q532B				

Item No		Quantity	Rate	Amount
	<u>SECTION 5 WORK PACKAGE 4</u>			
	<u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u>			
	<u>BILL NO 10</u>			
	<u>METALWORK</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 134 for JBCC CPAP purposes</i>			
	<hr/>			
	<u>STEEL COLUMN AND FIXING DETAILS</u>			
	<u>The following in welded and bolted galvanised steel columns and connector plate</u>			
A	120 x 120 x 6mm Square hollow section column D : 0.115 E : 0.115 G : -0.115	t	0.115	
B	400 x 120 x 10mm Connector plate fully welded to steel column (elsewhere measured) and bolted to timber beam (elsewhere measured) D : 2 E : 2 G : -2	No	2	
C	M16 bolts D : 4 E : 4 G : -4	No	4	
	<u>The following in galvanised base plates</u>			
D	250 x 250 x 10mm Thick base plate D : 2 E : 2 G : -2	No	2	
	Carried Forward			R
	Section No. 5 Bill No. 10 Metalwork Q532B			

	Brought Forward				R
A	250 x 250 x 25mm Thick non-shrink grout between concrete and underside of base plate D : 2 E : 2 G : -2	No	2		
B	M16 HD Gr8.8 bolts D : 8 E : 8 G : -8	No	8		
	<u>ALUMINIUM WINDOWS, DOORS, ETC</u>				
	<i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 149 for JBCC CPAP purposes</i>				
	All aluminium doors, windows, etc to comply with AAAMSA standards and specifications and to Architect's approval.				
	Prices must include for the perimeters of frames to be sealed to the structure with approved sealant.				
	<u>All glazing should be in strict accordance with the requirements for SAGGA Glass Installation</u>				
	<u>ALUMINIUM DOORS</u>				
	<u>Crealco Clip44 Stable door white powder coated complete with wool piles all-round to ensure a dust proof seal, glazed with 6.4mm clear normal strength laminated safety glass plugged to brickwork or concrete (Ironmongery measured elsewhere). All to AAAMSA Standards and Architects approval.</u>				
C	Single Door, overall size 900mm x 2100mm high. <u>(As per drawing attached to these bills of quantities Drawing 305-026 DS-001 Door Type A)</u> D : 2 E : 1 G : -2	No	1		
	<u>ALUMINIUM WINDOWS</u>				
	<u>Crealco 38 Casement complete with A075A Defender Stays 400mm and 24kg (12 year guarantee) System (All to AAAMSA Standards and Architects approval) plugged to brickwork or concrete:</u>				
	Carried Forward				R
	Section No. 5 Bill No. 10 Metalwork Q532B				

Brought Forward									
<u>White powder coated aluminium windows with 6.4mm clear double glazing safety glass for all panels. All windows with and including standard window furniture complete with screws and bolts installed strictly according to AAAMSA standards and specifications</u>									
A	Window overall size 600mm x 900mm high. (As per <u>Drawing 305-026-WIN004-Window D</u> attached to these bills of quantities)		No	1					
	D : 1 E : 1 G : -1								
B	Window overall size 900mm x 900mm high. (As per <u>Drawing 305-026 -WIN001 Window A</u> attached to these bills of quantities)		No	1					
	D : 1 E : 0 G : 0								
C	Window overall size 3220mm x 1200mm high. (<u>As per Drawing 305-026 -WIN002 Window B</u> attached to these bills of quantities)		No	1					
	D : 1 E : 1 G : -1								
<u>HBS 900 Series Slider system (All to AAAMSA Standards and Architects approval) plugged to brickwork or concrete:</u>									
<u>White powder coated aluminium windows with 6.4mm clear double glazing safety glass for all panels. All windows with and including standard window furniture complete with screws and bolts installed strictly according to AAAMSA standards and specifications</u>									
D	Window overall size 1100mm x 1200mm high. (<u>As per Drawing 305-026 -WIN003 Window C</u> attached to these bills of quantities)		No	1					
	D : 1 E : 0 G : 0								
E	Window overall size 1100mm x 1200mm high. (<u>As per Drawing 305-026 -WIN005 Window E</u> attached to these bills of quantities)		No	1					
	D : 1 E : 0 G : 0								
Carried Forward									
Section No. 5 Bill No. 10 Metalwork Q532B									

	Brought Forward				
A	Window overall size 1600mm x 1200mm high. <u>(As per Drawing 305-026 -WIN006 Window F attached to these bills of quantities)</u> D : 0 E : 1 G : 0	No	1	R	
B	Window overall size 1190mm x 1200mm high. <u>(As per Drawing 305-026 -WIN007 Window G attached to these bills of quantities)</u> D : 0 E : 1 G : 0	No	1		
C	Window overall size 1600mm x 900mm high. <u>(As per Drawing 305-026 -WIN008 Window H attached to these bills of quantities)</u> D : 0 E : 1 G : 0	No	1		
Carried Forward to Summary of Section No. 5				R	
Section No. 5 Bill No. 10 Metalwork Q532B					

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 11</u></p> <p><u>PLASTERING</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i></p>			
	<p><u>SCREEDS</u></p> <p><u>1:3 Cement plaster screeds on concrete</u></p>			
A	<p>30mm Thick on floors with steel trowelled finish D : 17 E : 17 G : -17</p>	m2	17	
	<p><u>SPECIALIST FLOOR COVERINGS</u></p> <p><u>Levelite F30 self-levelling compound as manufactured by iTe products, to a thickness of 4mm as part of the iTe Products screed preparation system</u></p>			
B	<p>Floors D : 17 E : 17 G : -17</p>	m2	17	
	<p><u>INTERNAL PLASTER</u></p>			
	Carried Forward			R
	<p>Section No. 5 Bill No. 11 Plastering Q532B</p>			

Brought Forward							
<u>One coat 1:4 cement plaster to brickwork with steel trowel to receive a skim finishing plaster</u>							
A	On walls	m2	40				
	D : 41 E : 40 G : -41						
B	On narrow widths	m2	3				
	D : 3 E : 3 G : -3						
<u>2mm Thick approved skim finishing plaster</u>							
C	2mm Thick skim finishing plaster to plastered walls	m2	43				
	D : 44 E : 43 G : -44						
<u>DIVIDING STRIPS, NOSING STRIPS ETC.</u>							
<u>25mm x 3mm Brass dividing strip cast into screed (flush with floor finish)</u>							
D	On floors	m	2				
	D : 2 E : 2 G : -2						
Carried Forward to Summary of Section No. 5							
Section No. 5							
Bill No. 11							
Plastering							
Q532B							

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 12</u></p> <p><u>TILING</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>Note:</u> It is the responsibility of the specialist tiler to study the drawings and design and to allow for the design and execution of special fixing accessories, expansion joints, etc</p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 144 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>WALL TILING</u></p> <p><u>250 x 200 x 6.5mm Thick Johnson AL4 matt white ceramic wall tiles with 2mm joints and white grout fixed to walls with approved tile adhesive to plastered walls and waterproof tile grouting to joints</u></p>			
A	<p>On walls in splashbacks</p> <p style="padding-left: 40px;">D : 3 E : 3 G : -3</p>	m2	3	
	<p>Carried Forward to Summary of Section No. 5</p>			R
	<p>Section No. 5 Bill No. 12 Tiling Q532B</p>			

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 13</u></p> <p><u>INTERNAL PLUMBING AND DRAINAGE</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 148 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>SANITARY FITTINGS</u></p> <p><u>Handwash basins</u></p>			
A	<p>Polymer Composite vandal resistant wash hand basin by Whyte House Psych Basin (WHBPSYCH - 8) to be installed as per manufacturer's specifications</p> <p style="padding-left: 40px;">D : 1 E : 1 G : -1</p>	No	1	
	Carried Forward			R
	<p>Section No. 5 Bill No. 13 Internal Plumbing and Drainage Q532B</p>			

Brought Forward		R
<u>Washdown suites</u>		
A	38643001 Uniset (830x470x130mm) for WC flushing cisterna GD2 with small maintenance access sound - insulation EPS module for masonry - in 830 x 470x 130mm rail adaptors for modular fixing for single or rail installation. Wall rail with fixing accessories for single installation. 2 x WC fixing bolts, distance of fixing bolts 180/230mm fixing device for ceramic outlet bend 90mm diameter depth adjustable 90 / 110mm diameter reducer inlet and outlet connecting set adjustment ex. Factory 6L and 3L pneumatic discharge valve offering 3 modes of operation: Dual flush, start/stop, single flush water supply. From left/right/back or top low noise DIN approved insulated against condensation 1/2" water supply connection including integrated angle valve and push fit flexible hose union for vertical or horizontal use union for vertical or horizontal use D : 1 E : 1 G : -1	No 1
B	Grohe Air button single flush (code 37059000) actuator with 1500mm pneumatic hose, 100mm flange plate in Grohe Starlight chrome finish D : 1 E : 1 G : -1	No 1
C	Polymer composite vandal resistant wc pan like Whyte house Psych (WHP-1) fixed as per manufacturer's specifications D : 1 E : 1 G : -1	No 1
<u>Stainless steel sinks, washtrough, etc.</u>		
D	Franke NVN611 single stainless steel end bowl drop on sink and drainer grade 304 (18/10) (Code: 101.0167.171 /811023) size 800 x 460mm drop in sink unit fitted to cupboard (elsewhere measured) D : 1 E : 1 G : -1	No 1
<u>Taps, valves, traps, etc.</u>		
E	32mm Diameter Geberit bottle trap with dip tube, for washbasin, horizontal outlet, chrome plated (Code 151.034.21.1) D : 2 E : 2 G : -2	No 2
Carried Forward		R
Section No. 5 Bill No. 13 Internal Plumbing and Drainage Q532B		

Brought Forward									
A	Cobra metering Pillar tape (Code COB-KM2-100) in chrome finish, includes self-closing, non-hold open, flow controller with flow cycle of 1-20 seconds, 1/2"male inlet, backnut, washer and streamline outlet for flow aesthetics.		No	1					R
	D : 1 E : 1 G : -1								
B	Cobra Karoo mixer (Code KO-970) single lever sink mixer with swivel outlet with 1/2" BSP female inlet including sink mixer swivel outlet and 400mm long flexible inlets		No	1					
	D : 1 E : 1 G : -1								
C	50mm UPVC du Bois waste trap		No	1					
	D : 1 E : 1 G : -1								
<u>SANITARY PLUMBING</u>									
<u>uPVC pipes</u>									
D	50mm Pipes in walls		m	10					
	D : 10 E : 10 G : -10								
E	110mm Pipes		m	3					
	D : 3 E : 3 G : -3								
F	50mm Pipes laid in and including trenches not exceeding 1m deep under surface beds		m	2					
	D : 2 E : 2 G : -2								
G	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds		m	5					
	D : 5 E : 5 G : -5								
<u>Extra over uPVC pipes for fittings</u>									
H	50mm Adaptor		No	2					
	D : 2 E : 2 G : -2								
I	50mm Bend		No	4					
	D : 4 E : 4 G : -4								
J	50mm Access Bend		No	2					
	D : 2 E : 2 G : -2								
Carried Forward									R
Section No. 5 Bill No. 13 Internal Plumbing and Drainage Q532B									

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward				R
<u>Class 1 copper pipes</u>				
A	15mm Pipes D : 15 E : 15 G : -15	m	15	
B	15mm Pipes chased into walls D : 6 E : 6 G : -6	m	6	
C	15mm Pipes fixed to into knock-up ceiling with M8 rubber lined hanger brackets including M8 threaded rod not exceeding 500mm long and M8 drop-in anchor D : 15 E : 15 G : -15	m	15	
<u>Extra over class 1 copper pipes for capillary fittings</u>				
D	15mm Fittings D : 18 E : 18 G : -18	No	18	
<u>FIXED WATER STORAGE HEATERS</u>				
E	Zip Hydroboil 2.5 litre with white powder coated finish D : 1 E : 1 G : -1	No	1	
<u>TESTING</u>				
F	Testing hot and cold water installation		Item	
<u>Gulleys, etc</u>				
G	110mm Diameter PVC dished gulley, complete with necessary pipe, head, trap, gulley surround etc. not exceeding 1m deep D : 1 E : 1 G : -1	No	1	
<u>FIRE APPLIANCES ETC.</u>				
H	4.5Kg DCP filled fire extinguisher with wall mounting bracket fitted to 400 x 200 x 22mm Meranti back plate with smoothed and rounded edges and varnished finish D : 1 E : 1 G : -1	No	1	
Carried Forward to Summary of Section No. 5				R
Section No. 5				
Bill No. 13				
Internal Plumbing and Drainage				
Q532B				

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 14</u></p> <p><u>GLAZING</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>No reference to trade names shall be made in these Bills of Quantities. Any reference to trade names in the Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 150 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>PANELS, MIRRORS, ETC</u></p> <p><u>6mm Silvered float glass copper backed mirrors with bevelled edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u></p>			
A	<p>Mirror, size 600 x 400mm D : 1 E : 1 G : -1</p>	No	1	
	<p>Carried Forward to Summary of Section No. 5</p> <p>Section No. 5 Bill No. 14 Glazing Q532B</p>			R

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>BILL NO 15</u></p> <p><u>PAINTWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>PAINTWORK, ETC TO NEW WORK</u></p>			
	Carried Forward		R	
	<p>Section No. 5 Bill No. 15 Painting Q532B</p>			

Brought Forward

R

Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved

A On internal walls

m2

43

D : 44 E : 43 G : -44

Carried Forward

R

Section No. 5
Bill No. 15
Painting
Q532B

Brought Forward				R
<p><u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Plascon Wall and All (WAA/TWA) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u></p>				
A	On fibre cement fascia and barge boards D : 11 E : 11 G : -11	m2	11	
B	On internal fibre cement window sills not exceeding 300mm wide D : 8 E : 8 G : -8	m	8	
<u>ON METALWORK</u>				
Carried Forward				R
Section No. 5 Bill No. 15 Painting Q532B				

Brought Forward									
	<p><u>Apply Plascon Galvanised Iron Cleaner (GIC 1) to all bare galvanised areas. Surface to be dry, sound and clean. Apply Plascon Galvanised Iron Cleaner (GIC 1) to all bare galvanised areas. Allow to react for 1 minute and rinse off with tap water using bristle brush or Scotch Brite pads to remove all surface conta-minants, until surface is water break-free. Prime with one coat of Plascon Plascosafe 18 primer (EMS18) to achieve continuous film and allow 8 hours to dry, apply one coat Plascon Universal Undercoat (UC1) to achieve continuous film and allow 16 hours to dry. Finish with two coats of Plascon Velvagio Water based (VLW/TVW) to achieve complete obliteration allowing 4 hours drying time between coats.</u></p>								
A	Structural steel D : 4 E : 4 G : -4	m2		4					
	<p><u>ON WOOD</u></p> <p><u>Surface to be dry, sound and clean. Moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 220 grit paper in the direction of the grain and dust off. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and sand to a smooth finish and dust off. Wash knots and resinous areas with Plascon Lacquer Thinner (ILS1), apply Plascon Woodcare Knot seal (PK2) to all knots and resinous areas and allow 1 hour to dry. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours, apply one coat of Plascon Universal Undercoat (UC1) to achieve continuous film and finish with two full coats of Plascon Waterbased Velvagio Satin (VLO) to achieve complet obliteration allowing 4 hours drying time between coats. Colour to Architects approval</u></p>								
B	On doors D : 4 E : 4 G : -4	m2		4					
C	On skirtings, rails, bars, etc not exceeding 300mm girth D : 44 E : 44 G : -44	m		44					
Carried Forward									
	<p>Section No. 5 Bill No. 15 Painting Q532B</p>								

	Brought Forward				
	<p><u>Surface to be dry, sound and clean. Moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 220 grit paper in the direction of the grain and dust off. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and sand to a smooth finish and dust off. Wash knots and resinous areas with Plascon Lacquer Thinner (ILS1), apply Plascon Woodcare Knot seal (PK2) to all knots and resinous areas and allow 1 hour to dry. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours, apply one coat of Plascon Universal Undercoat (UC1) to achieve continuous film and finish with two full coats of Plascon Waterbased Velvagio Satin (VLO) to achieve complet obliteration allowing 4 hours drying time between coats. Colour to Architects approval</u></p>			R	
A	<p>On existing exposed roof timbers at eaves D : 16 E : 16 G : -16</p>	m2	16		
	<p>Carried Forward to Summary of Section No. 5</p> <p>Section No. 5 Bill No. 15 Painting Q532B</p>			R	

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>EXTERNAL WORKS</u></p> <p><u>BILL NO 16</u></p> <p><u>GENERAL SITE WORKS</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>Nature of ground</u></p> <p>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>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>DEMOLITIONS</u></p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>Removal of trees</u></p> <p>A Cutting down and removing trees exceeding 200mm and not exceeding 500mm girth, including grubbing up roots, all necessary filling in of holes, lightly compacted and roughly levelled</p> <p style="padding-left: 40px;">D : 1 E : 0 G : 0</p> <p>B Ditto, but exceeding 500mm and not exceeding 1000mm girth</p> <p style="padding-left: 40px;">D : 1 E : 1 G : -1</p>			
	Carried Forward			R
	<p>Section No. 5 Bill No. 16 External works Q532B</p>			

		Brought Forward		R
A	Ditto, but exceeding 1000mm and not exceeding 1500mm girth D : 1 E : 0 G : 0	No	1	
<u>SITE CLEARANCE ETC</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
<u>Site clearance</u>				
B	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc D : 70 E : 70 G : -70	m2	70	
C	Stripping average 200mm thick layer of top soil and stockpiling on site D : 14 E : 14 G : -14	m3	14	
<u>BULK EXCAVATION, ETC</u>				
<u>Note: The costs of soil, compaction, etc. tests in accordance with SABS 1200 are to be included in the rates for the relevant works</u>				
<u>Open face excavation in earth over sloping site</u>				
D	Open face excavation in earth on site in cutting and levelling sloping sites for platforms and roads and deposit on site D : 21 E : 21 G : -21	m3	21	
<u>Extra over bulk excavation in earth for excavation in</u>				
E	Intermediate rock D : 2 E : 0 G : 0	m3	2	
F	Hard rock D : 1 E : 0 G : 0	m3	1	
Carried Forward				R
Section No. 5 Bill No. 16 External works Q532B				

Brought Forward				R
<u>Extra over all excavations for carting away</u>				
A	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor D : 21 E : 21 G : -21	m3	21	
<u>Keeping excavations free of water</u>				
B	Keeping excavations free of all water other than subterranean water		Item	
<u>FILLING ETC.</u>				
<u>G5 earth filling obtained from the excavations and / or prescribed stock piles on site including haulage not exceeding 500m from perimeter of excavations or stock piles compacted in layers not exceeding 150mm to 90% modified AASHTO density</u>				
C	To form platforms under buildings D : 21 E : 21 G : -21	m3	21	
<u>G5 imported fill supplied by the contractor compacted to 95% Mod AASHTO density in layers not exceeding 150mm</u>				
D	Fill to form platforms for buildings, parking areas, roads, etc. D : 15 E : 0 G : 0	m3	15	
<u>APRONS AROUND GATEHOUSES</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
<u>Excavate in pickable material not exceeding 2m deep below natural or reduced ground level</u>				
E	Reduce levels under aprons, etc. D : 6 E : 6 G : -6	m3	6	
Carried Forward				R
Section No. 5 Bill No. 16 External works Q532B				

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATE HOUSE</u></p> <p><u>EXTERNAL PLUMBING AND DRAINAGE</u></p> <p><u>BILL NO. 17</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 146 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>STORMWATER DRAINAGE</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the "South African Bureau of Standards Standardized Specification for Civil Engineering Construction" (SABS 1200) before pricing this Bill, as these specifications shall apply to this Contract.</p> <p><i><u>NOTE:</u> The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>DEMOLITIONS</u></p>			
A	<p>Break down and remove existing storm water catchpit, size approximately 1585 x 1230 x 1500mm deep under ground level, complete with overslab, floor channels, etc. including necessary excavations, filling, compaction, roughly levelling ground surface, etc.</p> <p style="text-align: center;">D : 1 E : 0 G : 1</p>	No	2	
	Carried Forward			R
	<p>Section No. 5 Bill No. 17 External plumbing and drainage Q532B</p>			

Brought Forward							
R							
<u>EARTHWORKS</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>							
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>							
<u>Excavations in earth</u>							
A	For pipes exceeding 1m and not exceeding 2m deep	m3	156				
	D : 0 E : 156 G : 0						
<u>Extra over excavations for carting away</u>							
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	62				
	D : 0 E : 62 G : 0						
<u>BEDDING, BACKFILLING, ETC</u>							
<u>Provide bedding from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>							
C	Selected granular material	m3	31				
	D : 0 E : 31 G : 0						
<u>Fill blanket from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>							
D	Selected fill material	m3	31				
	D : 0 E : 31 G : 0						
Carried Forward							
R							
Section No. 5 Bill No. 17 External plumbing and drainage Q532B							

Brought Forward							
	<u>Provide main fill blanket from trench excavations in layers not exceeding 150mm thick, compacted to 95% MOD AASHTO density. All excavated material to be free of organic matter and to be mixed in minimum proportions of 30% dark grey intact sandy silt sand of shallower excavations and 30% light grey hard shale and clay material from deeper excavations (maximum size of rocks/stone to be 75mm) for use as backfill for pipe trenches and to be compacted to minimum 95% mod AASHTO densite</u>						
A	Selected fill material D : 0 E : 94 G : 0		m3		94		
	<u>PIPEWORK</u>						
	<i>NOTE: The following items shall be deemed to fall into Work Group No 146 for JBCC CPAP purposes</i>						
	<u>Supply and lay Sans677 Class 50D interlocking joint reinforced concrete pipes (excavation, backfilling, compaction, etc. elsewhere)</u>						
B	450mm Diameter pipe exceeding 1m and not exceeding 2m deep D : 0 E : 60 G : 0		m		60		
	<u>THE FOLLOWING IN NO. 1 STORMWATER MANHOLE</u>						
C	Excavate in earth for and build stormwater manhole, size 1500 x 1500mm exceeding 1m deep and not exceeding 1.5m deep internally, with one brick sides, finished internally with one coat cement plaster, on 150mm thick reinforced concrete 20Mpa (20mm stone) base and reinforced with and including 20mm diameter high tensile reinforcing bars at 200mm centres in both directions, with 150mm thick precast concrete cover slab, finished smooth on all exposed surfaces, rounded on salient angles and provided with opening rebated for grating (measured elsewhere), including concrete benching, building through pipes, formwork, back filling, ramming, etc. D : 0 E : 1 G : 0		No		1		
Carried Forward							
Section No. 5 Bill No. 17 External plumbing and drainage Q532B							

	Brought Forward				R
A	Hard rock D : 0 E : 8 G : 0	m3	8		
	<u>WATER SUPPLY</u>				
	<u>EXTERNAL WATER SUPPLY</u>				
	<u>PREAMBLES</u>				
	Tenderers are advised to study the "South African Bureau of Standards Standardized Specification for Civil Engineering Construction" (SABS 1200) before pricing this Bill, as these specifications shall apply to this Contract.				
	<u>WATER SUPPLIES</u>				
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes				
	<u>EARTHWORKS</u>				
B	For pipes not exceeding 1m deep D : 19 E : 36 G : -19	m3	36		
	<u>Extra over excavations for carting away</u>				
C	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor D : 8 E : 14 G : -8	m3	14		
	<u>BEDDING, BACKFILLING, ETC</u>				
	<u>Provide bedding from carted on material from commercial sources including sifting and compaction to 93% MOD AASHTO density for backfilling to</u>				
D	Selected granular material D : 2 E : 4 G : -2	m3	4		
	Carried Forward				R
	Section No. 5 Bill No. 17 External plumbing and drainage Q532B				

Brought Forward							
<u>Fill blanket from carted on material from commercial sources including sifting and compaction to 93% MOD AASHTO density for backfilling to</u>							R
A	Selected fill material D : 6 E : 11 G : -6	m3	11				
<u>Provide main fill blanket from trench excavations in layers not exceeding 150mm thick, compacted to 95% MOD AASHTO density. All excavated material to be free of organic matter and to be mixed in minimum proportions of 30% dark grey intact sandy silt sand of shallower excavations and 30% light grey hard shale and clay material from deeper excavations (maximum size of rocks/stone to be 75mm) for use as backfill for pipe trenches and to be compacted to minimum 95% mod AASHTO densite</u>							
B	Selected fill material D : 11 E : 22 G : -11	m3	22				
<u>WATER SUPPLIES</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 148 for JBCC CPAP purposes</i>							
C	Sterilizing all water pipes prior to installation in strict accordance to the methods and specifications in SANS10252-1		Item				
<u>HDPE pipes Class 12 for use under ground in accordance with SABS 791 with uPVC couplings (Excavation, bedding material, back filling, compaction, etc. elsewhere)</u>							
D	40mm Diameter pipe not exceeding 1m deep D : 31 E : 60 G : -31	m	60				
<u>Extra over piping for Plasson screwed type fittings</u>							
E	40mm pressure bend, 90 degrees D : 4 E : 4 G : -4	No	4				
Carried Forward							R
Section No. 5 Bill No. 17 External plumbing and drainage Q532B							

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward				R
A	40mm pressure bend, 45 degrees D : 2 E : 2 G : -2	No	2	
B	40mm pressure bend, 22.5 degrees D : 2 E : 2 G : -2	No	2	
C	40mm tee D : 2 E : 4 G : -2	No	4	
<u>Thrust blocks to 22.5 degrees bends</u>				
D	Size extreme 300 x 350 x 300mm high D : 2 E : 2 G : -2	No	2	
<u>Thrust blocks to 45 degrees bends</u>				
E	Size extreme 400 x 500 x 175mm high D : 2 E : 2 G : -2	No	2	
<u>Thrust blocks to 90 degrees bends</u>				
F	Size extreme 500 x 740 x 250mm high D : 4 E : 4 G : -4	No	4	
<u>Valve chambers</u>				
<u>Taps, Valves, etc.</u>				
G	80mm Flanged Class 16 gate valves "Premier Euro 16" or similar approved with hand wheel and non-rising spindle D : 0 E : 1 G : 0	No	1	
<u>Precast concrete valve chamber, 400mm internal diameter, complete including all necessary excavations, precast manholes rings, in situ concrete bottom slabs (size 1000mm diameter) laid to falls (thickness of slab 150mm) with 20mm thick concrete topping, 150mm thick medium duty precast roof slab, channels, finishes, cast iron double seal cover and frame, etc. all joints sealed with 1:3 cement sand mix caulked in ring joints</u>				
H	Valve chamber not exceeding 1m deep D : 0 E : 1 G : 0	No	1	
Carried Forward				R
Section No. 5 Bill No. 17 External plumbing and drainage Q532B				

Brought Forward				R
<u>Excavations in earth</u>				
A	For pipes exceeding 1m and not exceeding 2m deep D : 56 E : 106 G : -56	m3	106	
<u>Extra over excavations for carting away</u>				
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor D : 21 E : 19 G : -14	m3	26	
<u>BEDDING, BACKFILLING, ETC</u>				
<u>Provide bedding from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>				
C	Selected granular material D : 8 E : 16 G : -8	m3	16	
<u>Fill blanket from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>				
D	Selected fill material D : 6 E : 11 G : -6	m3	11	
<u>Provide main fill blanket from trench excavations in layers not exceeding 150mm thick, compacted to 95% MOD AASHTO density. All excavated material to be free of organic matter and to be mixed in minimum proportions of 30% dark grey intact sandy silt sand of shallower excavations and 30% light grey hard shale and clay material from deeper excavations (maximum size of rocks/stone to be 75mm) for use as backfill for pipe trenches and to be compacted to minimum 95% mod AASHTO densite</u>				
E	Selected fill material D : 42 E : 80 G : -42	m3	80	
Carried Forward				R
Section No. 5 Bill No. 17 External plumbing and drainage Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward			R
	<u>Testing</u>			
A	Pressure testing drainage pipe system		Item	
	<u>Extra over excavation for sewer drainage for excavation</u>			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>			
B	Intermediate rock	m3	16	
	D : 0 E : 16 G : 0			
C	Hard rock	m3	8	
	D : 0 E : 8 G : 0			
Carried Forward to Summary of Section No. 5				
Section No. 5				R
Bill No. 17				
External plumbing and drainage				
Q532B				

Item No		Quantity	Rate	Amount
	<p><u>SECTION 5 WORK PACKAGE 4</u></p> <p><u>PE PROVINCIAL HOSPITAL BUCKINGHAM ROAD AND ST CROIX ROAD MAIN FRONT PARKING AREA</u></p> <p><u>BILL NO. 18</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p>This section consists of the following buildings:</p> <p>Block B: PE Provincial Hospital</p> <p>Block G: SMME Packages</p> <p><u>HOARDING</u></p> <p><u>TEMPORARY MILD STEEL WELDMESH FENCE</u></p> <p><u>NOTE:</u> <i>The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i></p>			
A	<p>Allow for clearing site for the width of 2 000 mm where existing fencing runs (1000 mm on each side of fence), and where new fence are to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling. Prospective bidders to familiarize themselves with the areas that do contain shrubs, etc. at the mandatory briefing meeting to ensure that the item is priced accordingly and correctly, as no further costs shall be entertained by Employer.</p> <p style="text-align: center;">B : 404 G : 0</p>	m	404	
	Carried Forward			R
	<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		R	
A	Take off and remove existing pedestrian gate size 3010 x 1000mm high complete with all steel posts, concrete footings, etc. including necessary excavations, filling, compaction, roughly levelling, etc. B : 1 G : 0	No	1
B	Cut 300mm wide x 150mm deep channel into existing sliding gate concrete beam, for sliding gate to operate on same level as existing entrance roads B : 8 G : 0	m	8
<u>Removal of trees</u>			
<u>Taking out and removing, grubbing up roots and filling in holes</u>			
C	Tree exceeding 200mm and not exceeding 500mm girth B : 10 G : 0	No	10
D	Tree exceeding 500mm and not exceeding 1000mm girth B : 2 G : 0	No	2
E	Tree exceeding 1000mm and not exceeding 1500mm girth B : 1 G : 0	No	1
F	Tree exceeding 1500mm and not exceeding 2000mm girth B : 1 G : 0	No	1
<u>Trimming of trees</u>			
G	Allow the Amount of R20,000.00 (Twenty thousand Rand) for the trimming of trees and tree roots	Item	20,000.00
H	Profit on above item.	Item	
I	Attendance on ditto.	Item	
Carried Forward		R	
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B			

Brought Forward							
<u>REMOVE AND RELOCATE EXISTING TIMBER BUILDING TO DIFFERENT POSITION ON SITE</u>							
A	Remove and relocate existing timber gate house building, overall size 3 x 3m wide and 3m high. Timber building to be relocated, not exceeding 500m from original position B : 1 G : 0	No	1				
B	Remove and relocate existing timber gate house building, overall size 3 x 3m wide and 3m high. Timber building to be relocated, not exceeding 1000m from original position to position identified by End User (To be handed to client at the end of the contract) B : 1 G : 0	No	1				
<u>TEMPORARY ACCESS SIGNAGE</u>							
C	Allow the Amount of R20,000.00 (Twenty thousand Rand) for the temporary access signage			Item			20,000.00
D	Profit on above item.			Item			
E	Attendance on ditto.			Item			
<u>EXTEND EXISTING FACE BRICK COLUMNS</u>							
<u>MASONRY</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i>							
<u>Brickwork of clay bricks in 6:1 cement mortar</u>							
F	Mass brickwork in piers on top of existing brick columns B : 22 G : 0	m3	22				
G	One brick walls B : 8 G : 0	m2	8				
Carried Forward							
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B							

Brought Forward				R
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
A	12mm Diameter bars B : 0.700 G : 0.000	t	0.700	
B	16mm Diameter bars B : 0.700 G : 0.000	t	0.700	
<u>PRECAST CONCRETE</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 112 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: 0;"/>				
<u>Pre-cast coping</u>				
C	Pre-cast concrete coping, size 560 x 560 x 80mm high with apex to additional height of 20mm installed on top of face brick columns bedded in cement mortar B : 14 G : 0	No	14	
D	Pre-cast concrete coping, size 790 x 790 x 80mm high with apex to additional height of 20mm installed on top of face brick columns bedded in cement mortar B : 6 G : 0	No	6	
E	Pre-cast concrete coping, size 560 x 728 x 80mm high with apex to additional height of 20mm installed on top of face brick columns bedded in cement mortar B : 4 G : 0	No	4	
F	Pre-cast concrete corner coping, each side size 650 x 550mm wide x 80mm high with apex to additional height of 20mm installed on top of face brick columns bedded in cement mortar (overall length 1300mm) B : 3 G : 0	No	3	
<u>Patching and repairing existing road</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: 0;"/>				
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

Brought Forward									
A	Tack coat of 30% cationic stable grade emulsion (0.45L/m ²) B : 3 G : 0	m2	3						
B	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²) B : 3 G : 0	m2	3						
C	30mm Premix (continuously graded with 60/70 penetration bitumen) on and including RTH 1/4 prime coat and KRS tack coat on base course (elsewhere measured) in patching B : 3 G : 0	m2	3						
<u>Precast concrete kerbs:</u>									
D	300 x 150mm High Figure 8c mountable precast concrete kerb in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 600 x 150mm thick under, and 200 x 200 x 200mm high unreinforced concrete Class B haunching behind including necessary excavation B : 16 G : 0	m	16						
<u>HIGH SECURITY FENCING</u>									
<u>PVC coated high security fencing, gates and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated. Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO9001 and Green Building Council</u>									
<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes									

Carried Forward								R	
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B									

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward			R
A	<p>70 x 44mm x 2mm x 1685mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts to be fixed to top of face brick low level wall</p> <p style="text-align: center;">B : 189 G : 0</p>	No	189	
B	<p>70 x 44mm x 2mm x 3000mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling</p> <p style="text-align: center;">B : 22 G : 0</p>	No	22	
C	<p>High Security fence panels size 1000 x 1685mm high with aperture size (centers) of 76mm x 12mm rigid mesh panels with bends. Core wire (3mm diameter) to be manufactured from Zincalu Super wire coated to SANS 10244-2:2003 specification (Min. 275g/m²) coating consisting of 95% Zinc and 5% Aluminium. Panel shall receive additional PVC Coating (3.4mm thick) Anthracite RAL 7021 or Green RAL 6005, including 60mm high x 2.5mm x 3046mm saw tooth top rail with additional PVC coating. The top rail saw tooth shall be pre-drilled to fix top section of the panel with M8 x 30mm cup square bolts. All bolts and washers required shall be of grade 304 stainless steel.</p> <p style="text-align: center;">B : 3 G : 0</p>	No	3	
	Carried Forward			R
	<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	Ditto, but panel size 1200 x 1685mm high B : 2 G : 0	No	2	
B	Ditto, but panel size 2587 x 1685mm high B : 126 G : 0	No	126	
C	High security mesh panels size 3050 x 2400mm high with aperture size (centers) of 76mm x 12mm rigid mesh panels with bends. Core wire (3mm diameter) to be manufactured from Zincalu Super wire coated to SANS 10244-2:2003 specification (Min. 275g/m ²) coating consisting of 95% Zinc and 5% Aluminium. Panel shall receive additional PVC Coating (3.4mm thick) Anthracite RAL 7021 or Green RAL 6005, including 60mm high x 2.5mm x 3046mm saw tooth top rail with additional PVC coating. The top rail saw tooth shall be pre-drilled to fix top section of the panel with M8 x 30mm cup square bolts. All bolts and washers required shall be of grade 304 stainless steel. B : 18 G : 0	No	18	
<u>Mass concrete footing for fence</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
D	Excavations not exceeding 2m deep for underdig B : 5 G : 0	m3	5	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				
E	Mass concrete (15Mpa) for concrete underdig beam B : 5 G : 0	m3	5	
<u>Extra over excavations in earth for excavation in</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
F	Soft rock B : 1 G : 0	m3	1	
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

	Brought Forward			R
A	<p>Sliding pedestrian gate, size 3010mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 30 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 80 x 80 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 75mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with a locking device. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026 SIT-004</u></p> <p style="text-align: center;">B : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>			

	Brought Forward						
A	<p>Sliding gate, size 4500mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC006 (St Croix road elevation 1)</u></p> <p style="text-align: center;">B : 1 G : 0</p>	No	1	R			
	Carried Forward			R			
	<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>						

	Brought Forward						
A	<p>Sliding gate, size 4920mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products .Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with a locking device. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC006 (St Croix road elevation 1)</u></p> <p style="text-align: center;">B : 1 G : 0</p>	No	1	R			
	Carried Forward			R			
	<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>						

	Brought Forward			R
A	<p>Sliding gate, size 9613mm wide x 2400mm high formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with a locking device. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling, <u>all in accordance with Sliding Gate Drawing 305-026-ARC006 (Buckingham road elevation 2)</u></p> <p style="text-align: center;">B : 1 G : 0</p> <p><u>CONCRETE GATE BEAM</u></p> <p><i>NOTE:</i> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</p>	No	1	
	Carried Forward			R
	<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>			

Brought Forward				R
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>				
A	Concrete gate beam B : 7 G : 0	m3	7	
<u>Extra over all excavations for carting away</u>				
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor B : 7 G : 0	m3	7	
<u>Risk of collapse of excavations</u>				
C	Sides of trench and hole excavations not exceeding 1,5m deep B : 40 G : 0	m2	40	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				

<u>30MPa/19 mm Reinforced concrete in</u>				
D	Gate beams B : 7 G : 0	m3	7	
<u>Reinforcement</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				

<u>Mild steel rod reinforcement to structural concrete work</u>				
E	8mm Diameter bars B : 0.245 G : 0.000	t	0.245	
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
F	10mm Diameter bars B : 1.225 G : 0.000	t	1.225	
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

Brought Forward						
A	12mm Diameter bars B : 0.980 G : 0.000	t	0.980			R
<u>Steel track in concrete beam</u>						
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>						
B	10 x 100mm galvanised mild steel flat bar cast on edge in concrete ground beam including 10mm diameter lugs welded to flat bar at 500mm centres B : 44 G : 0	m	44			
<u>BOOM GATES</u>						
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>						
<u>Automatic Industrial Vehicle barrier With Swiftdrive</u>						
C	Automatic industrial vehicle barrier with swiftdrive as supplied by Turnstar Systems (011 786 1633). Barrier to consist of BLDC, 24V DC, 100W motor, Plaetary gearbox with 27.6 V DC, 4.5A, 120W motor power supply. Barrier to include collision detection, dual channel safety loop detector and input for any external sensor, integrates with all access control, ticketing and time & attendance systems, triggered trough a normally open dry contact and free exit loop feature built-in as standard. With push button located in security/guard house. Barrier to be manufactured from Stainless steel Grade 316. Barrier to include 3m barrier arm size 86mm x 43mm x 1.5mm thickness, power coated aluminium with red reflective tape and integrated RGB. Barrier to be bolted to 500 x 500 x 300mm deep concrete base (15Mpa), including all excavations and backfilling (Installed strictly to manufacturers specifications) B : 2 G : 0	No	2			
<u>REPLACEMENT OF EXISTING MANHOLE COVERS</u>						
Carried Forward						R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B						

Brought Forward				R
<i>NOTE: The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i>				
<hr/>				
<u>Brickwork of clay bricks in 6:1 cement mortar</u>				
A	Half brick walls B : 2 G : 0	m2	2	
B	One and a half brick walls B : 2 G : 0	m2	2	
C	Ditto, but in foundations B : 2 G : 0	m2	2	
<u>Brick reinforcement</u>				
D	High tensile galvanised steel brick reinforcement 75mm wide well lapped at all angles and passings and built into brick walls B : 59 G : 0	m	59	
E	High tensile galvanised steel brick reinforcement 150mm wide well lapped at all angles and passings and built into brick walls B : 47 G : 0	m	47	
F	Ditto, but in foundations B : 47 G : 0	m	47	
<u>External facings to be Corobrik Country Meadow Travertine FBS pointed with tinted horizontal and vertical joints with cement mortar to match colour of face bricks and seal with ABE Durasil S sealant</u>				
G	Extra over brickwork for face brickwork B : 5 G : 0	m2	5	
<u>Pre-cast coping</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 112 for JBCC CPAP purposes</i>				
<hr/>				
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

Brought Forward							
	<p><u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u></p>						
A	External walls B : 4 G : 0		m2		4		
<p><u>PAVING AT PEDESTRIAN ENTRANCE (MAIN ENTRANCE)</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>Demolitions</u></p>							
B	Break up and remove existing concrete paving, aprons, etc. not exceeding 120mm thick including preparation, roughly levelling ground surfaces, ramming, etc. B : 170 G : 0		m2		170		
Carried Forward							R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B							R

Brought Forward							
R							
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>							
A	Subbase under concrete paving B : 51 G : 0	m3	51				
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							
<u>Reinforced concrete (30Mpa/19mm) in:</u>							
B	Paving B : 26 G : 0	m3	26				
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>							
C	Paving B : 170 G : 0	m2	170				
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>							
<u>General Formwork</u>							
D	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 50 G : 0	m	50				
<u>Movement joints</u>							
E	8 x 40mm Saw cut joints in top of concrete paving B : 60 G : 0	m	60				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>							
<u>Fabric reinforcement</u>							
F	Type 395 fabric reinforcement in concrete paving B : 170 G : 0	m2	170				
Carried Forward							R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B							

Brought Forward				R
<i>NOTE: The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>				
<hr/>				
<u>One layer of 250 micron "Consol Plastics Gunplas Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>				
A	Under paving B : 179 G : 0	m2	179	
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>				
<hr/>				
<u>Precast concrete kerbs:</u>				
B	150 x 250mm Precast Barrier kerb BK2, in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 400 x 60mm thick under and 125 x 150 x 150mm high unreinforced concrete Class B haunching behind, including necessary excavation B : 10 G : 0	m	10	
C	Ditto, but circular on plan not exceeding 4m radius B : 6 G : 0	m	6	
<u>NEW ASPHALT SURFACE AND CONCRETE WALKWAY AT EXIT GATE HOUSE</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>				
<hr/>				
<u>Demolitions</u>				
D	Break up and remove existing precast concrete kerb, over all size approximately 300 x 150mm wide, including necessary excavations, filling, compaction, roughly levelling ground surface, etc. B : 58 G : 0	m	58	
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

Brought Forward				R
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 95% Mod. AASHTO density</u>				
A	Subbase under roads B : 43 G : 0	m3	43	
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>				
B	Subbase under roads B : 43 G : 0	m3	43	
<u>Approved weed killer (Certificate to be provided before payment)</u>				
C	Hyvar X or other equally approved soil herbicide at a rate of 50 gram/m ² under paving etc. B : 284 G : 0	m2	284	
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin: 0 auto;"/>				
<u>Asphalt</u>				
D	Tack coat of 30% cationic stable grade emulsion (0.45L/m ²) B : 270 G : 0	m2	270	
E	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²) B : 270 G : 0	m2	270	
F	40mm Asphalt surfacing - 60/70 penetrating B12 road grade bitumen to be medium continuously graded and compacted to above stated thickness B : 270 G : 0	m2	270	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin: 0 auto;"/>				
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

Brought Forward				R
<u>Reinforced concrete (30Mpa/19mm) in:</u>				
A	Paving B : 2 G : 0	m3	2	
B	Ramps. etc B : 1 G : 0	m3	1	
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>				
C	Paving, ramps B : 14 G : 0	m2	14	
<u>Finishing top surfaces of concrete to a ribbed finish tamped with a straight edge</u>				
D	Paving (Sloping) B : 14 G : 0	m2	14	
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>General Formwork</u>				
E	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 14 G : 0	m	14	
F	10mm Sajex or other approved cane fibre filler board in expansion joint between edge of concrete paving and walls in narrow widths not exceeding 150mm wide including tacking to face of wall and polysulphide sealant between concrete and brickwork B : 5 G : 0	m	5	
<u>Movement joints</u>				
G	8 x 40mm Saw cut joints in top of concrete surface bed B : 5 G : 0	m	5	
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

Brought Forward							
							R
<u>Fabric reinforcement</u>							
A	Type 395 fabric reinforcement in concrete surface beds, slabs, etc. B : 14 G : 0	m2	14				
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>							
<u>Precast concrete kerbs:</u>							
B	150 x 250mm Precast Barrier kerb BK2, in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 400 x 60mm thick under and 125 x 150 x 150mm high unreinforced concrete Class B haunching behind, including necessary excavation B : 46 G : 0	m	46				
C	Ditto, but circular on plan not exceeding 4m radius B : 12 G : 0	m	12				
D	125 x 300mm In-situ cast concrete channel cast in approximately 1000mm lengths, bedded, jointed and pointed in 1:3 cement mortar, including unreinforced concrete foundation size 450 x 75mm thick under including necessary excavation B : 46 G : 0	m	46				
E	Ditto, but circular on plan not exceeding 4m radius B : 12 G : 0	m	12				
<u>CONCRETE WALKWAY AND RAMPS AT ENTRANCE GATEHOUSE</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>							
<u>Demolitions</u>							
F	Break up and remove existing concrete paving, aprons, etc. not exceeding 120mm thick including preparation, roughly levelling ground surfaces, ramming, etc. B : 220 G : 0	m2	220				
Carried Forward							R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B							

Brought Forward							
<p>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</p> <hr style="width: 20%; margin: 0 auto;"/> <p><u>Excavate in earth or compacted filling not exceeding 2m deep below natural or reduced ground level</u></p>							
A	Reduced levels under paving B : 66 G : 0	m3	66				
<p><u>Extra over all excavations for carting away</u></p>							
B	Extra over all excavations for carting surplus excavated material B : 66 G : 0	m3	66				
<p><u>Compaction of surfaces</u></p>							
C	Scarify earth surface to a depth of 150mm, breaking down over size material and reconsolidate to 95% modified AASHTO density B : 220 G : 0	m2	220				
<p><u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u></p>							
D	Subbase under concrete paving B : 66 G : 0	m3	66				
<p>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</p> <hr style="width: 20%; margin: 0 auto;"/> <p><u>Reinforced concrete (30Mpa/19mm) in:</u></p>							
E	Paving B : 30 G : 0	m3	30				
F	Ramps. etc B : 3 G : 0	m3	3				
Carried Forward							R
<p>Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B</p>							

Brought Forward							
Finishing top surfaces of concrete to an evenly brushed non-slip surface							
A	Paving, ramps B : 220 G : 0	m2					
			220				
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>							
<hr style="width: 20%; margin: auto;"/>							
General Formwork							
B	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 172 G : 0	m					
			172				
C	10mm Sajex or other approved cane fibre filler board in expansion joint between edge of concrete paving and walls in narrow widths not exceeding 150mm wide including tacking to face of wall and polysulphide sealant between concrete and brickwork B : 60 G : 0	m					
			60				
Movement joints							
D	8 x 40mm Saw cut joints in top of concrete surface bed B : 48 G : 0	m					
			48				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>							
<hr style="width: 20%; margin: auto;"/>							
Fabric reinforcement							
E	Type 395 fabric reinforcement in concrete surface beds, slabs, etc. B : 220 G : 0	m2					
			220				
<i>NOTE: The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>							
<hr style="width: 20%; margin: auto;"/>							
		Carried Forward					R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B							

Brought Forward							
	<u>One layer of 250 micron "Consol Plastics Gunplas Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>						R
A	Under paving, ramps B : 231 G : 0	m2	231				
	<u>NEW ASPHALT SURFACE AT ENTRANCE GATE HOUSE</u>						
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>						
	<u>Demolitions</u>						
B	Break up and remove existing precast concrete kerb, over all size approximately 300 x 150mm wide, including necessary excavations, filling, compaction, roughly levelling ground surface, etc. B : 123 G : 0	m	123				
	<u>Breaking up and removing</u>						
C	Break up and remove existing tarmac, not exceeding 40mm thick including preparation, roughly levelling ground surfaces, ramming, etc. B : 566 G : 0	m2	566				
	<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>						
	<u>Excavate in pickable material not exceeding 2m deep below natural or reduced ground level</u>						
D	Reduced levels under roads B : 170 G : 0	m3	170				
	<u>Extra over bulk excavation in earth for excavation in</u>						
E	Intermediate rock B : 17 G : 0	m3	17				
F	Hard rock B : 8 G : 0	m3	8				
	Carried Forward						R
	Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B						

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward				R
A	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²) B : 566 G : 0	m2	566	
B	40mm Asphalt surfacing - 60/70 penetrating B12 road grade bitumen to be medium continuously graded and compacted to above stated thickness B : 566 G : 0	m2	566	
<u>Precast concrete kerbs:</u>				
C	150 x 300mm High Rectangular precast concrete kerb (DRG15297) in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 350 x 150mm thick under, and 200 x 200 x 200mm high unreinforced continuous concrete Class B haunching behind including necessary excavation B : 110 G : 0	m	110	
D	Ditto, but circular on plan not exceeding 4,0m radius B : 7 G : 0	m	7	
E	Ditto, but circular on plan exceeding 4,0m radius B : 6 G : 0	m	6	
<u>STATUTORY SIGNS</u>				
<u>All road markings shall comply with the SADC road traffic sign manual and the national road traffic regulations</u>				
<u>Statutory signs, street signs, etc. supplied and erected complete, including steel posts for a mounted heights of 2,4m (Department of Transport Code shown in brackets)</u>				
F	Stop sign (R1) B : 2 G : 0	No	2	
G	No entry signs (R3) B : 2 G : 0	No	2	
H	No parking sign (R216) B : 2 G : 0	No	2	
Carried Forward				R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
A	Buses/ taxi sign (R134) B : 2 G : 0	No	2
	<u>Prepare and paint two coats approved road marking paint:</u>		
B	Line 100mm wide B : 87 G : 0	m	87
C	Stop sign and line painted on road (GM7) B : 4 G : 0	No	4
D	100mm Wide continuous roadmarking line for parking bays B : 150 G : 0	m	150
E	Single-headed directional arrow (proceed straight only) (RM8.3) B : 5 G : 0	No	5
F	Single-headed directional arrow 400mm wide x 1400mm long B : 2 G : 0	No	2
G	Disabled persons symbol B : 4 G : 0	No	4
	<u>SIGNAGE</u>		
H	Allow the Amount of R100,000.00 (One Hundred thousand Rand) for the replacement of existing Signage	Item	100,000.00
I	Profit on above item.	Item	
J	Attendance on ditto.	Item	
	<u>LANDSCAPING</u>		
K	Allow the Amount of R35,000.00 (Thirty Five thousand Rand) for Landscaping	Item	35,000.00
L	Profit on above item.	Item	
Carried Forward			R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward				R
A	Attendance on ditto.	Item			
	<u>BUILDERSWORK FOR CCTV INSTALLATION</u>				
B	Allow the Amount of R250,000.00 (Two Hundred and Fifty thousand Rand) for the builders work related to CCTV installation	Item			250,000.00
C	Profit on above item.	Item			
D	Attendance on ditto.	Item			
	<u>ALTERATIONS TO EXISTING SERVER ROOM IN HOSPITAL FOR CCTV INSTALLATION</u>				
E	Allow the Amount of R500,000.00 (Five Hundred thousand Rand) for the alterations to the existing server room in hospital for CCTV installation	Item			500,000.00
F	Profit on above item.	Item			
G	Attendance on ditto.	Item			
	<u>DEMOLITIONS FOR CCTV INSTALLATION CONDUITS AND SLEEVES</u>				
	<u>Breaking up and removing</u>				
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>				
H	Break up and remove existing precast concrete kerb in patching in various areas, over all size approximately 300 x 150mm wide, including necessary excavations, filling, compaction, roughly levelling ground surface, etc. B : 15 G : 0	m	15		
	Carried Forward				R
	Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

		Brought Forward		R
<u>Reinforced concrete (30Mpa/19mm) in:</u>				
A	Paving B : 4 G : 0	m3	4	
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>				
B	Paving B : 35 G : 0	m2	35	
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>General Formwork</u>				
C	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 30 G : 0	m	30	
<u>Movement joints</u>				
D	8 x 40mm Saw cut joints in top of concrete paving B : 32 G : 0	m	32	
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>Fabric reinforcement</u>				
E	Type 395 fabric reinforcement in concrete paving B : 35 G : 0	m2	35	
<i>NOTE: The following items shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>One layer of 250 micron "Consol Plastics Gunplas Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>				
F	Under paving B : 37 G : 0	m2	37	
		Carried Forward		R
Section No. 5 Bill No. 18 Buckingham road and St Croix Road entrance Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

SECTION SUMMARY - SECTION 5 WORK PACKAGE 4 PEPH GATEHOUSES

Bill No		Page No	Amount
1	Foundations	284	
2	Concrete Formwork and reinforcing	286	
3	Masonry	289	
4	Waterproofing	291	
5	Roof covering	294	
6	Carpentry and Joinery	299	
7	Ceilings, partitioning and access flooring	301	
8	Floorcovering	302	
9	Ironmongery	306	
10	Metalwork	310	
11	Plastering	312	
12	Tiling	313	
13	Internal Plumbing and Drainage	318	
14	Glazing	319	
15	Painting	325	
16	External works	329	
17	External plumbing and drainage	341	
18	Buckingham road and St Croix Road entrance	381	
	Carried to Final Summary		R
	Section No. 5 Q532B		

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Item No		Quantity	Rate	Amount
	<u>SECTION 6 WORK PACKAGE 5</u>			
	<u>PE PROVINCIAL HOSPITAL</u>			
	<u>BILL NO. 1</u>			
	<u>ST CROIX STREET</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	This section consists of the following buildings:			
	Block B: PE Provincial Hospital			
	Block G: SMME Packages			
	<u>DEMOLITIONS</u>			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>			
	<hr style="width: 20%; margin-left: 0;"/>			
	<u>Removal of trees</u>			
	<u>Taking out and removing, grubbing up roots and filling in holes</u>			
A	Tree exceeding 200mm and not exceeding 500mm girth B : 3 G : 0	No	3	
B	Tree exceeding 1000mm and not exceeding 1500mm girth B : 1 G : 0	No	1	
	<u>Trimming of trees</u>			
C	Allow the Amount of R20,000.00 (Twenty thousand Rand) for the trimming of trees and tree roots			
		Item		20,000.00
	Carried Forward		R	
	Section No. 6 Bill No. 1 St Croix Road Q532B			

Brought Forward									
R									
<u>Metalwork</u>									
A	Take off and remove existing pedestrian gate size 1375 x 1850mm high complete with all steel posts, concrete footings, etc. including necessary excavations, filling, compaction, roughly levelling, etc. B : 1 G : 0	No	1						
B	Take off and remove existing pedestrian gate size 2374 x 1850mm high complete with all steel posts, concrete footings, etc. including necessary excavations, filling, compaction, roughly levelling, etc. B : 1 G : 0	No	1						
C	Take off and remove existing swing gate size 4325 x 2100mm high complete with all steel posts, concrete footings, etc. including necessary excavations, filling, compaction, roughly levelling, etc. B : 1 G : 0	No	1						
D	Take off and remove existing sliding gate size 6684 x 2126mm high complete with all steel posts, sliding track, concrete footings, etc. including necessary excavations, filling, compaction, roughly levelling, etc. B : 1 G : 0	No	1						
<u>BOREHOLE SUPPLY PIPE TO BE PLACED UNDERGROUND</u>									
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>									
<u>Excavate in pickable material not exceeding 2m deep below natural or reduced ground level</u>									
E	Trenches B : 85 G : 0	m3	85						
Carried Forward									
R									
Section No. 6 Bill No. 1 St Croix Road Q532B									

Brought Forward					
				R	
<u>Extra over all excavations for carting away</u>					
A	Extra over all excavations for carting surplus excavated material and spreading, levelling and lightly compacting on site where directed average 500m from the excavations (Measured nett- no allowance made for bulking)	m3	68		
	B : 68 G : 0				
<u>G5 gravel layers supplied by the contractor compacted to 98% Mod AASHTO density in layers not exceeding 150mm</u>					
B	Subbase under paving	m3	13		
	B : 13 G : 0				
<u>Provide bedding from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>					
C	Selected granular material	m3	34		
	B : 34 G : 0				
<u>Fill blanket from carted on material from commercial sources including sifting and compaction to 90% MOD AASHTO density for backfilling to</u>					
D	Selected fill material	m3	34		
	B : 34 G : 0				
<u>Provide main fill blanket from trench excavations in layers not exceeding 150mm thick, compacted to 95% MOD AASHTO density. All excavated material to be free of organic matter and to be mixed in minimum proportions of 30% dark grey intact sandy silt sand of shallower excavations and 30% light grey hard shale and clay material from deeper excavations (maximum size of rocks/stone to be 75mm) for use as backfill for pipe trenches and to be compacted to minimum 95% mod AASHTO densite</u>					
E	Selected fill material	m3	17		
	B : 17 G : 0				
Carried Forward				R	
Section No. 6 Bill No. 1 St Croix Road Q532B					

Brought Forward				R
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				
<hr/>				
<u>Reinforced concrete (30Mpa) in:</u>				
A	Paving B : 2 G : 0	m3	2	
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>				
B	Paving, ramps B : 22 G : 0	m2	22	
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr/>				
<u>Fabric reinforcement</u>				
C	Type 395 fabric reinforcement in concrete paving B : 22 G : 0	m2	22	
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>				
<hr/>				
<u>General Formwork</u>				
D	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 73 G : 0	m	73	
E	10mm Sajex or other approved cane fibre filler board in expansion joint between edge of concrete paving and walls in narrow widths not exceeding 150mm wide including tacking to face of wall and polysulphide sealant between concrete and brickwork B : 2 G : 0	m	2	
<u>Movement joints</u>				
F	8 x 40mm Saw cut joints in top of concrete paving B : 2 G : 0	m	2	
Carried Forward				R
Section No. 6 Bill No. 1 St Croix Road Q532B				

Brought Forward

R

PIPEWORK

***NOTE:** The following items shall be deemed to fall into Work Group No 146 for JBCC CPAP purposes*

Lay existing 50mm HDPE water pipe in trench (excavation, backfilling, compaction, etc. elsewhere)

A	Existing 50mm Diameter HDPE water pipe laid in trench not exceeding 1m deep	m	141
	B : 141 G : 0		

IN-SITU CONCRETE PAVING IN PATCHING ON SIDEWALKS

***NOTE:** The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes*

Excavate in pickable material not exceeding 2m deep below natural or reduced ground level

B	Reduced levels under pavings, etc	m3	6
	B : 67 G : -60		

Extra over all excavations for carting away

C	Extra over all excavations for carting surplus excavated material and spreading, levelling and lightly compacting on site where directed average 500m from the excavations (Measured nett- no allowance made for bulking)	m3	6
	B : 67 G : -60		

Compaction of surfaces

D	Scarify earth surface to a depth of 150mm, breaking down over size material and reconsolidate to 93% modified AASHTO density	m2	22
	B : 222 G : -200		

Carried Forward

R

Section No. 6
Bill No. 1
St Croix Road
Q532B

Brought Forward							
						R	
<u>G5 gravel layers supplied by the contractor compacted to 98% Mod AASHTO density in layers not exceeding 150mm</u>							
A	Subbase under paving B : 67 G : -60	m3	7				
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							
<u>Reinforced concrete (30Mpa) in:</u>							
B	Paving B : 33 G : -30	m3	3				
<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>							
C	Paving, ramps B : 222 G : -200	m2	22				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>							
<u>Fabric reinforcement</u>							
D	Type 395 fabric reinforcement in concrete paving B : 222 G : -200	m2	23				
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>							
<u>General Formwork</u>							
E	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 278 G : -250	m	28				
Carried Forward						R	
Section No. 6 Bill No. 1 St Croix Road Q532B							

Brought Forward							
A	10mm Sajex or other approved cane fibre filler board in expansion joint between edge of concrete paving and walls in narrow widths not exceeding 150mm wide including tacking to face of wall and polysulphide sealant between concrete and brickwork B : 222 G : -200	m	22				
<u>Movement joints</u>							
B	8 x 40mm Saw cut joints in top of concrete paving B : 22 G : -20	m	2				
<u>HIGH SECURITY FENCING</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>							
C	Allow for clearing site for the width of 2 000 mm where existing fencing runs (1000 mm on each side of fence), and where new fence are to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling. Prospective bidders to familiarize themselves with the areas that do contain shrubs, etc. at the mandatory briefing meeting to ensure that the item is priced accordingly and correctly, as no further costs shall be entertained by Employer B : 140 G : 0	m	140				
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>							
Carried Forward							
Section No. 6 Bill No. 1 St Croix Road Q532B							

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward							
<u>PVC coated high security fencing, gates and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated. Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO9001 and Green Building Council</u>							R
A	<p>70 x 44mm x 2mm x 3000mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling</p> <p style="text-align: center;">B : 48 G : -43</p>	No		5			
B	<p>High security mesh panels size 3050 x 2400mm high with aperture size (centers) of 76mm x 12mm rigid mesh panels with bends. Core wire (3mm diameter) to be manufactured from Zinca Super wire coated to SANS 10244-2:2003 specification (Min. 275g/m²) coating consisting of 95% Zinc and 5% Aluminium. Panel shall receive additional PVC Coating (3.4mm thick) Anthracite RAL 7021 or Green RAL 6005, including 60mm high x 2.5mm x 3046mm saw tooth top rail with additional PVC coating. The top rail saw tooth shall be pre-drilled to fix top section of the panel with M8 x 30mm cup square bolts. All bolts and washers required shall be of grade 304 stainless steel.</p> <p style="text-align: center;">B : 46 G : -41</p>	No		5			
C	<p>Ditto, but panel size 1500 x 2400mm high</p> <p style="text-align: center;">B : 3 G : -2</p>	No		1			
D	<p>Ditto, but panel size 2500 x 2400mm high</p> <p style="text-align: center;">B : 2 G : -1</p>	No		1			
Carried Forward							R
<p>Section No. 6 Bill No. 1 St Croix Road Q532B</p>							

Brought Forward				R
<u>Mass concrete footing for fence</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
A	Excavations not exceeding 2m deep for underdig B : 12 G : -11	m3	1	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				
B	Mass concrete (15Mpa) for concrete underdig B : 12 G : -11	m3	1	
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>				
<u>Rough formwork to sides</u>				
C	Ground beams B : 97 G : -87	m2	10	
<u>Extra over excavations in earth for excavation in</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
D	Soft rock B : 2 G : 0	m3	2	
E	Intermediate rock B : 2 G : 0	m3	2	
F	Hard rock B : 2 G : 0	m3	2	
<u>GATES</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>				
Carried Forward				R
Section No. 6 Bill No. 1 St Croix Road Q532B				

	Brought Forward			R
A	<p> Pedestrian swing gate, size 1255mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with a pair of hinges. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 30 x 4mm flat bar welded to framework and 30 x 4mm flat bar mesh clamping fixed to mesh framing flats. Horizontal and vertical wires shall have a core diameter of 3.96mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 4 bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with two 20mm diameter drop bolts and one 160mm diameter locakble sliding bolt. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC008 (Northwood Road elevation 6)</u> B : 1 G : 0 </p>	No	1	
	Carried Forward			R
	Section No. 6 Bill No. 1 St Croix Road Q532B			

	Brought Forward			R
A	<p>Sliding gate, size 4320mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate shall be fitted with a locking lug for padlock. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC008 (St Croix road elevation 3)</u></p> <p style="text-align: center;">B : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p>Section No. 6 Bill No. 1 St Croix Road Q532B</p>			

	Brought Forward			R
A	<p>Sliding gate, size 6680mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with a locking device. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC008 (Northwood Road elevation 6)</u></p> <p style="text-align: center;">B : 1 G : 0</p> <p><u>CONCRETE GATE BEAM</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i></p>	No	1	
	Carried Forward			R
	<p>Section No. 6 Bill No. 1 St Croix Road Q532B</p>			

Brought Forward				R
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>				
A	Concrete gate beam B : 4 G : 0	m3	4	
<u>Extra over all excavations for carting away</u>				
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor B : 4 G : 0	m3	4	
<u>Risk of collapse of excavations</u>				
C	Sides of trench and hole excavations not exceeding 1,5m deep B : 22 G : 0	m2	22	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				

<u>30MPa/19 mm Reinforced concrete in</u>				
D	Gate beams B : 4 G : 0	m3	4	
<u>Reinforcement</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				

<u>Mild steel rod reinforcement to structural concrete work</u>				
E	8mm Diameter bars B : 0.140 G : 0.000	t	0.140	
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
F	10mm Diameter bars B : 0.700 G : 0.000	t	0.700	
Carried Forward				R
Section No. 6 Bill No. 1 St Croix Road Q532B				

Brought Forward						
A	12mm Diameter bars B : 0.560 G : 0.000 <u>Steel track in concrete beam</u> <i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>	t	0.560			
B	10 x 100mm galvanised mild steel flat bar cast on edge in concrete ground beam including 10mm diameter lugs welded to flat bar at 500mm centres B : 25 G : 0 <u>REPAIRS TO SUBSTATION AND ADJACENT EXTERNAL WALLS</u> <i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>	m	25			
C	Hack off and remove external plaster from brick walls, and prepare to receive new plaster (measured elsewhere), including all necessary cleaning B : 20 G : 0	m2	20			
D	Remove all spalled concrete and scabble to expose sound concrete aggregate and reinforcement B : 5 G : 0	m2	5			
E	Clean exposed surfaces with compressed air to remove loose particles and dust, and apply an approved bonding slurry and corrosion protection primer (Sika Mono Top-610 or similar approved) in accordance with the manufacturer's specifications. B : 5 G : 0	m2	5			
F	Apply an approved structural repair mortar (Sika Mono Top-610 or similar approved) in accordance with the manufacturer's specifications B : 5 G : 0 <i>NOTE: The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i>	m2	5			
Carried Forward						
Section No. 6 Bill No. 1 St Croix Road Q532B						R

Brought Forward							
	One coat 1:4 cement plaster in patching to brickwork with steel trowel						
A	On external walls B : 25 G : 0	m2	25				R
	<i>NOTE: The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i>						
	<u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u>						
B	On external walls B : 104 G : 0	m2	104				
	Carried Forward						R
	Section No. 6 Bill No. 1 St Croix Road Q532B						

	Brought Forward				
	<p><u>Surface to be dry, sound and clean. Moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Sand wood to a smooth finish with 150 - 220 grit paper in the direction of the grain and dust off. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet and sand to a smooth finish and dust off. Wash knots and resinous areas with Plascon Lacquer Thinner (ILS1), apply Plascon Woodcare Knot seal (PK2) to all knots and resinous areas and allow 1 hour to dry. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours, apply one coat of Plascon Universal Undercoat (UC1) to achieve continuous film and finish with two full coats of Plascon Waterbased Velvagio Satin (VLO) to achieve complete obliteration allowing 4 hours drying time between coats. Colour to Architects approval</u></p>			R	
A	On doors B : 4 G : 0	m2	4		
	<u>CREDIT FOR OLD MATERIAL</u>				
B	The contractor to allow herein for credit for all old materials from the alteration described to become the property of the contractor. B : -1 G : 0	No	-1		
	Carried Forward to Summary of Section No. 6			R	
	Section No. 6 Bill No. 1 St Croix Road Q532B				

Item No		Quantity	Rate	Amount
	<u>SECTION 6 WORK PACKAGE 5</u>			
	<u>PE PROVINCIAL HOSPITAL</u>			
	<u>BILL NO. 2</u>			
	<u>NORTHWOOD ROAD</u>			
	<u>PREAMBLES</u>			
	<u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u>			
	<u>TRADE NAMES</u>			
	Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"			
	This section consists of the following buildings:			
	Block B: PE Provincial Hospital			
	Block G: SMME Packages			
	<u>TEMPORARY MILD STEEL WELDMESH FENCE</u>			
	<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>			
	<hr style="width: 20%; margin-left: 0;"/>			
	<u>Timber posts</u>			
A	100mm Diameter timber gumpole, 2400mm long embedded in 450 x 450 x 900 mm mass concrete (15 MPa) base B : 294 G : 0	No	294	
	<u>Fencing</u>			
B	Security fencing 50 x 25 x 2.5 x1800mm high diamond mesh fully galvanized weld mesh overall fixed to posts and straining eye bolts, tied with 2.5mm binding wire at 500mm centres to each strand of draw wire B : 478 G : 0	m	478	
	Carried Forward			R
	Section No. 6 Bill No. 2 Northwood Road Q532B			

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward				R
<u>Taking out and removing, grubbing up roots and filling in holes</u>				
A	Tree exceeding 200mm and not exceeding 500mm girth B : 1 G : 0	No	1	
B	Tree exceeding 500mm and not exceeding 1000mm girth B : 1 G : 0	No	1	
C	Tree exceeding 1500mm and not exceeding 2000mm girth B : 1 G : 0	No	1	
<u>Trimming of trees</u>				
D	Allow the Amount of R30,000.00 (Thirty thousand Rand) for the trimming of trees and tree roots		Item	30,000.00
E	Profit on above item.		Item	
F	Attendance on ditto.		Item	
<u>Breaking up and removing</u>				
G	Cut through concrete paving in patching on sidewalks not exceeding 120mm thick to allow area for new ground beam construction, 1700mm wide, cut existing mesh (if any) on centre, bend up and preserve and remove existing concrete paving B : 490 G : -441	m2	49	
<u>Walls and wall finishes</u>				
H	Break down and remove existing concrete boundary wall, 200mm wide and 2100mm high, including 250 x 250mm wide concrete columns every 2700mm intervals, complete with concrete under ground level and concrete foundations, etc. including necessary excavations filling, compaction, roughly levelling ground surface, etc. B : 366 G : -329	m2	36	
Carried Forward				R
Section No. 6 Bill No. 2 Northwood Road Q532B				

		Brought Forward		R
<u>REINFORCED CONCRETE</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				
<hr/>				
<u>20MPa/19mm concrete</u>				
A	Concrete infill in brick columns B : 1 G : 0	m3	1	
<u>REINFORCEMENT</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr/>				
<u>Mild steel rod reinforcement to structural concrete work</u>				
B	8mm Diameter bars B : 0.035 G : 0.000	t	0.035	
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>				
C	12mm Diameter bars B : 0.175 G : 0.000	t	0.175	
D	16mm Diameter bars B : 0.140 G : 0.000	t	0.140	
<u>EXTERNAL PLASTER</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i>				
<hr/>				
<u>One coat 1:4 cement plaster to brickwork with steel trowel to receive a skim finishing plaster</u>				
E	On external walls B : 3 G : 0	m2	3	
F	On narrow widths B : 1 G : 0	m2	1	
		Carried Forward		R
Section No. 6 Bill No. 2 Northwood Road Q532B				

Brought Forward

R

PAINTWORK

NOTE: The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes

Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved

A	On external walls	m2	4	
	B : 4 G : 0			

HIGH SECURITY FENCING

NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes

Carried Forward

R

Section No. 6
Bill No. 2
Northwood Road
Q532B

	Brought Forward			R
A	<p>Allow for clearing site for the width of 2 000 mm where existing fencing runs (1000 mm on each side of fence), and where new fence are to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling. Prospective bidders to familiarize themselves with the areas that do contain shrubs, etc. at the mandatory briefing meeting to ensure that the item is priced accordingly and correctly, as no further costs shall be entertained by Employer.</p> <p style="text-align: center;">B : 288 G : 0</p> <p><u>PVC coated high security fencing, gates and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated. Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO9001 and Green Building Council</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p>	m	288	
B	<p>70 x 44mm x 2mm x 3000mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling</p> <p style="text-align: center;">B : 98 G : -88</p>	No	10	
	Carried Forward			R
	<p>Section No. 6 Bill No. 2 Northwood Road Q532B</p>			

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward				R
A	Ground beams B : 202 G : -182	m2	20		
	<u>Extra over excavations in earth for excavation in</u>				
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes				
B	Soft rock B : 4 G : 0	m3	4		
C	Intermediate rock B : 4 G : 0	m3	4		
D	Hard rock B : 2 G : 0	m3	2		
	<u>GATES</u>				
	<u>NOTE:</u> The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes				
	Carried Forward				R
	Section No. 6 Bill No. 2 Northwood Road Q532B				

	Brought Forward			R
A	<p> Pedestrian swing gate, size 1255mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with a pair of hinges. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 30 x 4mm flat bar welded to framework and 30 x 4mm flat bar mesh clamping fixed to mesh framing flats. Horizontal and vertical wires shall have a core diameter of 3.96mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 4 bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with two 20mm diameter drop bolts and one 160mm diameter locakble sliding bolt. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC008 (Northwood Road elevation 8)</u> B : 2 G : 0 </p> <p style="text-align: center;"><u>CREDIT FOR OLD MATERIAL</u></p>	No	2	
B	<p> The contractor to allow herein for credit for all old materials from the alteration described to become the property of the contractor. B : -1 G : 0 </p>	No	-1	
	<p>Carried Forward to Summary of Section No. 6</p> <p> Section No. 6 Bill No. 2 Northwood Road Q532B </p>			R

Item No		Quantity	Rate	Amount
	<p><u>SECTION 6 WORK PACKAGE 5</u></p> <p><u>PE PROVINCIAL HOSPITAL</u></p> <p><u>BILL NO. 3</u></p> <p><u>EASTBOURNE ROAD AND SECTION OF NORTHWOOD ROAD</u></p> <p><u>PREAMBLES</u></p> <p><u>Preambles for Trades as defined in Pricing Instructions (Item 7)</u></p> <p><u>TRADE NAMES</u></p> <p>Any reference to trade names in the Bills of Quantities or Architect's specification or drawings shall deem to mean "or similar and approved"</p> <p>This section consists of the following buildings:</p> <p>Block B: PE Provincial Hospital</p> <p>Block G: SMME Packages</p> <p><u>TEMPORARY MILD STEEL WELDMESH FENCE (PREVIOUS HOARDING WILL BE RE-USED)</u></p> <p><u>Re-use existing temporary security fencing</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p>			
A	<p>Take out of storage and re-install temporary security fencing, poles and shadenetting, 1800mm high including necessary excavations, filling, compaction, roughly levelling ground surfaces, etc.</p> <p style="padding-left: 40px;">B : 435 G : 0</p>	m	435	
B	<p>Dismantle and take off temporary security fencing after completion of construction including necessary excavations, filling, compaction, roughly levelling ground surfaces, etc.</p> <p style="padding-left: 40px;">B : 435 G : 0</p>	m	435	
	Carried Forward			R
	<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R
<u>DEMOLITIONS</u>			
<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>			
<hr style="width: 20%; margin-left: 0;"/>			
<u>Trimming of trees</u>			
A	Allow the Amount of R20,000.00 (Twenty thousand Rand) for the trimming of trees and shrubs	Item	20,000.00
B	Profit on above item.	Item	
C	Attendance on ditto.	Item	
<u>Breaking up and removing</u>			
D	Cut through concrete paving on sidewalks in patching not exceeding 120mm thick to allow area for new ground beam construction, 1700mm wide, cut existing mesh (if any) on centre, bend up and preserve and remove existing concrete paving B : 423 G : -381	m2 43	
<u>Walls and wall finishes</u>			
E	Break down and remove existing brick column size 750 x 750 x 2100mm high above ground level, complete with brickwork under ground level and mass concrete strip foundation, including necessary excavations, filling, compaction, roughly levelling ground surface, etc. B : 1 G : 0	No 1	
F	Break down and remove existing concrete boundary wall, 200mm wide and 1700mm high, including 200 x 200mm concrete columns every 3m, complete with concrete foundations, etc. including necessary excavations filling, compaction, roughly levelling ground surface, etc. B : 389 G : 0	m2 389	
Carried Forward			R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B			

Brought Forward								
							R	
		<u>Excavate in pickable material not exceeding 2m deep below natural or reduced ground level</u>						
A	Reduced levels under pavings, etc B : 138 G : -124	m3	14					
		<u>Extra over all excavations for carting away</u>						
B	Extra over all excavations for carting surplus excavated material and spreading, levelling and lightly compacting on site where directed average 500m from the excavations (Measured nett- no allowance made for bulking) B : 138 G : -124	m3	14					
		<u>Compaction of surfaces</u>						
C	Scarify earth surface to a depth of 150mm, breaking down over size material and reconsolidate to 93% modified AASHTO density B : 459 G : -413	m2	46					
		<u>G5 gravel layers supplied by the contractor compacted to 97% Mod AASHTO density in layers not exceeding 150mm</u>						
D	Subbase under paving B : 138 G : -124	m3	14					
		<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>						
		<u>Reinforced concrete (30Mpa) in:</u>						
E	Paving B : 69 G : -62	m3	7					
		<u>Finishing top surfaces of concrete to an evenly brushed non-slip surface</u>						
F	Paving, ramps B : 459 G : -413	m2	46					
		Carried Forward						R
		Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B						

Brought Forward				R
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr/>				
<u>Fabric reinforcement</u>				
A	Type 395 fabric reinforcement in concrete paving B : 459 G : -413	m2	46	
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>				
<hr/>				
<u>General Formwork</u>				
B	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 498 G : -448	m	50	
C	10mm Sajex or other approved cane fibre filler board in expansion joint between edge of concrete paving and walls in narrow widths not exceeding 150mm wide including tacking to face of wall and polysulphide sealant between concrete and brickwork B : 46 G : -41	m	5	
<u>Movement joints</u>				
D	8 x 40mm Saw cut joints in top of concrete paving B : 46 G : -41	m	5	
<u>EMBANKMENTS AND FILLING</u>				
<i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i>				
<hr/>				
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>				
E	To form embankments and platforms for walkway B : 39 G : 0	m3	39	
Carried Forward				R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B				

Brought Forward				R
<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site in layers of 150mm thick compacted to 93% Mod AASHTO density</u>				
A	Backfilling to trenches, holes, etc B : 44 G : -40	m3	5	
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>				
B	Backfilling behind retaining walls B : 27 G : -24	m3	3	
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin: auto;"/>				
<u>15MPa/19mm Unreinforced concrete</u>				
C	Blinding under retaining wall footings on excavated surfaces B : 4 G : -3	m3	1	
<u>30 MPa/19 mm Reinforced concrete in</u>				
D	Retaining wall footings B : 23 G : -21	m3	3	
E	Retaining walls B : 28 G : -25	m3	3	
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin: auto;"/>				
<u>Mild steel reinforcement</u>				
F	8 mm Diameter bars B : 0.61 G : -0.55	t	0.06	
Carried Forward				R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B				

Brought Forward				R
<u>High tensile steel rod reinforcement to structural concrete work</u>				
A	10mm Diameter bars B : 1.22 G : -1.10	t	0.13	
B	12mm Diameter bars B : 1.53 G : -1.38	t	0.15	
C	16mm Diameter bars B : 2.75 G : -2.48	t	0.28	
<i>NOTE: The following items shall be deemed to fall into Work Group No 111 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>Rough formwork to sides</u>				
D	Retaining walls B : 216 G : -194	m2	22	
<i>NOTE: The following items shall be deemed to fall into Work Group No 146 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
<u>Subsoil drain</u>				
E	Subsoil drain formed with 110mm diameter perforated geopipe fixed to wall with Hilti nails including wrapping in Kaymat U14 geotextile material, and encased with 300 x 300mm 19mm nominal size crushed stone B : 60 G : -54	m	6	
<u>Weepholes pipes cast in concrete walls</u>				
F	50mm Diameter PVC pipe in lengths not exceeding 250mm long in concrete wall for weepholes B : 60 G : -54	No	6	
<i>NOTE: The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i>				
<hr style="width: 20%; margin-left: auto; margin-right: auto;"/>				
Carried Forward				R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B				

Brought Forward							
						R	
<u>One coat 1:5 cement plaster on brickwork</u>							
A	External concrete retaining walls B : 78 G : -70	m2	8				
B	In narrow widths B : 15 G : -14	m2	2				
<p><i>NOTE:</i> The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</p> <hr style="width: 20%; margin: 10px auto;"/> <p><u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u></p>							
C	External concrete retaining walls B : 93 G : -84	m2	9				
<u>HIGH SECURITY FENCING</u>							
<p><i>NOTE:</i> The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</p> <hr style="width: 20%; margin: 10px auto;"/>							
Carried Forward						R	
<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>							

Brought Forward							
A	<p>Allow for clearing site for the width of 2 000 mm where existing fencing runs (1000 mm on each side of fence), and where new fence are to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling. Prospective bidders to familiarize themselves with the areas that do contain shrubs, etc. at the mandatory briefing meeting to ensure that the item is priced accordingly and correctly, as no further costs shall be entertained by Employer.</p> <p style="text-align: center;">B : 249 G : 0</p> <p><u>PVC coated high security fencing, gates and setting out. All bolts, nuts and washers to be stainless steel grade 304 and all fixators will be of grade 304 stainless steel (ISO 9223) and PVC coated. Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO9001 and Green Building Council</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i></p>						
		m	249				R
B	<p>70 x 44mm x 2mm x 3000mm long H-Shaped profile. Secure post to be hot dipped galvanised and coated with PVC coated Anthracite RAL7021 or Green RAL6005. Holes are pre-drilled before PVC coating. Spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post and secured using tamper-proof shear-off nuts (no self-drilling screws). The system must be a bolted system utilizing security nuts, bolts and washers. All bolts, nuts and washers required will be of grade 304 stainless steel. Fixators required will be of grade 304 stainless steel (ISO9223). Posts embedded in 600 x 400 x 400 mm mass concrete (15 MPa) base including excavations and backfilling</p> <p style="text-align: center;">B : 64 G : -58</p>						
		No	6				
Carried Forward							R
<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>							

	Brought Forward			R
A	<p>Sliding gate, size 4000mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with a locking device. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026 ARC007 (Northwood Road elevation 4)</u></p> <p style="text-align: center;">B : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>			

	Brought Forward			R
A	<p>Sliding gate, size 4500mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. The gate shall be fitted with a locking lug for padlock. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate to be fitted with a locking device. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC007 (Northwood Road elevation 7)</u></p> <p style="text-align: center;">B : 1 G : 0</p>	No	1	
	Carried Forward			R
	<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>			

	Brought Forward			R
A	<p>Sliding gate, size 4920mm wide x 2400mm high, formed of SHS 75 x 75 x 5mm gate frame with RHS 150 x 100 x 3mm gate bottom carrier beam. Gate panels to be mesh panels fabricated from high tensile steel with a weld strength of 60% and an tensile strength of 500N/mm². Mesh framing to consist of 50 x 5mm flat bar welded to framework and 50 x 5mm flat bar mesh clamping fixed to mesh framing flats. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate shall be fitted with a locking lug for padlock. Horizontal and vertical wires shall have a core diameter of 3.00mm with a tolerance of 0.07mm. Apertures shall be 76.2mm wide x 12.7mm high c/c of wires. Panels are laterally strengthened by incorporation of 43mm deep V-profiled horizontal and stiffener bends. Mesh panels are manufactured with Zincalu wire (Galfan). Mesh shall be clamp fixed to gate frame using flat 30 x 5mm bolted to mounting flat with M8 cup square bolts, shear-off nuts and flat washers. Fixing screws and fasteners shall be Grade 304 stainless steel. Mesh panels shall have a Zincalu finish and posts, structure, clamp plates and mesh framing shall be HD Galvanised. All to have additional PVC coating to a minimum thickness of 200um (micron) in accordance with EN10245-2 steel wire and wire products. Install two 150mm diameter bottom rollers housed into gate carrier beam. The gate system shall be provided with two gate portals made from 100 x 100 x 3mm RHS welded construction, consisting of one guide/support portal at the travelling end of the gate and one latching portal at the docking end of the gate. Each gate portal shall be equipped with a pair of 60mm diameter nylon guide rollers. Finish colour to be RAL 6005 Green or RAL 7021 Anthracite. Gate portals shall be embedded in 900 x 400 x 750 mm mass concrete (25 MPa) base including excavations and backfilling <u>all in accordance with Sliding Gate Drawing 305-026-ARC007 (Eastbourne Road elevation 3)</u></p> <p style="text-align: center;">B : 1 G : 0</p> <p><u>CONCRETE GATE BEAM</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i></p>	No	1	
	Carried Forward			R
	<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>			

Brought Forward							
R							
<u>Excavation in earth or compacted filling not exceeding 2m deep</u>							
A	Concrete gate beam B : 2 G : 0	m3		2			
<u>Extra over all excavations for carting away</u>							
B	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor B : 2 G : 0	m3		2			
<u>Risk of collapse of excavations</u>							
C	Sides of trench and hole excavations not exceeding 1,5m deep B : 9 G : 0	m2		9			
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							

<u>30MPa/19 mm Reinforced concrete in</u>							
D	Gate beams B : 2 G : 0	m3		2			
<u>Reinforcement</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes</i>							

<u>Mild steel rod reinforcement to structural concrete work</u>							
E	8mm Diameter bars B : 0.070 G : 0.000	t		0.070			
<u>High tensile steel rod reinforcement to structural concrete work in foundations</u>							
F	10mm Diameter bars B : 0.350 G : 0.000	t		0.350			
Carried Forward							
R							
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B							

Brought Forward							
A	12mm Diameter bars B : 0.280 G : 0.000	t	0.280				R
<i>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</i>							
<u>Steel track in concrete beam</u>							
B	10 x 100mm galvanised mild steel flat bar cast on edge in concrete ground beam including 10mm diameter lugs welded to flat bar at 500mm centres B : 27 G : 0	m	27				
<u>EXTEND EXISTING BRICK COLUMNS AT PEDESTRIAN GATES</u>							
<u>MASONRY</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i>							
<u>Brickwork of clay bricks in 6:1 cement mortar</u>							
C	Mass brickwork in piers on top of existing brick columns B : 1 G : 0	m3	1				
<u>Brick reinforcement</u>							
D	High tensile galvanised steel brick reinforcement 150mm wide well lapped at all angles and passings and built into brick walls B : 21 G : 0	m	21				
<u>REINFORCED CONCRETE</u>							
<i>NOTE: The following items shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes</i>							
<u>20MPa/19mm concrete</u>							
E	Concrete infill in brick columns B : 1 G : 0	m3	1				
Carried Forward							R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B							

Brought Forward

NOTE: The following items shall be deemed to fall into Work Group No 114 for JBCC CPAP purposes

Mild steel rod reinforcement to structural concrete work

A	8mm Diameter bars	t	0.035
	B : 0.035 G : 0.000		

High tensile steel rod reinforcement to structural concrete work in foundations

B	12mm Diameter bars	t	0.175
	B : 0.175 G : 0.000		

C	16mm Diameter bars	t	0.140
	B : 0.140 G : 0.000		

EXTERNAL PLASTER

NOTE: The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes

One coat 1:4 cement plaster to brickwork with steel trowel to receive a skim finishing plaster

D	On external walls	m2	1
	B : 1 G : 0		

E	On narrow widths	m2	1
	B : 1 G : 0		

PAINTWORK

NOTE: The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes

Carried Forward

Section No. 6
Bill No. 3
Eastbourne road and section of Northwood Road
Q532B

R

R

	Brought Forward			R
A	<p><u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u></p> <p>On external walls</p> <p style="padding-left: 40px;">B : 2 G : 0</p>	m2	2	
	<p><u>REPAIRS TO EXTERNAL BOUNDARY BRICK WALLS AND COLUMNS</u></p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/> <p><u>Demolitions</u></p>			
B	<p>Hack off and remove external plaster in patching from brick walls, concrete columns and beams and prepare to receive new plaster (measured elsewhere), including all necessary cleaning</p> <p style="padding-left: 40px;">B : 34 G : 0</p> <p><i>NOTE: The following items shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</i></p> <hr style="width: 20%; margin-left: 0;"/>	m2	34	
	Carried Forward			R
	<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>			

	Brought Forward				R
	<u>One coat 1:4 cement plaster in patching to brickwork with steel trowel</u>				
A	On external walls B : 34 G : 0	m2	34		
	<i>NOTE: The following items shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i>				
	<u>Ensure that surfaces are dry, sound and clean. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR1) using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3.5% sodium hypochlorite) 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler. Moisture content to not exceed 8% on B2 scale. Apply one coat of Professional Gypsum and Plaster Primer (PP700) to achieve a continuous film. Allow 16 hours to dry. Apply two full coats of Professional superior low sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats. All strictly to manufacturer's detail specification or equal approved</u>				
B	On external walls B : 60 G : 0	m2	60		
	<u>NEW ASPHALT ROAD AT NORTHWOOD ROAD AND EASTBOURNE ROAD ENTRANCE</u>				
	<i>NOTE: The following items shall be deemed to fall into Work Group No 102 for JBCC CPAP purposes</i>				
	Carried Forward				R
	Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B				

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

Brought Forward				R
A	Hard rock B : 1 G : 0	m3	1	
<u>Extra over all excavations for carting away</u>				
B	Extra over all excavations for carting surplus excavated material and spreading, levelling and lightly compacting on site, area as identified by Contractor approximately 500m from the excavations (Measured nett- no allowance made for bulking) B : 112 G : 0	m3	112	
<u>Keeping excavations free of water</u>				
C	Keeping excavations free of all water other than subterranean water		Item	
<u>Compaction of surfaces</u>				
D	Scarify earth surface to a depth of 150mm, breaking down over size material and reconsolidate to 93% modified AASHTO density B : 373 G : 0	m2	373	
<u>Approved G5 filling supplied and carted on by the Contractor, compacted in layers not exceeding 150mm to 98% Mod. AASHTO density</u>				
E	Subbase under roads B : 112 G : 0	m3	112	
<i>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</i>				
<u>Asphalt</u>				
F	Tack coat of 30% cationic stable grade emulsion (0.45L/m ²) B : 373 G : 0	m2	373	
G	Prime coat - MC-30 cut-back bitumen (Applied at a rate of 0.91L/m ²) B : 373 G : 0	m2	373	
Carried Forward				R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B				

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward							
A	40mm Asphalt surfacing - 60/70 penetrating B12 road grade bitumen to be medium continuously graded and compacted to above stated thickness B : 373 G : 0	m2	373				R
<p>NOTE: The following items shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</p> <hr style="width: 20%; margin: 0 auto;"/> <p><u>Approved weed killer (Certificate to be provided before payment)</u></p>							
B	Hyvar X or other equally approved soil herbicide at a rate of 50 gram/m2 under paving etc. B : 373 G : 0	m2	373				
<p>NOTE: The following items shall be deemed to fall into Work Group No 154 for JBCC CPAP purposes</p> <hr style="width: 20%; margin: 0 auto;"/> <p><u>Precast concrete kerbs:</u></p>							
C	150 x 250mm Precast Barrier kerb BK2, in approximately 1000mm lengths, bedded, jointed and pointed including unreinforced concrete foundation size 400 x 60mm thick under and 125 x 150 x 150mm high unreinforced concrete Class B haunching behind, including necessary excavation B : 74 G : 0	m	74				
D	Ditto, but circular on plan not exceeding 4m radius B : 23 G : 0	m	23				
<p><u>STATUTORY SIGNS</u></p> <p><u>All road markings shall comply with the SADC road traffic sign manual and the national road traffic regulations</u></p> <p><u>Statutory signs, street signs, etc. supplied and erected complete, including steel posts for a mounted heights of 2,4m (Department of Transport Code shown in brackets)</u></p>							
E	Stop sign (R1) B : 1 G : 0	No	1				
Carried Forward							R
<p>Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B</p>							

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

		Brought Forward		R
A	No entry signs (R3) B : 1 G : 0	No	1	
B	No parking sign (R216) B : 1 G : 0	No	1	
C	Buses/ taxi sign (R134) B : 1 G : 0	No	1	
<u>Prepare and paint two coats approved road marking paint:</u>				
D	Line 100mm wide B : 25 G : 0	m	25	
E	Stop sign and line painted on road (GM7) B : 1 G : 0	No	1	
<u>CREDIT FOR OLD MATERIAL</u>				
F	The contractor to allow herein for credit for all old materials from the alteration described to become the property of the contractor. B : -1 G : 0	No	-1	
Carried Forward to Summary of Section No. 6				R
Section No. 6 Bill No. 3 Eastbourne road and section of Northwood Road Q532B				

SECTION SUMMARY - SECTION 6 WORK PACKAGE 5 - REMAINDER OF FE

Bill No		Page No	Amount
1	St Croix Road	399	
2	Northwood Road	411	
3	Eastbourne road and section of Northwood Road	436	
Carried to Final Summary			R
Section No. 6 Q532B			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 7</u></p> <p><u>BILL NO 1</u></p> <p><u>CONTRACTOR'S SOCIO-ECONOMIC DELIVERABLES</u></p> <p>The following provisional sums cover the required full compliance with the C3.6 Socio-Economic Deliverables</p> <p>The Contractor may allow under the "profit" item for any profit he considers necessary. If the Contractor allows an amount for profit, this amount will be adjusted in direct proportion to the final value</p> <p>Each provisional sum in this bill is followed by an item under which the Contractor may allow for attendance on the specific item</p> <p>-----</p> <p><u>CONTRACTOR SOCIO-ECONOMIC DELIVERABLES - TO BE IN ACCORDANCE WITH C3.6 SOCIO-ECONOMIC DELIVERABLES</u></p> <p><u>EMPLOYMENT OF LOCAL RESOURCES (DELIVERABLE L1)</u></p> <p>A The main contractor shall conduct a detailed labour risk assessment and submit risk assessment within 21 calender days of contract award as prescribed in Deliverable L1.1</p> <p>B The main contractor shall adhere to employment of labour in accordance with the specifications, regulations and contractual obligations as prescribed in Deliverable L1.2</p> <p>C The main contractor shall adhere to recruitment requirements, employment targets and target areas, in accordance with the specifications as prescribed in Deliverable L1.3</p>			
	Carried Forward		R	
	<p>Section No. 7 Bill No. 1 Socio economic deliverables Q532B</p>			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		R	
A	The main contractor shall adhere to wages, increases, and payment stipulations in accordance with the specifications, regulations and contractual obligations as prescribed in Deliverable L1.4	Item	
B	The main contractor shall ensure required employment contracts are in place in accordance with the specifications as prescribed in Deliverable L1.5	Item	
C	The main contractor shall provide for the mobilising and de-mobilising of all personnel employed on the project as prescribed in Deliverable L1.6	Item	
<u>INDUCTIONS FOR THE DURATION OF THE PROJECT (L2)</u>			
D	The main contractor to ensure all project personnel to attend induction presentations on a fully paid time basis, as prescribed in Deliverable L2	Item	
<u>EMPLOYMENT OF SITE EMPLOYMENT RELATION PRACTITIONER FOR THE DURATION OF THE PROJECT (L3)</u>			
E	The contractor shall employ a site employment relations practitioner with required competency, knowledge as prescribed in Deliverable L3 & L3.1	Item	
F	All associated other costs, including tools of the trade, safety equipment, etc as prescribed in Deliverable L3	Item	
<u>C.L.O. (L4)</u>			
G	Allow the Amount of R375,000.00 (Three Hundred and Seventy Five Thousand rand for monthly payment of R9,585.00 of the Community Liaison Officer (CLO) as prescribed in Deliverable L4	Item	375,000.00
H	Profit on above item.	Item	
I	Attendance on ditto.	Item	
J	All associated other costs, including tools of the trade, safety equipment, etc. as prescribed in Deliverable L4	Item	
Carried Forward			
Section No. 7 Bill No. 1 Socio economic deliverables Q532B		R	

Brought Forward			R	
<p><u>TRAINING AND DEVELOPMENT INTERVENTION TO ACHIEVE FULL COMPLIANCE TO THE CIDB CONTRACT SKILLS DEVELOPMENT GOAL (CSDG) (DELIVERABLE L5)</u></p> <p><u>Provide structured workplace learning opportunities that result in the attainment of a part of a full occupational qualification (CSDG Method 1) as prescribed in Deliverable L5.1</u></p>				
A	All associated training costs, including tools of the trade, consumables, safety equipment, etc. as prescribed in Deliverable L5.1	Item		
B	Wages for employed learners as prescribed in Deliverable L5.1	Item		
C	Unemployed learner stipend (to cover daily transport and meal) as prescribed in Deliverable L5.1	Item		
<p><u>Provide structured workplace learning opportunities for apprentices and/or other artisan learners towards the attainment of a trade qualification in the Built environment (CSDG Method 2) (At least 60% of the Artisan Learners being holders of public TVET college qualifications as prescribed in Deliverable L5.2</u></p>				
D	All associated training costs, including tools of the trade, consumables, safety equipment, etc as prescribed in Deliverable L5.2	Item		
E	Wages for apprentices and learners as prescribed in Deliverable L5.2	Item		
<p><u>Work integrated learning opportunities for University of Technology or Comprehensive University students completing their National Diplomas (CSDG Method 3) as prescribed in Deliverable L5.3</u></p>				
F	All associated training costs, including tools of the trade, consumables, safety equipment, etc as prescribed in Deliverable L5.3	Item		
Carried Forward			R	
<p>Section No. 7 Bill No. 1 Socio economic deliverables Q532B</p>				

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

Brought Forward		R
A	Learner wages as prescribed in Deliverable L5.3	Item
	<u>CANDIDATE PROFESSIONALS (Deliverable L5.4)</u>	
	<u>Provide structured workplace learning for built environment profession candidates towards professional registration by a statutory council (CSDG Method 4) as prescribed in Deliverable L5.4</u>	
B	Allow the Amount of R540,000.00 (Five Hundred and Fourty Thousand Rand) for monthly payment of Candidate Professionals stipend cost of R15,000 per month (2 intakes of 1 candidate = 2 candidates for 18 months each as prescribed in Deliverable L5.4 and 5.4.1	Item
		540,000.00
C	Profit on above item.	Item
D	Attendance on ditto.	Item
E	All associated other costs, including tools of the trade, safety equipment, etc. as prescribed in Deliverable L5.4.1	Item
	<u>HEALTH AND SAFETY AWARENESS TRAINING (DELIVERABLE L6)</u>	
F	General Health and Safety Awareness training for the entire workforce as prescribed in Deliverable L6.1	Item
G	HIV/Aids Prevention Awareness Training for the entire workforce as prescribed in Deliverable L6.3	Item
	<u>PROVIDE SPECIFIC WORK READINESS AND LIFE SKILLS TRAINING FOR DESIGNATED PERSONS (DELIVERABLE L7)</u>	
Carried Forward		R
Section No. 7		
Bill No. 1		
Socio economic deliverables		
Q532B		

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward			R	
<u>All training costs such as tuition, venue and trainee refreshments to be provided. The required training courses, duration of training and required quantity of people to be trained is indicated in Deliverable L7.1</u>				
A	Allow the Amount of R15,000.00 (Fifteen Thousand Rand) for First Aid Training and all associated costs as prescribed in Deliverable L7.1	Item		15,000.00
B	Profit on above item.	Item		
C	Attendance on ditto.	Item		
<u>PROVIDE WORK OPPORTUNITIES TO POST GRADUATE INTERNS (DELIVERABLE L8)</u>				
<u>The recommended internships, amount of stipend, annual increases, etc is indicated in Deliverables L8.1 & 8.3</u>				
D	Allow the Amount of R1,100,000.00 (One Million One Hundred Thousand Rand) for monthly payment of built environment internships stipend cost of R7,550 per month for 36 months (2 intakes of 4 candidates each = 8 candidates for 18 months each as prescribed in Deliverable L8.1	Item		1,100,000.00
E	Profit on above item.	Item		
F	Attendance on ditto.	Item		
G	All associated other costs, including tools of the trade, consumables, safety equipment, etc (Deliverable L8.1)	Item		
<u>PROVIDE SEMI-SKILLED TRAINING AND EXPERIENTIAL WORK OPPORTUNITIES TOWARDS TRADE COMPETENCIES FOR DESIGNATED PERSONS (DELIVERABLE L9)</u>				
Carried Forward			R	
Section No. 7 Bill No. 1 Socio economic deliverables Q532B				

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Brought Forward		R
<u>The required training courses, stipend, duration of training and required quantity of people to be trained is indicated in Deliverable L9.1</u>		
A	Allow the Amount of R850,000.00 (Eight Hundred and Fifty Thousand Rand) for accredited technical training as prescribed in Deliverable L9 and L9.1	850,000.00
B	Profit on above item.	Item
C	Attendance on ditto.	Item
D	Unemployed learner stipend for Technical Training (excluding General worker site preparation course) as prescribed in Deliverable L9.1	Item
E	All associated other costs, including all safety equipment required for technical training (Deliverable L9.1)	Item
<u>ACCOMMODATION FOR NON-LOCAL CONSTRUCTION PERSONNEL (DELIVERABLE L10)</u>		
F	Contractor to provide accommodation for non-local construction personnel as prescribed in Deliverable L10.1	Item
<u>COMMUNITY PARTICIPATION / ENGAGEMENT (L11)</u>		
G	Allow the Amount of R240,000.00 (Two Hundred and Fourty Thousand Rand) for participation in community engagement activities through the Project Support Committee for monthly stipend including meeting costs	240,000.00
H	Profit on above item.	Item
I	Attendance on ditto.	Item
<u>ON-SITE COMMUNICATION STRUCTURES (DELIVERABLE L12)</u>		
J	Contractor to establish and ensure the proper functioning of the Labour Consultative forum for the full duration of the project as prescribed in Deliverable L12	Item
Carried Forward		R
Section No. 7 Bill No. 1 Socio economic deliverables Q532B		

Brought Forward

**MAIN CONTRACTOR ENSURING FULL
 COMPLIANCE (DELIVERABLE L13)**

A Main Contractor to ensure the achievement of all socio-economic deliverables and full compliance to the labour management protocols on the whole project, inclusive of all sub-contractors for the full duration of the project as prescribed in **Deliverable L13**

Item

R

Carried to Final Summary

Section No. 7
 Bill No. 1
 Socio economic deliverables
Q532B

R

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8</u></p> <p><u>BILL NO 1</u></p> <p><u>SMME DIRECT DOMESTIC SUB-CONTRACTORS</u></p> <p>The following provisional sums cover the complete supply and installation of material and equipment by firms of SMME contractors to be direct domestic sub-contractors and are NETT, that is the sum does not include for builders discount</p> <p>The Contractor may allow under the "profit" item for any profit he considers necessary. If the Contractor allows an amount for profit, this amount will be adjusted in direct proportion to the final value of the SMME work</p> <p><u>Attendance on Domestic Sub-contractors</u></p> <p>Each provisional sum in this bill is followed by an item under which the Contractor may allow for attendance on the specific SMME sub-contractor</p> <p>The amounts of the items for "Attendance" are to allow for giving every facility to attending upon and making good in all trades after the SMME sub-contractors have completed their work, for providing the use of all water, electricity, storage space for materials, etc. the use of general amenities, i.e. latrines, etc., for the SMME sub-contractors and their workmen. For maintaining conduits, sleeve pipes, etc. in position during the building operations and providing the use of all ordinary scaffolding and plant. The Contractor is to leave erected scaffolding in position for the period required for work by the domestic sub-contractors under this contract</p> <p>-----</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p>			
	Carried Forward		R	
	<p>Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B</p>			

<p style="text-align: center;">Brought Forward</p> <p><u>The following provisional sums are for work to be executed by the Small, Medium and Micro Enterprises, which will be regarded as direct domestic sub-contractors to the contractor. The contractor must call for quotations from firms approved by the Client in accordance with the conditions of contract and in conjunction with the Management Team for consideration.</u></p> <p><u>Tenderers are advised that it is a condition of the tender that where SMME's cannot be found, can not proceed or fail to complete the work, the Main Contractor will complete the work at his own tendered rates as per Section 2, 3, 4, 5 and 6</u></p> <p><u>Tenderers to take note that a portion of the building works, excluding specialist work, are to be contracted to SMME's. Provisional Sums are provided for this purpose and bids will be called for after award for these packages on a domestic sub-contractor basis. 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.</u></p> <p><u>The portion is made up of all building works excluding the following:</u> <u>Preliminaries and General</u> <u>Provisional Sums</u> <u>Electrical Specialist Works</u> <u>Mechanical Specialist Works</u> <u>Escalation and</u> <u>Contingencies</u> <u>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</u></p>		R	
<p style="text-align: center;">Carried Forward</p> <p>Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B</p>		R	

Brought Forward

R

SMME DIRECT DOMESTIC SUB-CONTRACTS

The following provisional sums cover the complete supply and installation of material and equipment by firms of SMME contractors to be direct domestic sub-contractors and are NETT, that is the sum does not include for builders discount. The contractor must call for quotations from firms approved by the Employer in accordance with the conditions of contract and in conjunction with the Management Team for consideration. **(at least three responsive quotations are required)**

The Contractor may allow under the "profit" item for any profit he considers necessary. If the Contractor allows an amount for profit, this amount will be adjusted in direct proportion to the final value of the SMME work

Attendance on Domestic Sub-contractors

Each provisional sum in this bill is followed by an item under which the Contractor may allow for attendance on the specific SMME sub-contractor

The amounts of the items for "Attendance" are to allow for giving every facility to attending upon and making good in all trades after the SMME sub-contractors have completed their work, for providing the use of all water, electricity, storage space for materials, etc. the use of general amenities, i.e. latrines, etc., for the SMME sub-contractors and their workmen. For maintaining conduits, sleeve pipes, etc. in position during the building operations and providing the use of all ordinary scaffolding and plant. The Contractor is to leave erected scaffolding in position for the period required for work by the domestic sub-contractors under this contract

Carried Forward

R

Section No. 8
 Bill No. 1
 SMME Sub-Contractors
Q532B

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward		R	
	<u>SMME FOREMAN / MENTOR</u>			
A	Provide the sum of R900,000.00 (Nine Hundred Thousand Rand) nett for the employment, on a full time basis for the duration of the contract, a dedicated Foreman to assist SMME sub-contractors with quality control, etc. Foreman and duration on site to be approved by Employer prior to appointment (R25,000.00 per month gross salary)	Item		900,000.00
B	Allow for profit if required	Item		
C	Allow for attendance	Item		
D	Provide the sum of R900,000.00 (Nine Hundred Thousand Rand) nett for the employment, on a full time basis for the duration of the contract, a SMME Mentor (R25,000.00 per month gross salary)	Item		900,000.00
E	Allow for profit if required	Item		
F	Allow for attendance	Item		
	<u>SMME PROVISIONAL SUMS</u>			
	<u>The following provisional sums are for work to be executed by the Small, Medium and Micro Enterprises, which will be regarded as direct domestic sub-contractors to the contractor. The contractor must call for quotations from firms approved by the Employer in accordance with the conditions of contract and in conjunction with the Management Team for consideration.</u>			
	Notes: It is required that the contractor shall adhere to the requirements of employment and management of SMME Subcontractors			
	Tenderers are advised that it is a condition of the tender that where SMME's cannot be found, can not proceed or fail to complete the work, the Main Contractor will complete the work at his own tendered rates as per Bills of Quantities			
	Carried Forward		R	
	Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B			

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

	Brought Forward		R
<u>TRAINING OF SMME CONTRACTORS</u>			
A	Provide the sum of R300,000.00 (Three Hundred Thousand Rand) nett for the provision of accredited specific training to Domestic SMME Subcontractors to be used at the discretion of the Employer, or to be deducted in whole or in part if not required	Item	300,000.00
B	Allow for profit if required	Item	
C	Allow for attendance	Item	
<u>PPE FOR SMME DOMESTIC SUBCONTRACTOR LABOURERS</u>			
D	Provide the sum of R350,000.00 (Three Hundred and Fifty Thousand Rand) nett for purchasing and providing PPE Kits for all SMME domestic subcontractor labourers' (The Main Contractor shall provide detailed lists with names including ID numbers, verified by SMME Mentor)	Item	350,000.00
E	Allow for profit if required	Item	
F	Allow for attendance	Item	
<u>SMME CONTRACTS - DOMESTIC SUBCONTRACT PACKAGES</u>			
<p>SMME Domestic sub-contract packages to be implemented are below. The Bills of Quantities for the packages shall be provided to the successful bidder (Contractor) to obtain prices from SMME sub Contractors. The Employer to approve list of subcontractors and preferred sub-contractors prior to appointment of such SMME Domestic Sub-contractors</p> <p>All envisaged costs related to SMME packages to the Contractor shall be priced under Preliminaries, Item B/35</p>			
Carried Forward			R
Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B			

Brought Forward				R
Alternative SMME packages proposed by Contractor could be considered by the Employer. Work packages below could be divided into further smaller packages by the Employer, should it be required. No additional costs in this regard shall be entertained				
Should the prescribed packages not reach the required 35% value of the contract (Contract Amount less VAT15%, contingencies, escalation, PC Sums, Main contractors Preliminaries), then the Contractor shall identify additional work within the BOQ to comply with the condition. All envisaged costs to the Contractor shall be priced under Preliminaries, Item A/34				
<u>SMME CONTRACTS - DOMESTIC SUBCONTRACT</u>				
<u>LIVINGSTONE HOSPITAL - HIGH SECURITY FENCING</u>				
A Provide the sum of R3,050,000.00 (Three Million and Fifty Thousand Rand) nett for construction of new high security fence at Livingstone Hospital, by a SMME subcontractor (75% of new high security fence) (<u>Work Package 1</u>)	Item		3,050,000.00	
B Allow for profit if required	Item			
C Allow for attendance	Item			
<u>PE PROVINCIAL HOSPITAL - ENTRANCE GATE HOUSE</u>				
D Provide the sum of R830,000.00 (Eight Hundred and Thirty Thousand Rand) nett for construction of Entrance Gatehouse at PE Provincial Hospital to be done by a SMME subcontractor (<u>Work package 4</u>)	Item		830,000.00	
E Allow for profit if required	Item			
F Allow for attendance	Item			
Carried Forward				R
Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B				

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

			R
	Brought Forward		
	<u>PE PROVINCIAL HOSPITAL - REMOVE EXISTING AND CONSTRUCTION OF NEW CONCRETE PAVING IN PATCHING ON SIDEWALKS AT ST CROIX ROAD AND CONCRETE UNDERDIG FOR FENCING</u>		
A	Provide the sum of R470,000.00 (Four Hundred and Seventy Thousand Rand) nett for removal of existing and new concrete paving on sidewalks in patching at St Croix Road and concrete underdig for new fencing to be done by a SMME subcontractor <u>(Work Package 5)</u>	Item	470,000.00
B	Allow for profit if required	Item	
C	Allow for attendance	Item	
	<u>PE PROVINCIAL HOSPITAL - DEMOLITION AND REMOVAL OF EXISTING CONCRETE AND BRICK WALLS INCLUDING FOUNDATIONS AT ST CROIX ROAD</u>		
D	Provide the sum of R170,000.00 (One Hundred and Seventy Thousand Rand) nett for Demolition of existing concrete and brick walls including foundations at St Croix road, by a SMME subcontractor <u>(Work Package 5)</u>	Item	170,000.00
E	Allow for profit if required	Item	
F	Allow for attendance	Item	
	<u>PE PROVINCIAL HOSPITAL - HIGH SECURITY FENCING ST CROIX ROAD</u>		
G	Provide the sum of R500,000.00 (Five Hundred Thousand Rand) nett for construction of new high security fence at St Croix Road, by a SMME subcontractor <u>(Work Package 5)</u>	Item	500,000.00
H	Allow for profit if required	Item	
	Carried Forward		
	Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B		R

Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25

	Brought Forward			R
A	Allow for attendance	Item		
	<u>PE PROVINCIAL HOSPITAL - DEMOLITION AND REMOVAL OF EXISTING CONCRETE AND BRICK WALLS INCLUDING FOUNDATIONS AT NORTHWOOD ROAD</u>			
B	Provide the sum of R275,000.00 (Two Hundred and Seventy Five Thousand Rand) nett for Demolition of existing concrete and brick walls including foundations at Northwood Road, by a SMME subcontractor (<u>Work Package 5</u>)	Item		275,000.00
C	Allow for profit if required	Item		
D	Allow for attendance	Item		
	<u>PE PROVINCIAL HOSPITAL - REMOVE EXISTING AND CONSTRUCTION OF NEW CONCRETE PAVING IN PATCHING ON SIDEWALKS AT NORTHWOOD ROAD AND CONCRETE UNDERDIG FOR FENCING</u>			
E	Provide the sum of R940,000.00 (Nine Hundred and Fourty Thousand Rand) nett for removal of existing and new concrete paving on sidewalks in patching at St Croix Road and concrete underdig for fencing to be done by a SMME subcontractor (<u>Work Package 5</u>)	Item		940,000.00
F	Allow for profit if required	Item		
G	Allow for attendance	Item		
	<u>PE PROVINCIAL HOSPITAL - HIGH SECURITY FENCING AT NORTHWOOD ROAD</u>			
H	Provide the sum of R950,000.00 (Nine Hundred and Fifty Thousand Rand) nett for construction of new high security fencing at Northwood Road by a SMME subcontractor (<u>Work Package 5</u>)	Item		950,000.00
	Carried Forward			R
	Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B			

**Upgrading of security related infrastructure
 at Livingstone PEPH Hospital Complex
 Provisional Bills of Quantities
 CDC/377/25**

	Brought Forward		R
A	Allow for profit if required	Item	
B	Allow for attendance	Item	
	<u>PE PROVINCIAL HOSPITAL - REMOVE EXISTING AND CONSTRUCTION OF NEW CONCRETE PAVING IN PATCHING ON SIDEWALKS AT EASTBOURNE ROAD AND CONCRETE UNDERDIG FOR FENCING</u>		
C	Provide the sum of R850,000.00 (Eight Hundred and Fifty Thousand Rand) nett for removal of existing and new concrete paving on sidewalks in patching at Eastbourne Road and concrete underdig for fencing to be done by a SMME subcontractor <u>(Work Package 5)</u>	Item	850,000.00
D	Allow for profit if required	Item	
E	Allow for attendance	Item	
	<u>PE PROVINCIAL HOSPITAL - CONSTRUCTION OF CONCRETE RETAINING WALL INCLUDING FOUNDATIONS AT EASTBOURNE ROAD</u>		
F	Provide the sum of R675,000.00 (Six Hundred and Seventy Five Thousand Rand) nett for construction of new concrete retaining walls and foundations at Eastbourne Road, by a SMME subcontractor <u>(Work Package 5)</u>	Item	675,000.00
G	Allow for profit if required	Item	
H	Allow for attendance	Item	
	Carried Forward		R
	Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B		

Brought Forward		R
<p><u>PE PROVINCIAL HOSPITAL - HIGH SECURITY FENCING AT EASTBOURNE ROAD</u></p>		
A	Provide the sum of R770,000.00 (Seven Hundred and Seventy Thousand Rand) nett for construction of new high security fence at Eastbourne Road, by a SMME subcontractor <u>(Work Package 5)</u>	Item 770,000.00
B	Allow for profit if required	Item
C	Allow for attendance	Item
<p><u>SMME PACKAGES TO BE IDENTIFIED BY MAIN CONTRACTOR (MINIMUM OF 4 PACKAGES)</u></p>		
D	SMME packages (minimum of 4 packages) for the sum of R3,000,000.00 (Three Million Rand) nett, to be identified by Main Contractor (Value currently included in measured work). Packages need to be identified, defined and quantified by the Main Contractor prior to site handover of the project	Item INCLUDED
E	Allow for profit if required	Item
F	Allow for attendance	Item
Carried to Final Summary		R
Section No. 8 Bill No. 1 SMME Sub-Contractors Q532B		

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Section No	<u>FINAL SUMMARY</u>	Page No	Amount
1	SECTION 1 PRELIMINARIES AND GENERAL	63	
2	SECTION 2 WORK PACKAGE 1 - FENCING AT LIVINGSTONE HOSPITAL	146	
3	SECTION 3 WORK PACKAGE 2 STEEL STAIRCASE AT PROTEA FLATS	167	
4	SECTION 4 WORK PACKAGE 3 RENOVATIONS TO PROTEA FLATS	278	
5	SECTION 5 WORK PACKAGE 4 PEPH GATEHOUSES & BUCKINGHAM & ST CROIX STREET ENTRANCE	382	
6	SECTION 6 WORK PACKAGE 5 - REMAINDER OF FENCING AT PE PROVINCIAL HOSPITAL	437	
7	SECTION 7 PROVISIONAL SUMS	444	
8	SECTION 8 SMME DOMESTIC SUB-CONTRACTS	454	
	SUB TOTAL		R
	SECTION 9A - LIVINGSTONE HOSPITAL ELECTRICAL INSTALLATION - GUARDBOUSES - WORK PACKAGE 1	Item	
	SECTION 9B - LIVINGSTONE HOSPITAL - PERIMETER LIGHTING, SLEEVES & CONDUITS FOR CCTV INSTALLATION LIVINGSTONE HOSPITAL - WORK PACKAGE 1	Item	
	SECTION 9C - LIVINGSTONE HOSPITAL - CCTV INSTALLATION - WORK PACKAGE 1	Item	
	SECTION 10A - PROTEA FLATS - ELECTRICAL INSTALLATION - WORK PACKAGE 3	Item	
	SECTION 10B - PROTEA FLATS - PERIMETER LIGHTING, CONDUITS & SLEEVES FOR CCTV INSTALLATION - WORK PACKAGE 3	Item	
	Carried Forward		R
	Q532B		

Section No		Page No	Amount
	FINAL SUMMARY		
	Brought Forward		R
	SECTION 10C - PROTEA FLATS - CCTV INSTALLATION - WORK PACKAGE 3	Item	
	SECTION 11A - PE PROVINCIAL HOSPITAL - ELECTRICAL INSTALLATION TO ENTRANCE AND EXIT GUARDBOUSES - WORK PACKAGE 4	Item	
	SECTION 11B - PE PROVINCIAL HOSPITAL - PERIMETER LIGHTING, CONDUITS AND SLEEVES FOR CCTV INSTALLATION - WORK PACKAGE 4	Item	
	SECTION 11C - PE PROVINCIAL HOSPITAL - CCTV INSTALLATION - WORK PACKAGE 4	Item	
	SUB TOTAL		R
	<u>ALLOWANCE FOR CONTINGENCIES</u>		
	Allow the Amount of R3,000,000.00 (Three Million Rand) for Contingencies to be used at the discretion of the Employer, or to be deducted in whole or in part if not required	Item	3,000,000.00
	<u>ALLOWANCE FOR ESCALATION</u>		
	Allow the Amount of R4,750,000-00 (Four Million and Seven Hundred and Fifty Thousand Rand) for Escalation to be adjusted accordingly to contract conditions	Item	4,750,000.00
	SUB TOTAL (EXCLUDING VAT @ 15%)		R
	VAT @ 15%		R
	TOTAL CARRIED TO FORM OF OFFER AND ACCEPTANCE (INCLUDING VAT @ 15%)		R
	Carried to Form of Offer and Acceptance		R
	Q532B		

SECTION 9A

LIVINGSTONE HOSPITAL

ELECTRICAL INSTALLATION FOR RENOVATIONS TO GATEHOUSES 1,2 & 3

**Vol. 1.1 Part 1
DETAILED SPECIFICATIONS**

PROJECT TITLE:	SECTION 9A: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – RENOVATIONS TO GATEHOUSES (1,2&3) - WORK PACKAGE 1 - ELECTRICAL INSTALLATIONS
-----------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------

Contents

1.0 INTRODUCTION & GENERAL 2

2.0 SCOPE OF WORK 2

 2.1 General Electrical Installation 2

 2.2 Specialised Installation..... 3

 2.3 Temporary Works 3

3.0 SYSTEM LOW VOLTAGE..... 3

4.0 NOTICES AND FEES..... 3

5.0 QUALITY OF MATERIALS..... 3

6.0 BALANCING OF LOAD 3

7.0 BUILDER’S WORK 4

8.0 SCHEDULES OF INFORMATION 4

9.0 SCHEDULE OF LUMINAIRES..... 4

10.0 SAMPLES AND ALTERNATIVES 5

11.0 SUPERVISION, WORKMANSHIP AND DELAYS 5

12.0 MAKING GOOD 5

13.0 COMMISSIONING AND TESTING 5

 13.1 Commissioning..... 5

14.0 CONSTRUCTION PROGRAMME 6

15.0 DRAWINGS 6

 15.1 General..... 6

 15.2 Record / As-Built Drawings 6

16.0 MEASUREMENT 6

17.0 TRENCHING AND EXCAVATIONS 7

 Trenching 7

 Bedding of Cables..... 7

 Backfilling 7

 Random Check of Excavations 7

18.0 LAYING, TESTING AND TERMINATION OF CABLES 7

 18.1 Cable Terminations 7

Cable Marker Tape.....	8
19.0 MONTHLY CERTIFICATES.....	8
20.0 LV DISTRIBUTION BOARDS.....	8
20.1 Cascading	8
21.0 DISTRIBUTION CABLES	9
22.0 PVC SLEEVES.....	9
23.0 CABLE DRAW WIRE	9
24.0 EARTHING AND BONDING	9
24.1 General.....	9
24.2 Water pipes.....	10
24.3 Roofs, gutters and down pipes	10
24.4 Sub-distribution boards	10
24.5 Sub-circuits.....	10
24.6 Common Earth	10
24.7 Non-metallic Conduit.....	11
24.8 Flexible Conduit	11
24.9 Connection	11
24.10 Earth Terminal for Other Services.....	11
25.0 CONDUIT, WIREWAYS AND ACCESSORIES.....	11
25.1 Conduit.....	11
25.2 Wiring Trunking / Channel	12
26.0 WIRING.....	12
27.0 WALL SWITCHES AND SWITCH SOCKET OUTLETS.....	13
28.0 TELEPHONE, COMPUTER AND SECURITY INSTALLATIONS.....	14
29.0 EQUIPMENT GUARANTEES, MAINTENANCE AND INSTRUCTION MANUALS.....	14
30.0 COMMISSIONING AND TAKE-OVER	14
30.1 Completion.....	14

1.0 INTRODUCTION & GENERAL

Should there be any conflict or ambiguity between sections of this enquiry, then the sections will be considered in the following order of priority: -

- Schedule of Quantities
- Detailed Specification
- Drawings

Should the Tenderer notice any inconsistencies between these sections, it is his responsibility to notify the Engineer in order to obtain clarification thereon.

2.0 SCOPE OF WORK

The main contract is for the Renovations to Gatehouses 1,2&3 Main, A&E and Oncology for Livingstone Hospital in Gqeberha.

The Electrical installations shall entail but not limited to following:

- Installation of new LED lights throughout the buildings;
- Installation of new socket outlets and isolators for Main Gates
- Installation of wires ways for Security installations viz; PVC conduits with draw-wires
- Access Control System
- Earthing, testing and commissioning of the entire installation including issuing of Certificate of Compliance for each DB
- Etc.

2.1 General Electrical Installation

The Works will be executed in strict accordance with the following: -

- a) The Wiring Code - SANS 10421-1: 2008,
- b) Interior Lighting Part 1: Artificial Lighting of Interiors; Part 2: Emergency Lighting – SANS 10114-1,
- c) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.

The general electrical installation is reflected on a set of drawings attached to this tender document.

- a) The Subcontractor to be mindful of the fact that the site is occupied at all times.
- b) The Subcontractor will be responsible for the supply and installation of new LV mains cabling between new distribution boards and existing distribution boards in existing buildings including replacement of circuit breakers for the new cables.

The new DBs are as shown on the power layout.

- c) Supply and installation of
 - complete building electrical installation including cabling, distribution boards,

- the installation and connection to power of such equipment as may be supplied by the Employer or other Employer's contractors, and
 - Testing of the Electrical installation and issue Certificates of Compliance.
- d) Repairs to post top luminaires. This shall include
- Replacement of existing luminaires with new LED post top luminaires
 - Repairs to cables and streetlight wires
- e) Produce marked up As-Built drawings of the Electrical Installations and be submitted to the Engineer.

The description of the Works listed above, is not necessarily complete and shall not limit the work to be carried out by the Subcontractor under this Contract.

2.2 Specialised Installation

No allowance for specialised installations on this contract.

2.3 Temporary Works

No temporary works are envisaged in the current design and planned execution of the works except where the Subcontractor wants to incorporate it as part of his work method. In case the requirement for such is necessary, the subcontractor to arrange with Engineer for a variation order of such work before it is carried out.

3.0 SYSTEM LOW VOLTAGE

The supply to all the Electrical installation shall be 230 Volts, 1-phase, 50 Hertz, Earthed Neutral.

4.0 NOTICES AND FEES

The Subcontractor shall liaise, issue all notices to and make the necessary arrangements with the Technical department of the hospital for planned power disruptions.

5.0 QUALITY OF MATERIALS

Materials are to comply with the relevant South African National Standards (SANS), or to IEC specifications, where no SABS specifications exist. All materials used shall bear the SABS or IEC mark of approval as applicable.

NB: All materials must be of South African manufacture. The Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.

6.0 BALANCING OF LOAD

The Subcontractor is required to balance the load as equally as possible over the multiphase supply **before Final Completion.**

7.0 BUILDER'S WORK

Subject to negotiations the following may be provided by the Contractor under the building works contract: -

- Making good all chasing
- Refurbishing of road surfaces

8.0 SCHEDULES OF INFORMATION

The schedule of information contained in this document consists of 2 sections:

- a) Information supplied by the Employer (schedules of; drawings, cables, luminaires, etc. as applicable.)
- b) Information to be supplied by the Subcontractor at bidding stage (information on the makes, types and ratings of equipment and materials offered, schedules of prices and rates for variations, schedules of quantities, etc. as applicable.)

Bidders are required to enter, at the time of bidding, in the "Schedule of Equipment and Material Offered", sufficient details to enable the equipment concerned to be identified without ambiguity.

It is not sufficient for a tender to state "as specified" in the schedules.

Failure to complete these schedules (if applicable) may render a bid invalid.

9.0 SCHEDULE OF LUMINAIRES

9.1 All luminaires to

- LED lights with suitable constant current drivers,
- 3m cable with 5A plug,
- bear a SABS or IEC mark of quality approval
- with average lifespan of 50 000 hours
- Power Factor > 0.9

9.2 LED luminaires to be 4000K

Type	Description
A	40W LED 1250mm long surface mounted luminaire with: <ul style="list-style-type: none">• Body – Metal.• Diffuser – Opal white diffuser• Minimum Dimensions –1250mm long
P1	150W LED surface mounted Flood Light with: <ul style="list-style-type: none">• Body – Die cast Aluminium• Stainless steel helicoils inserts to avoid metal corrosion.• Diffuser – Opal non-discolouring high impact acrylic injection molded diffuser• Environmental Protection – IP 66

	<ul style="list-style-type: none"> • Vandal resistant screws • Colour – thick black • Total luminous flux not less than 21 000lm
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------

10.0 SAMPLES AND ALTERNATIVES

- 10.1 Prior to installation the Subcontractor is required to submit for approval, comment or records, samples of materials upon which his offer is based. Any approvals given or comments made shall be on the generality of the scheme and shall not relieve the Subcontractor of his responsibility to ensure full compliance with all performance and regulatory criteria and materials latent defects.
- 10.2 Samples forwarded shall be labelled and remain in the site stores until completion of the Works. The samples may be the last items to be embodied in the installation.
- 10.3 All expenses in do with the supply and return of the samples shall be borne by the Subcontractor.

11.0 SUPERVISION, WORKMANSHIP AND DELAYS

The work shall at all times, for the entire duration of the contract, be executed under the supervision of a skilled and competent representative of the Subcontractor, who must be able and authorized to receive and execute instructions on behalf of the Subcontractor.

In the event that inferior materials or bad workmanship, on the part of the Subcontractor, leads to remedial work requiring redesign by the Engineer, the cost of this work, including related professional fees, shall be borne by the Subcontractor.

Similarly, should delays in the contract be caused by poor performance on the part of the Subcontractor causing the Engineer to spend extraordinary time on the project, the extra costs incurred may be borne by the Subcontractor.

These costs will be based on the ECSA hourly rates and may be deducted from claims due or claims which will become due to the Subcontractor.

12.0 MAKING GOOD

The Subcontractor will carry out in all instances any work to be made good such as damage to or disturbances of the building installations caused by themselves or their employees during the execution of the contract, at their own cost.

13.0 COMMISSIONING AND TESTING

13.1 Commissioning

A documented method shall be followed, whereby the Subcontractor shall ensure that his installation is correctly constructed in accordance with the manufacturers' specifications, consultant's specification, consultant's design and all codes of practice and international design codes.

The commissioning procedure must allow for signing off of the major items of equipment by a qualified person in terms of the codes. These signed off documents will form part of the record drawings.

The Subcontractor will arrange for all inspections and testing of the installation after completion, including the issuing of the Certificate of Compliance. All notices, fees, including inspection and re-inspection are the responsibility of the Subcontractor and all the relevant costs shall be borne by him.

Any materials or workmanship considered as faulty or incorrectly or inadequately installed or repaired, will be substituted, altered or rectified to the approval of the Employer, without additional cost to the Employer.

14.0 CONSTRUCTION PROGRAMME

The Subcontractor must submit their construction programme to the Contractor who will amalgamate it into the project's overall construction programme.

15.0 DRAWINGS

15.1 General

Drawings must be read in conjunction with this Specification and the Bills of Quantities. Any errors, discrepancies or contradictions found between the Drawings, the Specifications and the Bills of Quantities must be brought to the attention of the Engineer immediately, they become evident.

The drawings generally show the scope and extent of the proposed work and shall be construed as showing every minute detail of the work to be executed.

Construction Drawings will be issued to site accompanied by drawing issue slips. The drawing issue register reflecting the summary of all previously issued drawings with dates and drawing revisions will be issued at the site meetings once a month.

15.2 Record / As-Built Drawings

The Subcontractor must prepare Record/As-Built drawings of the completed installation indicating actual cable runs, circuiting, distribution board details, final cable sleeves positions, luminaire, power point layout details, etc. The contract will not be deemed complete until these drawings have been submitted to the Engineer.

16.0 MEASUREMENT

The Subcontractor shall not make any assumption regarding the installation. If there is any doubt or ambiguity, they must consult the Engineer. The Subcontractor shall take cognisance of the fact that the schedule of quantities is re-measurable and final quantities may be adjusted at the end of the contract.

- a) All outlet boxes up to 100 x 100mm are measured as one item regardless of the number of conduit entries.

- b) Outlet boxes shall be without covers and draw boxes shall include covers, screws, etc.
- c) Conduit boxes shall always include the fixing to the conduit with lock and bush nuts.
- d) All switches and plug (SSO) units shall include the fixing to conduit and shall include screws, cover plates.
- e) All fittings, equipment and accessories shall include connections to power. All light fittings shall be complete with lamps and tubes.
- f) All measurements are net Tendered rates must allow for wastage.

17.0 TRENCHING AND EXCAVATIONS

Trenching

Unless detailed otherwise on the drawings LV cables the depth shall be 450mm below final ground level. Where the required depth cannot be met, the Engineer may approve one of the following:

- cement slabs over the cables or
- cable Sleeve pipe encased in 300 mm² concrete

The width of trenches shall be 400mm.

Bedding of Cables

Normal bedding requirements for both LV cables shall be 150mm sand under and 150mm sand over.

The final decision as to whether bedding may be omitted or not, shall rest with the Engineer.

Backfilling

- a) All loose stones or any other material likely to cause damage to cables shall be removed from trenches, before backfilling commences.
- b) Backfilling shall not commence without prior inspection, measurement and approval of the Engineer.
- c) Backfilling of trenches in road reserves shall be in layers not exceeding 300mm and the use of a suitable compacting machine is essential in order to achieve an approximate 9,8% Mod. AASHO density.

Random Check of Excavations

The Engineer reserves the right to request random check holes to check cable depth, bedding, material classification, danger tape, etc.

18.0 LAYING, TESTING AND TERMINATION OF CABLES

18.1 Cable Terminations

- (a) Terminations shall only be made by competent personnel, who are regularly

employed on this type of work, and shall be carried out strictly in accordance with manufacturers' instructions.

- (b) The use of only first class appropriate materials is essential. Conductors, all ferrules and lugs shall be tinned and crimped by means of suitable mechanical or pneumatic tools designed for this purpose and then sweated with solder added to ensure adequate contact.
- (c) Where cables are cut and not immediately made off, the ends shall be sealed without delay to avoid the ingress of moisture.
- (d) Cable core numbers and/or colours shall be matched without twisting of the joints; cable end seals may be removed and replaced to check this before the next length is laid.

Cable Marker Tape

- (a) All LV cables shall be marked by means of a continuous tough, brightly coloured PVC sheet known as "Cable Marker Tape" of 800 gauge thickness.
- (b) Cable marker tape shall be laid approximately 300mm from finished ground level.
- (c) Wording on cable marker tape shall be in three languages "DANGER INGOZI" with skull and crossbones.
- (d) Cable marker tape requirements and the following principle shall be followed:
 - One cable - 1x150mm
 - Two cables - 2x150mm or 1x300mm

19.0 MONTHLY CERTIFICATES

Pro forma claim form will be available from the Engineer in Excel format. This is the preferred method of submitting payment claims. Should the Subcontractor have developed his own method of claiming, this may be submitted to the Engineer for consideration.

20.0 LV DISTRIBUTION BOARDS

All distribution boards (DBs) will be supplied, wired and complete with all equipment of quantities, types, sizes and ratings as specified on the distribution board schematics, which are included in this document. The distribution boards shall be manufactured in accordance with the Standard Specification for Electrical Building Services.

The Subcontractor shall confirm on site, before commencing with any work that sufficient space and access is available to install the DBs as specified. No additional claims for failure to check these details and rectify any default will be entertained.

Before handing over, the DBs shall be thoroughly cleaned inside and outside. Damaged finished surfaces shall be made good where necessary with identical paint to the original finish.

20.1 Cascading

All DBs circuit breakers must be cascaded from the same manufacture and cascading

group. Mixing of circuit breaker makes is not allowed.

Each cascaded DB must be marked with a label

- a) informing that circuit breakers are cascaded and
- b) that replacement and / or additional circuit breakers must be chosen from the same circuit breaker group.

20.2 Shop Drawings

Prior to manufacturing of DBs subcontractor will prepare and issue shop drawings of each DB to Engineer for approval. If the shop drawing is prepared by the manufacturer the subcontractor shall thoroughly review the drawings to ensure they match Engineer's schematic line diagrams before handing them over to the Engineer.

21.0 DISTRIBUTION CABLES

21.1 Low Voltage (LV)

All PVC Insulated PVC bedded SWA PVC sheathed 600/1000V copper cables shall conform to SANS 1507-3 and bear the SABS mark. Cables shall be of sizes and type as shown on the drawings.

Cables shall be supplied with their corresponding termination and as well as corresponding bare copper earth wire. The Subcontractor is advised to measure actual lengths of cable required on site before ordering as no compensation for over-measurements shall be entertained.

22.0 PVC SLEEVES

- a) Pipes for sleeving shall be the ribbed type-Kabelflex unless otherwise noted on the drawings.
- b) Sleeves shall be laid as shown on site plan layout at depth of approximately 300mm from the top of the sleeve to the finished surface of the road and laid in a straight line with the cable trench.
- c) All sleeves must be cleared by pulling through a loose fitting mandrel prior to the installing of cables.
- d) All spare sleeves shall be provided with a No. 10 gauge galvanised draw wire and sealed on both ends with a non-hardening material.

23.0 CABLE DRAW WIRE

The draw wire shall be No. 10 gauge galvanised draw wire.

24.0 EARTHING AND BONDING

24.1 General

Earthing shall generally be in accordance with

- SANS 10142-1: 2008 Wiring Code,
- SANS 10198: Part 3 - Earthing System; General Provision; Part 12 - Installation of Earthing Systems,
- SANS 10200: Neutral Earthing in Medium Voltage Industrial Power Systems,
- SANS 10292: Earthing of Low Voltage Distribution Systems,
- SANS 1063: Earth Rods Couplers and Clamps,
- AMEU Code of Practice for the application of protective multiple earthing to low voltage distribution systems and
- The latest amendments and the OHS Act 1993.

24.2 Water pipes

All metallic hot and cold-water pipes shall be bonded with 12mm x 0,8mm perforated for solid copper strapping and connected to the nearest system earth. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150-mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board.

24.3 Roofs, gutters and down pipes

Unless not included in the Lightning Protection System (LPS), all metal parts of roofs, gutters and down pipes shall be earthed.

24.4 Sub-distribution boards

A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of bare stranded copper conductors installed along the same routes as the supply cables or in the same sleeve or ladder as the power conductors.

Alternatively, armoured cables with earth continuity conductors included in the armouring (ECC) may be utilised where specified or approved.

24.5 Sub-circuits

The earth conductors of all sub-circuits shall be connected to the earth busbar in the source DB in accordance with SANS 10142.

24.6 Common Earth

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Engineer. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered.

NB: The common earth shall not be broken.

24.7 Non-metallic Conduit

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

24.8 Flexible Conduit

An earth conductor shall be installed in all non-metal flexible conduits. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

24.9 Connection

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Subcontractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

24.10 Earth Terminal for Other Services

A readily accessible earthing terminal shall be provided, near the trap door in the ceiling, for the bonding of other services such as a television aerial or satellite dish, an audio system, a video surveillance system, and the like, to the building. Such an earthing terminal shall be bonded to the consumer's earth terminal in the main distribution board by a conductor of at least 6mm² copper or equivalent, and shall be identified by the earth symbol.

NOTE: Providers of services other than the electrical power services should not access the distribution board or other parts of the electrical installation.

25.0 CONDUIT, WIREWAYS AND ACCESSORIES

25.1 Conduit

Unless indicated differently on the drawings conduit and conduit accessories shall be PVC to SABS 950. The conduit shall be chased in concrete, under plaster and roof space, throughout.

All conduit/outlet boxes and associated fittings for use in this installation will be SABS approved.

The Electrical subcontractor must provide all conduit and accessories for the lighting, power, ICT, telephone, Access Control and fire protection as shown on the drawings and as measured in the bills of quantities.

Flexible metallic tubing of galvanized steel shall be used for connections to water heaters, fans and other similar equipment. The corrugations of the tubing shall have a rectangular cross section suitable to fit standard brass connections.

The Subcontractor must provide all conduit and accessories for the lighting, power, telephone, communications, computer and security systems, as shown on the drawings and as measured in the schedule of quantities.

Flexible metallic tubing of galvanized steel shall be used for connections to water heaters, fans and other similar equipment. The corrugations of the tubing shall have a rectangular cross section suitable to fit standard brass connections.

25.2 Wiring Trunking / Channel

Wiring channels in ceiling voids and wherever indicated on the drawings shall be medium duty of Cab-strut, Cooper B-Line or similar manufacture and shall be complete with corner pieces, end pieces, hangers, junction pieces, supply conduits, cover plates and power outlets as specified and indicated on the drawings. Note that Nylon or plastic nuts or fasteners will not be accepted.

The channels shall be manufactured of rolled sheet steel and hot-dip galvanised to SANS 763.

Channels shall be cold galvanised at all joints, sections that have been cut and at places where the galvanising has been damaged.

The wiring channels' metal covers shall be pop-riveted closed, once the installation is complete.

26.0 ACCESS CONTROL

The subcontractor shall Supply, Install, test and commissioning of an electric Lock (Inward Opening) for pedestrian gate, hot-dipped galvanised and polyester exterior grade powder coat, integrated with two-way intercom system, including power supply and UPS.

The intercom shall be controlled by means of a single push button from the entry panel located in next to the gate and handset carried by security guard.

Operating voltage	12V DC supplied from gate motor supply or separate 14V DC supply 220 Volt AC
Frequency	50Hz / 60Hz
Current draw	Quiescent - 150mA ±60mA for a One-to-One Kit Maximum - 200mA
Call confirmation at entry panel	Yes
Gate/door release	Potential-free normally-open contact
Wiring	Two common wires polarised for speech,

	call and lock release
Speech volume	Adjustable at each entry panel and handset
IP rating	IP56
Surge protection	Yes

27.0 **GATE MOTOR**

The subcontractor shall. Supply, Install, test and commissioning of gate motor suitable for industrial site for a heavy-duty sliding gate and heavy traffic. The gate motor to be complete with lockable motor cover, theft cage and beams for sensing.

Operating voltage	240Volt AC
Frequency	50Hz / 60Hz
Current draw	10A
Packaging dimensions	350mm wide x 282mm deep x 470mm
Manual Override	Lockable with key release
Wiring	Two common wires polarised for speech, call and lock release
Receiver frequency	433.92MHz
IP rating	IP54

28.0 **WIRING**

Lighting and Power wiring in conduit and channel wireways shall comprise 600/1000V single core PVC insulated copper wire sized in accordance with the distribution board schematics. Conductor outer sheaths shall be of the following colours: -

- Phase Conductors : red, white, blue
- Neutral : black
- Earth : yellow + green

29.0 **WALL SWITCHES AND SWITCH SOCKET OUTLETS**

Wall switches to be of the flush type complete with cover plates and screws in 100 x 50 x 50 extension outlet boxes mounted on the wall surfaces. Colours of outlet boxes and cover plates must match.

All surfaces mounted switch socket outlets to be in 100 x 100 x 50 extension outlet boxes mounted on the wall surfaces. Colours of outlet boxes and cover plates must match.

All switched socket outlets mounted in power skirting to have matching cover plates.

The Subcontractor will be responsible for the installation of power points to feed equipment such as water heaters, air-conditioners, fans, security equipment, etc. This equipment, if supplied and installed by others, will be connected by the Subcontractor.

The cover plates to all outlets shall be fixed **AFTER** the final coat of paint has been applied.

All light switches and power points shall be labelled with indelible circuit numbers to tie up with a circuit number in the distribution boards. Labels shall be engraved Trifoliolate or similar approved type. Labels, like Brother™ labels that peel off easily shall not be acceptable.

30.0 TELEPHONE, COMPUTER AND SECURITY INSTALLATIONS

The Subcontractor will be responsible for the complete installation of conduits and wireways for the I.C.T and security systems.

31.0 EQUIPMENT GUARANTEES, MAINTENANCE AND INSTRUCTION MANUALS

The Contractor shall submit to the Engineer all manufacturers' equipment guarantees, maintenance and instruction manuals. All equipment shall be guaranteed for twelve (12) months from the date of Practical Completion Certificate.

32.0 COMMISSIONING AND TAKE-OVER

The Contractor shall carry out the necessary tests according to the SANS 10142-1, the latest edition and provide a certificate of compliance on completion of the works. The certificates of compliance shall be of the approved type as issued by the Electrical Contracting Board of South Africa.

32.1 Completion

The electrical installation shall be complete after:

- (i) All tests for the switchgear and cables have been done and tests results submitted to the Engineer.
- (ii) The completed certificates of compliance have been submitted to the Engineer.
- (iii) All equipment guarantees, maintenance and instruction manuals have been submitted to the Engineer.
- (iv) The site has been cleared of all debris and electrical waste materials and left in a neat and tidy condition.
- (v) "As-Built" drawings of the Works; and
- (vi) Certificates for Distribution boards have been submitted to the Engineer.

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 9A: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – RENOVATIONS TO GATEHOUSES (1,2&3) - WORK PACKAGE 1 - ELECTRICAL INSTALLATIONS
-----------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 9A: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – RENOVATIONS TO GATEHOUSES - WORK PACKAGE 1,2 &3 - ELECTRICAL INSTALLATIONS
-----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------

SCHEDULE OF TENDER DRAWINGS

Drawing No.	Rev	Qty	Description	Size
2316-T-E-101	Rev00	1	Power and Lighting Layout – Main Guardhouse	A3
2316-T-E-102	Rev00	1	Power and Lighting Layout A&E Guardhouse	A3
2316-T-E-103	Rev00	1	Power and Lighting Layout Oncology Guardhouse	A3
2316-T-E-300	Rev00	1	DB Schematic Diagrams	A3

NAME OF TENDER :

NAME OF COMPANY :

SIGNATURE OF TENDERER :

LIGHTING LEGEND	
●	PHOTO CELL
	150W LED FLOODLIGHTS MOUNTED AT 3500 A.F.F.L (IP 66 Rating)
	50W LED CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE CEILING / WALL MOUNTED BULKHEAD.
	ELECTRICAL DISTRIBUTION BOARD

NOTES:
EXISTING LIGHT SWITCHES TO BE USED.

POWER LEGEND	
	16A 3 - Pin switched socket outlet (Weatherproof) to comply with SANS 164-1 (white) 450mm AFFL (Normal Supply)

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 30mmØ & 4 X 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SURTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	17-09-25	E.C.	ISSUED FOR TENDER.



PROJECT
ALTERATIONS AND ADDITIONS AT LIVINGSTONE HOSPITAL, GQEBERHA

TITLE
EXISTING MAIN GATE HOUSE (STANDFORD ROAD SIDE) - LIGHTING & POWER LAYOUT

COPYRIGHT
RNA CONSULTING ENGINEERS
 Consulting Electrical & Mechanical Engineers
 87 Hengh Road, Walmer, Port Elizabeth, 6070
 E-Mail: rna-pe@rna.co.za
 P.O. Box 35039, Newton Park, 6055
 Tel: 041 581 2807
 Fax: 041 581 2808



DESIGN	TENDER	CONSTRUCTION
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

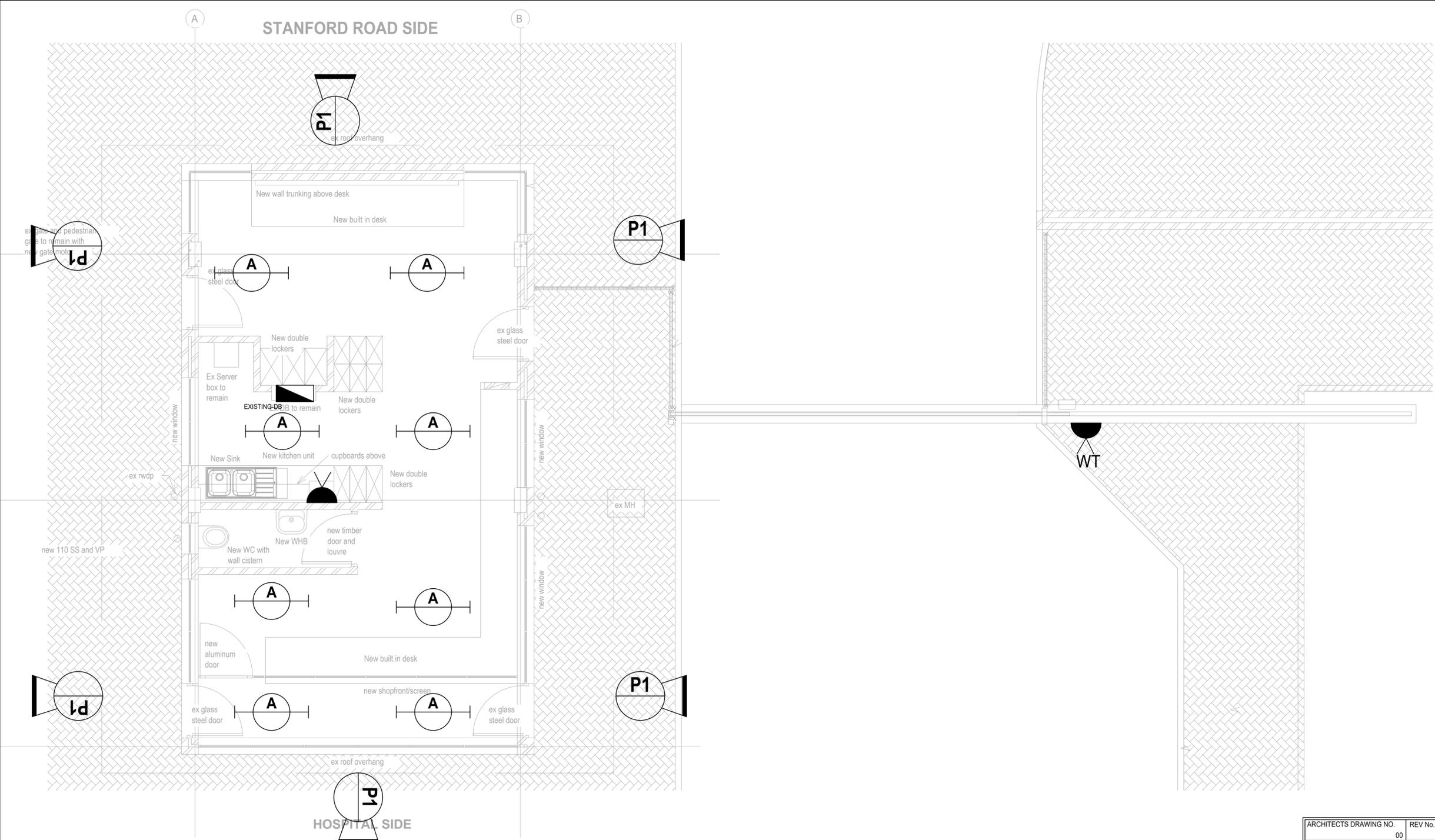
DESIGNED BY: **B.GEELBOOI** SCALE: 1:100

DRAWN: **B.GEELBOOI** DATE: 10/11/2023 PRINT DATE: 23/09/2025

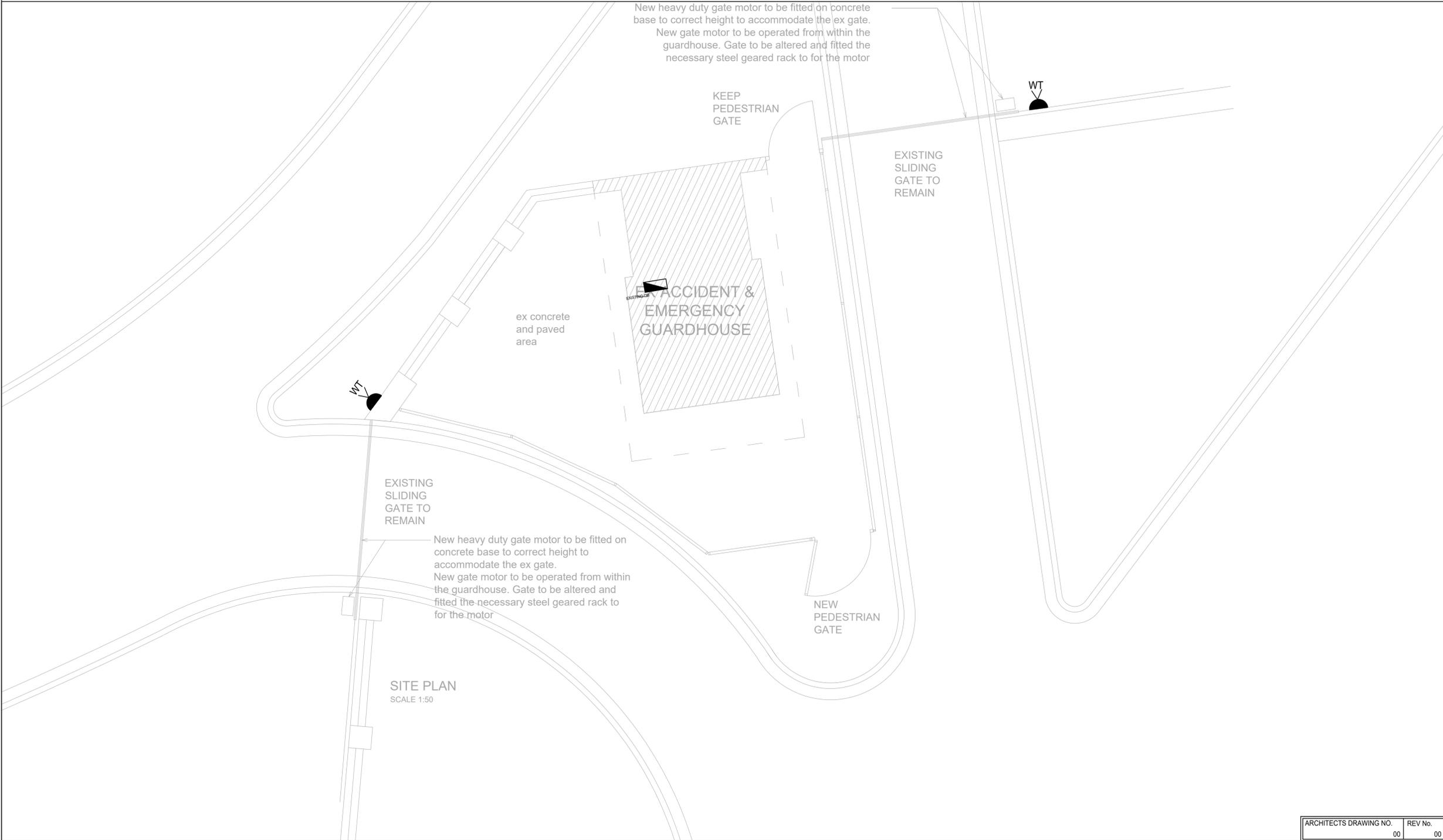
CHECKED BY: **E. CEBA**
 REGISTRATION No. 201930053
 SIGNED: _____

ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-101 GH 1 REV No. 00



LIGHTING LEGEND	
	16A 3 - Pin switched socket outlet (Weatherproof) to comply with SANS 164-1 (white) 450mm AFFL (Normal Supply)
	EXISTING ELECTRICAL DISTRIBUTION BOARD



- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 30mmØ & 4 X 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SURTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:
 - AC = AIR CONDITIONING
 - D = DEDICATED SSO
 - L = LIGHTING CIRCUIT
 - P = STANDARD SSO
 - XL = LIGHTING CIRCUIT ON STANDBY POWER
 - XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	19-09-25	E.C.	ISSUED FOR TENDER.

CLIENT



Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT
LIVINGSTONE HOSPITAL, GQEBERHA

TITLE

A&E GATE HOUSE -
POWER LAYOUT

COPYRIGHT



RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hengh Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@rnaza.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808



CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DESIGNED BY: B.GEELBOOI SCALE: 1:100

DRAWN: B.GEELBOOI DATE: 10/11/2023 PRINT DATE: 23/09/2025

CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED: _____

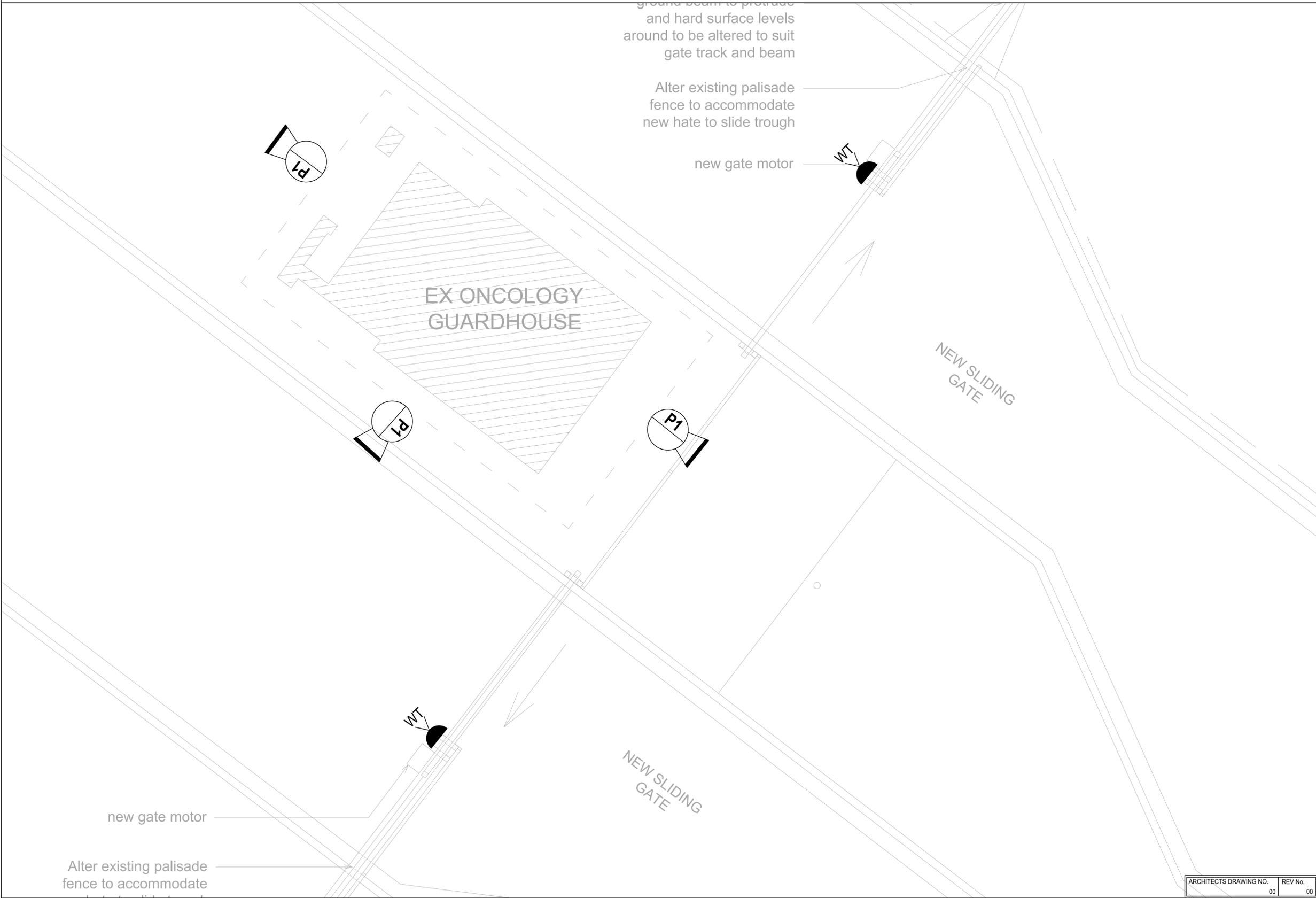
ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-102 GH 2 REV No. 00

LIGHTING & POWER LEGEND	
●	PHOTO CELL
	150W LED FLOODLIGHTS MOUNTED AT 3500 A.F.F.L (IP 66 Rating)
	16A 3 - Pin switched socket outlet (Weatherproof) to comply with SANS 164-1 (white) 450mm AFFL (Normal Supply)
	EXISTING ELECTRICAL DISTRIBUTION BOARD

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 30mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SURTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.



REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	19-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT
LIVINGSTONE HOSPITAL, GQEBERHA

TITLE

ONCOLOGY GATE HOUSE -
LIGHTING & POWER LAYOUT

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hengeh Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@rna.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808

CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DESIGNED BY: B.GEELBOOI	SCALE 1:100	
DRAWN B.GEELBOOI	DATE 10/11/2023	PRINT DATE 23/09/2025
CHECKED BY: E. CEBA	REGISTRATION No. 201930053	SIGNED.
ARCHITECTS DRAWING NO. 00	REV No. 00	DRAWING NO. 2316-T-E-103 GH 3
		REV No. 00

LEGEND

BUSBAR

—+— SINGLE POLE

—+—+ TRIPLE POLE

—+— ISOLATOR

—+—/— CIRCUIT BREAKER
SIZE AS SHOWN

CH = WIRING CHANNEL

—+—/— EL EARTH LEAKAGE PROTECTION UNIT WITH DISCONNECTOR

—+—/— C2 3 POLE CONTACTOR

—+—/— E MM ELECTRONIC CONSUMPTION MULTIMETER

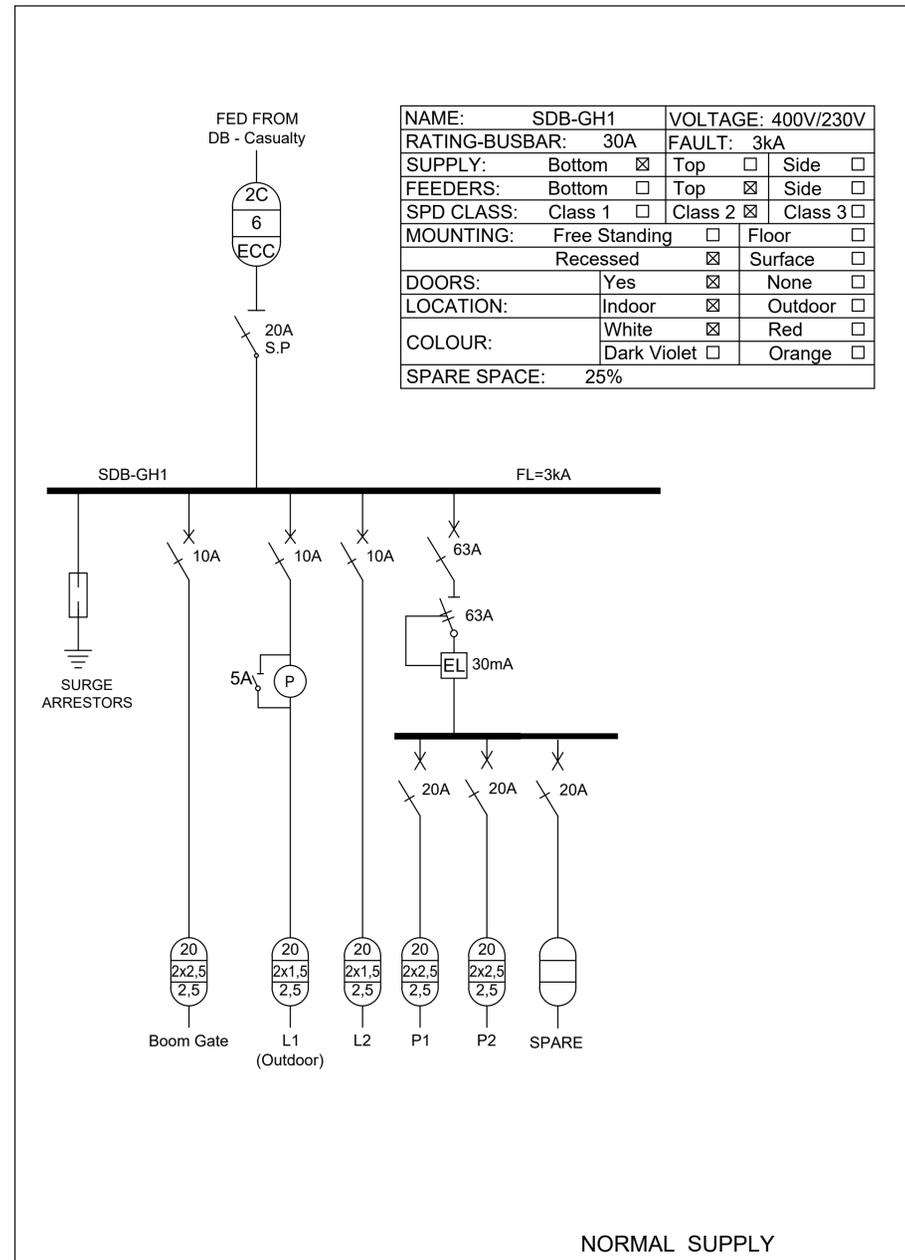
—+—/— P PHOTOCELL WITH BYPASS SWITCH

CABLES

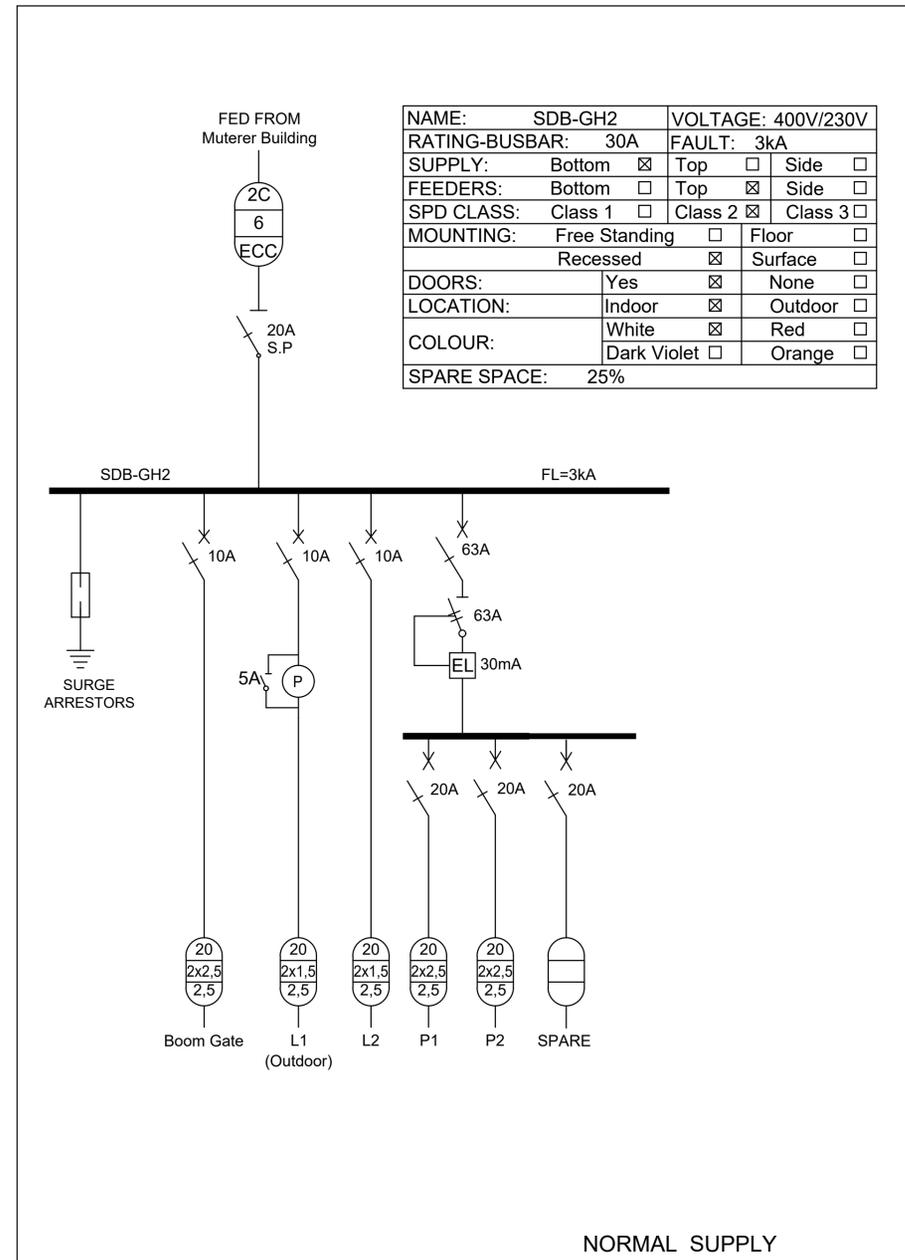
4C NO. OF CORES
16 CORE SIZE mm
ECC EARTH CONTINUITY CONDUCTOR mm

WIRING IN CONDUIT

25 CONDUIT SIZE mm
2x4 No. & CONDUCTOR SIZE mm²
2.5 EARTH CONDUCTOR mm²



ENTRANCE GUARD HOUSE



EXIT GUARD HOUSE

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB'S)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING: AC = AIR CONDITIONING
D = DEDICATED SSO
L = LIGHTING CIRCUIT
P = STANDARD SSO
XL = LIGHTING CIRCUIT ON STANDBY POWER
XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	23-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

Province of the **EASTERN CAPE** HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH, GQEBERHA

TITLE

NEW ENTRANCE GUARD HOUSE AND NEW EXIT GUARD HOUSE - DB SCHEMATIC DIAGRAM

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road, Walmer, Port Elizabeth, 6070
E-Mail: rna-pe@conusa.co.za

P.O. Box 35039 Newton Park, 6055
Tel: 041 581 2807 Fax: 041 581 2808

CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI

SCALE: 1:100

DRAWN: B. GEELBOOI DATE: 13/11/2023 PRINT DATE: 23/09/2025

CHECKED BY: E. CEBA

REGISTRATION No. 201930053

SIGNED:

ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-300 GH1-2 REV No. 00

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1.2&3 AT LIVINGSTONE HOSPITAL

WORK PACKAGE 1

BILL NO. 1 : PROVISIONAL AND SUPERVISION AMOUNTS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	<u>Other Fixed-charge Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
		Sum	1		
1.2	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OSHA Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	<u>Other Value Related Obligations</u>	Sum	1		
	(Please Specify).	Sum	1		
	. . . . .	Sum	1		
1.3	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	<u>Other Time-Related Obligations</u>	Sum	1		
	(Please Specify).	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL
ELECTRICAL INSTALLATIONS

BILL NO. 2 : LUMINAIRES

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Luminaires Luminaires mounted on concrete or suspended ceilings, or on brickwork including lamps and fixing material. NOTE: See contract document for detailed technical specifications.				
2.1.2	Type-P1 (150W LED surface mounted Flood Light, IP65 rating, Aluminium Body, Colour: Black) Supply Install	each each	6 6		
2.1.3	Type-A (40W LED Surface mounted luminaire 1250mm long) Supply Install	each each	8 8		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL

ELECTRICAL INSTALLATIONS

BILL NO. 3: SWITCHGEAR EQUIPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Switchgear 16 Amp rocker type light switch with coverplate installed into a flush box measured elsewhere.				
3.1.1	Single lever, one way Supply Install	each each	1 1		
3.1.2	10 amp photo electric cell surface mounted in an empty luminaire Supply Install	each each	1 1		
3.2	SOCKET OUTLETS Supply, deliver, accept and store the following socket outlets, complete with 100mmx100mmx50mm OR 100mmx50mmx50mmgalvanized box where required, PVC covers screws and LABELING as specified including covers and surrounds, mounted to outlet boxes, power skirting, flushed floor ducting and / or ducting				
3.2.1	16 Amp flush mounted single switched socket outlet Supply Install	No. No.	1 1		
3.2.2	Surface mounted weather proof single switched socket outlet Supply Install	No. No.	6 6		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL

WORK PACKAGE 1

BILL NO. 4 : GENERAL POWER

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
4.1	Conduit PVC conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
4.1.1	20mm Supply	m	60		
	Install	m	60		
4.1.2	25mm Supply	m	50		
	Install	m	50		
4.2	Galvanised metal conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
4.2.1	20mm Supply	m	50		
	Install	m	50		
4.2.2	25mm Supply	m	40		
	Install	m	40		
4.3	Conduit Boxes Round Galvanised box for 20mm conduit, back or side entry for 1, 2, 3 or 4-way chased into brickwork, cast into concrete or fixed in trusses including couplings bushes cover plates and fixing materials (average rate)				
4.3.1	20mm Galv round box Supply	each	15		
	Install	each	15		
4.3.2	25mm Galv round box Supply	each	10		
	Install	each	10		
4.4	Galv boxes with 20mm knockouts as specified chased into brickwork.				
4.4.1	100mm x 50mm x 50mm Supply	each	1		
	Install	each	1		
4.4.2	100mm x 100mm x 50mm Supply	each	5		
	Install	each	5		
TOTAL SCHEDULE NO. 4 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL**WORK PACKAGE 1****BILL NO. 5 : CONDUCTORS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
5.1	Conductors 600/1000 grade PVC insulated single core copper conductors drawn into conduit				
5.1.1	1,5mm ² red/black				
	Supply	m	30		
	Install	m	30		
5.1.2	2,5mm ² red/black				
	Supply	m	100		
	Install	m	100		
5.1.3	2,5mm ² yellow & green				
	Supply	m	65		
	Install	m	65		
TOTAL SCHEDULE NO. 5 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL**WORK PACKAGE 1****BILL NO 6 : EXCAVATIONS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
6.1	Excavations for cables in trenches (450 wide x 600deep)				
6.1.1	Excavate in normal earth	m ³	16.2		
6.1.2	Allow for Soft Rock in above trench	m ³	5.4		
6.1.3	Selected fines bedding 150mm under cable and 150mm on top of cable	m ³	3.75		
6.1.4	In concrete/ tar/ paving including reinstatement to original finishing	m ³	4.5		
TOTAL SCHEDULE NO. 6 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL
WORK PACKAGE 1

BILL NO 7 :ACCESS CONTROL

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
7.1	Access control with intercom System (Pedestrian Gate)				
7.1.1	Electric Lock (Inward Opening) for pedestrian gate, hot-dipped galvanised and polyester exterior grade powder coat, integrated with two-way Centurion intercom system, including power supply and UPS. Supply and Install	No	3		
7.1.2	CAT 6 Cable Supply	m	110		
	Install	m	110		
7.1.4	Remote control transmitter - three button (For Main Gates) - Supply and Install	No	6		
TOTAL SCHEDULE NO. 7 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2&3 AT LIVINGSTONE HOSPITAL
WORK PACKAGE 1

BILL NO 8 :SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
8.1	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
8.2	Provide As-built drawing for the new works	Sum	1		
8.3	Heavy Duty Gate Motor -supply, deliver, and install complete with accessories	No	6		
TOTAL SCHEDULE NO. 8 TO PRICE SUMMARY					

SECTION 9A - BILL FOR ELECTRICAL INSTALLATION FOR RENOVATIONS TO GUARDBOUSES 1,2 & 3 AT LIVINGSTONE HOSPITAL

WORK PACKAGE 1

SUMMARY OF MAIN BILL

DESCRIPTION	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : LUMINAIRES	
BILL NO. 3 : SWITCHGEAR EQUIPMENT	
BILL NO. 4 : GENERAL POWER	
BILL NO. 5 : CONDUCTORS	
BILL NO. 6 : EXCAVATIONS	
BILL NO 7 : ACCESS CONTROL	
BILL NO. 8 : SUNDRY ITEMS	
SUBTOTAL	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 9A ON FINAL SUMMARY ON PAGE 455	

SECTION 9B

LIVINGSTONE HOSPITAL

**ELECTRICAL INSTALLATION
FOR PERIMETER LIGHTING, CONDUITS
AND SLEEVES FOR CCTV**

**Vol. 1.1 Part 1
DETAILED SPECIFICATIONS**

PROJECT TITLE:	SECTION 9B: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	-----------------------------------------------------------------------------------------------------------------------------------

1. SCOPE

This section covers but not limited to the supply, installation, testing and commissioning of:

- (a) Security lighting along perimeter fence at Livingstone Hospital as shown on the drawings;
- (b) LV mains cables for the lights;
- (c) Consumer distribution units (electrical kiosk);
- (d) Earthing of the installation; and
- (e) Issuing of test certificates (COC).

2. SUB-CONTRACTOR'S RESPONSIBILITY

The sub-contractor's shall, as specified in all the relevant sections of this document, take full responsibility for the following:

- (a) Providing time/activity mini-programmes, to arrange for the shut-down, interconnection to and re-energizing of all existing and new networks, to ensure proper testing, safety under all conditions and a minimum disruption of service to all consumers. These programmes shall be approved in writing by the Engineer before being implemented by the Contractor.
- (b) Arranging with Supply Authority (Municipality) for all stoppages, shut-downs and for all switching of networks.
- (c) Ensuring that all parts of the Works shall at all times be safe to the public and to his own personnel and those of the Employer.
- (d) Arranging all tests prior to handing over of any portion of the Works.
- (e) The Contractor shall ensure that no work shall be commenced on the low/medium voltage network prior to the network being isolated and earthed by the Municipality's authorised representative and a "permit to work" being issued by the Municipality's authorised representative. When the particular section of the network is to be re-energised, the Contractor shall hand the cancelled (i.e. signed off) "permit to work" to the Municipality's authorised representative.

3. PAYMENT TERMS

The subcontractors claim will form part of Main Contractor's claim. So, claims shall be submitted on monthly basis to the main contractor via electrical engineer for approval.

4. SECURITY LIGHTING

4.1 Security/Perimeter Lighting

Security Lighting shall be installed along the perimeter fence of Livingstone Hospital. The distance to be covered shall be approximately 1500m. The extent of installation is as shown on drawings number 2316-T-100-EL Sheet 1.

4.1.1 Floodlight luminaire

The luminaire shall be a 150W LED floodlight with a side-entry spigot slot, complete with a suitable mounting bracket. The housing shall be manufactured from marine-grade (LM6) high-pressure die-cast aluminium and fitted with an opal, non-discolouring, high-impact, injection-moulded acrylic diffuser. The unit shall be designed to withstand site

conditions and ambient temperatures without reducing the LED lifespan, with an ingress protection rating of IP66. Stainless steel helicoil inserts shall be provided to prevent corrosion, and vandal-resistant screws shall be included. The external finish shall be a thick black coating, and the total luminous flux shall not be less than 21,000 lm.

4.1.2 Flood light pole

The pole shall be Galvanised Steel tapered pole with 7m. The pole shall be supplied complete with a 0.5m single spigot and in accordance to the standard specification. The poles shall be planted at a depth of 1 metres deep. The streetlight poles are to be supplied with all components as specified. Access door opening with a cover manufactured from glass filled nylon impregnated in the same colour as that of the surface coat of the pole for fibre glass poles.

The door shall have vandal proof screws to be opened only with a special tool. The tool shall be handed over to the Engineer at the end of the project. Baseplate, gland plate and fuse (with fuse carrier) shall also be supplied with the pole.

Internal wiring for streetlight pole shall be 2.5mm² PVC red & black with green/yellow wire for earth. The wiring shall form part of the price on the bill.

The streetlights luminaires are to be spaced as indicated on the drawings.

4.1.3 Spigot adaptors

The existing luminaires are mounted on concrete poles with 8m mounting height. The luminaire spigot is on an outreach arm extending installation height and angle of the luminaire. For this project the existing outreach arm shall be replaced with a 2m hot dip galvanised spigot adaptor with one side tightly fixed around the pole and the other side with a spigot attached for mounting of the new LED luminaire.

Only SABS marked fittings will be accepted. The tenderer must provide details of the fitting on the form named "Schedule of Materials" which is part of this document.

5. CABLE TRENCHING

The trenching for the cables shall be carried out by hand except where machinery is required on approval of Engineer. The trench shall be 650mm deep and 450mm wide.

200mm imported sand shall be laid along the cable trench cleaned of excess material. Then the cable shall be then be laid onto the sand and 150mm imported sand shall cover the cable. The plastic warning tape shall then follow in line with the cable.

The positions for the trenches on the drawing are indicated in-line with the streetlights. The trench detail described above is shown on the tender drawings.

After cable, sand and warning tape has been laid into the trench the contractor shall cover the trench using original material removed during trenching. Excess material shall be removed from site to a position identified by the Main Contractor.

Sub-contractor shall allow enough time for inspection of the trench by the Engineer representative before cable is laid. The stages of inspection shall be detailed on Engineer's quality control and this shall be made available to the sub-contractor before commencement of works.

6. LV MAINS CABLING

Contract

01 Vol 1.1 Part 1 Scope of Works

The supply cable for streetlights shall be through 6mm², 4 core; PVC insulated PVC bedded SWA PVC sheathed 600/1000V cable with Copper conductors.

For earthing purposes, the cable may be supplied with a complete earth continuity conductor (ECC) built-into the cable SWA. Alternatively, 4mm bare copper earth wire may be supplied separately and shall be installed along the mains cable.

7. CABLE TERMINATIONS

Cable shall be terminated into existing Municipal or new electric kiosk (CDU) and on each pole to make electrical connection. Proper termination kit shall be used to make a good connection.

8. CONSUMER DISTRIBUTION UNIT

Consumer distribution unit (electric kiosk) shall be to NMBM specification.

The kiosk offered must allow for at least nine (9) 16mm² x 1 core CNE service cable tee-offs plus the following mains combinations: -

Type 1 : A termination utilising a CNE cable of up to 95mm² x 3 core;

The consumer distribution units are to be manufactured from 3CR12 steel. Units are to be supplied with sliding removable side covers. The design must be such as to allow safe removal and replacement of these with the busbars energised.

Each consumer distribution unit shall be fitted with a simple robust vandal-proof locking device that shall render unauthorised access virtually impossible. Details of the locking arrangement must be submitted with the tender.

The boards are to be fitted to the consumer distribution units by means of stainless-steel bolts, nuts and flat washers.

The consumer distribution units are to be epoxy powder-coated in colour code 7032 prior to delivery.

9. TESTING AND COMMISSIONING OF INSTALLATIONS

Testing of the installations shall be in accordance with latest SANS 10142-1

C3.14

Vol. 1.1 Part 1
SCHEDULE OF INFORMATION

PROJECT TITLE:	SECTION 9B: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	-----------------------------------------------------------------------------------------------------------------------------------

ITEM	DESCRIPTION
1.	REGISTRATION AS ELECTRICAL CONTRACTOR
2.	DETAILS OF INSTALLATION ELECTRICIAN
3.	SCHEDULE OF MATERIALS OFFERED

1. **REGISTRATION AS ELECTRICAL CONTRACTOR**

The Tenderer must be registered as an Electrical Contractor with the Department of Labour and must also be registered with the Workmen's Compensation Commissioner and the Unemployment Insurance Commissioner to qualify for this tender.

Tenderers must complete the following questionnaire and submit it with this tender.

- a) Has the company been registered with the Department of Labour
YES/NO

Registration No :

Date of issue :

NB: Proof of current registration to be submitted with the tender. Should your tender be successful you will be expected to submit the original document for perusal by the Engineer.

- b) Has the company been registered with the Department of Labour?

- i) The Workmen's Compensation Commissioner YES/NO

Registration No :

Date of issue :

- ii) The Unemployment Insurance Commissioner YES/NO

Registration No :

Date of issue :

I/We certify that the above information is correct

Signature :

Name of Signatory :

Name of Firm Represented :

Address :

.....

Date :

2. **DETAILS OF INSTALLATION ELECTRICIAN**

I/We certify that is a registered installation electrician in terms of the Occupational Health and Safety Act (Act 85 1994) and is permanently employed by my/our company trading as:

.....

I/We further certify that the abovementioned person will be appointed as the responsible person in charge of the installation, which person shall personally supervise the whole of the electrical works as tendered for from inception to completion inclusive of signing all commencement/completion/ cost certificates necessary as part of the Works.

I/We further certify that I/We am/are fully aware of the provisions of the Occupational Health and Safety Act (Act 85 1994), and that my/our company is trading as a registered electrical contracting organisation.

SIGNATURE OF TENDERER	.....	SIGNATURE OF INSTALLATION ELECTRICIAN	.....
REGISTRATION NUMBER OF INSTALLATION ELECTRICIAN	.....	DATE	.....

COMPANY STAMP

NOTE It is an offence to employ a registered single-phase installation electrician on a poly-phase installation and it may be necessary to submit a certified copy of the licence of the person to be employed on any poly-phase project.

3. **SCHEDULE OF MATERIALS OFFERED**

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB : Only one manufacturer's name to be inserted for each item.

ITEM	MATERIAL	MAKE OR TRADE NAME	CONFORMITY TO SANS ?
1.0	Cables:		
1.1	Cables PVC, SWA, Cu		
1.2	Cable glands & shrouds		
3.0	Streetlighting:		
3.1	Poles		
3.2	Luminaires		

NOTE : The Contractor is to note that under no circumstances may materials be installed other than that offered in the above material schedule, which has been approved and accepted by the Engineer. Should the Contractors wish to supply materials other than that originally offered, prior written approval must be obtained from the Engineer, before any orders are placed.

Signature :

Name of Tenderer :

**Vol. 1.1 Part 1
QUALITY SPECIFICATIONS**

PROJECT TITLE:	SECTION 9B: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	-----------------------------------------------------------------------------------------------------------------------------------

QUALITY SPECIFICATION FOR MATERIAL AND EQUIPMENT OF ELECTRICAL INSTALLATIONS.

STANDARD TECHNICAL SPECIFICATION

1.0 DEFINITION

In this Part, the term "Contractor" means the person, firm or company whose tender has been accepted for the work specified in the document of which it forms a part.

2.0 ELECTRICAL SUPPLY AND PHASE ROTATION

The electrical power supply details relative to fault levels, voltage and phase rotation are given elsewhere in this Specification.

The phase rotation specified shall be maintained on all overhead lines, cables, transformers, switchgear and distribution equipment. Where existing connections are to be reconnected to a new system, the phase rotation is to be checked before disconnection and the reconnection made to maintain the same phase rotation.

3.0 SWITCHING OF POWER SUPPLIES

Any switching of existing power supplies shall be pre-arranged with the appropriate Authority. All possible preparation shall be made in advance to minimize the time required for re-energizing the system. All such switching shall be carried out by the "responsible person" unless such authority is given to the Contractor by that person, in writing.

4.0 EARTHING AND BONDING

4.1 RESISTANCE VALUES

While every effort should be made to obtain an earth resistance value of 1,0 ohm or less, the maximum values of earth electrode resistance acceptable, unless stated to the contrary elsewhere in this specification, are 10 ohm at any mini-sub or transformer, 15 ohms at any indoor or outdoor switchboard or HV gang links and 20 ohms at cradle earthing points, lightning arresters or other pole mounted equipment. In the case of the earthing of LV feeder and overhead line neutrals the combined resistance to earth of all systems shall not exceed 10 ohms.

4.2 GENERAL EARTH SYSTEMS

Unless otherwise specified elsewhere in this Specification, the earth systems for distribution transformers, mini subs and ground or pole mounted switchgear, lightning arresters, etc. shall generally comprise two earth electrodes with 1,5m long earth spikes located 6,0m apart, linked with 70mm bare conductor. They are to be located adjacent to Consumer distribution units (CDU) and shall be located at least 1,0m there from.

The earth system is to be connected with 70mm² insulated earth conductor to the earth bar inside CDU.

Immediately after installation and before livening up the equipment the Contractor shall test the earth resistance of the earth system, using the respective earth bar or termination as the reference point. If the required value is not obtained, each earth spike, if installed in a sidewalk, shall be increased in length by driving a further length of 1,5m but where located in open ground, two additional spikes are to be installed. These latter spikes are to be perpendicular to the original two, in line with the spike at the point of connection of the insulated earth conductor and each 6,0m there from. After installing the additional spikes the earth resistance shall again be determined. The Contractor shall submit a report in duplicate confirming the values measured,

including the first set if appropriate, to the Engineer.

Where the number of spikes called for does not achieve the required values, the Engineer is to be advised and will give further instructions for the improvement of the values obtained. Where more spikes are necessary to obtain the required value, these shall not be installed within 6,0m of any other spike.

The common leg of the secondaries of CT's, other than the secondaries of summation transformers, shall be effectively earthed to the main earth system.

4.3 **RETICULATION FEEDER NEUTRAL EARTHING**

At CDU/kiosks a 30m length of bare earth conductor of half the size of the phase conductors but not greater than 70mm² shall be laid from each kiosk earth bar towards the source of supply. The neutral bar shall be connected to the earth bar with green insulated conductor of the equivalent size.

4.4 **EARTH SPIKES**

Earth spikes shall comprise 16mm sectional steel cored rods with a minimum of 0,25mm pure copper coating molecularly bonded thereto, complying with SABS 1063, and of "Cadweld" or equivalent manufacture. The top of earth spikes and the interconnecting conductors are to be 1,0m below finished ground level.

Under no circumstances are earth spikes to be located closer than 1,0m to any structure or plinth nor are they to be installed in pole holes.

The connections to earth spikes shall be by means of at least two phosphor bronze mechanical clamps of an approved type for this duty, or a "Cadweld" joint. The clamps shall not be attached to the rod but must be installed so that the bolt face is in contact with the rod. Brazing will not be accepted. The connection must be wrapped with two layers of "Denzo" tape.

A cable marker as described elsewhere in this Part shall be installed above each spike and shall be labelled "Earth Spike".

4.5 **EARTH CONTINUITY CONDUCTORS**

Earth conductors shall be hard drawn bare copper wire complying with SABS 182 or bi-coloured green/yellow PVC covered, the PVC being UV stabilised complying with SABS 1411 Part 2, as elsewhere specified herein. The conductor sizes shall be such that they can carry the short circuit current likely to be imposed upon them but generally shall be half the area of the phase conductors with a maximum size of 70mm² or in accordance with the appropriate Regulations, unless specific sizes are given elsewhere in this Specification. 50mm² conductors shall be 7/2,65 HD.

Bare earth continuity conductors shall be run with all cables constituting a low voltage distribution system and shall be installed at CDU's, etc.

A single conductor may be used where two or more cables run together, provided that the conductor cross-sectional area is based on the largest size cable in the run, and that branch earth wires are solidly connected to the main earth conductor using only "Cadweld" connections. Earth continuity conductors shall be connected to main earth bars.

Uninsulated earth conductors shall not be less than 500mm below ground level. Above this level all earth conductors shall be green insulated carried in a PVC conduit sleeve except where galvanised conduit is specified elsewhere herein.

A terminal lug shall be crimped onto the end of the main earth conductor for bolting to the main earth bar of a substation or mini-sub or other outdoor equipment. Two mechanical clamps shall be used for connection onto cradles or other equipment, as appropriate.

Earth connections shall be so made that in the event of any connections being removed the earth

connection to the rest of the equipment will not be affected.

4.6 **BONDING GENERALLY**

All metallic parts of the installation are to be bonded to the earth system as required by the appropriate Regulations.

All iron roofs, gutters, down pipes water and waste pipes, as well as all steel structures, are to be bonded to earth. The maximum resistance of any such point to the earthed end of the earthing lead shall not exceed 0,2 ohm.

4.7 **BONDING OF EQUIPMENT**

Where equipment is bolted together, as in the case of an HV or LV switchgear panel, there is to be a 32mm x 4mm copper earth strap extending the whole length of the equipment. All earth bars shall be run in one continuous length as far as possible, and shall not be bent or formed in any way that requires hammering or severe distortion. Any joints shall be lapped with at least two bolts with nuts and washers of suitable size. The lapped ends shall be pre-tinned. If multiple straps are used, they shall be bolted and fixed together at not more than 75mm intervals. All connections shall be made using brass or stainless steel bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels, mini subs and outdoor equipment. Connections to indoor equipment may be made with cadmium plated steel bolts, nuts and washers, with a steel spring washer.

All steelwork on a pole is to be bonded using 25mm² solid copper conductor. This requirement applies to cross-arms, all insulator supports and any other hardware. Where equipment is also mounted on the pole, the bonded metal is to be earthed to an earth spike as elsewhere specified herein, using a 50mm² bare copper conductor.

5.0 **SLEEVES**

Sleeves for cables shall be either PVC with single socket joints complying with SABS 791 (heavy duty) or fibre cement complying with SABS 1223 in the case of 50mm and 100mm sleeves (in compliance with SABS 0198 : Part VIII) or with SABS 819 for larger sleeves, the sizes being as indicated on the drawings. Sleeves shall be nominal 100mm diameter unless otherwise specified. Pitch fibre sleeves shall NOT be used.

The sleeves shall extend at least 1,0m beyond each side of a road crossing and shall be effectively sealed at the ends. Each sleeve shall be provided with a draw-wire. At least one spare sleeve shall be provided at each crossing.

All sleeves shall be laid in accordance with SABS 1200 (LC) and at a depth of 900mm unless otherwise indicated. The radius of the bends used in the sleeves shall not be less than six times the diameter of the sleeve, and the sleeve not be less than twice the cable diameter unless otherwise specified.

Sleeves shall be laid on a 100mm compacted layer of selected bedding material or, if this is not available, on a 100mm sand bedding. The cover layer shall be hand compacted completely around the sleeves and to a cover of 150mm above the top of them. The sleeves shall be supported along their entire length by the bedding. A further 100mm layer of selected bedding material shall be added and this shall be compacted using four to six passes of a vibration pan compactor. Thereafter, the trench shall be back-filled and compacted as specified in the sub-Clause "Compaction" elsewhere in this Part.

Both ends of all sleeved crossings shall be marked by means of cable markers as elsewhere specified, labelled "Cable sleeve".

The Contractor shall make all necessary arrangements with the appropriate Authorities for closing sidewalks and/or half the roadway at a time, and he shall comply fully with any statutory requirement applicable and any requirements the Authorities deem necessary. The surfaces shall be made good to the satisfaction of the authorities and the Engineer, but where tarring or paving is to be laid or re-laid, this shall not be done until the Engineer has given the necessary approval.

Where the HV or main LV cables cross over or pass under other services such as water or drain pipes, they shall be run in sleeves. Where these crossings present a particular hazard to the cable, the Contractor shall draw the attention of the Engineer to any such crossing requiring special attention.

All sleeves for Telkom cables will be 110mm diameter pitch fibre similar to Santar, supplied by the Regional Engineer, unless otherwise specified. These sleeves are to be laid under this Contract and must be kept at a minimum of 0,6m horizontally from and 0,3m vertically above any power cable sleeve. They are to be laid at a depth of 800mm and one end is to be provided with a marker labelled "Telkom".

6.0 **CABLES**

6.1 **DESCRIPTION**

PVC insulated cables for LV shall be to SABS 1507 and shall consist of PVC insulated conductors, PVC bedding, galvanized steel wire armouring and a PVC sheath.

The abbreviation for this type of cable is PVCAS.

Paper insulated cables shall, unless otherwise specified elsewhere in this Specification, be of the screened type suitable for use on an earthed system and complying with SABS 97. They shall be lead sheathed, bedded with two bituminised paper tapes and one layer of fibrous material and preferably armoured with two layers of steel tape or alternatively with a single layer of galvanized steel wires, both served with bituminised fibrous material. Such cables shall comply with Table 19 of SABS 97 and shall be non-draining. They shall have a sheath of lead alloy 'E' and/or be PVC served only if called for elsewhere in this Specification.

The abbreviation for this type of cable is PILCA

Cross-linked polyethylene cables shall be Type A suitable for use on an earthed system and complying with SABS 1339, being individually screened and armoured, unless otherwise called for elsewhere in this specification.

The abbreviation for this type of cable is XLPE

Service cables may be multicore PVC insulated and wire armoured and PVC served (PVCAS), concentric neutral or "Airdac" as specified elsewhere in this Specification.

Concentric neutral cables shall be XLPE insulated complying with SABS 1268. "Airdac" cables shall be XLPE insulated with copper conductors, the phase conductor being contained within a radial band of insulated neutral and bare earth conductors, the whole being XLPE served. All cables are to be installed in compliance with the Manufacturer's recommendations.

The sizes indicated are for cables with copper conductors unless otherwise specified. For LV systems aluminium conductor cables may be offered as an alternative, if a price advantage can be shown. In such cases both the resistance and current carrying capacity of the aluminium cables offered must compare suitably with the sizes of copper conductor indicated. Where cables offered are other than those specified, Scheduled Rates for the supplying, laying, jointing and termination of the cable shall be entered in "Departures from the Specification". The Contractor will be responsible for advising equipment suppliers of the type of cable termination required if a cable other than that specified is accepted.

6.2 **CABLE LENGTHS**

All scheduled cable lengths are for tendering purposes only and the Contractor shall measure the actual lengths required before ordering.

The length of all cables will be re-measured after installation and the lengths indicated in the Bill Schedule of Quantities will be adjusted accordingly. The Contractor will be paid for the actual lengths measured on site and any allowance for snaking, joints or ends must be incorporated in the unit price.

6.3 **HANDLING OF CABLES**

Particular care shall be taken in handling drums of cable. Cable drums shall not be dropped or allowed to roll unchecked. The drums shall, under no circumstances, be rolled in any direction other than that indicated by arrows thereon.

When running cable off a drum it shall be properly and securely mounted so as to rotate without difficulty and the spindle supporting it shall be straight, horizontal, supported at both ends and of adequate strength. Cable shall only be removed from the drum by rotating the drum. The inner end of the cable shall be released before running any cable off the drum.

Care is to be taken to ensure that each length of cable is run off the drum sequentially so that a crossed core situation does not arise at joints.

No cable shall be bent to a radius less than 12 times the overall diameter of the cable; bending or straightening shall be done slowly. PILCA cable shall not be laid if the temperature falls below 10°C.

Should a cable inadvertently become damaged or the lead sheath or end cap punctured, this fact shall be brought to the notice of the Engineer immediately, who shall decide what further action is to be taken. The Engineer shall also be notified immediately should there be any suspicion of moisture having entered a PILCA or XPLE cable.

6.4 **CABLES IN SLEEVES**

Cables shall pass in and out of buildings and under roadways and pavements in sleeves. In addition, where cables cross or run along a boundary between two plots, these cables shall, where called for, be installed in sleeves. All sleeves shall be installed in accordance with the Clause "Sleeves" elsewhere in this Part.

6.5 **CABLES LAID IN TRENCHES**

HV cables shall generally be laid 800mm and LV cables at 500mm below ground level. Where two HV cables are run in the same trench, they shall be laid a minimum of 300mm apart with separate cable slabs over each cable. Where HV and LV cables are laid in the same trench, the HV cable shall be located on the road side and the LV cables on the plot side of the trench. A horizontal distance of not less than 400mm shall be maintained between the cables of different voltage groups. Where a number of LV cables are run in the same trench, they shall be laid with a minimum separation of 100mm. This applies to feeder cables only and not street lighting and service cables which shall be only 25mm apart. Cables shall not cross each other.

Where cables run across even parallel to lateral boundaries, they shall be located 1,0m from the boundary at a depth of 1,0m. If so specified they shall be run in sleeves, otherwise both HV and LV cables shall be protected by cable slabs and a PVC sheet marker laid 300mm, above them.

The trench bottom shall be cleared of all sharp or protruding stones. The trench is then to be refilled with 150mm of soft material and compacted. A further layer of soft material shall be installed after the cables are laid to provide 200mm cover for the cable when compacted. Protective cable slabs a minimum of 50mm thick x 230mm wide shall then be laid in the case of HV cables, and PVC sheet cable marker strip 450mm wide with indelibly printed warnings every 150mm along its length, in the case of LV cables. In cases where HV and LV cables run in the same trench, 100mm of soft bedding for the LV cables shall be situated above the protective cable slabs. Where LV service cables or street lighting cables only are installed, a clean trench bottom and soft material back-fill only is required, and no PVC sheet marker.

The soft material described above may be either sand or back-fill material sifted through a 3,0mm mesh grid. Where the bottom of the trench consists of only soft sandy material, the bedding underneath the cable shall be omitted and the cable shall be laid on the trench bottom at the correct depth. Permission must be obtained from the Clerk of Works or the Engineer for the cable bedding to be omitted in such instances. Where sand has to be brought to site, the quantity must be measured and confirmed by the Engineer or Clerk of Works.

The balance of the trench is to be back-filled with excavated material from which all stones, etc. greater than 100mm in size have been extracted. All such extracted material is to be removed from site.

Cable route markers shall be provided for all HV and main LV feeder cables at road, culvert and Telkom cable crossings, at all changes of direction, at joints and at intervals not exceeding 60 metres along the straight. Cable route markers shall comprise concrete blocks in the shape of truncated pyramids 300mm high, 150mm x 150mm at the top and 225mm x 225mm at the base. An aluminium plate 3,0mm thick minimum, with four rods 75mm minimum welded to it on the underside, shall be cast into the top of the concrete block, and the plate shall have stamped on it the cable data and direction arrows, and at a crossing, the crossing shall be indicated.

The cable route markers shall be placed over the cable, in the trench way, and shall protrude 25mm above the finished ground level but not where they are likely to cause an obstruction or be in the way of moving traffic. Joint markers shall indicate as such. The Contractor shall ensure that the ground under and around the cable marker is properly compacted.

CABLE JOINTS AND TERMINATIONS

6.6 GENERAL

Cable jointing and termination shall be carried out by a qualified cable jointer using only approved standard methods for the particular type of cable. Proof of his training may be required.

Joints in all cables shall only be made at full drum length intervals, but where necessary and when approved by the Engineer cable through joints may be used in other approved positions.

Where a cable has steel wire armouring all strands of armouring shall be through jointed.

Cable connections shall be made by means of crimped or sweated lugs, firmly bolted, one plain and one lock washer being placed under the nut, so that the plain washer is against the lug and there shall be no washer between the lug and the terminal. A plain washer is also required under the bolt head. Alternatively, sweated stems fitting into clamp connections will be acceptable.

Crimped lugs up to 70mm² shall be fitted using manual tools and hydraulic tools from this size upwards. Approved tools are to be used in both cases. An hydraulic tool is to be used on all sizes of aluminium cable. Where a single point hydraulic crimping tool is used, the lug shall be crimped in three places. Where a hexagonal die is used, this shall extend the full length of the lug.

Where aluminium cored cables are to be connected to circuit breakers, the aluminium cable lug shall be bolted to a copper tag or tail which is to be connected to the circuit breaker. The Contractor shall ensure that sufficient Denzo paste is installed on the faces of the lugs.

Where an aluminium cable is to connect to copper, the lug shall be a bi-metal type lug with a copper spade and an aluminium ferrule friction welded to the spade.

Cable connections shall be made using brass bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels and mini-sub and with cadmium plated steel bolts and nuts on all indoor equipment. All bolted joints shall be taped with self-vulcanising (not adhesive) tape.

Where cable connections are required to the HV and LV terminals of transformers, these shall be made off as follows:-

Red Phase to Terminal A

White Phase to Terminal B

Blue Phase to Terminal C

All transformer connections shall be kept in strict phase rotation and where two or more units are to operate in parallel, the respective connections are to be checked for phase rotation and polarity. In the case of cable terminations to transformer bushings the cable itself shall be clamped substantially to a post adjacent to the transformer, connections to the bushings being puttied and taped.

All connections are to be colour coded.

6.7 LV CABLE TERMINATIONS

PVCAS cables shall be made off using adjustable mechanical glands. Care shall be taken to ensure that armour wires are correctly seated in the gland and that all parts are properly tightened. Outdoors, in damp situations and in all mini-sub and kiosks, neoprene waterproofing shrouds are to be fitted over all glands.

Contractor shall ensure that sufficient space is left on the gland plate for the future cables.

Wherever PVCAS cables are terminated to overhead lines a suitable moulded heat shrinkable glove to effect a watertight seal at the crotch shall be used, in accordance with the manufacturer's instructions. Alternatively, a PVC cable cap may be used.

7.0 **CABLE TESTING**

On completed sections of laid, jointed and terminated LV cables, pressure testing of cables shall be carried out by persons qualified to make such test. Certificates with the test results shall be submitted to the Engineer.

STREET LIGHTING

7.1 GENERAL

Street lighting poles and luminaires to be installed under this Contract including the type, mounting height, quantities, etc., are detailed elsewhere in this Specification.

7.2 GLASS REINFORCED FIBRE STREETLIGHT POLES

A cable entry of 80mm diameter shall be provided \pm 600mm below ground level.

The pole shall have an access door of 600mm x 150mm. The door cover shall be an overlapping polycarbonate cover smaller in diameter than the pole to ensure a tight fit. The cover shall be secured to the pole by means of two captive stainless steel tamper-proof screws. (screws that are completely tamper proof and only accessible with tamper-proof screws tool. The door cover shall be completely replaceable and interchangeable.

The pole is to have a 400mm x 400mm x 6mm hot dipped galvanised baseplate secured to the pole by means of hot dipped hook bolts and nuts.

The pole shall be supplied with a glandplate to accommodate 2 x 20mm glands, fuse terminal block and earth stud. This glandplate shall be removable so that the work can be executed outside the pole.

A SABS certificate certifying the bending strength of the pole shall be enclosed.

Copy of Quality Assurance Certificate of SABS 0157 Part 2 shall be enclosed.

A pamphlet furnishing full details of the pole offered, shall be submitted with the tender

7.3 PHOTO-ELECTRIC CONTROLS

Where called for elsewhere in this Specification, a photo-electric control unit shall be used to switch the street lighting installation. Photo-electric switches shall be of the type comprising a photo-sensitive resistor, thermal actuator with an inherent operating delay to make it insensitive to short duration changes in light levels and a change-over switch mechanism, all housed within a tough, translucent, weather and ultra-violet resistant cover. The operating level shall be factory preset to switch on at approximately 50 lux and off at approximately 100 lux. The response time after sudden changes in light level shall be not less than 15 seconds.

Integral protection against voltage surges shall be provided.

A suitable unit would be the "National" type ZS-20AR.

Where the photo-electric switch is pole mounted it shall be positioned in such a way that it will not be affected by spill-light from the street lighting installation or by vehicle headlamps.

7.4 COMPLETION AND TESTING

Immediately after completion of the installation the street lighting system shall be switched on and lamps allowed to stabilise for at least one hour. Any faulty lamps shall be replaced. The voltage at each luminaire shall be measured and topings on the ballasts set accordingly.

7.5 GUARANTEES AND MAINTENANCE

The installation shall be guaranteed and maintenance carried out in accordance with the requirements detailed elsewhere in this Specification, except that where no other defects or maintenance procedures requiring Contractor's attention exist, the installation of replacement lamps supplied by the Contractor will be carried out by the Employer's maintenance personnel, unless otherwise specified elsewhere herein. Under no circumstances is any spare equipment or lamps elsewhere specified to be used for replacement during the foregoing period.

8.0 HOT DIP GALVANISING

Where hot dip galvanising is called for, it shall conform to SABS 763, the required coating thickness being in accordance with Table 1. Unless the galvanized part is to be painted, the coating is to be passivated immediately. Where later painting is required, a suitable primer shall be applied at the galvanising works.

Before galvanising, all cutting, drilling, welding, etc., shall be complete. Bolt threads shall be suitably undercut and nut threads over tapped to ensure the correct fit after galvanising.

All galvanized parts shall be stored under cover and in stacks such that no part is resting on another and there is sufficient ventilation to prevent condensation occurring. No galvanized parts shall be stored directly on the ground but on pallets or similar protection. Any damaged parts or parts attacked by white rust will be rejected.

Any galvanized surface that is subsequently damaged shall, if the Engineer does not require replacement, be touched up in the manner specified in the Clause "Painting" elsewhere in this Part.

9.0 LABELS AND NOTICES

The Contractor shall arrange for the labelling of all equipment, instruments, meters, relays, cables, etc., as indicated below.

All labels shall be ivory or other back engraved white on black labels of the sizes indicated. They are to be located in purpose made holders or otherwise are to be screwed or riveted into position. "Dymo" tape or similar labels will not be accepted nor will labels which are glued in position only.

Labels on poles shall comprise an aluminium plate with the designated number. These labels shall be nailed to the pole 1,5m above ground level. Nails shall be electro-galvanized clout nails.

Prior to any equipment being labelled, the Contractor shall request the Engineer to provide a complete labelling schedule for all items of equipment. Under no circumstances is equipment to be labelled in accordance with the tender drawings since any description thereon is for identification purposes during construction only and is unlikely to apply to the completed Works.

The following list indicates the general labelling requirements but does not limit the extent of labelling required, which shall encompass the full extent of the equipment supplied, or in the case of existing equipment, any such which is affected by this Contract.

50mm high lettering:-

CDU and feeder panel designation.

5mm high lettering:-

CDU feeder breakers and isolators.
Meters, instruments and relays.

3mm high lettering:-

This size shall be used to designate the conductor size and number of cores of each cable installed under this Contract. In addition, all feeder cables shall be labelled to state from whence they are fed.

All kiosks shall be provided with notices as required by the Occupational Health and Safety Act. All doors to such locations shall be fitted with the appropriate notices.

10.0 REMOVED MATERIAL

All material recovered shall become the property of the Contractor and shall be removed from the site by him.

11.0 **INSPECTION, TESTING AND COMMISSIONING**

The Engineer shall have access at all reasonable times to such parts of the Works or the Contractor's premises for the purpose of inspecting, examining and testing the materials, workmanship and performance of any plant or equipment specified for the Works.

All wiring is to be subjected to a test voltage of 2kV for one minute without insulation failure. A Megger test is to be applied with a 500V instrument immediately thereafter to prove the insulation resistance better than 20 megohms.

All equipment necessary to enable the tests to be carried out shall be provided and shall include, inter alia:

- Phase rotation meter
- Avometer
- 500V/2kV DC test set

On completion of the entire installation or any particular section thereof, as may be decided by the Engineer, commissioning shall be carried out by the Contractor, and any tests the Engineer deems necessary shall be conducted. The Contractor shall supply all equipment necessary for the testing and commissioning procedures.

During commissioning, all tap change switches are to be correctly set and locked.

The Contractor shall supply all equipment necessary for the testing and commissioning procedures. The test equipment required at Site shall include, inter alia :

- (i) Phase rotation meter
- (ii) Suitable cable test set
- (iii) 11 000V phasing sticks
- (iv) 500V megger
- (v) Avometer
- (vi) Earth resistance test set

After completion of the commissioning tests the Contractor shall provide duplicate test certificates relating to cable tests and results of earth tests.

The Contractor shall give the Engineer at least 14 days notice of the date of any testing or commissioning so that he may be present if he so wishes. Where the Engineer does not himself, or through his representative, attend to witness the tests, then the Contractor may proceed with the test, duly forwarding to the Engineer certified copies of the results obtained. In such cases, the test shall be deemed to have been made in the presence of the Engineer.

In the event of the equipment or installation not passing the tests, the Employer shall be at liberty to deduct from the Contract Price, all reasonable expense incurred by him or by the Engineer in repeating the tests.

15.0 **COMPLETION OF WORKS**

Before completion of the Contract any damage which may have been done in the process of the installation shall be repaired and made good, trench or excavation work shall be left in a clean and tidy state and all accumulated debris shall be removed from the Site by the Contractor, to the

satisfaction of the Employer and Engineer.

All defects found are to be rectified within one month of written notice of such defects. A penultimate certificate reducing the retention amount to that stated elsewhere in this Specification will only be issued upon submission of As Built Drawings and Operating Manuals as called for elsewhere herein, after completion of all notified defects, and once all test certificates called for in the Clause "Inspection, Testing and Commissioning" elsewhere in this Part have been submitted and accepted by the Engineer.

An appropriate Certificate shall acknowledge practical completion of the Works and the commencement of the period during which the Contractor will be responsible for any defects that may become apparent, and of maintenance of the installation.

The Contract will not be deemed to be finally complete until the Engineer's final payment certificate is issued.

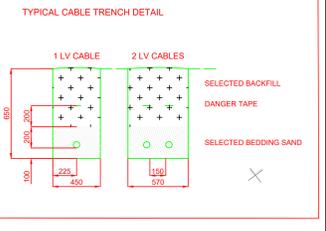
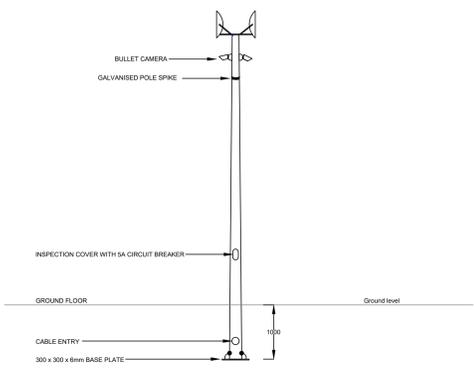
**Vol. 1.1 Part 1
Drawing Schedule**

PROJECT TITLE:	SECTION 9B: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	-----------------------------------------------------------------------------------------------------------------------------------

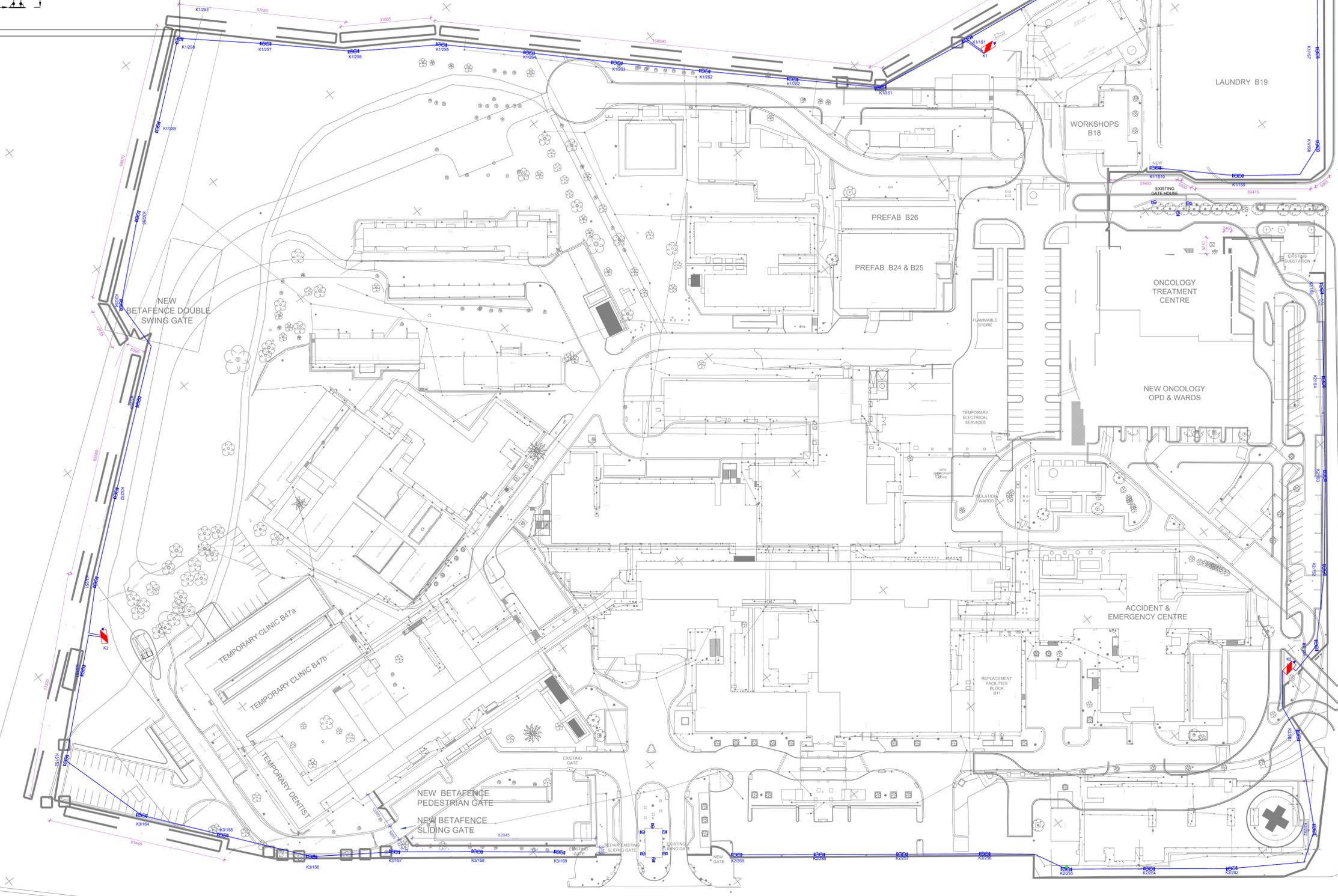
The following drawings form part of this document. Drawing Book is attached separate to this tender book.

DRAWING NO.	DESCRIPTION	SIZE	BOUND	LOOSE
2316-T-E-100A	SITE PLAN: PERIMETER LIGHTING & SLEEVE LAYOUT	A0		✓

TYPICAL FLOOD LIGHT DETAIL



SECURITY LEGEND	
	150W LED FLOODLIGHTS MOUNTED AT 6000 A.F.F.L (IP 66 Rating)
	PHOTO CELL
	2 x 150W LED FLOODLIGHTS MOUNTED ON A 6m GALVANISED POLE INSTALLED ALONG THE FENCES
	OUTDOOR DISTRIBUTION KIOSK
	150W LED FLOODLIGHTS MOUNTED AT 3500 A.F.F.L (IP 66 Rating)
	6mm 4C Cu ECC IN A 50mm PVC SLEEVE



- GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - CD - DEDICATED CIRCUIT
 - L - LIGHTING CIRCUIT
 - ST - STANDING STAND
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING STAND ON STANDBY POWER
 - ALL 500 AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.

TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	26-09-25	ISSUED FOR TENDER	EC



DISCIPLINE: ELECTRICAL
 SERVICE: LIVINGSTONE HOSPITAL : UPGRADING SECURITY FENCE.

DRAWING TITLE: SITE PLAN: PERIMETER LIGHTING & SLEEVE LAYOUT

SCALE	DRAWN
1:500	B. GEELEBOO
DATE: FEBRUARY 2017	DRAWN: B. GEELEBOO
PRINT DATE: 26/09/2025	CHECKED: ERIC CEBA
ARCHITECTS DRAWING NO: 2316-T-E-100A AL	REV No: 00

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 9B: ELECTRICAL INSTALLATION – LIVINGSTONE HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	-----------------------------------------------------------------------------------------------------------------------------------

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.

SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL

WORK PACKAGE 1

SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 1 : PROVISIONAL AND SUPERVISION AMOUNTS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	<u>Other Fixed-charge Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.2	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OHS&A Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	<u>Other Value Related Obligations</u>	Sum	1		
	(Please Specify).	Sum	1		
	. . . . .	Sum	1		
1.3	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	<u>Other Time-Related Obligations</u>	Sum	1		
	(Please Specify).	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL

ELECTRICAL INSTALLATIONS

SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 2 : DISTRIBUTION BOARDS & CABLING

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Distribution Kiosk Fibreglass Kiosk with backing board two lockable doors, base and electrical switchgear as per SLD				
2.1.1	Kiosk 1,2 &3 Supply	each	3		
	Install	each	3		
2.2	Existing Distribution Board Supply and install in existing distribution boards the following switchgear and materials including labelling:				
2.2.1	-: 25 Amps,TP, 6kA circuit breakers	each	3		
2.3	Cables PVC Insulated PVC bedded SWA PVC sheathed 600/1000V copper cables. drawn into building entry sleeve, mounted on Tray or Wire Basket.. Tenderer to allow addition suitable earth conductor for the cable				
2.3.1	6mm ² 4 Core complete with ECC Supply	m	1,600		
	Install	m	1,600		
2.2.1.1	Termination for 6mm ² 4 core cable complete with ECC Supply	No.	100		
	Install	No.	100		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
ELECTRICAL INSTALLATIONS
SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 3 : LUMINAIRES

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Luminaires Luminaires mounted on concrete or suspended ceilings, or on brickwork including lamps and fixing material. NOTE: See contract document for detailed technical specifications.				
3.1.1	Type-P (150W LED surface mounted Flood Light, IP65 rating, Aluminium Body, Colour: Black) Price to include brackets and IP65 terminal boxes for installation on pole Supply Install	each each	94 94		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
ELECTRICAL INSTALLATIONS
SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 4 : SWITCHGEAR EQUIPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
4.1	Switchgear 16 Amp rocker type light switch with coverplate installed into a flush box measured elsewhere.				
4.1.1	10 amp photo electric cell surface mounted in on a kiosk as shown on the Supply Install	each each	3 3		
TOTAL SCHEDULE NO. 4 TO PRICE SUMMARY					

**SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
 WORK PACKAGE 1
 SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
 BILL NO. 5 : GENERAL POWER**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
5.1	Conduit PVC conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
5.1.1	20mm Supply Install	m m	250 250		
5.1.2	25mm Supply Install	m m	100 100		
5.2	Galvanised metal conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
5.2.1	20mm Supply Install	m m	100 100		
5.2.2	25mm Supply Install	m m	50 50		
5.3	Conduit Boxes Round Galvanised box for 20mm conduit, back or side entry for 1, 2, 3 or 4-way chased into brickwork, cast into concrete or fixed in trusses including couplings bushes cover plates and fixing materials (average rate)				
5.3.1	20mm Galv round box Supply Install	each each	50 50		
5.3.2	25mm Galv round box Supply Install	each each	10 10		
TOTAL SCHEDULE NO. 5 TO PRICE SUMMARY					

**SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
WORK PACKAGE 1**

SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 6 : CONDUCTORS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
6.1	Conductors 600/1000 grade PVC insulated single core copper conductors drawn into conduit				
6.1.1	2,5mm ² red/black Supply	m	470		
	Install	m	470		
6.1.2	2,5mm ² yellow & green Supply	m	235		
	Install	m	235		
TOTAL SCHEDULE NO. 6 TO PRICE SUMMARY					

**SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
WORK PACKAGE 1**

SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO 7 : POWER RETICULATION EQUIPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
7.0	WIRING DUCT				
7.1	50mm PVC sleeve Supply	m	1,500		
	Install	m	1,500		
7.2	110mm PVC sleeve Supply	m	1,500		
	Install	m	1,500		
3.1.2	Galvanised Steel Poles for CCTV Cameras and Security Lights Galvanised Steel pole with 7m, base plate, gland plate, 5A MCB, access door. Price to include tamper proof screws for access door and 2 spanners				
3.2	Supply	each	47		
	Install	each	47		
3.1.2	Galvanised Spikes Klaw Spikes for poles above				
3.2	Supply	each	47		
	Install	each	47		
TOTAL SCHEDULE NO. 7 TO PRICE SUMMARY					

**SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
WORK PACKAGE 1**

SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO 8 : EXCAVATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
8.1	Excavations for cables in trenches (450 wide x 600deep)				
8.1.1	Excavate in normal earth	m ³	432		
8.1.2	Allow for Soft Rock in above trench	m ³	150		
8.1.3	Allow for Hard Rock in above trench	m ³	5		
8.1.4	In concrete/ tar/ paving including reinstatement to original finishing	m ³	20		
8.1.5	Selected fines bedding 150mm under cable and 150mm on top of cable	m ³	52		
8.1.6	Removal of unsuitable material	m ³	15		
8.1.7	Supply and install cable marker tape 200mm above cable in trench	m	1,500		
8.1.8	Allow trenching for the poles per specifications	No.	47		
8.1.9	Allow concrete plinth including nuts and bolts for pole mounting	No.	47		
TOTAL SCHEDULE NO. 8 TO PRICE SUMMARY					

SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL
WORK PACKAGE 1
SECTION 9B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO 9 :SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
9.1	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
9.2	Testing of complete installation in terms of the regulations	Sum	3		
9.3	Provide Certificate of Compliance for the new works	Sum	3		
9.4	Provide As-built drawing for the new works	Sum	1		
TOTAL SCHEDULE NO. 9 TO PRICE SUMMARY					

SECTION 9B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND, SLEEVES AND CONDUITS FOR CCTV AT LIVINGSTONE HOSPITAL

WORK PACKAGE 1

SUMMARY OF MAIN BILL

DESCRIPTION	SECURITY FENCE - LIGHTING & CCTV SLEEVES AND POLES
	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : DISTRIBUTION KIOSKS & CABLING	
BILL NO. 3 : LUMINAIRES	
BILL NO. 4 : SWITCHGEAR EQUIPMENT	
BILL NO. 5 : GENERAL POWER	
BILL NO. 6 : CONDUCTORS	
BILL NO 7 : POWER RETICULATION EQUIPMENT	
BILL NO. 8 : EXCAVATIONS	
BILL NO. 9 : SUNDRY ITEMS	
SUBTOTAL	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 9B ON FINAL SUMMARY ON PAGE 455	

SECTION 9C

LIVINGSTONE HOSPITAL

CCTV INSTALLATION

LIVINGSTONE HOSPITAL - HEALTH CENTRE

CCTV INSTALLATION

DETAILED TECHNICAL SPECIFICATION

1. CCTV INSTALLATION

1.1 GENERAL INFORMATION

The Subcontractor is responsible for providing the installation in accordance with the Specification as well as the specifications and requirements set out in the Department of Health ICT, Data and Security systems installation specification.

The intent of this document is a performance specification for a modular security management system encompassing the sub-systems described. Tenderers are at liberty to offer enhancements to the equipment specified.

The security subcontract will be inclusive of the following IP based installations:

- Closed Circuit Television Cameras, Monitors and Recording
- Control Desk in control room

Tenderers are encouraged to tender a main option which would represent a compliance with the specification and quantities and would relate to the completed Bills of Quantities. Alternative options may be offered together with a full motivation and separate Bills of Quantities.

In instances where reference is made or inferred to particular products, it only serves the purpose of defining a required standard. Tenderers are requested to offer the best and most suitable products for the application.

General items include the following:

- a) Cable trays to be supplied and used where possible and all cable to be neatly and securely tied with cable ties.
- b) If no cable trays, all cables to be installed in conduit and correctly secured.
- c) No cables may be left to lay on the ceiling boards.
- d) All cable loops to have minimum of 20% spare capacity.
- e) All cabling to electronic locks is to be installed on the secure side.
- f) No joins in cable will be accepted.
- g) All junction boxes and boards to be correctly mounted.
- h) All door monitors will be of the 20mm recessed type unless specified otherwise.
- i) All readers must be wired to facilitate the reader sounder and other functionalities.
- j) All electronic devices, power supplies and any other control equipment must be mounted neatly in suitable enclosures to protect them against damage and tampering. Each enclosure will be fitted with a tamper switch and all power supplies are to be monitored.
- k) All floor, room and ceiling voids to be protected and monitored for smoke, fire and water.

- l) All power supplies will be battery backed up with a 12Vdc, sealed rechargeable lead acid battery.
- m) All CCTV, access control, fire detection and monitoring, plus emergency evacuation systems are to be connected to UPS power with battery back-up. Head end equipment must be provided with dual UPS power from different power breakers.
- n) On system hand-over, the installation is to be complete and FULLY functional.
- o) A complete set of user friendly operating instructions to be provided.
- p) Adequate operator training to be included in tender price.
- q) A complete set of design architecture drawings depicting correct positioning of all equipment to be supplied.
- r) All devices including public address speakers and access control devices must be labelled according to the floor number and location on the floor. A register of the items installed and the corresponding numbering must be supplied on hand over.
- s) All equipment must be networkable and facilitate remote monitoring and operation.

1.2 **SPECIFICATION**

1.2.1 Local and Supply Authority

The project location is within the bounds of the Livingstone Hospital (Standford Road & Lindsay Road, Korsten, Gqeberha). The area is also approximately 2.1km from Algoa Bay

This site consists of both single-storey and multi-storey buildings.

1.2.2 Site Conditions

Equipment shall be suitable for the following conditions:

Ambient temperature	-5°C to 40°C
Altitude	0m
Lightning	Severe
Dust	Severe
Relative Humidity	32°C dB Temperature 22°C wB Temperature
Nominal LV Supply	400/231 [no load] 4 wire, 3 phase system with earthed neutral.
Nominal HV Supply	22kV 3-wire system.
Frequency	50 Hz.

Details to be submitted with the tender document:

Should the Subcontractor in any way differ from the Specification, the differences shall be stated in detail. The information shall be included in a covering letter accompanying the tender, stating the paragraph of the Specification where the requirements are deviated from.

It shall be noted that the information entered in the schedules will not relieve the Subcontractor of his obligations to comply with the Specification.

1.2.3 Scope

The Specification covers all activities up to final commissioning and maintenance during the guarantee period of the installation.

- IP Based CCTV Axis, Bosh or other Department of Health approved
- Full Integration of the above

A Main Security Control Room and Equipment Room will be provided in the building site in which the Access Control and CCTV systems will be installed.

Tenderers shall allow for the future extension of the systems and equipment offered for an additional 20% extension of all systems.

Access Control and CCTV termination boxes will be provided on and will be all linked to the Main Security Control Room.

1.2.4 The Access Control and CCTV Installation shall include but not be limited to:

- The design of the ACS and CCTV systems, supply, delivery, installation, testing, integration, commissioning, guarantee and maintenance of the Access Control and CCTV Installation.
- The provision of all necessary equipment, tools, accessories and test equipment to complete the Security Installation.
- The timeous provision of building work details.
- The provision of shop drawings showing all wiring routes, equipment details, equipment positions, [including fixing details], sleeves, etc.
- The compilation of manuals including a full schedule of equipment installed spares lists, "As Built" drawings and information as set out in the Specification.

1.2.5 The Access Control and CCTV Installation shall include but not be limited to:

- The design of the Access Control and CCTV systems, supply, delivery, installation, testing, integration, commissioning, guarantee and maintenance of the Access Control and CCTV Installation.
- The provision of all necessary equipment, tools, accessories and test equipment to complete the Security Installation.
- The timeous provision of building work details.
- The provision of shop drawings indicating all wiring routes, equipment details, equipment positions [including fixing details], sleeves, etc.
- The compilation of manuals including a full schedule of equipment installed spares lists, "As Built" drawings and information as set out in the Specification.

1.2.6 Related work by others

The following related work associated with this Subcontract will be carried out by other parties as specified:

1.2.6.1 Access Control and CCTV Subcontractor and Main Contract

The following work will be provided by the Main Contractor:

- Provisions of penetrations in walls and structure for reticulation of cabling.
- Closing of ducts and opening through concrete slabs after installation of wiring and piping.
- Setting out of all equipment

1.2.6.2 CCTV Subcontractor and Electrical Subcontract

The following work will be provided by the Electrical Subcontractor:

- A 400V 3-phase or 240V [uninterrupted] power supply point at each point as required and identified by the Subcontractor. Any transformers or converters required for other voltages shall form part of this subcontract and shall be priced with associated equipment.
- All conduit and wiring channels.

1.2.8 Service Level Agreement [SLA]

Tenderers shall specifically state their ability to provide a comprehensive SLA to the Owner on completion. Tenderers shall submit with their tender's examples and a list of performance-driven SLA's provided for installations similar in scope and nature.

1.2.9 Confidentiality

It is a condition of issue of these documents that the successful Subcontractor shall maintain full confidentiality of the documents and drawings.

During the course of the Subcontract, the successful Subcontractor shall institute such procedures to ensure proper control over copies of documentation and drawings. Such procedures may vary from time to time but shall include:

- Numbering of all prints of shop drawings and recording issue.
- Return of all drawings when superseded.

1.2.10 Conduits and wire-ways

All conduits and wire-ways required by the Subcontractor will be supplied and installed by the Electrical Subcontractor.

All conduits in areas of exposed slabs will either be cast in concrete or installed on surface as the case may be.

All conduits in walls will be built in.

The Subcontractor shall provide shop drawings for requirements over and above those already indicated for co-ordination purposes. These shall in particular, show size and position of outlet boxes as well as details of any special fixings that are required. All additional wire

ways and power supplies to be supplied on shop drawings that may be accordance with the product specified

All wiring required to make the Security System operational shall form part of this Subcontract. This shall include all power and control wiring from the 400V/240V power points installed by the Electrical Subcontractor.

All wire ways in the Security Control and Equipment rooms are excluded from this subcontract and will be installed by the Electrical Subcontractor.

1.3 **CLOSED CIRCUIT TV SYSTEMS**

A closed circuit television surveillance system shall be provided for surveillance of areas as shown on the drawings. The system shall allow for an extension of + 30% of equipment for further project phases.

1.3.1 General

- Network capability [with Client interface]
- Storage of minimum 3 years for all transactions, to be confirmed with Department of Defence
- Anti-pass back facility
- Audit trails
- Off-line capability; minimum of 25 000 events
- Exception report capability
- Maintenance; UPS and battery backup
- SLA's and maintenance contracts in place
- Minimum 60 months manufacturer's warranty on all equipment from date of commissioning
- Servers to be housed in server rooms or secure and adequately ventilated areas.
- All areas to have reader in/no touch release button out; unless specified otherwise
- High risk areas to have second verification facilities
- All high risk areas [server rooms, security Control Room/control room] to have one-on-one access control facility
- The hardware and software must form part of the fully integrated computerised system.
- System must provide for host/visitor function.
- Event interfacing with CCTV to be established
- Provision must be made for on-site image back-ups on an external storage device.

1.3.2 Cameras

Colour cameras with Infra-Red capabilities shall be installed in positions as indicated on the drawings or as measured in the Bills of Quantities. Camera positioning will be determined by positioning of equipment in the Server. The main areas to be equipped with CCTV will be:

- Perimeter Fence

Cameras will be powered by dedicated network switches, provided by the infrastructure. The Camera's must be IP based, and able to run off POE or POE+ Cameras operating at 24V shall be equipped with a dedicated power supply, which will be priced as part of the camera.

Cameras shall only be sourced from approved suppliers able to provide ongoing support and service. Tenderers shall state the manufacture of cameras and control systems offered.

The cameras indicated shall be fitted with Image Motion Detection to enable image transmission to be event triggered, or by access or alarm within the system. It shall be possible to define separate motion detection areas within the camera field of view, with each motion detection section to be armed or disarmed in accordance with time settings.

CCTV cameras shall be offered as high resolution, with conversion to monochrome facility in low light conditions, [less than ½ Lux]. Tenderers shall state the resolution performance of cameras offered.

All outdoor cameras shall be provided with an environmental housing.

The Subcontractor shall allow to install cameras by means of suitable mounting brackets against face brick and granite surfaces. In all cases an extended mounting arm of high quality steel or aluminium, 500mm in length, shall be allowed. The bracket and extension arm shall allow for adjustment of the camera. Although it is preferred the brackets are sourced from the camera supplier samples shall be provided for approval to the Contractor.

Dome cameras will be required with the following features:

- Sizes of 270 and 360mm diameter
- Camera will be mounted on ceiling
- Pendant dome colour will be white
- Lower dome colour will be smoked
- Auto focus/zoom with simple override to manual operation

1.3.3 LCD Monitors

Four 42" [inch] LCD monitors shall initially be required in the Main Security Control Room [allow for 30% extension].

The following basic requirements for viewing images shall be achieved:

- Stored images retrievable from log in 2 seconds.
- View live images from up to 4 cameras through one operator station, or up to 4 operation stations to view one camera.
- Zoom feature must be available for display images.
- Authorisation levels shall be available for all cameras, to select or prevent image display.
- Images displayed must be provided with digital Pan, Tilt and Roll functions.
- Tenderers shall state the viewing performance in fps that may be achieved by viewing multiple cameras at full size, as well as available trade-offs between frames capture rate and picture quality.

The following controls shall be mounted on the front of the monitor:

- On/Off power switch.
- Brightness control.
- Contrast control.

Horizontal and vertical hold controls shall be incorporated. These controls shall preferably be front mounted but easily accessible rear mounted controls will be accepted.

The monitors shall be freestanding with no cut-outs being accepted in the control desk. The Subcontractor shall note that all the monitors will be in close proximity to each other. It is therefore essential that all monitors are adequately screened and properly earthed. Any mutual interference and beat frequency that result shall be corrected at the expense of the Subcontractor.

Adequate cooling shall be provided in the design of the control desk for the monitors. This shall include ventilation slots at the rear of the control desk and pass through for cabling.

All wiring shall be neatly bonded and arranged. All intermediate power and control wiring shall terminate at numbered terminal strips. Video cables shall terminate on associated equipment using accepted connectors. Power and signal cables shall be separated throughout. Screened cables shall be used wherever possibility of mutual interference exists.

Cognisance shall be taken in the selection of the cabling to ensure cables will comply with the distance requirements between the cameras and the Security Control Room. Cabling shall be sized and selected to prevent degradation of the signal over the cables.

It is emphasised that the monitors shall be arranged to provide optimum viewing angles.

The subcontract includes all equipment and materials, cables and connections, terminals, plugs and sockets covers, finishing pieces, power skirting, etc. required to provide a neat and operationally complete installation.

1.3.4 Network Video Recorder (NVR) Hardware Platform

- The Network Video Recorder, a device for recording IP based video from IP output cameras or analog cameras that have been converted to IP output shall consist of a PC Compatible Chassis and other specified components, as shown in the following sub sections that together create the Network Video Recorder.
- NVR Chassis Configuration
- NVR Chassis which shall support a maximum of four video capture boards, one hard drive for OS and Software and up to eight (8) Serial ATA hard drives using Multi-Drive hard disk controller for video storage. RAID 5 hard disk controller configuration shall be available as an additional cost option.
- The end-user shall have the option of providing their own NVR chassis under the condition that it meets or exceeds the specifications as follows:
 - ✚ Intel Motherboard
 - ✚ 3.2 Ghz Processor Or Greater
 - ✚ 8 GB Of RAM or Greater
 - ✚ 800 Mhz Front Side Bus
 - ✚ Microsoft Windows XP Professional or Microsoft Windows 2003 Server Operating System on a dedicated OS Drive
 - ✚ 10/100/1000 Ethernet
 - ✚ Storage on SATA, SCSI or Fibre (internal or external)
 - ✚ Net Meeting
 - ✚ CD-ROM Drive
 - ✚ Mouse, keyboard and monitor (for initial setup)

1.4 **Security measures**

1.4.1 First line of security

The first line of security will be implemented by passive and active components. Passive components will comprise of either a boundary security wall, electric fencing and signage whilst the active components will be implemented by means of security guards, access control and closed

circuit television [CCTV] surveillance. This first point of security is at the point of entry to the development. At this point of entry, there will be a gatehouse at the boundary wall of the site. The gatehouse will comprise of security boom gates and attached to this, CCTV to record footage of the driver as well as the registration plate of the vehicles. The gatehouse will also comprise of a 24 hour security guard to monitor tenant access, visitors, deliveries and maintenance. The vehicle entry points will also be complemented with biometric access control points for free access of tenants.

> **Operation**

Staff approaching the site will be forced to present their biometric access/card access. This process can be recorded in such a way that a digital photo of tenant faces and vehicle registration numbers may be recorded and attached to the time stamp of the access control transaction.

Visitor access to the development and the apartments will comprise of dependant procedures. The first procedure will require the visitor to actively converse with the security and then enter into the visitors book the reason for entry. After positive identification of the visitor by the security guard, the guard will then release the vehicle boom for entry to site.

Please note that visual intercom identification can rather be selected for this process but has not been allowed for in the budget or documentation.

The security guard at the gatehouse will be supplied with a telephone, panic button and an access control override button for additional security.

The security booms will be equipped with infra-red sensors as well as an inductive loop system for monitoring of vehicle entries.

Sufficient lighting to be provided to enable adequate CCTV coverage.

1.4.2 Second line of security

This line of security will be implemented at the reception counter in the main foyer. The main entrance doors should be access controlled in order to maintain security at these gates after hours. These doors will be controlled by the receptionist via a push button located in a non-visible location at the reception desk.

The reception desk will be monitored by CCTV and will be recorded and stored for a minimum of thirty [30] days. The reception desk will house all necessary equipment to ensure that this security line secures access to all departments. The reception desk must house two desk top computers.

The first computer will be used for the following administration operations:

- Staff enrolment
- Visitors station
- Access control queries
- Internet and network queries

The second computer will be used for CCTV monitoring of visitors entering the premises, making their way through to the reception foyer. This will provide further security for staff and visitors.

> **Operation**

All visitors must report to the main reception following positive communication with the security guard at the gatehouse.

Dedicated view monitors in the security control room must be implemented to monitor all visitors entering the development.

At reception, all visitors must be enrolled as a visitor. The details captured by the receptionist could vary depending on the level of security required.

The details could include:

- Personal details captured onto the system and attached to the tenants profile for use of future visits.
- Biometric details in addition to the personal details to register the visitor as a frequent visitor.
- The above details and an attached photograph of the visitor to ensure maximum security.

If positive identification is obtained by the receptionist either by intercom system or on a pre-booked system, the visitor will then proceed to the designated area.

All details of the visitor entering the premises will be kept on record for a period of thirty [30] days, [unless otherwise requested].

> **General**

1. Intercom and CCTV to be provided at main access points for vehicles and visitors to communicate with the Control Room after hours
2. Panic buttons to be installed at all guardhouse desks
3. No PC's in the Control Room, they must be in the server room with extensions to the monitor keyboard and mouse and other devices as needed to the Control Room
4. Portable de-mustering stations to be provided for roll call at assembly points.
5. Guard tour monitoring software to be provided.
6. Provision for firearm storage [By Architect]

1.5 CONTROL DESK

The Subcontractor will install the security control desk [position to be finalised]

An equipment cabinet shall be part of the desk for installation of processing units or front-end equipment. Adequate ventilation openings shall be provided to ensure operating temperatures of equipment will not be exceeded.

To reduce the heat component in the security control room an equipment room it has been allowed for the installation of air-conditioning. All cabling to processors and for example amplifiers will be extended from the equipment room to the security control room.

The Control Room will consist of:

- 2 x workstations with 4 off 42" monitors
- House keys cabinet
- Lockable Key Cabinet
- Rack to accommodate 2 way radios
- Video intercom for control room
- Interlocking door

Openable doors at the bottom of the desk will allow easy access to power points and cabling underneath the desk. All cabling shall be internally reticulated with no surface mounted cabling being acceptable. The desk shall arrive on site complete with power skirting and wiring channel adequately sized for installation of the following equipment:

- Booms controls
- CCTV
- Magnetic locks control
- Intercoms
- Door monitoring

All pass through shall be adequately sized for the volume of cabling to be reticulated to the worktop inclusive of power supplies and plug tops.

Manufacturing drawings of the security control desk shall be submitted for approval prior to manufacture. It will be expected of the Subcontractor to liaise with other Subcontractors through the Contractor to obtain all inputs with respect to final installation details and interfaces. The point of interface shall be a terminal strip in the console where other Subcontractors will interface and connect wiring to.

All of the above is to be integrated under one Software Platform and work in conjunction with each other.

1.6 VIDEO IDENTIFICATION SYSTEMS [VIDEO BADGING]

The access control system must have the capability for video badging at the following areas:

- Main reception counter; all visitors and tenants
- Vehicle entrance; all drivers and vehicles
- Pedestrian entrance; all visitors and tenants

At the main reception and pedestrian entrance the system shall have the capability to capture a video image and audio record of the visitor, which shall be linked to the Access Control record.

At the vehicle entrance the system shall have the ability to capture video images of the driver as well as the vehicle registration plate, by means of a video and audio image, date and time stamped and linked to the Access Control System record.

LIVINGSTONE HOSPITAL - HEALTH FACILITY

CCTV INSTALLATION

SCHEDULE OF DRAWINGS

DRAWING NO.	DESCRIPTION OF DRAWING
2316-T-E-100B CCTV	Site Plan: CCTV & Sleeve Layout

LIVINGSTONE HOSPITAL - HEALTH FACILITY

CCTV INSTALLATION

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

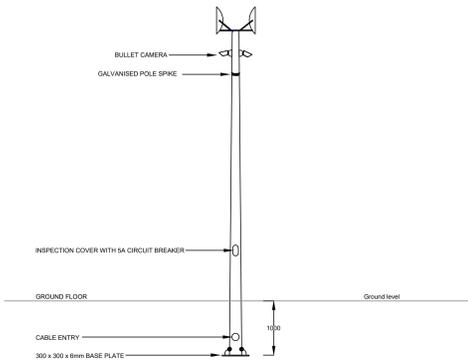
Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

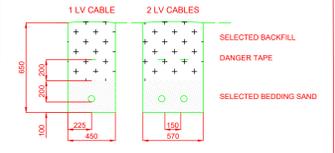
Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.

TYPICAL FLOOD LIGHT DETAIL



TYPICAL CABLE TRENCH DETAIL



ICT LEGEND

	DATA LINE CONNECTION POINT IN CEILING VOID OR FOR CCTV UNIT
	VANDAL PROOF STATIC SURVEILLANCE CAMERA
	110mm PVC SLEEVE
	6m GALVANISED POLE FOR FLOODLIGHTS INSTALLED ALONG THE FENCES

- GENERAL NOTES:
1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 2. DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 7. NON-CORRODING DRAW WIRE STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 9. ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB).
 10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 11. CIRCUITING:
 - AC - AIR CONDITIONING
 - CD - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - PS - STANDING SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING SMO ON STANDBY POWER
 12. ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.



TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	26-09-25	ISSUED FOR TENDER	EC



DISCIPLINE
ELECTRICAL

SERVICE
LIVINGSTONE HOSPITAL : PERIMETER CCTV.

DRAWING TITLE
SITE PLAN: CCTV & SLEEVE LAYOUT

SCALE	1:500	DRAWN	B. GEELEBOO
DATE	FEBRUARY 2017	CHECKED	B. GEELEBOO
PRINT DATE	26/09/2025	CHECKED	ERIC CEBA
DESIGN NUMBER	2316-T-E-100B CCTV	REV No.	00



COMPREHENSIVE PERIMETER ELECTRONIC SECURITY SOLUTION SPECIFICATION



SPECIFICATION FOR THE SUPPLY, DELIVERY, INSTALLATION AND MAINTENANCE OF A COMPREHENSIVE PERIMETER ELECTRONIC SECURITY SOLUTION FOR WESTERN REGION HEALTH FACILITIES.

I. SURVEILLANCE		
NO.	QTY	SCOPE OF WORK
1.1		Outdoor Bullets
	1	6 MP, IP Bullet AcuSense Strobe Siren, 12mm lens, IP67, IR 60m, H.264+ Galvanized Vandal Proof Cage with Anti Bird Spike
1.2		PTZ Solutions
	1	6m Galvanised Square Cubed Surveillance pole, 100mm with Thick outside wall, large base plate, gussets, and mounting plate, predrilled and galvanised. Anti Climb Spike Collar Enclosure Fiberglass - H:450 x W:300 x D:210 PTZ 6+4MP TandemVu IR 200m 25x IP66 White Aluminium PTZ Wall mount Bracket, 97x182x3 White Aluminium PTZ Corner mount Bracket Video wise Camera Power Supply, 24Vac 3Amp, Surge Protected, Fused
2. CONTROL ROOM LAYOUT AND DESIGN		
2.1		Digital Recorder
	1	16Ch AcuSense NVR, 256Mbps, 4 SATA, alarm I/O:16/4, 1.5U
	1	Surveillance HDD 9TB Serial ATA 600 (6Gbps) - 64MB Cache @ 5900rpm
2.2		Server Room
	1	19 unit Server Cabinet, international standard - Material: Cold-rolled steel - Surface finish: Digressing, pickling, phosphoric powder coated - Frame thickness: 2.0mm - Curved, perforated front door - Double-section back door - Double-section side panels for easy access and assembly - Ventilation rate of over 80% - Adjustable, closeable, top and bottom wiring channels - Vertical cable management at the back of the cabinet - Mounting rail with U mark - Standard with earthing kits - 1000Kg loading C44- Adjustable feet and heavy duty castors Dimensions: 600mm Wide x 2000mm High x 950mm Deep - INCLUDES BRUSH PANELS, 24 PORT PATCH PANELS, BLANKS AND TRAYS
	1	PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty
2.3		Field Switches
	1	PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty
	1	RCT 4U 450mm Fixed Wall Mount Cabinet Perforated Metal - Black wall mount cabinet with 2x Front Upr. 2x Glands + Screws - Optional Fans / Trays / Power Rail / Brush & Patch Panels RCT 1 Way Sing Fan Wired - Wall Mount + Casing
2.4		Wireless Communications
	1	M5: 5GHz, 23dBi Hi Power, TDMA Station, incl PoE
2.5		Wireless Fidelity
	1	Wifi 1000/1000 Mbps Uncapped data with router, Outbound Uncapped Voice Channel, Inbound Uncapped Voice Channel, Quality Voice Bandwidth, Non-Geo Voice Numbers, Minimum contract term: 36 months
	1	Wifi Extender RE650 AC2600, Dual band, WPA/WPS button, MU-MIMO for 4 x faster connection, 1 Year Warranty (extended to 3 years)
2.6		Cable Hardware
	1	CAT6 Shielded Twisted Pair Cable - UV protected, per meter
	1	CAT6 RJ45 Crimp Connector
	1	CAT6 RJ45 Weather Boot



CONFIDENTIAL

2.7	Keyboard Controller	
	|	Speed Dome - IP Network Keyboard Controller
2.8	Review Control Station	
	|	24/7 LED CCTV Monitoring Screen 55" Full HD 1920 x 1080 P
	|	26" to 60" Universal LCD / LED Panel Wall mount Bracket
	|	HDMI to HDMI Gold Plated Cables
2.9	Control Room Layout and Design	
	|	Air-conditions 12 BTU
	|	Carpeting for new floor (Vinal Floor) per sqm
	|	Painting of control room per sqm
	|	Woodwork for display wall (Carpentry, Screen mount brackets and Consoles)
	|	Two Office Chairs
	|	A4 Black Printer, Wi-Fi connectivity, Windows Supported OS
3. BACK - UP POWER SUPPLY SYSTEM		
3.1	UPS Solution	
	|	10KVA 6U ON-LINE SINE WAVE Rack mountable UPS - Black
		SNMP Network Card WTU / GTU / GRU ON-LINE UPS
		Modbus Card for WTU / GTU / GRU ON-LINE UPS
		Rack Mount Kit for GRU Rack mountable UPS
		5000VA ON-LINE UPS (with AVR, Monitoring Software + Cable & Built-in Surge Protection) – Black
=10 Hours Duration		
4. POST IMPLEMENTATION SUPPORT MECHANISM		
4.1	Operating And Maintenance Manual:	
	|	Supply hard copy format operating and maintenance manual for IP surveillance system.
		Supply electronic media format operating and maintenance manual for IP surveillance system.
4.2	Training On Site:	
	|	Training of staff on the entire IP surveillance system.
4.3	Infrastructure Installation Drawing/Diagram:	
	|	Submit Installation drawings or diagram depicting infrastructural layout for work done of all IP surveillance systems installation
4.4	Guarantee:	
	|	36 Month warranty and maintenance for the complete IP Surveillance system including a next business day response.



SECTION 9C - LIVINGSTONE HOSPITAL - BILL for CCTV INSTALLATION

WORK PACKAGE 1

BILL NO. 1 : PROVISIONAL AND SUPERVISION AMOUNTS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.10	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	<u>Other Fixed-charge Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.20	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OHS&A Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	<u>Other Value Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.30	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	<u>Other Time-Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 9C - LIVINGSTONE HOSPITAL - BILL for CCTV INSTALLATION
ELECTRICAL INSTALLATIONS
BILL NO. 2 : CCTV

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Outdoor Bullet Camera 6 MP, IP Bullet AcuSense Strobe Siren, 12mm lens, IP67, IR 60m, H.264+ with Galvanized Vandal Proof Cage with Anti Bird Spike				
	Supply	each	44		
	Install	each	44		
2.2	Digital Recorder 16Ch AcuSense NVR, 256Mbps, 4 SATA, alarm I/O:16/4, 1.5U with Surveillance HDD 9TB Serial ATA 600 (6Gbps) - 64MB Cache @ 5900rpm				
	Supply	each	1		
	Install	each	1		
2.3	Monitors 24/7 LED CCTV Monitoring Screen 55" Full HD 1920 x 1080 P with 26" to 60" Universal LCD / LED Panel Wall mount Bracket				
	Supply	each	2		
	Install	each	2		
2.4	Licensing and Software CCTV software including licensing, graphics and commission etc.	Sum	1		
2.5	Switches PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty				
	Supply	No	14		
	Install	No	14		
2.6	Cabling				
2.6.1	CAT6 Shielded Twisted Pair Cable (UV protected)	m	2500		
2.6.2	All consumables i.e CAT6 RJ45 Crimp Connector, CAT6 RJ45 Weather Boot etc.	Sum.	1		
2.7	Cabinets 19 unit Server Cabinet, international standard - Material: Cold-rolled steel - Surface finish: Digressing, pickling, phosphoric powder coated - Frame thickness: 2.0mm - Curved, perforated front door - Double-section back door - Double-section side panels for easy access and assembly - Ventilation rate of over 80% - Adjustable, closeable, top and bottom wiring channels - Vertical cable management at the back of the cabinet - Mounting rail with U mark - Standard with earthing kits - 1000Kg loading C44- Adjustable feet and heavy duty castors Dimensions: 600mm Wide x 2000mm High x 950mm Deep - INCLUDES BRUSH PANELS, 24 PORT PATCH PANELS, BLANKS AND TRAYS	No.	2		
2.8	Uninterrupted Power Supply 10KVA 6U ON-LINE SINE WAVE Rack mountable UPS - Black, SNMP Network Card WTU / GTU / GRU ON-LINE UPS, Modbus Card for WTU / GTU / GRU ON-LINE UPS, Rack Mount Kit for GRU Rack mountable UPS, including all wiring and consumable required	Sum.	1		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 9C - LIVINGSTONE HOSPITAL - BILL for CCTV INSTALLATION

WORK PACKAGE 1

BILL NO 3 : SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Testing of complete installation in terms of the regulations	Sum	1		
3.2	On site training	Sum	1		
3.3	As-built drawing	Sum	1		
3.4	Operating and Maintenance Manuals	Sum	1		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 9C - LIVINGSTONE HOSPITAL - BILL for CCTV INSTALLATION

WORK PACKAGE 1

COST ESTIMATE

DESCRIPTION	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : CCTV	
BILL NO 3 : SUNDRY ITEMS	
SUBTOTAL	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 9C ON FINAL SUMMARY ON PAGE 455	

SECTION 10A

PROTEA FLATS

ELECTRICAL INSTALLATION

Vol. 1.1 Part 1

DETAILED SPECIFICATIONS

PROJECT TITLE:	SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS
-----------------------	----------------------------------------------------------------------------

Contents

1.0 INTRODUCTION & GENERAL 2

2.0 SCOPE OF WORK 2

 2.1 General Electrical Installation 2

 2.2 Specialised Installation..... 3

 2.3 Temporary Works 3

3.0 SYSTEM LOW VOLTAGE..... 3

4.0 NOTICES AND FEES..... 3

5.0 QUALITY OF MATERIALS..... 3

6.0 BALANCING OF LOAD 3

7.0 BUILDER’S WORK 3

8.0 SCHEDULES OF INFORMATION 4

9.0 SCHEDULE OF LUMINAIRES..... 4

10.0 SAMPLES AND ALTERNATIVES 5

11.0 SUPERVISION, WORKMANSHIP AND DELAYS 5

12.0 MAKING GOOD 5

13.0 COMMISSIONING AND TESTING 5

 13.1 Commissioning..... 5

14.0 CONSTRUCTION PROGRAMME 6

15.0 DRAWINGS 6

 15.1 General..... 6

 15.2 Record / As-Built Drawings 6

16.0 MEASUREMENT 6

17.0 TRENCHING AND EXCAVATIONS 7

 Trenching 7

 Bedding of Cables..... 7

 Backfilling 7

 Random Check of Excavations 7

18.0 LAYING, TESTING AND TERMINATION OF CABLES..... 7

 18.1 Cable Terminations 7

Cable Marker Tape.....	8
19.0 MONTHLY CERTIFICATES.....	8
20.0 LV DISTRIBUTION BOARDS.....	8
20.1 Cascading	8
21.0 DISTRIBUTION CABLES	9
22.0 PVC SLEEVES.....	9
23.0 CABLE DRAW WIRE	9
24.0 EARTHING AND BONDING	9
24.1 General.....	9
24.2 Water pipes.....	10
24.3 Roofs, gutters and down pipes	10
24.4 Sub-distribution boards	10
24.5 Sub-circuits.....	10
24.6 Common Earth	10
24.7 Non-metallic Conduit.....	10
24.8 Flexible Conduit	10
24.9 Connection	11
24.10 Earth Terminal for Other Services.....	11
25.0 CONDUIT, WIREWAYS AND ACCESSORIES.....	11
25.1 Conduit.....	11
25.2 Wiring Trunking / Channel	11
26.0 WIRING.....	12
27.0 WALL SWITCHES AND SWITCH SOCKET OUTLETS.....	12
28.0 TELEPHONE, COMPUTER AND SECURITY INSTALLATIONS.....	12
29.0 EQUIPMENT GUARANTEES, MAINTENANCE AND INSTRUCTION MANUALS.....	13
30.0 COMMISSIONING AND TAKE-OVER	13
30.1 Completion.....	13

1.0 INTRODUCTION & GENERAL

Should there be any conflict or ambiguity between sections of this enquiry, then the sections will be considered in the following order of priority: -

- Schedule of Quantities
- Detailed Specification
- Drawings

Should the Tenderer notice any inconsistencies between these sections, it is his responsibility to notify the Engineer in order to obtain clarification thereon.

2.0 SCOPE OF WORK

The main contract is for the Alterations and Additions at Protea Flats: New GSA Offices in Gqeberha.

The Electrical installations shall entail but not limited to following:

- Installation of new Distribution Board;
- Installation of new LED lights throughout the buildings;
- Installation of socket outlets wall mounted;
- Installation of DB switchgear in the existing buildings
- Installations of mains cables from existing DB to new DB planned for feeding the building.
- Removal and disposal of existing electrical installations.
- Earthing, testing and commissioning of the entire installation including issuing of Certificate of Compliance
- Installation of conduits, conduit boxes and wireways for other services viz; HVAC
- etc.

2.1 General Electrical Installation

The Works will be executed in strict accordance with the following: -

- a) The Wiring Code - SANS 10421-1: 2008,
- b) Interior Lighting Part 1: Artificial Lighting of Interiors; Part 2: Emergency Lighting – SANS 10114-1,
- c) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.

The general electrical installation is reflected on a set of drawings attached to this tender document.

- a) The Subcontractor to be mindful of the fact that the site is occupied at all times.
- b) The Subcontractor will be responsible for the supply and installation of new LV mains cabling between new distribution board and existing distribution board in existing buildings including replacement of circuit breaker for the new cables.

- c) Supply and installation of
- complete building electrical installation including cabling, distribution board;
 - the installation and connection to power of such equipment as may be supplied by the Employer or other Employer's contractors; and
 - Testing of the Electrical installation and issue Certificates of Compliance.
- d) Produce marked up As-Built drawings of the Electrical Installations and be submitted to the Engineer.

The description of the Works listed above, is not necessarily complete and shall not limit the work to be carried out by the Subcontractor under this Contract.

2.2 Specialised Installation

No allowance for specialised installations on this contract.

2.3 Temporary Works

No temporary works are envisaged in the current design and planned execution of the works except where the Subcontractor wants to incorporate it as part of his work method. In case the requirement for such is necessary, the subcontractor to arrange with Engineer for a variation order of such work before it is carried out.

3.0 SYSTEM LOW VOLTAGE

The supply to all the Electrical installation shall be 400/230 Volts, 1-phase, 50 Hertz, Earthed Neutral.

4.0 NOTICES AND FEES

The Subcontractor shall liaise, issue all notices to and make the necessary arrangements with the Technical department of the hospital for planned power disruptions.

5.0 QUALITY OF MATERIALS

Materials are to comply with the relevant South African National Standards (SANS), or to IEC specifications, where no SABS specifications exist. All materials used shall bear the SABS or IEC mark of approval as applicable.

NB: All materials must be of South African manufacture. The Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.

6.0 BALANCING OF LOAD

The Subcontractor is required to balance the load as equally as possible over the multiphase supply **before Final Completion**.

7.0 BUILDER'S WORK

Subject to negotiations the following may be provided by the Contractor under the building works contract: -

- Making good all chasing

- Refurbishing of road surfaces

8.0 SCHEDULES OF INFORMATION

The schedule of information contained in this document consists of 2 sections:

- a) Information supplied by the Employer (schedules of; drawings, cables, luminaires, etc. as applicable.)
- b) Information to be supplied by the Subcontractor at bidding stage (information on the makes, types and ratings of equipment and materials offered, schedules of prices and rates for variations, schedules of quantities, etc. as applicable.)

Bidders are required to enter, at the time of bidding, in the “Schedule of Equipment and Material Offered”, sufficient details to enable the equipment concerned to be identified without ambiguity.

It is not sufficient for a tender to state “as specified” in the schedules.

Failure to complete these schedules (if applicable) may render a bid invalid.

9.0 SCHEDULE OF LUMINAIRES

9.1 All luminaires to

- LED lights with suitable constant current drivers,
- 3m cable with 5A plug,
- bear a SABS or IEC mark of quality approval
- with average lifespan of 50 000 hours
- Power Factor > 0.9

9.2 LED luminaires to be 4000K

Type	Description
A	50W LED surface mounted linear luminaire with: <ul style="list-style-type: none"> • Body – Seamless Aluminum extruded frame • Non-dimmable • Dimensions –1500mm (L)
N	20W LED module bulkhead wall/ceiling mounted luminaire with: <ul style="list-style-type: none"> • Body – base and trim to be made of high-pressure die-cast marine grade aluminium • Stainless steel helicoils inserts to avoid metal corrosion. • Diffuser – Opal non-discolouring high impact acrylic injection molded diffuser • Environmental Protection – IP 65 • Vandal resistant screws • Colour – thick black • Total luminous flux not less than 3400lm

Z	11W LED downlight luminaire <ul style="list-style-type: none"> • Body – Die cast extruded aluminum • Dimensions – 96mm diameter x 130mm
---	-----------------------------------------------------------------------------------------------------------------------------------------------------------------

10.0 SAMPLES AND ALTERNATIVES

- 10.1 Prior to installation the Subcontractor is required to submit for approval, comment or records, samples of materials upon which his offer is based. Any approvals given or comments made shall be on the generality of the scheme and shall not relieve the Subcontractor of his responsibility to ensure full compliance with all performance and regulatory criteria and materials latent defects.
- 10.2 Samples forwarded shall be labelled and remain in the site stores until completion of the Works. The samples may be the last items to be embodied in the installation.
- 10.3 All expenses in do with the supply and return of the samples shall be borne by the Subcontractor.

11.0 SUPERVISION, WORKMANSHIP AND DELAYS

The work shall at all times, for the entire duration of the contract, be executed under the supervision of a skilled and competent representative of the Subcontractor, who must be able and authorized to receive and execute instructions on behalf of the Subcontractor.

In the event that inferior materials or bad workmanship, on the part of the Subcontractor, leads to remedial work requiring redesign by the Engineer, the cost of this work, including related professional fees, shall be borne by the Subcontractor.

Similarly, should delays in the contract be caused by poor performance on the part of the Subcontractor causing the Engineer to spend extraordinary time on the project, the extra costs incurred may be borne by the Subcontractor.

These costs will be based on the ECSA hourly rates and may be deducted from claims due or claims which will become due to the Subcontractor.

12.0 MAKING GOOD

The Subcontractor will carry out in all instances any work to be made good such as damage to or disturbances of the building installations caused by themselves or their employees during the execution of the contract, at their own cost.

13.0 COMMISSIONING AND TESTING

13.1 Commissioning

A documented method shall be followed, whereby the Subcontractor shall ensure that his installation is correctly constructed in accordance with the manufacturers' specifications, consultant's specification, consultant's design and all codes of practice and international design codes.

The commissioning procedure must allow for signing off of the major items of equipment by a qualified person in terms of the codes. These signed off documents will form part of the record drawings.

The Subcontractor will arrange for all inspections and testing of the installation after completion, including the issuing of the Certificate of Compliance. All notices, fees, including inspection and re-inspection are the responsibility of the Subcontractor and all the relevant costs shall be borne by him.

Any materials or workmanship considered as faulty or incorrectly or inadequately installed or repaired, will be substituted, altered or rectified to the approval of the Employer, without additional cost to the Employer.

14.0 CONSTRUCTION PROGRAMME

The Subcontractor must submit their construction programme to the Contractor who will amalgamate it into the project's overall construction programme.

15.0 DRAWINGS

15.1 General

Drawings must be read in conjunction with this Specification and the Bills of Quantities. Any errors, discrepancies or contradictions found between the Drawings, the Specifications and the Bills of Quantities must be brought to the attention of the Engineer immediately, they become evident.

The drawings generally show the scope and extent of the proposed work and shall be construed as showing every minute detail of the work to be executed.

Construction Drawings will be issued to site accompanied by drawing issue slips. The drawing issue register reflecting the summary of all previously issued drawings with dates and drawing revisions will be issued at the site meetings once a month.

15.2 Record / As-Built Drawings

The Subcontractor must prepare Record/As-Built drawings of the completed installation indicating actual cable runs, circuiting, distribution board details, final cable sleeves positions, luminaire, power point layout details, etc. The contract will not be deemed complete until these drawings have been submitted to the Engineer.

16.0 MEASUREMENT

The Subcontractor shall not make any assumption regarding the installation. If there is any doubt or ambiguity, they must consult the Engineer. The Subcontractor shall take cognisance of the fact that the schedule of quantities is re-measurable and final quantities may be adjusted at the end of the contract.

- a) All outlet boxes up to 100 x 100mm are measured as one item regardless of the number of conduit entries.
- b) Outlet boxes shall be without covers and draw boxes shall include covers, screws, etc.
- c) Conduit boxes shall always include the fixing to the conduit with lock and bush nuts.
- d) All switches and plug (SSO) units shall include the fixing to conduit and shall include screws, cover plates.

- e) All fittings, equipment and accessories shall include connections to power. All light fittings shall be complete with lamps and tubes.
- f) All measurements are net Tendered rates must allow or wastage.

17.0 TRENCHING AND EXCAVATIONS

Trenching

Unless detailed otherwise on the drawings LV cables the depth shall be 450mm below final ground level. Where the required depth cannot be met, the Engineer may approve one of the following:

- cement slabs over the cables or
- cable Sleeve pipe encased in 300 mm² concrete

The width of trenches shall be 400mm.

Bedding of Cables

Normal bedding requirements for both LV cables shall be 150mm sand under and 150mm sand over.

The final decision as to whether bedding may be omitted or not, shall rest with the Engineer.

Backfilling

- a) All loose stones or any other material likely to cause damage to cables shall be removed from trenches, before backfilling commences.
- b) Backfilling shall not commence without prior inspection, measurement and approval of the Engineer.
- c) Backfilling of trenches in road reserves shall be in layers not exceeding 300mm and the use of a suitable compacting machine is essential in order to achieve an approximate 9,8% Mod. AASHO density.

Random Check of Excavations

The Engineer reserves the right to request random check holes to check cable depth, bedding, material classification, danger tape, etc.

18.0 LAYING, TESTING AND TERMINATION OF CABLES

18.1 Cable Terminations

- (a) Terminations shall only be made by competent personnel, who are regularly employed on this type of work, and shall be carried out strictly in accordance with manufacturers' instructions.
- (b) The use of only first class appropriate materials is essential. Conductors, all ferrules and lugs shall be tinned and crimped by means of suitable mechanical or pneumatic tools designed for this purpose and then sweated with solder added to ensure adequate contact.

- (c) Where cables are cut and not immediately made off, the ends shall be sealed without delay to avoid the ingress of moisture.
- (d) Cable core numbers and/or colours shall be matched without twisting of the joints; cable end seals may be removed and replaced to check this before the next length is laid.

Cable Marker Tape

- (a) All LV cables shall be marked by means of a continuous tough, brightly coloured PVC sheet known as "Cable Marker Tape" of 800 gauge thickness.
- (b) Cable marker tape shall be laid approximately 300mm from finished ground level.
- (c) Wording on cable marker tape shall be in three languages "DANGER INGOZI" with skull and crossbones.
- (d) Cable marker tape requirements and the following principle shall be followed:
 - One cable - 1x150mm
 - Two cables - 2x150mm or 1x300mm

19.0 MONTHLY CERTIFICATES

Pro forma claim form will be available from the Engineer in Excel format. This is the preferred method of submitting payment claims. Should the Subcontractor have developed his own method of claiming, this may be submitted to the Engineer for consideration.

20.0 LV DISTRIBUTION BOARDS

All distribution boards (DBs) will be supplied, wired and complete with all equipment of quantities, types, sizes and ratings as specified on the distribution board schematics, which are included in this document. The distribution boards shall be manufactured in accordance with the Standard Specification for Electrical Building Services.

The Subcontractor shall confirm on site, before commencing with any work that sufficient space and access is available to install the DBs as specified. No additional claims for failure to check these details and rectify any default will be entertained.

Before handing over, the DBs shall be thoroughly cleaned inside and outside. Damaged finished surfaces shall be made good where necessary with identical paint to the original finish.

20.1 Cascading

All DBs circuit breakers must be cascaded from the same manufacture and cascading group. Mixing of circuit breaker makes is not allowed.

Each cascaded DB must be marked with a label

- a) informing that circuit breakers are cascaded and
- b) that replacement and / or additional circuit breakers must be chosen from the same circuit breaker group.

20.2 Shop Drawings

Prior to manufacturing of DBs subcontractor will prepare and issue shop drawings of each DB to Engineer for approval. If the shop drawing is prepared by the manufacturer the subcontractor shall thoroughly review the drawings to ensure they match Engineer's schematic line diagrams before handing them over to the Engineer.

21.0 DISTRIBUTION CABLES

21.1 Low Voltage (LV)

All PVC Insulated PVC bedded SWA PVC sheathed 600/1000V copper cables shall conform to SANS 1507-3 and bear the SABS mark. Cables shall be of sizes and type as shown on the drawings.

Cables shall be supplied with their corresponding termination and as well as corresponding bare copper earth wire. The Subcontractor is advised to measure actual lengths of cable required on site before ordering as no compensation for over-measurements shall be entertained.

22.0 PVC SLEEVES

- a) Pipes for sleeving shall be the ribbed type-Kabelflex unless otherwise noted on the drawings.
- b) Sleeves shall be laid as shown on site plan layout at depth of approximately 300mm from the top of the sleeve to the finished surface of the road and laid in a straight line with the cable trench.
- c) All sleeves must be cleared by pulling through a loose fitting mandrel prior to the installing of cables.
- d) All spare sleeves shall be provided with a No. 10 gauge galvanised draw wire and sealed on both ends with a non-hardening material.

23.0 CABLE DRAW WIRE

The draw wire shall be No. 10 gauge galvanised draw wire.

24.0 EARTHING AND BONDING

24.1 General

Earthing shall generally be in accordance with

- SANS 10142-1: Wiring Code (latest),
- SANS 10198: Part 3 - Earthing System; General Provision; Part 12 - Installation of Earthing Systems,
- SANS 10200: Neutral Earthing in Medium Voltage Industrial Power Systems,
- SANS 10292: Earthing of Low Voltage Distribution Systems,
- SANS 1063: Earth Rods Couplers and Clamps,
- The latest amendments and the OHS Act 1993.

24.2 Water pipes

All metallic hot and cold-water pipes shall be bonded with 12mm x 0,8mm perforated for solid copper strapping and connected to the nearest system earth. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150-mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board.

24.3 Roofs, gutters and down pipes

Unless not included in the Lightning Protection System (LPS), all metal parts of roofs, gutters and down pipes shall be earthed.

24.4 Sub-distribution boards

A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of bare stranded copper conductors installed along the same routes as the supply cables or in the same sleeve or ladder as the power conductors.

Alternatively, armoured cables with earth continuity conductors included in the armouring (ECC) may be utilised where specified or approved.

24.5 Sub-circuits

The earth conductors of all sub-circuits shall be connected to the earth busbar in the source DB in accordance with SANS 10142.

24.6 Common Earth

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Engineer. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered.

NB: The common earth shall not be broken.

24.7 Non-metallic Conduit

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

24.8 Flexible Conduit

An earth conductor shall be installed in all non-metal flexible conduits. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

24.9 Connection

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Subcontractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

24.10 Earth Terminal for Other Services

A readily accessible earthing terminal shall be provided, near the trap door in the ceiling, for the bonding of other services such as a television aerial or satellite dish, an audio system, a video surveillance system, and the like, to the building. Such an earthing terminal shall be bonded to the consumer's earth terminal in the main distribution board by a conductor of at least 6mm² copper or equivalent, and shall be identified by the earth symbol.

NOTE: Providers of services other than the electrical power services should not access the distribution board or other parts of the electrical installation.

25.0 CONDUIT, WIREWAYS AND ACCESSORIES

25.1 Conduit

Unless indicated differently on the drawings conduit and conduit accessories shall be PVC to SABS 950. The conduit shall be chased in concrete, under plaster and roof space, throughout.

All conduit/outlet boxes and associated fittings for use in this installation will be SABS approved.

The Electrical subcontractor must provide all conduit and accessories for the lighting, power, ICT, telephone, Access Control and fire protection as shown on the drawings and as measured in the bills of quantities.

Flexible metallic tubing of galvanized steel shall be used for connections to water heaters, fans and other similar equipment. The corrugations of the tubing shall have a rectangular cross section suitable to fit standard brass connections.

The Subcontractor must provide all conduit and accessories for the lighting, power, telephone, communications, computer and security systems, as shown on the drawings and as measured in the schedule of quantities.

Flexible metallic tubing of galvanized steel shall be used for connections to water heaters, fans and other similar equipment. The corrugations of the tubing shall have a rectangular cross section suitable to fit standard brass connections.

25.2 Wiring Trunking / Channel

Wiring channels in ceiling voids and wherever indicated on the drawings shall be medium duty of Cab-strut, Cooper B-Line or similar manufacture and shall be complete with corner pieces, end pieces, hangers, junction pieces, supply conduits, cover plates and

power outlets as specified and indicated on the drawings. Note that Nylon or plastic nuts or fasteners will not be accepted.

The channels shall be manufactured of rolled sheet steel and hot-dip galvanised to SANS 763.

Channels shall be cold galvanised at all joints, sections that have been cut and at places where the galvanising has been damaged.

The wiring channels' metal covers shall be pop-riveted closed, once the installation is complete.

26.0 WIRING

Lighting and Power wiring in conduit and channel wireways shall comprise 600/1000V single core PVC insulated copper wire sized in accordance with the distribution board schematics. Conductor outer sheaths shall be of the following colours: -

- Phase Conductors : red, white, blue
- Neutral : black
- Earth : yellow + green

27.0 WALL SWITCHES AND SWITCH SOCKET OUTLETS

Wall switches to be of the flush type complete with cover plates and screws in 100 x 50 x 50 extension outlet boxes mounted on the wall surfaces. Colours of outlet boxes and cover plates must match.

All surfaces mounted switch socket outlets to be in 100 x 100 x 50 extension outlet boxes mounted on the wall surfaces. Colours of outlet boxes and cover plates must match.

All switched socket outlets mounted in power skirting to have matching cover plates.

The Subcontractor will be responsible for the installation of power points to feed equipment such as water heaters, air-conditioners, fans, security equipment, etc. This equipment, if supplied and installed by others, will be connected by the Subcontractor.

The cover plates to all outlets shall be fixed **AFTER** the final coat of paint has been applied.

All light switches and power points shall be labelled with indelible circuit numbers to tie up with a circuit number in the distribution boards. Labels shall be engraved Trifoliate or similar approved type. Labels, like Brother™ labels that peel off easily shall not be acceptable.

28.0 TELEPHONE, COMPUTER AND SECURITY INSTALLATIONS

The Subcontractor will be responsible for the complete installation of conduits and wireways for the I.C.T and security systems.

29.0 EQUIPMENT GUARANTEES, MAINTENANCE AND INSTRUCTION MANUALS

The Contractor shall submit to the Engineer all manufacturers' equipment guarantees, maintenance and instruction manuals. All equipment shall be guaranteed for twelve (12) months from the date of Practical Completion Certificate.

30.0 COMMISSIONING AND TAKE-OVER

The Contractor shall carry out the necessary tests according to the SANS 10142-1, the latest edition and provide a certificate of compliance on completion of the works. The certificates of compliance shall be of the approved type as issued by the Electrical Contracting Board of South Africa.

30.1 Completion

The electrical installation shall be complete after:

- (i) All tests for the switchgear and cables have been done and tests results submitted to the Engineer.
- (ii) The completed certificates of compliance have been submitted to the Engineer.
- (iii) All equipment guarantees, maintenance and instruction manuals have been submitted to the Engineer.
- (iv) The site has been cleared of all debris and electrical waste materials and left in a neat and tidy condition.
- (v) "As-Built" drawings of the Works; and
- (vi) Certificates for Distribution boards have been submitted to the Engineer.

Vol. 1.1 Part 1
QUALITY SPECIFICATIONS

PROJECT TITLE:	SECTION 10B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 3- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

QUALITY SPECIFICATION FOR MATERIAL AND EQUIPMENT OF ELECTRICAL INSTALLATIONS.

STANDARD TECHNICAL SPECIFICATION

1.0 DEFINITION

In this Part, the term "Contractor" means the person, firm or company whose tender has been accepted for the work specified in the document of which it forms a part.

2.0 ELECTRICAL SUPPLY AND PHASE ROTATION

The electrical power supply details relative to fault levels, voltage and phase rotation are given elsewhere in this Specification.

The phase rotation specified shall be maintained on all overhead lines, cables, transformers, switchgear and distribution equipment. Where existing connections are to be reconnected to a new system, the phase rotation is to be checked before disconnection and the reconnection made to maintain the same phase rotation.

3.0 SWITCHING OF POWER SUPPLIES

Any switching of existing power supplies shall be pre-arranged with the appropriate Authority. All possible preparation shall be made in advance to minimize the time required for re-energizing the system. All such switching shall be carried out by the "responsible person" unless such authority is given to the Contractor by that person, in writing.

4.0 EARTHING AND BONDING

4.1 RESISTANCE VALUES

While every effort should be made to obtain an earth resistance value of 1,0 ohm or less, the maximum values of earth electrode resistance acceptable, unless stated to the contrary elsewhere in this specification, are 10 ohm at any mini-sub or transformer, 15 ohms at any indoor or outdoor switchboard or HV gang links and 20 ohms at cradle earthing points, lightning arresters or other pole mounted equipment. In the case of the earthing of LV feeder and overhead line neutrals the combined resistance to earth of all systems shall not exceed 10 ohms.

4.2 GENERAL EARTH SYSTEMS

Unless otherwise specified elsewhere in this Specification, the earth systems for distribution transformers, mini subs and ground or pole mounted switchgear, lightning arresters, etc. shall generally comprise two earth electrodes with 1,5m long earth spikes located 6,0m apart, linked with 70mm bare conductor. They are to be located adjacent to Consumer distribution units (CDU) and shall be located at least 1,0m there from.

The earth system is to be connected with 70mm² insulated earth conductor to the earth bar inside CDU.

Immediately after installation and before livening up the equipment the Contractor shall test the earth resistance of the earth system, using the respective earth bar or termination as the reference point. If the required value is not obtained, each earth spike, if installed in a sidewalk, shall be increased in length by driving a further length of 1,5m but where located in open ground, two additional spikes are to be installed. These latter spikes are to be perpendicular to the original two, in line with the spike at the point of connection of the insulated earth conductor and each 6,0m there from. After installing the additional spikes the earth resistance shall again be determined. The Contractor shall submit a report in duplicate confirming the values measured,

including the first set if appropriate, to the Engineer.

Where the number of spikes called for does not achieve the required values, the Engineer is to be advised and will give further instructions for the improvement of the values obtained. Where more spikes are necessary to obtain the required value, these shall not be installed within 6,0m of any other spike.

The common leg of the secondaries of CT's, other than the secondaries of summation transformers, shall be effectively earthed to the main earth system.

4.3 **RETICULATION FEEDER NEUTRAL EARTHING**

At CDU/kiosks a 30m length of bare earth conductor of half the size of the phase conductors but not greater than 70mm² shall be laid from each kiosk earth bar towards the source of supply. The neutral bar shall be connected to the earth bar with green insulated conductor of the equivalent size.

4.4 **EARTH SPIKES**

Earth spikes shall comprise 16mm sectional steel cored rods with a minimum of 0,25mm pure copper coating molecularly bonded thereto, complying with SABS 1063, and of "Cadweld" or equivalent manufacture. The top of earth spikes and the interconnecting conductors are to be 1,0m below finished ground level.

Under no circumstances are earth spikes to be located closer than 1,0m to any structure or plinth nor are they to be installed in pole holes.

The connections to earth spikes shall be by means of at least two phosphor bronze mechanical clamps of an approved type for this duty, or a "Cadweld" joint. The clamps shall not be attached to the rod but must be installed so that the bolt face is in contact with the rod. Brazing will not be accepted. The connection must be wrapped with two layers of "Denzo" tape.

A cable marker as described elsewhere in this Part shall be installed above each spike and shall be labelled "Earth Spike".

4.5 **EARTH CONTINUITY CONDUCTORS**

Earth conductors shall be hard drawn bare copper wire complying with SABS 182 or bi-coloured green/yellow PVC covered, the PVC being UV stabilised complying with SABS 1411 Part 2, as elsewhere specified herein. The conductor sizes shall be such that they can carry the short circuit current likely to be imposed upon them but generally shall be half the area of the phase conductors with a maximum size of 70mm² or in accordance with the appropriate Regulations, unless specific sizes are given elsewhere in this Specification. 50mm² conductors shall be 7/2,65 HD.

Bare earth continuity conductors shall be run with all cables constituting a low voltage distribution system and shall be installed at CDU's, etc.

A single conductor may be used where two or more cables run together, provided that the conductor cross-sectional area is based on the largest size cable in the run, and that branch earth wires are solidly connected to the main earth conductor using only "Cadweld" connections. Earth continuity conductors shall be connected to main earth bars.

Uninsulated earth conductors shall not be less than 500mm below ground level. Above this level all earth conductors shall be green insulated carried in a PVC conduit sleeve except where galvanised conduit is specified elsewhere herein.

A terminal lug shall be crimped onto the end of the main earth conductor for bolting to the main earth bar of a substation or mini-sub or other outdoor equipment. Two mechanical clamps shall be used for connection onto cradles or other equipment, as appropriate.

Earth connections shall be so made that in the event of any connections being removed the earth

connection to the rest of the equipment will not be affected.

4.6 **BONDING GENERALLY**

All metallic parts of the installation are to be bonded to the earth system as required by the appropriate Regulations.

All iron roofs, gutters, down pipes water and waste pipes, as well as all steel structures, are to be bonded to earth. The maximum resistance of any such point to the earthed end of the earthing lead shall not exceed 0,2 ohm.

4.7 **BONDING OF EQUIPMENT**

Where equipment is bolted together, as in the case of an HV or LV switchgear panel, there is to be a 32mm x 4mm copper earth strap extending the whole length of the equipment. All earth bars shall be run in one continuous length as far as possible, and shall not be bent or formed in any way that requires hammering or severe distortion. Any joints shall be lapped with at least two bolts with nuts and washers of suitable size. The lapped ends shall be pre-tinned. If multiple straps are used, they shall be bolted and fixed together at not more than 75mm intervals. All connections shall be made using brass or stainless steel bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels, mini subs and outdoor equipment. Connections to indoor equipment may be made with cadmium plated steel bolts, nuts and washers, with a steel spring washer.

All steelwork on a pole is to be bonded using 25mm² solid copper conductor. This requirement applies to cross-arms, all insulator supports and any other hardware. Where equipment is also mounted on the pole, the bonded metal is to be earthed to an earth spike as elsewhere specified herein, using a 50mm² bare copper conductor.

5.0 **SLEEVES**

Sleeves for cables shall be either PVC with single socket joints complying with SABS 791 (heavy duty) or fibre cement complying with SABS 1223 in the case of 50mm and 100mm sleeves (in compliance with SABS 0198 : Part VIII) or with SABS 819 for larger sleeves, the sizes being as indicated on the drawings. Sleeves shall be nominal 100mm diameter unless otherwise specified. Pitch fibre sleeves shall NOT be used.

The sleeves shall extend at least 1,0m beyond each side of a road crossing and shall be effectively sealed at the ends. Each sleeve shall be provided with a draw-wire. At least one spare sleeve shall be provided at each crossing.

All sleeves shall be laid in accordance with SABS 1200 (LC) and at a depth of 900mm unless otherwise indicated. The radius of the bends used in the sleeves shall not be less than six times the diameter of the sleeve, and the sleeve not be less than twice the cable diameter unless otherwise specified.

Sleeves shall be laid on a 100mm compacted layer of selected bedding material or, if this is not available, on a 100mm sand bedding. The cover layer shall be hand compacted completely around the sleeves and to a cover of 150mm above the top of them. The sleeves shall be supported along their entire length by the bedding. A further 100mm layer of selected bedding material shall be added and this shall be compacted using four to six passes of a vibration pan compactor. Thereafter, the trench shall be back-filled and compacted as specified in the sub-Clause "Compaction" elsewhere in this Part.

Both ends of all sleeved crossings shall be marked by means of cable markers as elsewhere specified, labelled "Cable sleeve".

The Contractor shall make all necessary arrangements with the appropriate Authorities for closing sidewalks and/or half the roadway at a time, and he shall comply fully with any statutory requirement applicable and any requirements the Authorities deem necessary. The surfaces shall be made good to the satisfaction of the authorities and the Engineer, but where tarring or paving is to be laid or re-laid, this shall not be done until the Engineer has given the necessary approval.

Where the HV or main LV cables cross over or pass under other services such as water or drain pipes, they shall be run in sleeves. Where these crossings present a particular hazard to the cable, the Contractor shall draw the attention of the Engineer to any such crossing requiring special attention.

All sleeves for Telkom cables will be 110mm diameter pitch fibre similar to Santar, supplied by the Regional Engineer, unless otherwise specified. These sleeves are to be laid under this Contract and must be kept at a minimum of 0,6m horizontally from and 0,3m vertically above any power cable sleeve. They are to be laid at a depth of 800mm and one end is to be provided with a marker labelled "Telkom".

6.0 **CABLES**

6.1 **DESCRIPTION**

PVC insulated cables for LV shall be to SABS 1507 and shall consist of PVC insulated conductors, PVC bedding, galvanized steel wire armouring and a PVC sheath.

The abbreviation for this type of cable is PVCAS.

Paper insulated cables shall, unless otherwise specified elsewhere in this Specification, be of the screened type suitable for use on an earthed system and complying with SABS 97. They shall be lead sheathed, bedded with two bituminised paper tapes and one layer of fibrous material and preferably armoured with two layers of steel tape or alternatively with a single layer of galvanized steel wires, both served with bituminised fibrous material. Such cables shall comply with Table 19 of SABS 97 and shall be non-draining. They shall have a sheath of lead alloy 'E' and/or be PVC served only if called for elsewhere in this Specification.

The abbreviation for this type of cable is PILCA

Cross-linked polyethylene cables shall be Type A suitable for use on an earthed system and complying with SABS 1339, being individually screened and armoured, unless otherwise called for elsewhere in this specification.

The abbreviation for this type of cable is XLPE

Service cables may be multicore PVC insulated and wire armoured and PVC served (PVCAS), concentric neutral or "Airdac" as specified elsewhere in this Specification.

Concentric neutral cables shall be XLPE insulated complying with SABS 1268. "Airdac" cables shall be XLPE insulated with copper conductors, the phase conductor being contained within a radial band of insulated neutral and bare earth conductors, the whole being XLPE served. All cables are to be installed in compliance with the Manufacturer's recommendations.

The sizes indicated are for cables with copper conductors unless otherwise specified. For LV systems aluminium conductor cables may be offered as an alternative, if a price advantage can be shown. In such cases both the resistance and current carrying capacity of the aluminium cables offered must compare suitably with the sizes of copper conductor indicated. Where cables offered are other than those specified, Scheduled Rates for the supplying, laying, jointing and termination of the cable shall be entered in "Departures from the Specification". The Contractor will be responsible for advising equipment suppliers of the type of cable termination required if a cable other than that specified is accepted.

6.2 **CABLE LENGTHS**

All scheduled cable lengths are for tendering purposes only and the Contractor shall measure the actual lengths required before ordering.

The length of all cables will be re-measured after installation and the lengths indicated in the Bill Schedule of Quantities will be adjusted accordingly. The Contractor will be paid for the actual lengths measured on site and any allowance for snaking, joints or ends must be incorporated in the unit price.

6.3 **HANDLING OF CABLES**

Particular care shall be taken in handling drums of cable. Cable drums shall not be dropped or allowed to roll unchecked. The drums shall, under no circumstances, be rolled in any direction other than that indicated by arrows thereon.

When running cable off a drum it shall be properly and securely mounted so as to rotate without difficulty and the spindle supporting it shall be straight, horizontal, supported at both ends and of adequate strength. Cable shall only be removed from the drum by rotating the drum. The inner end of the cable shall be released before running any cable off the drum.

Care is to be taken to ensure that each length of cable is run off the drum sequentially so that a crossed core situation does not arise at joints.

No cable shall be bent to a radius less than 12 times the overall diameter of the cable; bending or straightening shall be done slowly. PILCA cable shall not be laid if the temperature falls below 10°C.

Should a cable inadvertently become damaged or the lead sheath or end cap punctured, this fact shall be brought to the notice of the Engineer immediately, who shall decide what further action is to be taken. The Engineer shall also be notified immediately should there be any suspicion of moisture having entered a PILCA or XPLE cable.

6.4 **CABLES IN SLEEVES**

Cables shall pass in and out of buildings and under roadways and pavements in sleeves. In addition, where cables cross or run along a boundary between two plots, these cables shall, where called for, be installed in sleeves. All sleeves shall be installed in accordance with the Clause "Sleeves" elsewhere in this Part.

6.5 **CABLES LAID IN TRENCHES**

HV cables shall generally be laid 800mm and LV cables at 500mm below ground level. Where two HV cables are run in the same trench, they shall be laid a minimum of 300mm apart with separate cable slabs over each cable. Where HV and LV cables are laid in the same trench, the HV cable shall be located on the road side and the LV cables on the plot side of the trench. A horizontal distance of not less than 400mm shall be maintained between the cables of different voltage groups. Where a number of LV cables are run in the same trench, they shall be laid with a minimum separation of 100mm. This applies to feeder cables only and not street lighting and service cables which shall be only 25mm apart. Cables shall not cross each other.

Where cables run across even parallel to lateral boundaries, they shall be located 1,0m from the boundary at a depth of 1,0m. If so specified they shall be run in sleeves, otherwise both HV and LV cables shall be protected by cable slabs and a PVC sheet marker laid 300mm, above them.

The trench bottom shall be cleared of all sharp or protruding stones. The trench is then to be refilled with 150mm of soft material and compacted. A further layer of soft material shall be installed after the cables are laid to provide 200mm cover for the cable when compacted. Protective cable slabs a minimum of 50mm thick x 230mm wide shall then be laid in the case of HV cables, and PVC sheet cable marker strip 450mm wide with indelibly printed warnings every 150mm along its length, in the case of LV cables. In cases where HV and LV cables run in the same trench, 100mm of soft bedding for the LV cables shall be situated above the protective cable slabs. Where LV service cables or street lighting cables only are installed, a clean trench bottom and soft material back-fill only is required, and no PVC sheet marker.

The soft material described above may be either sand or back-fill material sifted through a 3,0mm mesh grid. Where the bottom of the trench consists of only soft sandy material, the bedding underneath the cable shall be omitted and the cable shall be laid on the trench bottom at the correct depth. Permission must be obtained from the Clerk of Works or the Engineer for the cable bedding to be omitted in such instances. Where sand has to be brought to site, the quantity must be measured and confirmed by the Engineer or Clerk of Works.

The balance of the trench is to be back-filled with excavated material from which all stones, etc. greater than 100mm in size have been extracted. All such extracted material is to be removed from site.

Cable route markers shall be provided for all HV and main LV feeder cables at road, culvert and Telkom cable crossings, at all changes of direction, at joints and at intervals not exceeding 60 metres along the straight. Cable route markers shall comprise concrete blocks in the shape of truncated pyramids 300mm high, 150mm x 150mm at the top and 225mm x 225mm at the base. An aluminium plate 3,0mm thick minimum, with four rods 75mm minimum welded to it on the underside, shall be cast into the top of the concrete block, and the plate shall have stamped on it the cable data and direction arrows, and at a crossing, the crossing shall be indicated.

The cable route markers shall be placed over the cable, in the trench way, and shall protrude 25mm above the finished ground level but not where they are likely to cause an obstruction or be in the way of moving traffic. Joint markers shall indicate as such. The Contractor shall ensure that the ground under and around the cable marker is properly compacted.

CABLE JOINTS AND TERMINATIONS

6.6 GENERAL

Cable jointing and termination shall be carried out by a qualified cable joiner using only approved standard methods for the particular type of cable. Proof of his training may be required.

Joints in all cables shall only be made at full drum length intervals, but where necessary and when approved by the Engineer cable through joints may be used in other approved positions.

Where a cable has steel wire armouring all strands of armouring shall be through jointed.

Cable connections shall be made by means of crimped or sweated lugs, firmly bolted, one plain and one lock washer being placed under the nut, so that the plain washer is against the lug and there shall be no washer between the lug and the terminal. A plain washer is also required under the bolt head. Alternatively, sweated stems fitting into clamp connections will be acceptable.

Crimped lugs up to 70mm² shall be fitted using manual tools and hydraulic tools from this size upwards. Approved tools are to be used in both cases. An hydraulic tool is to be used on all sizes of aluminium cable. Where a single point hydraulic crimping tool is used, the lug shall be crimped in three places. Where a hexagonal die is used, this shall extend the full length of the lug.

Where aluminium cored cables are to be connected to circuit breakers, the aluminium cable lug shall be bolted to a copper tag or tail which is to be connected to the circuit breaker. The Contractor shall ensure that sufficient Denzo paste is installed on the faces of the lugs.

Where an aluminium cable is to connect to copper, the lug shall be a bi-metal type lug with a copper spade and an aluminium ferrule friction welded to the spade.

Cable connections shall be made using brass bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels and mini-subts and with cadmium plated steel bolts and nuts on all indoor equipment. All bolted joints shall be taped with self-vulcanising (not adhesive) tape.

Where cable connections are required to the HV and LV terminals of transformers, these shall be made off as follows:-

Red Phase to Terminal A

White Phase to Terminal B

Blue Phase to Terminal C

All transformer connections shall be kept in strict phase rotation and where two or more units are to operate in parallel, the respective connections are to be checked for phase rotation and polarity.

In the case of cable terminations to transformer bushings the cable itself shall be clamped substantially to a post adjacent to the transformer, connections to the bushings being puttied and taped.

All connections are to be colour coded.

6.7 **LV CABLE TERMINATIONS**

PVCAS cables shall be made off using adjustable mechanical glands. Care shall be taken to ensure that armour wires are correctly seated in the gland and that all parts are properly tightened. Outdoors, in damp situations and in all mini-substations and kiosks, neoprene waterproofing shrouds are to be fitted over all glands.

Contractor shall ensure that sufficient space is left on the gland plate for the future cables.

Wherever PVCAS cables are terminated to overhead lines a suitable moulded heat shrinkable glove to effect a watertight seal at the crotch shall be used, in accordance with the manufacturer's instructions. Alternatively, a PVC cable cap may be used.

7.0 **CABLE TESTING**

On completed sections of laid, jointed and terminated LV cables, pressure testing of cables shall be carried out by persons qualified to make such test. Certificates with the test results shall be submitted to the Engineer.

PERIMETER LIGHTING

7.1 **GENERAL**

Perimeter lighting poles and luminaires to be installed under this Contract including the type, mounting height, quantities, etc., are detailed elsewhere in this Specification.

7.2 **GLASS REINFORCED FIBRE STREETLIGHT POLES**

A cable entry of 80mm diameter shall be provided \pm 600mm below ground level.

The pole shall have an access door of 600mm x 150mm. The door cover shall be an overlapping polycarbonate cover smaller in diameter than the pole to ensure a tight fit. The cover shall be secured to the pole by means of two captive stainless steel tamper-proof screws. (screws that are completely tamper proof and only accessible with tamper-proof screws tool. The door cover shall be completely replaceable and interchangeable.

The pole is to have a 400mm x 400mm x 6mm hot dipped galvanised baseplate secured to the pole by means of hot dipped hook bolts and nuts.

The pole shall be supplied with a glandplate to accommodate 2 x 20mm glands, fuse terminal block and earth stud. This glandplate shall be removable so that the work can be executed outside the pole.

A SABS certificate certifying the bending strength of the pole shall be enclosed.

Copy of Quality Assurance Certificate of SABS 0157 Part 2 shall be enclosed.

A pamphlet furnishing full details of the pole offered, shall be submitted with the tender

7.3 **PHOTO-ELECTRIC CONTROLS**

Where called for elsewhere in this Specification, a photo-electric control unit shall be used to switch the street lighting installation. Photo-electric switches shall be of the type comprising a photo-sensitive resistor, thermal actuator with an inherent operating delay to make it insensitive to short duration changes in light levels and a change-over switch mechanism, all housed within a

tough, translucent, weather and ultra-violet resistant cover. The operating level shall be factory preset to switch on at approximately 50 lux and off at approximately 100 lux. The response time after sudden changes in light level shall be not less than 15 seconds.

Integral protection against voltage surges shall be provided.

A suitable unit would be the "National" type ZS-20AR.

Where the photo-electric switch is pole mounted it shall be positioned in such a way that it will not be affected by spill-light from the street lighting installation or by vehicle headlamps.

7.4 **COMPLETION AND TESTING**

Immediately after completion of the installation the street lighting system shall be switched on and lamps allowed to stabilise for at least one hour. Any faulty lamps shall be replaced. The voltage at each luminaire shall be measured and toppings on the ballasts set accordingly.

7.5 **GUARANTEES AND MAINTENANCE**

The installation shall be guaranteed and maintenance carried out in accordance with the requirements detailed elsewhere in this Specification, except that where no other defects or maintenance procedures requiring Contractor's attention exist, the installation of replacement lamps supplied by the Contractor will be carried out by the Employer's maintenance personnel, unless otherwise specified elsewhere herein. Under no circumstances is any spare equipment or lamps elsewhere specified to be used for replacement during the foregoing period.

8.0 **HOT DIP GALVANISING**

Where hot dip galvanising is called for, it shall conform to SABS 763, the required coating thickness being in accordance with Table 1. Unless the galvanized part is to be painted, the coating is to be passivated immediately. Where later painting is required, a suitable primer shall be applied at the galvanising works.

Before galvanising, all cutting, drilling, welding, etc., shall be complete. Bolt threads shall be suitably undercut and nut threads over tapped to ensure the correct fit after galvanising.

All galvanized parts shall be stored under cover and in stacks such that no part is resting on another and there is sufficient ventilation to prevent condensation occurring. No galvanized parts shall be stored directly on the ground but on pallets or similar protection. Any damaged parts or parts attacked by white rust will be rejected.

Any galvanized surface that is subsequently damaged shall, if the Engineer does not require replacement, be touched up in the manner specified in the Clause "Painting" elsewhere in this Part.

9.0 **LABELS AND NOTICES**

The Contractor shall arrange for the labelling of all equipment, instruments, meters, relays, cables, etc., as indicated below.

All labels shall be ivory or other back engraved white on black labels of the sizes indicated. They are to be located in purpose made holders or otherwise are to be screwed or riveted into position. "Dymo" tape or similar labels will not be accepted nor will labels which are glued in position only.

Labels on poles shall comprise an aluminium plate with the designated number. These labels shall be nailed to the pole 1,5m above ground level. Nails shall be electro-galvanized clout nails.

Prior to any equipment being labelled, the Contractor shall request the Engineer to provide a complete labelling schedule for all items of equipment. Under no circumstances is equipment to be labelled in accordance with the tender drawings since any description thereon is for identification purposes during construction only and is unlikely to apply to the completed Works.

The following list indicates the general labelling requirements but does not limit the extent of

05 Vol 1.1 Part 1 Scope of Works

labelling required, which shall encompass the full extent of the equipment supplied, or in the case of existing equipment, any such which is affected by this Contract.

50mm high lettering:-

CDU and feeder panel designation.

5mm high lettering:-

CDU feeder breakers and isolators.
Meters, instruments and relays.

3mm high lettering:-

This size shall be used to designate the conductor size and number of cores of each cable installed under this Contract. In addition, all feeder cables shall be labelled to state from whence they are fed.

All kiosks shall be provided with notices as required by the Occupational Health and Safety Act. All doors to such locations shall be fitted with the appropriate notices.

10.0 **REMOVED MATERIAL**

All material recovered shall become the property of the Contractor and shall be removed from the site by him.

11.0 **INSPECTION, TESTING AND COMMISSIONING**

The Engineer shall have access at all reasonable times to such parts of the Works or the Contractor's premises for the purpose of inspecting, examining and testing the materials, workmanship and performance of any plant or equipment specified for the Works.

All wiring is to be subjected to a test voltage of 2kV for one minute without insulation failure. A Megger test is to be applied with a 500V instrument immediately thereafter to prove the insulation resistance better than 20 megohms.

All equipment necessary to enable the tests to be carried out shall be provided and shall include, inter alia:

- Phase rotation meter
- Avometer
- 500V/2kV DC test set

On completion of the entire installation or any particular section thereof, as may be decided by the Engineer, commissioning shall be carried out by the Contractor, and any tests the Engineer deems necessary shall be conducted. The Contractor shall supply all equipment necessary for the testing and commissioning procedures.

During commissioning, all tap change switches are to be correctly set and locked.

The Contractor shall supply all equipment necessary for the testing and commissioning procedures. The test equipment required at Site shall include, inter alia :

- (i) Phase rotation meter
- (ii) Suitable cable test set
- (iii) 11 000V phasing sticks

- (iv) 500V megger
- (v) Avometer
- (vi) Earth resistance test set

After completion of the commissioning tests the Contractor shall provide duplicate test certificates relating to cable tests and results of earth tests.

The Contractor shall give the Engineer at least 14 days notice of the date of any testing or commissioning so that he may be present if he so wishes. Where the Engineer does not himself, or through his representative, attend to witness the tests, then the Contractor may proceed with the test, duly forwarding to the Engineer certified copies of the results obtained. In such cases, the test shall be deemed to have been made in the presence of the Engineer.

In the event of the equipment or installation not passing the tests, the Employer shall be at liberty to deduct from the Contract Price, all reasonable expense incurred by him or by the Engineer in repeating the tests.

15.0 **COMPLETION OF WORKS**

Before completion of the Contract any damage which may have been done in the process of the installation shall be repaired and made good, trench or excavation work shall be left in a clean and tidy state and all accumulated debris shall be removed from the Site by the Contractor, to the satisfaction of the Employer and Engineer.

All defects found are to be rectified within one month of written notice of such defects. A penultimate certificate reducing the retention amount to that stated elsewhere in this Specification will only be issued upon submission of As Built Drawings and Operating Manuals as called for elsewhere herein, after completion of all notified defects, and once all test certificates called for in the Clause "Inspection, Testing and Commissioning" elsewhere in this Part have been submitted and accepted by the Engineer.

An appropriate Certificate shall acknowledge practical completion of the Works and the commencement of the period during which the Contractor will be responsible for any defects that may become apparent, and of maintenance of the installation.

The Contract will not be deemed to be finally complete until the Engineer's final payment certificate is issued.

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS
-----------------------	----------------------------------------------------------------------------

SCHEDULE OF TENDER DRAWINGS

Drawing No.	Rev	Qty	Description	Size
2316-T-E-101PF	Rev00	1	Lighting Layout	A1
2316-T-E-102PF	Rev00	1	Power Layout	A1
2316-T-E-300PF	Rev00	1	Schematic Diagrams	A1

NAME OF TENDER :

NAME OF COMPANY :

SIGNATURE OF TENDERER :

Vol. 1.1 Part 1
SCHEDULE OF INFORMATION

PROJECT TITLE:	SECTION 10B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 3- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

ITEM	DESCRIPTION
1.	REGISTRATION AS ELECTRICAL CONTRACTOR
2.	DETAILS OF INSTALLATION ELECTRICIAN
3.	SCHEDULE OF MATERIALS OFFERED

1. **REGISTRATION AS ELECTRICAL CONTRACTOR**

The Tenderer must be registered as an Electrical Contractor with the Department of Labour and must also be registered with the Workmen's Compensation Commissioner and the Unemployment Insurance Commissioner to qualify for this tender.

Tenderers must complete the following questionnaire and submit it with this tender.

- a) Has the company been registered with the Department of Labour
YES/NO

Registration No :

Date of issue :

NB: Proof of current registration to be submitted with the tender. Should your tender be successful you will be expected to submit the original document for perusal by the Engineer.

- b) Has the company been registered with the Department of Labour?

- i) The Workmen's Compensation Commissioner YES/NO

Registration No :

Date of issue :

- ii) The Unemployment Insurance Commissioner YES/NO

Registration No :

Date of issue :

I/We certify that the above information is correct

Signature :

Name of Signatory :

Name of Firm Represented :

Address :

.....

Date :

2. **DETAILS OF INSTALLATION ELECTRICIAN**

I/We certify that is a registered installation electrician in terms of the Occupational Health and Safety Act (Act 85 1994) and is permanently employed by my/our company trading as:

.....

I/We further certify that the abovementioned person will be appointed as the responsible person in charge of the installation, which person shall personally supervise the whole of the electrical works as tendered for from inception to completion inclusive of signing all commencement/completion/ cost certificates necessary as part of the Works.

I/We further certify that I/We am/are fully aware of the provisions of the Occupational Health and Safety Act (Act 85 1994), and that my/our company is trading as a registered electrical contracting organisation.

SIGNATURE OF TENDERER	.....	SIGNATURE OF INSTALLATION ELECTRICIAN	.....
REGISTRATION NUMBER OF INSTALLATION ELECTRICIAN	.....	DATE	.....

COMPANY STAMP

NOTE **It is an offence to employ a registered single-phase installation electrician on a poly-phase installation and it may be necessary to submit a certified copy of the licence of the person to be employed on any poly-phase project.**

3. **SCHEDULE OF MATERIALS OFFERED**

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB : Only one manufacturer's name to be inserted for each item.

ITEM	MATERIAL	MAKE OR TRADE NAME	CONFORMITY TO SANS ?
1.0	Cables:		
1.1	Cables PVC, SWA, Cu		
1.2	Cable glands & shrouds		
3.0	Streetlighting:		
3.1	Poles		
3.2	Luminaires		

NOTE : The Contractor is to note that under no circumstances may materials be installed other than that offered in the above material schedule, which has been approved and accepted by the Engineer. Should the Contractors wish to supply materials other than that originally offered, prior written approval must be obtained from the Engineer, before any orders are placed.

Signature :

Name of Tenderer :



LIGHTING LEGEND	
	PHOTO CELL
	1 LEVER - 1 WAY - LIGHT SWITCH
	MOTION SENSOR
	2 LEVER - 2 WAY - LIGHT SWITCH
	11W LED RECESSED DOWNLIGHTER(96mm DIAMETER)
	40W LED SURFACE MOUNTED LUMINAIRE (600mm X 600mm)
	40W LED SURFACE MOUNTED LUMINAIRE (600mm X 600mm) WITH 50% MAINTAINED EMERGENCY LIGHTING FOR 1 HOUR
	11W LED RECESSED DOWNLIGHTER(96mm DIAMETER) USED AS NIGHT LIGHT.
	50W LED LINEAR LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE CEILING / WALL MOUNTED BULKHEAD.
	ELECTRICAL DISTRIBUTION BOARD

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 20mmØ & 4 X 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SPLITTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	29-09-25	E.C.	ISSUED FOR INFORMATION.

CLIENT

PROJECT
ALTERATIONS AND ADDITIONS AT PROTEA FLATS, GQEBERHA

TITLE
NEW GSA OFFICES - LIGHTING LAYOUT

COPYRIGHT



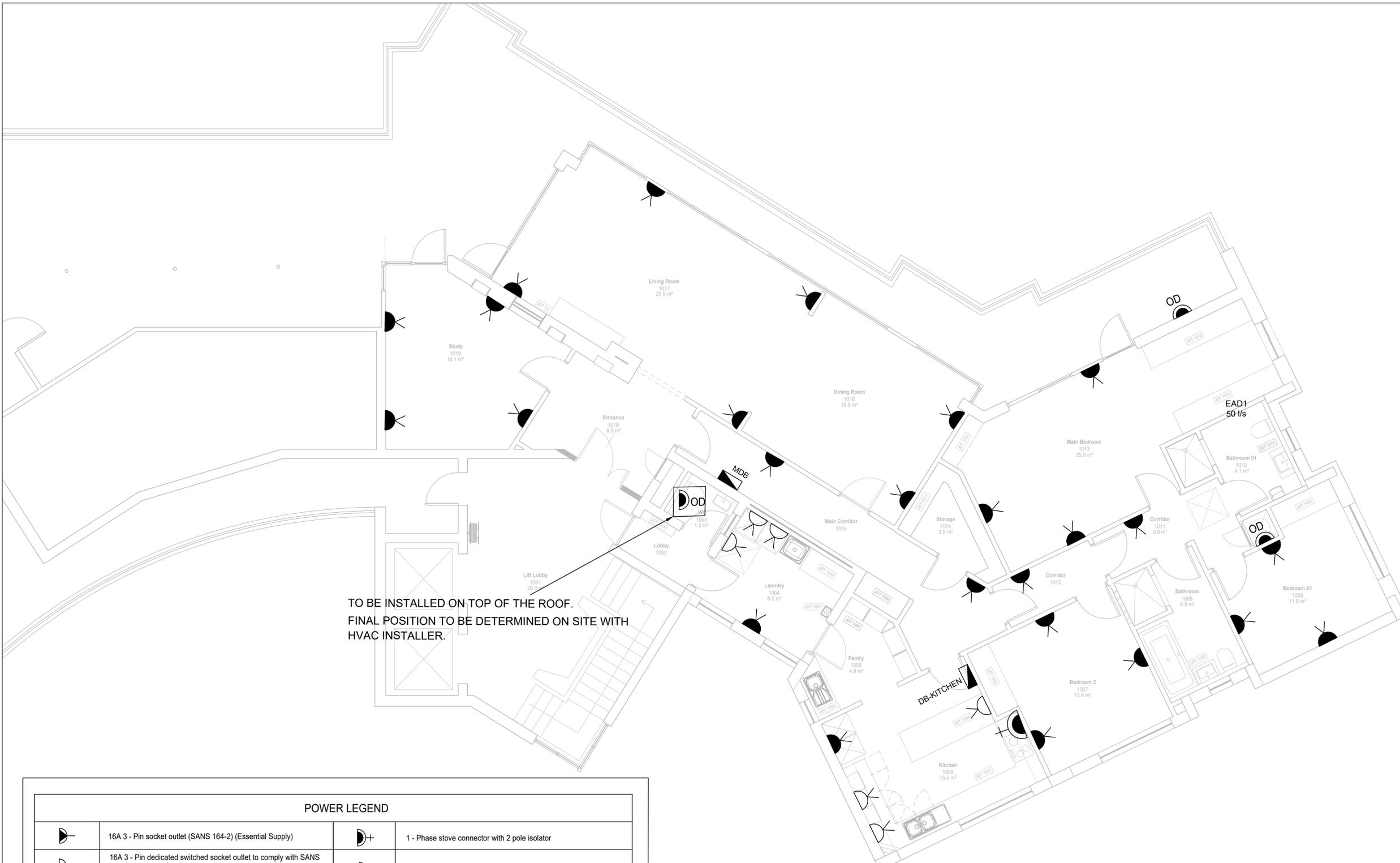
DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B.GEELBOOI
SCALE: 1:50

DRAWN: B.GEELBOOI
DATE: 29/06/2023
PRINT DATE: 29/09/2025

CHECKED BY: E.CEBA
REGISTRATION No. 201930053
SIGNED:

DRAWING NO. 2316-T-E-101PF
REV No. 00



TO BE INSTALLED ON TOP OF THE ROOF.
FINAL POSITION TO BE DETERMINED ON SITE WITH
HVAC INSTALLER.

POWER LEGEND

	16A 3 - Pin socket outlet (SANS 164-2) (Essential Supply)		1 - Phase stove connector with 2 pole isolator
	16A 3 - Pin dedicated switched socket outlet to comply with SANS 164-1 (Red) (Essential Supply)		2 Pole isolator (Normal Supply)
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 on (White) 450mm AFFL (Normal Supply)		2 Pole Outdoor isolator (Normal Supply)
	16A 3 - Pin dedicated switched socket outlet to comply with SANS 164-1 & 2 (Red) (Essential Supply)		4 Pole isolator (Normal Supply)
	16A 3 - Pin dedicated switched socket outlet to comply with SANS 164-1 (Red) (Essential Supply)		Electrical distribution board
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 (White) mounted in the ceiling void (Normal Supply)		
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (white) 450mm AFFL (Normal Supply)		
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (White) 1200mm AFFL OR 300mm ABOVE WORKTOPS (Normal Supply)		

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:
 - AC = AIR CONDITIONING
 - D = DEDICATED SSO
 - L = LIGHTING CIRCUIT
 - P = STANDARD SSO
 - XL = LIGHTING CIRCUIT ON STANDBY POWER
 - XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	29-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

PROJECT

ALTERATIONS AND ADDITIONS AT PROTEA FLATS, GQEBERHA

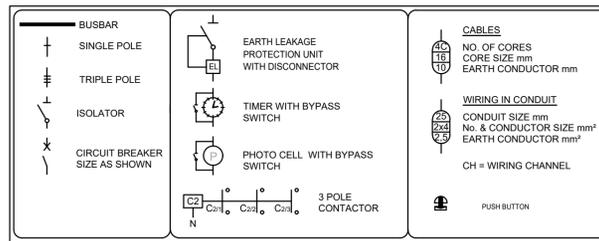
TITLE

NEW GSA OFFICES - POWER LAYOUT



DESIGN	TENDER	CONSTRUCTION
	✓	
DESIGNED BY: B.GEELBOOI	SCALE 1:50	
DRAWN B.GEELBOOI	DATE 29/06/2023	PRINT DATE 29/09/2025
CHECKED BY: E. CEBA	REGISTRATION No. 201930053	SIGNED.
DRAWING NO. 2316-T-E-102PF	REV No. 00	

LEGEND



GENERAL NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
- DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
- A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
- FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
- CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
- SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
- NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
- DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
- ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB'S)
- IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
- TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
- IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
- CIRCUITING: AC = AIR CONDITIONING
D = DEDICATED SSO
L = LIGHTING CIRCUIT
F = STANDARD SSO
XL = LIGHTING CIRCUIT ON STANDBY POWER
XP = STANDARD SSO ON STANDBY POWER
- DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
- ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
- AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	29-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

PROJECT
ALTERATIONS AT PROTEA FLATS,
GQEBERHA

TITLE
ELECTRICAL:
SCHEMATIC DIAGRAMS

COPYRIGHT
RNA CONSULTING ENGINEERS
 Consulting Electrical & Mechanical Engineers
 87 Hengh Road, Walmer, Port Elizabeth, 6070
 E-Mail: office@rnaconsulting.co.za
 P.O. Box 35039, Newton Park, 6055
 Tel: 041 581 2807



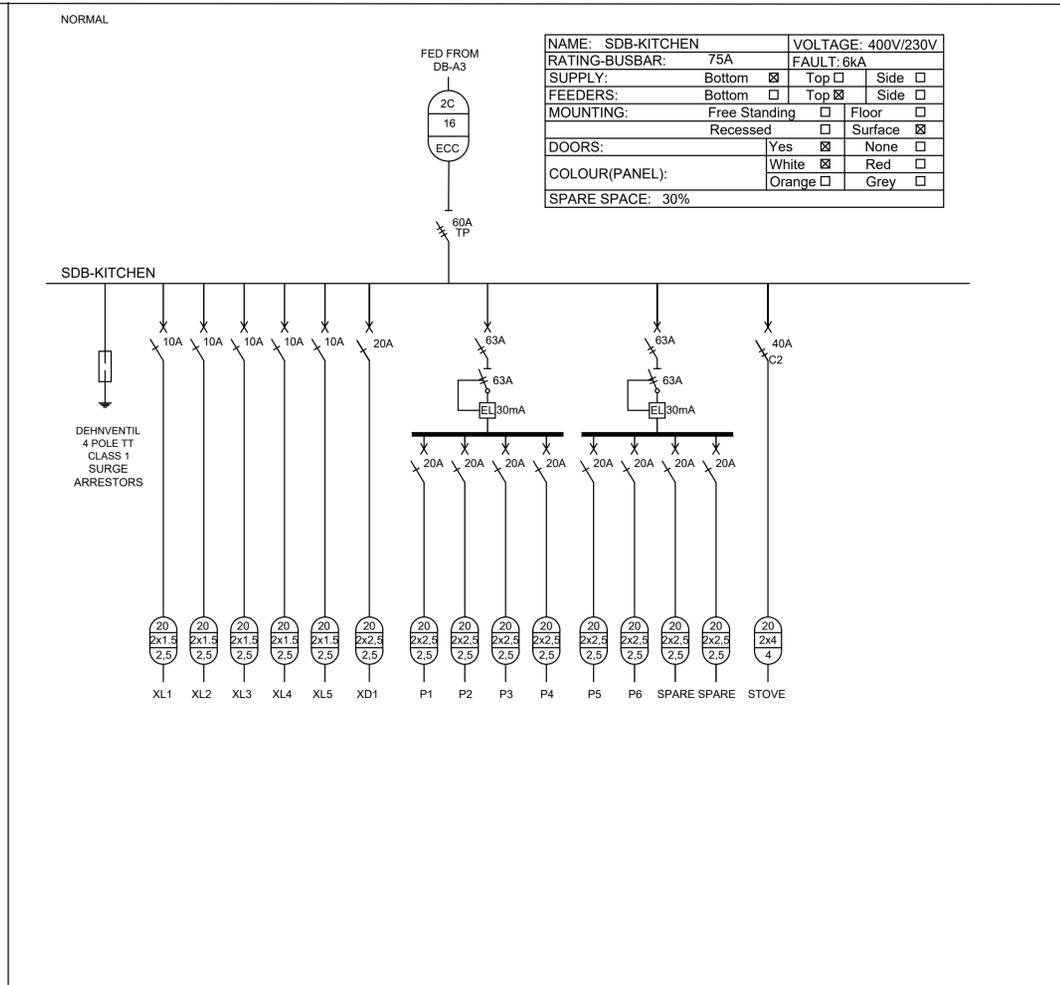
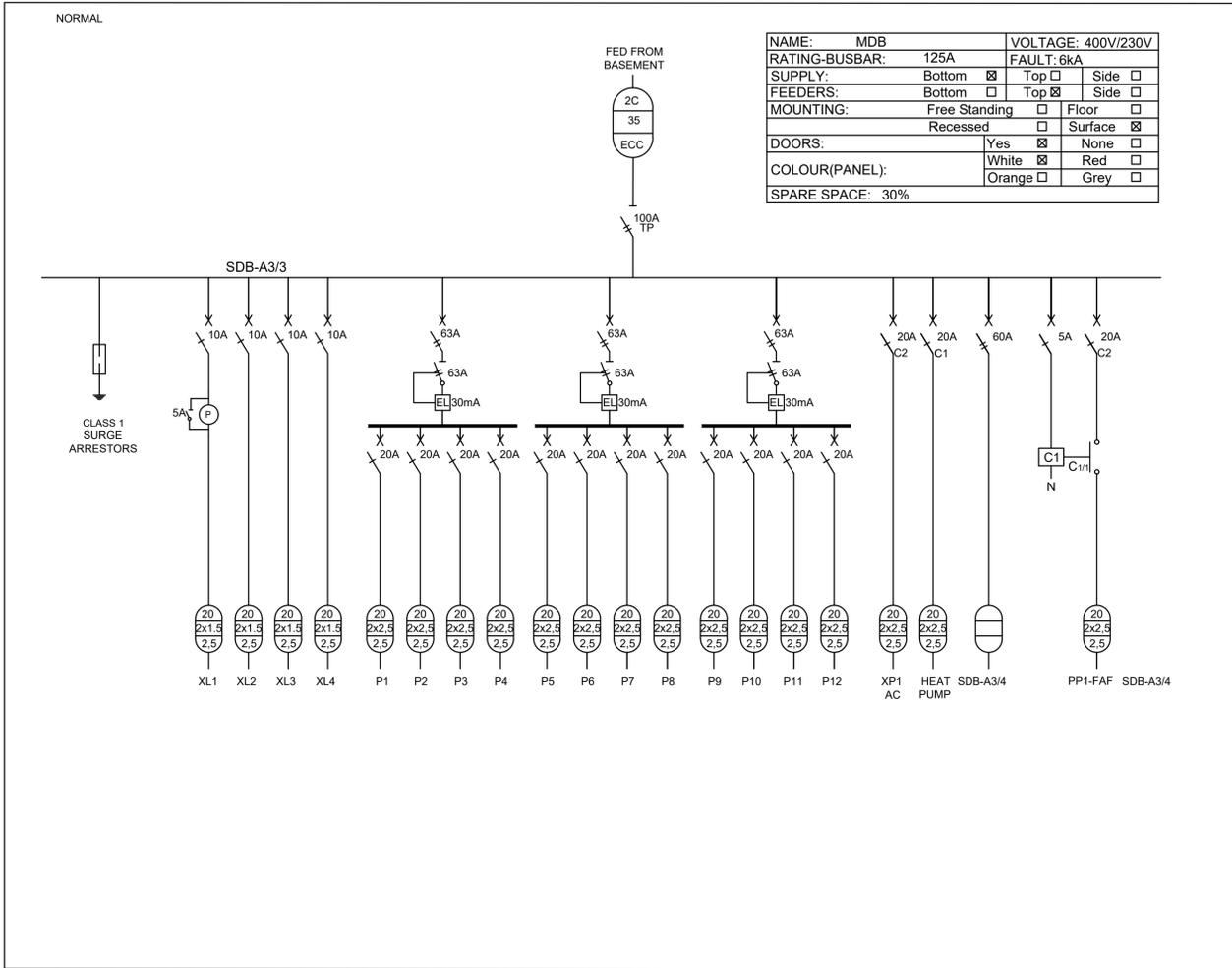
DESIGN	TENDER	CONSTRUCTION

DESIGNED BY: E. CEBA
SCALE: N.T.S

DRAWN: B.GEELBOOI
DATE: 17/10/2023
PRINT DATE: 29/09/2025

CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED:

DRAWING NO. 2316-T-E-300PF
REV No. 00



ARCHITECTS DRAWING NO.
REV No.

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS
-----------------------	----------------------------------------------------------------------------

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

BILL NO. 1 : PRELIMINARIES AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1.0	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	<u>Other Fixed-charge Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.20	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OHS&A Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	<u>Other Value Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.30	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	<u>Other Time-Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3**BILL NO. 2 : DISTRIBUTION BOARDS (DB)**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Distribution board Supply and Install new DB to specifications and drawings				
2.1.1	MDB				
	Supply	each	1		
	Install	each	1		
2.1.2	SDB- KITCHEN				
2.1.2.1	Supply and Install new DB to specifications and drawings				
	Supply	each	1		
	Install	each	1		
2.1.2.2	Remove and dispose existing Distribution Board including feeder cables and conductors	each	1		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

BILL NO. 3 : GENERAL LIGHTING

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Remove and dispose existing Luminaires Remove and dispose existing lights including; conductors, conduits, etc				
3.1.1	Concrete/Wall/Ceiling mounted bulkhead	each	10		
3.1.2	Open channel fluorescent luminaires	each	15		
3.1.3	Surface mounted open channel fluorescent luminaire with reflector or diffuser	each	80		
3.2	Luminaires Luminaires mounted on concrete or suspended ceilings, or on brickwork including lamps and fixing material.				
3.2.1	Type-A (40W LED Channel Luminaire)				
	Supply	each	11		
	Install	each	11		
3.2.2	Type-N (20W LED Bulk Head - Wall Mounted)				
	Supply	each	10		
	Install	each	10		
3.2.3	Type-Z (11W LED downlighter -96mm)				
	Supply	each	95		
	Install	each	95		
3.2.4	Type-EX (1W LED Maintained Emergency Exit Sign)				
	Supply	each	1		
	Install	each	1		
3.3	Occupancy Sensors Ceiling mounted occupancy sensors with accessories for a complete installation				
3.3.1	Motion Detector (Passive Infra Red)				
	Supply	each	7		
	Install	each	7		
3.4	Photo-cell				
3.4.1	5 Amp photo-cell.				
	Supply	each	1		
	Install	each	1		
3.5	Conduit Galvanised conduit fixed on steel trusses including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
3.5.1	20mm				
	Supply	m	2,000		
	Install	m	2,000		
3.6	Conduit Boxes Round galvanised box for 20mm conduit, back or side entry for 1, 2, 3 or 4-way fixed on trusses including couplings bushes cover plates and fixing materials (average rate)				
3.6.1	20mm Galvanised round box				
	Supply	each	100		
	Install	each	100		
3.6.2	Galvanised boxes with 20mm knockouts as specified chased into brickwork.				
3.6.3	100mm x 50mm x 50mm				
	Supply	each	10		
	Install	each	10		
3.6.4	100mm x 100mm x 50mm				
	Supply	each	31		
	Install	each	31		
TOTAL SCHEDULE NO. 3 TO NEXT PAGE					
BOQ 585					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3
BILL NO. 3 : GENERAL LIGHTING

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
TOTAL FROM PREVIOUS PAGE					
3.7	Conductors 600/1000 grade PVC insulated single core copper conductors drawn into conduit				
3.7.1	1,5mm ² red/black				
	Supply	m	5,800		
	Install	m	5,800		
3.7.2	2,5mm ² yellow & green				
	Supply	m	2,900		
	Install	m	2,900		
3.8	Light Switches 16 Amp rocker type light switch with coverplate installed into a flush box measured elsewhere.				
3.8.1	Single lever, one way				
	Supply	each	10		
	Install	each	10		
3.8.2	Double lever, one way				
	Supply	each	1		
	Install	each	1		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

BILL NO. 4: GENERAL POWER

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
4.1	Remove and dispose existing Socket Outlets and Isolators				
	Remove and dispose existing light-switches, socket outlets and isolators including conductors, conduits, etc				
4.1.1	Isolator	each	10		
4.1.2	Switch	each	10		
4.1.3	Socket Outlet	each	20		
4.2	Socket Outlets				
4.2.1	16 Amp 3 pin switched socket outlets with cover plates Standard: installed into existing flush wall Box (single). Colour: White				
	Supply	each	32		
	Install	each	32		
4.2.2	16 Amp 3 pin Dedicated switched socket outlets with cover plates Standard: installed into surface-mounted Box (single). Colour: Red				
	Supply	each	0		
	Install	each	0		
4.2.3	5 amp unswitched Socket outlet for lights in the ceiling void				
	Supply	each	110		
	Install	each	110		
4.3	Conduit				
	Galvanised conduit fixed on steel trusses including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
4.3.1	20mm				
	Supply	m	1,500		
	Install	m	1,500		
4.5	ISOLATORS FOR HVAC AND VENTILATION				
	Supply and install complete including all surface boxes, isolators and associated equipment.				
4.5.1	20 Amp indoor flush wall mounted double isolator.	Nº	1		
4.5.2	45 Amp double pole indoor flush mounted isolator. Wall	Nº	1		
4.5.2	45 Amp 250V 3-Pin single phase stove socket	Nº	1		
4.5.3	20 Amp three phase outdoor surface mount isolator for AC	Nº	2		
TOTAL SCHEDULE NO. 4 TO NEXT PAGE					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

BILL NO. 4: GENERAL POWER

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
TOTAL FROM PREVIOUS PAGE					
4.6	Conductors				
	600/1000 grade PVC insulated single core copper conductors drawn into conduit				
4.6.1	2,5mm ² red/black				
	Supply	m	1,800		
	Install	m	1,800		
4.6.2	2,5mm ² yellow & green				
	Supply	m	900		
	Install	m	900		
4.6.3	2,5mm ² surffix cable				
	Supply	m	30		
	Install	m	30		
4.6.4	4mm ² surffix cable				
	Supply	m	80		
	Install	m	80		
TOTAL SCHEDULE NO. 4 TO PRICE SUMMARY					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

BILL NO. 5 : CABLING AND CABLE SLEEVES

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER
5.1	LV Cabling				
5.1.1	Multicore PVC/SWAPVC cable with stranded copper conductors to SANS 1507-3 drawn into cable sleeves, installed on cable trays/ladders or laid in open trenches and ducts. All cables to be complete with ECC for earthing				
5.1.1.1	35mm ² 2 Core				
	Supply	m	100		
	Install	m	100		
	Terminations	No.	2		
5.1.1.2	16mm ² 2 Core				
	Supply	m	60		
	Install	m	60		
	Terminations	No.	2		
TOTAL SCHEDULE NO. 5 TO PRICE SUMMARY					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

BILL NO. 6 : SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
6.1	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
6.2	Testing of complete installation in terms of the regulations	Sum	1		
6.3	Provide Certificate of Compliance for all buildings	Sum	1		
TOTAL SCHEDULE NO. 6 TO PRICE SUMMARY					

SECTION 10A: RENOVATIONS TO PROTEA FLATS - ELECTRICAL INSTALLATIONS- WORK PACKAGE 3

**ELECTRICAL INSTALLATION
SUMMARY OF MAIN BILL**

DESCRIPTION	TENDER
BILL NO. 1 : PRELIMINARIES AND GENERAL	
BILL NO. 2 : DISTRIBUTION BOARDS (DB)	
BILL NO. 3 : GENERAL LIGHTING	
BILL NO. 4: GENERAL POWER	
BILL NO. 5 : CABLING AND CABLE SLEEVES	
BILL NO. 6 : SUNDRY ITEMS	
SUBTOTAL (EXCL VAT)	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 10A ON FINAL SUMMARY ON PAGE 455	

SECTION 10B

PROTEA FLATS

PERIMETER LIGHTING, CONDUITS AND SLEEVE INSTALLATION

**Vol. 1.1 Part 1
QUALITY SPECIFICATIONS**

PROJECT TITLE:	SECTION 10B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 3- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

QUALITY SPECIFICATION FOR MATERIAL AND EQUIPMENT OF ELECTRICAL INSTALLATIONS.

STANDARD TECHNICAL SPECIFICATION

1.0 DEFINITION

In this Part, the term "Contractor" means the person, firm or company whose tender has been accepted for the work specified in the document of which it forms a part.

2.0 ELECTRICAL SUPPLY AND PHASE ROTATION

The electrical power supply details relative to fault levels, voltage and phase rotation are given elsewhere in this Specification.

The phase rotation specified shall be maintained on all overhead lines, cables, transformers, switchgear and distribution equipment. Where existing connections are to be reconnected to a new system, the phase rotation is to be checked before disconnection and the reconnection made to maintain the same phase rotation.

3.0 SWITCHING OF POWER SUPPLIES

Any switching of existing power supplies shall be pre-arranged with the appropriate Authority. All possible preparation shall be made in advance to minimize the time required for re-energizing the system. All such switching shall be carried out by the "responsible person" unless such authority is given to the Contractor by that person, in writing.

4.0 EARTHING AND BONDING

4.1 RESISTANCE VALUES

While every effort should be made to obtain an earth resistance value of 1,0 ohm or less, the maximum values of earth electrode resistance acceptable, unless stated to the contrary elsewhere in this specification, are 10 ohm at any mini-sub or transformer, 15 ohms at any indoor or outdoor switchboard or HV gang links and 20 ohms at cradle earthing points, lightning arresters or other pole mounted equipment. In the case of the earthing of LV feeder and overhead line neutrals the combined resistance to earth of all systems shall not exceed 10 ohms.

4.2 GENERAL EARTH SYSTEMS

Unless otherwise specified elsewhere in this Specification, the earth systems for distribution transformers, mini subs and ground or pole mounted switchgear, lightning arresters, etc. shall generally comprise two earth electrodes with 1,5m long earth spikes located 6,0m apart, linked with 70mm bare conductor. They are to be located adjacent to Consumer distribution units (CDU) and shall be located at least 1,0m there from.

The earth system is to be connected with 70mm² insulated earth conductor to the earth bar inside CDU.

Immediately after installation and before livening up the equipment the Contractor shall test the earth resistance of the earth system, using the respective earth bar or termination as the reference point. If the required value is not obtained, each earth spike, if installed in a sidewalk, shall be increased in length by driving a further length of 1,5m but where located in open ground, two additional spikes are to be installed. These latter spikes are to be perpendicular to the original two, in line with the spike at the point of connection of the insulated earth conductor and each 6,0m there from. After installing the additional spikes the earth resistance shall again be determined. The Contractor shall submit a report in duplicate confirming the values measured,

including the first set if appropriate, to the Engineer.

Where the number of spikes called for does not achieve the required values, the Engineer is to be advised and will give further instructions for the improvement of the values obtained. Where more spikes are necessary to obtain the required value, these shall not be installed within 6,0m of any other spike.

The common leg of the secondaries of CT's, other than the secondaries of summation transformers, shall be effectively earthed to the main earth system.

4.3 **RETICULATION FEEDER NEUTRAL EARTHING**

At CDU/kiosks a 30m length of bare earth conductor of half the size of the phase conductors but not greater than 70mm² shall be laid from each kiosk earth bar towards the source of supply. The neutral bar shall be connected to the earth bar with green insulated conductor of the equivalent size.

4.4 **EARTH SPIKES**

Earth spikes shall comprise 16mm sectional steel cored rods with a minimum of 0,25mm pure copper coating molecularly bonded thereto, complying with SABS 1063, and of "Cadweld" or equivalent manufacture. The top of earth spikes and the interconnecting conductors are to be 1,0m below finished ground level.

Under no circumstances are earth spikes to be located closer than 1,0m to any structure or plinth nor are they to be installed in pole holes.

The connections to earth spikes shall be by means of at least two phosphor bronze mechanical clamps of an approved type for this duty, or a "Cadweld" joint. The clamps shall not be attached to the rod but must be installed so that the bolt face is in contact with the rod. Brazing will not be accepted. The connection must be wrapped with two layers of "Denzo" tape.

A cable marker as described elsewhere in this Part shall be installed above each spike and shall be labelled "Earth Spike".

4.5 **EARTH CONTINUITY CONDUCTORS**

Earth conductors shall be hard drawn bare copper wire complying with SABS 182 or bi-coloured green/yellow PVC covered, the PVC being UV stabilised complying with SABS 1411 Part 2, as elsewhere specified herein. The conductor sizes shall be such that they can carry the short circuit current likely to be imposed upon them but generally shall be half the area of the phase conductors with a maximum size of 70mm² or in accordance with the appropriate Regulations, unless specific sizes are given elsewhere in this Specification. 50mm² conductors shall be 7/2,65 HD.

Bare earth continuity conductors shall be run with all cables constituting a low voltage distribution system and shall be installed at CDU's, etc.

A single conductor may be used where two or more cables run together, provided that the conductor cross-sectional area is based on the largest size cable in the run, and that branch earth wires are solidly connected to the main earth conductor using only "Cadweld" connections. Earth continuity conductors shall be connected to main earth bars.

Uninsulated earth conductors shall not be less than 500mm below ground level. Above this level all earth conductors shall be green insulated carried in a PVC conduit sleeve except where galvanised conduit is specified elsewhere herein.

A terminal lug shall be crimped onto the end of the main earth conductor for bolting to the main earth bar of a substation or mini-sub or other outdoor equipment. Two mechanical clamps shall be used for connection onto cradles or other equipment, as appropriate.

Earth connections shall be so made that in the event of any connections being removed the earth

connection to the rest of the equipment will not be affected.

4.6 **BONDING GENERALLY**

All metallic parts of the installation are to be bonded to the earth system as required by the appropriate Regulations.

All iron roofs, gutters, down pipes water and waste pipes, as well as all steel structures, are to be bonded to earth. The maximum resistance of any such point to the earthed end of the earthing lead shall not exceed 0,2 ohm.

4.7 **BONDING OF EQUIPMENT**

Where equipment is bolted together, as in the case of an HV or LV switchgear panel, there is to be a 32mm x 4mm copper earth strap extending the whole length of the equipment. All earth bars shall be run in one continuous length as far as possible, and shall not be bent or formed in any way that requires hammering or severe distortion. Any joints shall be lapped with at least two bolts with nuts and washers of suitable size. The lapped ends shall be pre-tinned. If multiple straps are used, they shall be bolted and fixed together at not more than 75mm intervals. All connections shall be made using brass or stainless steel bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels, mini subs and outdoor equipment. Connections to indoor equipment may be made with cadmium plated steel bolts, nuts and washers, with a steel spring washer.

All steelwork on a pole is to be bonded using 25mm² solid copper conductor. This requirement applies to cross-arms, all insulator supports and any other hardware. Where equipment is also mounted on the pole, the bonded metal is to be earthed to an earth spike as elsewhere specified herein, using a 50mm² bare copper conductor.

5.0 **SLEEVES**

Sleeves for cables shall be either PVC with single socket joints complying with SABS 791 (heavy duty) or fibre cement complying with SABS 1223 in the case of 50mm and 100mm sleeves (in compliance with SABS 0198 : Part VIII) or with SABS 819 for larger sleeves, the sizes being as indicated on the drawings. Sleeves shall be nominal 100mm diameter unless otherwise specified. Pitch fibre sleeves shall NOT be used.

The sleeves shall extend at least 1,0m beyond each side of a road crossing and shall be effectively sealed at the ends. Each sleeve shall be provided with a draw-wire. At least one spare sleeve shall be provided at each crossing.

All sleeves shall be laid in accordance with SABS 1200 (LC) and at a depth of 900mm unless otherwise indicated. The radius of the bends used in the sleeves shall not be less than six times the diameter of the sleeve, and the sleeve not be less than twice the cable diameter unless otherwise specified.

Sleeves shall be laid on a 100mm compacted layer of selected bedding material or, if this is not available, on a 100mm sand bedding. The cover layer shall be hand compacted completely around the sleeves and to a cover of 150mm above the top of them. The sleeves shall be supported along their entire length by the bedding. A further 100mm layer of selected bedding material shall be added and this shall be compacted using four to six passes of a vibration pan compactor. Thereafter, the trench shall be back-filled and compacted as specified in the sub-Clause "Compaction" elsewhere in this Part.

Both ends of all sleeved crossings shall be marked by means of cable markers as elsewhere specified, labelled "Cable sleeve".

The Contractor shall make all necessary arrangements with the appropriate Authorities for closing sidewalks and/or half the roadway at a time, and he shall comply fully with any statutory requirement applicable and any requirements the Authorities deem necessary. The surfaces shall be made good to the satisfaction of the authorities and the Engineer, but where tarring or paving is to be laid or re-laid, this shall not be done until the Engineer has given the necessary approval.

Where the HV or main LV cables cross over or pass under other services such as water or drain pipes, they shall be run in sleeves. Where these crossings present a particular hazard to the cable, the Contractor shall draw the attention of the Engineer to any such crossing requiring special attention.

All sleeves for Telkom cables will be 110mm diameter pitch fibre similar to Santar, supplied by the Regional Engineer, unless otherwise specified. These sleeves are to be laid under this Contract and must be kept at a minimum of 0,6m horizontally from and 0,3m vertically above any power cable sleeve. They are to be laid at a depth of 800mm and one end is to be provided with a marker labelled "Telkom".

6.0 **CABLES**

6.1 **DESCRIPTION**

PVC insulated cables for LV shall be to SABS 1507 and shall consist of PVC insulated conductors, PVC bedding, galvanized steel wire armouring and a PVC sheath.

The abbreviation for this type of cable is PVCAS.

Paper insulated cables shall, unless otherwise specified elsewhere in this Specification, be of the screened type suitable for use on an earthed system and complying with SABS 97. They shall be lead sheathed, bedded with two bituminised paper tapes and one layer of fibrous material and preferably armoured with two layers of steel tape or alternatively with a single layer of galvanized steel wires, both served with bituminised fibrous material. Such cables shall comply with Table 19 of SABS 97 and shall be non-draining. They shall have a sheath of lead alloy 'E' and/or be PVC served only if called for elsewhere in this Specification.

The abbreviation for this type of cable is PILCA

Cross-linked polyethylene cables shall be Type A suitable for use on an earthed system and complying with SABS 1339, being individually screened and armoured, unless otherwise called for elsewhere in this specification.

The abbreviation for this type of cable is XLPE

Service cables may be multicore PVC insulated and wire armoured and PVC served (PVCAS), concentric neutral or "Airdac" as specified elsewhere in this Specification.

Concentric neutral cables shall be XLPE insulated complying with SABS 1268. "Airdac" cables shall be XLPE insulated with copper conductors, the phase conductor being contained within a radial band of insulated neutral and bare earth conductors, the whole being XLPE served. All cables are to be installed in compliance with the Manufacturer's recommendations.

The sizes indicated are for cables with copper conductors unless otherwise specified. For LV systems aluminium conductor cables may be offered as an alternative, if a price advantage can be shown. In such cases both the resistance and current carrying capacity of the aluminium cables offered must compare suitably with the sizes of copper conductor indicated. Where cables offered are other than those specified, Scheduled Rates for the supplying, laying, jointing and termination of the cable shall be entered in "Departures from the Specification". The Contractor will be responsible for advising equipment suppliers of the type of cable termination required if a cable other than that specified is accepted.

6.2 **CABLE LENGTHS**

All scheduled cable lengths are for tendering purposes only and the Contractor shall measure the actual lengths required before ordering.

The length of all cables will be re-measured after installation and the lengths indicated in the Bill Schedule of Quantities will be adjusted accordingly. The Contractor will be paid for the actual lengths measured on site and any allowance for snaking, joints or ends must be incorporated in the unit price.

6.3 **HANDLING OF CABLES**

Particular care shall be taken in handling drums of cable. Cable drums shall not be dropped or allowed to roll unchecked. The drums shall, under no circumstances, be rolled in any direction other than that indicated by arrows thereon.

When running cable off a drum it shall be properly and securely mounted so as to rotate without difficulty and the spindle supporting it shall be straight, horizontal, supported at both ends and of adequate strength. Cable shall only be removed from the drum by rotating the drum. The inner end of the cable shall be released before running any cable off the drum.

Care is to be taken to ensure that each length of cable is run off the drum sequentially so that a crossed core situation does not arise at joints.

No cable shall be bent to a radius less than 12 times the overall diameter of the cable; bending or straightening shall be done slowly. PILCA cable shall not be laid if the temperature falls below 10°C.

Should a cable inadvertently become damaged or the lead sheath or end cap punctured, this fact shall be brought to the notice of the Engineer immediately, who shall decide what further action is to be taken. The Engineer shall also be notified immediately should there be any suspicion of moisture having entered a PILCA or XPLE cable.

6.4 **CABLES IN SLEEVES**

Cables shall pass in and out of buildings and under roadways and pavements in sleeves. In addition, where cables cross or run along a boundary between two plots, these cables shall, where called for, be installed in sleeves. All sleeves shall be installed in accordance with the Clause "Sleeves" elsewhere in this Part.

6.5 **CABLES LAID IN TRENCHES**

HV cables shall generally be laid 800mm and LV cables at 500mm below ground level. Where two HV cables are run in the same trench, they shall be laid a minimum of 300mm apart with separate cable slabs over each cable. Where HV and LV cables are laid in the same trench, the HV cable shall be located on the road side and the LV cables on the plot side of the trench. A horizontal distance of not less than 400mm shall be maintained between the cables of different voltage groups. Where a number of LV cables are run in the same trench, they shall be laid with a minimum separation of 100mm. This applies to feeder cables only and not street lighting and service cables which shall be only 25mm apart. Cables shall not cross each other.

Where cables run across even parallel to lateral boundaries, they shall be located 1,0m from the boundary at a depth of 1,0m. If so specified they shall be run in sleeves, otherwise both HV and LV cables shall be protected by cable slabs and a PVC sheet marker laid 300mm, above them.

The trench bottom shall be cleared of all sharp or protruding stones. The trench is then to be refilled with 150mm of soft material and compacted. A further layer of soft material shall be installed after the cables are laid to provide 200mm cover for the cable when compacted. Protective cable slabs a minimum of 50mm thick x 230mm wide shall then be laid in the case of HV cables, and PVC sheet cable marker strip 450mm wide with indelibly printed warnings every 150mm along its length, in the case of LV cables. In cases where HV and LV cables run in the same trench, 100mm of soft bedding for the LV cables shall be situated above the protective cable slabs. Where LV service cables or street lighting cables only are installed, a clean trench bottom and soft material back-fill only is required, and no PVC sheet marker.

The soft material described above may be either sand or back-fill material sifted through a 3,0mm mesh grid. Where the bottom of the trench consists of only soft sandy material, the bedding underneath the cable shall be omitted and the cable shall be laid on the trench bottom at the correct depth. Permission must be obtained from the Clerk of Works or the Engineer for the cable bedding to be omitted in such instances. Where sand has to be brought to site, the quantity must be measured and confirmed by the Engineer or Clerk of Works.

The balance of the trench is to be back-filled with excavated material from which all stones, etc. greater than 100mm in size have been extracted. All such extracted material is to be removed from site.

Cable route markers shall be provided for all HV and main LV feeder cables at road, culvert and Telkom cable crossings, at all changes of direction, at joints and at intervals not exceeding 60 metres along the straight. Cable route markers shall comprise concrete blocks in the shape of truncated pyramids 300mm high, 150mm x 150mm at the top and 225mm x 225mm at the base. An aluminium plate 3,0mm thick minimum, with four rods 75mm minimum welded to it on the underside, shall be cast into the top of the concrete block, and the plate shall have stamped on it the cable data and direction arrows, and at a crossing, the crossing shall be indicated.

The cable route markers shall be placed over the cable, in the trench way, and shall protrude 25mm above the finished ground level but not where they are likely to cause an obstruction or be in the way of moving traffic. Joint markers shall indicate as such. The Contractor shall ensure that the ground under and around the cable marker is properly compacted.

CABLE JOINTS AND TERMINATIONS

6.6 GENERAL

Cable jointing and termination shall be carried out by a qualified cable jointer using only approved standard methods for the particular type of cable. Proof of his training may be required.

Joints in all cables shall only be made at full drum length intervals, but where necessary and when approved by the Engineer cable through joints may be used in other approved positions.

Where a cable has steel wire armouring all strands of armouring shall be through jointed.

Cable connections shall be made by means of crimped or sweated lugs, firmly bolted, one plain and one lock washer being placed under the nut, so that the plain washer is against the lug and there shall be no washer between the lug and the terminal. A plain washer is also required under the bolt head. Alternatively, sweated stems fitting into clamp connections will be acceptable.

Crimped lugs up to 70mm² shall be fitted using manual tools and hydraulic tools from this size upwards. Approved tools are to be used in both cases. An hydraulic tool is to be used on all sizes of aluminium cable. Where a single point hydraulic crimping tool is used, the lug shall be crimped in three places. Where a hexagonal die is used, this shall extend the full length of the lug.

Where aluminium cored cables are to be connected to circuit breakers, the aluminium cable lug shall be bolted to a copper tag or tail which is to be connected to the circuit breaker. The Contractor shall ensure that sufficient Denzo paste is installed on the faces of the lugs.

Where an aluminium cable is to connect to copper, the lug shall be a bi-metal type lug with a copper spade and an aluminium ferrule friction welded to the spade.

Cable connections shall be made using brass bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels and mini-subts and with cadmium plated steel bolts and nuts on all indoor equipment. All bolted joints shall be taped with self-vulcanising (not adhesive) tape.

Where cable connections are required to the HV and LV terminals of transformers, these shall be made off as follows:-

Red Phase to Terminal A

White Phase to Terminal B

Blue Phase to Terminal C

All transformer connections shall be kept in strict phase rotation and where two or more units are to operate in parallel, the respective connections are to be checked for phase rotation and polarity.

In the case of cable terminations to transformer bushings the cable itself shall be clamped substantially to a post adjacent to the transformer, connections to the bushings being puttied and taped.

All connections are to be colour coded.

6.7 **LV CABLE TERMINATIONS**

PVCAS cables shall be made off using adjustable mechanical glands. Care shall be taken to ensure that armour wires are correctly seated in the gland and that all parts are properly tightened. Outdoors, in damp situations and in all mini-sub and kiosks, neoprene waterproofing shrouds are to be fitted over all glands.

Contractor shall ensure that sufficient space is left on the gland plate for the future cables.

Wherever PVCAS cables are terminated to overhead lines a suitable moulded heat shrinkable glove to effect a watertight seal at the crotch shall be used, in accordance with the manufacturer's instructions. Alternatively, a PVC cable cap may be used.

7.0 **CABLE TESTING**

On completed sections of laid, jointed and terminated LV cables, pressure testing of cables shall be carried out by persons qualified to make such test. Certificates with the test results shall be submitted to the Engineer.

PERIMETER LIGHTING

7.1 **GENERAL**

Perimeter lighting poles and luminaires to be installed under this Contract including the type, mounting height, quantities, etc., are detailed elsewhere in this Specification.

7.2 **GLASS REINFORCED FIBRE STREETLIGHT POLES**

A cable entry of 80mm diameter shall be provided \pm 600mm below ground level.

The pole shall have an access door of 600mm x 150mm. The door cover shall be an overlapping polycarbonate cover smaller in diameter than the pole to ensure a tight fit. The cover shall be secured to the pole by means of two captive stainless steel tamper-proof screws. (screws that are completely tamper proof and only accessible with tamper-proof screws tool. The door cover shall be completely replaceable and interchangeable.

The pole is to have a 400mm x 400mm x 6mm hot dipped galvanised baseplate secured to the pole by means of hot dipped hook bolts and nuts.

The pole shall be supplied with a glandplate to accommodate 2 x 20mm glands, fuse terminal block and earth stud. This glandplate shall be removable so that the work can be executed outside the pole.

A SABS certificate certifying the bending strength of the pole shall be enclosed.

Copy of Quality Assurance Certificate of SABS 0157 Part 2 shall be enclosed.

A pamphlet furnishing full details of the pole offered, shall be submitted with the tender

7.3 **PHOTO-ELECTRIC CONTROLS**

Where called for elsewhere in this Specification, a photo-electric control unit shall be used to switch the street lighting installation. Photo-electric switches shall be of the type comprising a photo-sensitive resistor, thermal actuator with an inherent operating delay to make it insensitive to short duration changes in light levels and a change-over switch mechanism, all housed within a

tough, translucent, weather and ultra-violet resistant cover. The operating level shall be factory preset to switch on at approximately 50 lux and off at approximately 100 lux. The response time after sudden changes in light level shall be not less than 15 seconds.

Integral protection against voltage surges shall be provided.

A suitable unit would be the "National" type ZS-20AR.

Where the photo-electric switch is pole mounted it shall be positioned in such a way that it will not be affected by spill-light from the street lighting installation or by vehicle headlamps.

7.4 **COMPLETION AND TESTING**

Immediately after completion of the installation the street lighting system shall be switched on and lamps allowed to stabilise for at least one hour. Any faulty lamps shall be replaced. The voltage at each luminaire shall be measured and toppings on the ballasts set accordingly.

7.5 **GUARANTEES AND MAINTENANCE**

The installation shall be guaranteed and maintenance carried out in accordance with the requirements detailed elsewhere in this Specification, except that where no other defects or maintenance procedures requiring Contractor's attention exist, the installation of replacement lamps supplied by the Contractor will be carried out by the Employer's maintenance personnel, unless otherwise specified elsewhere herein. Under no circumstances is any spare equipment or lamps elsewhere specified to be used for replacement during the foregoing period.

8.0 **HOT DIP GALVANISING**

Where hot dip galvanising is called for, it shall conform to SABS 763, the required coating thickness being in accordance with Table 1. Unless the galvanized part is to be painted, the coating is to be passivated immediately. Where later painting is required, a suitable primer shall be applied at the galvanising works.

Before galvanising, all cutting, drilling, welding, etc., shall be complete. Bolt threads shall be suitably undercut and nut threads over tapped to ensure the correct fit after galvanising.

All galvanized parts shall be stored under cover and in stacks such that no part is resting on another and there is sufficient ventilation to prevent condensation occurring. No galvanized parts shall be stored directly on the ground but on pallets or similar protection. Any damaged parts or parts attacked by white rust will be rejected.

Any galvanized surface that is subsequently damaged shall, if the Engineer does not require replacement, be touched up in the manner specified in the Clause "Painting" elsewhere in this Part.

9.0 **LABELS AND NOTICES**

The Contractor shall arrange for the labelling of all equipment, instruments, meters, relays, cables, etc., as indicated below.

All labels shall be ivory or other back engraved white on black labels of the sizes indicated. They are to be located in purpose made holders or otherwise are to be screwed or riveted into position. "Dymo" tape or similar labels will not be accepted nor will labels which are glued in position only.

Labels on poles shall comprise an aluminium plate with the designated number. These labels shall be nailed to the pole 1,5m above ground level. Nails shall be electro-galvanized clout nails.

Prior to any equipment being labelled, the Contractor shall request the Engineer to provide a complete labelling schedule for all items of equipment. Under no circumstances is equipment to be labelled in accordance with the tender drawings since any description thereon is for identification purposes during construction only and is unlikely to apply to the completed Works.

The following list indicates the general labelling requirements but does not limit the extent of

labelling required, which shall encompass the full extent of the equipment supplied, or in the case of existing equipment, any such which is affected by this Contract.

50mm high lettering:-

CDU and feeder panel designation.

5mm high lettering:-

CDU feeder breakers and isolators.
Meters, instruments and relays.

3mm high lettering:-

This size shall be used to designate the conductor size and number of cores of each cable installed under this Contract. In addition, all feeder cables shall be labelled to state from whence they are fed.

All kiosks shall be provided with notices as required by the Occupational Health and Safety Act. All doors to such locations shall be fitted with the appropriate notices.

10.0 **REMOVED MATERIAL**

All material recovered shall become the property of the Contractor and shall be removed from the site by him.

11.0 **INSPECTION, TESTING AND COMMISSIONING**

The Engineer shall have access at all reasonable times to such parts of the Works or the Contractor's premises for the purpose of inspecting, examining and testing the materials, workmanship and performance of any plant or equipment specified for the Works.

All wiring is to be subjected to a test voltage of 2kV for one minute without insulation failure. A Megger test is to be applied with a 500V instrument immediately thereafter to prove the insulation resistance better than 20 megohms.

All equipment necessary to enable the tests to be carried out shall be provided and shall include, inter alia:

- Phase rotation meter
- Avometer
- 500V/2kV DC test set

On completion of the entire installation or any particular section thereof, as may be decided by the Engineer, commissioning shall be carried out by the Contractor, and any tests the Engineer deems necessary shall be conducted. The Contractor shall supply all equipment necessary for the testing and commissioning procedures.

During commissioning, all tap change switches are to be correctly set and locked.

The Contractor shall supply all equipment necessary for the testing and commissioning procedures. The test equipment required at Site shall include, inter alia :

- (i) Phase rotation meter
- (ii) Suitable cable test set
- (iii) 11 000V phasing sticks

- (iv) 500V megger
- (v) Avometer
- (vi) Earth resistance test set

After completion of the commissioning tests the Contractor shall provide duplicate test certificates relating to cable tests and results of earth tests.

The Contractor shall give the Engineer at least 14 days notice of the date of any testing or commissioning so that he may be present if he so wishes. Where the Engineer does not himself, or through his representative, attend to witness the tests, then the Contractor may proceed with the test, duly forwarding to the Engineer certified copies of the results obtained. In such cases, the test shall be deemed to have been made in the presence of the Engineer.

In the event of the equipment or installation not passing the tests, the Employer shall be at liberty to deduct from the Contract Price, all reasonable expense incurred by him or by the Engineer in repeating the tests.

15.0 **COMPLETION OF WORKS**

Before completion of the Contract any damage which may have been done in the process of the installation shall be repaired and made good, trench or excavation work shall be left in a clean and tidy state and all accumulated debris shall be removed from the Site by the Contractor, to the satisfaction of the Employer and Engineer.

All defects found are to be rectified within one month of written notice of such defects. A penultimate certificate reducing the retention amount to that stated elsewhere in this Specification will only be issued upon submission of As Built Drawings and Operating Manuals as called for elsewhere herein, after completion of all notified defects, and once all test certificates called for in the Clause "Inspection, Testing and Commissioning" elsewhere in this Part have been submitted and accepted by the Engineer.

An appropriate Certificate shall acknowledge practical completion of the Works and the commencement of the period during which the Contractor will be responsible for any defects that may become apparent, and of maintenance of the installation.

The Contract will not be deemed to be finally complete until the Engineer's final payment certificate is issued.

Vol. 1.1 Part 1
SCHEDULE OF INFORMATION

PROJECT TITLE:	SECTION 10B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 3- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

ITEM	DESCRIPTION
1.	REGISTRATION AS ELECTRICAL CONTRACTOR
2.	DETAILS OF INSTALLATION ELECTRICIAN
3.	SCHEDULE OF MATERIALS OFFERED

1. **REGISTRATION AS ELECTRICAL CONTRACTOR**

The Tenderer must be registered as an Electrical Contractor with the Department of Labour and must also be registered with the Workmen's Compensation Commissioner and the Unemployment Insurance Commissioner to qualify for this tender.

Tenderers must complete the following questionnaire and submit it with this tender.

- a) Has the company been registered with the Department of Labour
YES/NO

Registration No :

Date of issue :

NB: Proof of current registration to be submitted with the tender. Should your tender be successful you will be expected to submit the original document for perusal by the Engineer.

- b) Has the company been registered with the Department of Labour?

- i) The Workmen's Compensation Commissioner YES/NO

Registration No :

Date of issue :

- ii) The Unemployment Insurance Commissioner YES/NO

Registration No :

Date of issue :

I/We certify that the above information is correct

Signature :

Name of Signatory :

Name of Firm Represented :

Address :

.....

Date :

2. **DETAILS OF INSTALLATION ELECTRICIAN**

I/We certify that is a registered installation electrician in terms of the Occupational Health and Safety Act (Act 85 1994) and is permanently employed by my/our company trading as:

.....

I/We further certify that the abovementioned person will be appointed as the responsible person in charge of the installation, which person shall personally supervise the whole of the electrical works as tendered for from inception to completion inclusive of signing all commencement/completion/ cost certificates necessary as part of the Works.

I/We further certify that I/We am/are fully aware of the provisions of the Occupational Health and Safety Act (Act 85 1994), and that my/our company is trading as a registered electrical contracting organisation.

SIGNATURE OF TENDERER	.....	SIGNATURE OF INSTALLATION ELECTRICIAN	.....
REGISTRATION NUMBER OF INSTALLATION ELECTRICIAN	.....	DATE	.....

COMPANY STAMP

NOTE It is an offence to employ a registered single-phase installation electrician on a poly-phase installation and it may be necessary to submit a certified copy of the licence of the person to be employed on any poly-phase project.

3. **SCHEDULE OF MATERIALS OFFERED**

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

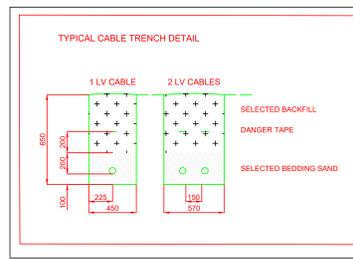
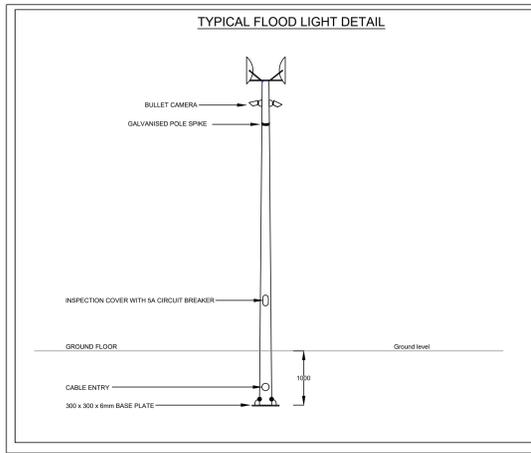
NB : Only one manufacturer's name to be inserted for each item.

ITEM	MATERIAL	MAKE OR TRADE NAME	CONFORMITY TO SANS ?
1.0	Cables:		
1.1	Cables PVC, SWA, Cu		
1.2	Cable glands & shrouds		
3.0	Streetlighting:		
3.1	Poles		
3.2	Luminaires		

NOTE : The Contractor is to note that under no circumstances may materials be installed other than that offered in the above material schedule, which has been approved and accepted by the Engineer. Should the Contractors wish to supply materials other than that originally offered, prior written approval must be obtained from the Engineer, before any orders are placed.

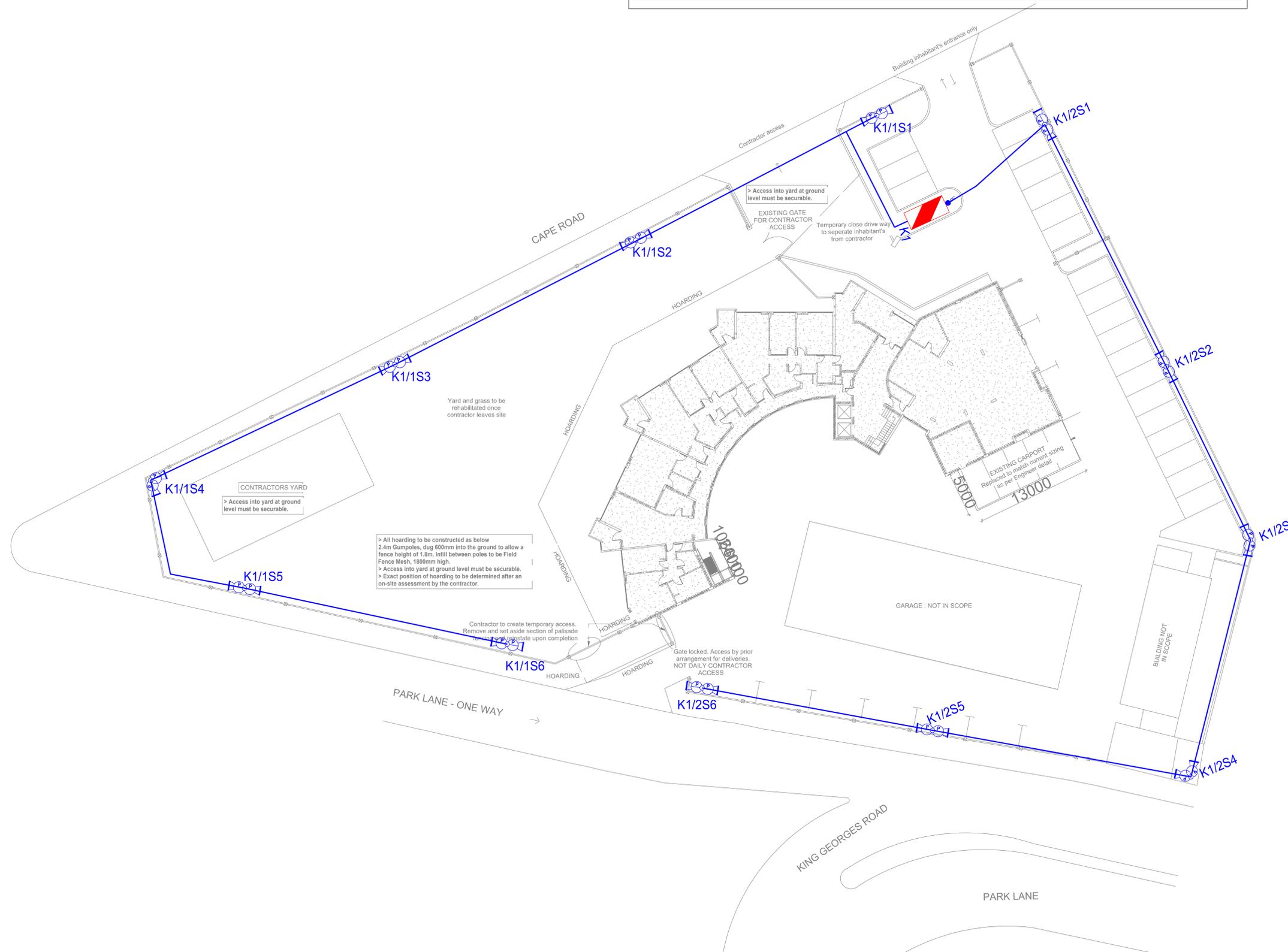
Signature :

Name of Tenderer :



SECURITY LEGEND	
	PHOTO CELL
	2 x 150W LED FLOODLIGHTS MOUNTED ON A 6m GALVANISED POLE INSTALLED ALONG THE FENCES
	OUTDOOR DISTRIBUTION KIOSK
	6mm 4C Cu ECC IN A 50mm PVC SLEEVE

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB'S).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - D - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - PE - STANDING SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.



TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC

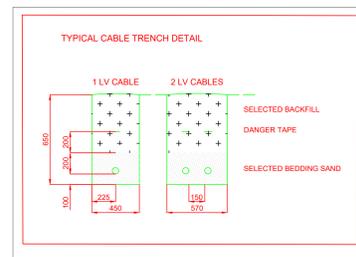
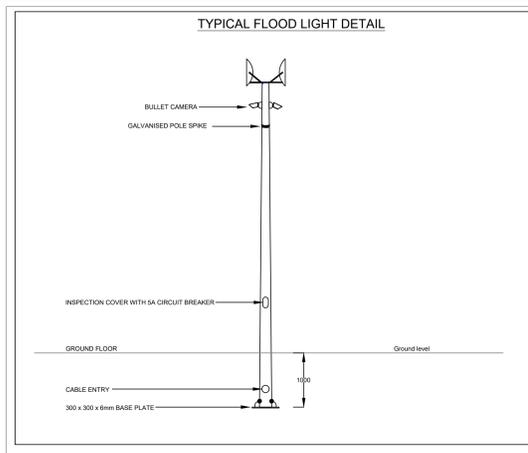


DISCIPLINE
ELECTRICAL

SERVICE
**PROTEA FLATS:
UPGRADING SECURITY FENCE.**

DRAWING TITLE
**SITE PLAN:
PERIMETER LIGHTING & SLEEVE
LAYOUT**

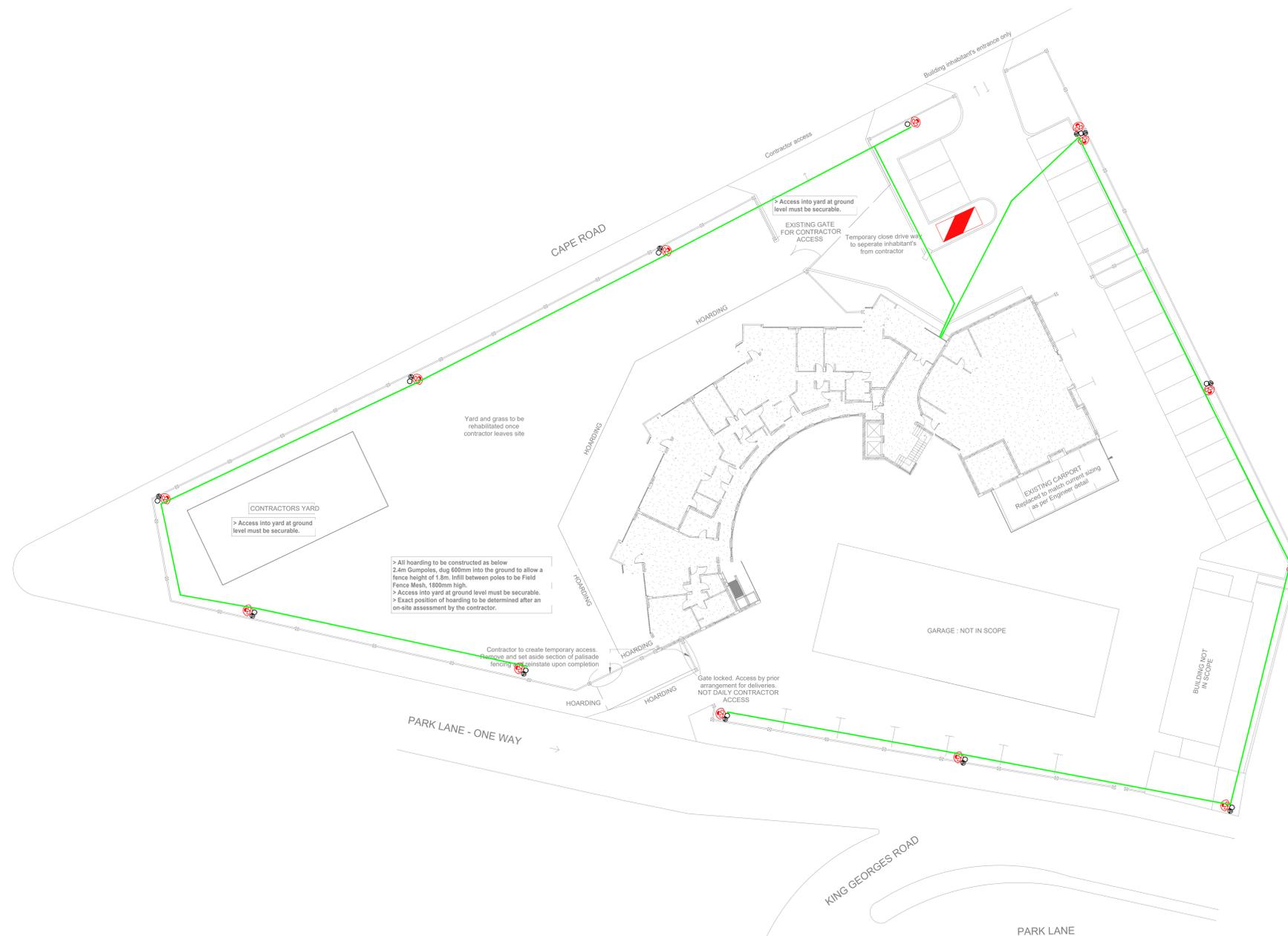
SCALE	1:500	DRAWN	B. GEELEBOO
DATE	FEBRUARY 2017	CHECKED	B. GEELEBOO
PRINT DATE	29/09/2025	CHECKED	ERIC CEBA
PROJECT NUMBER	2316-T-E-100A AL	REVISION	00



ICT LEGEND

	DATA LINE CONNECTION POINT IN CEILING VOID OR FOR CCTV UNIT
	VANDAL PROOF STATIC SURVEILLANCE CAMERA
	110mm PVC SLEEVE
	6m GALVANISED POLE FOR FLOODLIGHTS INSTALLED ALONG THE FENCES

- ### GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - CD - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - SP - STANDBY SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDBY SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.



TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC



b4 Architects cc
Responsible HealthCare Design
17 St. George Street, Port Elizabeth, 6001
Tel: 041 202 1111
Fax: 041 202 1112
Email: info@b4architects.co.za

electrical engineer
RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers
17 St. George Street, Port Elizabeth, 6001
Tel: 041 202 1111
Fax: 041 202 1112
Email: info@rnacape.co.za

DISCIPLINE
ELECTRICAL

SERVICE
PROTEA FLATS : PERIMETER CCTV.

DRAWING TITLE
SITE PLAN: CCTV & SLEEVE LAYOUT

SCALE 1:500	DRAWN B. GEELEBOO
DATE FEBRUARY 2017	CHECKED B. GEELEBOO
PRINT DATE 28/09/2025	CHECKED ERIC CEBA
ARCHITECTS DRAWING NO. 2316-T-E-100B	REV No. 00

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS

WORK PACKAGE 3

SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 1 : PRELIMINARIES AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	Other Fixed-charge Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.2	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Guarantee of the Works	Sum	1		
1.2.3	Provide Test Results	Sum	1		
1.2.4	Provision of Record Drawings	Sum	1		
1.2.5	All OHS&A Requirements including safety equipment and clothing	Sum	1		
1.2.6	All HIV / AIDS Specification Requirements	Sum	1		
1.2.7	Other Value Related Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.3	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	Other Time-Related Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS
ELECTRICAL INSTALLATIONS
SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 2 : DISTRIBUTION BOARDS & Cabling

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Distribution Kiosk Fibreglass Kiosk with backing board two lockable doors, base and electrical switchgear as per SLD				
2.1.1	Kiosk 1				
	Supply	each	1		
	Install	each	1		
2.2	Existing Distribution Board Supply and install in existing distribution boards the following switchgear and materials including labelling:				
2.2.1	:- 25 Amps, TP, 6kA circuit breakers	each	1		
2.3	Cables PVC Insulated PVC bedded SWA PVC sheathed 600/1000V copper cables. drawn into building entry sleeve, mounted on Tray or Wire Basket.. Tenderer to allow addition suitable earth conductor for the cable				
2.3.1	6mm ² 4 Core complete with ECC				
	Supply	m	350		
	Install	m	350		
2.2.1.1	Termination for 6mm ² 4 core cable complete with ECC				
	Supply	No.	24		
	Install	No.	24		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS

ELECTRICAL INSTALLATIONS

SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 3 : LUMINAIRES

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Luminaires Luminaires mounted on concrete or suspended ceilings, or on brickwork including lamps and fixing material. NOTE: See contract document for detailed technical specifications.				
3.1.1	Type-P (150W LED surface mounted Flood Light, IP65 rating, Aluminium Body, Colour: Black) Price to include brackets and IP65 terminal boxes for installation on pole				
	Supply	each	24		
	Install	each	24		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS

ELECTRICAL INSTALLATIONS

SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 4 : SWITCHGEAR EQUIPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
4.1	Switchgear 16 Amp rocker type light switch with coverplate installed into a flush box measured elsewhere.				
4.1.1	10 amp photo electric cell surface mounted in on a kiosk as shown on the drawings				
	Supply	each	1		
	Install	each	1		
TOTAL SCHEDULE NO. 4 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS**WORK PACKAGE 3****SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO. 5 : GENERAL POWER**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
5.1	Conduit PVC conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
5.1.1	20mm				
	Supply	m	100		
	Install	m	100		
5.1.2	25mm				
	Supply	m	50		
	Install	m	50		
5.2	Galvanised metal conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
5.2.1	20mm				
	Supply	m	80		
	Install	m	80		
5.2.2	25mm				
	Supply	m	40		
	Install	m	40		
5.3	Conduit Boxes Round Galvanised box for 20mm conduit, back or side entry for 1, 2, 3 or 4-way chased into brickwork, cast into concrete or fixed in trusses including couplings bushes cover plates and fixing materials (average rate)				
5.3.1	20mm Galv round box				
	Supply	each	10		
	Install	each	10		
5.3.2	25mm Galv round box				
	Supply	each	5		
	Install	each	5		
TOTAL SCHEDULE NO. 5 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS**WORK PACKAGE 3****SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO. 6 : CONDUCTORS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
6.1	Conductors 600/1000 grade PVC insulated single core copper conductors drawn into conduit				
6.1.1	2,5mm ² red/black				
	Supply	m	120		
	Install	m	120		
6.1.2	2,5mm ² yellow & green				
	Supply	m	60		
	Install	m	60		
TOTAL SCHEDULE NO. 6 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS**WORK PACKAGE 3****SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO 7 : POWER RETICULATION EQUIPMENT**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
7.0	WIRING DUCT				
7.1	50mm PVC sleeve				
	Supply	m	350		
	Install	m	350		
7.2	110mm PVC sleeve				
	Supply	m	350		
	Install	m	350		
3.1.2	Galvanised Steel Poles for CCTV Cameras and Security Lights				
	Galvanised Steel pole with 7m, base plate, gland plate, 5A MCB, access door. Price to include tamper proof screws for access door and 2 spanners				
3.2	Supply	each	12		
	Install	each	12		
3.1.2	Galvansed Spikes				
	Klaw Spikes for poles above				
3.2	Supply	each	12		
	Install	each	12		
TOTAL SCHEDULE NO. 7 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS**WORK PACKAGE 3****SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO 8 :EXCAVATIONS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
8.1	Excavations for cables in trenches (450 wide x 600deep)				
8.1.1	Excavate in normal earth	m ³	95		
8.1.2	Allow for Soft Rock in above trench	m ³	2		
8.1.3	Allow for Hard Rock in above trench	m ³	2		
8.1.4	In concrete/ tar/ paving including reinstatement to original finishing	m ³	5		
8.1.5	Selected fines bedding 150mm under cable and 150mm on top of cable	m ³	20		
8.1.6	Removal of unsuitable material	m ³	8		
8.1.7	Supply and install cable marker tape 200mm above cable in trench	m	350		
8.1.8	Allow trenching for the poles per specifications	No.	12		
8.1.9	Allow concrete plinth including nuts and bolts for pole mounting	No.	12		
TOTAL SCHEDULE NO. 8 TO PRICE SUMMARY					

SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PROTEA FLATS**WORK PACKAGE 3****SECTION 10B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO 9 :SUNDRY ITEMS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
9.1	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
9.2	Testing of complete installation in terms of the regulations	Sum	1		
9.3	Provide Certificate of Compliance for the new works	Sum	1		
9.4	Provide As-built drawing for the new works	Sum	1		
TOTAL SCHEDULE NO. 9 TO PRICE SUMMARY					

**SECTION 10B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV
AT PROTEA FLATS**

WORK PACKAGE 3

SUMMARY OF MAIN BILL

DESCRIPTION	SECURITY FENCE - LIGHTING & CCTV SLEEVES AND POLES
	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : DISTRIBUTION KIOSKS & CABLING	
BILL NO. 3 : LUMINAIRES	
BILL NO. 4 : SWITCHGEAR EQUIPMENT	
BILL NO. 5 : GENERAL POWER	
BILL NO. 6 : CONDUCTORS	
BILL NO 7 : POWER RETICULATION EQUIPMENT	
BILL NO. 8 : EXCAVATIONS	
BILL NO. 9 : SUNDRY ITEMS	
SUBTOTAL (EXCL VAT)	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 10B ON FINAL SUMMARY ON PAGE 455	

SECTION 10C

PROTEA FLATS

CCTV INSTALLATION

PROTEA FLATS - HEALTH CENTRE

CCTV INSTALLATION

DETAILED TECHNICAL SPECIFICATION

1. CCTV INSTALLATION

1.1 GENERAL INFORMATION

The Subcontractor is responsible for providing the installation in accordance with the Specification as well as the specifications and requirements set out in the Department of Health ICT, Data and Security systems installation specification.

The intent of this document is a performance specification for a modular security management system encompassing the sub-systems described. Tenderers are at liberty to offer enhancements to the equipment specified.

The security subcontract will be inclusive of the following IP based installations:

- Closed Circuit Television Cameras, Monitors and Recording
- Control Desk in control room

Tenderers are encouraged to tender a main option which would represent a compliance with the specification and quantities and would relate to the completed Bills of Quantities. Alternative options may be offered together with a full motivation and separate Bills of Quantities.

In instances where reference is made or inferred to particular products, it only serves the purpose of defining a required standard. Tenderers are requested to offer the best and most suitable products for the application.

General items include the following:

- a) Cable trays to be supplied and used where possible and all cable to be neatly and securely tied with cable ties.
- b) If no cable trays, all cables to be installed in conduit and correctly secured.
- c) No cables may be left to lay on the ceiling boards.
- d) All cable loops to have minimum of 20% spare capacity.
- e) All cabling to electronic locks is to be installed on the secure side.
- f) No joins in cable will be accepted.
- g) All junction boxes and boards to be correctly mounted.
- h) All door monitors will be of the 20mm recessed type unless specified otherwise.
- i) All readers must be wired to facilitate the reader sounder and other functionalities.
- j) All electronic devices, power supplies and any other control equipment must be mounted neatly in suitable enclosures to protect them against damage and tampering. Each enclosure will be fitted with a tamper switch and all power supplies are to be monitored.
- k) All floor, room and ceiling voids to be protected and monitored for smoke, fire and water.

- l) All power supplies will be battery backed up with a 12Vdc, sealed rechargeable lead acid battery.
- m) All CCTV, access control, fire detection and monitoring, plus emergency evacuation systems are to be connected to UPS power with battery back-up. Head end equipment must be provided with dual UPS power from different power breakers.
- n) On system hand-over, the installation is to be complete and FULLY functional.
- o) A complete set of user friendly operating instructions to be provided.
- p) Adequate operator training to be included in tender price.
- q) A complete set of design architecture drawings depicting correct positioning of all equipment to be supplied.
- r) All devices including public address speakers and access control devices must be labelled according to the floor number and location on the floor. A register of the items installed and the corresponding numbering must be supplied on hand over.
- s) All equipment must be networkable and facilitate remote monitoring and operation.

1.2 **SPECIFICATION**

1.2.1 Local and Supply Authority

The project location is within the bounds of the Livingstone Hospital (Standford Road & Lindsay Road, Korsten, Gqeberha). The area is also approximately 2.1km from Algoa Bay

This site consists of both single-storey and multi-storey buildings.

1.2.2 Site Conditions

Equipment shall be suitable for the following conditions:

Ambient temperature	-5°C to 40°C
Altitude	0m
Lightning	Severe
Dust	Severe
Relative Humidity	32°C dB Temperature 22°C wB Temperature
Nominal LV Supply	400/231 [no load] 4 wire, 3 phase system with earthed neutral.
Nominal HV Supply	22kV 3-wire system.
Frequency	50 Hz.

Details to be submitted with the tender document:

Should the Subcontractor in any way differ from the Specification, the differences shall be stated in detail. The information shall be included in a covering letter accompanying the tender, stating the paragraph of the Specification where the requirements are deviated from.

It shall be noted that the information entered in the schedules will not relieve the Subcontractor of his obligations to comply with the Specification.

1.2.3 Scope

The Specification covers all activities up to final commissioning and maintenance during the guarantee period of the installation.

- IP Based CCTV Axis, Bosh or other Department of Health approved
- Full Integration of the above

A Main Security Control Room and Equipment Room will be provided in the building site in which the Access Control and CCTV systems will be installed.

Tenderers shall allow for the future extension of the systems and equipment offered for an additional 20% extension of all systems.

Access Control and CCTV termination boxes will be provided on and will be all linked to the Main Security Control Room.

1.2.4 The Access Control and CCTV Installation shall include but not be limited to:

- The design of the ACS and CCTV systems, supply, delivery, installation, testing, integration, commissioning, guarantee and maintenance of the Access Control and CCTV Installation.
- The provision of all necessary equipment, tools, accessories and test equipment to complete the Security Installation.
- The timeous provision of building work details.
- The provision of shop drawings showing all wiring routes, equipment details, equipment positions, [including fixing details], sleeves, etc.
- The compilation of manuals including a full schedule of equipment installed spares lists, "As Built" drawings and information as set out in the Specification.

1.2.5 The Access Control and CCTV Installation shall include but not be limited to:

- The design of the Access Control and CCTV systems, supply, delivery, installation, testing, integration, commissioning, guarantee and maintenance of the Access Control and CCTV Installation.
- The provision of all necessary equipment, tools, accessories and test equipment to complete the Security Installation.
- The timeous provision of building work details.
- The provision of shop drawings indicating all wiring routes, equipment details, equipment positions [including fixing details], sleeves, etc.
- The compilation of manuals including a full schedule of equipment installed spares lists, "As Built" drawings and information as set out in the Specification.

1.2.6 Related work by others

The following related work associated with this Subcontract will be carried out by other parties as specified:

1.2.6.1 Access Control and CCTV Subcontractor and Main Contract

The following work will be provided by the Main Contractor:

- Provisions of penetrations in walls and structure for reticulation of cabling.
- Closing of ducts and opening through concrete slabs after installation of wiring and piping.
- Setting out of all equipment

1.2.6.2 CCTV Subcontractor and Electrical Subcontract

The following work will be provided by the Electrical Subcontractor:

- A 400V 3-phase or 240V [uninterrupted] power supply point at each point as required and identified by the Subcontractor. Any transformers or converters required for other voltages shall form part of this subcontract and shall be priced with associated equipment.
- All conduit and wiring channels.

1.2.8 Service Level Agreement [SLA]

Tenderers shall specifically state their ability to provide a comprehensive SLA to the Owner on completion. Tenderers shall submit with their tender's examples and a list of performance-driven SLA's provided for installations similar in scope and nature.

1.2.9 Confidentiality

It is a condition of issue of these documents that the successful Subcontractor shall maintain full confidentiality of the documents and drawings.

During the course of the Subcontract, the successful Subcontractor shall institute such procedures to ensure proper control over copies of documentation and drawings. Such procedures may vary from time to time but shall include:

- Numbering of all prints of shop drawings and recording issue.
- Return of all drawings when superseded.

1.2.10 Conduits and wire-ways

All conduits and wire-ways required by the Subcontractor will be supplied and installed by the Electrical Subcontractor.

All conduits in areas of exposed slabs will either be cast in concrete or installed on surface as the case may be.

All conduits in walls will be built in.

The Subcontractor shall provide shop drawings for requirements over and above those already indicated for co-ordination purposes. These shall in particular, show size and position of outlet boxes as well as details of any special fixings that are required. All additional wire

ways and power supplies to be supplied on shop drawings that may be accordance with the product specified

All wiring required to make the Security System operational shall form part of this Subcontract. This shall include all power and control wiring from the 400V/240V power points installed by the Electrical Subcontractor.

All wire ways in the Security Control and Equipment rooms are excluded from this subcontract and will be installed by the Electrical Subcontractor.

1.3 **CLOSED CIRCUIT TV SYSTEMS**

A closed circuit television surveillance system shall be provided for surveillance of areas as shown on the drawings. The system shall allow for an extension of + 30% of equipment for further project phases.

1.3.1 General

- Network capability [with Client interface]
- Storage of minimum 3 years for all transactions, to be confirmed with Department of Defence
- Anti-pass back facility
- Audit trails
- Off-line capability; minimum of 25 000 events
- Exception report capability
- Maintenance; UPS and battery backup
- SLA's and maintenance contracts in place
- Minimum 60 months manufacturer's warranty on all equipment from date of commissioning
- Servers to be housed in server rooms or secure and adequately ventilated areas.
- All areas to have reader in/no touch release button out; unless specified otherwise
- High risk areas to have second verification facilities
- All high risk areas [server rooms, security Control Room/control room] to have one-on-one access control facility
- The hardware and software must form part of the fully integrated computerised system.
- System must provide for host/visitor function.
- Event interfacing with CCTV to be established
- Provision must be made for on-site image back-ups on an external storage device.

1.3.2 Cameras

Colour cameras with Infra-Red capabilities shall be installed in positions as indicated on the drawings or as measured in the Bills of Quantities. Camera positioning will be determined by positioning of equipment in the Server. The main areas to be equipped with CCTV will be:

- Perimeter Fence

Cameras will be powered by dedicated network switches, provided by the infrastructure. The Camera's must be IP based, and able to run off POE or POE+ Cameras operating at 24V shall be equipped with a dedicated power supply, which will be priced as part of the camera.

Cameras shall only be sourced from approved suppliers able to provide ongoing support and service. Tenderers shall state the manufacture of cameras and control systems offered.

The cameras indicated shall be fitted with Image Motion Detection to enable image transmission to be event triggered, or by access or alarm within the system. It shall be possible to define separate motion detection areas within the camera field of view, with each motion detection section to be armed or disarmed in accordance with time settings.

CCTV cameras shall be offered as high resolution, with conversion to monochrome facility in low light conditions, [less than ½ Lux]. Tenderers shall state the resolution performance of cameras offered.

All outdoor cameras shall be provided with an environmental housing.

The Subcontractor shall allow to install cameras by means of suitable mounting brackets against face brick and granite surfaces. In all cases an extended mounting arm of high quality steel or aluminium, 500mm in length, shall be allowed. The bracket and extension arm shall allow for adjustment of the camera. Although it is preferred the brackets are sourced from the camera supplier samples shall be provided for approval to the Contractor.

Dome cameras will be required with the following features:

- Sizes of 270 and 360mm diameter
- Camera will be mounted on ceiling
- Pendant dome colour will be white
- Lower dome colour will be smoked
- Auto focus/zoom with simple override to manual operation

1.3.3 LCD Monitors

Four 42" [inch] LCD monitors shall initially be required in the Main Security Control Room [allow for 30% extension].

The following basic requirements for viewing images shall be achieved:

- Stored images retrievable from log in 2 seconds.
- View live images from up to 4 cameras through one operator station, or up to 4 operation stations to view one camera.
- Zoom feature must be available for display images.
- Authorisation levels shall be available for all cameras, to select or prevent image display.
- Images displayed must be provided with digital Pan, Tilt and Roll functions.
- Tenderers shall state the viewing performance in fps that may be achieved by viewing multiple cameras at full size, as well as available trade-offs between frames capture rate and picture quality.

The following controls shall be mounted on the front of the monitor:

- On/Off power switch.
- Brightness control.
- Contrast control.

Horizontal and vertical hold controls shall be incorporated. These controls shall preferably be front mounted but easily accessible rear mounted controls will be accepted.

The monitors shall be freestanding with no cut-outs being accepted in the control desk. The Subcontractor shall note that all the monitors will be in close proximity to each other. It is therefore essential that all monitors are adequately screened and properly earthed. Any mutual interference and beat frequency that result shall be corrected at the expense of the Subcontractor.

Adequate cooling shall be provided in the design of the control desk for the monitors. This shall include ventilation slots at the rear of the control desk and pass through for cabling.

All wiring shall be neatly bonded and arranged. All intermediate power and control wiring shall terminate at numbered terminal strips. Video cables shall terminate on associated equipment using accepted connectors. Power and signal cables shall be separated throughout. Screened cables shall be used wherever possibility of mutual interference exists.

Cognisance shall be taken in the selection of the cabling to ensure cables will comply with the distance requirements between the cameras and the Security Control Room. Cabling shall be sized and selected to prevent degradation of the signal over the cables.

It is emphasised that the monitors shall be arranged to provide optimum viewing angles.

The subcontract includes all equipment and materials, cables and connections, terminals, plugs and sockets covers, finishing pieces, power skirting, etc. required to provide a neat and operationally complete installation.

1.3.4 Network Video Recorder (NVR) Hardware Platform

- The Network Video Recorder, a device for recording IP based video from IP output cameras or analog cameras that have been converted to IP output shall consist of a PC Compatible Chassis and other specified components, as shown in the following sub sections that together create the Network Video Recorder.
- NVR Chassis Configuration
- NVR Chassis which shall support a maximum of four video capture boards, one hard drive for OS and Software and up to eight (8) Serial ATA hard drives using Multi-Drive hard disk controller for video storage. RAID 5 hard disk controller configuration shall be available as an additional cost option.
- The end-user shall have the option of providing their own NVR chassis under the condition that it meets or exceeds the specifications as follows:
 - ✚ Intel Motherboard
 - ✚ 3.2 Ghz Processor Or Greater
 - ✚ 8 GB Of RAM or Greater
 - ✚ 800 Mhz Front Side Bus
 - ✚ Microsoft Windows XP Professional or Microsoft Windows 2003 Server Operating System on a dedicated OS Drive
 - ✚ 10/100/1000 Ethernet
 - ✚ Storage on SATA, SCSI or Fibre (internal or external)
 - ✚ Net Meeting
 - ✚ CD-ROM Drive
 - ✚ Mouse, keyboard and monitor (for initial setup)

1.4 **Security measures**

1.4.1 First line of security

The first line of security will be implemented by passive and active components. Passive components will comprise of either a boundary security wall, electric fencing and signage whilst the active components will be implemented by means of security guards, access control and closed

circuit television [CCTV] surveillance. This first point of security is at the point of entry to the development. At this point of entry, there will be a gatehouse at the boundary wall of the site. The gatehouse will comprise of security boom gates and attached to this, CCTV to record footage of the driver as well as the registration plate of the vehicles. The gatehouse will also comprise of a 24 hour security guard to monitor tenant access, visitors, deliveries and maintenance. The vehicle entry points will also be complemented with biometric access control points for free access of tenants.

> **Operation**

Staff approaching the site will be forced to present their biometric access/card access. This process can be recorded in such a way that a digital photo of tenant faces and vehicle registration numbers may be recorded and attached to the time stamp of the access control transaction.

Visitor access to the development and the apartments will comprise of dependant procedures. The first procedure will require the visitor to actively converse with the security and then enter into the visitors book the reason for entry. After positive identification of the visitor by the security guard, the guard will then release the vehicle boom for entry to site.

Please note that visual intercom identification can rather be selected for this process but has not been allowed for in the budget or documentation.

The security guard at the gatehouse will be supplied with a telephone, panic button and an access control override button for additional security.

The security booms will be equipped with infra-red sensors as well as an inductive loop system for monitoring of vehicle entries.

Sufficient lighting to be provided to enable adequate CCTV coverage.

1.4.2 Second line of security

This line of security will be implemented at the reception counter in the main foyer. The main entrance doors should be access controlled in order to maintain security at these gates after hours. These doors will be controlled by the receptionist via a push button located in a non-visible location at the reception desk.

The reception desk will be monitored by CCTV and will be recorded and stored for a minimum of thirty [30] days. The reception desk will house all necessary equipment to ensure that this security line secures access to all departments. The reception desk must house two desk top computers.

The first computer will be used for the following administration operations:

- Staff enrolment
- Visitors station
- Access control queries
- Internet and network queries

The second computer will be used for CCTV monitoring of visitors entering the premises, making their way through to the reception foyer. This will provide further security for staff and visitors.

> **Operation**

All visitors must report to the main reception following positive communication with the security guard at the gatehouse.

Dedicated view monitors in the security control room must be implemented to monitor all visitors entering the development.

At reception, all visitors must be enrolled as a visitor. The details captured by the receptionist could vary depending on the level of security required.

The details could include:

- Personal details captured onto the system and attached to the tenants profile for use of future visits.
- Biometric details in addition to the personal details to register the visitor as a frequent visitor.
- The above details and an attached photograph of the visitor to ensure maximum security.

If positive identification is obtained by the receptionist either by intercom system or on a pre-booked system, the visitor will then proceed to the designated area.

All details of the visitor entering the premises will be kept on record for a period of thirty [30] days, [unless otherwise requested].

> **General**

1. Intercom and CCTV to be provided at main access points for vehicles and visitors to communicate with the Control Room after hours
2. Panic buttons to be installed at all guardhouse desks
3. No PC's in the Control Room, they must be in the server room with extensions to the monitor keyboard and mouse and other devices as needed to the Control Room
4. Portable de-mustering stations to be provided for roll call at assembly points.
5. Guard tour monitoring software to be provided.
6. Provision for firearm storage [By Architect]

1.5 CONTROL DESK

The Subcontractor will install the security control desk [position to be finalised]

An equipment cabinet shall be part of the desk for installation of processing units or front-end equipment. Adequate ventilation openings shall be provided to ensure operating temperatures of equipment will not be exceeded.

To reduce the heat component in the security control room an equipment room it has been allowed for the installation of air-conditioning. All cabling to processors and for example amplifiers will be extended from the equipment room to the security control room.

The Control Room will consist of:

- 2 x workstations with 4 off 42" monitors
- House keys cabinet
- Lockable Key Cabinet
- Rack to accommodate 2 way radios
- Video intercom for control room
- Interlocking door

Openable doors at the bottom of the desk will allow easy access to power points and cabling underneath the desk. All cabling shall be internally reticulated with no surface mounted cabling being acceptable. The desk shall arrive on site complete with power skirting and wiring channel adequately sized for installation of the following equipment:

- Booms controls
- CCTV
- Magnetic locks control
- Intercoms
- Door monitoring

All pass through shall be adequately sized for the volume of cabling to be reticulated to the worktop inclusive of power supplies and plug tops.

Manufacturing drawings of the security control desk shall be submitted for approval prior to manufacture. It will be expected of the Subcontractor to liaise with other Subcontractors through the Contractor to obtain all inputs with respect to final installation details and interfaces. The point of interface shall be a terminal strip in the console where other Subcontractors will interface and connect wiring to.

All of the above is to be integrated under one Software Platform and work in conjunction with each other.

1.6 VIDEO IDENTIFICATION SYSTEMS [VIDEO BADGING]

The access control system must have the capability for video badging at the following areas:

- Main reception counter; all visitors and tenants
- Vehicle entrance; all drivers and vehicles
- Pedestrian entrance; all visitors and tenants

At the main reception and pedestrian entrance the system shall have the capability to capture a video image and audio record of the visitor, which shall be linked to the Access Control record.

At the vehicle entrance the system shall have the ability to capture video images of the driver as well as the vehicle registration plate, by means of a video and audio image, date and time stamped and linked to the Access Control System record.

LIVINGSTONE HOSPITAL - HEALTH FACILITY

CCTV INSTALLATION

SCHEDULE OF DRAWINGS

DRAWING NO.	DESCRIPTION OF DRAWING
2316-T-E-100B CCTV	Site Plan: CCTV & Sleeve Layout

LIVINGSTONE HOSPITAL - HEALTH FACILITY

CCTV INSTALLATION

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.



COMPREHENSIVE PERIMETER ELECTRONIC SECURITY SOLUTION SPECIFICATION



Together, moving the health system forward

Fraud prevention line: 0800 701 701
24 hour Call Centre: 0800 032 364
Website: www.ehealth.gov.za

SPECIFICATION FOR THE SUPPLY, DELIVERY, INSTALLATION AND MAINTENANCE OF A COMPREHENSIVE PERIMETER ELECTRONIC SECURITY SOLUTION FOR WESTERN REGION HEALTH FACILITIES.

I. SURVEILLANCE		
NO.	QTY	SCOPE OF WORK
1.1	Outdoor Bullets	
	1	6 MP, IP Bullet AcuSense Strobe Siren, 12mm lens, IP67, IR 60m, H.264+ Galvanized Vandal Proof Cage with Anti Bird Spike
1.2	PTZ Solutions	
	1	6m Galvanised Square Cubed Surveillance pole, 100mm with Thick outside wall, large base plate, gussets, and mounting plate, predrilled and galvanised. Anti Climb Spike Collar Enclosure Fiberglass - H:450 x W:300 x D:210 PTZ 6+4MP TandemVu IR 200m 25x IP66 White Aluminium PTZ Wall mount Bracket, 97x182x3 White Aluminium PTZ Corner mount Bracket Video wise Camera Power Supply, 24Vac 3Amp, Surge Protected, Fused
2. CONTROL ROOM LAYOUT AND DESIGN		
2.1	Digital Recorder	
	1	16Ch AcuSense NVR, 256Mbps, 4 SATA, alarm I/O:16/4, 1.5U
	1	Surveillance HDD 9TB Serial ATA 600 (6Gbps) - 64MB Cache @ 5900rpm
2.2	Server Room	
	1	19 unit Server Cabinet, international standard - Material: Cold-rolled steel - Surface finish: Digressing, pickling, phosphoric powder coated - Frame thickness: 2.0mm - Curved, perforated front door - Double-section back door - Double-section side panels for easy access and assembly - Ventilation rate of over 80% - Adjustable, closeable, top and bottom wiring channels - Vertical cable management at the back of the cabinet - Mounting rail with U mark - Standard with earthing kits - 1000Kg loading C44- Adjustable feet and heavy duty castors Dimensions: 600mm Wide x 2000mm High x 950mm Deep - INCLUDES BRUSH PANELS, 24 PORT PATCH PANELS, BLANKS AND TRAYS
	1	PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty
2.3	Field Switches	
	1	PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty
	1	RCT 4U 450mm Fixed Wall Mount Cabinet Perforated Metal - Black wall mount cabinet with 2x Front Upr. 2x Glands + Screws - Optional Fans / Trays / Power Rail / Brush & Patch Panels RCT 1 Way Sing Fan Wired - Wall Mount + Casing
2.4	Wireless Communications	
	1	M5: 5GHz, 23dBi Hi Power, TDMA Station, incl PoE
2.5	Wireless Fidelity	
	1	Wifi 1000/1000 Mbps Uncapped data with router, Outbound Uncapped Voice Channel, Inbound Uncapped Voice Channel, Quality Voice Bandwidth, Non-Geo Voice Numbers, Minimum contract term: 36 months
	1	Wifi Extender RE650 AC2600, Dual band, WPA/WPS button, MU-MIMO for 4 x faster connection, 1 Year Warranty (extended to 3 years)
2.6	Cable Hardware	
	1	CAT6 Shielded Twisted Pair Cable - UV protected, per meter
	1	CAT6 RJ45 Crimp Connector
	1	CAT6 RJ45 Weather Boot



CONFIDENTIAL

2.7	Keyboard Controller	
	|	Speed Dome - IP Network Keyboard Controller
2.8	Review Control Station	
	|	24/7 LED CCTV Monitoring Screen 55" Full HD 1920 x 1080 P
	|	26" to 60" Universal LCD / LED Panel Wall mount Bracket
	|	HDMI to HDMI Gold Plated Cables
2.9	Control Room Layout and Design	
	|	Air-conditions 12 BTU
	|	Carpeting for new floor (Vinal Floor) per sqm
	|	Painting of control room per sqm
	|	Woodwork for display wall (Carpentry, Screen mount brackets and Consoles)
	|	Two Office Chairs
	|	A4 Black Printer, Wi-Fi connectivity, Windows Supported OS
3. BACK - UP POWER SUPPLY SYSTEM		
3.1	UPS Solution	
	|	10KVA 6U ON-LINE SINE WAVE Rack mountable UPS - Black
	|	SNMP Network Card WTU / GTU / GRU ON-LINE UPS
	|	Modbus Card for WTU / GTU / GRU ON-LINE UPS
	|	Rack Mount Kit for GRU Rack mountable UPS
	|	5000VA ON-LINE UPS (with AVR, Monitoring Software + Cable & Built-in Surge Protection) – Black
	|	=10 Hours Duration
4. POST IMPLEMENTATION SUPPORT MECHANISM		
4.1	Operating And Maintenance Manual:	
	|	Supply hard copy format operating and maintenance manual for IP surveillance system.
	|	Supply electronic media format operating and maintenance manual for IP surveillance system.
4.2	Training On Site:	
	|	Training of staff on the entire IP surveillance system.
4.3	Infrastructure Installation Drawing/Diagram:	
	|	Submit Installation drawings or diagram depicting infrastructural layout for work done of all IP surveillance systems installation
4.4	Guarantee:	
	|	36 Month warranty and maintenance for the complete IP Surveillance system including a next business day response.



SECTION 10C CCTV INSTALLATIONS AT PROTEA FLATS

WORK PACKAGE 3

BILL NO. 1 : PRELIMINARIES AND GENERAL AMOUNTS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1.0	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	<u>Other Fixed-charge Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.2.0	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OHS Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	<u>Other Value Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.3.0	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	<u>Other Time-Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 10C CCTV INSTALLATIONS AT PROTEA FLATS**ELECTRICAL INSTALLATIONS****BILL NO. 2 : CCTV**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Outdoor Bullet Camera 6 MP, IP Bullet AcuSense Strobe Siren, 12mm lens, IP67, IR 60m, H.264+ with Galvanized Vandal Proof Cage with Anti Bird Spike				
	Supply	each	13		
	Install	each	13		
2.2	Digital Recorder 16Ch AcuSense NVR, 256Mbps, 4 SATA, alarm I/O:16/4, 1.5U with Surveillance HDD 9TB Serial ATA 600 (6Gbps) - 64MB Cache @ 5900rpm				
	Supply	each	1		
	Install	each	1		
2.3	Monitors 24/7 LED CCTV Monitoring Screen 55" Full HD 1920 x 1080 P with 26" to 60" Universal LCD / LED Panel Wall mount Bracket				
	Supply	each	1		
	Install	each	1		
2.4	Licensing and Software CCTV software including licensing, graphics and commission etc.	Sum	1		
2.5	Switches PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty				
	Supply	No	5		
	Install	No	5		
2.6	Cabling				
2.6.1	CAT6 Shielded Twisted Pair Cable (UV protected)	m	2000		
2.6.2	All consumables i.e CAT6 RJ45 Crimp Connector, CAT6 RJ45 Weather Boot etc.	Sum.	1		
2.7	Cabinets 19 unit Server Cabinet, international standard - Material: Cold-rolled steel - Surface finish: Digressing, pickling, phosphoric powder coated - Frame thickness: 2.0mm - Curved, perforated front door - Double-section back door - Double-section side panels for easy access and assembly - Ventilation rate of over 80% - Adjustable, closeable, top and bottom wiring channels - Vertical cable management at the back of the cabinet - Mounting rail with U mark - Standard with earthing kits - 1000Kg loading C44- Adjustable feet and heavy duty castors Dimensions: 600mm Wide x 2000mm High x 950mm Deep - INCLUDES BRUSH PANELS, 24 PORT PATCH PANELS, BLANKS AND TRAYS	No.	1		
2.8	Uninterrupted Power Supply 10KVA 6U ON-LINE SINE WAVE Rack mountable UPS - Black, SNMP Network Card WTU / GTU / GRU ON-LINE UPS, Modbus Card for WTU / GTU / GRU ON-LINE UPS, Rack Mount Kit for GRU Rack mountable UPS, including all wiring and consumable required	Sum.	1		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 10C CCTV INSTALLATIONS AT PROTEA FLATS

WORK PACKAGE 3

BILL NO 3 : SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Testing of complete installation in terms of the regulations	Sum	1		
3.2	On site training	Sum	1		
3.3	As-built drawing	Sum	1		
3.4	Operating and Maintenance Manuals	Sum	1		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 10C CCTV INSTALLATIONS AT PROTEA FLATS

WORK PACKAGE 3

SUMMARY OF MAIN BILL

DESCRIPTION	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : CCTV	
BILL NO 3 : SUNDRY ITEMS	
SUBTOTAL (EXCL VAT)	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 10C ON FINAL SUMMARY ON PAGE 456	

SECTION 11A

PE PROVINCIAL HOSPITAL

ELECTRICAL INSTALLATION FOR ENTRANCE AND EXIT GATEHOUSES

Vol. 1.1 Part 1**DETAILED SPECIFICATIONS**

PROJECT TITLE:	SECTION 11A: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATEHOUSE - WORK PACKAGE 4 - ELECTRICAL INSTALLATIONS
-----------------------	------------------------------------------------------------------------------------------------------------------------------------------------

Contents

1.0	INTRODUCTION & GENERAL	2
2.0	SCOPE OF WORK	2
2.1	General Electrical Installation	2
2.2	Specialised Installation.....	3
2.3	Temporary Works	3
3.0	SYSTEM LOW VOLTAGE.....	3
4.0	NOTICES AND FEES.....	3
5.0	QUALITY OF MATERIALS.....	3
6.0	BALANCING OF LOAD	3
7.0	BUILDER’S WORK	4
8.0	SCHEDULES OF INFORMATION	4
9.0	SCHEDULE OF LUMINAIRES.....	4
10.0	SAMPLES AND ALTERNATIVES	5
11.0	SUPERVISION, WORKMANSHIP AND DELAYS	5
12.0	MAKING GOOD	5
13.0	COMMISSIONING AND TESTING	6
13.1	Commissioning.....	6
14.0	CONSTRUCTION PROGRAMME	6
15.0	DRAWINGS	6
15.1	General.....	6
15.2	Record / As-Built Drawings	6
16.0	MEASUREMENT	7
17.0	TRENCHING AND EXCAVATIONS	7
	Trenching	7
	Bedding of Cables.....	7
	Backfilling	7
	Random Check of Excavations	8
18.0	LAYING, TESTING AND TERMINATION OF CABLES.....	8
18.1	Cable Terminations	8

Cable Marker Tape.....	8
19.0 MONTHLY CERTIFICATES.....	8
20.0 LV DISTRIBUTION BOARDS.....	8
20.1 Cascading	9
21.0 DISTRIBUTION CABLES	9
22.0 PVC SLEEVES.....	9
23.0 CABLE DRAW WIRE	10
24.0 EARTHING AND BONDING	10
24.1 General.....	10
24.2 Water pipes.....	10
24.3 Roofs, gutters and down pipes	10
24.4 Sub-distribution boards	10
24.5 Sub-circuits.....	10
24.6 Common Earth	11
24.7 Non-metallic Conduit.....	11
24.8 Flexible Conduit	11
24.9 Connection	11
24.10 Earth Terminal for Other Services.....	11
25.0 CONDUIT, WIREWAYS AND ACCESSORIES.....	11
25.1 Conduit.....	11
25.2 Wiring Trunking / Channel	12
26.0 WIRING.....	12
27.0 WALL SWITCHES AND SWITCH SOCKET OUTLETS.....	12
28.0 TELEPHONE, COMPUTER AND SECURITY INSTALLATIONS.....	13
29.0 EQUIPMENT GUARANTEES, MAINTENANCE AND INSTRUCTION MANUALS.....	13
30.0 COMMISSIONING AND TAKE-OVER	13
30.1 Completion.....	13

1.0 INTRODUCTION & GENERAL

Should there be any conflict or ambiguity between sections of this enquiry, then the sections will be considered in the following order of priority: -

- Schedule of Quantities
- Detailed Specification
- Drawings

Should the Tenderer notice any inconsistencies between these sections, it is his responsibility to notify the Engineer in order to obtain clarification thereon.

2.0 SCOPE OF WORK

The main contract is for the Construction of New Entrance and Exit Gatehouses for PE Provincial Hospital in Gqeberha.

The Electrical installations shall entail but not limited to following:

- Installation of new Distribution Boards;
- Installation of new LED lights throughout the buildings;
- Installation of socket outlets wall mounted;
- Installation of DB switchgear in the existing buildings adjacent to guardhouses to be constructed
- Installations of mains cables from existing DBs for Normal power supply to new guardhouse feeding these buildings.
- Earthing, testing and commissioning of the entire installation including issuing of Certificate of Compliance for each DB
- Installation of conduits with draw-wires for the boom gates (boom gates to be supplied by others)
- Repairs and maintenance to existing area-lighting (post tops)
- Etc.

2.1 General Electrical Installation

The Works will be executed in strict accordance with the following: -

- a) The Wiring Code - SANS 10421-1: 2008,
- b) Interior Lighting Part 1: Artificial Lighting of Interiors; Part 2: Emergency Lighting – SANS 10114-1,
- c) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.

The general electrical installation is reflected on a set of drawings attached to this tender document.

- a) The Subcontractor to be mindful of the fact that the site is occupied at all times.
- b) The Subcontractor will be responsible for the supply and installation of new LV mains cabling between new distribution boards and existing distribution boards in existing

buildings including replacement of circuit breakers for the new cables.

The new DBs are as shown on the power layout.

- c) Supply and installation of
- complete building electrical installation including cabling, distribution boards,
 - the installation and connection to power of such equipment as may be supplied by the Employer or other Employer's contractors, and
 - Testing of the Electrical installation and issue Certificates of Compliance.
- d) Repairs to post top luminaires. This shall include
- Replacement of existing luminaires with new LED post top luminaires
 - Repairs to cables and streetlight wires
- e) Produce marked up As-Built drawings of the Electrical Installations and be submitted to the Engineer.

The description of the Works listed above, is not necessarily complete and shall not limit the work to be carried out by the Subcontractor under this Contract.

2.2 Specialised Installation

No allowance for specialised installations on this contract.

2.3 Temporary Works

No temporary works are envisaged in the current design and planned execution of the works except where the Subcontractor wants to incorporate it as part of his work method. In case the requirement for such is necessary, the subcontractor to arrange with Engineer for a variation order of such work before it is carried out.

3.0 SYSTEM LOW VOLTAGE

The supply to all the Electrical installation shall be 230 Volts, 1-phase, 50 Hertz, Earthed Neutral.

4.0 NOTICES AND FEES

The Subcontractor shall liaise, issue all notices to and make the necessary arrangements with the Technical department of the hospital for planned power disruptions.

5.0 QUALITY OF MATERIALS

Materials are to comply with the relevant South African National Standards (SANS), or to IEC specifications, where no SABS specifications exist. All materials used shall bear the SABS or IEC mark of approval as applicable.

NB: All materials must be of South African manufacture. The Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.

6.0 BALANCING OF LOAD

The Subcontractor is required to balance the load as equally as possible over the multiphase supply **before Final Completion**.

7.0 BUILDER'S WORK

Subject to negotiations the following may be provided by the Contractor under the building works contract: -

- Making good all chasing
- Refurbishing of road surfaces

8.0 SCHEDULES OF INFORMATION

The schedule of information contained in this document consists of 2 sections:

- a) Information supplied by the Employer (schedules of; drawings, cables, luminaires, etc. as applicable.)
- b) Information to be supplied by the Subcontractor at bidding stage (information on the makes, types and ratings of equipment and materials offered, schedules of prices and rates for variations, schedules of quantities, etc. as applicable.)

Bidders are required to enter, at the time of bidding, in the "Schedule of Equipment and Material Offered", sufficient details to enable the equipment concerned to be identified without ambiguity.

It is not sufficient for a tender to state "as specified" in the schedules.

Failure to complete these schedules (if applicable) may render a bid invalid.

9.0 SCHEDULE OF LUMINAIRES

9.1 All luminaires to

- LED lights with suitable constant current drivers,
- 3m cable with 5A plug,
- bear a SABS or IEC mark of quality approval
- with average lifespan of 50 000 hours
- Power Factor > 0.9

9.2 LED luminaires to be 4000K

Type	Description
A	50W LED surface mounted linear luminaire with: <ul style="list-style-type: none">• Body – Seamless Aluminum extruded frame• Non-dimmable• Dimensions –1200mm (L)
N	20W LED module bulkhead wall/ceiling mounted luminaire with: <ul style="list-style-type: none">• Body – base and trim to be made of high-pressure die-cast marine grade aluminium• Stainless steel helicoils inserts to avoid metal corrosion.• Diffuser – Opal non-discolouring high impact acrylic injection molded diffuser• Environmental Protection – IP 65• Vandal resistant screws

	<ul style="list-style-type: none"> • Colour – thick black • Total luminous flux not less than 3400lm
S	<p>35W LED Post top luminaire with photocell on each luminaire mounted at a 4m mounting height on an existing steel pole.</p> <ul style="list-style-type: none"> • Body – painted housing aluminium • Diffuser – High impact acrylic <p>Luminaire price on the Schedule of Quantities to include removal of existing luminaire, repairs to wiring and cables and all components necessary to ensure the light works.</p>

10.0 SAMPLES AND ALTERNATIVES

- 10.1 Prior to installation the Subcontractor is required to submit for approval, comment or records, samples of materials upon which his offer is based. Any approvals given or comments made shall be on the generality of the scheme and shall not relieve the Subcontractor of his responsibility to ensure full compliance with all performance and regulatory criteria and materials latent defects.
- 10.2 Samples forwarded shall be labelled and remain in the site stores until completion of the Works. The samples may be the last items to be embodied in the installation.
- 10.3 All expenses in do with the supply and return of the samples shall be borne by the Subcontractor.

11.0 SUPERVISION, WORKMANSHIP AND DELAYS

The work shall at all times, for the entire duration of the contract, be executed under the supervision of a skilled and competent representative of the Subcontractor, who must be able and authorized to receive and execute instructions on behalf of the Subcontractor.

In the event that inferior materials or bad workmanship, on the part of the Subcontractor, leads to remedial work requiring redesign by the Engineer, the cost of this work, including related professional fees, shall be borne by the Subcontractor.

Similarly, should delays in the contract be caused by poor performance on the part of the Subcontractor causing the Engineer to spend extraordinary time on the project, the extra costs incurred may be borne by the Subcontractor.

These costs will be based on the ECSA hourly rates and may be deducted from claims due or claims which will become due to the Subcontractor.

12.0 MAKING GOOD

The Subcontractor will carry out in all instances any work to be made good such as damage to or disturbances of the building installations caused by themselves or their employees during the execution of the contract, at their own cost.

13.0 COMMISSIONING AND TESTING

13.1 Commissioning

A documented method shall be followed, whereby the Subcontractor shall ensure that his installation is correctly constructed in accordance with the manufacturers' specifications, consultant's specification, consultant's design and all codes of practice and international design codes.

The commissioning procedure must allow for signing off of the major items of equipment by a qualified person in terms of the codes. These signed off documents will form part of the record drawings.

The Subcontractor will arrange for all inspections and testing of the installation after completion, including the issuing of the Certificate of Compliance. All notices, fees, including inspection and re-inspection are the responsibility of the Subcontractor and all the relevant costs shall be borne by him.

Any materials or workmanship considered as faulty or incorrectly or inadequately installed or repaired, will be substituted, altered or rectified to the approval of the Employer, without additional cost to the Employer.

14.0 CONSTRUCTION PROGRAMME

The Subcontractor must submit their construction programme to the Contractor who will amalgamate it into the project's overall construction programme.

15.0 DRAWINGS

15.1 General

Drawings must be read in conjunction with this Specification and the Bills of Quantities. Any errors, discrepancies or contradictions found between the Drawings, the Specifications and the Bills of Quantities must be brought to the attention of the Engineer immediately, they become evident.

The drawings generally show the scope and extent of the proposed work and shall be construed as showing every minute detail of the work to be executed.

Construction Drawings will be issued to site accompanied by drawing issue slips. The drawing issue register reflecting the summary of all previously issued drawings with dates and drawing revisions will be issued at the site meetings once a month.

15.2 Record / As-Built Drawings

The Subcontractor must prepare Record/As-Built drawings of the completed installation indicating actual cable runs, circuiting, distribution board details, final cable sleeves positions, luminaire, power point layout details, etc. The contract will not be deemed complete until these drawings have been submitted to the Engineer.

16.0 MEASUREMENT

The Subcontractor shall not make any assumption regarding the installation. If there is any doubt or ambiguity, they must consult the Engineer. The Subcontractor shall take cognisance of the fact that the schedule of quantities is re-measurable and final quantities may be adjusted at the end of the contract.

- a) All outlet boxes up to 100 x 100mm are measured as one item regardless of the number of conduit entries.
- b) Outlet boxes shall be without covers and draw boxes shall include covers, screws, etc.
- c) Conduit boxes shall always include the fixing to the conduit with lock and bush nuts.
- d) All switches and plug (SSO) units shall include the fixing to conduit and shall include screws, cover plates.
- e) All fittings, equipment and accessories shall include connections to power. All light fittings shall be complete with lamps and tubes.
- f) All measurements are net Tendered rates must allow or wastage.

17.0 TRENCHING AND EXCAVATIONS

Trenching

Unless detailed otherwise on the drawings LV cables the depth shall be 450mm below final ground level. Where the required depth cannot be met, the Engineer may approve one of the following:

- cement slabs over the cables or
- cable Sleeve pipe encased in 300 mm² concrete

The width of trenches shall be 400mm.

Bedding of Cables

Normal bedding requirements for both LV cables shall be 150mm sand under and 150mm sand over.

The final decision as to whether bedding may be omitted or not, shall rest with the Engineer.

Backfilling

- a) All loose stones or any other material likely to cause damage to cables shall be removed from trenches, before backfilling commences.
- b) Backfilling shall not commence without prior inspection, measurement and approval of the Engineer.
- c) Backfilling of trenches in road reserves shall be in layers not exceeding 300mm and the use of a suitable compacting machine is essential in order to achieve an approximate 9,8% Mod. AASHO density.

Random Check of Excavations

The Engineer reserves the right to request random check holes to check cable depth, bedding, material classification, danger tape, etc.

18.0 LAYING, TESTING AND TERMINATION OF CABLES

18.1 Cable Terminations

- (a) Terminations shall only be made by competent personnel, who are regularly employed on this type of work, and shall be carried out strictly in accordance with manufacturers' instructions.
- (b) The use of only first class appropriate materials is essential. Conductors, all ferrules and lugs shall be tinned and crimped by means of suitable mechanical or pneumatic tools designed for this purpose and then sweated with solder added to ensure adequate contact.
- (c) Where cables are cut and not immediately made off, the ends shall be sealed without delay to avoid the ingress of moisture.
- (d) Cable core numbers and/or colours shall be matched without twisting of the joints; cable end seals may be removed and replaced to check this before the next length is laid.

Cable Marker Tape

- (a) All LV cables shall be marked by means of a continuous tough, brightly coloured PVC sheet known as "Cable Marker Tape" of 800 gauge thickness.
- (b) Cable marker tape shall be laid approximately 300mm from finished ground level.
- (c) Wording on cable marker tape shall be in three languages "DANGER INGOZI" with skull and crossbones.
- (d) Cable marker tape requirements and the following principle shall be followed:
 - One cable - 1x150mm
 - Two cables - 2x150mm or 1x300mm

19.0 MONTHLY CERTIFICATES

Pro forma claim form will be available from the Engineer in Excel format. This is the preferred method of submitting payment claims. Should the Subcontractor have developed his own method of claiming, this may be submitted to the Engineer for consideration.

20.0 LV DISTRIBUTION BOARDS

All distribution boards (DBs) will be supplied, wired and complete with all equipment of quantities, types, sizes and ratings as specified on the distribution board schematics, which are included in this document. The distribution boards shall be manufactured in accordance with the Standard Specification for Electrical Building Services.

The Subcontractor shall confirm on site, before commencing with any work that sufficient space and access is available to install the DBs as specified. No additional claims for failure to check these details and rectify any default will be entertained.

Before handing over, the DBs shall be thoroughly cleaned inside and outside. Damaged finished surfaces shall be made good where necessary with identical paint to the original finish.

20.1 Cascading

All DBs circuit breakers must be cascaded from the same manufacture and cascading group. Mixing of circuit breaker makes is not allowed.

Each cascaded DB must be marked with a label

- a) informing that circuit breakers are cascaded and
- b) that replacement and / or additional circuit breakers must be chosen from the same circuit breaker group.

20.2 Shop Drawings

Prior to manufacturing of DBs subcontractor will prepare and issue shop drawings of each DB to Engineer for approval. If the shop drawing is prepared by the manufacturer the subcontractor shall thoroughly review the drawings to ensure they match Engineer's schematic line diagrams before handing them over to the Engineer.

21.0 DISTRIBUTION CABLES

21.1 Low Voltage (LV)

All PVC Insulated PVC bedded SWA PVC sheathed 600/1000V copper cables shall conform to SANS 1507-3 and bear the SABS mark. Cables shall be of sizes and type as shown on the drawings.

Cables shall be supplied with their corresponding termination and as well as corresponding bare copper earth wire. The Subcontractor is advised to measure actual lengths of cable required on site before ordering as no compensation for over-measurements shall be entertained.

22.0 PVC SLEEVES

- a) Pipes for sleeving shall be the ribbed type-Kabelflex unless otherwise noted on the drawings.
- b) Sleeves shall be laid as shown on site plan layout at depth of approximately 300mm from the top of the sleeve to the finished surface of the road and laid in a straight line with the cable trench.
- c) All sleeves must be cleared by pulling through a loose fitting mandrel prior to the installing of cables.
- d) All spare sleeves shall be provided with a No. 10 gauge galvanised draw wire and sealed on both ends with a non-hardening material.

23.0 CABLE DRAW WIRE

The draw wire shall be No. 10 gauge galvanised draw wire.

24.0 EARTHING AND BONDING

24.1 General

Earthing shall generally be in accordance with

- SANS 10142-1: 2008 Wiring Code,
- SANS 10198: Part 3 - Earthing System; General Provision; Part 12 - Installation of Earthing Systems,
- SANS 10200: Neutral Earthing in Medium Voltage Industrial Power Systems,
- SANS 10292: Earthing of Low Voltage Distribution Systems,
- SANS 1063: Earth Rods Couplers and Clamps,
- AMEU Code of Practice for the application of protective multiple earthing to low voltage distribution systems and
- The latest amendments and the OHS Act 1993.

24.2 Water pipes

All metallic hot and cold-water pipes shall be bonded with 12mm x 0,8mm perforated for solid copper strapping and connected to the nearest system earth. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150-mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board.

24.3 Roofs, gutters and down pipes

Unless not included in the Lightning Protection System (LPS), all metal parts of roofs, gutters and down pipes shall be earthed.

24.4 Sub-distribution boards

A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of bare stranded copper conductors installed along the same routes as the supply cables or in the same sleeve or ladder as the power conductors.

Alternatively, armoured cables with earth continuity conductors included in the armouring (ECC) may be utilised where specified or approved.

24.5 Sub-circuits

The earth conductors of all sub-circuits shall be connected to the earth busbar in the source DB in accordance with SANS 10142.

24.6 Common Earth

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Engineer. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered.

NB: The common earth shall not be broken.

24.7 Non-metallic Conduit

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

24.8 Flexible Conduit

An earth conductor shall be installed in all non-metal flexible conduits. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

24.9 Connection

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Subcontractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

24.10 Earth Terminal for Other Services

A readily accessible earthing terminal shall be provided, near the trap door in the ceiling, for the bonding of other services such as a television aerial or satellite dish, an audio system, a video surveillance system, and the like, to the building. Such an earthing terminal shall be bonded to the consumer's earth terminal in the main distribution board by a conductor of at least 6mm² copper or equivalent, and shall be identified by the earth symbol.

NOTE: Providers of services other than the electrical power services should not access the distribution board or other parts of the electrical installation.

25.0 CONDUIT, WIREWAYS AND ACCESSORIES

25.1 Conduit

Unless indicated differently on the drawings conduit and conduit accessories shall be PVC to SABS 950. The conduit shall be chased in concrete, under plaster and roof space, throughout.

All conduit/outlet boxes and associated fittings for use in this installation will be SABS approved.

The Electrical subcontractor must provide all conduit and accessories for the lighting, power, ICT, telephone, Access Control and fire protection as shown on the drawings and as measured in the bills of quantities.

Flexible metallic tubing of galvanized steel shall be used for connections to water heaters, fans and other similar equipment. The corrugations of the tubing shall have a rectangular cross section suitable to fit standard brass connections.

The Subcontractor must provide all conduit and accessories for the lighting, power, telephone, communications, computer and security systems, as shown on the drawings and as measured in the schedule of quantities.

Flexible metallic tubing of galvanized steel shall be used for connections to water heaters, fans and other similar equipment. The corrugations of the tubing shall have a rectangular cross section suitable to fit standard brass connections.

25.2 Wiring Trunking / Channel

Wiring channels in ceiling voids and wherever indicated on the drawings shall be medium duty of Cab-strut, Cooper B-Line or similar manufacture and shall be complete with corner pieces, end pieces, hangers, junction pieces, supply conduits, cover plates and power outlets as specified and indicated on the drawings. Note that Nylon or plastic nuts or fasteners will not be accepted.

The channels shall be manufactured of rolled sheet steel and hot-dip galvanised to SANS 763.

Channels shall be cold galvanised at all joints, sections that have been cut and at places where the galvanising has been damaged.

The wiring channels' metal covers shall be pop-riveted closed, once the installation is complete.

26.0 WIRING

Lighting and Power wiring in conduit and channel wireways shall comprise 600/1000V single core PVC insulated copper wire sized in accordance with the distribution board schematics. Conductor outer sheaths shall be of the following colours: -

- Phase Conductors : red, white, blue
- Neutral : black
- Earth : yellow + green

27.0 WALL SWITCHES AND SWITCH SOCKET OUTLETS

Wall switches to be of the flush type complete with cover plates and screws in 100 x 50 x 50 extension outlet boxes mounted on the wall surfaces. Colours of outlet boxes and cover plates must match.

All surfaces mounted switch socket outlets to be in 100 x 100 x 50 extension outlet boxes mounted on the wall surfaces. Colours of outlet boxes and cover plates must match.

All switched socket outlets mounted in power skirting to have matching cover plates.

The Subcontractor will be responsible for the installation of power points to feed equipment such as water heaters, air-conditioners, fans, security equipment, etc. This equipment, if supplied and installed by others, will be connected by the Subcontractor.

The cover plates to all outlets shall be fixed **AFTER** the final coat of paint has been applied.

All light switches and power points shall be labelled with indelible circuit numbers to tie up with a circuit number in the distribution boards. Labels shall be engraved Trifoliate or similar approved type. Labels, like Brother™ labels that peel off easily shall not be acceptable.

28.0 TELEPHONE, COMPUTER AND SECURITY INSTALLATIONS

The Subcontractor will be responsible for the complete installation of conduits and wireways for the I.C.T and security systems.

29.0 EQUIPMENT GUARANTEES, MAINTENANCE AND INSTRUCTION MANUALS

The Contractor shall submit to the Engineer all manufacturers' equipment guarantees, maintenance and instruction manuals. All equipment shall be guaranteed for twelve (12) months from the date of Practical Completion Certificate.

30.0 COMMISSIONING AND TAKE-OVER

The Contractor shall carry out the necessary tests according to the SANS 10142-1, the latest edition and provide a certificate of compliance on completion of the works. The certificates of compliance shall be of the approved type as issued by the Electrical Contracting Board of South Africa.

30.1 Completion

The electrical installation shall be complete after:

- (i) All tests for the switchgear and cables have been done and tests results submitted to the Engineer.
- (ii) The completed certificates of compliance have been submitted to the Engineer.
- (iii) All equipment guarantees, maintenance and instruction manuals have been submitted to the Engineer.
- (iv) The site has been cleared of all debris and electrical waste materials and left in a neat and tidy condition.
- (v) "As-Built" drawings of the Works; and
- (vi) Certificates for Distribution boards have been submitted to the Engineer.

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 11A: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATEHOUSE - WORK PACKAGE 4 - ELECTRICAL INSTALLATIONS
-----------------------	------------------------------------------------------------------------------------------------------------------------------------------------

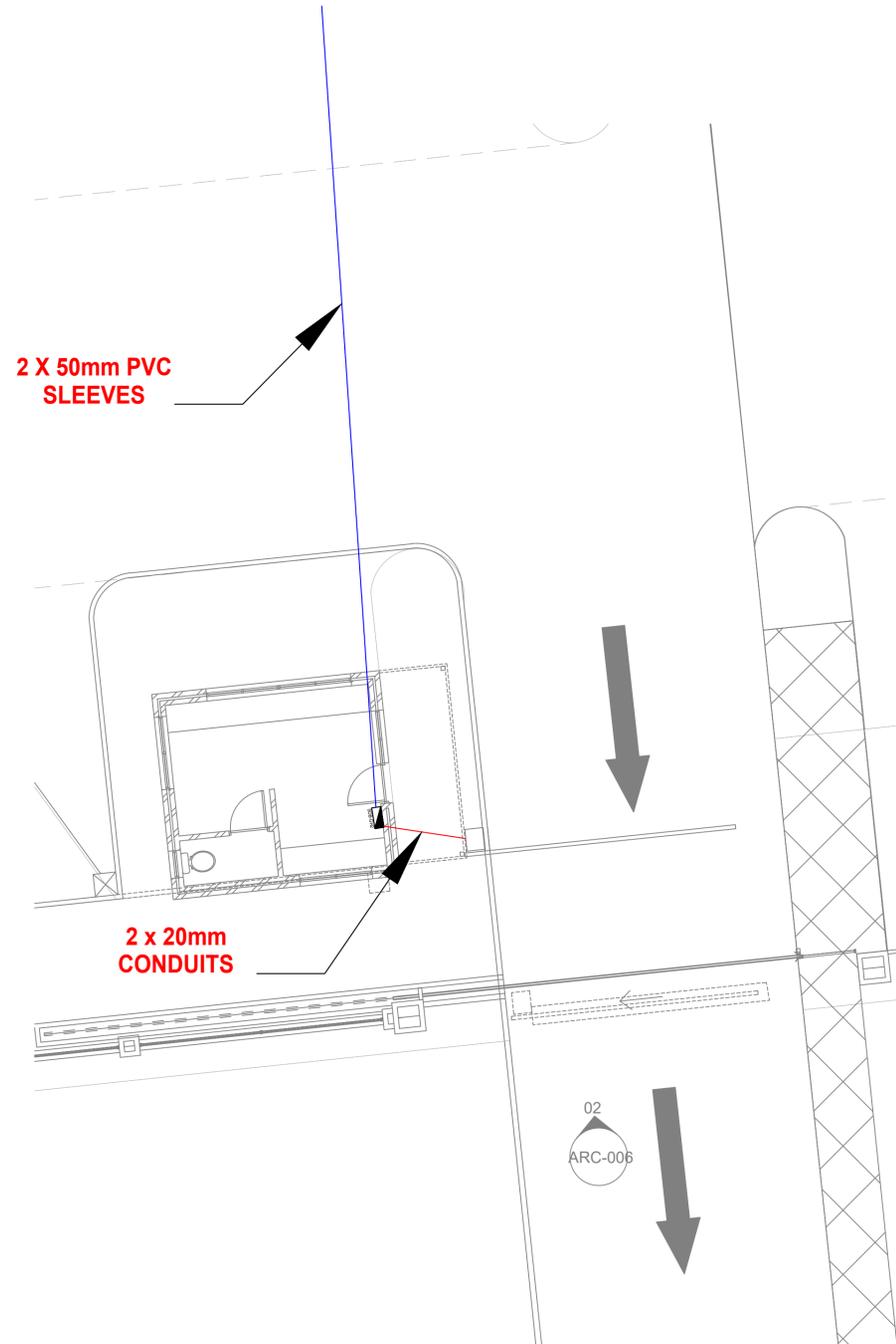
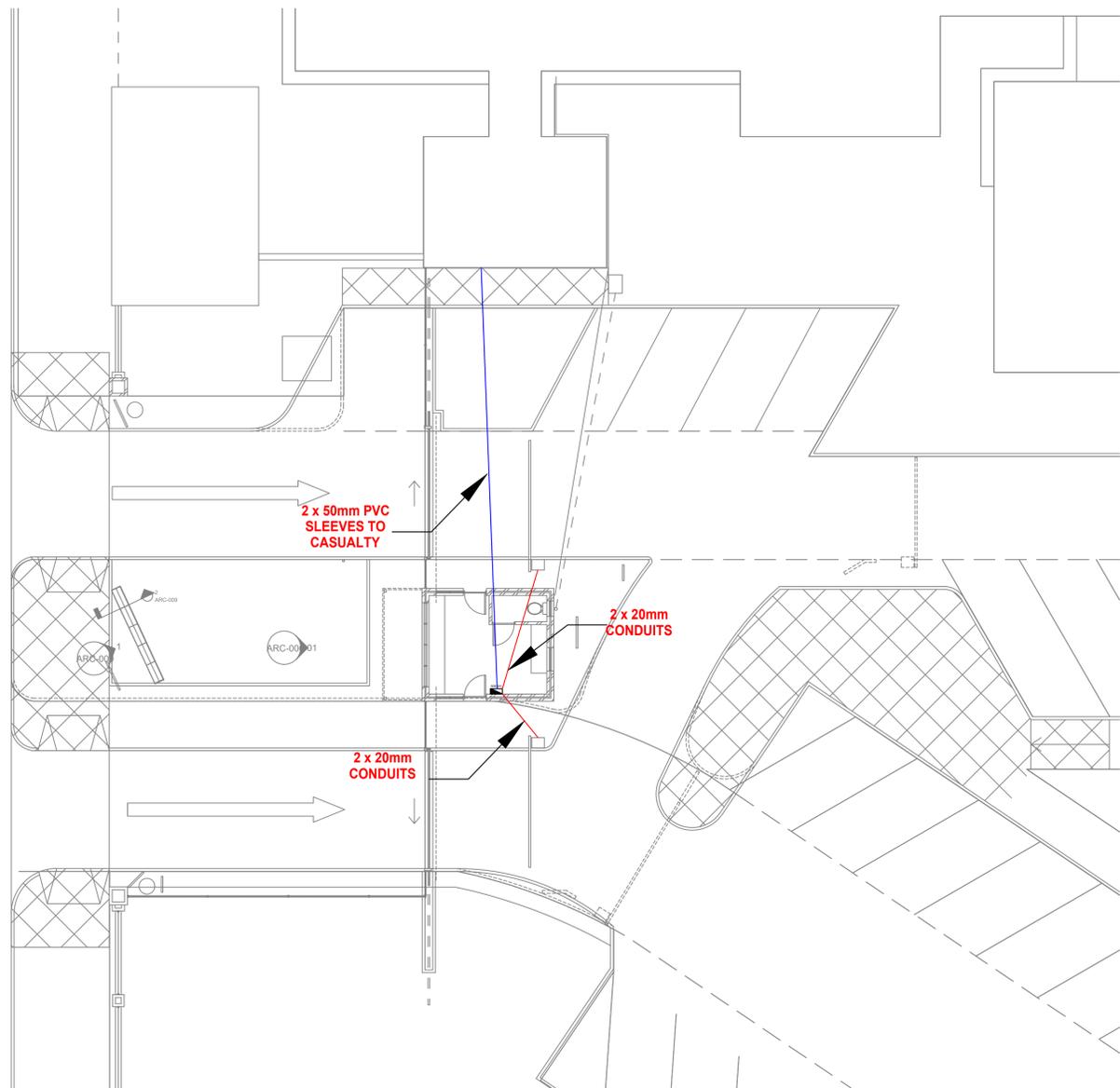
SCHEDULE OF TENDER DRAWINGS

Drawing No.	Rev	Qty	Description	Size
2316-T-E-100	Rev00	1	Site Plan Layout	A3
2316-T-E-101	Rev00	1	Power and Lighting Layout	A3
2316-T-E-300	Rev00	1	DB Schematic Diagrams	A3

NAME OF TENDER :

NAME OF COMPANY :

SIGNATURE OF TENDERER :



- GENERAL NOTES:**
1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 2. DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 7. NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 9. ALLOW 4 x 20mm \varnothing & 4 x 25mm \varnothing SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs).
 10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 11. TELEPHONE AND DATA CONDUITS TO BE 25 \varnothing mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 12. IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SHIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 13. CIRCUITING:
 - AC = AIR CONDITIONING
 - D = DEDICATED SSO
 - L = LIGHTING CIRCUIT
 - P = STANDARD SSO
 - XL = LIGHTING CIRCUIT ON STANDBY POWER
 - XP = STANDARD SSO ON STANDBY POWER
 14. DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1200mm WIDE FOR POWER CABLES (MINIMUM).
 15. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 16. AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	23-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH,
GQEBERHA

TITLE

NEW ENTRANCE GATE HOUSE AND NEW
EXIT GATE HOUSE -
SITE PLAN

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@rnaza.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808

CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	
DESIGNED BY: B.GEELBOOI	SCALE 1:100	
DRAWN B.GEELBOOI	DATE 15/11/2023	PRINT DATE 23/09/2025
CHECKED BY: E. CEBA	REGISTRATION No. 201930053	SIGNED.
ARCHITECTS DRAWING NO. 00	REV No. 00	DRAWING NO. 2316-T-E-100 GH1-2
		REV No. 00

LIGHTING LEGEND	
●	PHOTO CELL
⌂	1 LEVER - 1 WAY - LIGHT SWITCH
⌂	2 LEVER - 1 WAY - LIGHT SWITCH
⌂	50W LED CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
⌂	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE CEILING / WALL MOUNTED BULKHEAD.
⌂	ELECTRICAL DISTRIBUTION BOARD

POWER LEGEND	
⌂	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (White) 450mm AFFL (Normal Supply)
⌂	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (White) 1200mm AFFL OR 300mm ABOVE WORKTOPS (Normal Supply)

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SWIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	23-09-25	E.C.	ISSUED FOR TENDER.

CLIENT



Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH,
GQEBERHA

TITLE

NEW ENTRANCE GUARD HOUSE AND NEW
EXIT GUARD HOUSE -
LIGHTING & POWER LAYOUT

COPYRIGHT



RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@csa.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808



CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION

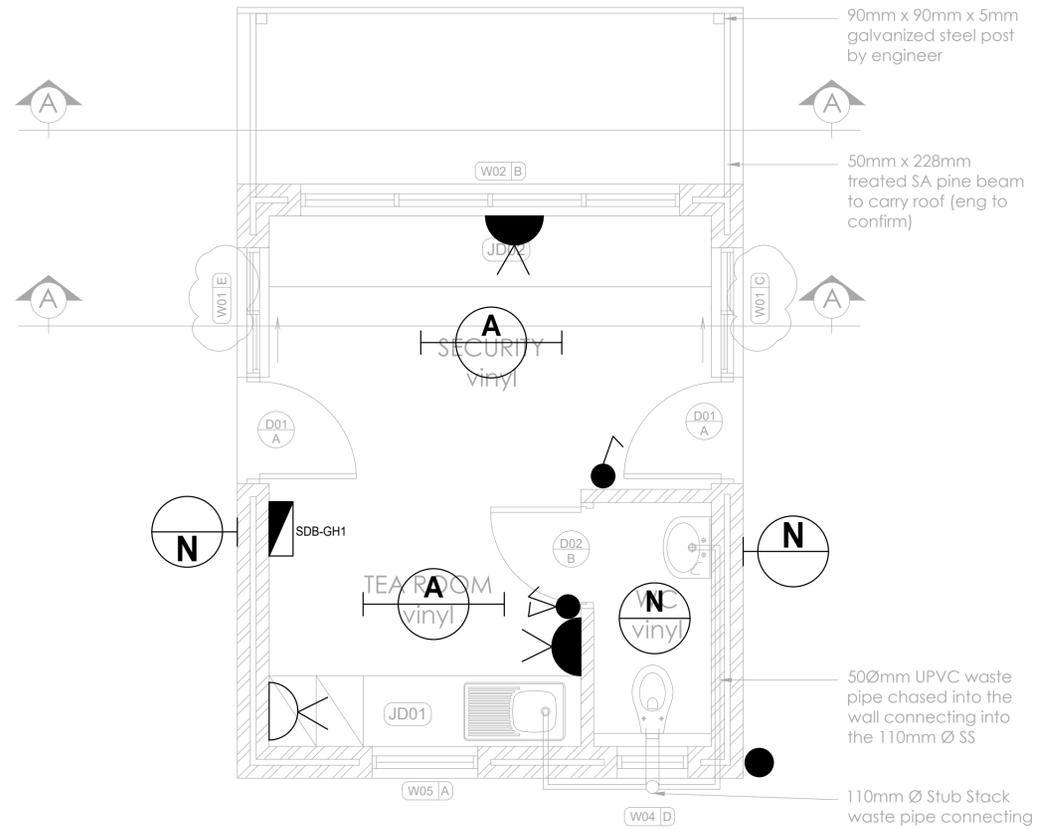
DESIGNED BY: B.GEELBOOI SCALE: 1:100

DRAWN: B.GEELBOOI DATE: 15/11/2023 PRINT DATE: 23/09/2025

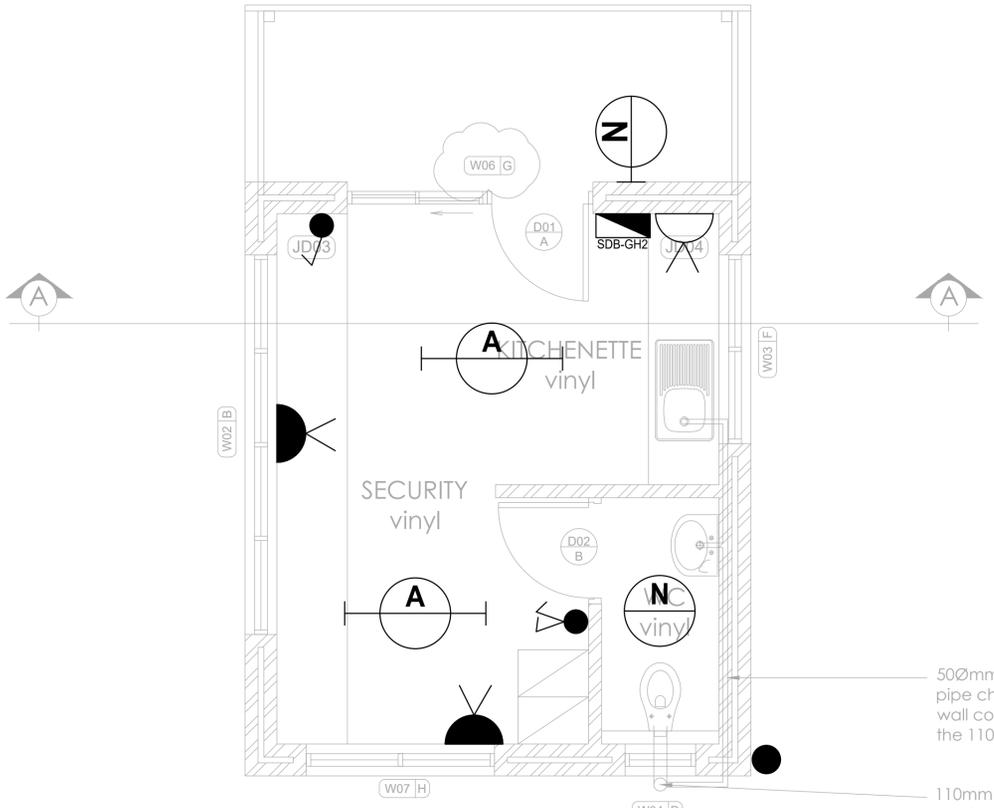
CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED: _____

ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-101 GH1-2 REV No. 00



NEW ENTRANCE GUARD HOUSE (SCALE 1:30)



NEW EXIT GUARD HOUSE (SCALE 1:30)

LEGEND

BUSBAR

—+— SINGLE POLE

—+—+ TRIPLE POLE

—+— ISOLATOR

—+—/— CIRCUIT BREAKER
SIZE AS SHOWN

CH = WIRING CHANNEL

—+— EL — EARTH LEAKAGE PROTECTION UNIT WITH DISCONNECTOR

—+— C2/1 C2/2 C2/3 — 3 POLE CONTACTOR

—+— E MM — ELECTRONIC CONSUMPTION MULTIMETER

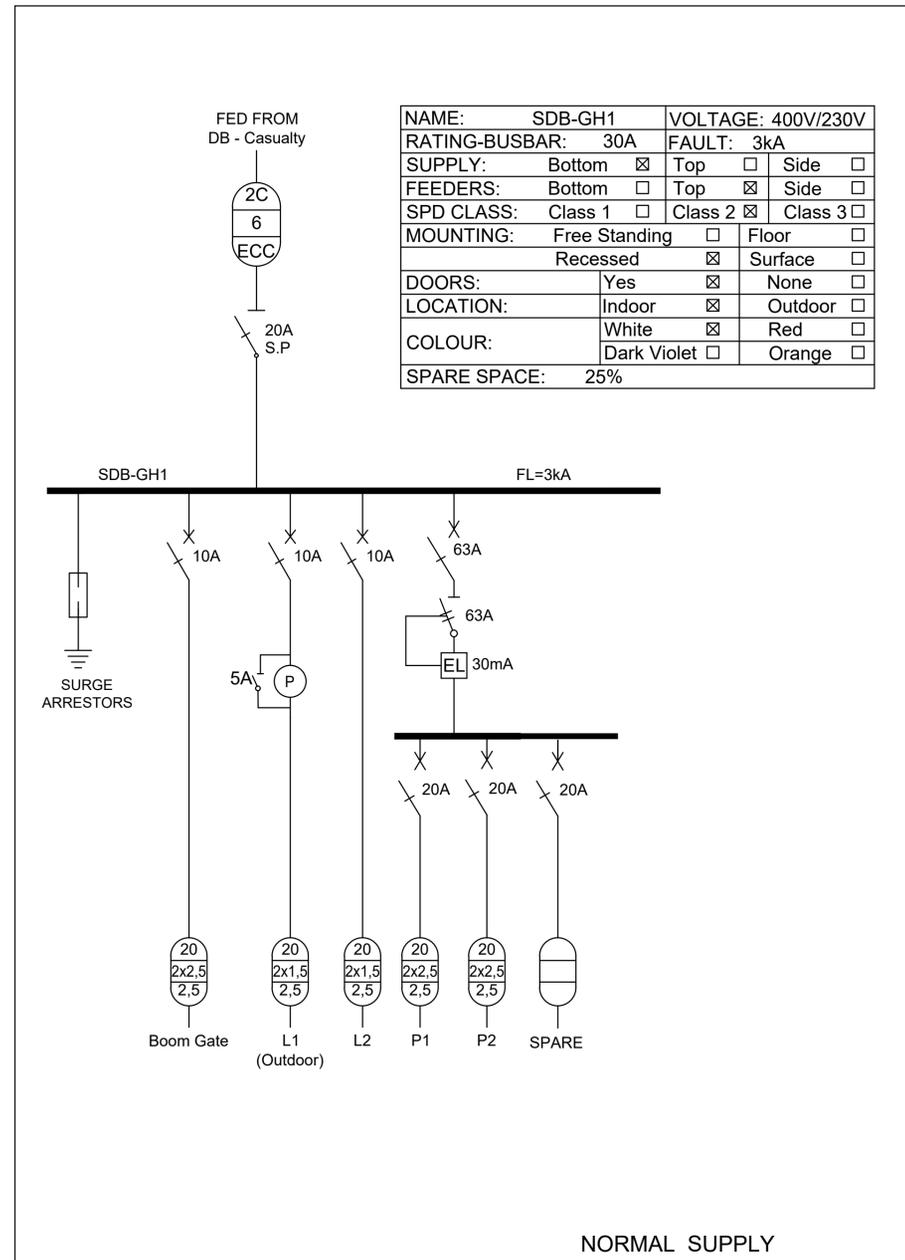
—+— P — PHOTOCELL WITH BYPASS SWITCH

CABLES

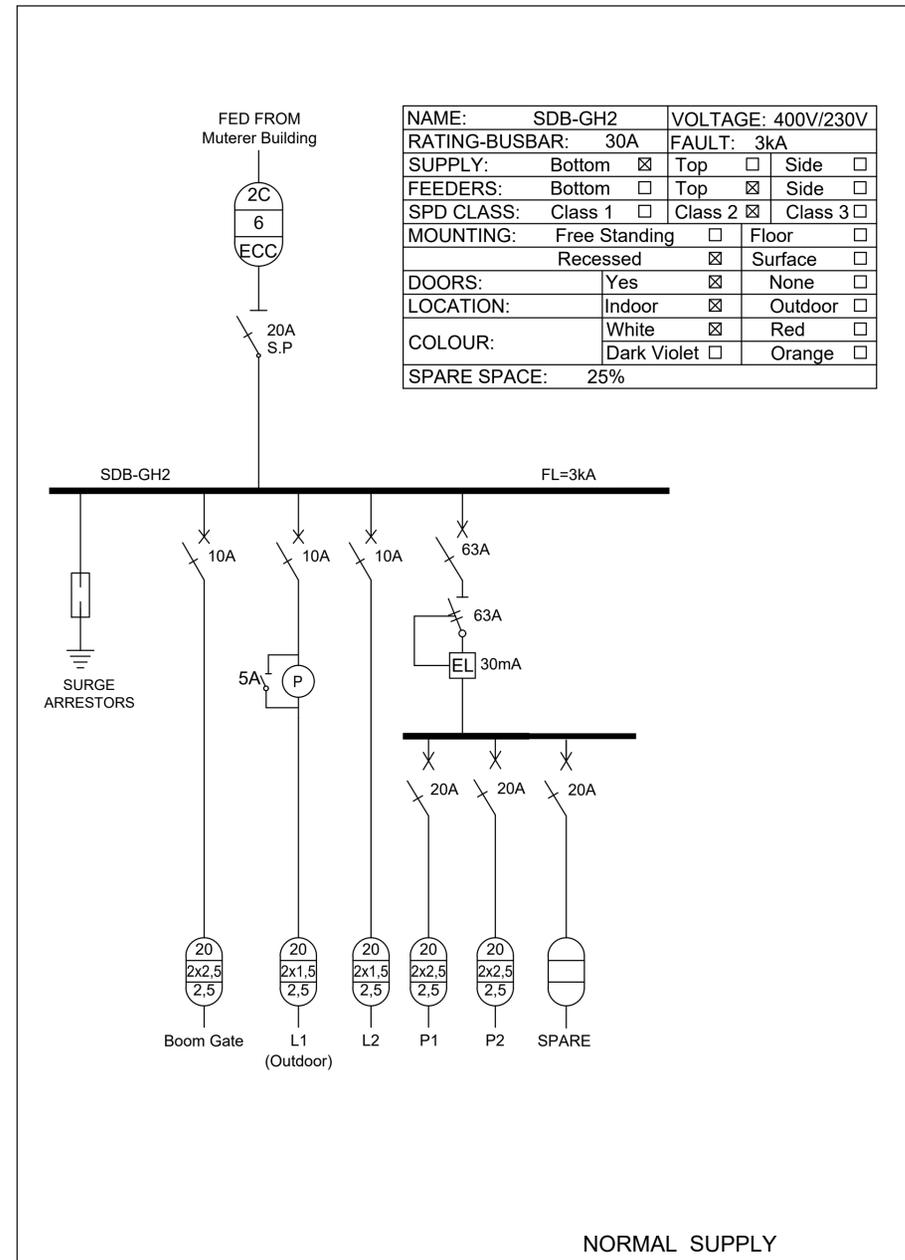
4C
16
ECC
—+— NO. OF CORES
CORE SIZE mm
EARTH CONTINUITY CONDUCTOR mm

WIRING IN CONDUIT

25
2x4
2.5
—+— CONDUIT SIZE mm
No. & CONDUCTOR SIZE mm²
EARTH CONDUCTOR mm²



ENTRANCE GUARD HOUSE



EXIT GUARD HOUSE

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB'S)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING: AC = AIR CONDITIONING
D = DEDICATED SSO
L = LIGHTING CIRCUIT
P = STANDARD SSO
XL = LIGHTING CIRCUIT ON STANDBY POWER
XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	12-03-24	E.C.	ISSUED FOR TENDER.

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH,
GQEBERHA

TITLE

NEW ENTRANCE GUARD HOUSE AND
NEW EXIT GUARD HOUSE -
DB SCHEMATIC DIAGRAM

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@conusa.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808

CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: **B. GEELBOOI**

SCALE: 1:100

DRAWN: **B. GEELBOOI** DATE: 13/11/2023 PRINT DATE: 12/03/2024

CHECKED BY: **E. CEBA**

REGISTRATION No. 201930053

SIGNED:

ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-300 GH1-2 REV No. 00

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 11A; ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL - ENTRANCE AND EXIT GATEHOUSE - WORK PACKAGE 4 - ELECTRICAL INSTALLATIONS
-----------------------	------------------------------------------------------------------------------------------------------------------------------------------------

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.

LIVINGSTONE AND PEPH COMPLEX: PEPH HOSPITAL - GUARDHOUSES 1 AND 2 -WORKPACKAGE 4

ELECTRICAL INSTALLATIONS

BILL NO. 1 : PRELIMINARIES AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1.0	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	Other Fixed-charge Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.20	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OSHA Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	Other Value Related Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.3.0	TIME-RELATED ITEMS				
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	Other Time-Related Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

LIVINGSTONE AND PEPH COMPLEX: PEPH HOSPITAL - GUARDHOUSES 1 AND 2 -WORKPACKAGE 4
 BILL NO. 2 : DISTRIBUTION BOARDS (DB)

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Service Distribution board Supply and Install new DB into existing chased in DB tray to specifications and drawings				
2.1.1	Guard House 1: SDB-GH1 Supply	each	1		
	Install	each	1		
2.1.2	Guard House 2: SDB-GH2 Supply	each	1		
	Install	each	1		
2.2	New switchgear in existing Distribution Boards				
	Supply and Install 20A Single pole circuit breaker including terminating breaker in the existing DB and labelling. The circuit breaker to match the existing circuit breakers				
	Supply	each	2		
	Install	each	2		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

LIVINGSTONE AND PEPH COMPLEX: PEPH HOSPITAL - GUARDBOUSES 1 AND 2 -WORKPACKAGE 4
BILL NO. 3 : GENERAL LIGHTING

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Luminaires Luminaires mounted on concrete or suspended ceilings, or on brickwork including lamps and fixing material.				
3.1.1	Type-A (50W LED Channel Luminaire)				
	Supply	each	4		
	Install	each	4		
3.1.2	Type-N (20W LED Bulk Head - Wall Mounted)				
	Supply	each	3		
	Install	each	3		
3.1.3	Repairs to existing Post Top Light Fittings with a 6m mounting high steel pole.	each	10		
3.2	Photo-cell				
3.2.1	5 Amp photo-cell.				
	Supply	each	2		
	Install	each	2		
3.3	Conduit Galvanised conduit fixed on steel trusses including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
3.3.1	20mm				
	Supply	m	300		
	Install	m	300		
3.4	Conduit Boxes Round galvanised box for 20mm conduit, back or side entry for 1, 2, 3 or 4-way fixed on trusses including couplings bushes cover plates and fixing materials (average rate)				
3.4.1	20mm Galvanised round box				
	Supply	each	14		
	Install	each	14		
3.4.2	Galvanised boxes with 20mm knockouts as specified chased into brickwork.				
3.4.3	100mm x 50mm x 50mm				
	Supply	each	4		
	Install	each	4		
3.4.4	100mm x 100mm x 50mm				
	Supply	each	6		
	Install	each	6		
3.5	Conductors <u>600/1000 grade PVC insulated single core copper conductors drawn into conduit</u>				
3.5.1	1,5mm ² red/black				
	Supply	m	400		
	Install	m	400		
3.5.2	2,5mm ² yellow & green				
	Supply	m	200		
	Install	m	200		
3.6	Light Switches 16 Amp rocker type light switch with coverplate installed into a flush box measured elsewhere.				
3.6.1	Single lever, one way				
	Supply	each	2		
	Install	each	2		
3.6.2	Double lever, one way				
	Supply	each	2		
	Install	each	2		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

LIVINGSTONE AND PEPH COMPLEX: PEPH HOSPITAL - GUARDBOUSES 1 AND 2 -WORKPACKAGE 4

BILL NO. 4: GENERAL POWER

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
4.1	Socket Outlets				
4.1.1	16 Amp 3 pin switched socket outlets with cover plates Standard: installed into existing flush wall Box (single). Colour: White				
	Supply	each	6		
	Install	each	6		
4.2	Conduit				
	Galvanised conduit fixed on steel trusses including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
4.2.1	20mm				
	Supply	m	160		
	Install	m	160		
4.4	Conductors 600/1000 grade PVC insulated single core copper conductors drawn into conduit				
4.4.1	2,5mm ² red/black				
	Supply	m	330		
	Install	m	330		
4.4.2	2,5mm ² yellow & green				
	Supply	m	165		
	Install	m	165		
TOTAL SCHEDULE NO. 4 TO PRICE SUMMARY					

BILL NO. 5 : CABLING AND CABLE SLEEVES

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
5.1	LV Cabling				
5.1.1	Multicore PVC/SWAPVC cable with stranded copper conductors to SANS 1507-3 drawn into cable sleeves, installed on cable trays/ladders or laid in open trenches and ducts. All cables to be complete with ECC for earthing				
5.1.1.1	6mm ² 2 Core				
	Supply	m	120		
	Install	m	120		
	Terminations	No.	4		
5.2	Trenching				
	Excavation 450mm deep x 400mm wide including backfilling and compaction.				
5.2.1	In Earth	m ³	26		
5.2.2	In concrete/tar/paving including reinstatement to original finishing	m ³	8		
5.2.3	Selected fines bedding 150mm under cable and 150mm on top of cable(when required by soil conditions)	m ³	6		
5.3	Cable Sleeves				
5.3.1	Supply and install 50mm PVC sleeve (one for mains cable and one as a spare)	m	200		
5.4	Galvanised Draw-wires				
5.4.1	Supply and install draw wire in spare sleeves and conduits	m	260		
TOTAL SCHEDULE NO. 5 TO PRICE SUMMARY					

LIVINGSTONE AND PEPH COMPLEX: PEPH HOSPITAL - GUARDHOUSES 1 AND 2 -WORKPACKAGE 4

BILL NO. 6 : SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
6.1	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
6.2	Testing of complete installation in terms of the regulations	Sum	1		
6.3	Provide Certificate of Compliance for all buildings	Sum	1		
TOTAL SCHEDULE NO. 6 TO PRICE SUMMARY					

LIVINGSTONE AND PEPH COMPLEX: PEPH HOSPITAL - GUARDBOUSES 1 AND 2 -WORKPACKAGE 4

**ELECTRICAL INSTALLATION
SUMMARY OF MAIN BILL**

DESCRIPTION	TENDER
BILL NO. 1 : PROVISIONAL AND SUPERVISION AMOUNTS	
BILL NO. 2 : DISTRIBUTION BOARDS (DB)	
BILL NO. 3 : GENERAL LIGHTING	
BILL NO. 4: GENERAL POWER	
BILL NO. 5 : CABLING AND CABLE SLEEVES	
BILL NO. 6 : SUNDRY ITEMS	
SUBTOTAL (EXCL VAT)	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 11A ON FINAL SUMMARY ON PAGE 456	

SECTION 11B

PE PROVINCIAL HOSPITAL

**ELECTRICAL INSTALLATION
FOR PERIMETER LIGHTING, CONDUITS
AND SLEEVES FOR CCTV**

**Vol. 1.1 Part 1
DETAILED SPECIFICATIONS**

PROJECT TITLE:	SECTION 11B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 4- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

1. SCOPE

This section covers but not limited to the supply, installation, testing and commissioning of:

- (a) Security lighting along perimeter fence at Livingstone Hospital as shown on the drawings;
- (b) LV mains cables for the lights;
- (c) Consumer distribution units (electrical kiosk);
- (d) Earthing of the installation; and
- (e) Issuing of test certificates (COC).

2. SUB-CONTRACTOR'S RESPONSIBILITY

The sub-contractor's shall, as specified in all the relevant sections of this document, take full responsibility for the following:

- (a) Providing time/activity mini-programmes, to arrange for the shut-down, interconnection to and re-energizing of all existing and new networks, to ensure proper testing, safety under all conditions and a minimum disruption of service to all consumers. These programmes shall be approved in writing by the Engineer before being implemented by the Contractor.
- (b) Arranging with Supply Authority (Municipality) for all stoppages, shut-downs and for all switching of networks.
- (c) Ensuring that all parts of the Works shall at all times be safe to the public and to his own personnel and those of the Employer.
- (d) Arranging all tests prior to handing over of any portion of the Works.
- (e) The Contractor shall ensure that no work shall be commenced on the low/medium voltage network prior to the network being isolated and earthed by the Municipality's authorised representative and a "permit to work" being issued by the Municipality's authorised representative. When the particular section of the network is to be re-energised, the Contractor shall hand the cancelled (i.e. signed off) "permit to work" to the Municipality's authorised representative.

3. PAYMENT TERMS

The subcontractors claim will form part of Main Contractor's claim. So, claims shall be submitted on monthly basis to the main contractor via electrical engineer for approval.

4. SECURITY LIGHTING

4.1 Security/Perimeter Lighting

Security Lighting shall be installed along the perimeter fence of Livingstone Hospital. The distance to be covered shall be approximately 1500m. The extent of installation is as shown on drawings number 2316-T-100-EL Sheet 1.

4.1.1 Floodlight luminaire

The luminaire shall be a 150W LED floodlight with a side-entry spigot slot, complete with a suitable mounting bracket. The housing shall be manufactured from marine-grade (LM6) high-pressure die-cast aluminium and fitted with an opal, non-discolouring, high-impact, injection-moulded acrylic diffuser. The unit shall be designed to withstand site

conditions and ambient temperatures without reducing the LED lifespan, with an ingress protection rating of IP66. Stainless steel helicoil inserts shall be provided to prevent corrosion, and vandal-resistant screws shall be included. The external finish shall be a thick black coating, and the total luminous flux shall not be less than 21,000 lm.

4.1.2 Flood light pole

The pole shall be Galvanised Steel tapered pole with 7m. The pole shall be supplied complete with a 0.5m single spigot and in accordance to the standard specification. The poles shall be planted at a depth of 1 metres deep. The streetlight poles are to be supplied with all components as specified. Access door opening with a cover manufactured from glass filled nylon impregnated in the same colour as that of the surface coat of the pole for fibre glass poles.

The door shall have vandal proof screws to be opened only with a special tool. The tool shall be handed over to the Engineer at the end of the project. Baseplate, gland plate and fuse (with fuse carrier) shall also be supplied with the pole.

Internal wiring for streetlight pole shall be 2.5mm² PVC red & black with green/yellow wire for earth. The wiring shall form part of the price on the bill.

The streetlights luminaires are to be spaced as indicated on the drawings.

4.1.3 Spigot adaptors

The existing luminaires are mounted on concrete poles with 8m mounting height. The luminaire spigot is on an outreach arm extending installation height and angle of the luminaire. For this project the existing outreach arm shall be replaced with a 2m hot dip galvanised spigot adaptor with one side tightly fixed around the pole and the other side with a spigot attached for mounting of the new LED luminaire.

Only SABS marked fittings will be accepted. The tenderer must provide details of the fitting on the form named "Schedule of Materials" which is part of this document.

5. CABLE TRENCHING

The trenching for the cables shall be carried out by hand except where machinery is required on approval of Engineer. The trench shall be 650mm deep and 450mm wide.

200mm imported sand shall be laid along the cable trench cleaned of excess material. Then the cable shall be then be laid onto the sand and 150mm imported sand shall cover the cable. The plastic warning tape shall then follow in line with the cable.

The positions for the trenches on the drawing are indicated in-line with the streetlights. The trench detail described above is shown on the tender drawings.

After cable, sand and warning tape has been laid into the trench the contractor shall cover the trench using original material removed during trenching. Excess material shall be removed from site to a position identified by the Main Contractor.

Sub-contractor shall allow enough time for inspection of the trench by the Engineer representative before cable is laid. The stages of inspection shall be detailed on Engineer's quality control and this shall be made available to the sub-contractor before commencement of works.

6. LV MAINS CABLING

Contract

01 Vol 1.1 Part 1 Scope of Works

The supply cable for streetlights shall be through 6mm², 4 core; PVC insulated PVC bedded SWA PVC sheathed 600/1000V cable with Copper conductors.

For earthing purposes, the cable may be supplied with a complete earth continuity conductor (ECC) built-into the cable SWA. Alternatively, 4mm bare copper earth wire may be supplied separately and shall be installed along the mains cable.

7. CABLE TERMINATIONS

Cable shall be terminated into existing Municipal or new electric kiosk (CDU) and on each pole to make electrical connection. Proper termination kit shall be used to make a good connection.

8. CONSUMER DISTRIBUTION UNIT

Consumer distribution unit (electric kiosk) shall be to NMBM specification.

The kiosk offered must allow for at least nine (9) 16mm² x 1 core CNE service cable tee-offs plus the following mains combinations: -

Type 1 : A termination utilising a CNE cable of up to 95mm² x 3 core;

The consumer distribution units are to be manufactured from 3CR12 steel. Units are to be supplied with sliding removable side covers. The design must be such as to allow safe removal and replacement of these with the busbars energised.

Each consumer distribution unit shall be fitted with a simple robust vandal-proof locking device that shall render unauthorised access virtually impossible. Details of the locking arrangement must be submitted with the tender.

The boards are to be fitted to the consumer distribution units by means of stainless-steel bolts, nuts and flat washers.

The consumer distribution units are to be epoxy powder-coated in colour code 7032 prior to delivery.

9. TESTING AND COMMISSIONING OF INSTALLATIONS

Testing of the installations shall be in accordance with latest SANS 10142-1

C3.14

Vol. 1.1 Part 1

PROJECT TITLE:	SECTION 11B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 4- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.

Vol. 1.1 Part 1
QUALITY SPECIFICATIONS

PROJECT TITLE:	SECTION 11B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

QUALITY SPECIFICATION FOR MATERIAL AND EQUIPMENT OF ELECTRICAL INSTALLATIONS.

STANDARD TECHNICAL SPECIFICATION

1.0 DEFINITION

In this Part, the term "Contractor" means the person, firm or company whose tender has been accepted for the work specified in the document of which it forms a part.

2.0 ELECTRICAL SUPPLY AND PHASE ROTATION

The electrical power supply details relative to fault levels, voltage and phase rotation are given elsewhere in this Specification.

The phase rotation specified shall be maintained on all overhead lines, cables, transformers, switchgear and distribution equipment. Where existing connections are to be reconnected to a new system, the phase rotation is to be checked before disconnection and the reconnection made to maintain the same phase rotation.

3.0 SWITCHING OF POWER SUPPLIES

Any switching of existing power supplies shall be pre-arranged with the appropriate Authority. All possible preparation shall be made in advance to minimize the time required for re-energizing the system. All such switching shall be carried out by the "responsible person" unless such authority is given to the Contractor by that person, in writing.

4.0 EARTHING AND BONDING

4.1 RESISTANCE VALUES

While every effort should be made to obtain an earth resistance value of 1,0 ohm or less, the maximum values of earth electrode resistance acceptable, unless stated to the contrary elsewhere in this specification, are 10 ohm at any mini-sub or transformer, 15 ohms at any indoor or outdoor switchboard or HV gang links and 20 ohms at cradle earthing points, lightning arresters or other pole mounted equipment. In the case of the earthing of LV feeder and overhead line neutrals the combined resistance to earth of all systems shall not exceed 10 ohms.

4.2 GENERAL EARTH SYSTEMS

Unless otherwise specified elsewhere in this Specification, the earth systems for distribution transformers, mini subs and ground or pole mounted switchgear, lightning arresters, etc. shall generally comprise two earth electrodes with 1,5m long earth spikes located 6,0m apart, linked with 70mm bare conductor. They are to be located adjacent to Consumer distribution units (CDU) and shall be located at least 1,0m there from.

The earth system is to be connected with 70mm² insulated earth conductor to the earth bar inside CDU.

Immediately after installation and before livening up the equipment the Contractor shall test the earth resistance of the earth system, using the respective earth bar or termination as the reference point. If the required value is not obtained, each earth spike, if installed in a sidewalk, shall be increased in length by driving a further length of 1,5m but where located in open ground, two additional spikes are to be installed. These latter spikes are to be perpendicular to the original two, in line with the spike at the point of connection of the insulated earth conductor and each 6,0m there from. After installing the additional spikes the earth resistance shall again be determined. The Contractor shall submit a report in duplicate confirming the values measured,

including the first set if appropriate, to the Engineer.

Where the number of spikes called for does not achieve the required values, the Engineer is to be advised and will give further instructions for the improvement of the values obtained. Where more spikes are necessary to obtain the required value, these shall not be installed within 6,0m of any other spike.

The common leg of the secondaries of CT's, other than the secondaries of summation transformers, shall be effectively earthed to the main earth system.

4.3 **RETICULATION FEEDER NEUTRAL EARTHING**

At CDU/kiosks a 30m length of bare earth conductor of half the size of the phase conductors but not greater than 70mm² shall be laid from each kiosk earth bar towards the source of supply. The neutral bar shall be connected to the earth bar with green insulated conductor of the equivalent size.

4.4 **EARTH SPIKES**

Earth spikes shall comprise 16mm sectional steel cored rods with a minimum of 0,25mm pure copper coating molecularly bonded thereto, complying with SABS 1063, and of "Cadweld" or equivalent manufacture. The top of earth spikes and the interconnecting conductors are to be 1,0m below finished ground level.

Under no circumstances are earth spikes to be located closer than 1,0m to any structure or plinth nor are they to be installed in pole holes.

The connections to earth spikes shall be by means of at least two phosphor bronze mechanical clamps of an approved type for this duty, or a "Cadweld" joint. The clamps shall not be attached to the rod but must be installed so that the bolt face is in contact with the rod. Brazing will not be accepted. The connection must be wrapped with two layers of "Denzo" tape.

A cable marker as described elsewhere in this Part shall be installed above each spike and shall be labelled "Earth Spike".

4.5 **EARTH CONTINUITY CONDUCTORS**

Earth conductors shall be hard drawn bare copper wire complying with SABS 182 or bi-coloured green/yellow PVC covered, the PVC being UV stabilised complying with SABS 1411 Part 2, as elsewhere specified herein. The conductor sizes shall be such that they can carry the short circuit current likely to be imposed upon them but generally shall be half the area of the phase conductors with a maximum size of 70mm² or in accordance with the appropriate Regulations, unless specific sizes are given elsewhere in this Specification. 50mm² conductors shall be 7/2,65 HD.

Bare earth continuity conductors shall be run with all cables constituting a low voltage distribution system and shall be installed at CDU's, etc.

A single conductor may be used where two or more cables run together, provided that the conductor cross-sectional area is based on the largest size cable in the run, and that branch earth wires are solidly connected to the main earth conductor using only "Cadweld" connections. Earth continuity conductors shall be connected to main earth bars.

Uninsulated earth conductors shall not be less than 500mm below ground level. Above this level all earth conductors shall be green insulated carried in a PVC conduit sleeve except where galvanised conduit is specified elsewhere herein.

A terminal lug shall be crimped onto the end of the main earth conductor for bolting to the main earth bar of a substation or mini-sub or other outdoor equipment. Two mechanical clamps shall be used for connection onto cradles or other equipment, as appropriate.

Earth connections shall be so made that in the event of any connections being removed the earth

connection to the rest of the equipment will not be affected.

4.6 **BONDING GENERALLY**

All metallic parts of the installation are to be bonded to the earth system as required by the appropriate Regulations.

All iron roofs, gutters, down pipes water and waste pipes, as well as all steel structures, are to be bonded to earth. The maximum resistance of any such point to the earthed end of the earthing lead shall not exceed 0,2 ohm.

4.7 **BONDING OF EQUIPMENT**

Where equipment is bolted together, as in the case of an HV or LV switchgear panel, there is to be a 32mm x 4mm copper earth strap extending the whole length of the equipment. All earth bars shall be run in one continuous length as far as possible, and shall not be bent or formed in any way that requires hammering or severe distortion. Any joints shall be lapped with at least two bolts with nuts and washers of suitable size. The lapped ends shall be pre-tinned. If multiple straps are used, they shall be bolted and fixed together at not more than 75mm intervals. All connections shall be made using brass or stainless steel bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels, mini subs and outdoor equipment. Connections to indoor equipment may be made with cadmium plated steel bolts, nuts and washers, with a steel spring washer.

All steelwork on a pole is to be bonded using 25mm² solid copper conductor. This requirement applies to cross-arms, all insulator supports and any other hardware. Where equipment is also mounted on the pole, the bonded metal is to be earthed to an earth spike as elsewhere specified herein, using a 50mm² bare copper conductor.

5.0 **SLEEVES**

Sleeves for cables shall be either PVC with single socket joints complying with SABS 791 (heavy duty) or fibre cement complying with SABS 1223 in the case of 50mm and 100mm sleeves (in compliance with SABS 0198 : Part VIII) or with SABS 819 for larger sleeves, the sizes being as indicated on the drawings. Sleeves shall be nominal 100mm diameter unless otherwise specified. Pitch fibre sleeves shall NOT be used.

The sleeves shall extend at least 1,0m beyond each side of a road crossing and shall be effectively sealed at the ends. Each sleeve shall be provided with a draw-wire. At least one spare sleeve shall be provided at each crossing.

All sleeves shall be laid in accordance with SABS 1200 (LC) and at a depth of 900mm unless otherwise indicated. The radius of the bends used in the sleeves shall not be less than six times the diameter of the sleeve, and the sleeve not be less than twice the cable diameter unless otherwise specified.

Sleeves shall be laid on a 100mm compacted layer of selected bedding material or, if this is not available, on a 100mm sand bedding. The cover layer shall be hand compacted completely around the sleeves and to a cover of 150mm above the top of them. The sleeves shall be supported along their entire length by the bedding. A further 100mm layer of selected bedding material shall be added and this shall be compacted using four to six passes of a vibration pan compactor. Thereafter, the trench shall be back-filled and compacted as specified in the sub-Clause "Compaction" elsewhere in this Part.

Both ends of all sleeved crossings shall be marked by means of cable markers as elsewhere specified, labelled "Cable sleeve".

The Contractor shall make all necessary arrangements with the appropriate Authorities for closing sidewalks and/or half the roadway at a time, and he shall comply fully with any statutory requirement applicable and any requirements the Authorities deem necessary. The surfaces shall be made good to the satisfaction of the authorities and the Engineer, but where tarring or paving is to be laid or re-laid, this shall not be done until the Engineer has given the necessary approval.

Where the HV or main LV cables cross over or pass under other services such as water or drain pipes, they shall be run in sleeves. Where these crossings present a particular hazard to the cable, the Contractor shall draw the attention of the Engineer to any such crossing requiring special attention.

All sleeves for Telkom cables will be 110mm diameter pitch fibre similar to Santar, supplied by the Regional Engineer, unless otherwise specified. These sleeves are to be laid under this Contract and must be kept at a minimum of 0,6m horizontally from and 0,3m vertically above any power cable sleeve. They are to be laid at a depth of 800mm and one end is to be provided with a marker labelled "Telkom".

6.0 **CABLES**

6.1 **DESCRIPTION**

PVC insulated cables for LV shall be to SABS 1507 and shall consist of PVC insulated conductors, PVC bedding, galvanized steel wire armouring and a PVC sheath.

The abbreviation for this type of cable is PVCAS.

Paper insulated cables shall, unless otherwise specified elsewhere in this Specification, be of the screened type suitable for use on an earthed system and complying with SABS 97. They shall be lead sheathed, bedded with two bituminised paper tapes and one layer of fibrous material and preferably armoured with two layers of steel tape or alternatively with a single layer of galvanized steel wires, both served with bituminised fibrous material. Such cables shall comply with Table 19 of SABS 97 and shall be non-draining. They shall have a sheath of lead alloy 'E' and/or be PVC served only if called for elsewhere in this Specification.

The abbreviation for this type of cable is PILCA

Cross-linked polyethylene cables shall be Type A suitable for use on an earthed system and complying with SABS 1339, being individually screened and armoured, unless otherwise called for elsewhere in this specification.

The abbreviation for this type of cable is XLPE

Service cables may be multicore PVC insulated and wire armoured and PVC served (PVCAS), concentric neutral or "Airdac" as specified elsewhere in this Specification.

Concentric neutral cables shall be XLPE insulated complying with SABS 1268. "Airdac" cables shall be XLPE insulated with copper conductors, the phase conductor being contained within a radial band of insulated neutral and bare earth conductors, the whole being XLPE served. All cables are to be installed in compliance with the Manufacturer's recommendations.

The sizes indicated are for cables with copper conductors unless otherwise specified. For LV systems aluminium conductor cables may be offered as an alternative, if a price advantage can be shown. In such cases both the resistance and current carrying capacity of the aluminium cables offered must compare suitably with the sizes of copper conductor indicated. Where cables offered are other than those specified, Scheduled Rates for the supplying, laying, jointing and termination of the cable shall be entered in "Departures from the Specification". The Contractor will be responsible for advising equipment suppliers of the type of cable termination required if a cable other than that specified is accepted.

6.2 **CABLE LENGTHS**

All scheduled cable lengths are for tendering purposes only and the Contractor shall measure the actual lengths required before ordering.

The length of all cables will be re-measured after installation and the lengths indicated in the Bill Schedule of Quantities will be adjusted accordingly. The Contractor will be paid for the actual lengths measured on site and any allowance for snaking, joints or ends must be incorporated in the unit price.

6.3 **HANDLING OF CABLES**

Particular care shall be taken in handling drums of cable. Cable drums shall not be dropped or allowed to roll unchecked. The drums shall, under no circumstances, be rolled in any direction other than that indicated by arrows thereon.

When running cable off a drum it shall be properly and securely mounted so as to rotate without difficulty and the spindle supporting it shall be straight, horizontal, supported at both ends and of adequate strength. Cable shall only be removed from the drum by rotating the drum. The inner end of the cable shall be released before running any cable off the drum.

Care is to be taken to ensure that each length of cable is run off the drum sequentially so that a crossed core situation does not arise at joints.

No cable shall be bent to a radius less than 12 times the overall diameter of the cable; bending or straightening shall be done slowly. PILCA cable shall not be laid if the temperature falls below 10°C.

Should a cable inadvertently become damaged or the lead sheath or end cap punctured, this fact shall be brought to the notice of the Engineer immediately, who shall decide what further action is to be taken. The Engineer shall also be notified immediately should there be any suspicion of moisture having entered a PILCA or XPLE cable.

6.4 **CABLES IN SLEEVES**

Cables shall pass in and out of buildings and under roadways and pavements in sleeves. In addition, where cables cross or run along a boundary between two plots, these cables shall, where called for, be installed in sleeves. All sleeves shall be installed in accordance with the Clause "Sleeves" elsewhere in this Part.

6.5 **CABLES LAID IN TRENCHES**

HV cables shall generally be laid 800mm and LV cables at 500mm below ground level. Where two HV cables are run in the same trench, they shall be laid a minimum of 300mm apart with separate cable slabs over each cable. Where HV and LV cables are laid in the same trench, the HV cable shall be located on the road side and the LV cables on the plot side of the trench. A horizontal distance of not less than 400mm shall be maintained between the cables of different voltage groups. Where a number of LV cables are run in the same trench, they shall be laid with a minimum separation of 100mm. This applies to feeder cables only and not street lighting and service cables which shall be only 25mm apart. Cables shall not cross each other.

Where cables run across even parallel to lateral boundaries, they shall be located 1,0m from the boundary at a depth of 1,0m. If so specified they shall be run in sleeves, otherwise both HV and LV cables shall be protected by cable slabs and a PVC sheet marker laid 300mm, above them.

The trench bottom shall be cleared of all sharp or protruding stones. The trench is then to be refilled with 150mm of soft material and compacted. A further layer of soft material shall be installed after the cables are laid to provide 200mm cover for the cable when compacted. Protective cable slabs a minimum of 50mm thick x 230mm wide shall then be laid in the case of HV cables, and PVC sheet cable marker strip 450mm wide with indelibly printed warnings every 150mm along its length, in the case of LV cables. In cases where HV and LV cables run in the same trench, 100mm of soft bedding for the LV cables shall be situated above the protective cable slabs. Where LV service cables or street lighting cables only are installed, a clean trench bottom and soft material back-fill only is required, and no PVC sheet marker.

The soft material described above may be either sand or back-fill material sifted through a 3,0mm mesh grid. Where the bottom of the trench consists of only soft sandy material, the bedding underneath the cable shall be omitted and the cable shall be laid on the trench bottom at the correct depth. Permission must be obtained from the Clerk of Works or the Engineer for the cable bedding to be omitted in such instances. Where sand has to be brought to site, the quantity must be measured and confirmed by the Engineer or Clerk of Works.

The balance of the trench is to be back-filled with excavated material from which all stones, etc. greater than 100mm in size have been extracted. All such extracted material is to be removed from site.

Cable route markers shall be provided for all HV and main LV feeder cables at road, culvert and Telkom cable crossings, at all changes of direction, at joints and at intervals not exceeding 60 metres along the straight. Cable route markers shall comprise concrete blocks in the shape of truncated pyramids 300mm high, 150mm x 150mm at the top and 225mm x 225mm at the base. An aluminium plate 3,0mm thick minimum, with four rods 75mm minimum welded to it on the underside, shall be cast into the top of the concrete block, and the plate shall have stamped on it the cable data and direction arrows, and at a crossing, the crossing shall be indicated.

The cable route markers shall be placed over the cable, in the trench way, and shall protrude 25mm above the finished ground level but not where they are likely to cause an obstruction or be in the way of moving traffic. Joint markers shall indicate as such. The Contractor shall ensure that the ground under and around the cable marker is properly compacted.

CABLE JOINTS AND TERMINATIONS

6.6 GENERAL

Cable jointing and termination shall be carried out by a qualified cable jointer using only approved standard methods for the particular type of cable. Proof of his training may be required.

Joints in all cables shall only be made at full drum length intervals, but where necessary and when approved by the Engineer cable through joints may be used in other approved positions.

Where a cable has steel wire armouring all strands of armouring shall be through jointed.

Cable connections shall be made by means of crimped or sweated lugs, firmly bolted, one plain and one lock washer being placed under the nut, so that the plain washer is against the lug and there shall be no washer between the lug and the terminal. A plain washer is also required under the bolt head. Alternatively, sweated stems fitting into clamp connections will be acceptable.

Crimped lugs up to 70mm² shall be fitted using manual tools and hydraulic tools from this size upwards. Approved tools are to be used in both cases. An hydraulic tool is to be used on all sizes of aluminium cable. Where a single point hydraulic crimping tool is used, the lug shall be crimped in three places. Where a hexagonal die is used, this shall extend the full length of the lug.

Where aluminium cored cables are to be connected to circuit breakers, the aluminium cable lug shall be bolted to a copper tag or tail which is to be connected to the circuit breaker. The Contractor shall ensure that sufficient Denzo paste is installed on the faces of the lugs.

Where an aluminium cable is to connect to copper, the lug shall be a bi-metal type lug with a copper spade and an aluminium ferrule friction welded to the spade.

Cable connections shall be made using brass bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels and mini-subts and with cadmium plated steel bolts and nuts on all indoor equipment. All bolted joints shall be taped with self-vulcanising (not adhesive) tape.

Where cable connections are required to the HV and LV terminals of transformers, these shall be made off as follows:-

Red Phase to Terminal A

White Phase to Terminal B

Blue Phase to Terminal C

All transformer connections shall be kept in strict phase rotation and where two or more units are to operate in parallel, the respective connections are to be checked for phase rotation and polarity.

In the case of cable terminations to transformer bushings the cable itself shall be clamped substantially to a post adjacent to the transformer, connections to the bushings being puttied and taped.

All connections are to be colour coded.

6.7 **LV CABLE TERMINATIONS**

PVCAS cables shall be made off using adjustable mechanical glands. Care shall be taken to ensure that armour wires are correctly seated in the gland and that all parts are properly tightened. Outdoors, in damp situations and in all mini-substations and kiosks, neoprene waterproofing shrouds are to be fitted over all glands.

Contractor shall ensure that sufficient space is left on the gland plate for the future cables.

Wherever PVCAS cables are terminated to overhead lines a suitable moulded heat shrinkable glove to effect a watertight seal at the crotch shall be used, in accordance with the manufacturer's instructions. Alternatively, a PVC cable cap may be used.

7.0 **CABLE TESTING**

On completed sections of laid, jointed and terminated LV cables, pressure testing of cables shall be carried out by persons qualified to make such test. Certificates with the test results shall be submitted to the Engineer.

PERIMETER LIGHTING

7.1 **GENERAL**

Perimeter lighting poles and luminaires to be installed under this Contract including the type, mounting height, quantities, etc., are detailed elsewhere in this Specification.

7.2 **GLASS REINFORCED FIBRE STREETLIGHT POLES**

A cable entry of 80mm diameter shall be provided \pm 600mm below ground level.

The pole shall have an access door of 600mm x 150mm. The door cover shall be an overlapping polycarbonate cover smaller in diameter than the pole to ensure a tight fit. The cover shall be secured to the pole by means of two captive stainless steel tamper-proof screws. (screws that are completely tamper proof and only accessible with tamper-proof screws tool. The door cover shall be completely replaceable and interchangeable.

The pole is to have a 400mm x 400mm x 6mm hot dipped galvanised baseplate secured to the pole by means of hot dipped hook bolts and nuts.

The pole shall be supplied with a glandplate to accommodate 2 x 20mm glands, fuse terminal block and earth stud. This glandplate shall be removable so that the work can be executed outside the pole.

A SABS certificate certifying the bending strength of the pole shall be enclosed.

Copy of Quality Assurance Certificate of SABS 0157 Part 2 shall be enclosed.

A pamphlet furnishing full details of the pole offered, shall be submitted with the tender

7.3 **PHOTO-ELECTRIC CONTROLS**

Where called for elsewhere in this Specification, a photo-electric control unit shall be used to switch the street lighting installation. Photo-electric switches shall be of the type comprising a photo-sensitive resistor, thermal actuator with an inherent operating delay to make it insensitive to short duration changes in light levels and a change-over switch mechanism, all housed within a

tough, translucent, weather and ultra-violet resistant cover. The operating level shall be factory preset to switch on at approximately 50 lux and off at approximately 100 lux. The response time after sudden changes in light level shall be not less than 15 seconds.

Integral protection against voltage surges shall be provided.

A suitable unit would be the "National" type ZS-20AR.

Where the photo-electric switch is pole mounted it shall be positioned in such a way that it will not be affected by spill-light from the street lighting installation or by vehicle headlamps.

7.4 **COMPLETION AND TESTING**

Immediately after completion of the installation the street lighting system shall be switched on and lamps allowed to stabilise for at least one hour. Any faulty lamps shall be replaced. The voltage at each luminaire shall be measured and toppings on the ballasts set accordingly.

7.5 **GUARANTEES AND MAINTENANCE**

The installation shall be guaranteed and maintenance carried out in accordance with the requirements detailed elsewhere in this Specification, except that where no other defects or maintenance procedures requiring Contractor's attention exist, the installation of replacement lamps supplied by the Contractor will be carried out by the Employer's maintenance personnel, unless otherwise specified elsewhere herein. Under no circumstances is any spare equipment or lamps elsewhere specified to be used for replacement during the foregoing period.

8.0 **HOT DIP GALVANISING**

Where hot dip galvanising is called for, it shall conform to SABS 763, the required coating thickness being in accordance with Table 1. Unless the galvanized part is to be painted, the coating is to be passivated immediately. Where later painting is required, a suitable primer shall be applied at the galvanising works.

Before galvanising, all cutting, drilling, welding, etc., shall be complete. Bolt threads shall be suitably undercut and nut threads over tapped to ensure the correct fit after galvanising.

All galvanized parts shall be stored under cover and in stacks such that no part is resting on another and there is sufficient ventilation to prevent condensation occurring. No galvanized parts shall be stored directly on the ground but on pallets or similar protection. Any damaged parts or parts attacked by white rust will be rejected.

Any galvanized surface that is subsequently damaged shall, if the Engineer does not require replacement, be touched up in the manner specified in the Clause "Painting" elsewhere in this Part.

9.0 **LABELS AND NOTICES**

The Contractor shall arrange for the labelling of all equipment, instruments, meters, relays, cables, etc., as indicated below.

All labels shall be ivory or other back engraved white on black labels of the sizes indicated. They are to be located in purpose made holders or otherwise are to be screwed or riveted into position. "Dymo" tape or similar labels will not be accepted nor will labels which are glued in position only.

Labels on poles shall comprise an aluminium plate with the designated number. These labels shall be nailed to the pole 1,5m above ground level. Nails shall be electro-galvanized clout nails.

Prior to any equipment being labelled, the Contractor shall request the Engineer to provide a complete labelling schedule for all items of equipment. Under no circumstances is equipment to be labelled in accordance with the tender drawings since any description thereon is for identification purposes during construction only and is unlikely to apply to the completed Works.

The following list indicates the general labelling requirements but does not limit the extent of

05 Vol 1.1 Part 1 Scope of Works

labelling required, which shall encompass the full extent of the equipment supplied, or in the case of existing equipment, any such which is affected by this Contract.

50mm high lettering:-

CDU and feeder panel designation.

5mm high lettering:-

CDU feeder breakers and isolators.
Meters, instruments and relays.

3mm high lettering:-

This size shall be used to designate the conductor size and number of cores of each cable installed under this Contract. In addition, all feeder cables shall be labelled to state from whence they are fed.

All kiosks shall be provided with notices as required by the Occupational Health and Safety Act. All doors to such locations shall be fitted with the appropriate notices.

10.0 **REMOVED MATERIAL**

All material recovered shall become the property of the Contractor and shall be removed from the site by him.

11.0 **INSPECTION, TESTING AND COMMISSIONING**

The Engineer shall have access at all reasonable times to such parts of the Works or the Contractor's premises for the purpose of inspecting, examining and testing the materials, workmanship and performance of any plant or equipment specified for the Works.

All wiring is to be subjected to a test voltage of 2kV for one minute without insulation failure. A Megger test is to be applied with a 500V instrument immediately thereafter to prove the insulation resistance better than 20 megohms.

All equipment necessary to enable the tests to be carried out shall be provided and shall include, inter alia:

- Phase rotation meter
- Avometer
- 500V/2kV DC test set

On completion of the entire installation or any particular section thereof, as may be decided by the Engineer, commissioning shall be carried out by the Contractor, and any tests the Engineer deems necessary shall be conducted. The Contractor shall supply all equipment necessary for the testing and commissioning procedures.

During commissioning, all tap change switches are to be correctly set and locked.

The Contractor shall supply all equipment necessary for the testing and commissioning procedures. The test equipment required at Site shall include, inter alia :

- (i) Phase rotation meter
- (ii) Suitable cable test set
- (iii) 11 000V phasing sticks

- (iv) 500V megger
- (v) Avometer
- (vi) Earth resistance test set

After completion of the commissioning tests the Contractor shall provide duplicate test certificates relating to cable tests and results of earth tests.

The Contractor shall give the Engineer at least 14 days notice of the date of any testing or commissioning so that he may be present if he so wishes. Where the Engineer does not himself, or through his representative, attend to witness the tests, then the Contractor may proceed with the test, duly forwarding to the Engineer certified copies of the results obtained. In such cases, the test shall be deemed to have been made in the presence of the Engineer.

In the event of the equipment or installation not passing the tests, the Employer shall be at liberty to deduct from the Contract Price, all reasonable expense incurred by him or by the Engineer in repeating the tests.

15.0 **COMPLETION OF WORKS**

Before completion of the Contract any damage which may have been done in the process of the installation shall be repaired and made good, trench or excavation work shall be left in a clean and tidy state and all accumulated debris shall be removed from the Site by the Contractor, to the satisfaction of the Employer and Engineer.

All defects found are to be rectified within one month of written notice of such defects. A penultimate certificate reducing the retention amount to that stated elsewhere in this Specification will only be issued upon submission of As Built Drawings and Operating Manuals as called for elsewhere herein, after completion of all notified defects, and once all test certificates called for in the Clause "Inspection, Testing and Commissioning" elsewhere in this Part have been submitted and accepted by the Engineer.

An appropriate Certificate shall acknowledge practical completion of the Works and the commencement of the period during which the Contractor will be responsible for any defects that may become apparent, and of maintenance of the installation.

The Contract will not be deemed to be finally complete until the Engineer's final payment certificate is issued.

Vol. 1.1 Part 1
SCHEDULE OF INFORMATION

PROJECT TITLE:	SECTION 11B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 4- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

ITEM	DESCRIPTION
1.	REGISTRATION AS ELECTRICAL CONTRACTOR
2.	DETAILS OF INSTALLATION ELECTRICIAN
3.	SCHEDULE OF MATERIALS OFFERED

1. **REGISTRATION AS ELECTRICAL CONTRACTOR**

The Tenderer must be registered as an Electrical Contractor with the Department of Labour and must also be registered with the Workmen's Compensation Commissioner and the Unemployment Insurance Commissioner to qualify for this tender.

Tenderers must complete the following questionnaire and submit it with this tender.

- a) Has the company been registered with the Department of Labour
YES/NO

Registration No :

Date of issue :

NB: Proof of current registration to be submitted with the tender. Should your tender be successful you will be expected to submit the original document for perusal by the Engineer.

- b) Has the company been registered with the Department of Labour?

- i) The Workmen's Compensation Commissioner YES/NO

Registration No :

Date of issue :

- ii) The Unemployment Insurance Commissioner YES/NO

Registration No :

Date of issue :

I/We certify that the above information is correct

Signature :

Name of Signatory :

Name of Firm Represented :

Address :

.....

Date :

2. **DETAILS OF INSTALLATION ELECTRICIAN**

I/We certify that is a registered installation electrician in terms of the Occupational Health and Safety Act (Act 85 1994) and is permanently employed by my/our company trading as:

.....

I/We further certify that the abovementioned person will be appointed as the responsible person in charge of the installation, which person shall personally supervise the whole of the electrical works as tendered for from inception to completion inclusive of signing all commencement/completion/ cost certificates necessary as part of the Works.

I/We further certify that I/We am/are fully aware of the provisions of the Occupational Health and Safety Act (Act 85 1994), and that my/our company is trading as a registered electrical contracting organisation.

SIGNATURE OF TENDERER	.....	SIGNATURE OF INSTALLATION ELECTRICIAN	.....
REGISTRATION NUMBER OF INSTALLATION ELECTRICIAN	.....	DATE	.....

COMPANY STAMP

NOTE

It is an offence to employ a registered single-phase installation electrician on a poly-phase installation and it may be necessary to submit a certified copy of the licence of the person to be employed on any poly-phase project.

3. **SCHEDULE OF MATERIALS OFFERED**

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB : Only one manufacturer's name to be inserted for each item.

ITEM	MATERIAL	MAKE OR TRADE NAME	CONFORMITY TO SANS ?
1.0	Cables:		
1.1	Cables PVC, SWA, Cu		
1.2	Cable glands & shrouds		
3.0	Streetlighting:		
3.1	Poles		
3.2	Luminaires		

NOTE : The Contractor is to note that under no circumstances may materials be installed other than that offered in the above material schedule, which has been approved and accepted by the Engineer. Should the Contractors wish to supply materials other than that originally offered, prior written approval must be obtained from the Engineer, before any orders are placed.

Signature :

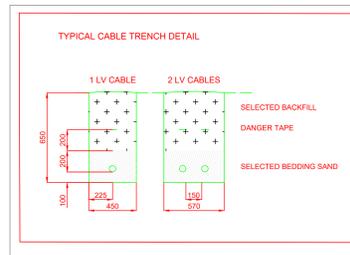
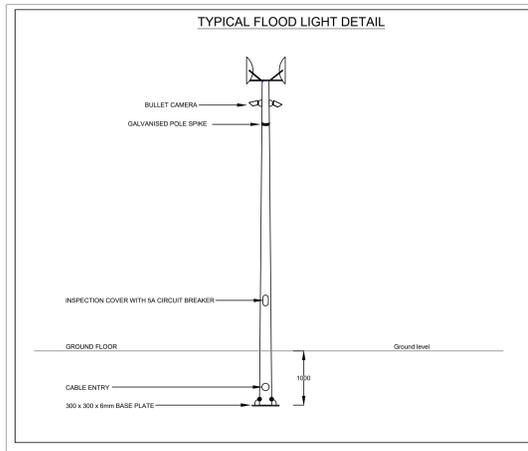
Name of Tenderer :

**Vol. 1.1 Part 1
Drawing Schedule**

PROJECT TITLE:	SECTION 11B: ELECTRICAL INSTALLATION – PE PROVINCIAL HOSPITAL – PERIMETER LIGHTING - WORK PACKAGE 1- ELECTRICAL INSTALLATIONS
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

The following drawings form part of this document. Drawing Book is attached separate to this tender book.

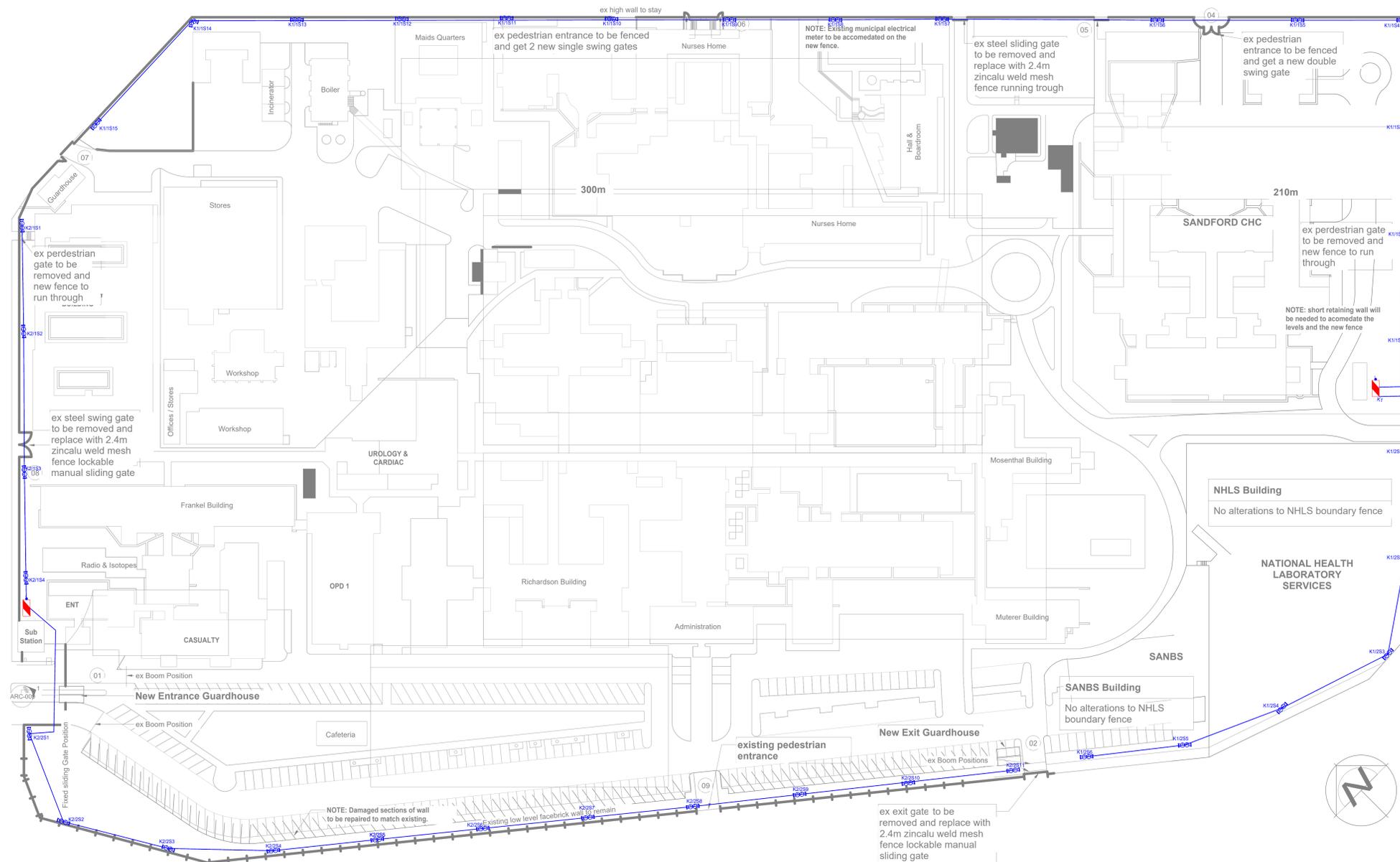
DRAWING NO.	DESCRIPTION	SIZE	BOUND	LOOSE
2316-T-E-100A	SITE PLAN: PERIMETER LIGHTING & SLEEVE LAYOUT	A0		✓



SECURITY LEGEND

	PHOTO CELL
	2 x 150W LED FLOODLIGHTS MOUNTED ON A 6m GALVANISED POLE INSTALLED ALONG THE FENCES
	OUTDOOR DISTRIBUTION KIOSK
	6mm 4C Cu ECC IN A 50mm PVC SLEEVE

- ### GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB'S).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - D - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - FP - STANDBY SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDBY SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.



TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC

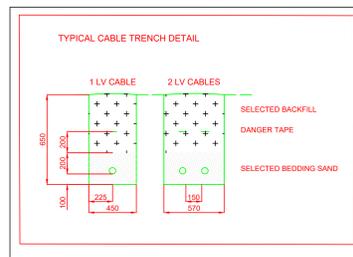
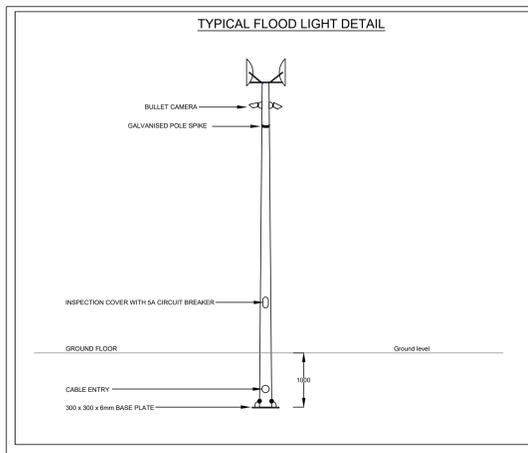


DISCIPLINE
ELECTRICAL

SERVICE
PORT ELIZABETH PROVINCIAL HOSPITAL (PEPH) : UPGRADING SECURITY FENCE.

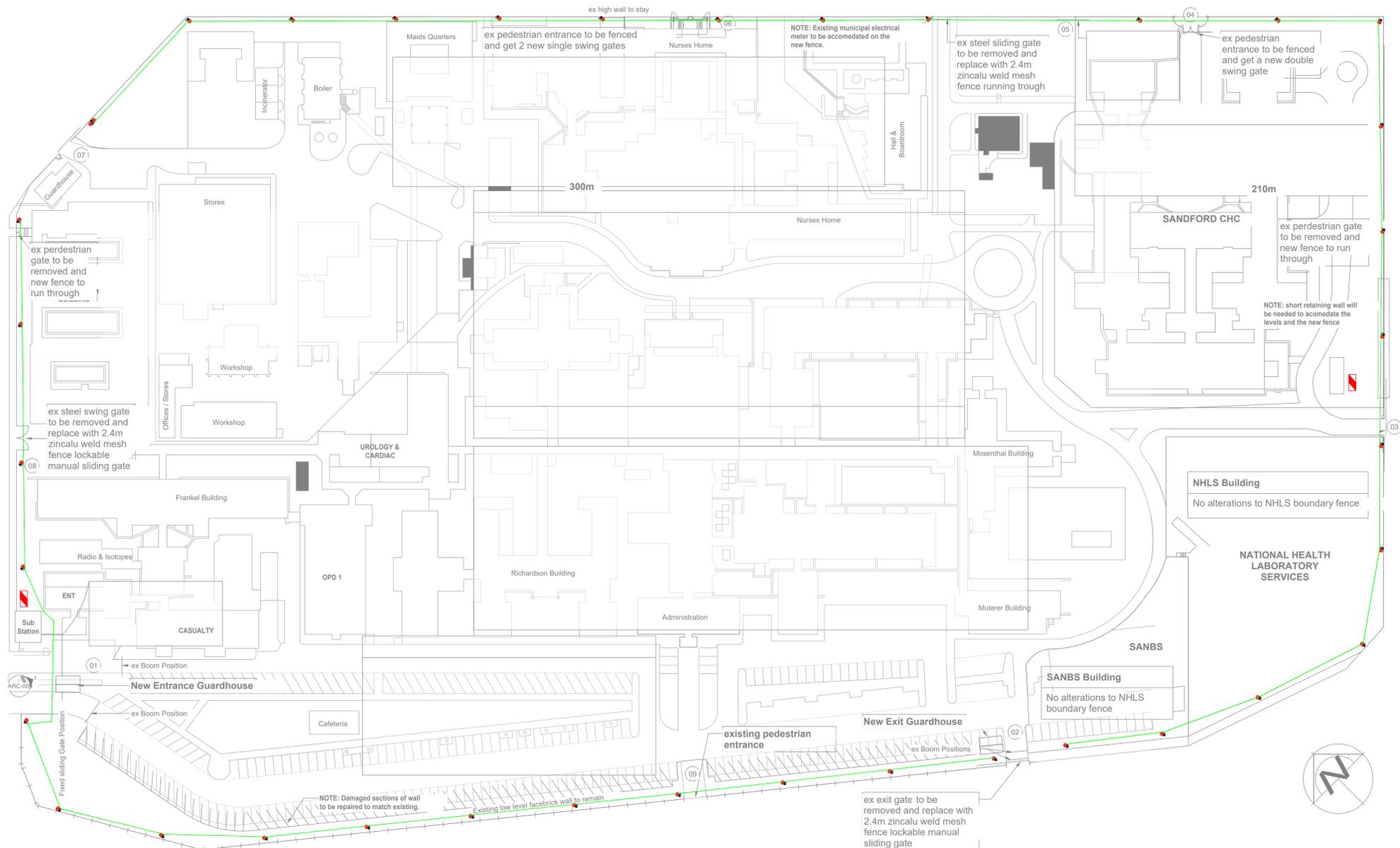
DRAWING TITLE
SITE PLAN: PERIMETER LIGHTING & SLEEVE LAYOUT

SCALE	1:500	DRAWN	B. GEELBOOD
DATE	FEBRUARY 2017	CHECKED	B. GEELBOOD
PRINT DATE	28/09/2025	CHECKED	ERIC CEBA
DESIGN NUMBER	2316-T-E-100A AL	REV No.	00



ICT LEGEND

	DATA LINE CONNECTION POINT IN CEILING VOID OR FOR CCTV UNIT
	VANDAL PROOF STATIC SURVEILLANCE CAMERA
	110mm PVC SLEEVE
	6m GALVANISED POLE FOR FLOODLIGHTS INSTALLED ALONG THE FENCES



- ### GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB'S).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - D - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - P - STANDING SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.

TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC



DISCIPLINE: ELECTRICAL
 SERVICE: PORT ELIZABETH PROVINCIAL HOSPITAL (PEPH) : PERIMETER CCTV.

DRAWING TITLE: SITE PLAN: CCTV & SLEEVE LAYOUT

SCALE: 1:500	DRAWN: B. GEELEBOO
DATE: FEBRUARY 2017	CHECKED: B. GEELEBOO
PRINT DATE: 29/09/2025	CHECKED: ERIC CEBA
ARCHITECTS DRAWING NO. 2316-T-E-100B	REV No. 00

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL

WORK PACKAGE 4

SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES

BILL NO. 1 : PROVISIONAL AND SUPERVISION AMOUNTS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	Other Fixed-charge Obligations	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.2	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OHSA Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	Other Value Related Obligations	Sum	1		
	(Please Specify).	Sum	1		
	. . . . .	Sum	1		
1.3	TIME-RELATED ITEMS				
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	Other Time-Related Obligations	Sum	1		
	(Please Specify).	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
ELECTRICAL INSTALLATIONS
SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 2 : DISTRIBUTION BOARDS & Cabling

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Distribution Kiosk Fibreglass Kiosk with backing board two lockable doors, base and electrical switchgear as per SLD				
2.1.1	Kiosk 1,2 &3				
	Supply	each	2		
	Install	each	2		
2.2	Existing Distribution Board Supply and install in existing distribution boards the following switchgear and materials including labelling:				
2.2.1	- 25 Amps,TP, 6kA circuit breakers	each	2		
2.3	Cables PVC Insulated PVC bedded SWA PVC sheathed 600/1000V copper cables. drawn into building entry sleeve, mounted on Tray or Wire Basket.. Tenderer to allow addition suitable earth conductor for the cable				
2.3.1	6mm ² 4 Core complete with ECC				
	Supply	m	1,250		
	Install	m	1,250		
2.2.1.1	Termination for 6mm ² 4 core cable complete with ECC				
	Supply	No.	72		
	Install	No.	72		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
ELECTRICAL INSTALLATIONS
SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 3 : LUMINAIRES

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Luminaires Luminaires mounted on concrete or suspended ceilings, or on brickwork including lamps and fixing material. NOTE: See contract document for detailed technical specifications.				
3.1.1	Type-P (150W LED surface mounted Flood Light, IP65 rating, Aluminium Body, Colour: Black) Price to include brackets and IP65 terminal boxes for installation on pole				
	Supply	each	72		
	Install	each	72		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
ELECTRICAL INSTALLATIONS
SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 4 : SWITCHGEAR EQUIPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
4.1	Switchgear 16 Amp rocker type light switch with coverplate installed into a flush box measured elsewhere.				
4.1.1	10 amp photo electric cell surface mounted in on a kiosk as shown on the drawings				
	Supply	each	2		
	Install	each	2		
TOTAL SCHEDULE NO. 4 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
WORK PACKAGE 4
SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 5 : GENERAL POWER

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
5.1	Conduit PVC conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
5.1.1	20mm Supply	m	200		
	Install	m	200		
5.1.2	25mm Supply	m	100		
	Install	m	100		
5.2	Galvanised metal conduit chased into brickwork, cast in concrete or fixed on trusses in ceiling void including cutting, bending, reaming, setting, joining, draw boxes and fixing material (average).				
5.2.1	20mm Supply	m	100		
	Install	m	100		
5.2.2	25mm Supply	m	50		
	Install	m	50		
5.3	Conduit Boxes Round Galvanised box for 20mm conduit, back or side entry for 1, 2, 3 or 4-way chased into brickwork, cast into concrete or fixed in trusses including couplings bushes cover plates and fixing materials (average rate)				
5.3.1	20mm Galv round box Supply	each	10		
	Install	each	10		
5.3.2	25mm Galv round box Supply	each	5		
	Install	each	5		
TOTAL SCHEDULE NO. 5 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
WORK PACKAGE 4
SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO. 6 : CONDUCTORS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
6.1	Conductors 600/1000 grade PVC insulated single core copper conductors drawn into conduit				
6.1.1	2,5mm ² red/black Supply	m	360		
	Install	m	360		
6.1.2	2,5mm ² yellow & green Supply	m	180		
	Install	m	180		
TOTAL SCHEDULE NO. 6 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
WORK PACKAGE 4
SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES
BILL NO 7 : POWER RETICULATION EQUIPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
7.0	WIRING DUCT				
7.1	50mm PVC sleeve Supply	m	1,200		
	Install	m	1,200		
7.2	110mm PVC sleeve Supply	m	1,200		
	Install	m	1,200		
7.3	Galvanised Steel Poles for CCTV Cameras and Security Lights Galvanised Steel pole with 7m, base plate, gland plate, 5A MCB, access door. Price to include tamper proof screws for access door and 2 spanners				
7.3.1	Supply	each	36		
	Install	each	36		
7.4	Galvansed Spikes Klaw Spikes for poles above				
7.4.1	Supply	each	36		
	Install	each	36		
TOTAL SCHEDULE NO. 7 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL**WORK PACKAGE 4****SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO 8 :EXCAVATIONS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
8.1	Excavations for cables in trenches (450 wide x 600deep)				
8.1.1	Excavate in normal earth	m ³	325		
8.1.2	Allow for Soft Rock in above trench	m ³	75		
8.1.3	Allow for Hard Rock in above trench	m ³	4		
8.1.4	In concrete/ tar/ paving including reinstatement to original finishing	m ³	11.25		
8.1.5	Selected fines bedding 150mm under cable and 150mm on top of cable	m ³	40		
8.1.6	Removal of unsuitable material	m ³	15		
8.1.7	Supply and install cable marker tape 200mm above cable in trench	m	1,200		
8.1.8	Allow trenching for the poles per specifications	No.	36		
8.1.9	Allow concrete plinth including nuts and bolts for pole mounting	No.	36		
TOTAL SCHEDULE NO. 8 TO PRICE SUMMARY					

SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL**WORK PACKAGE 4****SECTION 11B - BILL FOR PERIMETER LIGHTING AND CCTV SLEEVES****BILL NO 9 :SUNDRY ITEMS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
9.1	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
9.2	Testing of complete installation in terms of the regulations	Sum	2		
9.3	Provide Certificate of Compliance for the new works	Sum	2		
9.4	Provide As-built drawing for the new works	Sum	1		
TOTAL SCHEDULE NO. 9 TO PRICE SUMMARY					

**SECTION 11B - ELECTRICAL INSTALLATION, PERIMETER LIGHTING AND CCTV AT PE PROVINCIAL HOSPITAL
WORK PACKAGE 4**

SUMMARY OF MAIN BILL

DESCRIPTION	SECURITY FENCE - LIGHTING & CCTV SLEEVES AND POLES
	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : DISTRIBUTION KIOSKS & CABLING	
BILL NO. 3 : LUMINAIRES	
BILL NO. 4 : SWITCHGEAR EQUIPMENT	
BILL NO. 5 : GENERAL POWER	
BILL NO. 6 : CONDUCTORS	
BILL NO 7 : POWER RETICULATION EQUIPMENT	
BILL NO. 8 : EXCAVATIONS	
BILL NO. 9 : SUNDRY ITEMS	
SUBTOTAL (EXCL VAT)	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 11B ON FINAL SUMMARY ON PAGE 456	

SECTION 11C

PE PROVINCIAL HOSPITAL

CCTV INSTALLATION

PE PROVINCIAL HOSPITAL- HEALTH CENTRE

CCTV INSTALLATION

DETAILED TECHNICAL SPECIFICATION

1. CCTV INSTALLATION

1.1 GENERAL INFORMATION

The Subcontractor is responsible for providing the installation in accordance with the Specification as well as the specifications and requirements set out in the Department of Health ICT, Data and Security systems installation specification.

The intent of this document is a performance specification for a modular security management system encompassing the sub-systems described. Tenderers are at liberty to offer enhancements to the equipment specified.

The security subcontract will be inclusive of the following IP based installations:

- Closed Circuit Television Cameras, Monitors and Recording
- Control Desk in control room

Tenderers are encouraged to tender a main option which would represent a compliance with the specification and quantities and would relate to the completed Bills of Quantities. Alternative options may be offered together with a full motivation and separate Bills of Quantities.

In instances where reference is made or inferred to particular products, it only serves the purpose of defining a required standard. Tenderers are requested to offer the best and most suitable products for the application.

General items include the following:

- a) Cable trays to be supplied and used where possible and all cable to be neatly and securely tied with cable ties.
- b) If no cable trays, all cables to be installed in conduit and correctly secured.
- c) No cables may be left to lay on the ceiling boards.
- d) All cable loops to have minimum of 20% spare capacity.
- e) All cabling to electronic locks is to be installed on the secure side.
- f) No joins in cable will be accepted.
- g) All junction boxes and boards to be correctly mounted.
- h) All door monitors will be of the 20mm recessed type unless specified otherwise.
- i) All readers must be wired to facilitate the reader sounder and other functionalities.
- j) All electronic devices, power supplies and any other control equipment must be mounted neatly in suitable enclosures to protect them against damage and tampering. Each enclosure will be fitted with a tamper switch and all power supplies are to be monitored.
- k) All floor, room and ceiling voids to be protected and monitored for smoke, fire and water.

- l) All power supplies will be battery backed up with a 12Vdc, sealed rechargeable lead acid battery.
- m) All CCTV, access control, fire detection and monitoring, plus emergency evacuation systems are to be connected to UPS power with battery back-up. Head end equipment must be provided with dual UPS power from different power breakers.
- n) On system hand-over, the installation is to be complete and FULLY functional.
- o) A complete set of user friendly operating instructions to be provided.
- p) Adequate operator training to be included in tender price.
- q) A complete set of design architecture drawings depicting correct positioning of all equipment to be supplied.
- r) All devices including public address speakers and access control devices must be labelled according to the floor number and location on the floor. A register of the items installed and the corresponding numbering must be supplied on hand over.
- s) All equipment must be networkable and facilitate remote monitoring and operation.

1.2 **SPECIFICATION**

1.2.1 Local and Supply Authority

The project location is within the bounds of the Livingstone Hospital (Standford Road & Lindsay Road, Korsten, Gqeberha). The area is also approximately 2.1km from Algoa Bay

This site consists of both single-storey and multi-storey buildings.

1.2.2 Site Conditions

Equipment shall be suitable for the following conditions:

Ambient temperature	-5°C to 40°C
Altitude	0m
Lightning	Severe
Dust	Severe
Relative Humidity	32°C dB Temperature 22°C wB Temperature
Nominal LV Supply	400/231 [no load] 4 wire, 3 phase system with earthed neutral.
Nominal HV Supply	22kV 3-wire system.
Frequency	50 Hz.

Details to be submitted with the tender document:

Should the Subcontractor in any way differ from the Specification, the differences shall be stated in detail. The information shall be included in a covering letter accompanying the tender, stating the paragraph of the Specification where the requirements are deviated from.

It shall be noted that the information entered in the schedules will not relieve the Subcontractor of his obligations to comply with the Specification.

1.2.3 Scope

The Specification covers all activities up to final commissioning and maintenance during the guarantee period of the installation.

- IP Based CCTV Axis, Bosh or other Department of Health approved
- Full Integration of the above

A Main Security Control Room and Equipment Room will be provided in the building site in which the Access Control and CCTV systems will be installed.

Tenderers shall allow for the future extension of the systems and equipment offered for an additional 20% extension of all systems.

Access Control and CCTV termination boxes will be provided on and will be all linked to the Main Security Control Room.

1.2.4 The Access Control and CCTV Installation shall include but not be limited to:

- The design of the ACS and CCTV systems, supply, delivery, installation, testing, integration, commissioning, guarantee and maintenance of the Access Control and CCTV Installation.
- The provision of all necessary equipment, tools, accessories and test equipment to complete the Security Installation.
- The timeous provision of building work details.
- The provision of shop drawings showing all wiring routes, equipment details, equipment positions, [including fixing details], sleeves, etc.
- The compilation of manuals including a full schedule of equipment installed spares lists, "As Built" drawings and information as set out in the Specification.

1.2.5 The Access Control and CCTV Installation shall include but not be limited to:

- The design of the Access Control and CCTV systems, supply, delivery, installation, testing, integration, commissioning, guarantee and maintenance of the Access Control and CCTV Installation.
- The provision of all necessary equipment, tools, accessories and test equipment to complete the Security Installation.
- The timeous provision of building work details.
- The provision of shop drawings indicating all wiring routes, equipment details, equipment positions [including fixing details], sleeves, etc.
- The compilation of manuals including a full schedule of equipment installed spares lists, "As Built" drawings and information as set out in the Specification.

1.2.6 Related work by others

The following related work associated with this Subcontract will be carried out by other parties as specified:

1.2.6.1 Access Control and CCTV Subcontractor and Main Contract

The following work will be provided by the Main Contractor:

- Provisions of penetrations in walls and structure for reticulation of cabling.
- Closing of ducts and opening through concrete slabs after installation of wiring and piping.
- Setting out of all equipment

1.2.6.2 CCTV Subcontractor and Electrical Subcontract

The following work will be provided by the Electrical Subcontractor:

- A 400V 3-phase or 240V [uninterrupted] power supply point at each point as required and identified by the Subcontractor. Any transformers or converters required for other voltages shall form part of this subcontract and shall be priced with associated equipment.
- All conduit and wiring channels.

1.2.8 Service Level Agreement [SLA]

Tenderers shall specifically state their ability to provide a comprehensive SLA to the Owner on completion. Tenderers shall submit with their tender's examples and a list of performance-driven SLA's provided for installations similar in scope and nature.

1.2.9 Confidentiality

It is a condition of issue of these documents that the successful Subcontractor shall maintain full confidentiality of the documents and drawings.

During the course of the Subcontract, the successful Subcontractor shall institute such procedures to ensure proper control over copies of documentation and drawings. Such procedures may vary from time to time but shall include:

- Numbering of all prints of shop drawings and recording issue.
- Return of all drawings when superseded.

1.2.10 Conduits and wire-ways

All conduits and wire-ways required by the Subcontractor will be supplied and installed by the Electrical Subcontractor.

All conduits in areas of exposed slabs will either be cast in concrete or installed on surface as the case may be.

All conduits in walls will be built in.

The Subcontractor shall provide shop drawings for requirements over and above those already indicated for co-ordination purposes. These shall in particular, show size and position of outlet boxes as well as details of any special fixings that are required. All additional wire

ways and power supplies to be supplied on shop drawings that may be accordance with the product specified

All wiring required to make the Security System operational shall form part of this Subcontract. This shall include all power and control wiring from the 400V/240V power points installed by the Electrical Subcontractor.

All wire ways in the Security Control and Equipment rooms are excluded from this subcontract and will be installed by the Electrical Subcontractor.

1.3 **CLOSED CIRCUIT TV SYSTEMS**

A closed circuit television surveillance system shall be provided for surveillance of areas as shown on the drawings. The system shall allow for an extension of + 30% of equipment for further project phases.

1.3.1 General

- Network capability [with Client interface]
- Storage of minimum 3 years for all transactions, to be confirmed with Department of Defence
- Anti-pass back facility
- Audit trails
- Off-line capability; minimum of 25 000 events
- Exception report capability
- Maintenance; UPS and battery backup
- SLA's and maintenance contracts in place
- Minimum 60 months manufacturer's warranty on all equipment from date of commissioning
- Servers to be housed in server rooms or secure and adequately ventilated areas.
- All areas to have reader in/no touch release button out; unless specified otherwise
- High risk areas to have second verification facilities
- All high risk areas [server rooms, security Control Room/control room] to have one-on-one access control facility
- The hardware and software must form part of the fully integrated computerised system.
- System must provide for host/visitor function.
- Event interfacing with CCTV to be established
- Provision must be made for on-site image back-ups on an external storage device.

1.3.2 Cameras

Colour cameras with Infra-Red capabilities shall be installed in positions as indicated on the drawings or as measured in the Bills of Quantities. Camera positioning will be determined by positioning of equipment in the Server. The main areas to be equipped with CCTV will be:

- Perimeter Fence

Cameras will be powered by dedicated network switches, provided by the infrastructure. The Camera's must be IP based, and able to run off POE or POE+ Cameras operating at 24V shall be equipped with a dedicated power supply, which will be priced as part of the camera.

Cameras shall only be sourced from approved suppliers able to provide ongoing support and service. Tenderers shall state the manufacture of cameras and control systems offered.

The cameras indicated shall be fitted with Image Motion Detection to enable image transmission to be event triggered, or by access or alarm within the system. It shall be possible to define separate motion detection areas within the camera field of view, with each motion detection section to be armed or disarmed in accordance with time settings.

CCTV cameras shall be offered as high resolution, with conversion to monochrome facility in low light conditions, [less than ½ Lux]. Tenderers shall state the resolution performance of cameras offered.

All outdoor cameras shall be provided with an environmental housing.

The Subcontractor shall allow to install cameras by means of suitable mounting brackets against face brick and granite surfaces. In all cases an extended mounting arm of high quality steel or aluminium, 500mm in length, shall be allowed. The bracket and extension arm shall allow for adjustment of the camera. Although it is preferred the brackets are sourced from the camera supplier samples shall be provided for approval to the Contractor.

Dome cameras will be required with the following features:

- Sizes of 270 and 360mm diameter
- Camera will be mounted on ceiling
- Pendant dome colour will be white
- Lower dome colour will be smoked
- Auto focus/zoom with simple override to manual operation

1.3.3 LCD Monitors

Four 42" [inch] LCD monitors shall initially be required in the Main Security Control Room [allow for 30% extension].

The following basic requirements for viewing images shall be achieved:

- Stored images retrievable from log in 2 seconds.
- View live images from up to 4 cameras through one operator station, or up to 4 operation stations to view one camera.
- Zoom feature must be available for display images.
- Authorisation levels shall be available for all cameras, to select or prevent image display.
- Images displayed must be provided with digital Pan, Tilt and Roll functions.
- Tenderers shall state the viewing performance in fps that may be achieved by viewing multiple cameras at full size, as well as available trade-offs between frames capture rate and picture quality.

The following controls shall be mounted on the front of the monitor:

- On/Off power switch.
- Brightness control.
- Contrast control.

Horizontal and vertical hold controls shall be incorporated. These controls shall preferably be front mounted but easily accessible rear mounted controls will be accepted.

The monitors shall be freestanding with no cut-outs being accepted in the control desk. The Subcontractor shall note that all the monitors will be in close proximity to each other. It is therefore essential that all monitors are adequately screened and properly earthed. Any mutual interference and beat frequency that result shall be corrected at the expense of the Subcontractor.

Adequate cooling shall be provided in the design of the control desk for the monitors. This shall include ventilation slots at the rear of the control desk and pass through for cabling.

All wiring shall be neatly bonded and arranged. All intermediate power and control wiring shall terminate at numbered terminal strips. Video cables shall terminate on associated equipment using accepted connectors. Power and signal cables shall be separated throughout. Screened cables shall be used wherever possibility of mutual interference exists.

Cognisance shall be taken in the selection of the cabling to ensure cables will comply with the distance requirements between the cameras and the Security Control Room. Cabling shall be sized and selected to prevent degradation of the signal over the cables.

It is emphasised that the monitors shall be arranged to provide optimum viewing angles.

The subcontract includes all equipment and materials, cables and connections, terminals, plugs and sockets covers, finishing pieces, power skirting, etc. required to provide a neat and operationally complete installation.

1.3.4 Network Video Recorder (NVR) Hardware Platform

- The Network Video Recorder, a device for recording IP based video from IP output cameras or analog cameras that have been converted to IP output shall consist of a PC Compatible Chassis and other specified components, as shown in the following sub sections that together create the Network Video Recorder.
- NVR Chassis Configuration
- NVR Chassis which shall support a maximum of four video capture boards, one hard drive for OS and Software and up to eight (8) Serial ATA hard drives using Multi-Drive hard disk controller for video storage. RAID 5 hard disk controller configuration shall be available as an additional cost option.
- The end-user shall have the option of providing their own NVR chassis under the condition that it meets or exceeds the specifications as follows:
 - ✚ Intel Motherboard
 - ✚ 3.2 Ghz Processor Or Greater
 - ✚ 8 GB Of RAM or Greater
 - ✚ 800 Mhz Front Side Bus
 - ✚ Microsoft Windows XP Professional or Microsoft Windows 2003 Server Operating System on a dedicated OS Drive
 - ✚ 10/100/1000 Ethernet
 - ✚ Storage on SATA, SCSI or Fibre (internal or external)
 - ✚ Net Meeting
 - ✚ CD-ROM Drive
 - ✚ Mouse, keyboard and monitor (for initial setup)

1.4 **Security measures**

1.4.1 First line of security

The first line of security will be implemented by passive and active components. Passive components will comprise of either a boundary security wall, electric fencing and signage whilst the active components will be implemented by means of security guards, access control and closed

circuit television [CCTV] surveillance. This first point of security is at the point of entry to the development. At this point of entry, there will be a gatehouse at the boundary wall of the site. The gatehouse will comprise of security boom gates and attached to this, CCTV to record footage of the driver as well as the registration plate of the vehicles. The gatehouse will also comprise of a 24 hour security guard to monitor tenant access, visitors, deliveries and maintenance. The vehicle entry points will also be complemented with biometric access control points for free access of tenants.

> **Operation**

Staff approaching the site will be forced to present their biometric access/card access. This process can be recorded in such a way that a digital photo of tenant faces and vehicle registration numbers may be recorded and attached to the time stamp of the access control transaction.

Visitor access to the development and the apartments will comprise of dependant procedures. The first procedure will require the visitor to actively converse with the security and then enter into the visitors book the reason for entry. After positive identification of the visitor by the security guard, the guard will then release the vehicle boom for entry to site.

Please note that visual intercom identification can rather be selected for this process but has not been allowed for in the budget or documentation.

The security guard at the gatehouse will be supplied with a telephone, panic button and an access control override button for additional security.

The security booms will be equipped with infra-red sensors as well as an inductive loop system for monitoring of vehicle entries.

Sufficient lighting to be provided to enable adequate CCTV coverage.

1.4.2 Second line of security

This line of security will be implemented at the reception counter in the main foyer. The main entrance doors should be access controlled in order to maintain security at these gates after hours. These doors will be controlled by the receptionist via a push button located in a non-visible location at the reception desk.

The reception desk will be monitored by CCTV and will be recorded and stored for a minimum of thirty [30] days. The reception desk will house all necessary equipment to ensure that this security line secures access to all departments. The reception desk must house two desk top computers.

The first computer will be used for the following administration operations:

- Staff enrolment
- Visitors station
- Access control queries
- Internet and network queries

The second computer will be used for CCTV monitoring of visitors entering the premises, making their way through to the reception foyer. This will provide further security for staff and visitors.

> **Operation**

All visitors must report to the main reception following positive communication with the security guard at the gatehouse.

Dedicated view monitors in the security control room must be implemented to monitor all visitors entering the development.

At reception, all visitors must be enrolled as a visitor. The details captured by the receptionist could vary depending on the level of security required.

The details could include:

- Personal details captured onto the system and attached to the tenants profile for use of future visits.
- Biometric details in addition to the personal details to register the visitor as a frequent visitor.
- The above details and an attached photograph of the visitor to ensure maximum security.

If positive identification is obtained by the receptionist either by intercom system or on a pre-booked system, the visitor will then proceed to the designated area.

All details of the visitor entering the premises will be kept on record for a period of thirty [30] days, [unless otherwise requested].

> **General**

1. Intercom and CCTV to be provided at main access points for vehicles and visitors to communicate with the Control Room after hours
2. Panic buttons to be installed at all guardhouse desks
3. No PC's in the Control Room, they must be in the server room with extensions to the monitor keyboard and mouse and other devices as needed to the Control Room
4. Portable de-mustering stations to be provided for roll call at assembly points.
5. Guard tour monitoring software to be provided.
6. Provision for firearm storage [By Architect]

1.5 CONTROL DESK

The Subcontractor will install the security control desk [position to be finalised]

An equipment cabinet shall be part of the desk for installation of processing units or front-end equipment. Adequate ventilation openings shall be provided to ensure operating temperatures of equipment will not be exceeded.

To reduce the heat component in the security control room an equipment room it has been allowed for the installation of air-conditioning. All cabling to processors and for example amplifiers will be extended from the equipment room to the security control room.

The Control Room will consist of:

- 2 x workstations with 4 off 42" monitors
- House keys cabinet
- Lockable Key Cabinet
- Rack to accommodate 2 way radios
- Video intercom for control room
- Interlocking door

Openable doors at the bottom of the desk will allow easy access to power points and cabling underneath the desk. All cabling shall be internally reticulated with no surface mounted cabling being acceptable. The desk shall arrive on site complete with power skirting and wiring channel adequately sized for installation of the following equipment:

- Booms controls
- CCTV
- Magnetic locks control
- Intercoms
- Door monitoring

All pass through shall be adequately sized for the volume of cabling to be reticulated to the worktop inclusive of power supplies and plug tops.

Manufacturing drawings of the security control desk shall be submitted for approval prior to manufacture. It will be expected of the Subcontractor to liaise with other Subcontractors through the Contractor to obtain all inputs with respect to final installation details and interfaces. The point of interface shall be a terminal strip in the console where other Subcontractors will interface and connect wiring to.

All of the above is to be integrated under one Software Platform and work in conjunction with each other.

1.6 VIDEO IDENTIFICATION SYSTEMS [VIDEO BADGING]

The access control system must have the capability for video badging at the following areas:

- Main reception counter; all visitors and tenants
- Vehicle entrance; all drivers and vehicles
- Pedestrian entrance; all visitors and tenants

At the main reception and pedestrian entrance the system shall have the capability to capture a video image and audio record of the visitor, which shall be linked to the Access Control record.

At the vehicle entrance the system shall have the ability to capture video images of the driver as well as the vehicle registration plate, by means of a video and audio image, date and time stamped and linked to the Access Control System record.

LIVINGSTONE HOSPITAL - HEALTH FACILITY

CCTV INSTALLATION

SCHEDULE OF DRAWINGS

DRAWING NO.	DESCRIPTION OF DRAWING
2316-T-E-100B CCTV	Site Plan: CCTV & Sleeve Layout

LIVINGSTONE HOSPITAL - HEALTH FACILITY

CCTV INSTALLATION

BILLS OF QUANTITIES - NOTES TO TENDERERS

- 1 All queries will only be answered in writing by the Engineer responsible for the project.
- 2 The Bills of Quantities form part of and must be read in conjunction with the specification which contains the full description of the work to be done and material and equipment to be used. Unless otherwise described in the Bills of Quantities, reference should be made to the specification for the full meaning of description of work to be done and materials and equipment to be used in this service. Tenderers are requested to check the formulas in the Bills of Quantities and are responsible for the accuracy of their formulas/calculations.
- 3 The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Tenderers are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered.
- 4 No alterations, erasure or addition is to be made in the text of the Schedule of Prices. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Schedule of Prices will be adhered to.
- 5 The Priced Bills of Quantities of the successful Tenderer will be checked and the Employer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered.
- 6 The responsibility for accuracy of the quantities written into the schedules remains with the person who prepared the schedules. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the schedules although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the schedules and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification. Conductor prices shall include for wastage and sagging.
- 7 All conductors have been measured exclusive of sagging and wastage. The Contractors prices must therefore include for sagging as well as wastage.
- 8 All prices entered in these Bills of Quantities shall include for supply [unless otherwise stated], installation, testing, commissioning, guarantee with free maintenance during the Guarantee period and profit but excluding VAT.
- 9 The successful Tenderer and the Employer or his Agent may agree that the total of any bill or bills, including any variations by way of additions thereto or deductions therefrom, represents a fair accurate quantification of the items set out in the bills and the parties may agree to final payment on that basis. In the event of any dispute as to the quantities, the disputed item or items shall be adjusted where necessary.
- 10 The quantities in these Bills of Quantities are not to be used for ordering materials.
- 11 The description of each item shall, unless other-wise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, all installation materials and sundries, cutting and waste, sagging, patterns, models and templates, plant, temporary works, return of packing, establishment charges, profit and all other obligations arising out of the conditions of contract.
- 12 All measurements are net and Tenderers must allow for wastage in the item rate submitted.

- 13 All provisional sums shall be expended as directed by the Employer and any balance remaining shall be deducted from the amount of the contract sum.

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Employer.

- 14 It is a requirement of the contract that the work shall be carried out in the manner that is most economical on materials. Unless otherwise indicated by the Employer, the Electrical Contractor is required to use the shortest practical route for all conductors subject to the restrictions of the specification and good electrical practice.

- 15 The terms in the Bills of Quantities are based on standard Eskom/Telkom assemblies. The Tenderer shall take careful notice to the make-up of these assemblies with regard to the inclusion/exclusion of excavation, poles, stays, earthing and other items.

- 16 The prices shall be fixed and not subject to adjustment for inflation for the period between contract and programmed completion as set out in the contract.

Tenderers are to specifically note that the Bills of Quantities must be priced as per the quantities provided. Any change in the descriptions and/or additional information must be made in an alternative offer.

No quantities in the original Bills of Quantities or description of equipment offered are to be changed and must remain as is.

Note:

It will be expected of the successful tenderer to submit a full re-measured Bills of Quantities within twenty-one [21] days after acceptance of the tender price.



COMPREHENSIVE PERIMETER ELECTRONIC SECURITY SOLUTION SPECIFICATION



SPECIFICATION FOR THE SUPPLY, DELIVERY, INSTALLATION AND MAINTENANCE OF A COMPREHENSIVE PERIMETER ELECTRONIC SECURITY SOLUTION FOR WESTERN REGION HEALTH FACILITIES.

I. SURVEILLANCE		
NO.	QTY	SCOPE OF WORK
1.1		Outdoor Bullets
	1	6 MP, IP Bullet AcuSense Strobe Siren, 12mm lens, IP67, IR 60m, H.264+ Galvanized Vandal Proof Cage with Anti Bird Spike
1.2		PTZ Solutions
	1	6m Galvanised Square Cubed Surveillance pole, 100mm with Thick outside wall, large base plate, gussets, and mounting plate, predrilled and galvanised. Anti Climb Spike Collar Enclosure Fiberglass - H:450 x W:300 x D:210 PTZ 6+4MP TandemVu IR 200m 25x IP66 White Aluminium PTZ Wall mount Bracket, 97x182x3 White Aluminium PTZ Corner mount Bracket Video wise Camera Power Supply, 24Vac 3Amp, Surge Protected, Fused
2. CONTROL ROOM LAYOUT AND DESIGN		
2.1		Digital Recorder
	1	16Ch AcuSense NVR, 256Mbps, 4 SATA, alarm I/O:16/4, 1.5U
	1	Surveillance HDD 9TB Serial ATA 600 (6Gbps) - 64MB Cache @ 5900rpm
2.2		Server Room
	1	19 unit Server Cabinet, international standard - Material: Cold-rolled steel - Surface finish: Digressing, pickling, phosphoric powder coated - Frame thickness: 2.0mm - Curved, perforated front door - Double-section back door - Double-section side panels for easy access and assembly - Ventilation rate of over 80% - Adjustable, closeable, top and bottom wiring channels - Vertical cable management at the back of the cabinet - Mounting rail with U mark - Standard with earthing kits - 1000Kg loading C44- Adjustable feet and heavy duty castors Dimensions: 600mm Wide x 2000mm High x 950mm Deep - INCLUDES BRUSH PANELS, 24 PORT PATCH PANELS, BLANKS AND TRAYS
	1	PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty
2.3		Field Switches
	1	PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty
	1	RCT 4U 450mm Fixed Wall Mount Cabinet Perforated Metal - Black wall mount cabinet with 2x Front Upr. 2x Glands + Screws - Optional Fans / Trays / Power Rail / Brush & Patch Panels RCT 1 Way Sing Fan Wired - Wall Mount + Casing
2.4		Wireless Communications
	1	M5: 5GHz, 23dBi Hi Power, TDMA Station, incl PoE
2.5		Wireless Fidelity
	1	Wifi 1000/1000 Mbps Uncapped data with router, Outbound Uncapped Voice Channel, Inbound Uncapped Voice Channel, Quality Voice Bandwidth, Non-Geo Voice Numbers, Minimum contract term: 36 months
	1	Wifi Extender RE650 AC2600, Dual band, WPA/WPS button, MU-MIMO for 4 x faster connection, 1 Year Warranty (extended to 3 years)
2.6		Cable Hardware
	1	CAT6 Shielded Twisted Pair Cable - UV protected, per meter
	1	CAT6 RJ45 Crimp Connector
	1	CAT6 RJ45 Weather Boot



CONFIDENTIAL

2.7	Keyboard Controller	
	|	Speed Dome - IP Network Keyboard Controller
2.8	Review Control Station	
	|	24/7 LED CCTV Monitoring Screen 55" Full HD 1920 x 1080 P
	|	26" to 60" Universal LCD / LED Panel Wall mount Bracket
	|	HDMI to HDMI Gold Plated Cables
2.9	Control Room Layout and Design	
	|	Air-conditions 12 BTU
	|	Carpeting for new floor (Vinal Floor) per sqm
	|	Painting of control room per sqm
	|	Woodwork for display wall (Carpentry, Screen mount brackets and Consoles)
	|	Two Office Chairs
	|	A4 Black Printer, Wi-Fi connectivity, Windows Supported OS
3. BACK - UP POWER SUPPLY SYSTEM		
3.1	UPS Solution	
	|	10KVA 6U ON-LINE SINE WAVE Rack mountable UPS - Black
		SNMP Network Card WTU / GTU / GRU ON-LINE UPS
		Modbus Card for WTU / GTU / GRU ON-LINE UPS
		Rack Mount Kit for GRU Rack mountable UPS
		5000VA ON-LINE UPS (with AVR, Monitoring Software + Cable & Built-in Surge Protection) – Black
=10 Hours Duration		
4. POST IMPLEMENTATION SUPPORT MECHANISM		
4.1	Operating And Maintenance Manual:	
	|	Supply hard copy format operating and maintenance manual for IP surveillance system.
		Supply electronic media format operating and maintenance manual for IP surveillance system.
4.2	Training On Site:	
	|	Training of staff on the entire IP surveillance system.
4.3	Infrastructure Installation Drawing/Diagram:	
	|	Submit Installation drawings or diagram depicting infrastructural layout for work done of all IP surveillance systems installation
4.4	Guarantee:	
	|	36 Month warranty and maintenance for the complete IP Surveillance system including a next business day response.



**SECTION 11C CCTV INSTALLATIONS AT PE PROVINCIAL HOSPITAL
WORK PACKAGE 4**

BILL NO. 1 : PRELIMINARIES AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
	A Preliminary and General item is provided to cover the Contractor's charges for compliance with the Conditions of Contract and this Specification, including the provision, maintenance and removal of his site establishment, etc.				
1.1.0	FIXED CHARGES				
1.1.1	Site Establishment	Sum	1		
1.1.2	Removal of Site Establishment	Sum	1		
1.1.3	Provision of Electricity and Water	Sum	1		
1.1.4	Provision of Toilet Facilities	Sum	1		
1.1.5	<u>Other Fixed-charge Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.2.0	CONTRACTUAL REQUIREMENTS				
1.2.1	Provision of Sureties	Sum	1		
1.2.2	Insurances	Sum	1		
1.2.3	Third Party Insurance	Sum	1		
1.2.4	Guarantee of the Works	Sum	1		
1.2.5	Provide Test Results	Sum	1		
1.2.6	Provision of Record Drawings	Sum	1		
1.2.7	All OHS&A Requirements including safety equipment and clothing	Sum	1		
1.2.8	All HIV / AIDS Specification Requirements	Sum	1		
1.2.9	<u>Other Value Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
1.3.0	TIME-RELATED ITEMS		1		
1.3.1	Contractual Requirements	Sum	1		
1.3.2	Operation and Maintenance of Site Establishment	Sum	1		
1.3.3	Supervision for the Duration of Contract	Sum	1		
1.3.4	<u>Other Time-Related Obligations</u>	Sum	1		
	(Please Specify)	Sum	1		
	. . . . .	Sum	1		
TOTAL SCHEDULE NO. 1 TO PRICE SUMMARY					

**SECTION 11C CCTV INSTALLATIONS AT PE PROVINCIAL HOSPITAL
ELECTRICAL INSTALLATIONS
BILL NO. 2 : CCTV**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
2.1	Outdoor Bullet Camera 6 MP, IP Bullet AcuSense Strobe Siren, 12mm lens, IP67, IR 60m, H.264+ with Galvanized Vandal Proof Cage with Anti Bird Spike				
	Supply	each	37		
	Install	each	37		
2.2	Digital Recorder 16Ch AcuSense NVR, 256Mbps, 4 SATA, alarm I/O:16/4, 1.5U with Surveillance HDD 9TB Serial ATA 600 (6Gbps) - 64MB Cache @ 5900rpm				
	Supply	each	1		
	Install	each	1		
2.3	Monitors 24/7 LED CCTV Monitoring Screen 55" Full HD 1920 x 1080 P with 26" to 60" Universal LCD / LED Panel Wall mount Bracket				
	Supply	each	2		
	Install	each	2		
2.4	Licensing and Software CCTV software including licensing, graphics and commission etc.	Sum	1		
2.5	Switches PoE Switch(1910-24-PoE+), 24*100/1000ports + 2 SFP dual-personality ports 1000Mbps ports, fixed (desktop/19" telco rack), Basic Layer3, POE, Web managed, Lifetime warranty				
	Supply	No	10		
	Install	No	10		
2.6	Cabling				
2.6.1	CAT6 Shielded Twisted Pair Cable (UV protected)	m	2500		
2.6.2	All consumables i.e CAT6 RJ45 Crimp Connector, CAT6 RJ45 Weather Boot etc.	Sum.	1		
2.7	Cabinets 19 unit Server Cabinet, international standard - Material: Cold-rolled steel - Surface finish: Digressing, pickling, phosphoric powder coated - Frame thickness: 2.0mm - Curved, perforated front door - Double-section back door - Double-section side panels for easy access and assembly - Ventilation rate of over 80% - Adjustable, closeable, top and bottom wiring channels - Vertical cable management at the back of the cabinet - Mounting rail with U mark - Standard with earthing kits - 1000Kg loading C44- Adjustable feet and heavy duty castors Dimensions: 600mm Wide x 2000mm High x 950mm Deep - INCLUDES BRUSH PANELS, 24 PORT PATCH PANELS, BLANKS AND TRAYS	No.	2		
2.8	Uninterrupted Power Supply 10KVA 6U ON-LINE SINE WAVE Rack mountable UPS - Black, SNMP Network Card WTU / GTU / GRU ON-LINE UPS, Modbus Card for WTU / GTU / GRU ON-LINE UPS, Rack Mount Kit for GRU Rack mountable UPS, including all wiring and consumable required	Sum.	1		
TOTAL SCHEDULE NO. 2 TO PRICE SUMMARY					

SECTION 11C CCTV INSTALLATIONS AT PE PROVINCIAL HOSPITAL

WORK PACKAGE 4

BILL NO 3 : SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TENDER AMOUNT
3.1	Testing of complete installation in terms of the regulations	Sum	1		
3.2	On site training	Sum	1		
3.3	As-built drawing	Sum	1		
3.4	Operating and Maintenance Manuals	Sum	1		
TOTAL SCHEDULE NO. 3 TO PRICE SUMMARY					

SECTION 11C CCTV INSTALLATIONS AT PE PROVINCIAL HOSPITAL

WORK PACKAGE 4

SUMMARY OF MAIN BILL

DESCRIPTION	TENDER AMOUNT
BILL NO. 1 : P&G'S	
BILL NO. 2 : CCTV	
BILL NO 3 : SUNDRY ITEMS	
SUBTOTAL (EXCL VAT)	
MAIN CONTRACTOR'S PROFIT AND ATTENDANCE	
TOTAL (EXCLUDING VAT) CARRIED OVER TO SECTION 11C ON FINAL SUMMARY ON PAGE 456	

C2.3 FINAL SUMMARY

**Upgrading of security related infrastructure
at Livingstone PEPH Hospital Complex
Provisional Bills of Quantities
CDC/377/25**

Section No	<u>FINAL SUMMARY</u>	Page No	Amount
1	SECTION 1 PRELIMINARIES AND GENERAL	63	
2	SECTION 2 WORK PACKAGE 1 - FENCING AT LIVINGSTONE HOSPITAL	146	
3	SECTION 3 WORK PACKAGE 2 STEEL STAIRCASE AT PROTEA FLATS	167	
4	SECTION 4 WORK PACKAGE 3 RENOVATIONS TO PROTEA FLATS	278	
5	SECTION 5 WORK PACKAGE 4 PEPH GATEHOUSES & BUCKINGHAM & ST CROIX STREET ENTRANCE	382	
6	SECTION 6 WORK PACKAGE 5 - REMAINDER OF FENCING AT PE PROVINCIAL HOSPITAL	437	
7	SECTION 7 PROVISIONAL SUMS	444	
8	SECTION 8 SMME DOMESTIC SUB-CONTRACTS	454	
	SUB TOTAL		R
	SECTION 9A - LIVINGSTONE HOSPITAL ELECTRICAL INSTALLATION - GUARDBOUSES - WORK PACKAGE 1	Item	
	SECTION 9B - LIVINGSTONE HOSPITAL - PERIMETER LIGHTING, SLEEVES & CONDUITS FOR CCTV INSTALLATION LIVINGSTONE HOSPITAL - WORK PACKAGE 1	Item	
	SECTION 9C - LIVINGSTONE HOSPITAL - CCTV INSTALLATION - WORK PACKAGE 1	Item	
	SECTION 10A - PROTEA FLATS - ELECTRICAL INSTALLATION - WORK PACKAGE 3	Item	
	SECTION 10B - PROTEA FLATS - PERIMETER LIGHTING, CONDUITS & SLEEVES FOR CCTV INSTALLATION - WORK PACKAGE 3	Item	
	Carried Forward		R
	Q532B		

Section No		Page No		Amount
	<u>FINAL SUMMARY</u>			
	Brought Forward		R	
	SECTION 10C - PROTEA FLATS - CCTV INSTALLATION - WORK PACKAGE 3	Item		
	SECTION 11A - PE PROVINCIAL HOSPITAL - ELECTRICAL INSTALLATION TO ENTRANCE AND EXIT GUARDBOUSES - WORK PACKAGE 4	Item		
	SECTION 11B - PE PROVINCIAL HOSPITAL - PERIMETER LIGHTING, CONDUITS AND SLEEVES FOR CCTV INSTALLATION - WORK PACKAGE 4	Item		
	SECTION 11C - PE PROVINCIAL HOSPITAL - CCTV INSTALLATION - WORK PACKAGE 4	Item		
	SUB TOTAL		R	
	<u>ALLOWANCE FOR CONTINGENCIES</u>			
	Allow the Amount of R3,000,000.00 (Three Million Rand) for Contingencies to be used at the discretion of the Employer, or to be deducted in whole or in part if not required	Item		3,000,000.00
	<u>ALLOWANCE FOR ESCALATION</u>			
	Allow the Amount of R4,750,000-00 (Four Million and Seven Hundred and Fifty Thousand Rand) for Escalation to be adjusted accordingly to contract conditions	Item		4,750,000.00
	SUB TOTAL (EXCLUDING VAT @ 15%)		R	
	VAT @ 15%		R	
	TOTAL CARRIED TO FORM OF OFFER AND ACCEPTANCE (INCLUDING VAT @ 15%)		R	
	Carried to Form of Offer and Acceptance		R	
	Q532B			

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

PART T2: RETURNABLE DOCUMENTS

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

SBD 4

BIDDER'S DISCLOSURE FORM

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 interest² 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

² 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.

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

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 consortium³ 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 ENHANCING COMPLIANCE, TRANSPARENCY AND ACCOUNTABILITY IN SUPPLY CHAIN MANAGEMENT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

³ 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.

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

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, BIDDERS 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**

- a) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender 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 Bidder 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 Bidder, 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;

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

- (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 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 Bidder will be allocated points based on the goals stated in table 1 below as may

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

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 80/20 or 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 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 and 80/20 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 the 90/10 preference point system is applicable, corresponding points must also be indicated as such.

Note to Bidders: The Bidder 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 Bidder)
BBBEE Level of Contributor		
1	10	
2	9	
3	6	
4	5	
5	4	
6	3	
7	2	
8	1	
Non-compliant contributor	0	

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

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

- 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 Bidder 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.

.....	
SIGNATURE(S) OF BIDDER(S)	
SURNAME AND NAME:	.....
DATE:	.....
ADDRESS:	.....

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

**C11: SUPPLIER PERFORMANCE EVALUATION FORM (TO BE
USED FOR EVALUATION OF DELIVERABLES OF SERVICE
PROVIDERS/CONTRACTORS)**

EVALUATORS/PROJECT MANAGERS NAME:		
SERVICE PROVIDER/CONTRACTOR BEING EVALUATED:		
CLIENT		
VALUE OF CONTRACT		
REVIEW PERIOD	FROM:	TO:
REVIEW DATE		

EVALUATION ITEM - GENERIC MEASURES	RATINGS 1-5 (SEE EXPLANATIONS BELOW) AND COMMENTS
<i>Quality-Service /product deliverable:</i> Demonstration to meeting and exceeding specifications/ deliverables by service provider/contractor	
<i>Cost-:</i> Ability to provide services and goods cost effectively in terms of value for money	
<i>Time:</i> Ability to deliver products/services within the specified time period (contract duration) or within the agreed turnaround periods.	
<i>Communication:</i> Timeous, effective and efficient exchange of information that is pertinent to the delivery of services/products	
<i>Skills and Competency Availability:</i> refers to the actual availability and competency of staff deployed to the service/project	
<i>Management:</i> Demonstration of sound and pro-active management practices that are geared towards the achievement of service/products required.	

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

EVALUATION ITEM – SPECIFIC MEASURES (CHOOSE AS APPROPRIATE)	RATINGS 1-5 (SEE EXPLANATIONS BELOW) AND COMMENTS IF ANY
<i>SHE Performance:</i> Compliance with all relevant and necessary CDC SHE policies and guidelines	
<i>SMME participation:</i> Involvement of SMME during project/service delivery as per the contract	
<i>Skills and Competency Development:</i> The ability of the contractor/Service provider to develop their resources through training and development to the benefit of the CDC.	
<i>Other (Proposal for additional measures).....</i>	
Overall Score (Average of all scores relevant)	
General comments:	

CDC RATING SCALE

RATING	EXPLANATION
5	Exceptional performance beyond all task/job requirements
4	Exceeds expectation of the task/job requirement
3	Consistently meets all task/job expectations and requirements
2	Falls below expected performance on some task/job requirements
1	Falls below expected performance overall

Evaluators name
and designation: _____

Signature: _____

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO.
CDC/377/25**

T2.1.1 FORM A: Schedule of Work Carried out by the Bidder.

The Bidder shall list below the projects of a similar nature and highest value awarded to him over the last 10 years.

Details of contactable references for each project listed must be included. At least three (3) traceable CLIENT references must be provided.

Contractors MUST attach appointment letter, completion certificates from previous employers or consultants that they have worked with. This information is essential to the award of the Contract.

EMPLOYER (Name, Tel No and Fax No)	LEAD CONSULTANT (Name, Tel No and Fax No)	NATURE OF WORK	VALUE OF WORK	YEAR OF COMPLETION

SIGNATURE: **DATE:**

(of person authorised to sign on behalf of the Bidder)

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO.
CDC/377/25

T2.1.1 FORM A (continue): Schedule of Current Contracts

The Bidder shall list below the current projects awarded to his company.

Traceable and contactable references for each project listed must be included.

Contractors MUST attach appointment letters. This information is essential to the award of the Contract.

EMPLOYER (Name, Tel No and Fax No)	LEAD CONSULTANT (Name, Tel No and Fax No)	NATURE OF WORK	VALUE OF WORK	EXPECTED COMPLETION DATE

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO.
CDC/377/25**

T2.1.2 FORM B: Proposed Key Personnel

The Bidder shall list below the key personnel (including first nominee and the second choice alternate), whom he proposes to employ on the contract should his offer be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities.

CV's of the critical staff members such as Contract Manager, Site Agent, Foreman and Health & Safety Officer (to meet requirements as stipulated under functionality)

LOCATION	DESIGNATION	NAME AND NATIONALITY OF: (i) NOMINEE (ii) ALTERNATE	SUMMARY OF QUALIFICATIONS, EXPERIENCE AND PRESENT OCCUPATION
	Contract Manager	i)	
		ii)	
SITE OFFICE	Site Agent	i)	
		ii)	

NOTE: The positions above will be assessed in the functionality stage of the tender evaluation. If information is not provided, points cannot be allocated.

SIGNATURE: **DATE:**.....

(of person authorised to sign on behalf of the Bidder)

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO.
CDC/377/25**

T2.1.3 FORM C: Schedule of Proposed Sub-Contractors

I/We hereby notify you that it is my/our intention to employ the following Sub-Contractors for work in this contract.

NAMES AND ADDRESSES OF PROPOSED SUB-CONTRACTORS	NATURE AND EXTENT OF WORK TO BE SUB-CONTRACTED	PREVIOUS EXPERIENCE WITH SUB-CONTRACTOR OR RECENT WORK EXECUTED BY THE SUB-CONTRACTOR	LOCAL BASED (Yes or No)	BEE Level (Indicate)

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO.
CDC/377/25**

NAMES AND ADDRESSES OF PROPOSED SUB-CONTRACTORS	NATURE AND EXTENT OF WORK TO BE SUB-CONTRACTED	PREVIOUS EXPERIENCE WITH SUB-CONTRACTOR OR RECENT WORK EXECUTED BY THE SUB-CONTRACTOR	LOCAL BASED (Yes or No)	BFF Level (Indicate)

SIGNATURE: **DATE:**

(of person authorised to sign on behalf of the Bidder)

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL
PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.4 FORM D: Particulars of Electrical Contractor

I/We hereby notify you that it is my/our intention to employ the following Electrical Contractor for work in this contract.

NAME AND ADDRESS OF PROPOSED ELECTRICAL CONTRACTOR	NATURE AND EXTENT OF WORK	PREVIOUS EXPERIENCE WITH ELECTRICAL CONTRACTOR OR RECENT WORK EXECUTED BY THE ELECTRICAL CONTRACTOR	LOCAL BASED (Yes or No)	BEE Level (Indicate)

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:.....

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL
PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.5 FORM E: Financial References

Financial Statements

I/We agree, if required, to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Employer.

Details of Company's Bank

I/We hereby authorise the Employer/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference:

DESCRIPTION OF BANK DETAIL	BANK DETAILS APPLICABLE TO BIDDER'S HEAD OFFICE
Name of Bank	
Branch Name	
Branch Code	
Street Address	
Postal Address	
Name of Manager	
Telephone Number	()
Fax Number	()
Account Number	

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:.....

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL
PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.7 FORM G: Details of Amendments and Qualifications

AMENDMENTS AND QUALIFICATIONS

I / We herewith propose the amendments and discounts as set out in the tables below:

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

[Notes: (1) Amendments to the Contract Data are not acceptable;

***(2) The Tenderer must give full details of all the financial implications of the
amendments and qualifications in a covering letter attached to his tender.]***

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

(b) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

[Note: The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the alternative offer will be prejudiced]

SIGNATURE: **DATE:**.....
(of person authorized to sign on behalf of the Tenderer)

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.8 FORM H: PROTECTION OF PERSONAL INFORMATION: CONSENT

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 Coega Development Corporation (CDC) 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 CDC from time to time. The CDC confirms that it shall process the information disclosed by Bidders for the purpose of evaluating and subsequently awarding/appointing a successful Bidder.

In order to comply with procurement principles, set out in Section 217 of the Constitution and national procurement legislative prescripts, the names of all entities that submitted a bid, the tendered price thereof and the subsequent award will be made public.

The CDC hereby states that it does not and will never modify, amend, or alter any personal information submitted to it by a Bidder. Unless directed to do so by an order of court, the CDC 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 will be seized with information of a personal nature pertaining to the CDC. 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 CDC 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 CDC 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 is 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

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

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 organisation.

3. Bidder's Obligations:

- a) The Bidder is required to notify the Information Officer of CDC in writing as soon as possible after it becomes aware of or suspects any loss, unauthorised access or unlawful use of any of the CDC'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 CDC 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 CDC.

On behalf of the Bidder:

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

On behalf of the Client:

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

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

T2.1 10 FORM K: CONTRACT PARTICIPATION GOAL: EME / QSE Target Form

The CIDB Standard for Indirect Targeting is incorporated into this Contract. A Contract Participation Goal (CPG) of 35% (by value, excluding contingencies, escalation, VAT, Socio-economic deliverables, and EPWP allowances (if applicable)) is stipulated in this contract.

The Bidder is to commit to targeted works that can be performed by EMEs/QSEs as subcontractors. The EME/ QSE targeted CPG must be calculated in relation to every entity involved in the project as defined in the CDC SMME Specification document. No Functionality Points will be scored for a commitment that is less than 35%.

The identification of SMME packages post-award will be done in conjunction with the CDC SMME Unit and the project team. The sourcing, procurement, appointment, mentoring, and graduating of SMMEs will be done in accordance with the CDC SMME Specification.

The overall percentage in the table below will be utilised for the allocation of points in the Functionality Assessment stage of Evaluation and will be monitored during construction for compliance. Penalties may be applied for achieving less than the stated CPG %.

Please refer to Tables A1 and A2 in the Functionality section of Volume 1 of the Tender documents for the Evaluation Indicators for scoring purposes.

CONTRACT NUMBER	:	CDC/377/25
CONTRACT DESCRIPTION	:	UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES
PROJECT MANAGER	:	
BIDDER/S NAME	:	

I/We tender the following targets of:

Exempted Micro Enterprises (EMEs) / SMMEs Participation		
Participation	% Goal Tendered	Estimated RAND Value (R)
SMME Packages committed	%	R
Overall % Contract Participation Goal	%	R

I/We commit to achieving the above-mentioned Contract Participation Goal and to respond promptly to points of clarification regarding my/our CPGs, failing which I/we understand that my/our Tender will be deemed non-responsive on the grounds of being incomplete and not meeting the mandatory requirements as stipulated in the Tender.

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

Penalty on non-compliance/not achieving the committed minimum target of 35% participation

“The Bidders must allow for all costs application that they may feel be associated with the successful integration, development of and completion of SMME Contractors’ work to the approval of the Principal Agent on this project. This includes all the costs associated with the provision of an SMME Participation as stipulated on the Form K at a minimum of 35% of construction costs excluding VAT, Contingencies and Escalation”. The employer shall be entitled without prejudice to its other remedies under the contract, deduct from the contract price, as penalty calculated on the following formula

35% of PV (in monetary value -%age AV (in monetary value) = PAV (in monetary value);
 where PV = Project Value,
 where AV= Achieved SMME Participation Value,
 where PAV = Penalty Accumulated Value

Penalty = Target @ 35%-% Achieved SMME Participation = Balance of the % not achieved (which would be the penalty for non-compliance)

Duly authorised to sign on behalf of: (name of Bidder)	:	

Name of Person signing	:	
------------------------	---	--

Signature	:	

Date	:	
------	---	--

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

T2.1 11 FORM K1: LOCAL SUPPLIER TARGETED EXPENDITURE FORM

In order for the Bidder to score Functionality points for criteria 5.0 - the Bidder is obliged to commit to a percentage expenditure, including VAT, that will be spent in the defined targeted areas – see section below Table A2 in the functionality section contained in Volume 1 of the Tender Documents.

The overall percentage in the table below will be utilised for allocation of points in the Functionality Assessment stage of Evaluation and will be monitored during construction for compliance. Penalties may be applied for achieving less than the stated %.

The expenditure may be in respect of materials, plant hire, fuel, skilled and un-skilled labour and sub-contractors and must be proven expenditure that is directly attributable to the contract. The value claimed under this Target may not be duplicated with the Contract Participation Goal (Form K2).

The percentage expenditure shall be calculated on the Tendered Sum (including VAT), but excluding contingencies, socio-economic deliverables and EPWP allowance (if applicable). Penalties may be applied for achieving less than the stated expenditure. Compliance during construction will be based on the percentage tendered, and not on the rand value.

CONTRACT NUMBER : **CDC/377/25**

CONTRACT DESCRIPTION : **UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

PROJECT MANAGER :

BIDDER/S NAME :

I/We tender the following targets of expenditure on “Local suppliers”:

LOCAL SUPPLIER EXPENDITURE TARGETS		
AREA	% of the project value Tendered	Estimated RAND Value (R)
Area 1	%	R
Area 1 and 2	%	R
Area 1, 2 and 3	%	R
Area 1,2,3 and 4	%	R

I/We commit to achieving the above-mentioned Local Area- based expenditure and to respond promptly to points of clarification regarding my/our targets, failing which I/we understand that my/our Tender will

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

be deemed non-responsive on the grounds of being incomplete and not meeting the mandatory requirements as stipulated in the Tender.

Duly authorised to sign on behalf of: (name of Bidder)	:	

Name of Person signing	:	
------------------------	---	--

Signature	:	
-----------	---	--

Date	:	
------	---	--

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.12 FORM L: Record of Addenda to Tender Documents

We confirm that the following communications received from the Principal Agent before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1		
2		
3		
4		
5		

Attach additional pages if more space is required.

Signed:

Date:

Name:

Position:

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.13 FORM M: Proposed Construction Work Programme and Methodology

Bidders must provide an approach paper (Methodology and Technical approach) detailing the execution of the project which is consistent with the construction programme.

The Methodology is to make reference to the scope of works and SHEQ issues, and must also include contingency planning and management. The key risk factors affecting the project should be described with possible mitigation action.

Refer to Functionality Criteria and Weighting (Book 1, Annex E).

Proposed Construction Work programme and Methodology attached hereto.

(Please Tick)

YES		NO	
------------	--	-----------	--

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

T2.1.14 FORM N: BBBEE Validation, CIDB Certificates and CSD Registration document

1. The Bidder shall attach to this page a valid and Tax Compliance Status (PIN)

Original and Valid Certificate attached :

(Please Tick)

YES		NO	
-----	--	----	--

2. The Bidder shall attach to this page a certified copy of the BBBEE Validation Certificate issued by an accredited Verification Agency and/or financial statement in case of an EME/SMME.

In a case of Joint Ventures (JV) each JV partner must submit their BBBEE Validation Certificate.

Certified copy attached:

(Please Tick)

YES		NO	
-----	--	----	--

1. The Bidder shall attach to this page a copy of their CIDB Registration Certificate

In a case of Joint Ventures (JV) each JV partner must submit their CIDB Registration Certificate.

Certified Copy attached:

(Please Tick)

YES		NO	
-----	--	----	--

2. The Bidder shall attach to this page a copy of their CSD Registration Certificate

In a case of Joint Ventures (JV) each JV partner must submit their CSD Registration Certificate.

Printout attached:

(Please Tick)

YES		NO	
-----	--	----	--

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:.....

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

T 2.1.15 FORM O: Preliminary Programme

The Bidder shall attach hereto the anticipated construction sequence of the main work activities.

The program shall clearly indicate the lead times for materials ordering and delivery and any other key dates also showing the critical path activities.

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25**

T2.1.16 FORM P: Quality Control System and Procedures

The Bidders are to provide documentation indicating the availability of a quality management system or quality management plan that will be utilized for this project.

The Bidders must demonstrate that the system is functional and is being utilized by the Bidder, and that on this project it will adequately fulfill the required quality assurance standards.

Refer to Functionality Criteria and Weighting (Book 1, Annex E).

Quality control documentation attached hereto -

(Please Tick)

YES		NO	
------------	--	-----------	--

SIGNATURE:
(of person authorised to sign on behalf of the Bidder)

DATE:

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

T2.1.17 FORM Q: Safety Health and Environment

FORM Q: DEVELOPED FROM PROJECT SAFETY, HEALTH AND ENVIRONMENTAL SPECIFICATIONS

This form shall be amongst the returnable documents, and the Contractor will be required to submit the SHE File upon acceptance of appointment with the information listed on the table below but not limited to:

OHSSS Item No.	OHSSS Requirement	OHSA Requirement	Submission Date
2.3.1	<ul style="list-style-type: none"> Application for construction work permit submitted to the Provincial Department of Employment and Labour (DoEL) by the Client – CR 3 in the form of Annexure 1 or Notification of construction work submitted to the nearest Department of Employment and Labour Centre (DoELC) by the Principal Contractor – CR 4 in the form of Annexure 2 	A copy of completed Annexure 1 with signed construction work permit certificate from DoEL	Before commencement of construction work
2.3.2	Assignment of Construction Manager and Supervisor (CM & CS) for management and supervision of construction work, fulltime basis on site – CR 8(1) and CR 8(7)	Signed appointment and acceptance letter, profile, and copies of (ID, qualifications, short courses attended) registration with SACPCMP (where applicable)	
2.3.3	Assignment of Construction Health and Safety Officer or Manager (CHSO/M) to manage, assist in the control of all SHE related aspects on site – CR 8(5)	Signed appointment and acceptance letter, profile, copies of (ID, qualifications, short courses attended) registered with SACPCMP	
2.3.4	Construction work site Organogram	Designation and Names of Persons appointed to relevant Sections and Regulations of the Acts	
2.3.5	Assignment of Competent responsible persons as per project scope of work aligned with site organogram	Signed appointment and acceptance letter for relevant Sections and Regulations of relevant Legislations. Proof of competent certificates	
2.3.6	Registration with Compensation Fund or approved License Insurer in terms of Occupational Injuries and Diseases Act, Act (130 of 1993), CR 5(1)(j)	Valid proof of letter of good standing. (Sole or J/V entity)	
2.3.7	Prepared SHE Policies – Section 7	Signed SHE policies as per Tender SHE Specifications	

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

2.3.8	Prepared Baseline Risk Assessment (BRA) – Hazard Identification and Risk Assessment – CR 9(1)	Signed BRA specific to the project scope of work
2.3.9	Prepared Safety, Health and Environmental Plans (where applicable) – <ul style="list-style-type: none"> • Health and Safety Plan • Environmental Management Plan • Fall Protection Plan • Temporary Works plan • Demolition Plan • Emergency Preparedness and Response Plan • Training Plan 	Signed HSP specific to the Tender SHE Specifications
2.3.10	Documents, Training, Records and Registers – CR 7(1)(b)	Prepared registers, documents and records as per Tender SHE Specifications
2.3.11	Medical examinations of all employees specific to the work to be performed – pre, periodic and exits - CR 7(1)(g)	Proof of valid medical certificates issued by Occupational Health Practitioner with completed Annexure 3 and copies of employees' ID
2.3.12	Mandatory agreement entered between two parties - Section 37.2	Signed copy of mandatory agreement by the Client and Principal Contractor
2.3.13	Prepared Health and Safety Site Specifications (HSSS) by the Client - CR 5(1)(b)	Signed copy of HSSS Specifications
2.3.14	Prepared Baseline Risk Assessment (BRA) by the Client - CR 5(1)(a)	Signed copy of BRA specific to the project scope of work
2.3.15	Drawing Designs	Approved drawing designs by the Authorities
2.3.16	Appointment letters CR5(1)(k)	Signed appointment letters by Client and Principal Contractor
2.3.17	Project Environmental Specification (PES) by the Client	Signed copy of PES Specifications
2.3.18	SHE Bill of Quantities	Completed adequate provisions of SHE BoQ
2.3.19	Prepared Environmental Method Statements as per project scope of work	Approved Method Statements as per SHE Specifications
2.3.20	Prepared Safe Working Procedures as per project scope of work activities	Approved Safe Working Procedures as per SHE Specifications

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND
ASSOCIATED REFERRAL PHC FACILITIES - CONTRACT NO. CDC/377/25

“NB” The above required documents shall be compliant to the Occupational Health and Safety Act and Regulations (OHSA), Act (85 of 1993), National Environmental Management Act, Act (107 of 1998) and (Disaster Management Act, Act (57 of 2002) with relevant legislations.

Abbreviations:

SHE: Safety, Health and Environment

CR: Construction Regulations 2014

OHSA: Occupational Health and Safety Act and Regulations (OHSA), Act (85 of 1993)

OHSSS: Occupational Health and Safety Site Specification

Acknowledgement:

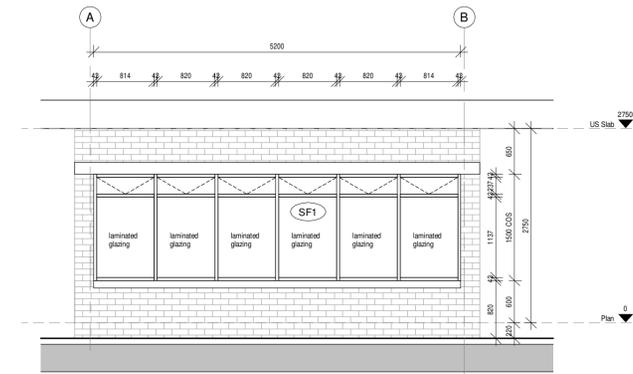
I, _____ representing _____ Principal Contractor have satisfied myself with the content of the OHSSS and shall ensure that the Contractors accountable under my administration will comply with all relevant obligations in respect thereof. I furthermore have fully included in my tendered rates or pricing (Bills of Quantities) for all resources and any other costs required for the interest of the OHSA fulfillment throughout the duration of the construction work and defects liability period.

Signature of Contractor

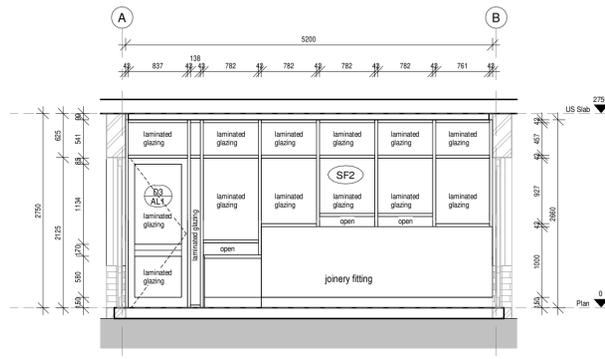
Date

LIVINGSTONE HOSPITAL

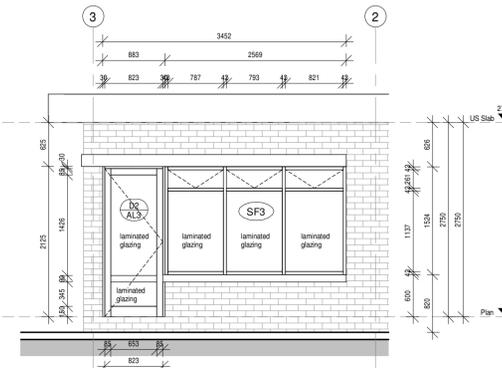
**DRAWINGS REFERENCED IN
BILLS OF QUANTITIES**



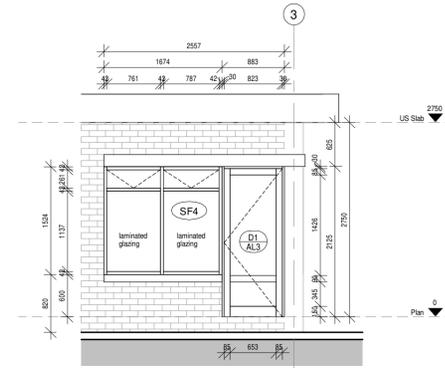
5 SF1 Window
1 : 50



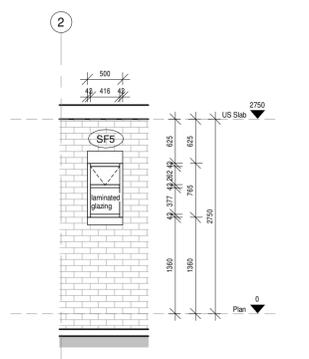
3 SF2 Reception shopfront & D3 Door
1 : 50



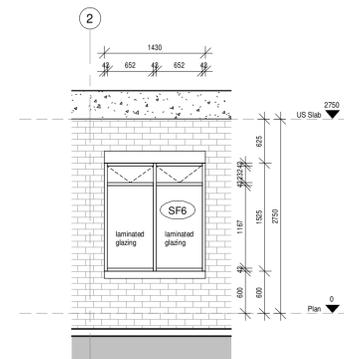
1 SF3 Window & D2 Door
1 : 50



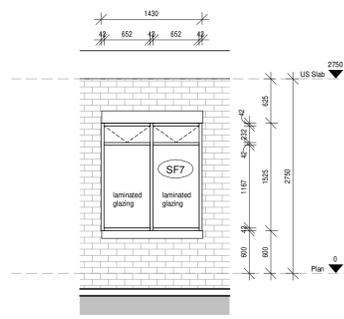
9 SF4 Window and D1 Door
1 : 50



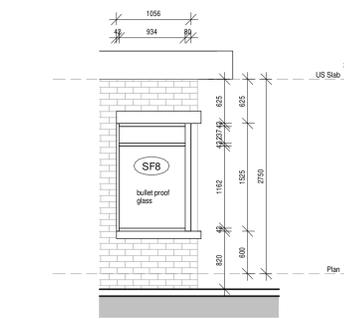
8 SF5 Window
1 : 50



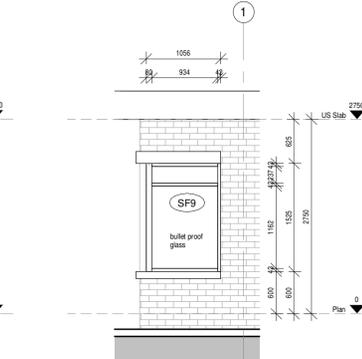
2 SF6 Window
1 : 50



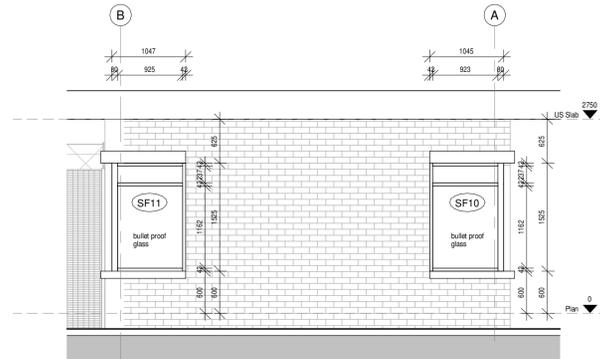
7 SF7 Window
1 : 50



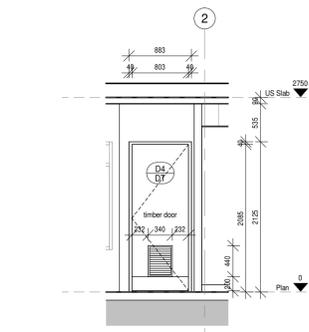
4 SF8 Window
1 : 50



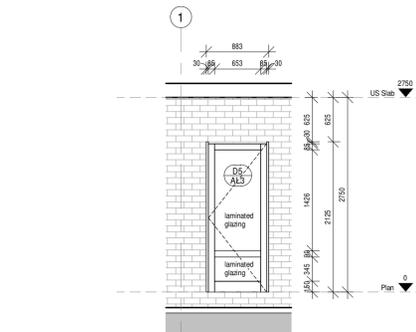
10 SF9 Window
1 : 50



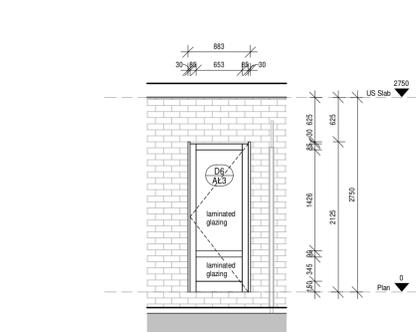
6 SF10 & SF11 Window
1 : 50



13 D4 Door
1 : 50



12 D5 Door
1 : 50



11 D6 Door
1 : 50

Window Schedule

Mark	Frame and mullion description	Windows and operable sections	Glazing type	Ironmongery
SF1	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF2	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	No operable sections, allow for the 3 x pigeon holes above the joinery fitting	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF3	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF4	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF5	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF6	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF7	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF8	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections, allow for the 3 x pigeon holes above the joinery fitting	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery
SF9	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery
SF10	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery
SF11	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery

Window Schedule

Mark	Door	Frame Type	Finish	Ironmongery	Count
AL1	40mm HBS aluminum door system to fit into 42mm x 80mm transom and top rail (white powdercoated)	80mm mullions and 42mm x 80mm transoms aluminum frame sections form the door frame (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification	1
AL3	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	80mm mullions and 42mm x 80mm transoms aluminum frame sections form the door frame (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification	4
DT	40mm thick solid core door with 10mm hardwood edging to stiles	42mm thick x 86mm wide standard hardwood frame	Prepped, primer painted prior to final coats painted (sand in between coats)	As per ironmongery specification	1

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date

DEPARTMENT OF HEALTH & CDC
PROJECT: UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES
CONTRACT No. CDC/377/25

TITLE: Window & Door Schedules

Scale: 1 : 50

Date: 2025-09-22

Drawn by: PV

Designer: PV

Professional Architect: BB

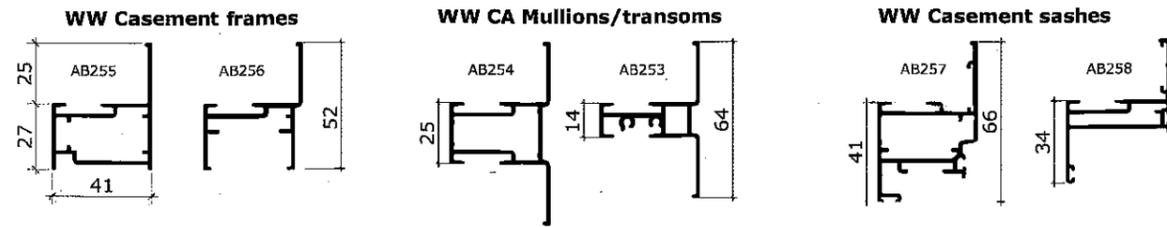
Checked by: BB

DWG No: 314-013_ARC-005

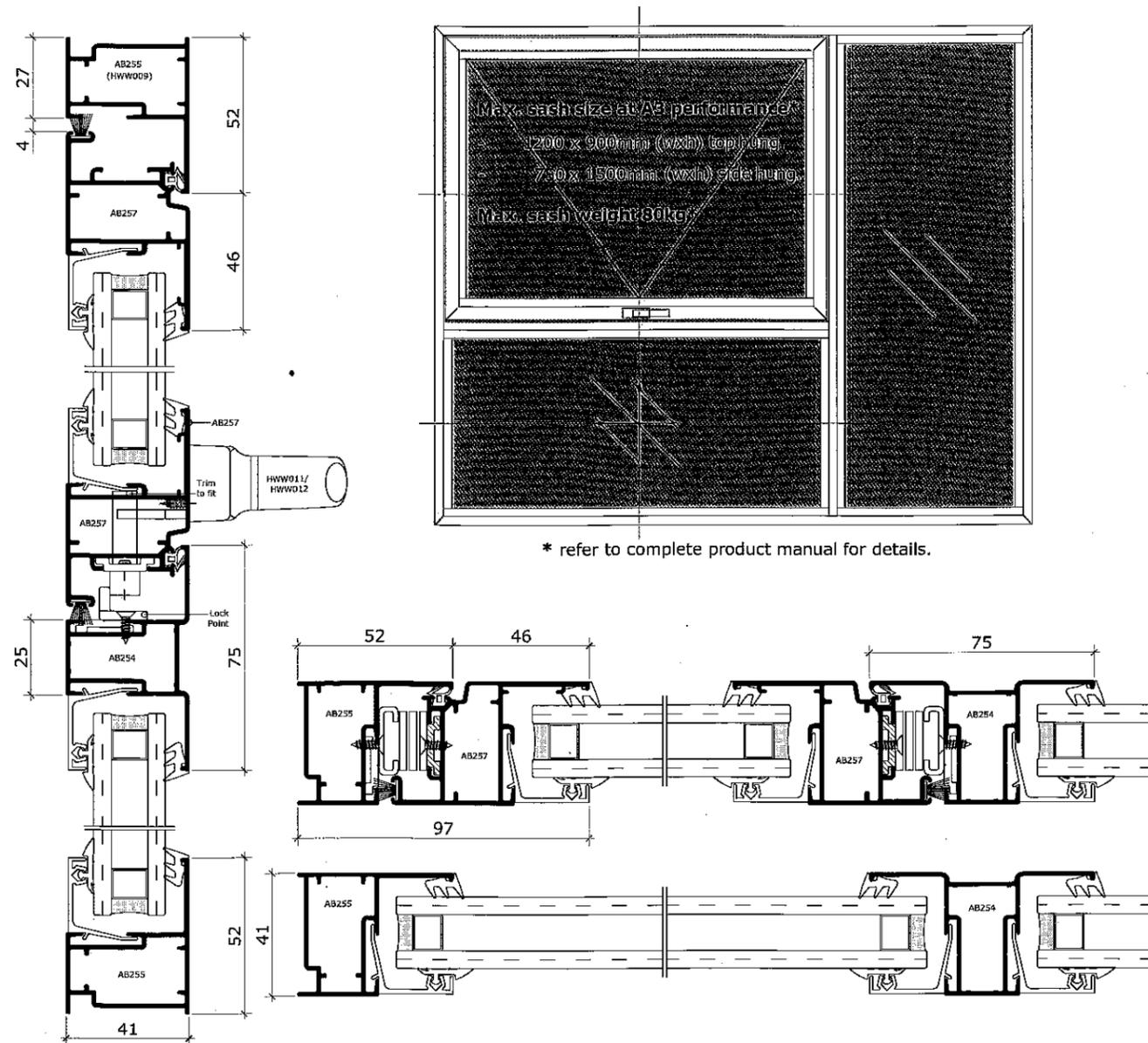
FOR TENDER ONLY

INTRODUCING CASEMENT DOUBLE GLAZING

On the basis of 6 new profiles and 5 additional hardware items HBS is pleased to introduce an economical and efficient A3 high-performance casement window system for double glazing up to 28mm.



For efficiency Window Wall casement utilizes glazing beads from the larger Window Wall system. The in-line sash (AB257) is designed for WW casement but also fits the larger Window Wall external Shopfront, WW Galaxy Slider, WW Vistafold and WW Foldaway. Same applies to casement mullions (AB254). Product U-values below 3 are obtainable with double glazing.

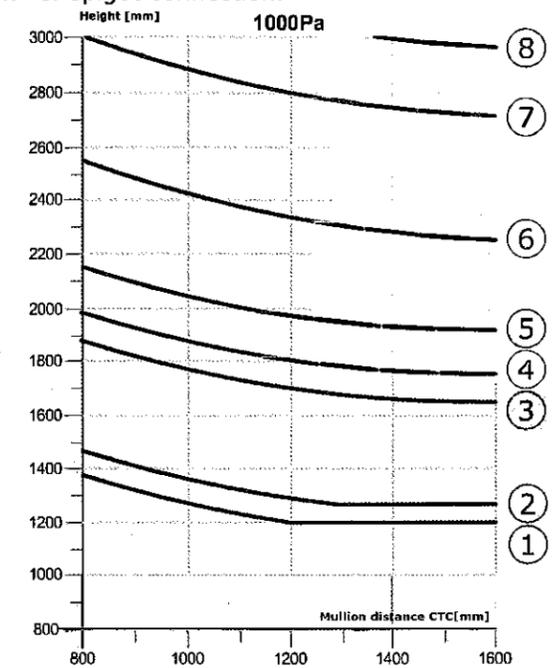
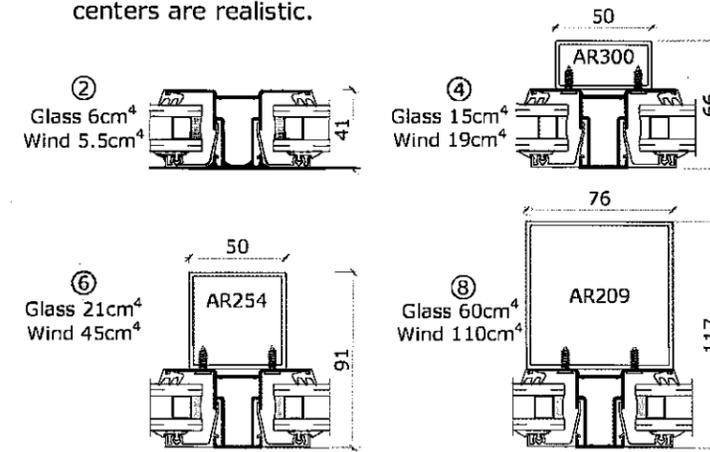
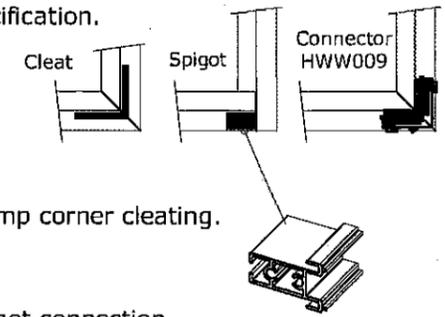


* refer to complete product manual for details.

FABRICATION

Window Wall casement can be made using conventional crimp corner cleats or pneumatic punch corner connectors depending on profile choice & specification.

- Outer frame (AB256) can be miter cut 45deg with cleats or square-cut 90deg with spigots. AB255 uses HWW009 mechanical connector.
- Sashes are miter cut for pneumatic punching or conventional crimp corner cleating. Gaskets are either push-in type, bubble seals or finpile.
- Mullion / transom profiles are end-milled for either screw- or spigot connection.
- Re-inforcement of mullion and/or transoms is provided. At 1000Pa products to 2700mm height at 1200mm centers are realistic.



ESTIMATING - QUICK QUOTE -

WW casement is fully integrated in Quick Quote versions higher than 3800. Material lists, costing and CAD drawing integration is ready for use in Quick Quote.

HBS
ALUMINIUM SYSTEMS

Cutting List

HBS
ALUMINIUM SYSTEMS

Project no. : 11
Project name : Window Wall Casement
Client name : World Center Johannesburg

Date: 21/01/2019

HBS Nuklip Window Wall - Casement

Image	Code	Description	Dimension
-------	------	-------------	-----------

WW Frame for Connector			
[Image]	AB255	w	1800
		H	1200
WW CA Sash for Connector			
[Image]	AB257	w	1152
		H	702
WW CA Mullion			
[Image]	AB254	w	1161
		H	1146

HBS
ALUMINIUM SYSTEMS

Quotation

HBS
ALUMINIUM SYSTEMS

Project no. : 11
Project name : Window Wall Casement
Client name : World Center Johannesburg

Date: 21/01/2019

Type	Width	Height	m²	Unit price ZAR	No of	Subtotal ZAR
1 [Image]	1800	1200	2.16	1,526.34	1	1,526.34
Description: Fix Alu. Color Code: White						



- for the Architect

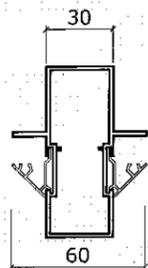
SLIM-LINE AESTHETICS

- 30% slimmer than typical Shop Front systems.
- 42mm profile width glass-to-glass (60mm typ.)
- 12mm mullion line internally (30mm typ.)
- Clean, facade-style appearance.
- Maximum light and vision.

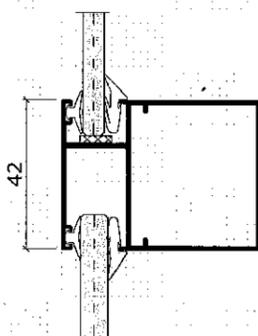
Typical Tenacity Mullion



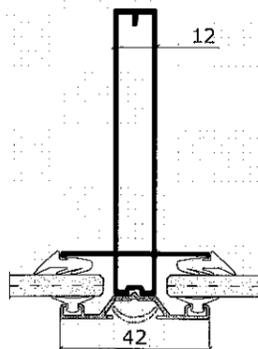
Typical Shop Front Mullion



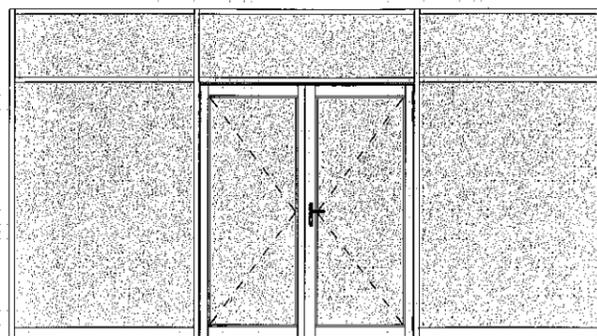
Tenacity Transom



Tenacity mullion



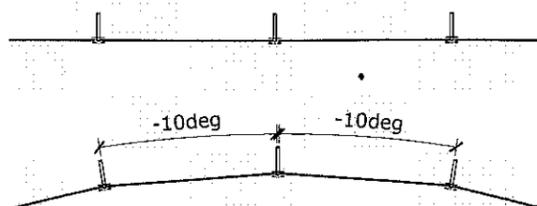
FRAME INSERTS - DOORS & WINDOWS



Inside or outside opening doors

FRAME CONSTRUCTION OPTIONS

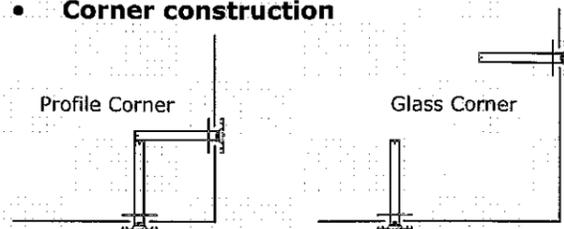
Flat screens



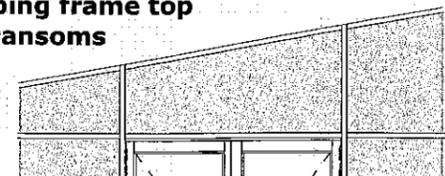
Curved, segmented screens (Max +/-10deg per mullion)



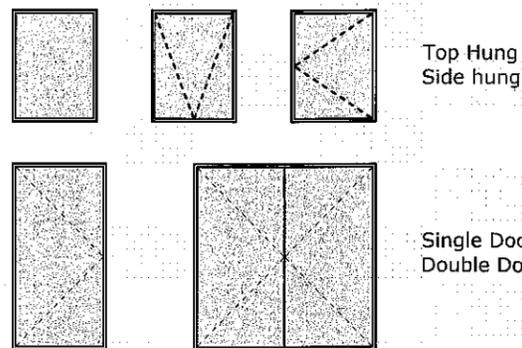
Corner construction



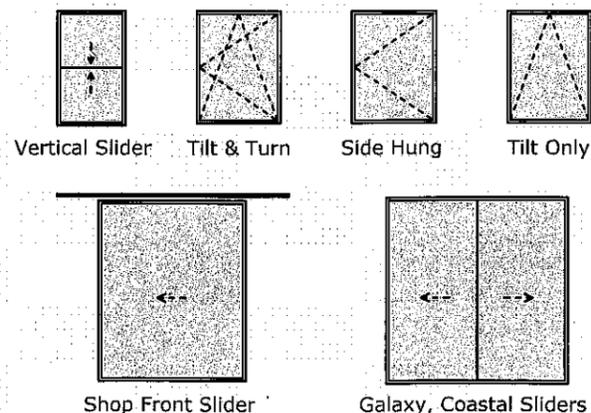
Sloping frame top & transoms



Sash & door inserts - with Rebate



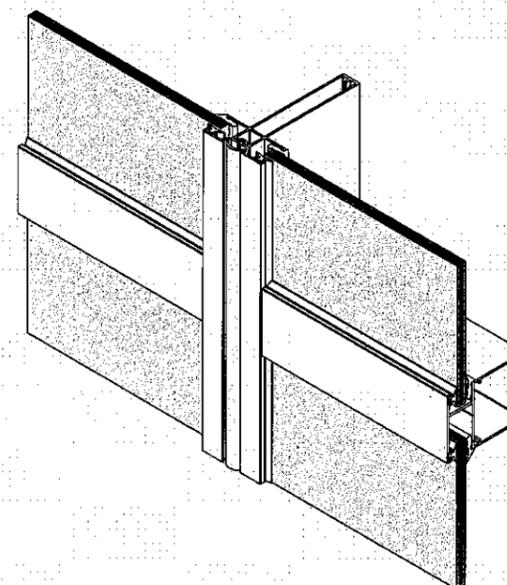
Product inserts - no Rebate



- for the Fabricator

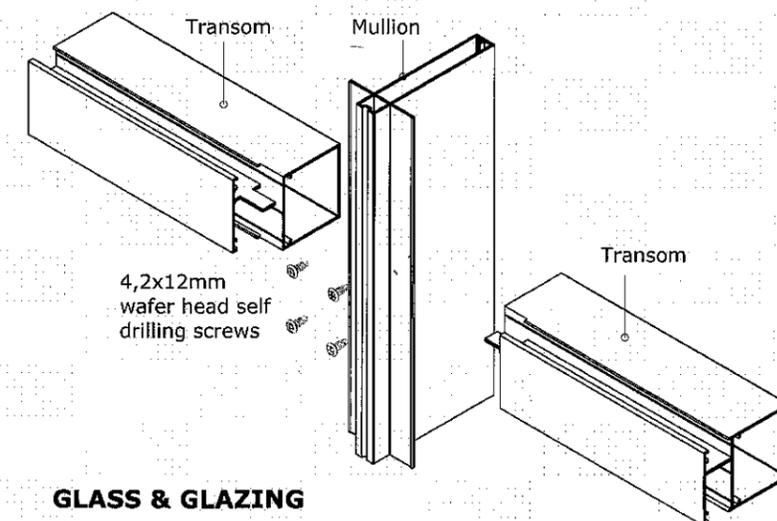
CLEAR BENEFITS

- Up to 30% cheaper than typical shopfronts.
- 40% faster assembly of fixed screens.
- 50 to 85% fewer beads yields faster cutting & glazing.
- High product performance due to simple construction.
- Simple mullion re-enforcement designed in.
- Inside and outside opening doors. (hinged & otherwise)
- Head & Sill compensation and concealed fixing available.

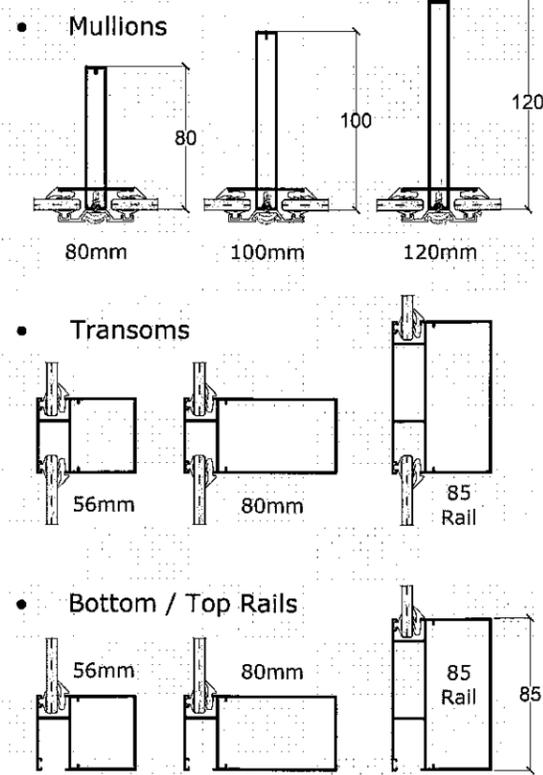


SPIGOT-LESS FABRICATION

- End milled transoms are joined directly to mullion with self-drilling screws.
- No pre-drilling required, just direct fixing.
- Easily sealed transom to mullion joints.
- Direct fix mullion pressure plate.



PROFILES

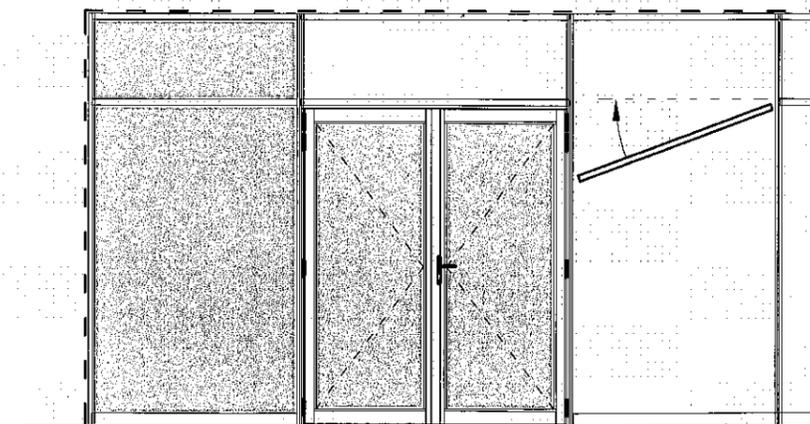


GLASS & GLAZING

- 6,0 to 9mm thickness glass.
- Non-vision panels up to 12mm can be glazed in. (MgO, plaster board etc)

ASSEMBLY

- Build ladder frames as required.
- Transoms are rotated into position, fixed & sealed.
- Insert glass, mount pressure plates, run gaskets.



PE PROVINCIAL HOSPITAL

DRAWINGS REFERENCED IN
BILLS OF QUANTITIES

Department of Health & CDC

305-026 : Upgrading of security related infrastructure at Livingstone
PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

Joinery

b4 Architects cc

Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070

Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :	No.	Description	Date
	1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 01

Scale 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

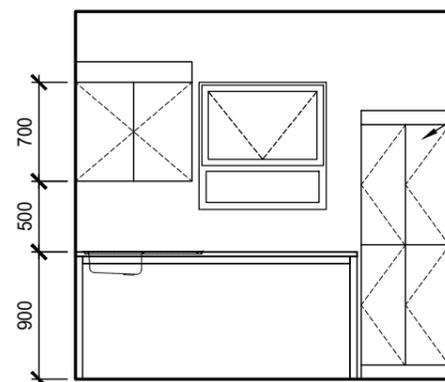
Professional Architect: BB

Checked by: BB

DWG No: 305-026 JP-01

FOR TENDER

REV

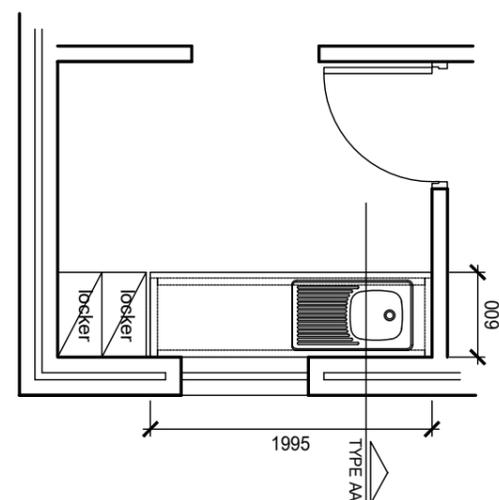


Locker 5P- slanted Industrial locker manufactured from 1.2mm-2.0mm steel from "METMEISTER" or similar approved

Lockers with split full-height cubicles are rigid and made from 1.2mm and 2mm heavy duty quality steel, epoxy coated in blue & grey texture, with 4 compartments and shelf. Each compartment fitted with 3 point lever lock. Locker mounted onto a 50mm plinth epoxy powder coated in RAL 9011 black

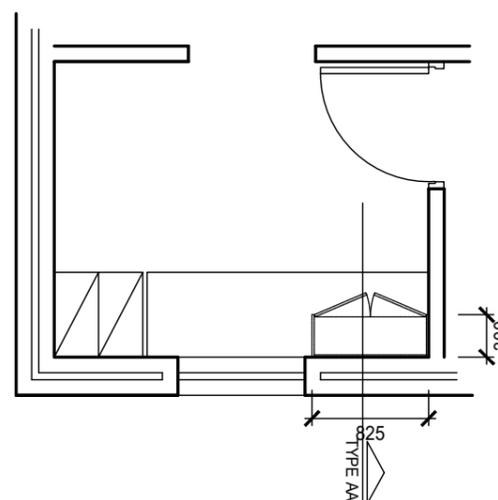
ELEVATION A

SCALE 1:50



PLAN (LOWER LEVEL)

SCALE 1:50



PLAN (UPPER LEVEL)

SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to sink units to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel fingerrip flat handels in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23-09-2025

REVISIONS :

PROJECT:

TITLE:

Scale

Date:

Drawn by:

Designer:

Professional Architect:

Checked by:

DWG No:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

1 : 20

23 September 2025

ET

ET

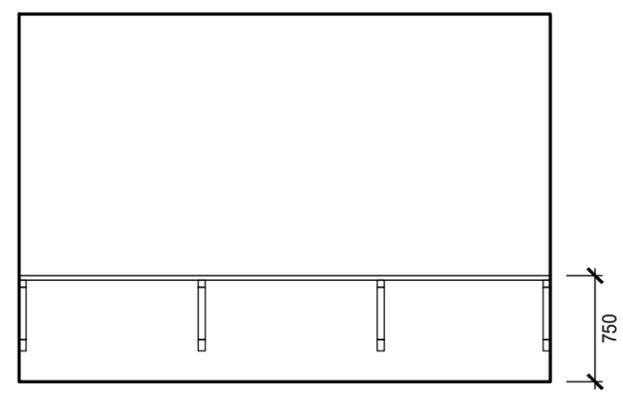
BB

BB

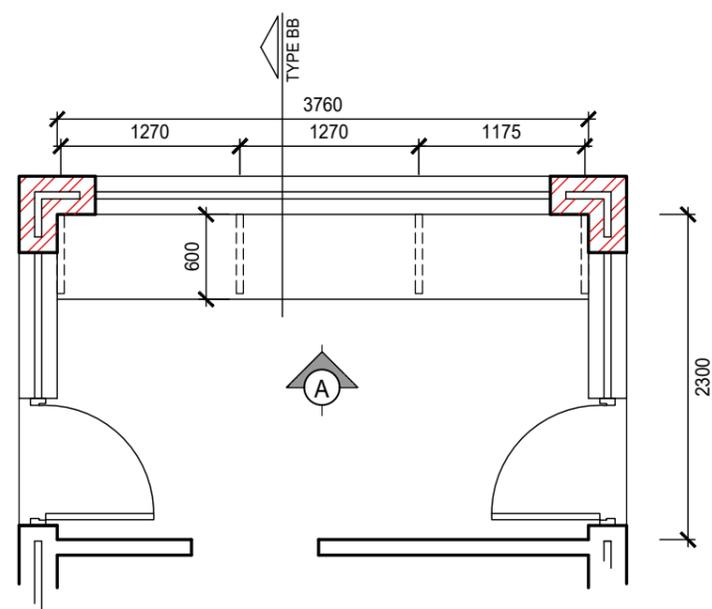
305-026 JP-02

FOR TENDER

REV



ELEVATION A
SCALE 1:50



PLAN SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to sink units to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel finger grip flat handles in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :	No.	Description	Date
	1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 03

Scale: 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

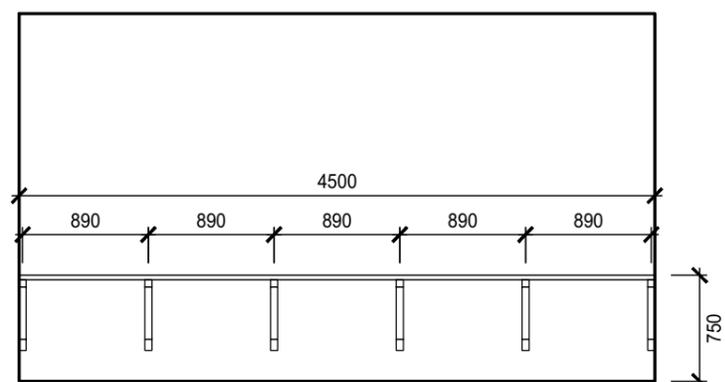
Professional Architect: BB

Checked by: BB

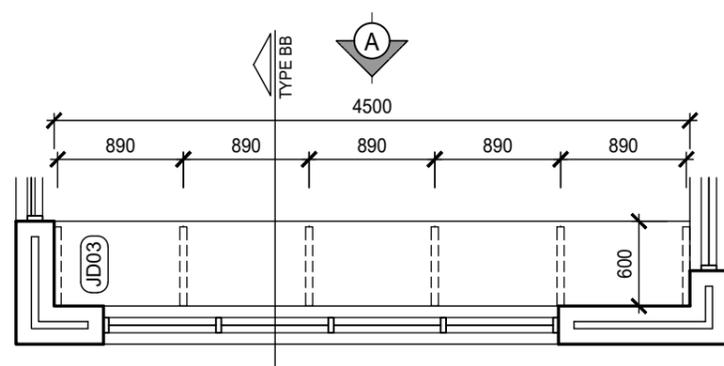
DWG No: 305-026 JP-03

FOR TENDER

REV



ELEVATION A
SCALE 1:50



PLAN SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel fingergrip flat handels in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 04

Scale: 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

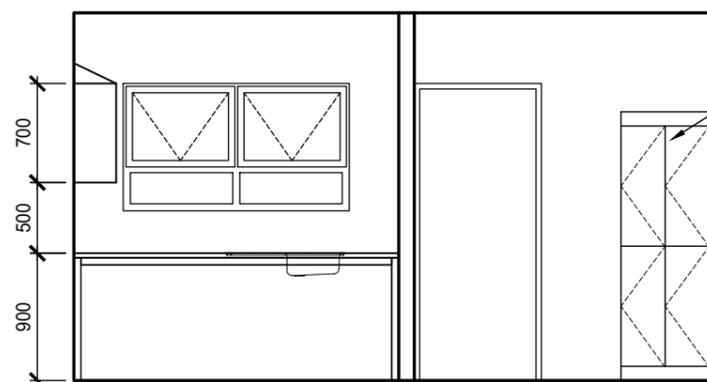
Professional Architect: BB

Checked by: BB

DWG No: 305-026 JP-04

FOR TENDER

REV

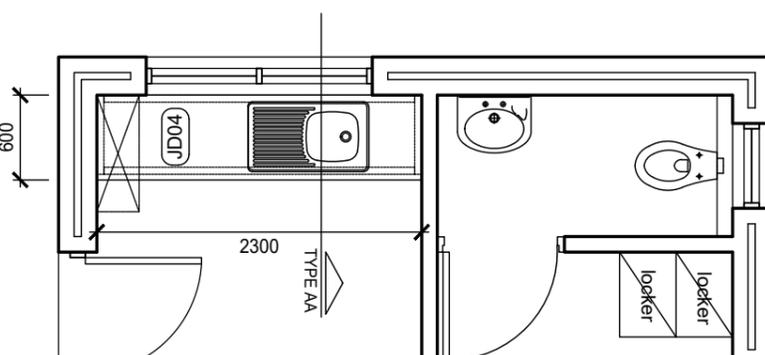


Locker 5P- slanted Industrial locker manufactured from 1.2mm-2.0mm steel from "METMEISTER" or similar approved

Lockers with split full-height cubicles are rigid and made from 1.2mm and 2mm heavy duty quality steel, epoxy coated in blue & grey texture, with 4 compartments and shelf. Each compartment fitted with 3 point lever lock. Locker mounted onto a 50mm plinth epoxy powder coated in RAL 9011 black

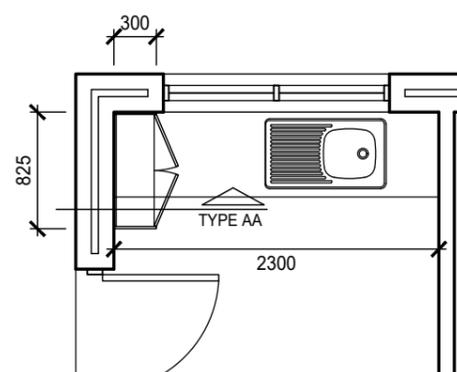
ELEVATION A

SCALE 1:50



PLAN (LOWER LEVEL)

SCALE 1:50



PLAN (UPPER LEVEL)

SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

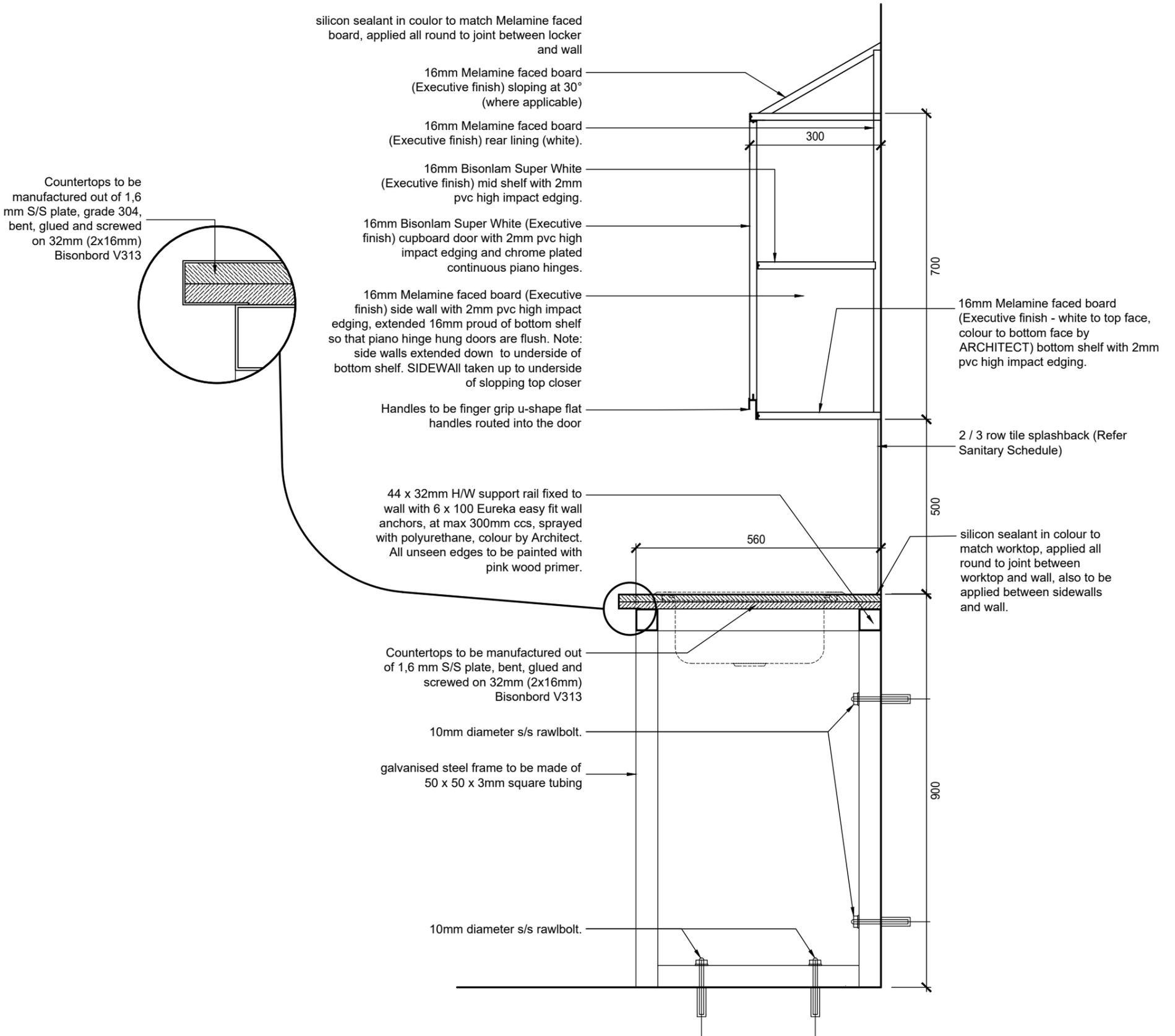
note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to sink units to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel finger grip flat handles in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

TYPE AA

GENERAL NOTES:

- All exposed edges to joinery units (including drawers, doors, etc.) to be finished using 2mm PVC high impact edging in colour matching board face.
- All doors and draws to be finished with Raiel Fingergrasp Flat Handles (code: RAH841) in Natural Anodised Aluminium finish. Handle to extend full length of door/drawer top, with ends deburred and neatened to a smooth finish. sample to be approved by architect.
- All hinges to be heavy duty chrome plated continuous piano hinges.
- All runners and sliders to be full extension ball bearing slides.
- All doors and drawers to be fitted with locks.
- All joints between walls, basins, sinks and joinery sealed with Sikaflex -11 FC+ (colour: White).
- All shelves to be supported on 3 sides.



SECTION SCALE 1:10

Province of the
EASTERN CAPE
HEALTH

b4 Architects cc
Resuscitating Healthcare Design

SAKHIWO bigen HDG HYP Quantity Surveyors

COPYRIGHT NOTICE

Copyright © 2023 (B4 Architects.) Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23 September 2025

PROJECT:
TITLE:

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Joinery Detail
Type A-A

Sakhiwo Ref No:

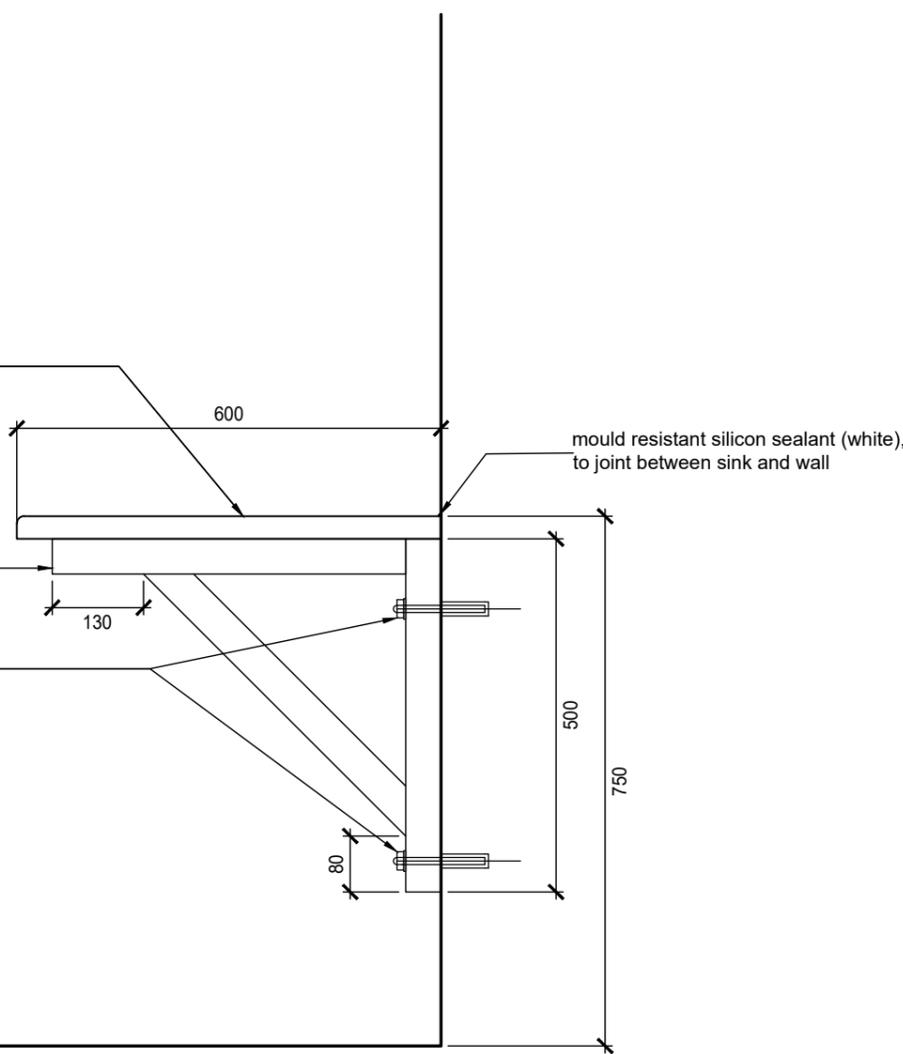
Scale	1 : 10
Date:	23 September 2025
Drawn by:	ET
Checked by:	BB
B4 Ref No.:	Architect Dwg No:
305-026	JD- 001
FOR TENDER	
REV	1

TYPE BB

600 x 32mm Life seal FORMICA finished post formed worktop with 90° bullnose edging. All cuts and rear edges to be painted with pink wood primer. Worktop screwed and fixed to support rails from below

mild steel bracket to be made of 50 x 50 x 3mm square tubing, painted (colour white)

10mm diameter s/s rawlbolt.



SECTION

SCALE 1:10



b4 Architects cc
Resuscitating Healthcare Design

COPYRIGHT NOTICE
Copyright © 2023 (B4 Architects.) Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23 September 2025

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Joinery Detail Type B-B

Sakhiwo Ref No:

Scale 1 : 10
Date: 23 September 2025

Drawn by: ET
Checked by: BB

B4 Ref No.: Architect Dwg No:
305-026

FOR TENDER

REV 1

Department of Health & CDC

305-026 : Upgrading of security related
infrastructure at Livingstone PEPH Hospital
Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

Door Schedule

b4 Architects cc

Resuscitating Healthcare Design

Port Elizabeth

PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070

Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban

1 Tamarine Close, Sunningdale, Umhlanga, 4139

Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

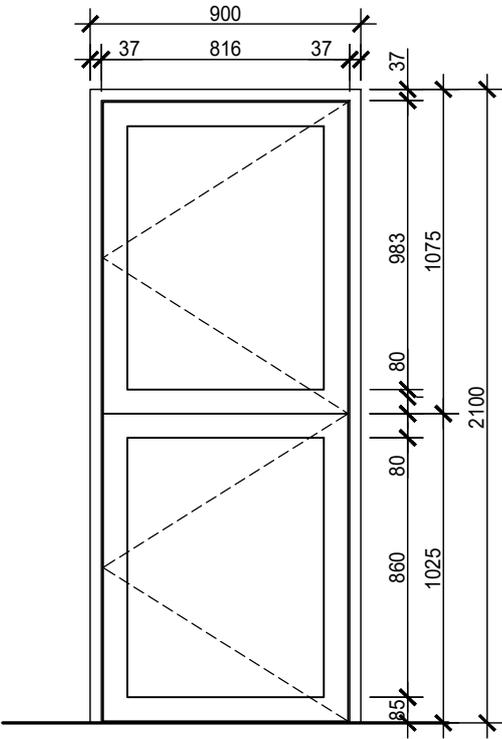


DOOR TYPE A

FRAME:
Aluminium frame, white powder coated.
Clip44 system

DOOR:
Aluminium framed stable door to fit in opening
2100 x 900mm - white powder coated

IRONMONGERY:
As per ironmongery schedule.



QUANTITY	DOOR NUMBERS
1	D01
GLAZING	6.4mm Laminated safety glass as glazing with spacer and deciccant

Province of the EASTERN CAPE HEALTH

b4 Architects cc
Resuscitating Healthcare Design

SAKHIWO SALES SOLUTIONS | HDG | NEMA SA

COPYRIGHT NOTICE
Copyright © 2023. B4 Architects | Copyright exists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the perpetrator liable for civil law copyright infringement and may in certain circumstances render the perpetrator liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, and drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS	No.	Description	Date
1	1	Issued for Tender	23-09-2025

NOTE: DETAILS ARE AS FOR TYPICAL DOOR ILLUSTRATED

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

Scale: 1 : 10
Date: 23 September 2025
Drawn by: ET
Checked by: BB

B4 Ref No.: Architect Dwg No:
305-026 DS- 001

Door Type A

Sakhiwo Ref No:

FOR TENDER ONLY REV 1

DOOR TYPE B

FRAME:

Timber frame.

DOOR:

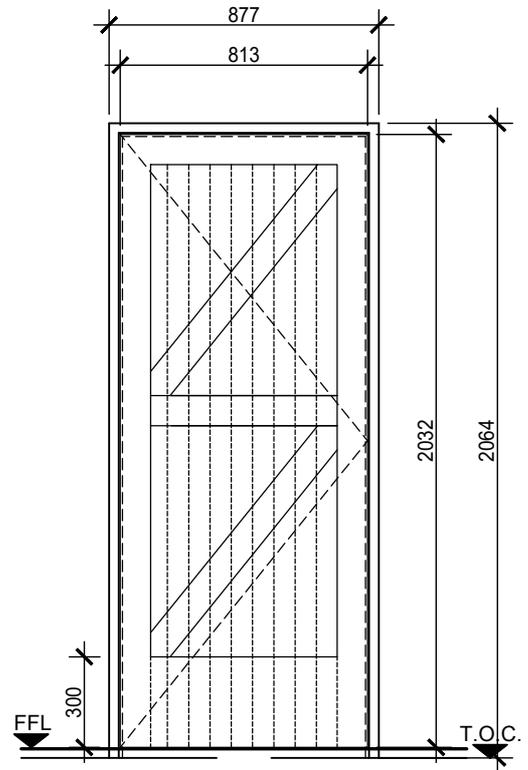
44mm thick Hardwood framed, ledged, braced and battened door.

Weatherboard on outside.

Plywood flush panel to inside.

IRONMONGERY:

As per ironmongery schedule.



QUANTITY	DOOR NUMBERS
1	D02

NOTE: DETAILS ARE AS FOR TYPICAL DOOR ILLUSTRATED.
CONTRACTOR TO MEASURE ALL DOOR OPENINGS BEFORE MANUFACTURE

Province of the
EASTERN CAPE
HEALTH

b4 Architects cc
Resuscitating Healthcare Design

SAKHIWO HEALTH SOLUTIONS | HDG | NEMA SA

COPYRIGHT NOTICE
Copyright © 2023 (B4 Architects) Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce (including to the extent necessary to carry out and complete the project described in the title block of this drawing).
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorised reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any work, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

REVISIONS	No.	Description	Date
	1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Door Type B

Sakhiwo Ref No:

Scale: 1 : 10
Date: 23 September 2025
Drawn by: ET
Checked by: BB
B4 Ref No.: Architect Dwg No:
305-026 DS- 002
FOR TENDER ONLY REV 1

PORT ELIZABETH PROVINCIAL HOSPITAL

305-026 : BOUNDARY FENCING AND GUARDHOUSE

Window Schedule

b4 Architects cc

Resuscitating Healthcare Design

Port Elizabeth

PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070

Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban

1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

REVISIONS :

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type A

Scale

1 : 20

Date:

23 September 2025

Drawn by:

PHV

Designer:

ET

Professional Architect:

BB

Checked by:

BB

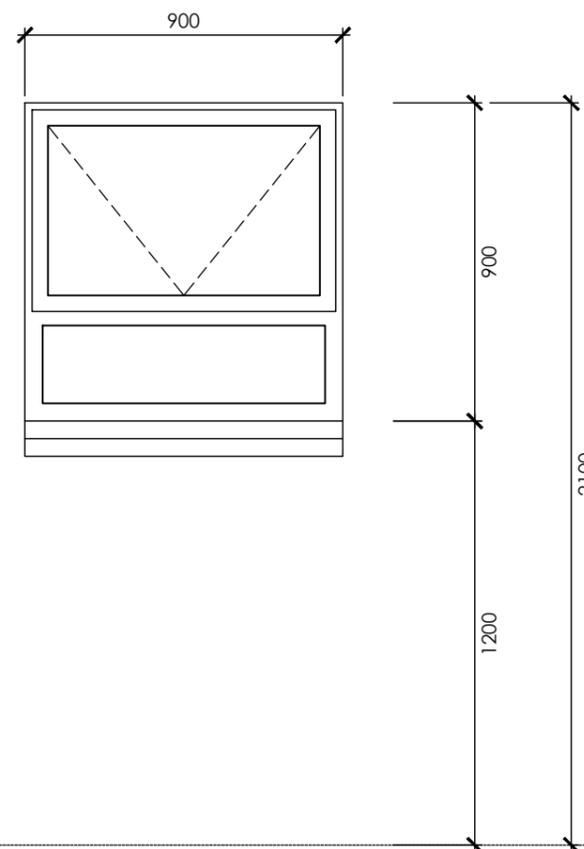
DWG No:

305-026 WIN-01

FOR TENDER ONLY

REV 2

WINDOW TYPE A



WINDOW NO'S	W05
QUANTITY	01
DESCRIPTION	900 x 900 Aluminium framed window with top hung opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with aluminum sections defender stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdale's Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

REVISIONS :

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type B

Scale: 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

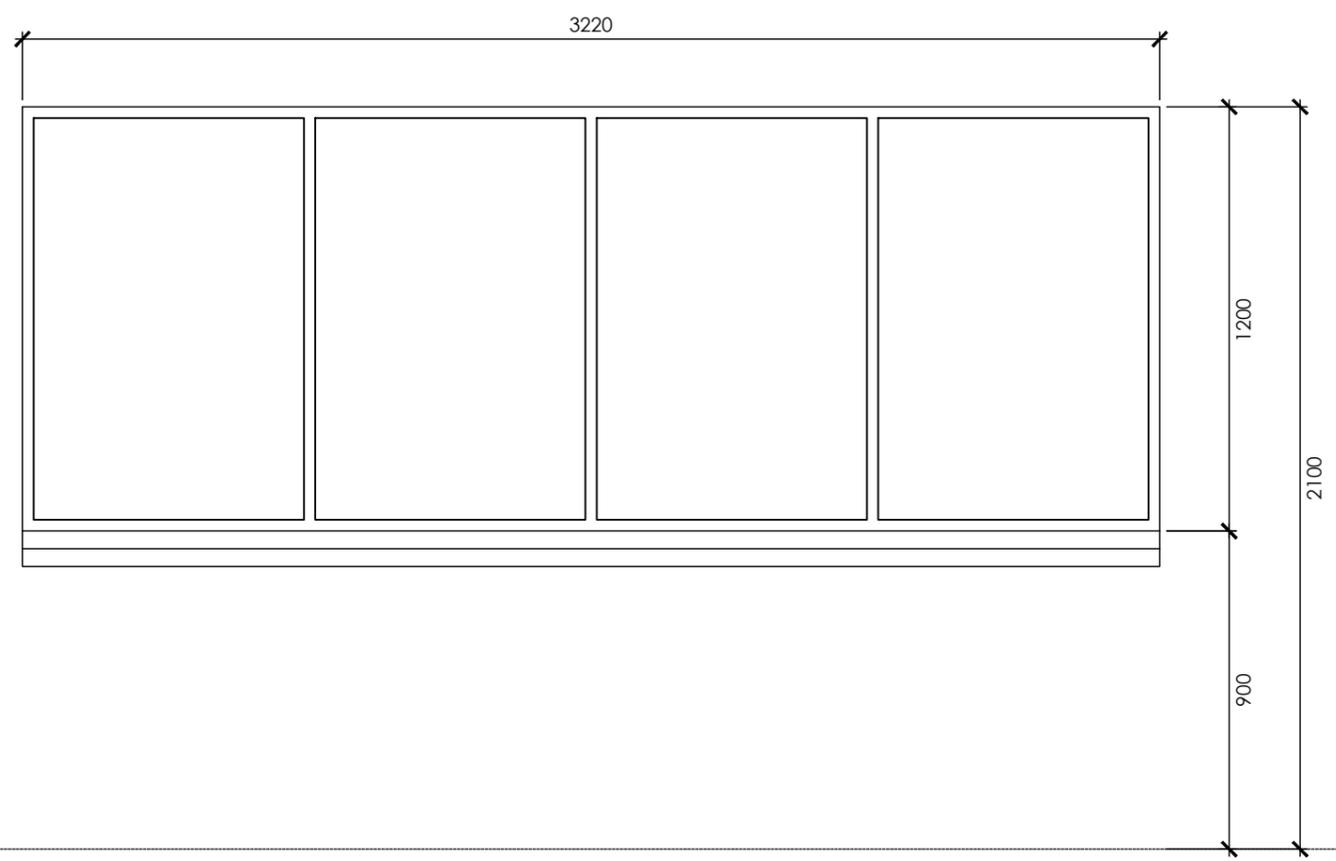
Professional Architect: BB

Checked by: BB

DWG No: 305-026 WIN-02

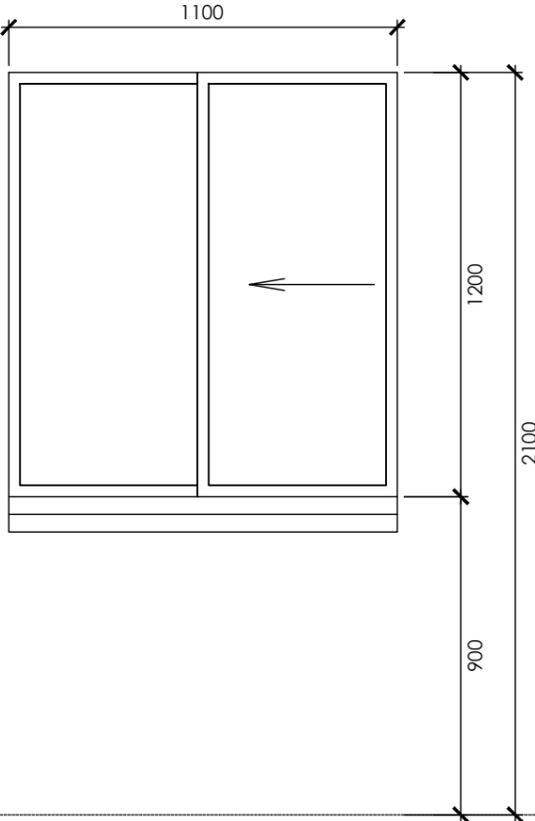
FOR TENDER ONLY REV 2

WINDOW TYPE B



WINDOW NO'S	W02
QUANTITY	02
DESCRIPTION	3220 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with Defender Stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

WINDOW TYPE C



WINDOW NO'S	W01
QUANTITY	01
DESCRIPTION	1100 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	HBS 900 Series slider system
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdale's Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Applied description	27-10-2023
2	Window size change	31-10-2023
3	Issued for Tender	23-09-2025

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type C

Scale: 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

Professional Architect: BB

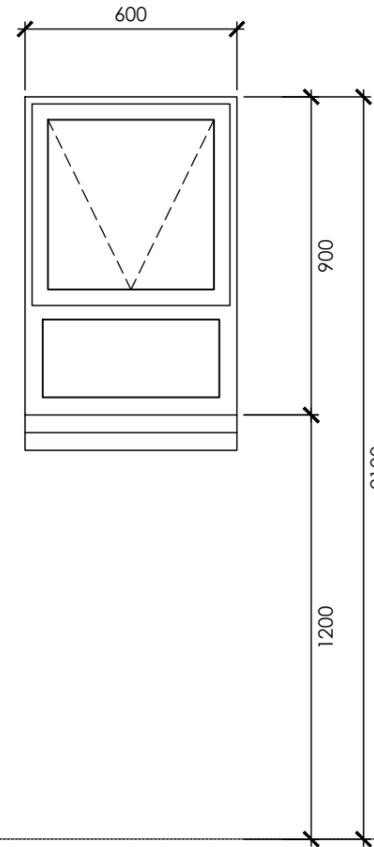
Checked by: BB

DWG No: 305-026 WIN-03

FOR TENDER ONLY

REV	3
-----	---

WINDOW TYPE D



WINDOW NO'S	W04
QUANTITY	02
DESCRIPTION	600 x 900 Aluminium framed window with top hung opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with aluminum sections defender stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects) . Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing .

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects .

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution . Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT:

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type D

Scale 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

Professional Architect: BB

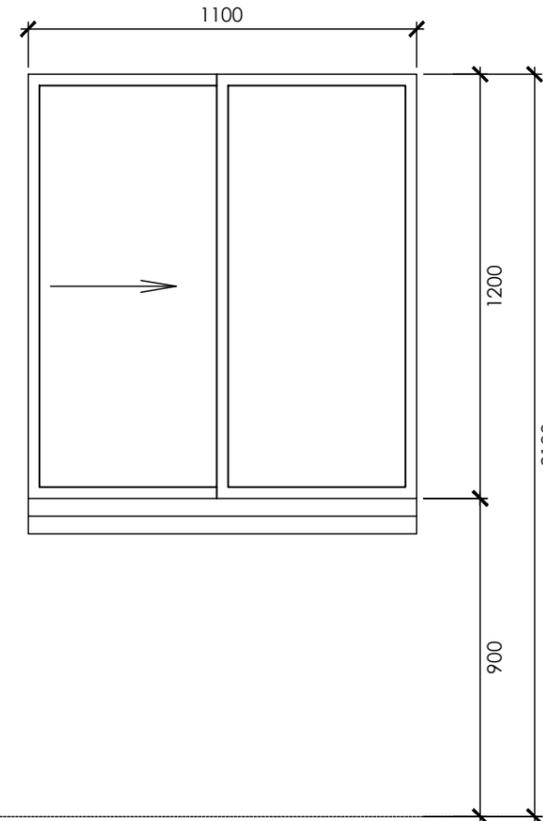
Checked by: BB

DWG No: 305-026 WIN-04

FOR TENDER ONLY

REV	2
-----	---

WINDOW TYPE E



WINDOW NO'S	W01
QUANTITY	01
DESCRIPTION	1030 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	HBS 900 Series slider system
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Window size change	23-09-2025
3	Issued for Tender	31-10-2023

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE: Window Type E

Scale: 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

Professional Architect: BB

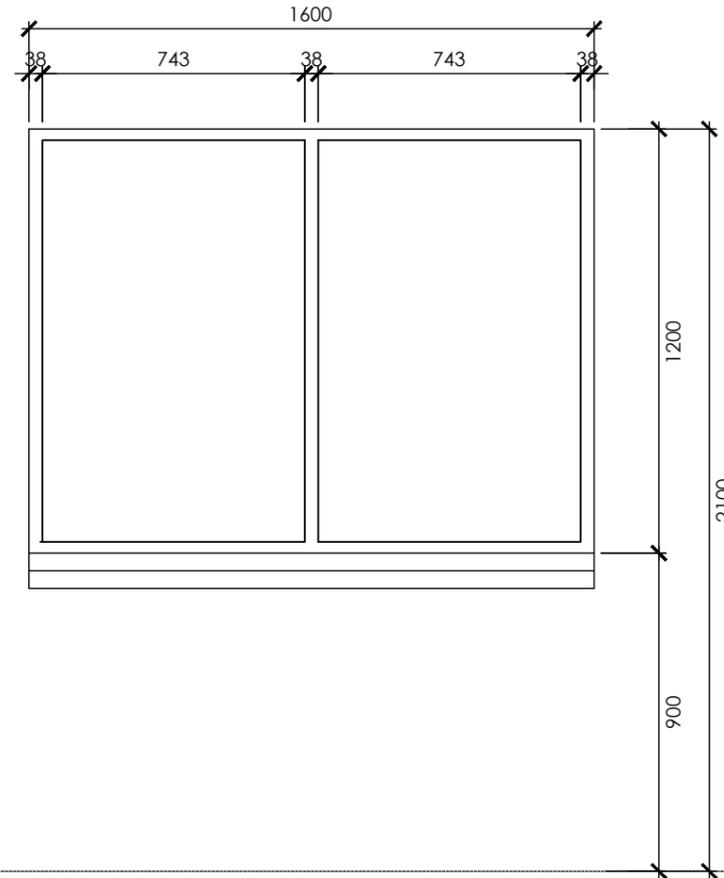
Checked by: BB

DWG No: 305-026 WIN-05

FOR TENDER ONLY

REV
3

WINDOW TYPE F



WINDOW NO'S	W03
QUANTITY	01
DESCRIPTION	1600 x 1200 Aluminium framed window with top hung opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with aluminum sections defender stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

Copyright © 2018 (B4 Architects) . Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing .

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects .

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution . Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

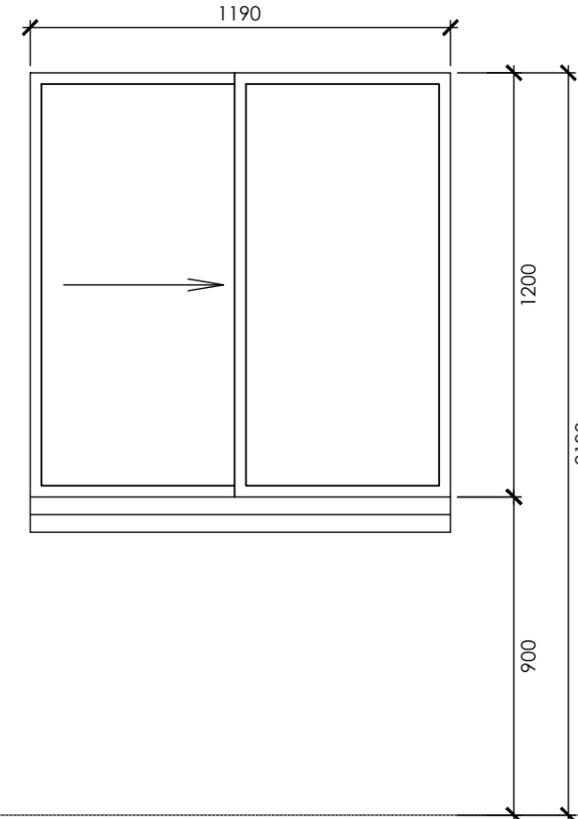
Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

23 September 2025

FOR TENDER ONLY

WINDOW TYPE G



WINDOW NO'S	W06
QUANTITY	01
DESCRIPTION	1030 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	HBS 900 Series slider system
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdale's Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Copyright © 2018 (B4 Architects) . Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing .

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects .

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution . Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

Department of Health & CDC

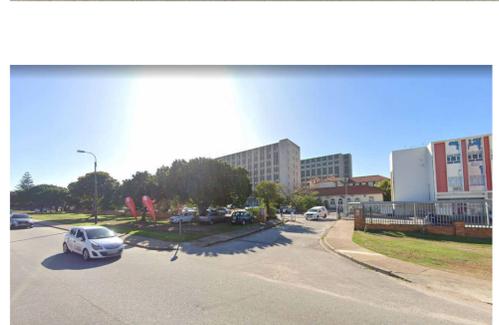
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

23 September 2025

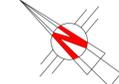
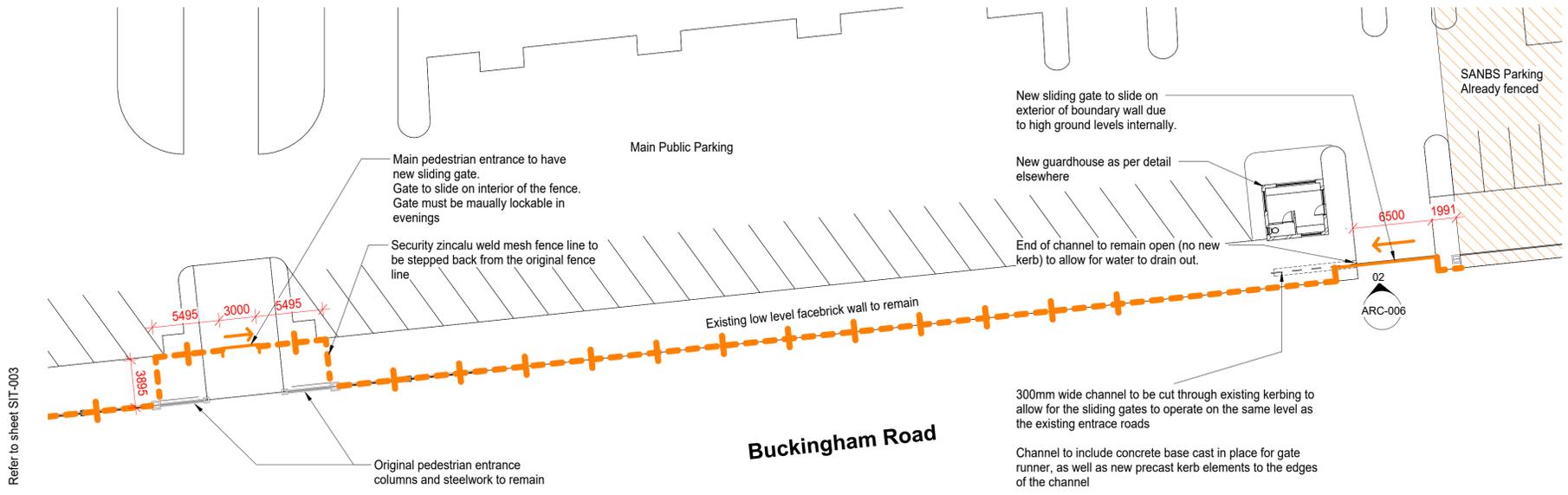
Photos of Existing Condition



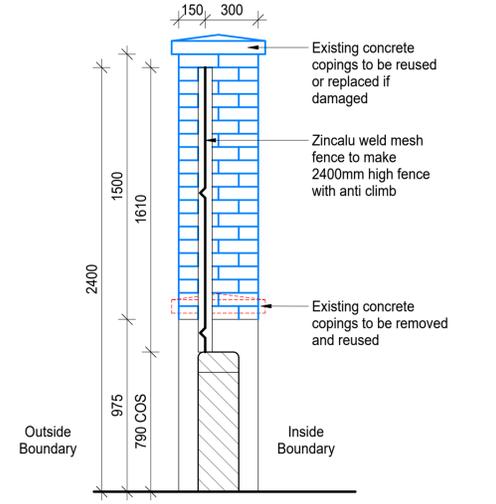
Main entrance to have single sliding gates
Swing gates as per standard betafence detailing
Gates must be lockable



Single sliding gate to parking exit.
Existing boom arm to remain on inside of new gate position
Existing redundant security spikes to be removed and road made good.

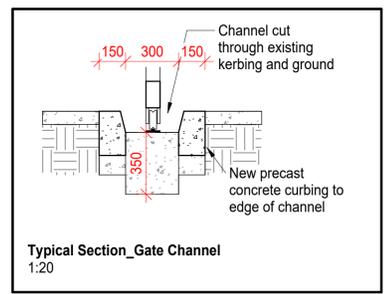


1 Site_South Wall_Buckingham Road_Part 2
1:250



Typical Section_New weld mesh infill pannel to front wall
1:20

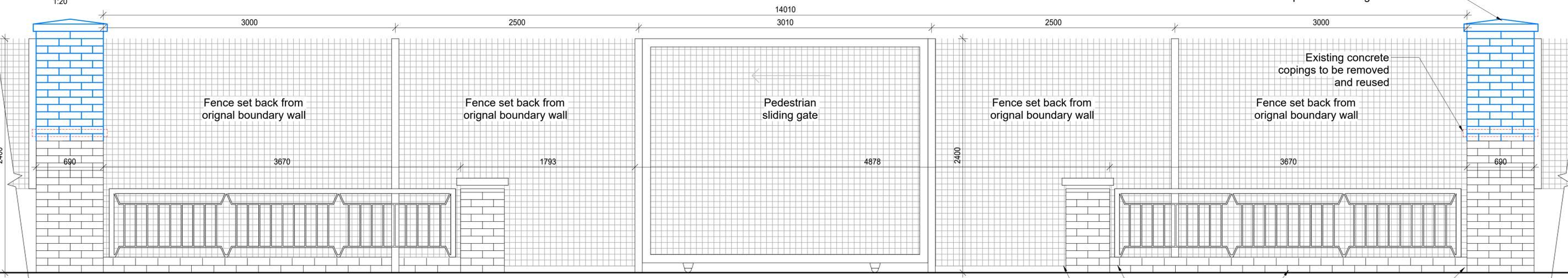
New Fence Specification:
Rigid Mesh Security Fencing
 Security zincalu weld mesh 3510 fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
 Rigid mesh panels with bends. Core wire (3mm) to be manufactured from Zincalu® Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanising
 Secure Posts: H - shaped profile post 70mmx 44mm. The panel is to fit securely behind the lip of the post. Height: 3000mm hot dipped galvanized mild steel posts
 Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
 Secured using tamper-proof shear-off nuts. (no self drilling screws).
 All fixator components to be stainless steel Grade 304 per ISO 9223.
 All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete.
 Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
 Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
 Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations



Typical Section_Gate Channel
1:20



Existing security boom and floor spikes currently unused, no longer functional and redundant due to dirt ingress. Should be removed entirely as position will clash with sliding gate.



09 Main Pedestrian Entrance
1:20



Port Elizabeth
 PO Box 5690, Walmer, Port Elizabeth, 6065
 Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
 Walmer, Port Elizabeth, 6070
 Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
 Westville, Durban, 3630
 Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE
 Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution, equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
 All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
 Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Remove Trade Names	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC
 Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 23 September 2025

Scale: As indicated
Drawn by: J Thomson
Designer: -
Professional Architect: B Brinkman
Checked by: B Brinkman

TITLE: South Wall - Buckingham Road
B4 Ref No.: 305-026
Architect DWG No.: SIT-004

FOR TENDER ONLY

PROTEA FLATS

**ALL DRAWINGS REFERENCED
IN BILLS OF QUANTITIES**

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

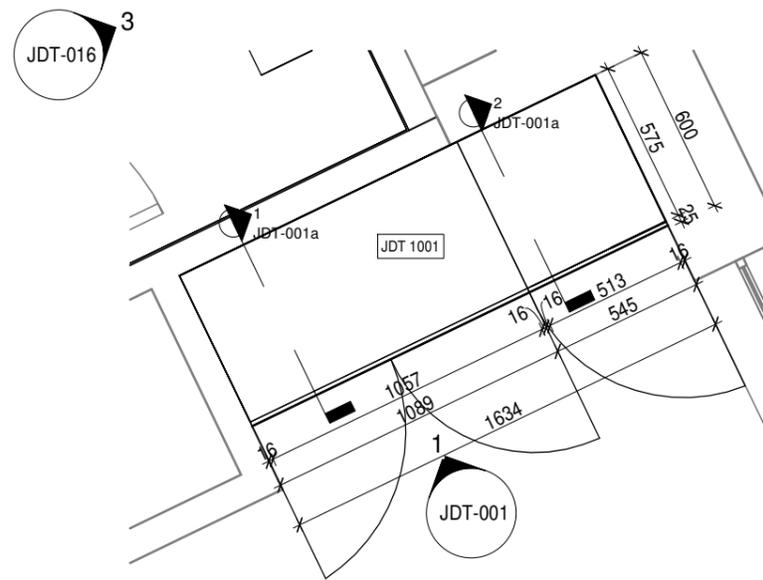
> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

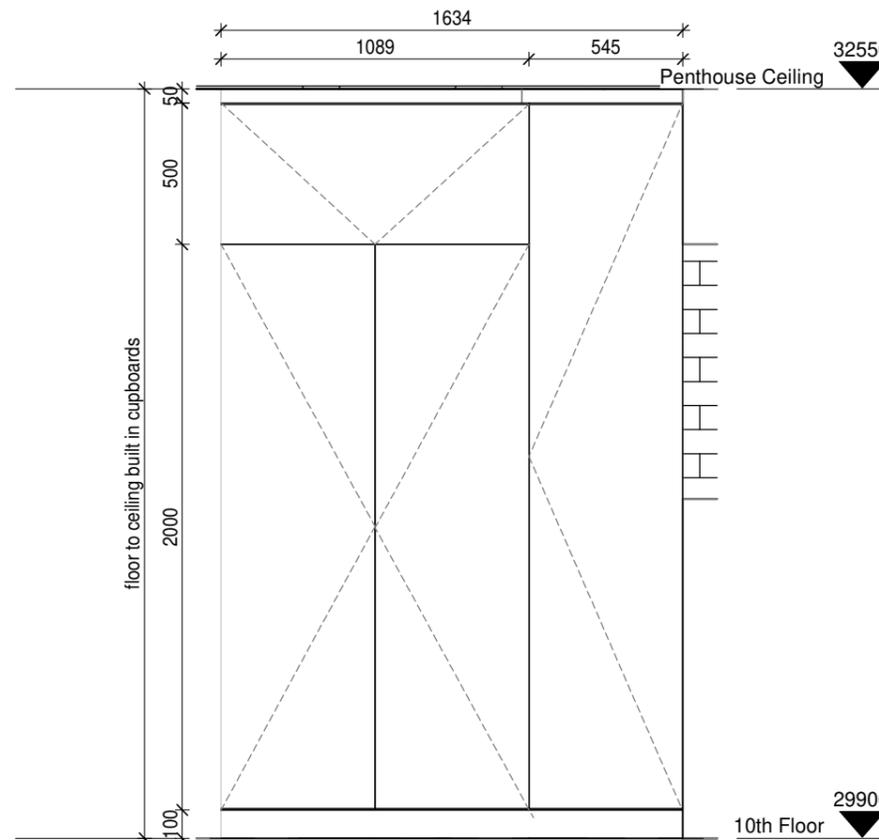
> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

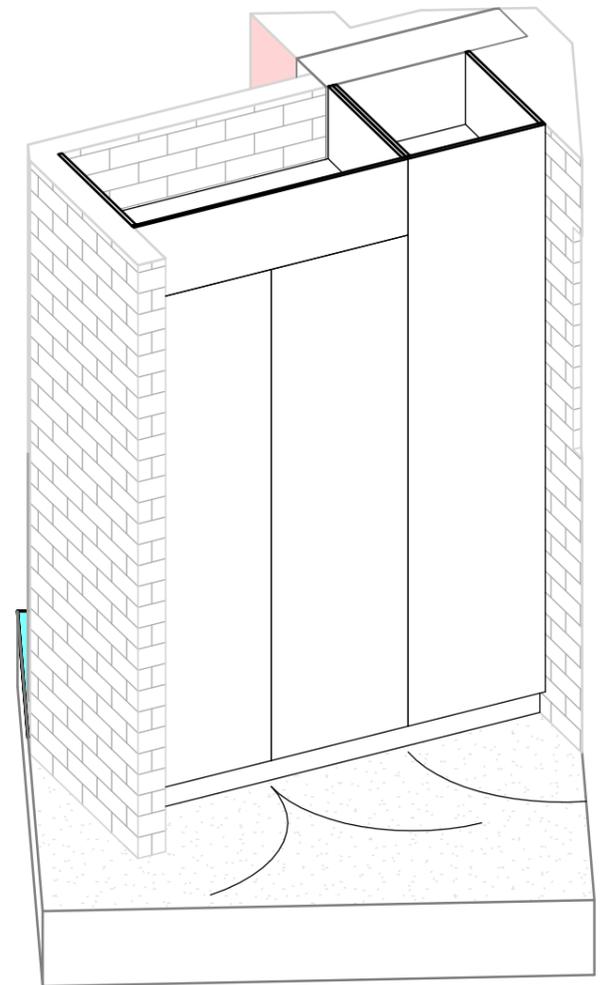
> All measurements to be confirmed on site prior to manufacture.



3 JDT 1001_Plan
1 : 25



1 JDT1001_Elevation1
1 : 25



4 JDT1001_Isometric

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce (withdrawing to the extent necessary to carry out and complete the project described in the title block of this drawing).

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale: 1 : 25

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

Checked by: B Brinkman

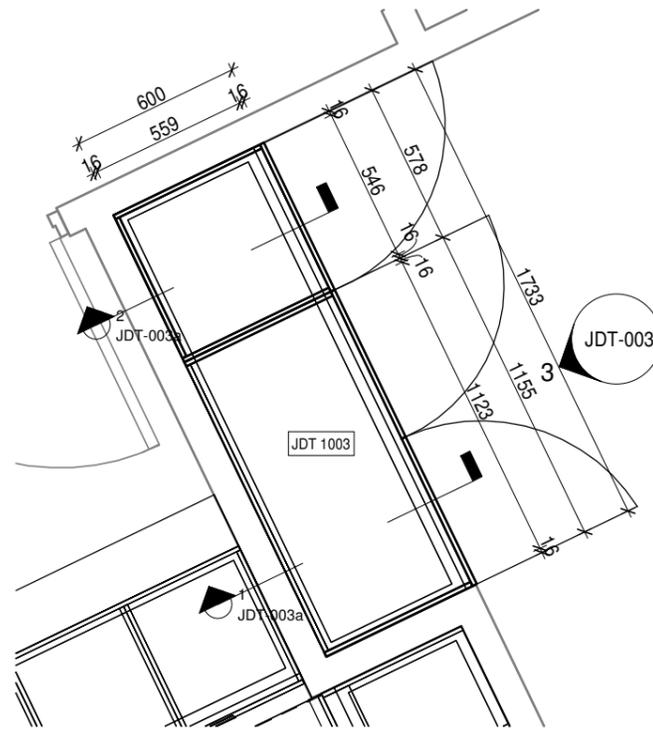
TITLE: Joinery Unit JDT1003

B4 Project Ref No.: 305-019

Architect DWG No.: JDT-003

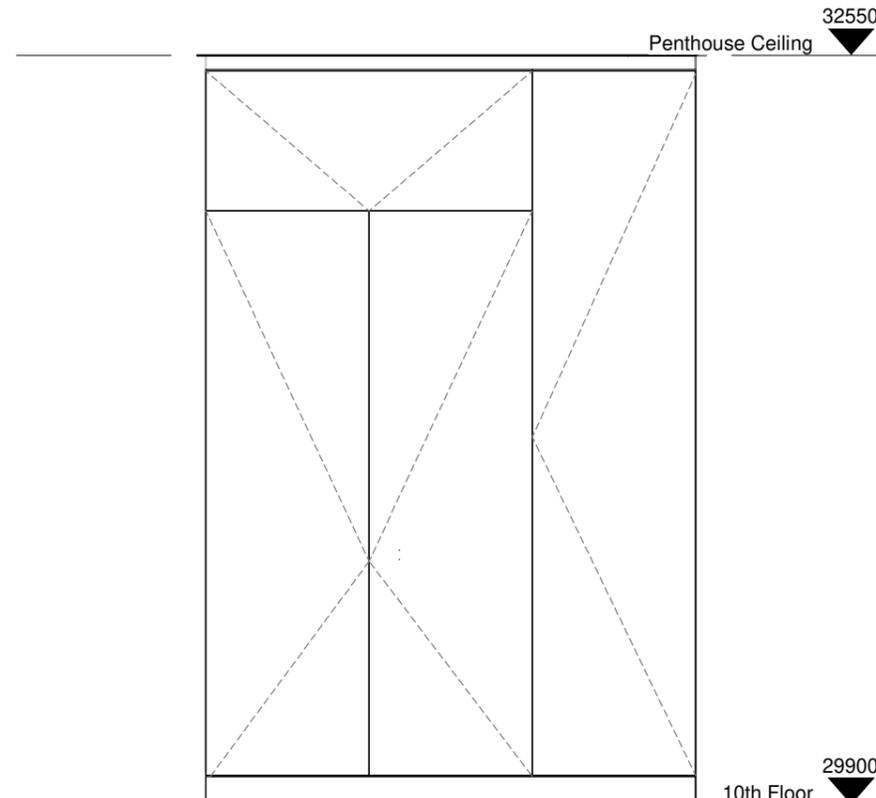
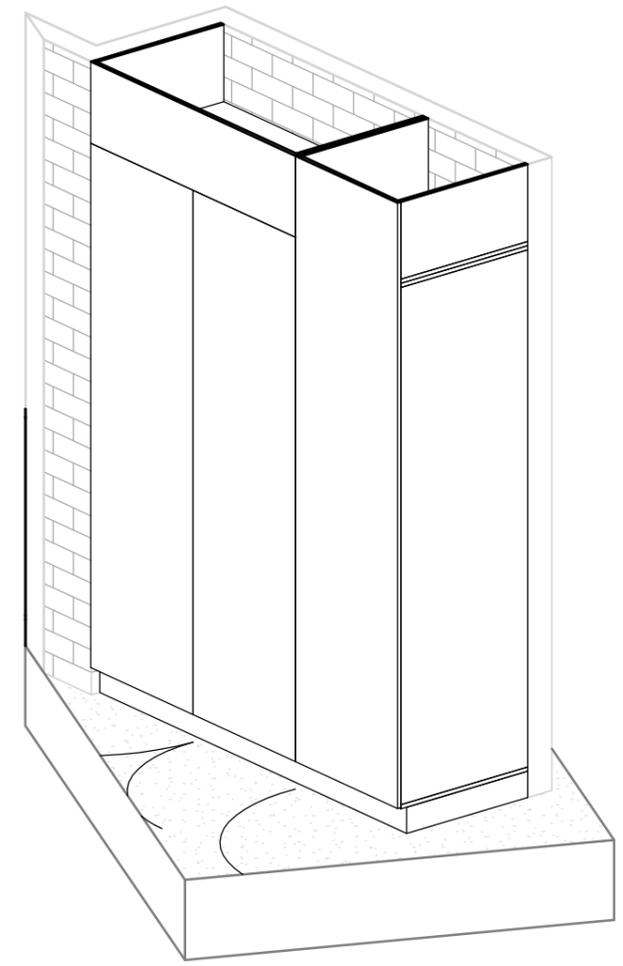
FOR TENDER ONLY

REV 4



1 JDT 1003_Plan
1 : 25

2 JDT1003_Isometric

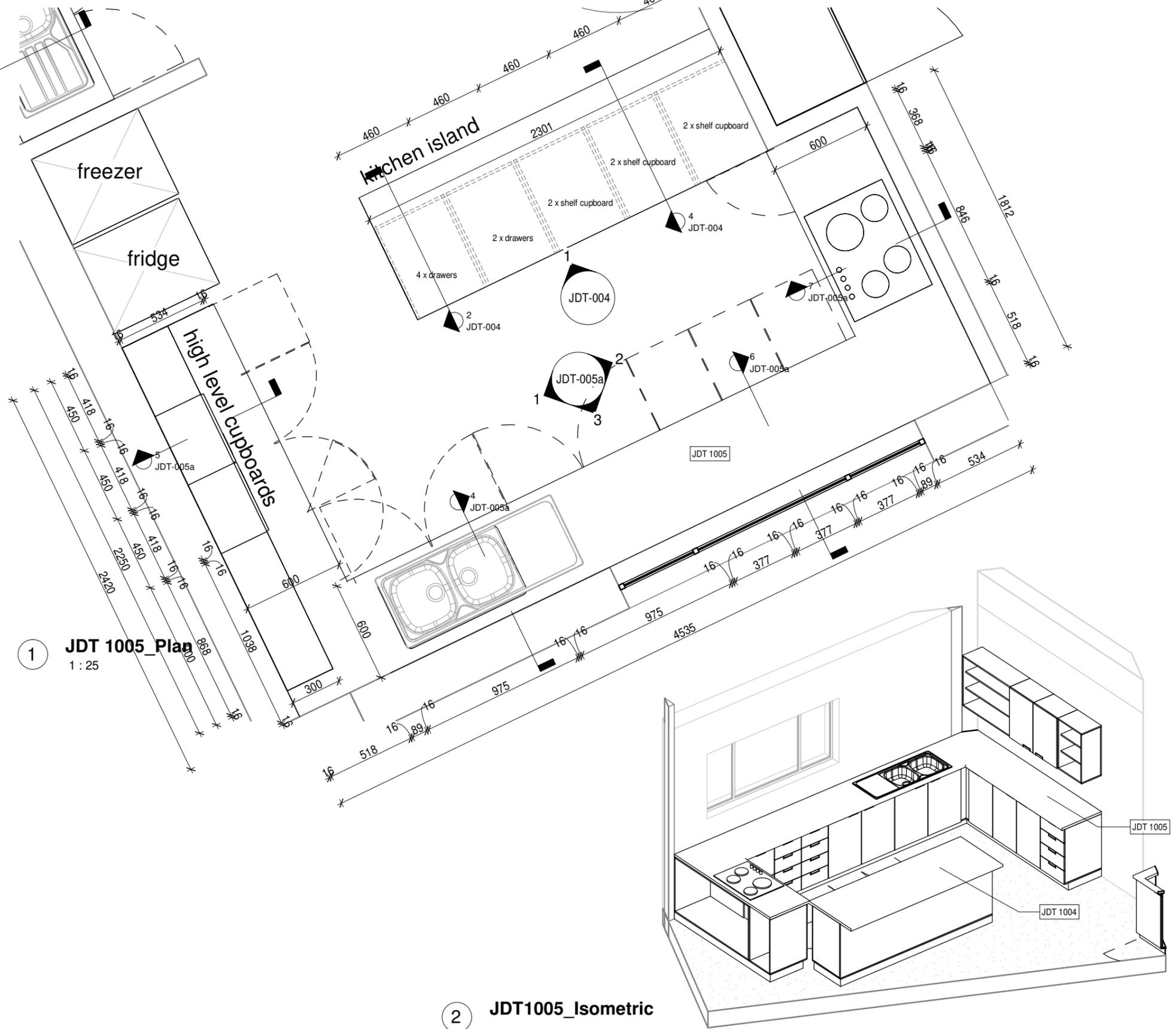


3 JDT1003_Elevation
1 : 25

2025/09/22 15:55:28

GENERAL JOINERY SPECIFICATION:

- > All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.
- > All internal shelves to be 16mm melamine faced board (COLOUR TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.
- > Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.
- > All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.
- > All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.
- > All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.
- > Backing board to units with open shelving to be 16mm melamine faced board to match shelving colour.
- > Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.
- > Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.
- > Handle specification:
Raiel Milano Grip Handle in Matt Chrome
- > All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.
- > Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing
- > All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)
- > All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.
- > Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.
- > All measurements to be confirmed on site prior to manufacture.



b4 Architects cc
Resuscitating Healthcare Design

Province of the **EASTERN CAPE**
HEALTH

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale: 1 : 25

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

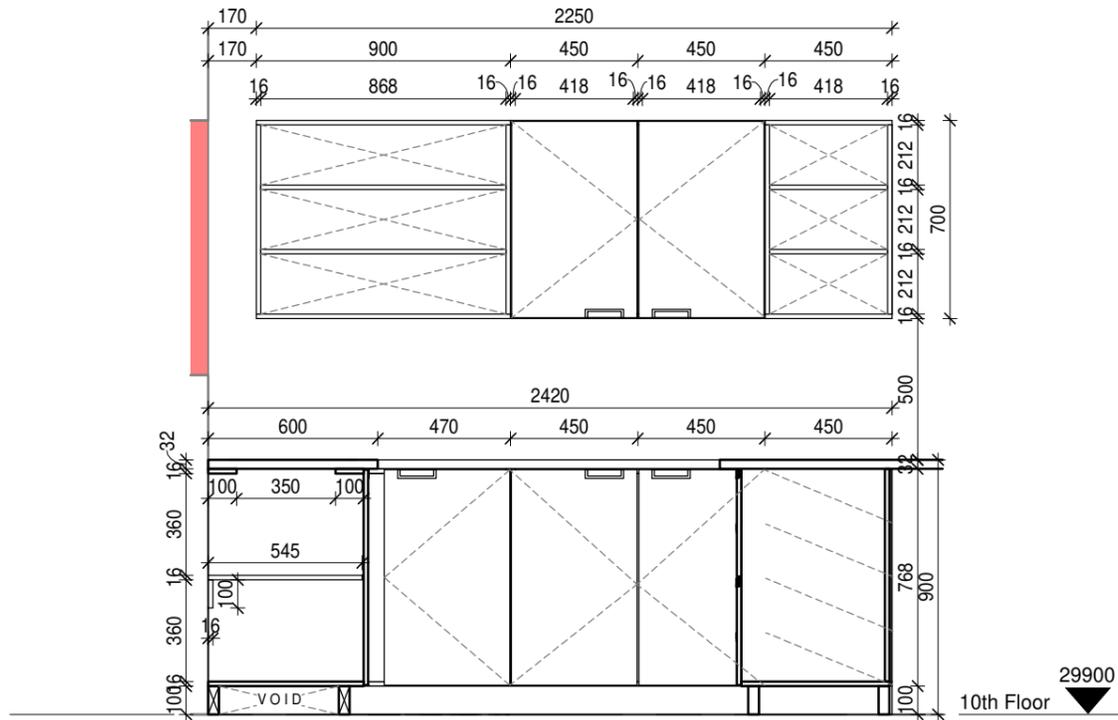
Checked by: B Brinkman

TITLE: Joinery Unit JDT1005

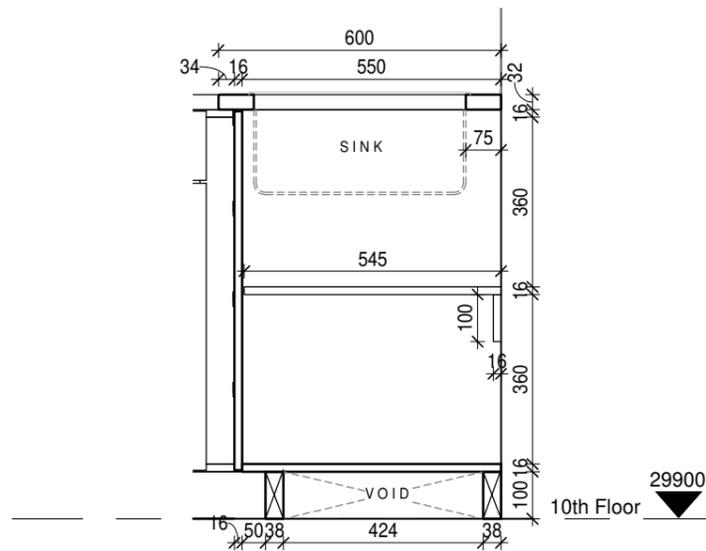
B4 Project Ref No.: 305-019
Architect DWG No.: JDT-005

FOR TENDER ONLY

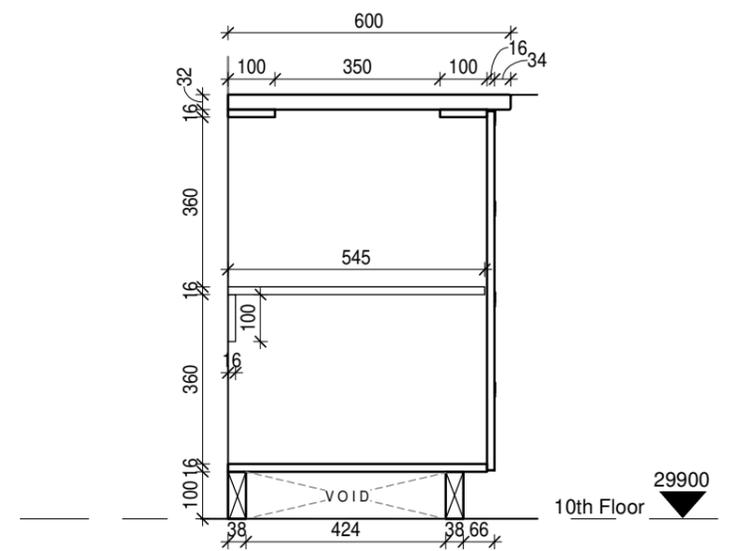
REV 4



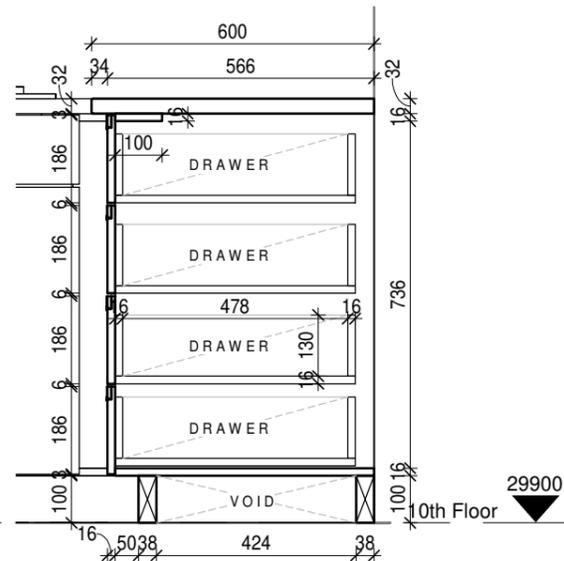
1 JDT1005_Elevation 1
1 : 25



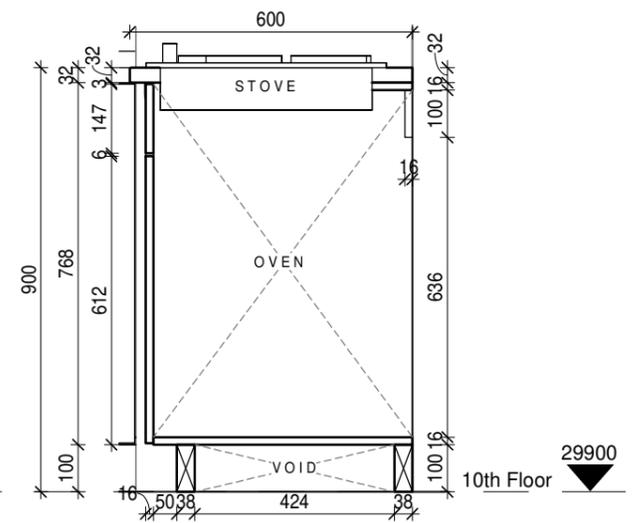
4 JDT1005_Section 1
1 : 15



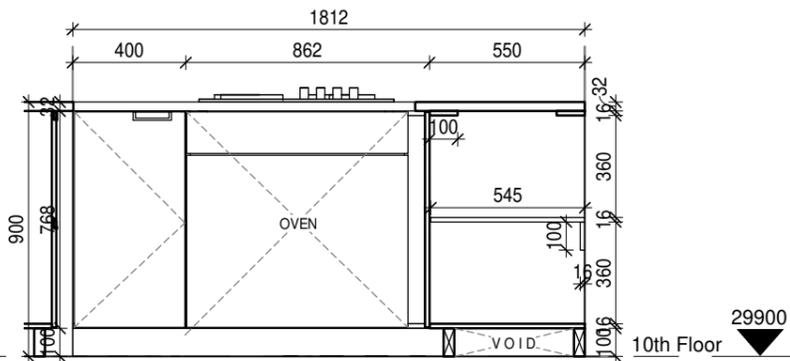
5 JDT1005_Section 2
1 : 15



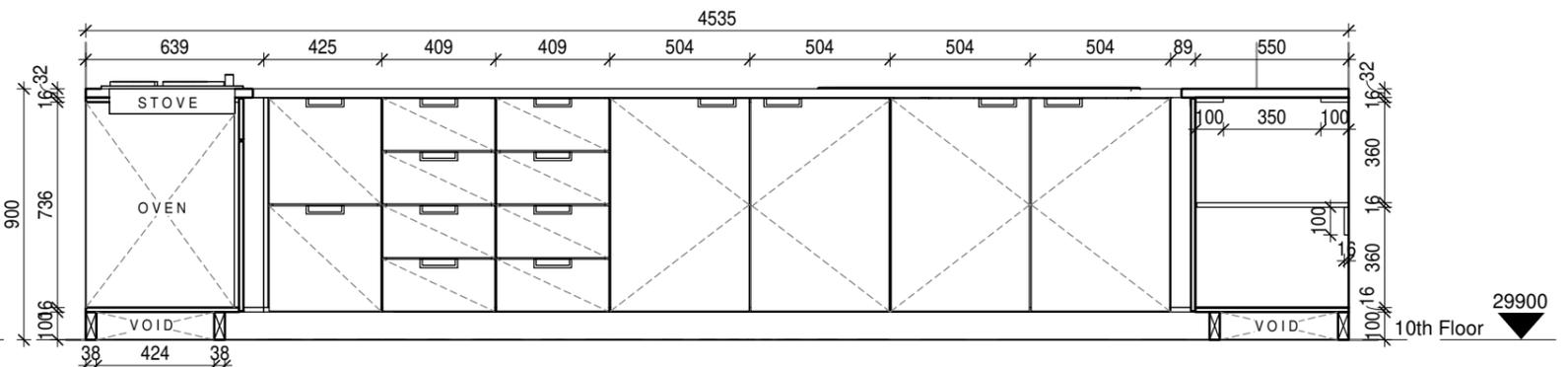
6 JDT1005_Section 3
1 : 15



7 JDT1005_Section 4
1 : 15



2 JDT1005_Elevation 2
1 : 25



3 JDT1005_Elevation 3
1 : 25

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1005
B4 Project Ref No.:	305-019
Architect DWG No.:	JDT-005a
FOR TENDER ONLY	REV 4

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

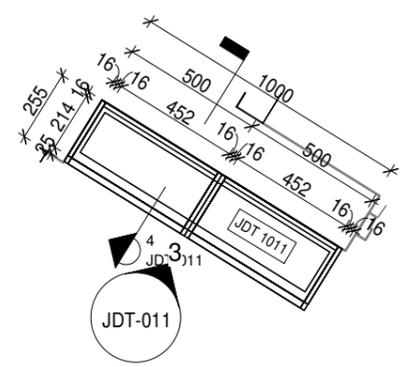
> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

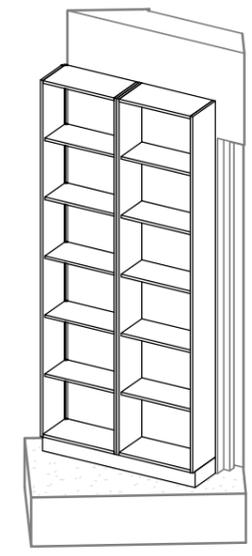
> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

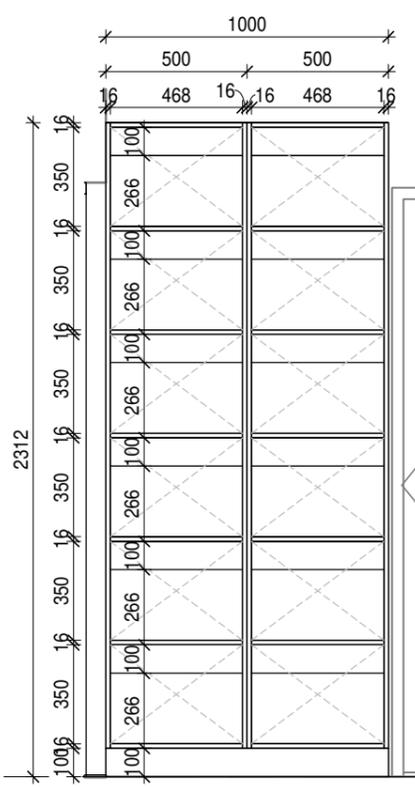
> All measurements to be confirmed on site prior to manufacture.



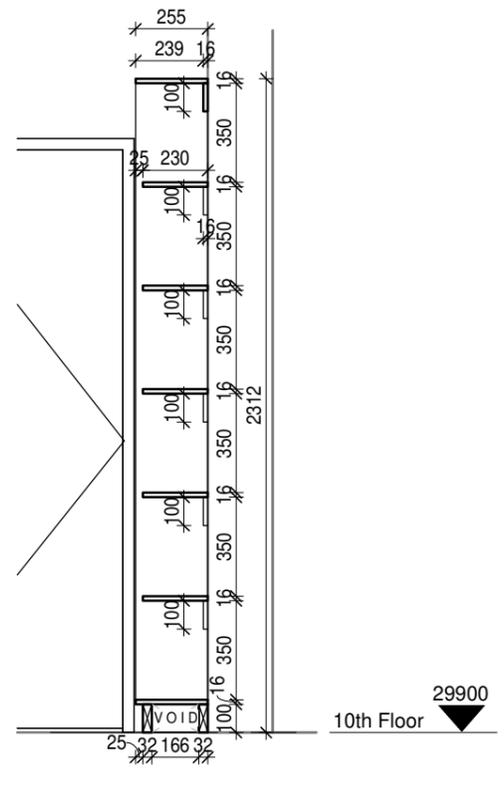
1 JDT 1011_Plan
1 : 25



2 JDT1011_Isometric



3 JDT1011_Elevation 1
1 : 25



4 JDT1011_Section 1
1 : 25



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date

PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

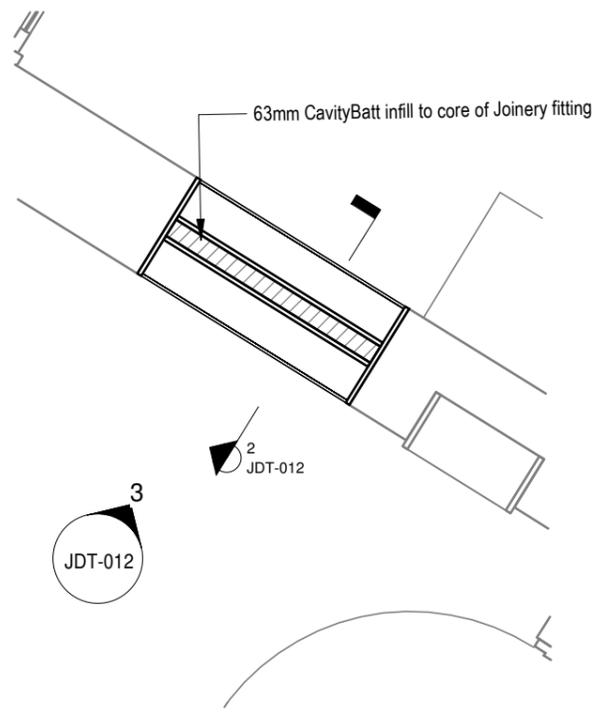
Scale:	1 : 25
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1011
B4 Project Ref No.:	305-019
Architect DWG No.:	JDT-011
FOR TENDER ONLY	
REV	

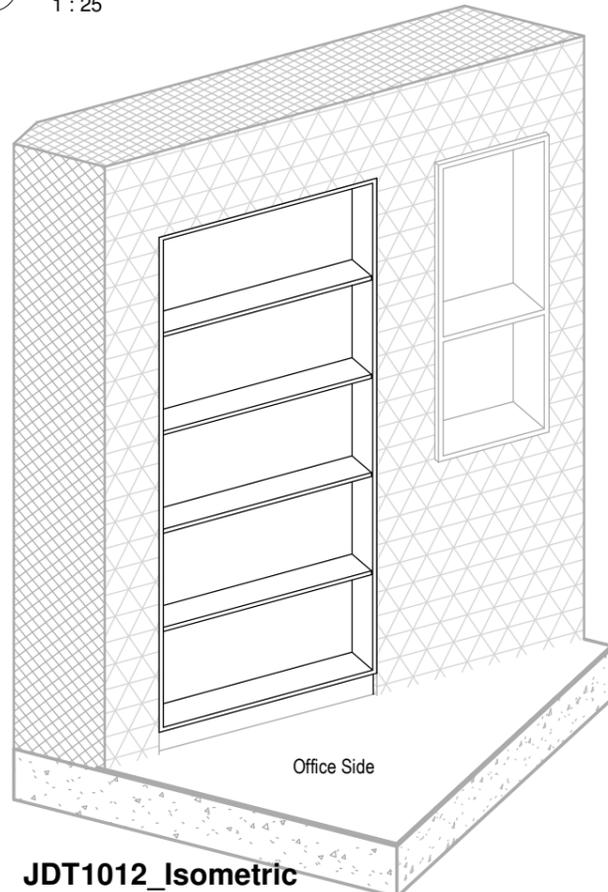
2025/09/22 15:59:05

GENERAL JOINERY SPECIFICATION:

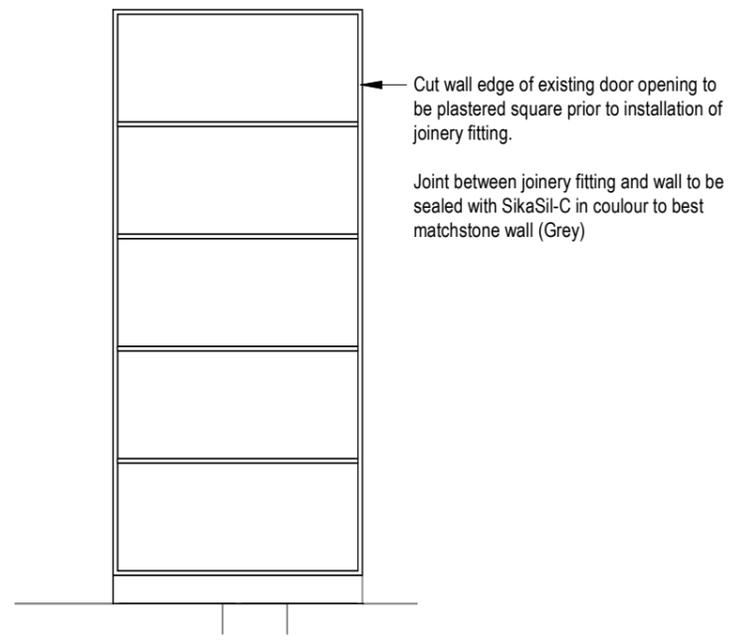
- > All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.
- > All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.
- > Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.
- > All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.
- > All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.
- > All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.
- > Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.
- > Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.
- > Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.
- > Handle specification:
Raiel Milano Grip Handle in Matt Chrome
- > All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.
- > Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing
- > All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)
- > All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.
- > Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.



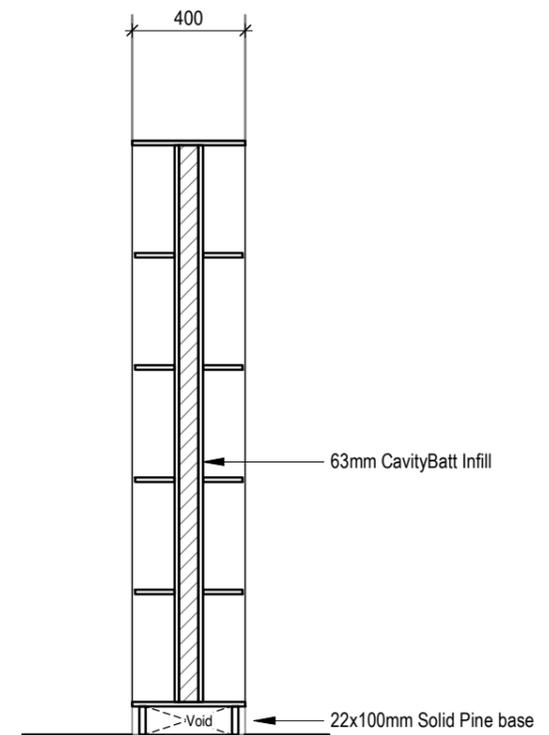
1 JDT 1012_Plan
1 : 25



4 JDT1012_Isometric



3 JDT1012_Elevation
1 : 25



2 JDT1012_Section
1 : 25

b4 Architects cc
Resuscitating Healthcare Design

Province of the **EASTERN CAPE**
HEALTH

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.
ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 25
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1012
B4 Project Ref No.:	305-019
Architect DWG No.:	JDT-012
FOR TENDER ONLY	
REV	4

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

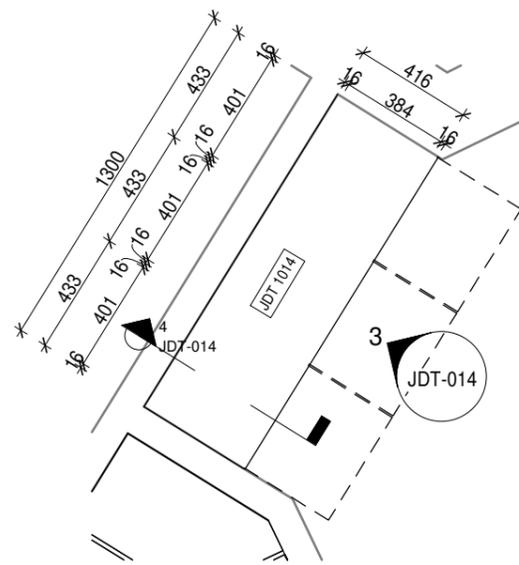
ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.
ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

No.	Description	Date

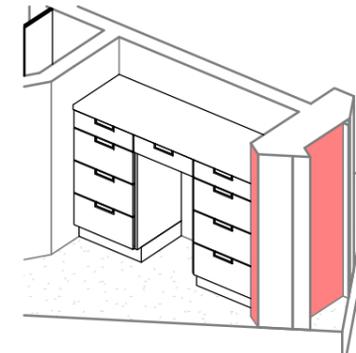
PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

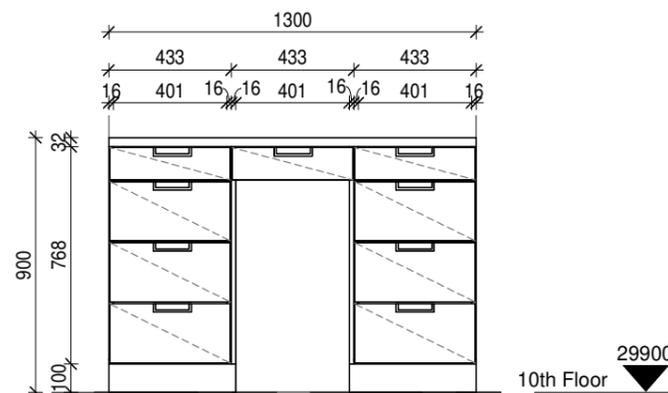
TITLE:	Joinery Unit JDT1014
B4 Project Ref No.:	305-019
Architect DWG No.:	JDT-014
FOR TENDER ONLY	
REV	



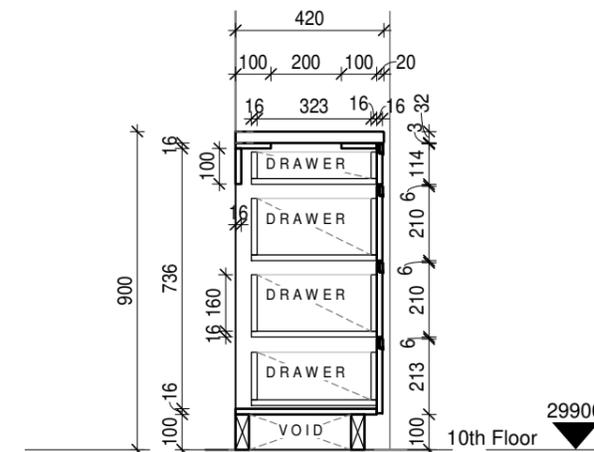
1 JDT 1014_Plan
1 : 25



2 JDT1014_Isometric



3 JDT1014_Elevation
1 : 25



4 JDT1014_Section
1 : 20

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.

+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

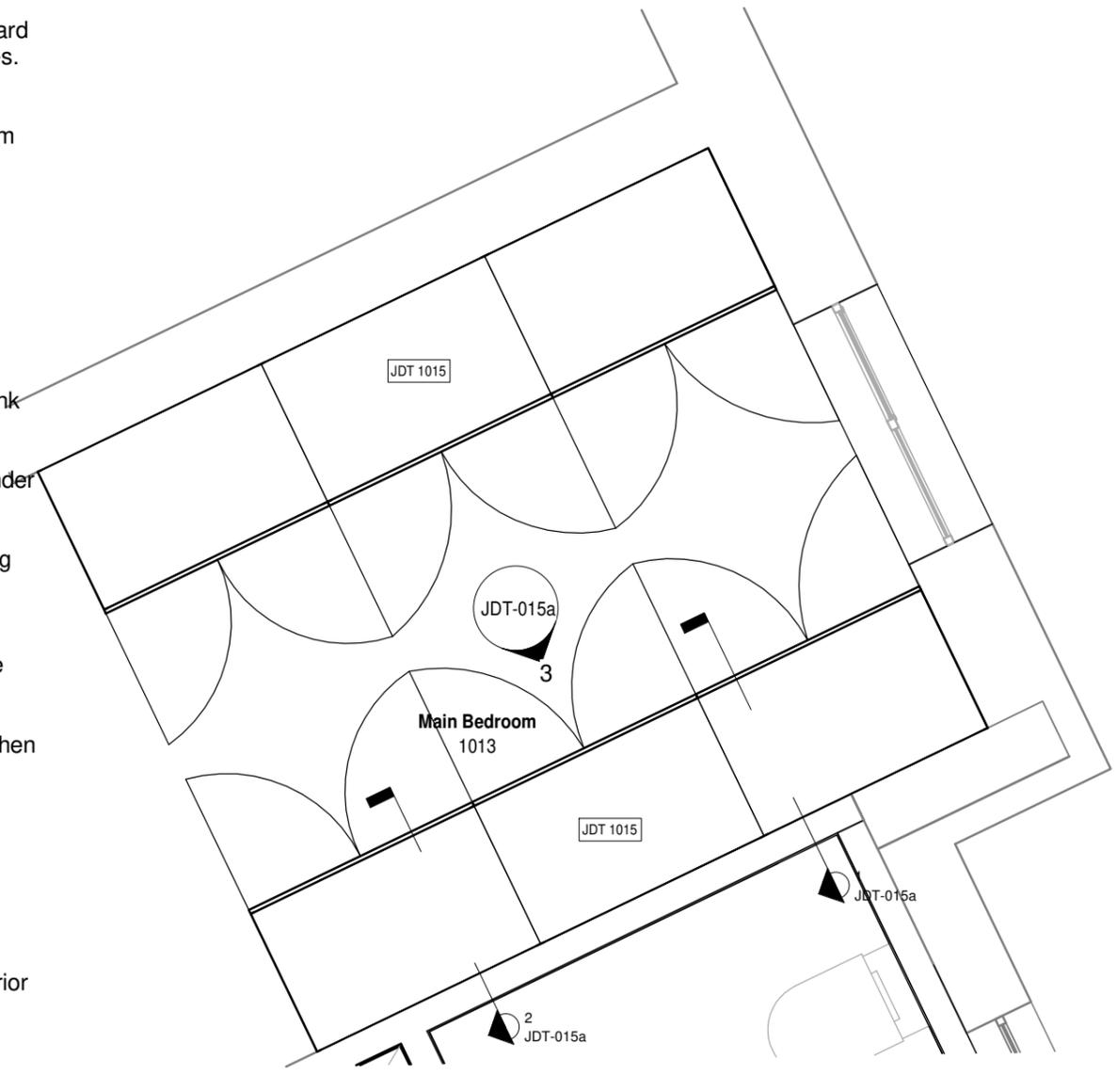
ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.
ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

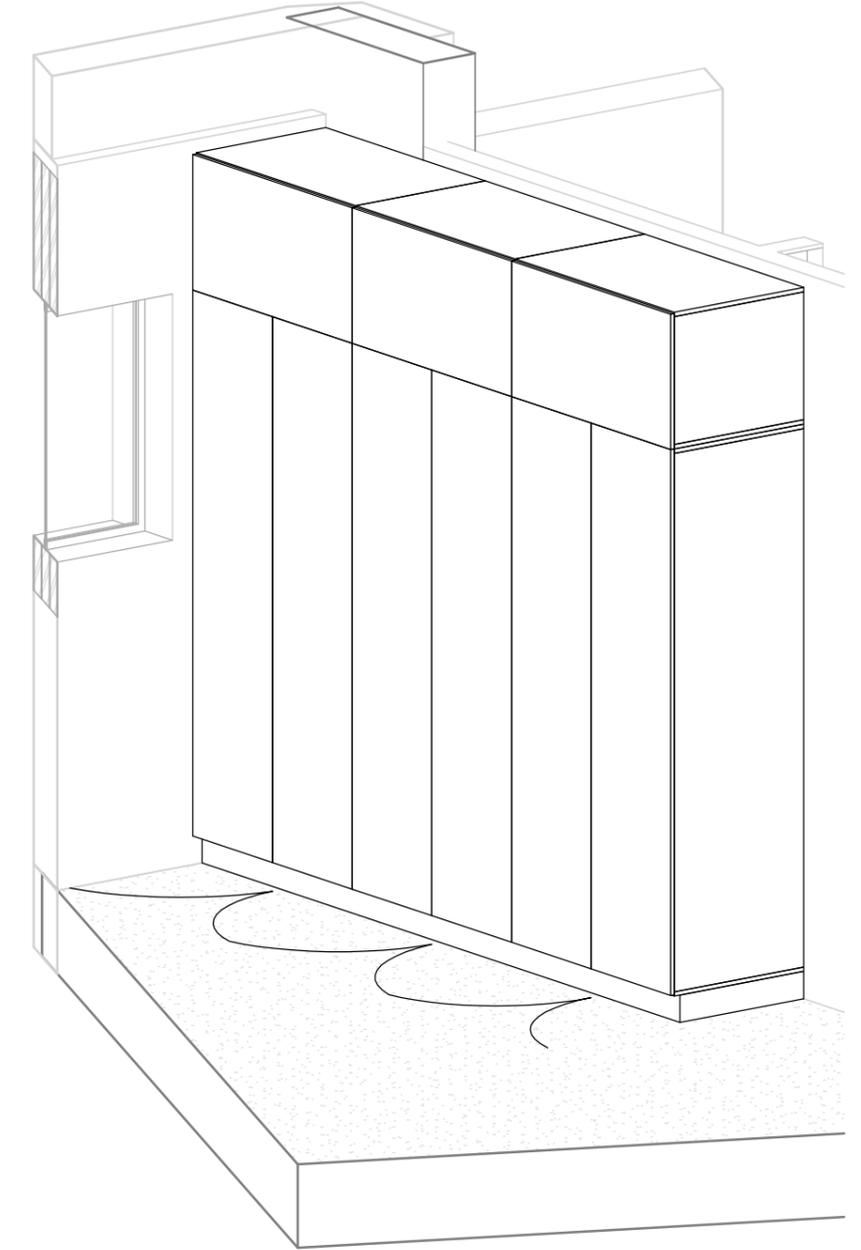
PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:
Date: 22 September 2025

Scale: 1 : 25
Drawn by: J Thomson
Designer: J Thomson
Professional Architect: B Brinkman
Checked by: B Brinkman

TITLE: Joinery Unit JDT1015
B4 Project Ref No.: 305-019
Architect DWG No.: JDT-015
FOR TENDER ONLY
REV 4

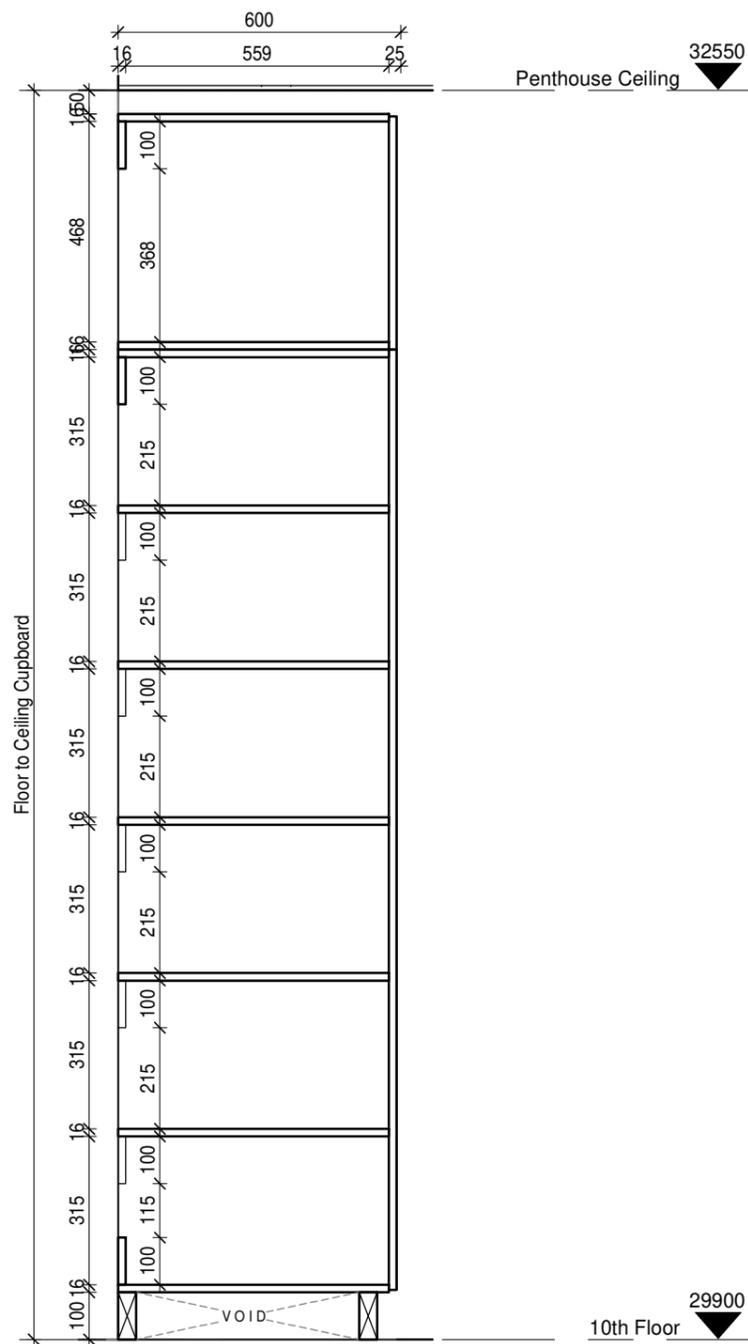


2 JDT 1015_Plan
1 : 25

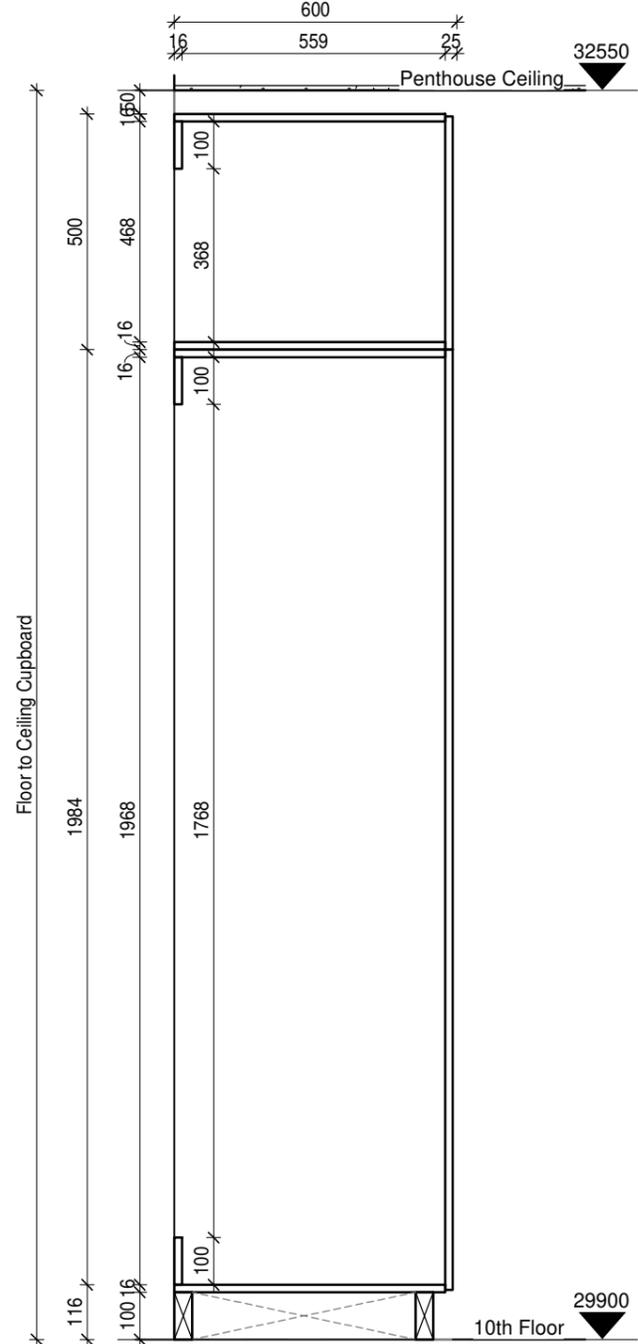


1 JDT1015_Isometric

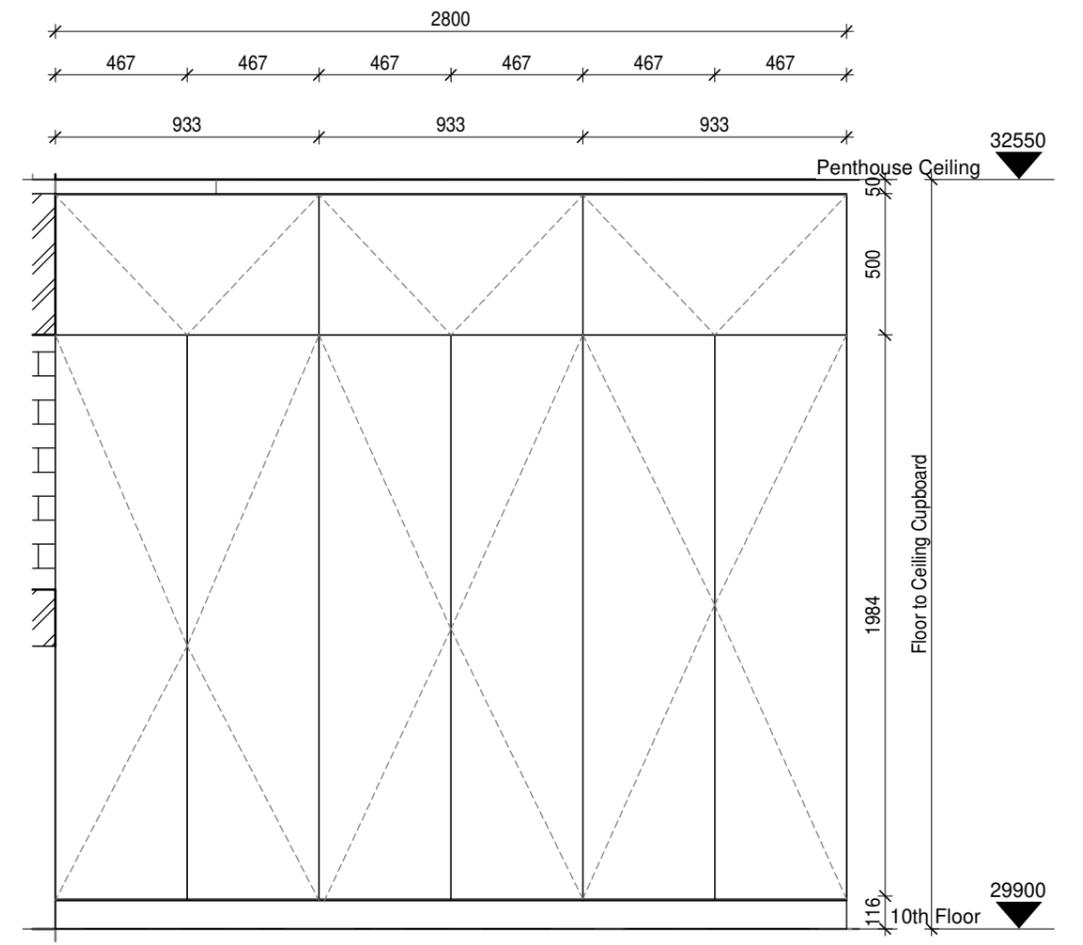
2025/09/22 16:02:29



1 JDT1015_Section 1
1 : 15



2 JDT1015_Section 2
1 : 15



3 JDT1015_Elevation 1
1 : 25

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1015 - Sections
B4 Project Ref No.:	Architect DWG No:
305-019	JDT-015a
FOR TENDER ONLY	
REV	4

EASTERN CAPE DEPARTMENT OF HEALTH

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH
HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

PROTEA FLATS : Penthouse Renovations

IRONMONGERY SPECIFICATION

REV 5

DOCUMENT NUMBER: 305-019/IRN-001
DOCUMENT NAME: Ironmongery Specification
REVISION: 5

ISSUED FOR TENDER PURPOSES

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** show specifications under review.
3. Items indicated in **green** are new specifications.

Refer to Dormakaba specification for detailed list of ironmongery required, including product codes, masterkeying, etc

CONTROL LIST

Door No.	Hardware Set	Location	Door Type	Handling	Door Material
-	01 : 2 off	Duct2			Timber/Steel
-	02 : 3 off	Bathrooms			Timber
-	03 : 12 off	General			Timber
	04: 1 off	Entrance Door			Timber/Steel
-	05 : 9 off	Fire Doors	FD02	RHA	FD Material
-	06 : 11 off	Fire Escape Doors – All Floors	FD01	RH	FD Material

NOTE:

FD01 – 11 Units throughout Building

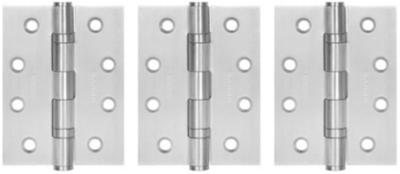
FD02 – 9 Units throughout building

Note : Type 04 subject to revision

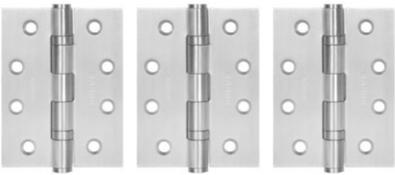
Hardware Set	01
Description / Notes	Duct service door
Doors (Total)	2

Image	Product	Finish	Quantity
	Dormakaba 102x75x3 EN1935 Grade 13. Two ball bearing butt hinge Double Ball Bearing Butt Hinge. Fire Rated. 120kg carrying capacity per pair. DBB-SS-009	Stainless Steel	1 Pair
	Dormakaba Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. D037D SS	Stainless Steel	1
	Dormakaba 40.5 – Europrofile Nickel Plated E-SP 5 Pin Cylinder – Masker Keyed DSC204101 MK	Satin Nikel	1
	Dormakaba Round Cylinder Escutcheon DCE-002 SS	Stainless Steel	0.5 pair
	Dormakaba 120 x 40mm Retangular Flush pull handle DFP-SS-025	Stainless Steel	1
	Dormakaba Adjustable roller bolt DBC-SS-022	Stainless Steel	1

Hardware Set	02
Description / Notes	Manually lockable WC stall door, Timber Door
Doors (Total)	3

Image	Product	Finish	Quantity
	Dormakaba 102x75x3 EN1935 Grade 13. Two ball bearing butt hinge Double Ball Bearing Butt Hinge. Fire Rated. 120kg carrying capacity per pair. DBB-SS-009	Stainless Steel	1,5 Pair
	Dormakaba Bathroom Sash Lock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm. Centres 57mm. D035S SS	Stainless Steel	1
	Dormakaba Lever handle on 170x170 plate with Bathroom/WC Furniture RH TH120 BP WC RH SS	Stainless Steel	1 Set
	Dormakaba Hat and Coat hook DHC-SS-030A	Stainless Steel	1
	Dormakaba Floor Mounted Door Stop. DDS-SS-017	Satin Chrome	1

Hardware Set	03
Description / Notes	Manually lockable door, Lock access both sides, Timber door
Doors (Total)	12

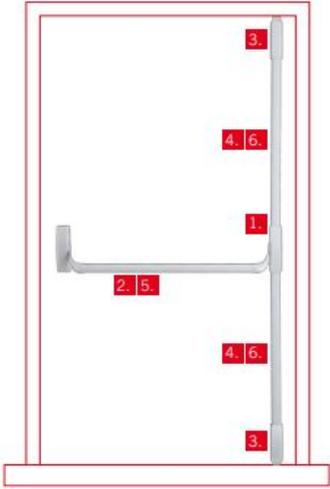
Image	Product	Finish	Quantity
	Dormakaba 102x75x3 EN1935 Grade 13. Two ball bearing butt hinge Double Ball Bearing Butt Hinge. Fire Rated. 120kg carrying capacity per pair. DBB-SS-009	Stainless Steel	1.5 Pairs
	Dormakaba Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm. D036S SS	Stainless Steel	1
	Dormakaba 63mm – 31.5+3.5mm Euro-profile Nickel Plated E-SP 5 Pin Double Cylinder – Master Keyed. DDC206301 MK	Satin Nickel	1
	Dormakaba Lever handle on 170x170 plate with Cylinder cutout TH120 BP CYL SS	Stainless Steel	1 Set
	Dormakaba Floor Mounted Door Stop. DDS-SS-017	Satin Chrome	1

Hardware Set	04
Description / Notes	
Doors (Total)	1

Image	Product	Finish	Quantity
	Hinges supplied as part of overall fire door frame		
	Parallel Arm HOLD OPEN Door Closer - Adjustable Strength	Silver	1
	325mm Straight tubular pull handle with flange	Stainless Steel	1 Set
	Floor Mounted Door Stop	Satin Chrome	2
	Single magnetic lock with 600lbf holding force	Anodized Aluminium	1
	L-Bracket for 600lbs maglock	Anodized Aluminium	1
	Access control by security specialist consisting of: 1x Biometric/Card Reader 1x 1-button intercom 1x Touch free door release 1x Emergency break glass unit 1x Wall mounted audio only handset	Stainless Steel and Plastic	1
	Cyclendar Deadlock	Stainless Steel	1
	Round Cylinder Escutcheon	Stainless Steel	2

Note: Access Control to be coordinated with Electrical engineer for approval and must interface with existing fire detection system on-site

Hardware Set	05
Description / Notes	Fire Door
Doors (Total)	09

Image	Product	Finish	Quantity
	Hinges supplied by fire door manufacturer		
	dormakaba EN 3-6 Parallel Arm NON HOLD OPEN Door Closer TS83 PA -Adjustable Strength, Hydraulic Speed Control. Push Side Fixing (Parallel Arm Bracket Included) EN3 850-950, EN4 950-1100, EN5 1100-1250, EN6 1250-1400. Door Closer tested to EN 1154. Approved to AS1905 Part 1 Fire Resistant Doors. Certified manufacturer to ISO 9001 NOTE: Parallel Arm Bracket (Rack & Pinion) to be used for push-side fixing. Please note fixing instructions supplied with the product	Silver	1 Set
	60X245X1,6mm Thick Grade 304 Stainless Steel Fixing Plate With Pre Drilled Holes To Suit Doorcloser Fixing Holes.Plate To Be Installed On Opposite Side Of Door Using dormakaba M5 Male/FemaleFixing Screws. TS83-SS-FP		
	Dormakaba Patent fixing screws for door closers DOOR CLOSED M5 FIXING SCREWS	Satin Nickel	4 Each
	Dormakaba Two point locking panic bar – Single door - Door leaf 1000mm wide x 2270mm high (2201. 2104. PHX02. PHX04) PHA2 S SD		1 Set

Hardware Set	06
Description / Notes	Fire Door
Doors (Total)	11

Image	Product	Finish	Quantity
	Hinges supplied by fire door manufacturer		
	dormakaba ELECTRO MECHANICAL HOLD OPEN Co-ordinated door closer system for rebated doors between 1220-1350mm. Closing Force EN 3. Hydraulic speed control. Max door width 950mm per leaf. Pull-side fixing. Door closer compliant with EN 1154. Door coordinators tested to EN 1158. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120, MM/IMM 240. Certified manufacturer to ISO 9001. NOTE: dormakaba recommends that in addition to the connection to a fire alarm system; the G-SR EMF HO also should include a “push to release” button. This needs to be integrated into the circuit in close vicinity to the door, allowing for a controlled release of the door leaves for cleaning and maintenance. TS91B G-SR EMF 1 VK	Silver	1 Set
	Plate to be fabricated from 1.2mm thick stainless steel with 8mm diameter predrilled holes positioned according To the relevant drawings. All corners to receive 5mm radius fillet. TS91 EN3 FP	Stainless Steel	2 Each
	Dormakaba DPH301C Pull Handle BT fixed on a 170x170x1.2mm thick Grade 430 stainless steel plate with cylinder cutout left. Stainless Steel Plate to have 4 countersunk holes for screw fixing. (Special Order) DHP-430-CL-SF 170x170	430 Brushed Stainless Steel	1 Each
	dormakaba DPH301C Pull Handle BT fixed on a 170x170x1.2mm thick Grade 430 stainless steel plate with cylinder cutout right. Stainless Steel Plate to have 4 countersunk holes for screw fixing. (Special Order) DHP-430-CR-SF 170x170		

	Dormakaba Patent fixing screws for door closers DOOR CLOSED M5 FIXING SCREWS	Satin Nickel	8 Each
	Dormakaba M4 Patent Male / Female fixing screw pack (2 pairs per pack)	Stainless Steel	1 Pack
	Dormakaba Floor Mounted Door Stop. DDS-SS-017	Satin Chrome	1

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Information	22/11/2023
2	Issued for Tender	27/11/2023
3	Issued for Pricing	22/09/2025
REVISIONS:		

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

PROJECT:
TITLE:
Fire Escape Stair Ballustrade & Screen Details

Scale: As indicated

Date: 22 September 2025

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

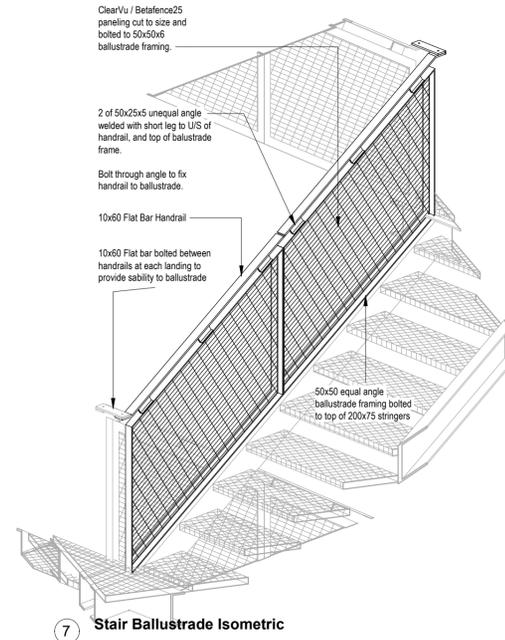
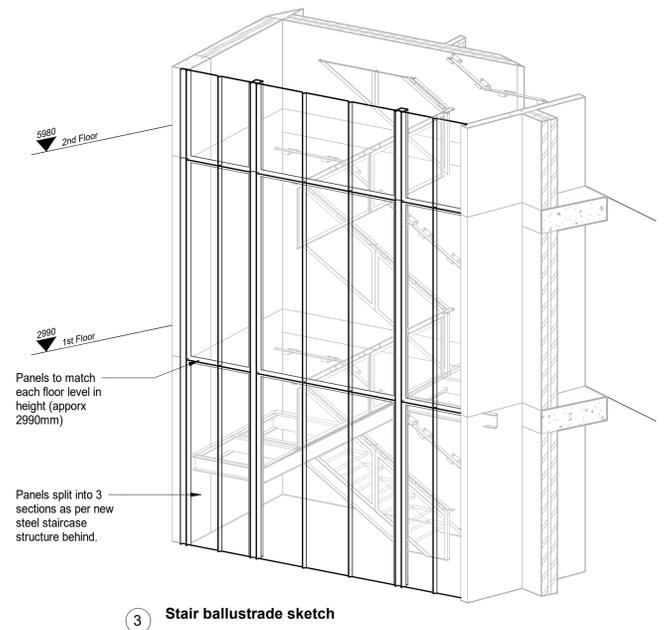
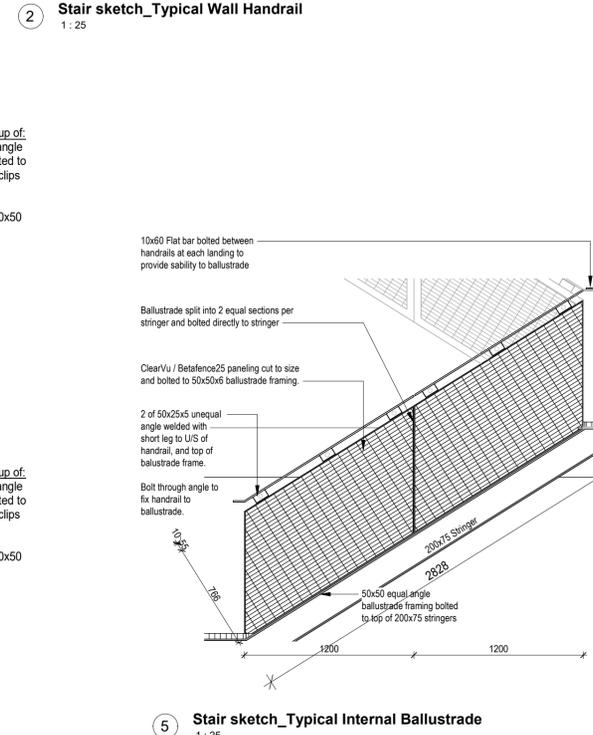
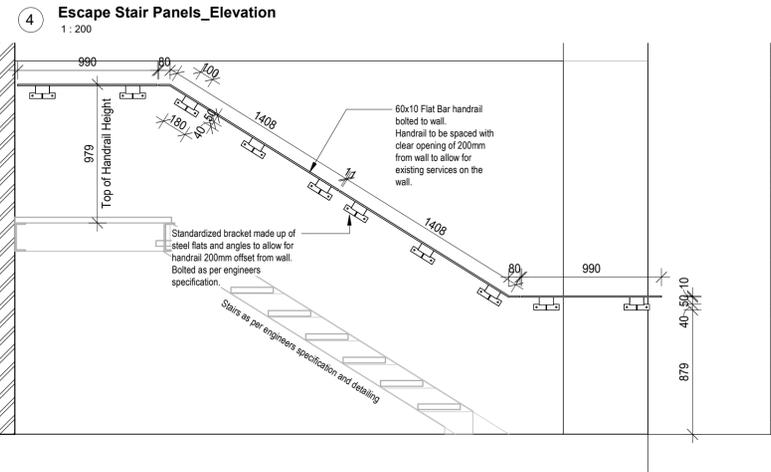
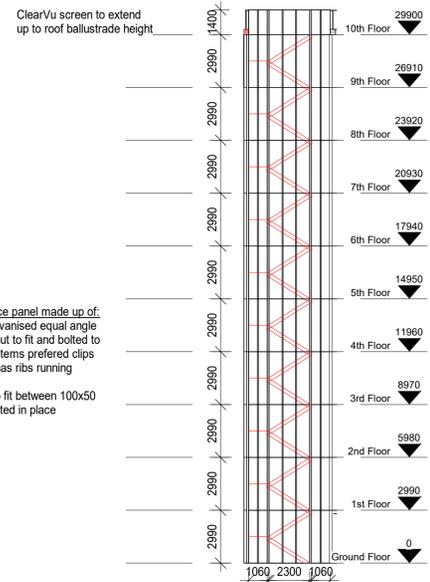
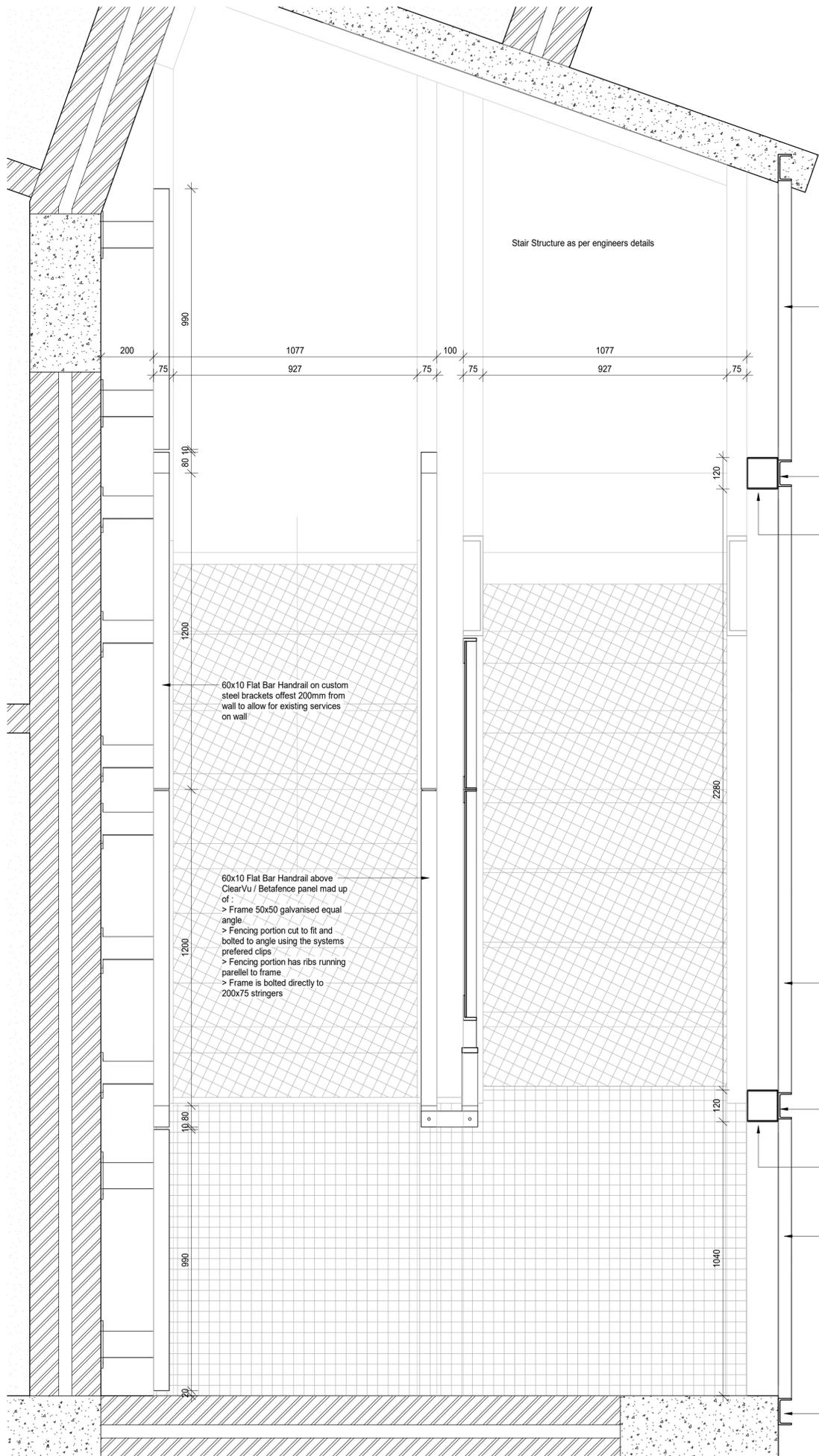
Checked by: B Brinkman

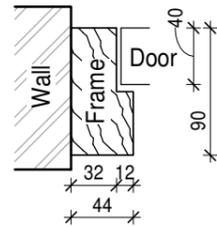
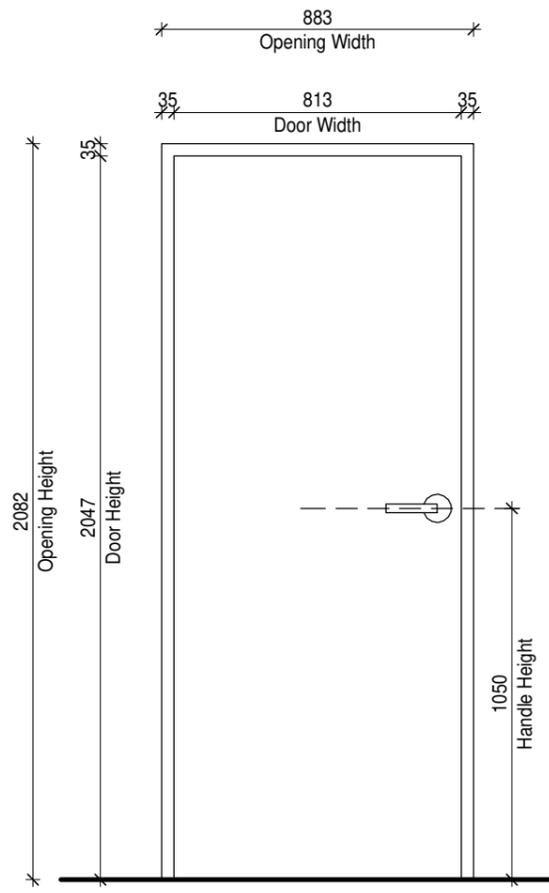
Sakhiwo Ref No:

B4 Project Ref No.: Architect DWG No:

305-019 DET-002

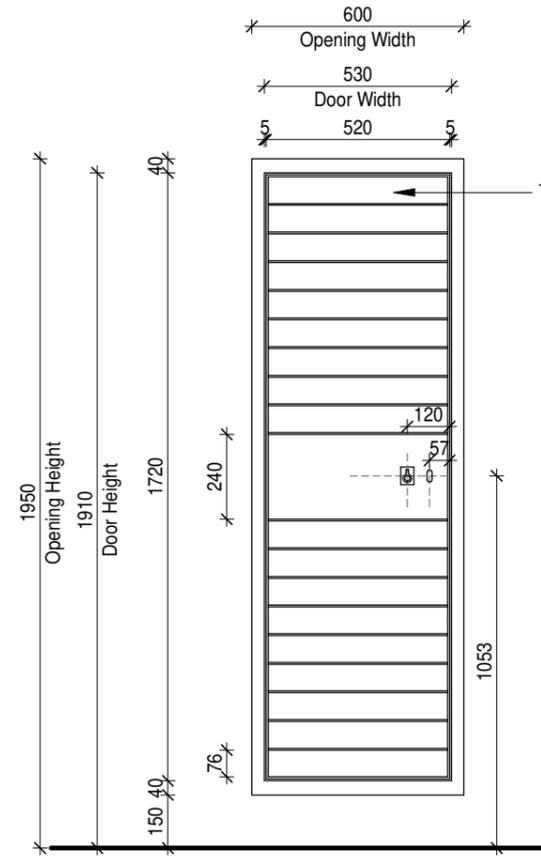
FOR TENDER ONLY
REV: 3





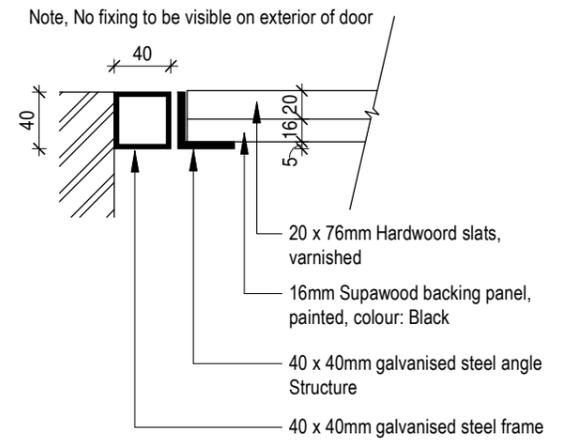
Door Type DT01

New standard hardwood timber frame (44x90mm) painted as per paint specification document



Door Type DT02

Solid 16mm timber infill layer with 20mm solid wood slats fixed on top



NOTE: All dimensions to be checked on site prior to manufacture

Door Schedule DT01-DT03

Mark	Type Mark	Height	Width	Construction Type	Finish	Comments
03	DT02	1950	600	Steel Frame, Timber slatted Duct Door	Natural Clear Varnish	40x40mm steel tube frame, 40x40mm Angle door rails and sides with timber infill
04	DT01	2082	883	Solid Core Timber	Painted as per finishes schedule	New Hardwood Timber Frame
05	DT02	1950	600	Steel Frame, Timber slatted Duct Door	Natural Clear Varnish	40x40mm steel tube frame, 40x40mm Angle door rails and sides with timber infill
06	DT01	2082	883	Solid Core Timber	Painted as per finishes schedule	New Hardwood Timber Frame

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for Pricing	31/10/2023
3	Update for pricing	08/11/2023
4	Issued for Tender	27/11/2023
5	Issued for Pricing	18/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale: As indicated

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

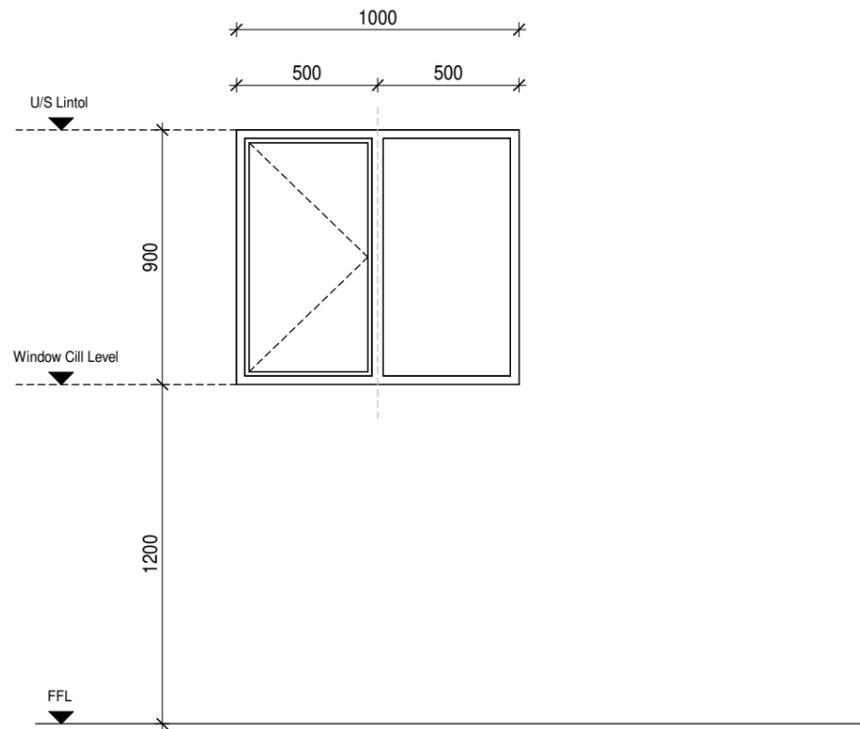
Checked by: B Brinkman

TITLE: Door Type DT01 , DT02

B4 Project Ref No.: 305-019 **Architect DWG No.:** DOR-001

FOR TENDER ONLY

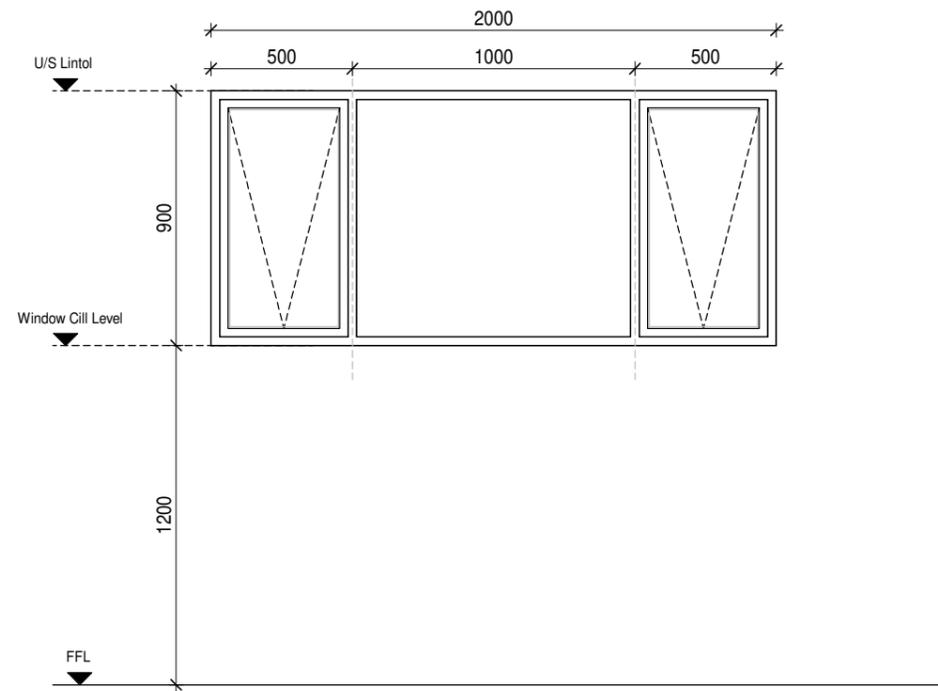
REV 5



Window Type WT01

Standard aluminium window to specialist detail.
 Heavy duty friction stays to be installed as per specialist recommendation.
 Colour: To match existing windows
 Glazing: 6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

Note: Window to replace existing steel window



Window Type WT02

Standard aluminium window to specialist detail.
 Heavy duty friction stays to be installed as per specialist recommendation.
 Colour: To match existing windows.
 Glazing: 6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

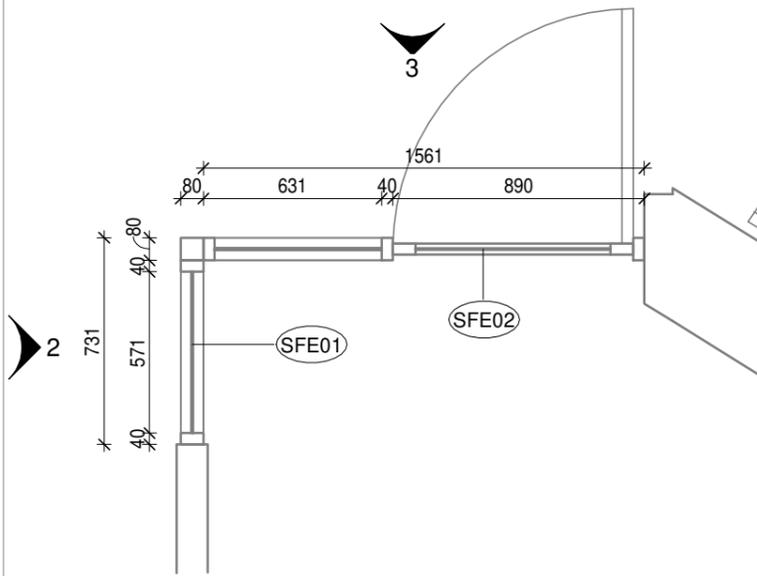
Note: Window to replace existing aluminium window

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	18/09/2025

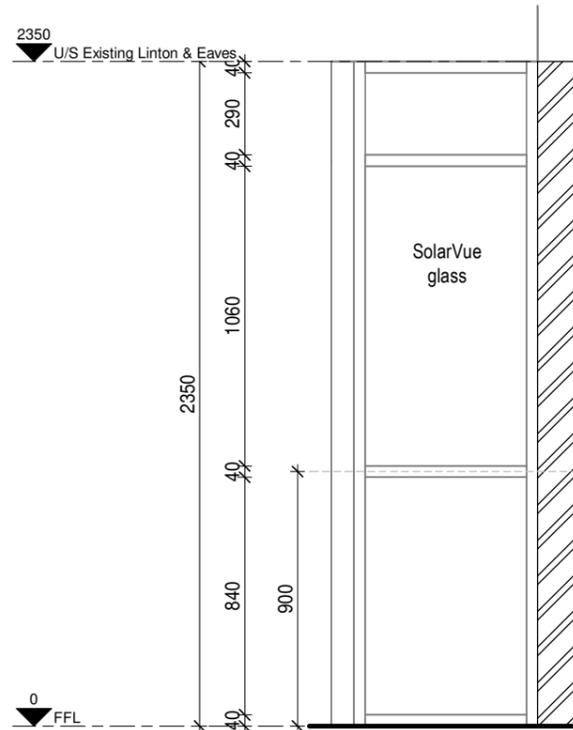
PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
	Sakhiwo Ref No:
	Date: 22 September 2025

Scale:	1 : 25
Drawn by:	J Thomson
Designer:	b4 Architects
Professional Architect:	B Brinkman
Checked by:	B Brinkman

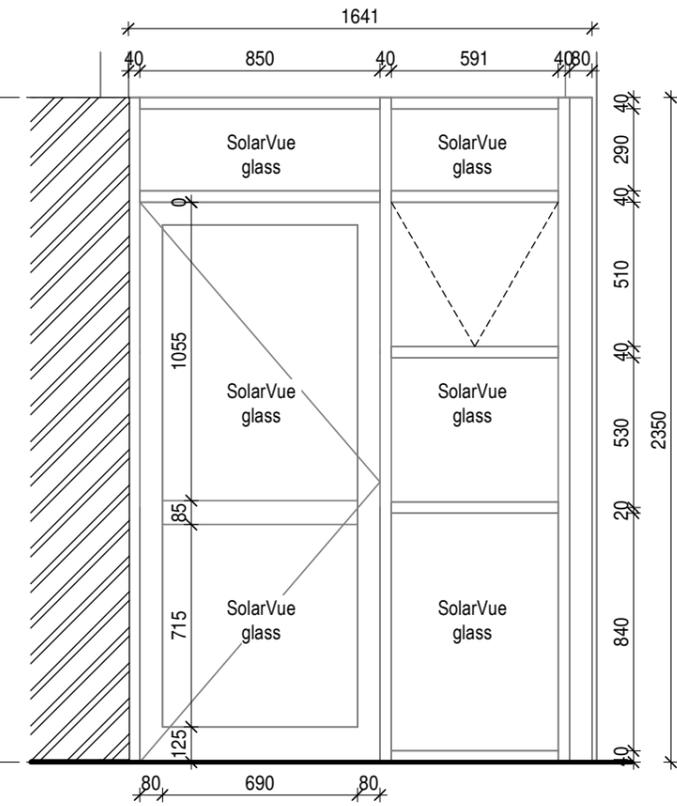
TITLE:	Window Type WT01 & WT02
B4 Project Ref No.:	Architect DWG No.:
305-019	WIN-001
FOR TENDER ONLY	
REV	4



1 Shopfront SFE01, SFE02_Plan
1 : 25



2 Shopfront SFE01_Elevation
1 : 25



3 Shopfront SFE02_Elevation
1 : 25

Shopfront Schedule SFE01, SHE02

Mark	Comments	Vinyl Decal	Glazing
E01	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E02	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E03	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E04	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E05	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E06	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E07	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

COPYRIGHT NOTICE

Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and/or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

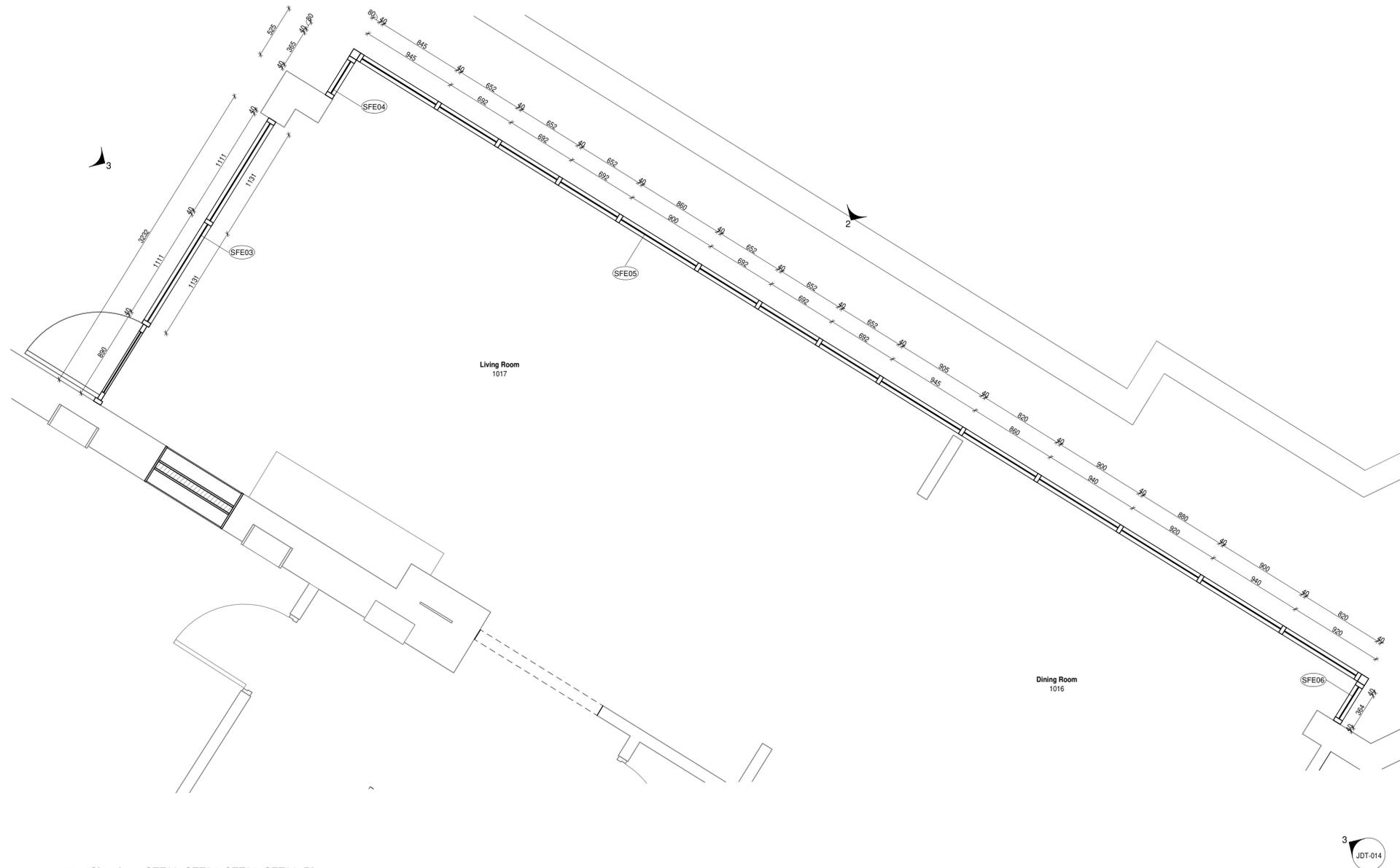
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	18/09/2025

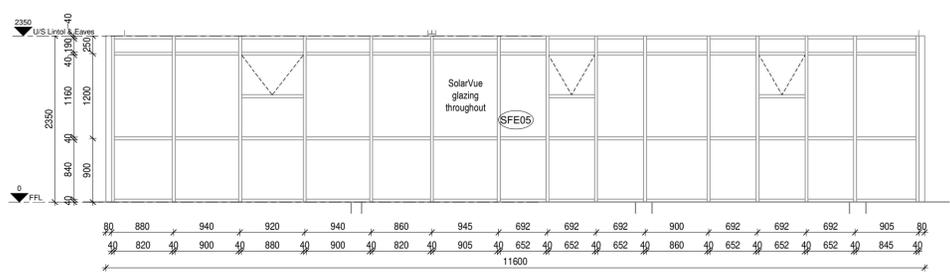
PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 25
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

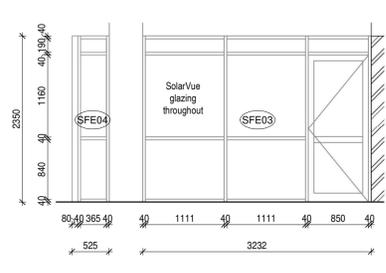
TITLE:	Shopfront Schedule SFE01, SFE02
B4 Project Ref No.:	Architect DWG No:
305-019	SHF-E01
FOR TENDER ONLY	
REV	4



1 Shopfront SFE03, SFE04, SFE05, SFE06_Plan
1 : 25



2 Shopfront SFE05_Elevation
1 : 50



3 Shopfront SFE03, SFE04_Elevation
1 : 50

Shopfront Schedule SFE03, SHE04, SFE05, SFE06			
Mark	Comments	Vinyl Decal	Glazing
E01	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E02	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E03	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E04	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E05	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E06	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E07	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	18/09/2025

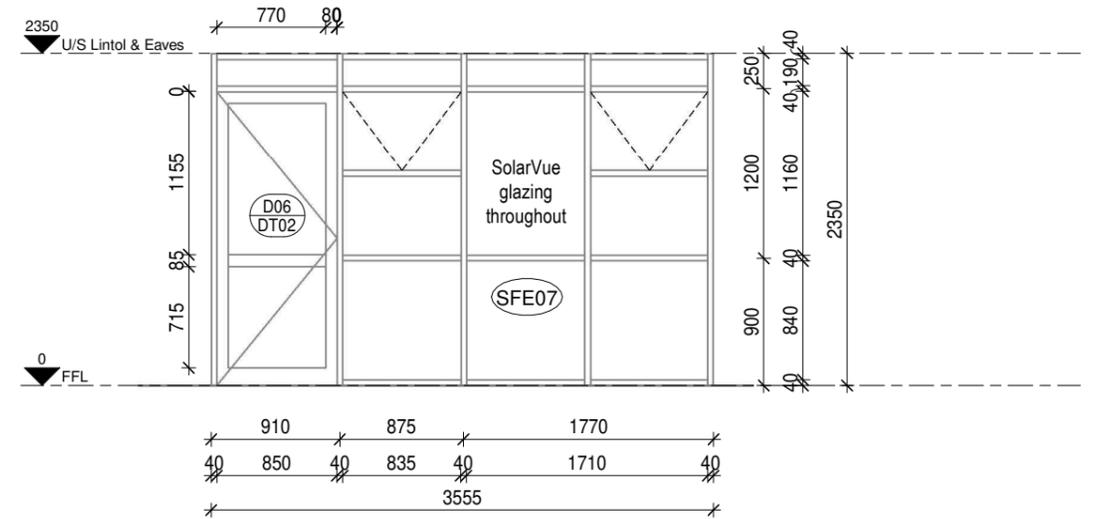
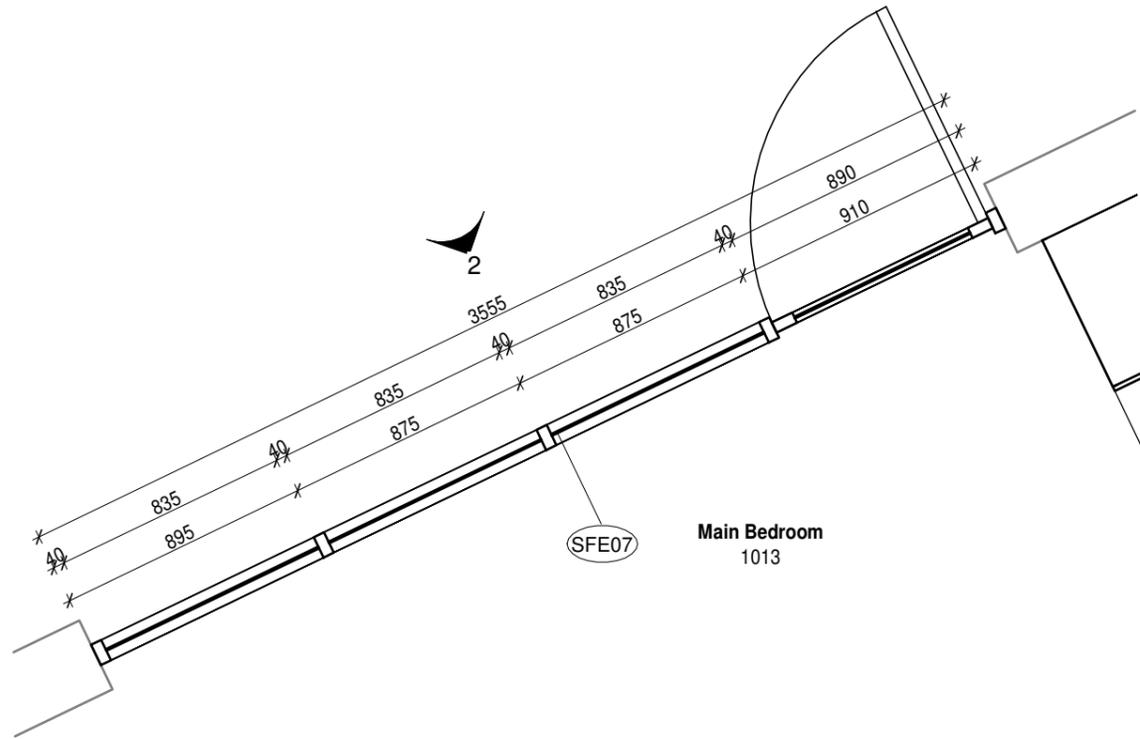
PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman
Sakhiwo Ref No:	

TITLE:	Shopfront Schedule SFE03, SFE04, SFE05, SFE06
B4 Project Ref No.:	305-019
Architect DWG No.:	SHF-E02
FOR TENDER ONLY	
REV:	4



1 Shopfront SFE07 - Plan
1 : 25

2 Shopfront SFE07 - External Elevation
1 : 25

Shopfront Schedule SFE07, SFE08

Mark	Comments	Glazing	Vinyl Decal
E01	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E02	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E03	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E04	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E05	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E06	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E07	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	18/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Shopfront Schedule SFE07	
B4 Project Ref No.:	Architect DWG No:	
	305-019	SHF-E03
	FOR TENDER ONLY	
		REV 4

LIVINGSTONE HOSPITAL

ALL ARCHITECT'S DRAWINGS

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date

DEPARTMENT OF HEALTH & CDC
PROJECT:
UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES
CONTRACT No. CDC/377/25

TITLE:
Ceiling & Key Plan

Scale: As indicated

Date: 2025-09-22

Drawn by: PV

Designer: PV

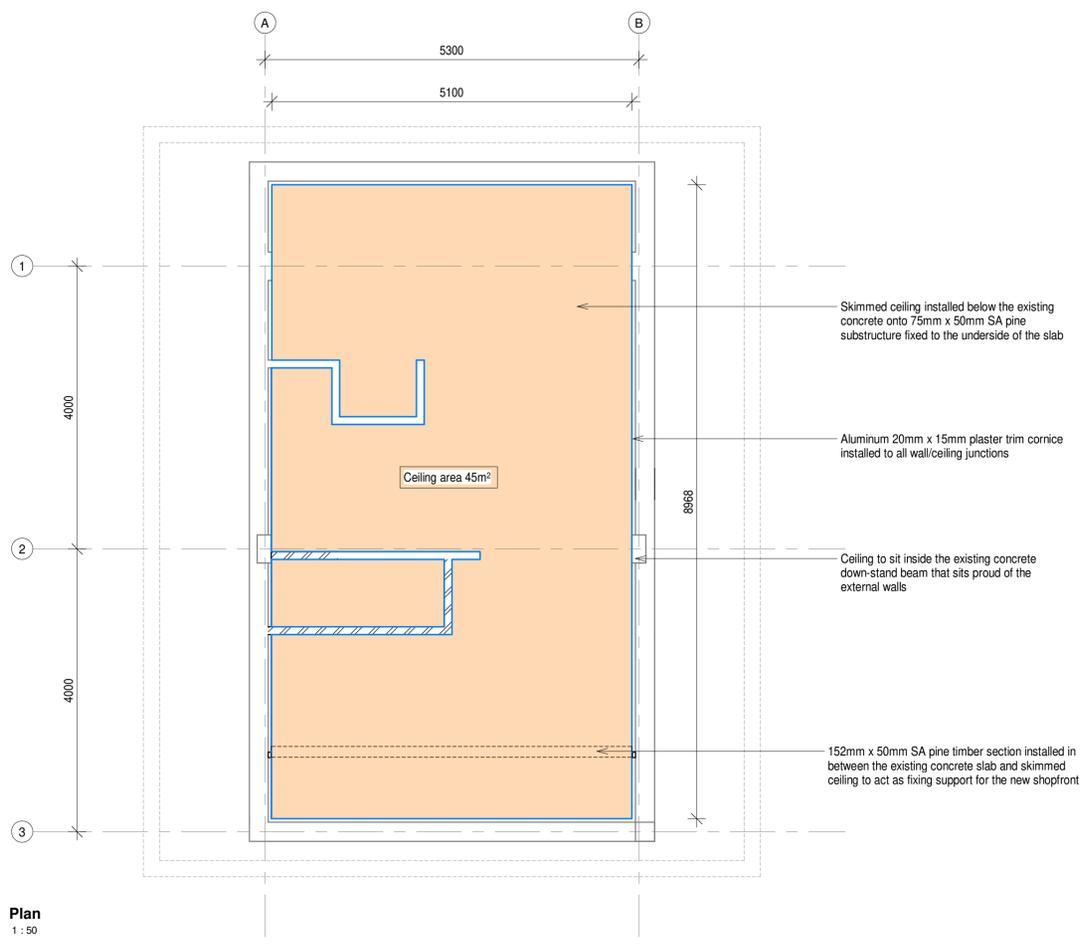
Professional Architect: BB

Checked by: BB

DWG No: 314-013_ARC-004

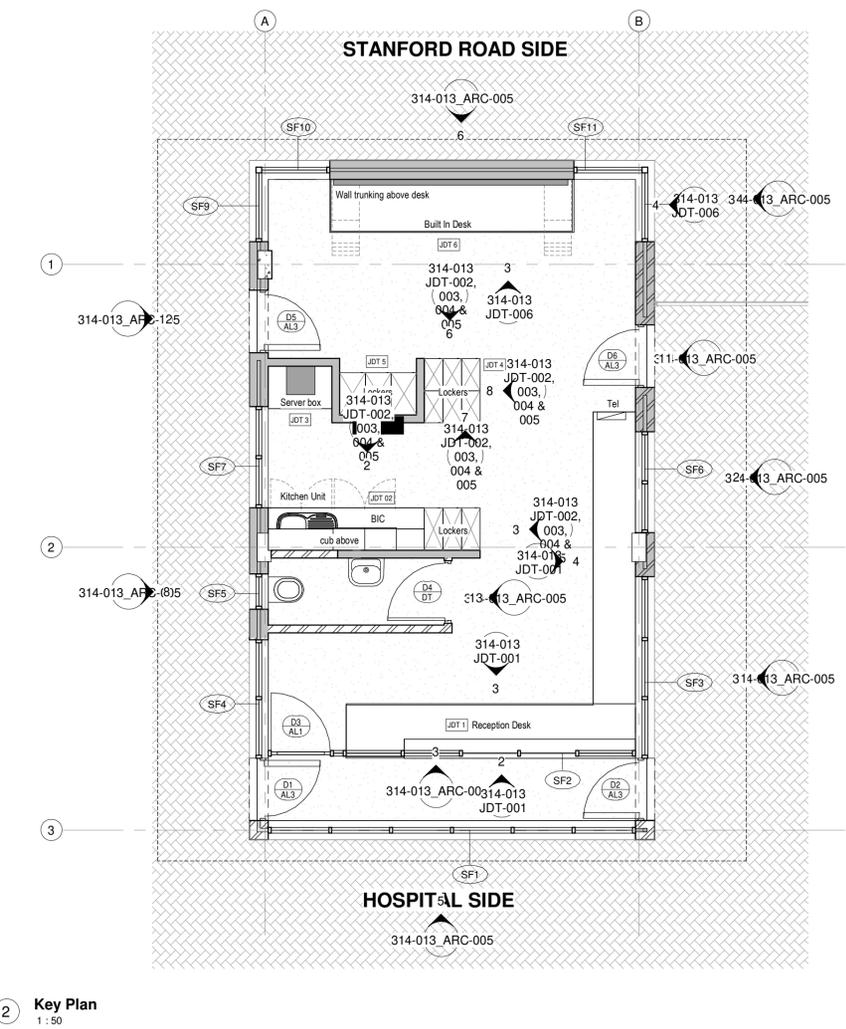
FOR TENDER ONLY

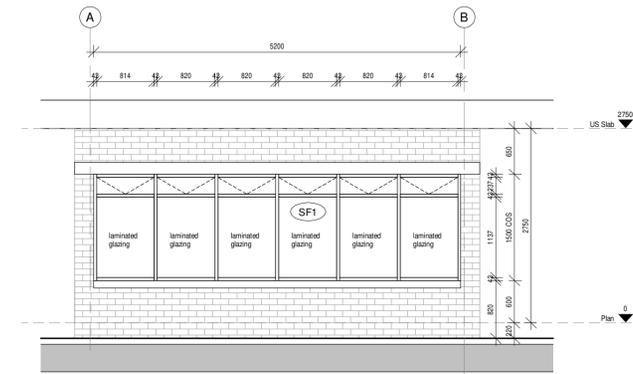
REV:



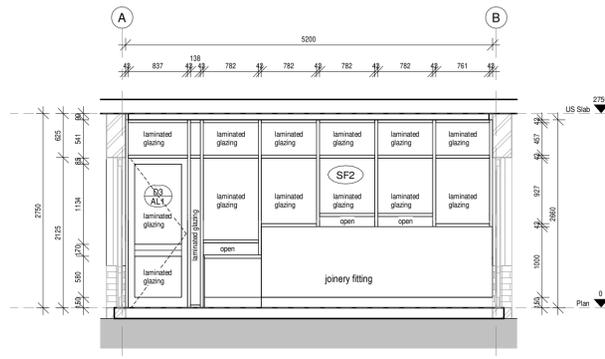
KEY

	SKIMMED CEILING: Gyproc Rhinoboard 6.4mm plasterboard ceiling consisting of 75mm x 50mm branders fixed at 600mm centres in one direction onto which Rhinoboard is fixed, primed side up, at right angles to the roof structure. All joints to be covered with Gyproc Rhinobond (include over butt joints) and then plastered with a 3.5mm coat of Gyproc Rhinobond or Gyproc CreateStone plaster applied as per manufacturers' instructions. Final finish to be painted. Clean, scribe, prepare and apply one (1) coat Placon Professional Waterbased Gyproc Sealer (PDS1), apply two (2) coats Placon Professional Super Matt (PEM500/15A).
	Cornice: New OVA aluminum 20mm x 15mm plaster trim shadow line plaster trim. All corners and junctions to be neatly cut at a 45° angle and set flush with one another. A filler section of wood to be added in the gap where the internal shopfront meets the bottom of the ceiling.

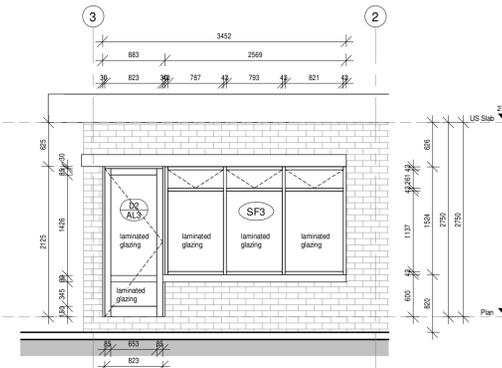




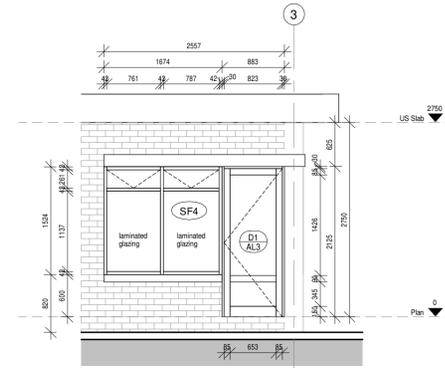
5 SF1 Window
1 : 50



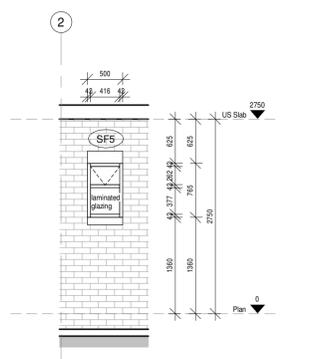
3 SF2 Reception shopfront & D3 Door
1 : 50



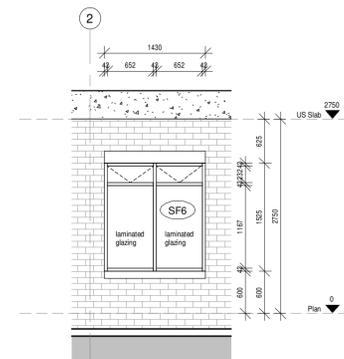
1 SF3 Window & D2 Door
1 : 50



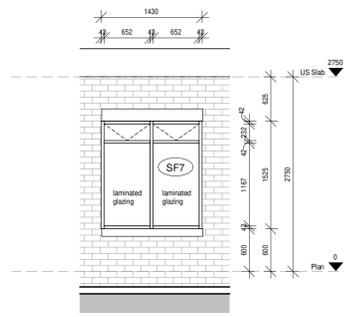
9 SF4 Window and D1 Door
1 : 50



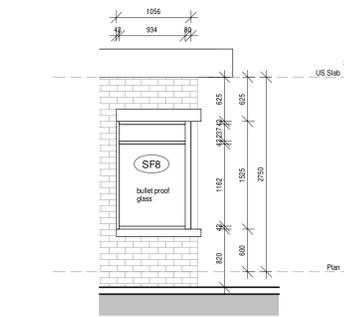
8 SF5 Window
1 : 50



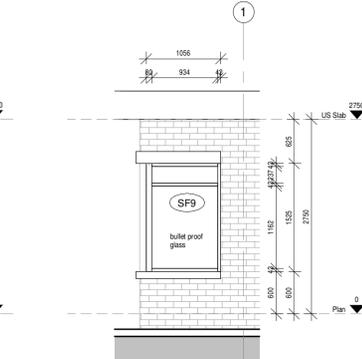
2 SF6 Window
1 : 50



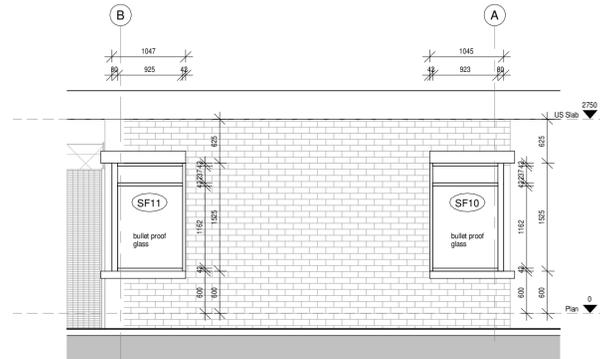
7 SF7 Window
1 : 50



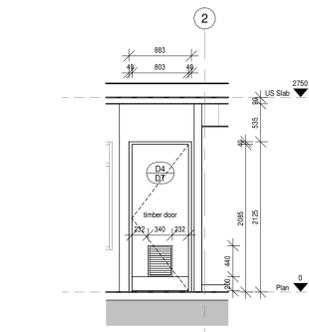
4 SF8 Window
1 : 50



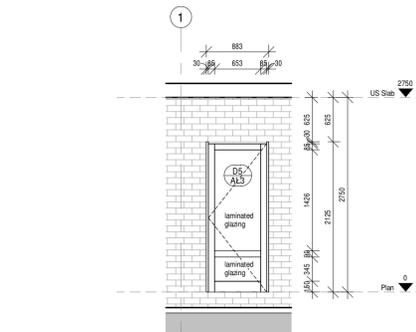
10 SF9 Window
1 : 50



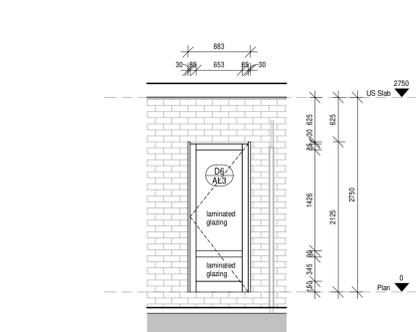
6 SF10 & SF11 Window
1 : 50



13 D4 Door
1 : 50



12 D5 Door
1 : 50



11 D6 Door
1 : 50

Window Schedule

Mark	Frame and mullion description	Windows and operable sections	Glazing type	Ironmongery
SF1	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF2	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	No operable sections, allow for the 3 x pigeon holes above the joinery fitting	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF3	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF4	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF5	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF6	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF7	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	Top hung operable sections to be fitted in 80mm mullions and 42mm x 80mm transoms with friction hinges and handles as per manufacturers specification (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification
SF8	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections, allow for the 3 x pigeon holes above the joinery fitting	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery
SF9	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery
SF10	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery
SF11	Double glazing HBS casement aluminum glazing system to take bullet proof glass fitted into the existing opening (white powdercoated)	No operable sections	All glazing to be 28mm laminated hand gun bullet proof glass	No ironmongery

Window Schedule

Mark	Door	Frame Type	Finish	Ironmongery	Count
AL1	40mm HBS aluminum door system to fit into 42mm x 80mm transom and top rail (white powdercoated)	80mm mullions and 42mm x 80mm transoms aluminum frame sections form the door frame (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification	1
AL3	80mm slim-line HBS Tenacity aluminum glazing system with 42mm x 80mm transom and bottom rail (white powdercoated)	80mm mullions and 42mm x 80mm transoms aluminum frame sections form the door frame (white powdercoated)	All glazing to be 8.76mm high penetration resistant safety glass	As per ironmongery specification	4
DT	40mm thick solid core door with 10mm hardwood edging to stiles	42mm thick x 86mm wide standard hardwood frame	Prepped, primer painted prior to final coats painted (sand in between coats)	As per ironmongery specification	1

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date

DEPARTMENT OF HEALTH & CDC
PROJECT: UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES
CONTRACT No. CDC/377/25

Window & Door Schedules

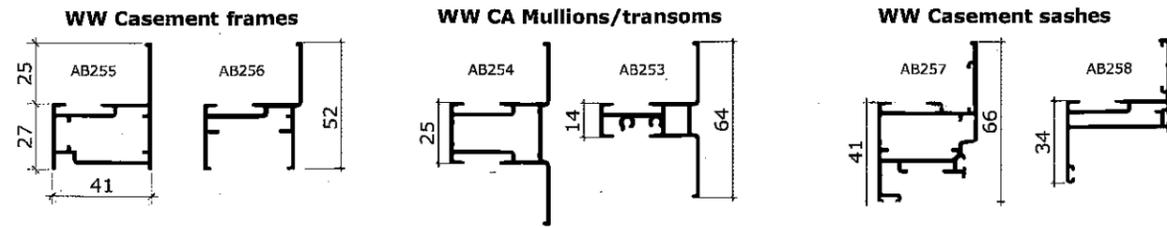
Scale	1 : 50
Date:	2025-09-22
Drawn by:	PV
Designer:	PV
Professional Architect:	BB
Checked by:	BB

DWG No: 314-013_ARC-005

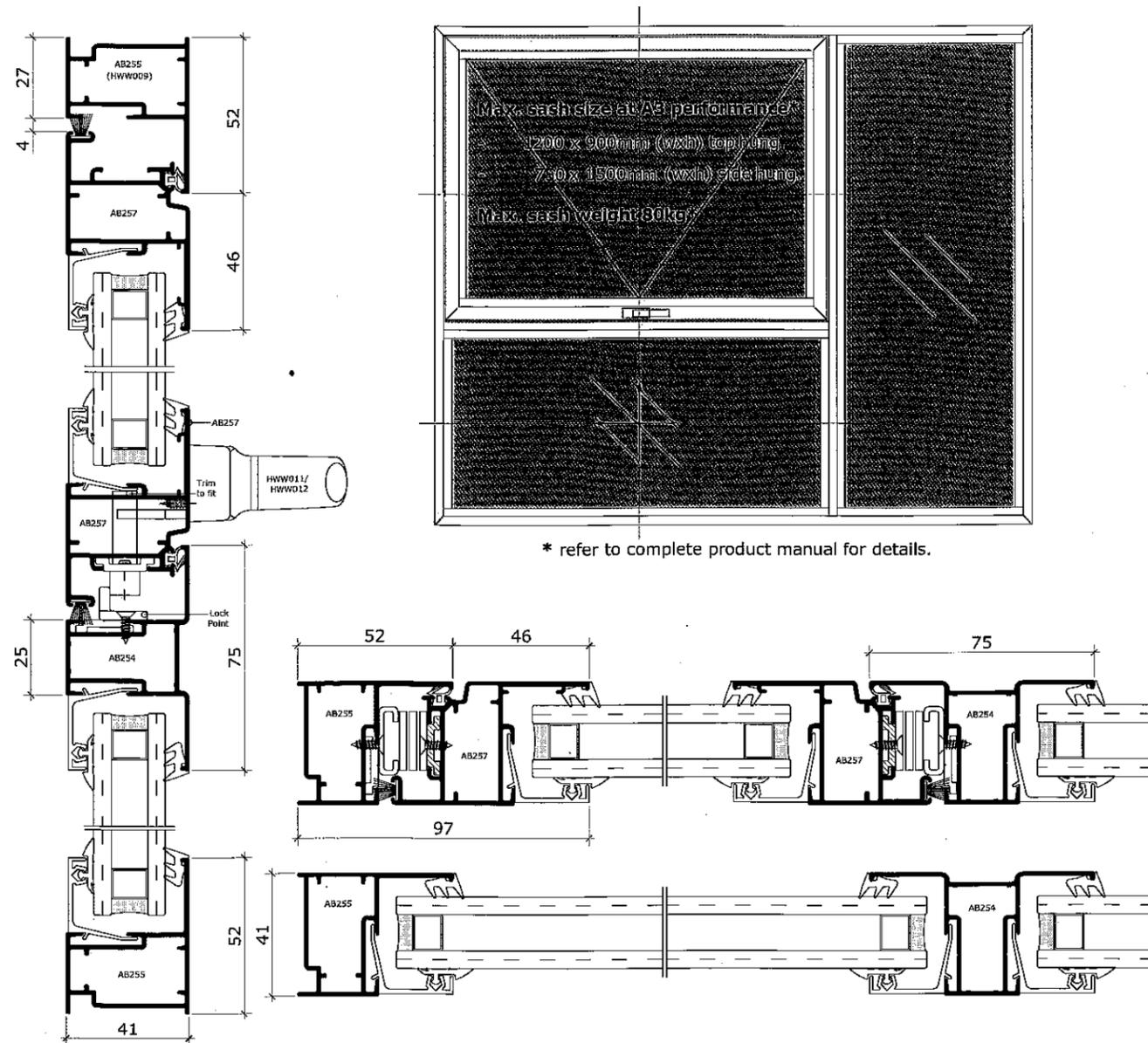
FOR TENDER ONLY

INTRODUCING CASEMENT DOUBLE GLAZING

On the basis of 6 new profiles and 5 additional hardware items HBS is pleased to introduce an economical and efficient A3 high-performance casement window system for double glazing up to 28mm.



For efficiency Window Wall casement utilizes glazing beads from the larger Window Wall system. The in-line sash (AB257) is designed for WW casement but also fits the larger Window Wall external Shopfront, WW Galaxy Slider, WW Vistafold and WW Foldaway. Same applies to casement mullions (AB254). Product U-values below 3 are obtainable with double glazing.

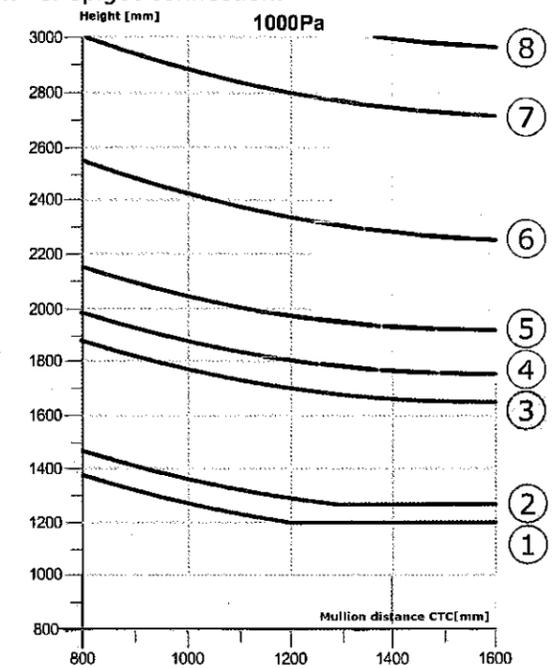
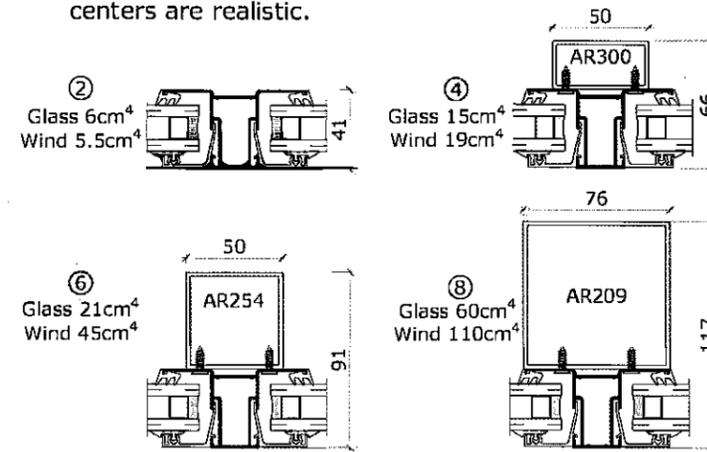
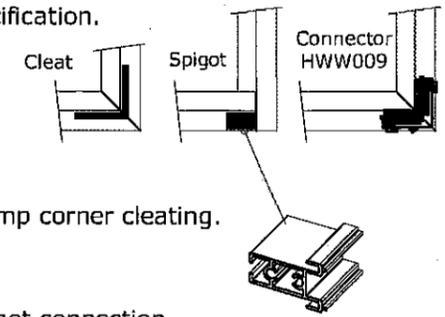


* refer to complete product manual for details.

FABRICATION

Window Wall casement can be made using conventional crimp corner cleats or pneumatic punch corner connectors depending on profile choice & specification.

- Outer frame (AB256) can be miter cut 45deg with cleats or square-cut 90deg with spigots. AB255 uses HWW009 mechanical connector.
- Sashes are miter cut for pneumatic punching or conventional crimp corner cleating. Gaskets are either push-in type, bubble seals or finpile.
- Mullion / transom profiles are end-milled for either screw- or spigot connection.
- Re-inforcement of mullion and/or transoms is provided. At 1000Pa products to 2700mm height at 1200mm centers are realistic.



ESTIMATING - QUICK QUOTE -

WW casement is fully integrated in Quick Quote versions higher than 3800. Material lists, costing and CAD drawing integration is ready for use in Quick Quote.

HBS
ALUMINIUM SYSTEMS

Cutting List

HBS
ALUMINIUM SYSTEMS

Project no. : 11
Project name : Window Wall Casement
Client name : World Center Johannesburg

Date: 21/01/2019

HBS Nuklip Window Wall - Casement

Image	Code	Description	Dimension
-------	------	-------------	-----------

WW Frame for Connector			
[Image]	AB255	w	1800
		H	1200
WW CA Sash for Connector			
[Image]	AB257	w	1152
		H	702
WW CA Mullion			
[Image]	AB254	w	1161
		H	1146

HBS
ALUMINIUM SYSTEMS

Quotation

Project no. : 11
Project name : Window Wall Casement
Client name : World Center Johannesburg

HBS
ALUMINIUM SYSTEMS

Date: 21/01/2019

Type	Width	Height	m²	Unit price ZAR	No of	Subtotal ZAR
1 [Image]	1800	1200	2.16	1,526.34	1	1,526.34
Description: Fix Alu. Color Code: White						



- for the Architect

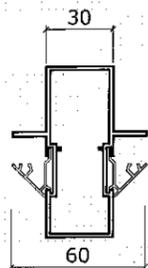
SLIM-LINE AESTHETICS

- 30% slimmer than typical Shop Front systems.
- 42mm profile width glass-to-glass (60mm typ.)
- 12mm mullion line internally (30mm typ.)
- Clean, facade-stile appearance.
- Maximum light and vision.

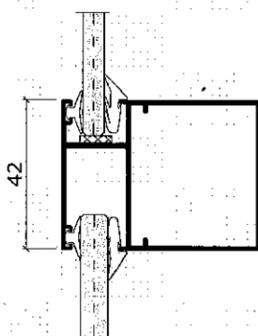
Typical Tenacity Mullion



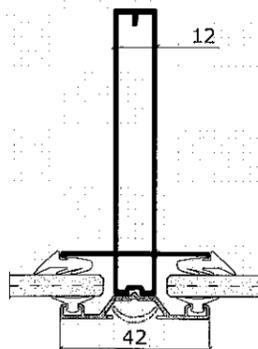
Typical Shop Front Mullion



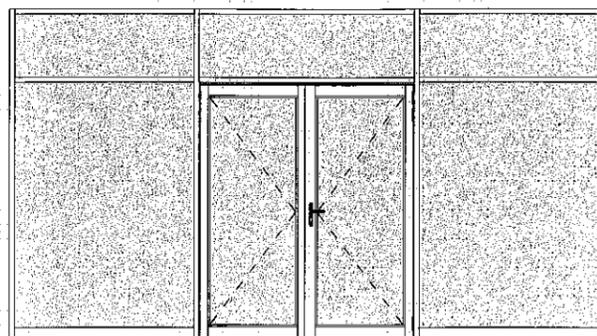
Tenacity Transom



Tenacity mullion



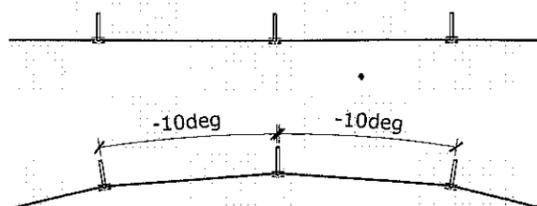
FRAME INSERTS - DOORS & WINDOWS



Inside or outside opening doors

FRAME CONSTRUCTION OPTIONS

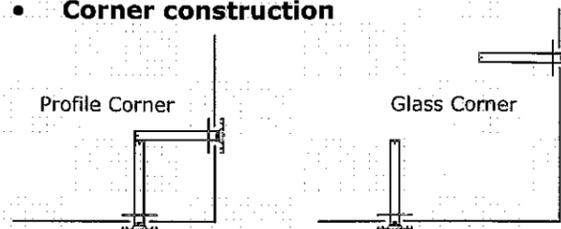
Flat screens



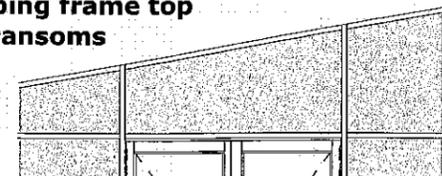
Curved, segmented screens (Max +/-10deg per mullion)



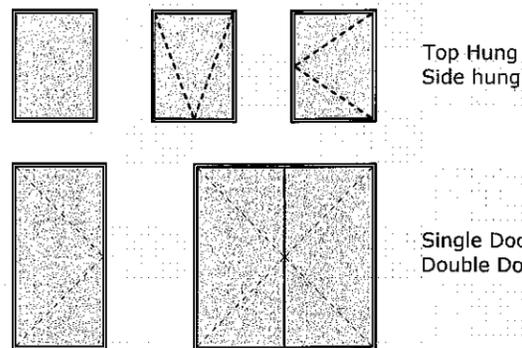
Corner construction



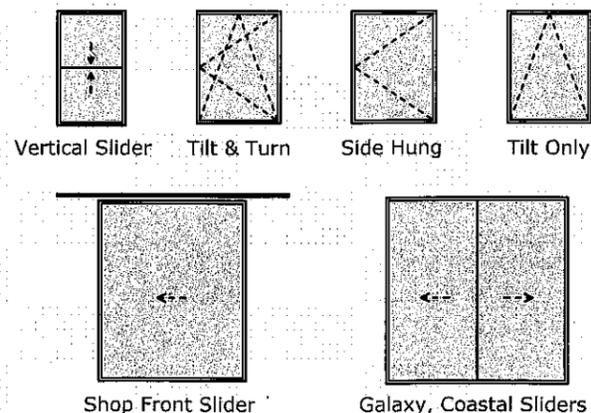
Sloping frame top & transoms



Sash & door inserts - with Rebate



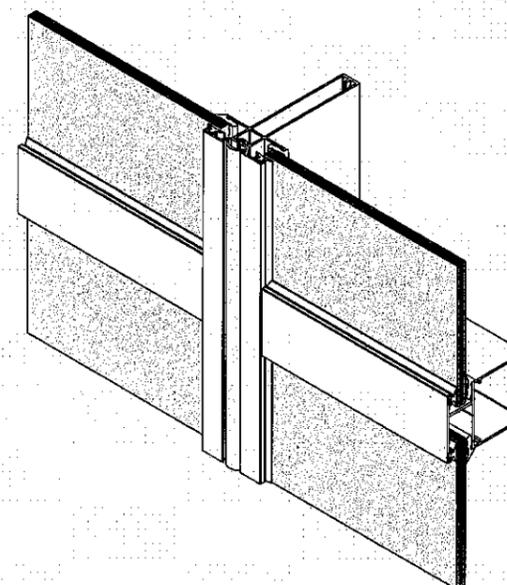
Product inserts - no Rebate



- for the Fabricator

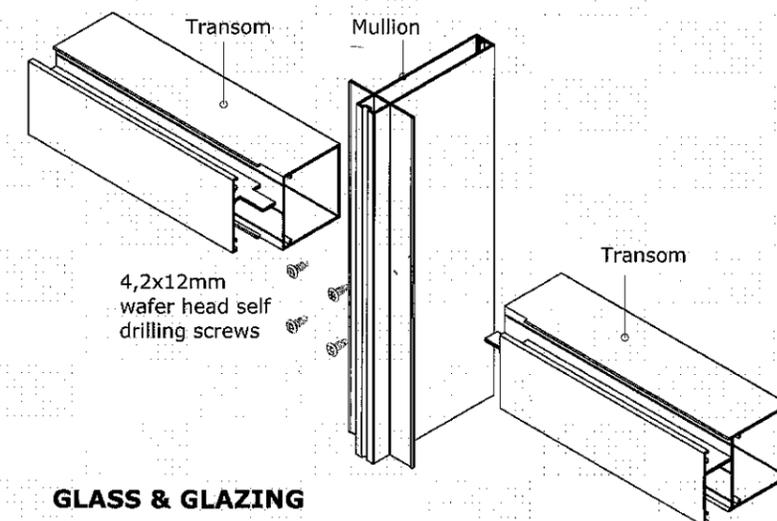
CLEAR BENEFITS

- Up to 30% cheaper than typical shopfronts.
- 40% faster assembly of fixed screens.
- 50 to 85% fewer beads yields faster cutting & glazing.
- High product performance due to simple construction.
- Simple mullion re-enforcement designed in.
- Inside and outside opening doors. (hinged & otherwise)
- Head & Sill compensation and concealed fixing available.

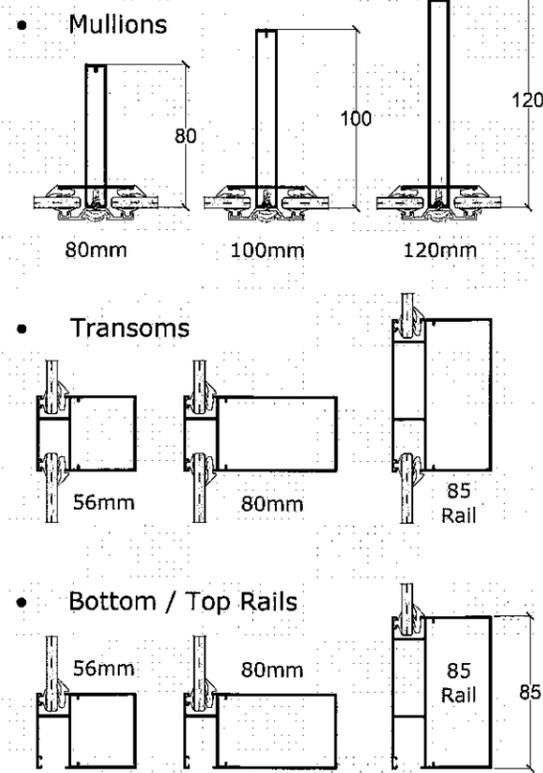


SPIGOT-LESS FABRICATION

- End milled transoms are joined directly to mullion with self-drilling screws.
- No pre-drilling required, just direct fixing.
- Easily sealed transom to mullion joints.
- Direct fix mullion pressure plate.



PROFILES

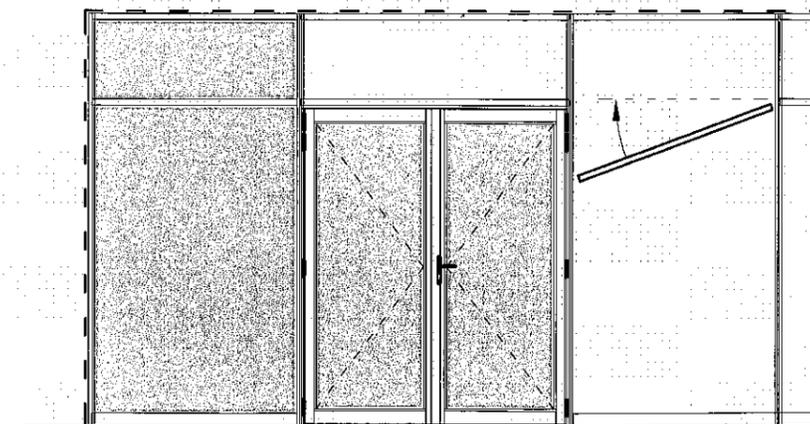


GLASS & GLAZING

- 6,0 to 9mm thickness glass.
- Non-vision panels up to 12mm can be glazed in. (MgO, plaster board etc)

ASSEMBLY

- Build ladder frames as required.
- Transoms are rotated into position, fixed & sealed.
- Insert glass, mount pressure plates, run gaskets.



COPYRIGHT NOTICE

The person or entity whose name appears in the title block of this drawing, reproduces this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license is in respect of the copyright in the drawing, as advised and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in the drawing to any other entity.

This license confers no ownership rights in the copyright material in the drawing the property of **B4 Architects**.

Any unauthorised reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an infringement of copyright. Where necessary, the copyright owner shall be notified in writing of any such infringement, requesting the cessation of the infringement and the appropriate compensation.

Secured using tamper-proof shear-off nuts. (In self-drilling screws).

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-1000 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing work. The contractor shall be responsible for any discrepancy between the drawings and the actual site conditions. Any discrepancy should be immediately referred to the Architect. IF IN DOUBT PLEASE ASK!

No.	Description	Date

DEPARTMENT OF HEALTH & CDC

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES CONTRACT NO. CDC/377125

PROJECT:
Site Layout
New Fence Layout

TITLE:
New Fence Layout

Scale:
1:750

Date:
23 SEPTEMBER 2025

Drawn by:
PHV

Designer:
Bryan Brinkman

Professional Architect:
Bryan Brinkman

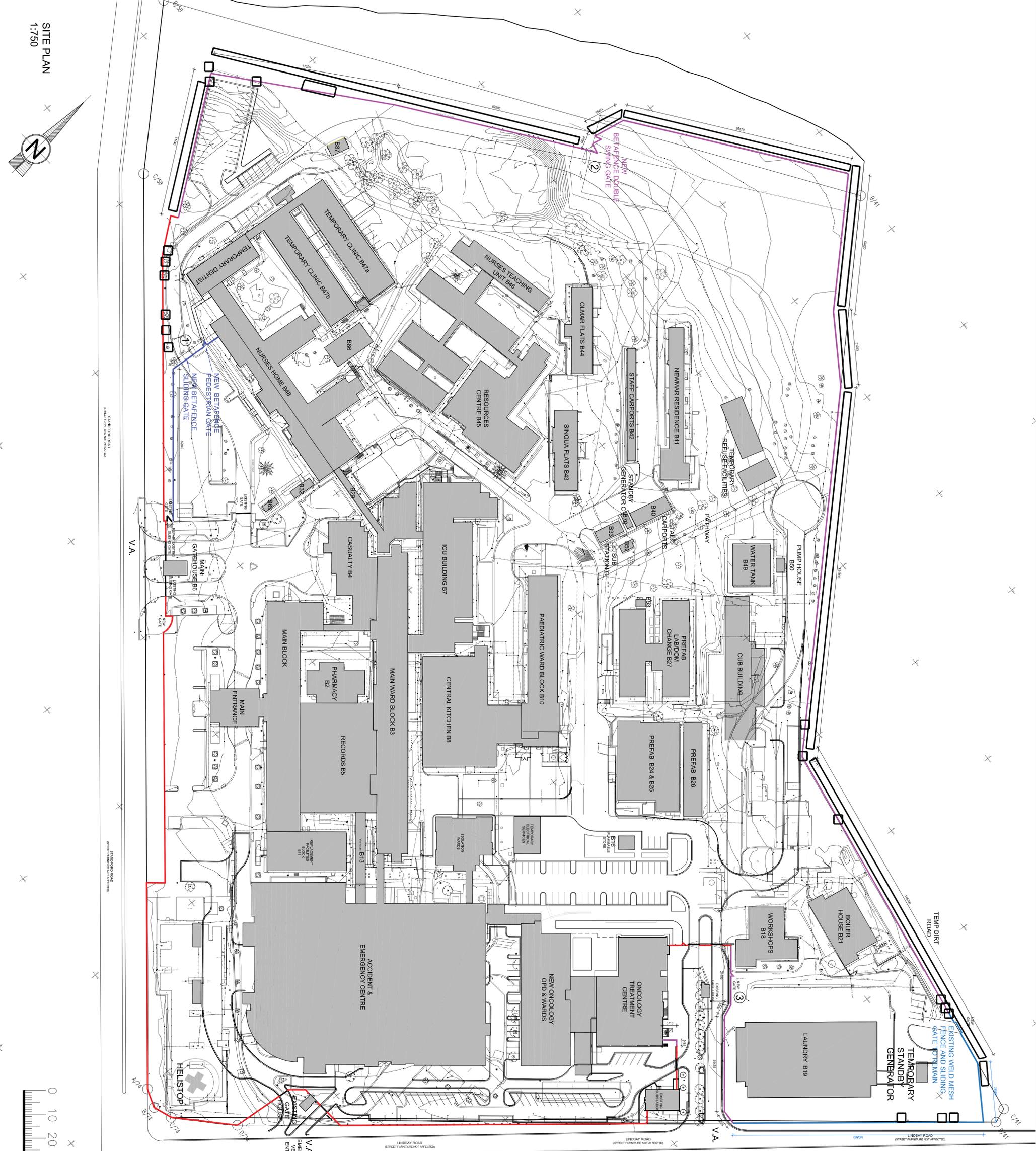
Checked by:
Bryan Brinkman

B4 Project Ref No.:
314-013

DWG No.:
314-013_ARC-S002

FOR TENDER ONLY

REV.:



SITE PLAN
1:750



COPYRIGHT NOTICE

Copyright © 2019 (b4 Architects). Copyright applies to this drawing. The person or entity whose name appears in the title block of this drawing, in having granted a non-exclusive license to use, display, print and / or reproduce the drawing, does not intend to waive or relinquish the copyright or other intellectual property rights in the drawing. Any person or entity who reproduces, publishes, transmits, disseminates, or otherwise makes available the drawing, in whole or in part, without the prior written consent of the copyright owner, shall be liable for all damages and costs incurred by the copyright owner. The license is granted for the copyright in the drawing, and the copyright owner reserves the right to sue for infringement of the copyright in the drawing. The license confers no ownership rights in the copyright, vesting in the drawing and the drawing and the copyright in the drawing, remain the property of b4 Architects.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa. At least in, to comply with the various SANS (SANS-10400 Building Regulations and all other regulations referred to therein).

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing work. All dimensions shall be taken from the finished floor level unless otherwise stated. Any dimensions should be immediately referred to the Architect. IF IN DOUBT PLEASE ASK!

No.	Description	Date

DEPARTMENT OF HEALTH & CDC

PROJECT:
UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPP HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES
CONTRACT NO. CDC/377125

TITLE:
Site Layout
and Contractors Yard
Plan

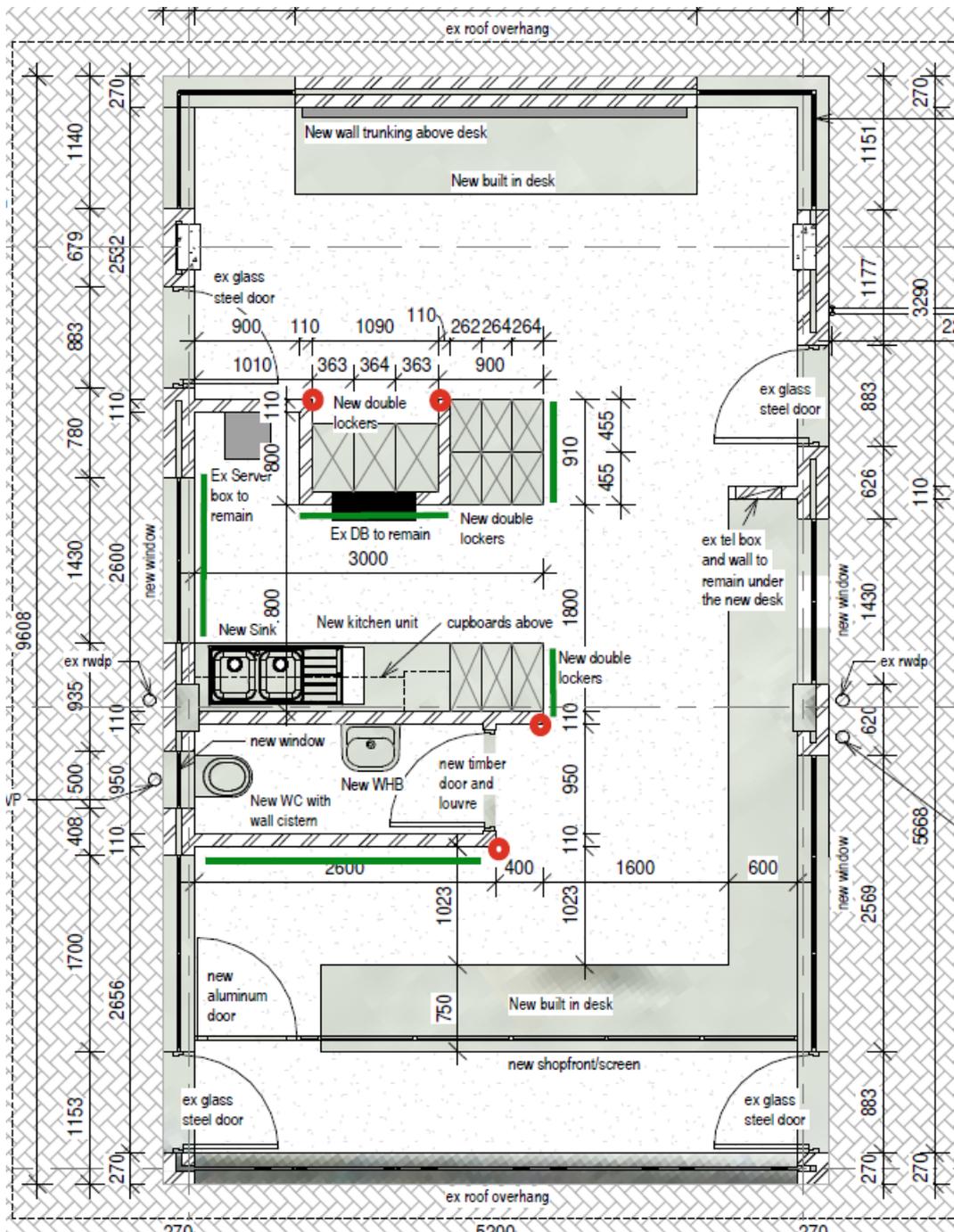
Scale	1:750
Date	23 SEPTEMBER 2025
Drawn by:	PHV
Designer:	Bryan Brinkman
Professional Architect:	Bryan Brinkman
Checked by:	Bryan Brinkman
B4 Project Ref No.:	314-013
DWG No.:	314-013_ARC-S005
FOR TENDER ONLY	REV.:



SITE PLAN
1:750

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick "POLYFLOR FOREST FX PUR" Rural Deckwood 3102 PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations.</p>
Skirting:	<p>Existing timber skirting to be removed. Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.</p>
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p> <p><u>SPLASHBACK:</u> Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness. Splashback to be indicated on joinery details.</p>
Protection:	New Sure-protect 200 x 3.5mm Wall
Window Sill:	New plastered and painted internal cill.
Window:	Refer window schedule.
Pelmet:	Nil
Door Frame:	<p>Allow for existing steel door frame to be removed</p> <p>New door frames as per shopfront and door schedules.</p>
Door:	<p>Allow for existing doors to be removed.</p> <p>New WC door as per detail.</p> <p>New Aluminium external doors as per detail.</p>
Cornice:	New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 9,5mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 50x38 Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Refer joinery schedule.
Sanitaryware:	Refer sanitarwary schedule.
Accessories:	Nil

Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil.
Notes:	Refer to Demolition Notes.



- **Red Dot** : ex 50 x 50mm x 90 degree x 1000mm high Gradus CG5090 Standard PVC-u Corner Guard no tape installed with contact adhesive and adequately primed surface to suppliers specification.
- **Green Line** : 200mm x 3.5mm thick Gradus WST200 PVC u-strip with bevelled edges, fixed to wall or cupboard with adhesive tape as supplied by Gradus supplier, with all joints to be butt jointed and edges sealed with SEPSC310 silicone sealant (Colour matched).

LIVINGSTONE HOSPITAL
MAIN ENTRANCE GUARDHOUSE
IRONMONGERY SCHEDULE

HARDWARE SET FOR DOOR TYPE A				
Notes	Aluminium fabricator to ensure the upright stiles are of sufficient width to accept the ironmongery specified. Preferably R4-90mm Male/Female screws to be used to fix lever furniture to the door. Grub screws on lever furniture to be tightened into grooved spindle as per manufacturers instructions. Cabin hook to be fitted onto 75x75x20mm square meranti hard wood block with chamfered edges.			
Doors 1	D01			
CODE	PRODUCT	FINISH	QTY	UNIT
1040-44	1040 - 100 x 44mm Natural Anodised Sinkless Hinge		1.5	Pair
CR001 Latch S.S	dormakaba Lever handle on rose - Latch	Stainless Steel	1	Set
D036S SS	dormakaba Cylinder Sash Lock. Case dimentions (mm) 116.5H x 78D. Forend dimentions (mm) 168H x 22W. Backset 57mm. Centres 61mm.	Stainless Steel	1	Each
DHK004201	dormakaba 43mm Half Knob Cylinder	Satin Nickel	1	Each
DCE-002	dormakaba Round Cylinder escutcheon	Stainless Steel	0.5	Pair
166	166 200mm satin chrome on brass cabin hook	Satin Chrome	1	Each

HARDWARE SET FOR DOOR TYPE B				
Notes				
Doors 1	D02			
CODE	PRODUCT	FINISH	QTY	UNIT
DBB-SS-009	dormakaba 102x75x3mm Two Ball Bearing Butt Hinge	Stainless Steel	1.5	Pair
CR001 Latch S.S	dormakaba Lever handle on rose - Latch	Stainless Steel	1	Set
D036S SS	dormakaba Cylinder Sash Lock. Case dimentions (mm) 116.5H x 78D. Forend dimentions (mm) 168H x 22W. Backset 57mm. Centres 61mm.	Stainless Steel	1	Each
DBC006601	dormakaba 66mm Euro-profile Bathroom / Privacy Cylinder	Satin Nickel	1	Each
DCE-002	dormakaba Round Cylinder escutcheon	Stainless Steel	1	Pair
DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	1	Each
Sanparrel	300mm x WOD Sanparrel kick plate fitted according to architects door schedules.		2	Each

Note :

4 x Set Type A

1 x Set Type B

**EASTERN CAPE
DEPARTMENT OF HEALTH**

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT
LIVINGSTONE PEPH
HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

PEPH GUARD HOUSES

**SANITARY SPECIFICATION
SCHEDULE**

Rev 1

**EASTERN CAPE DEPARTMENT OF HEALTH
LIVINGSTONE PEPH SECURITY & INFRASTRUCTURE UPGRADES
SANITARY SPECIFICATION SCHEDULE**

DOCUMENT NUMBER: 314-013_SAN-001
DOCUMENT NAME: Sanitary Specification Schedule
DATE: 2025-09-22
REVISION: 1

ISSUED FOR INFORMATION

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** show specifications under review.
3. Items indicated in **green** show new/additional specifications.

DATE	REVISION	DESCRIPTION
2025-09-16	1	Issued for Re-tender

EASTERN CAPE DEPARTMENT OF HEALTH
LIVINGSTONE PEPH SECURITY & INFRASTRUCTURE UPGRADES
SANITARY SPECIFICATION SCHEDULE

WASH HAND BASIN: Staff Ablutions

- Basin:
Polymer composite vandal resistant whb like Whyte House Psych Basin (WHBPSYCH-8), fixed as per Manufacturers specifications.
- Mixer:
Cobra metering pillar tap (code: COB-KM2-100) in chrome finish. Includes self-closing, non-hold open, flow controller with flow cycle of 1-20 seconds, ½" male inlet, backnut, washer and streamline outlet for flow aesthetics. Contractor to place tap centre on basin with hole for tap to be cut by basin manufacturer.
- Waste/Trap:
To be made up with 40mmØ upvc wastepipe with 3 x 40mmØ bend plain 87,5° and 1 x bend access heel 87,5°, glued together with approved pvc weld.

S1 SINK: Kitchenette

SINK:

- Sink:
Franke NVN611 Single End Bowl Sink Drop-on Sink (Code: 101.0167.171 / 811023), 800 x 460mm Single End Bowl S/S grade 304 18/10, 1,2 mm drop-in sink unit.
- Mixer:
Cobra Karoo (product code: KO-970) single lever sink mixer with swivel outlet with ½" BSP female inlet including sink mixer swivel outlet and 400mm long flexible inlets.
- Waste/Trap:
du Bois 50mm PVC trap inside cupboard.
- Accessories:
 - Hydroboil:
Franke Stainless Steel Hydroboil with concealed plumbing and electrical connections, to be installed as per manufacturer's specifications. Capacity: 2,5 litres (12-15 cups).

WC1 TOILET: Staff Ablutions

- Cistern:
Where cisterns will be built into brickwork:
38643001 Uniset for WC flushing cistern GD2 with small maintenance access sound-insulating EPS module for masonry – in 830x470x130mm rail adaptors for modular fixing for single or rail installation. Wall rail with fixing accessories for single installation. 2x WC fixing bolts, distance of fixing bolts 180/230mm fixing device for ceramic outlet bend 90mm dia., depth adjustable 90/110mm dia. reducer inlet and outlet connecting set adjustment ex. Factory 6ℓ and 3ℓ pneumatic discharge valve offering 3 modes of operation:
 - Dual flush
 - Start/stop.
 - Single flush water supply.From left/right/back or top low noise DIN approved insulated against condensation ½" water supply connection including integrated angle valve and push fit flexible hose union for vertical or horizontal hose union for vertical or horizontal use.
- Actuator Plate/Wall Plate
Grohe Air Button single flush (code: 37059000) actuator with 1500mm pneumatic hose, 100mm flange plate in Grohe StarLight® chrome finish.
- Pan:
Polymer composite vandal resistant wc pan like Whyte House Psych Basin (WHP-1), fixed as per Manufacturers specifications.
- Accessories:
 - Toilet Roll Holder:
Franke recessed type toilet roll holder (code: 359635) 118Ø x 110mm manufactured from Grade 304 (18/10) stainless steel, 2mm gauge. Unit with 20mm flange and 2x M10 treaded rods for bolting the unit through the wall.

DRAWING REGISTER

Livingstone Hospital : UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIS CONTRACT No. CDC/377/25

b4 Ref: 314-013

01 October 2025

Livingstone Provincial Hospital

LATEST ISSUE REGISTER

DRAWING NO.	CURRENT REVISION	DRAWING NAME:	SCALE	SIZE	STATUS
-------------	------------------	---------------	-------	------	--------

CONTRACTOR		QS		STRUCTURAL		MECH & ELEC		PM	
<i>pdf & hard copy</i>		<i>pdf</i>		<i>pdf</i>		<i>pdf</i>		<i>pdf</i>	
LAT. REV.	DATE	LAT. REV.	DATE	LAT. REV.	DATE	LAT. REV.	DATE	LAT. REV.	DATE

Plans & Site Drawings						
314-013	ARC-S001	-	LivH_Existing_Fence_Layuot_TEN	1:750	A1	For Tender
314-013	ARC-S002	-	LivH_New_Fence_Layout_TEN	1:750	A1	For Tender
314-013	ARC-S003	-	LivH_New_Gate_Layout_TEN	1:100 / 1:50	A1	For Tender
314-013	ARC-S005	-	LivH-New_Contractors Yard_TEN	1:750	A1	For Tender
314-013	ARC-001	-	LivH_Main_GH_Demo_&_FloorPlan_TEN	1:50	A1	For Tender
314-013	ARC-002	-	LivH_A&E_GH_TEN	1:50	A1	For Tender
314-013	ARC-003	-	LivH_Onc_GH_TEN	1:50 / 1:100	A1	For Tender
314-013	ARC-004	-	LivH_Main_GH_Ceiling_&_Key_Plan_TEN	1:50	A1	For Tender
314-013	ARC-005	-	LivH_Main_GH_Win_&_Door_Shedules_TEN	1:50	A1	For Tender
314-013	ARC-006	-	LivH_Ex_Boundary_Alterations_TEN	1:100	A1	For Tender
314-013	ARC-007	-	LivH_Overall_Boundary_Site_Plan_TEN	1:750	A1	For Tender
314-013	ARC-008	-	LivH_Main_GH_Fencing_TEN	1:50	A1	For Tender

		-	22/09/2025						
		-	22/09/2025						
		-	22/09/2025						
		-	01/10/2025						
		-	22/09/2025						
		-	22/09/2025						
		-	22/09/2025						
		-	22/09/2025						
		-	22/09/2025						
		-	22/09/2025						
		-	22/09/2025						

Joinery Drawings						
314-013	DET-001	-	Sliding Gate & Fence Detail	1:25	A1	For Tender

		-	02/10/2026						
--	--	---	------------	--	--	--	--	--	--

Joinery Drawings						
314-013	JDT-001	-	Joinery Layouts	1:25	A1	For Tender
314-013	JDT-002, 003, 004 & 005	-	Joinery Layouts	1:25	A1	For Tender
314-013	JDT-006	-	Joinery Layouts	1:25	A1	For Tender

		-	22/09/2026						
		-	22/09/2028						
		-	22/09/2029						

LIVINGSTONE HOSPITAL

**ALL STRUCTURAL / CIVIL
ENGINEER'S DRAWINGS**

1 2 3 4 5 6 7 8

A

B

C

D

E

F

A

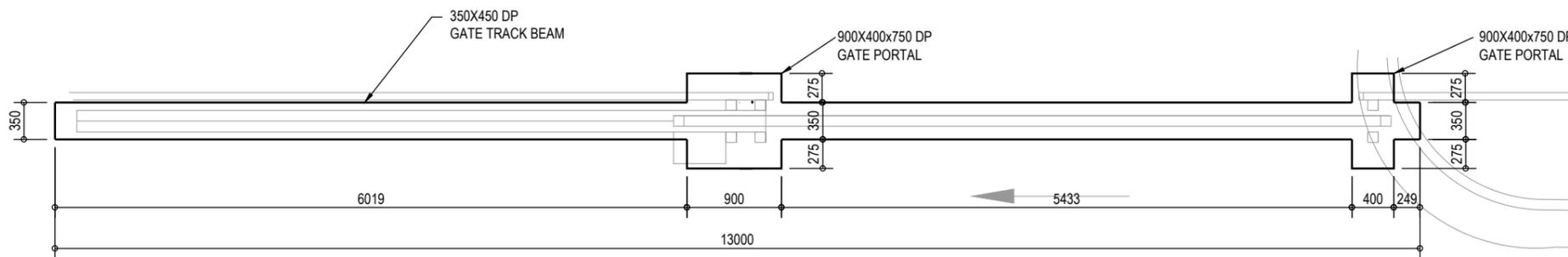
B

C

D

E

F



GATE TRACK BEAM FOUNDATION LAYOUT
SCALE: 1:50

NOTES:
LENGTH OF GROUND BEAM VARIES WITH LENGTH OF GATE.
PROVIDE 900x400x750 DP GATE PORTALS.
25MPa/19mm CONCRETE.

THESE NOTES SERVE AS AN ADDENDUM TO THE SPECIFICATION IN THE BILL OF QUANTITIES (BOQ). IN THOSE CASES WHERE THE BOQ SPECIFICATIONS DIFFER FROM THESE NOTES, THESE NOTES SHALL TAKE PREFERENCE

ON ORIGINAL

No	Date	Details	Chd	Appd
B	19-09-25	ISSUED FOR MEASUREMENT	ES	GK
A	16-09-25	ISSUED FOR MEASUREMENT	ES	GK
Revisions				

Client:

Architect:

Architecture | Interior Design | Project Management

b4 Architects

Engineer:

KEON
CONSULTING ENGINEERS

Project:

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES

Description:

LIVINGSTONE HOSPITAL UPGRADE GATE TRACK BEAM FOUNDATION LAYOUT

Engineer:

G. Kucherera Pr Eng (20110431)

Drawn By: S. Chinhanga	Designed By: S. Chinhanga	Checked By: E. Savanhu
---------------------------	------------------------------	---------------------------

Size: A3 Scale: As Shown Original Date: SEPTEMBER 2025

Issued For: **TENDER**

Project No: J117	Drawing No: S16	Revision: B
----------------------------	---------------------------	-----------------------

CONCRETE NOTES:		2.3	2.4	2.5	3.0	3.1	3.2	3.3	3.4	3.5	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	
1.0	SETTING OUT AND GENERAL:	ANY OVER EXCAVATIONS ARE TO BE MADE GOOD WITH 10MPa / 19mm CONCRETE AT THE CONTRACTOR'S EXPENSE.	BACKFILLING OVER COLUMN BASES SHALL BE DONE WITH AN APPROVED MATERIAL COMPACTED IN LAYERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.	ALLOWABLE BEARING PRESSURE UNDER:	CONCRETE CHARACTERISTIC 28 DAY STRENGTH:	BASES :	CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BEDS TO HAVE MINIMUM BLEED CHARACTERISTICS.	ALL CONCRETE TO BE ADEQUATELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 5 DAYS AFTER CASTING.	ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.N.S 1200G PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS II UNLESS SPECIFIED OTHERWISE.	CONCRETE CUBE TEST RESULTS TO BE SUBMITTED TIMEOUSLY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.	REINFORCEMENT	CHARACTERISTIC STRENGTH:	HIGH YIELD STEEL:	LAP LENGTH TO REINFORCING TO BE MINIMUM 50 x SMALLER BAR DIAMETER, UNLESS OTHERWISE NOTED.	MESH REINFORCEMENT REFERENCE 245 TO BE PLACED IN SLAB (TOP) MINIMUM LAPS = 300mm UNLESS OTHERWISE NOTED.	COVER TO REINFORCEMENT:	STRIP FOOTINGS:	CONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION.	FORMWORK AND PROPPING	STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING:	BEAM SHUTTERING:	FLAT SLABS:	PROPPING TIMES FOR:	CANTILEVER SLABS AND BEAMS:	CONCRETE FINISHES: UNLESS NOTED OTHERWISE
1.1	THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECTS' DRAWINGS.			CONCRETE BASES = 150kPa.	BASES : 25MPa / 19mm	STRIP FOOTINGS: 25MPa / 19mm					REINFORCEMENT	MILD STEEL: 250N/mm2				STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
1.2	ALL DIMENSIONS AND HEIGHTS ARE TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND.			STRIP FOOTINGS = 100kPa.	STRIP FOOTINGS: 25MPa / 19mm	SURFACE BEDS: 30MPa / 19mm					REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
1.3	REPORT DISCREPANCIES TO ARCHITECT OR ENGINEER.				SURFACE BEDS: 30MPa / 19mm	SUSPENDED SLABS & BEAMS: 30MPa / 19mm					REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
1.4	THIS DRAWING MUST NOT BE USED TO SCALE OFF. USE ONLY WRITTEN DIMENSIONS. CONTACT THE ENGINEER OR ARCHITECT WHERE CLARITY IS SOUGHT.				COLUMNS: 30MPa / 19mm						REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
1.5	FOR SETTING OUT DATA, SETTING OUT POINTS AND DATUM LEVELS REFER TO SURVEY INFORMATION AND ARCHITECT'S DRAWINGS.										REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
1.6	STRUCTURAL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE RELEVANT S.A.N.S SPECIFICATIONS. ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH S.A.N.S 1200G AND EARTHWORKS IN ACCORDANCE WITH S.A.N.S 1200D.										REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
1.8	CONSULT RELEVANT ARCHITECTS, MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS AND DETAILS AS RELEVANT FOR DRAINAGE, STORMWATER OUTLETS, RWDPS AND HOLES AND SLEEVES FOR THESE SERVICES. NO HOLES ARE TO BE CORED WITHOUT ENGINEERS WRITTEN APPROVAL.										REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
2.0	FOUNDATIONS										REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
2.1	ALL FOUNDATION EXCAVATIONS TO BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE IS CAST.										REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	
2.2	NO FOUNDATIONS ARE TO BE CAST IN FILL MATERIAL. A 50mm THICK LAYER OF 10MPa / 19mm BLINDING CONCRETE IS TO BE CAST UNDER ALL REINFORCED BASES, REINFORCED STRIP FOOTINGS AND GROUND BEAMS.										REINFORCEMENT					STRIP FOOTINGS: 50mm	STRIP FOOTINGS: 50mm		STRIPPING TIMES FOR:	COLUMN AND WALL SHUTTERING: 1.5 DAYS.	BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.	FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	SLABS AND BEAMS: 14 DAYS IN HOT WEATHER 21 DAYS IN COLD WEATHER	CANTILEVER SLABS AND BEAMS: 21 DAYS	CONCRETE FINISHES: UNLESS NOTED OTHERWISE	

1 2 3 4 5 6 7 8

SECTION 9

LIVINGSTONE HOSPITAL

**ALL DRAWINGS FOR ELECTRICAL
INSTALLATION, PERIMETER LIGHTING
AND CCTV INSTALLATION**

LIGHTING LEGEND	
●	PHOTO CELL
	150W LED FLOODLIGHTS MOUNTED AT 3500 A.F.F.L (IP 66 Rating)
	50W LED CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE CEILING / WALL MOUNTED BULKHEAD.
	ELECTRICAL DISTRIBUTION BOARD

NOTES:
EXISTING LIGHT SWITCHES TO BE USED.

POWER LEGEND	
	16A 3 - Pin switched socket outlet (Weatherproof) to comply with SANS 164-1 (white) 450mm AFFL (Normal Supply)

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 30mmØ & 4 X 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SURTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:
 - AC = AIR CONDITIONING
 - D = DEDICATED SSO
 - L = LIGHTING CIRCUIT
 - P = STANDARD SSO
 - XL = LIGHTING CIRCUIT ON STANDBY POWER
 - XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	17-09-25	E.C.	ISSUED FOR TENDER.



PROJECT
ALTERATIONS AND ADDITIONS AT LIVINGSTONE HOSPITAL, GQEBERHA

TITLE
EXISTING MAIN GATE HOUSE (STANDFORD ROAD SIDE) - LIGHTING & POWER LAYOUT

COPYRIGHT
RNA CONSULTING ENGINEERS
 Consulting Electrical & Mechanical Engineers
 87 Hough Road, Walmer, Port Elizabeth, 6070
 E-Mail: rna-pe@rna.co.za
 P.O. Box 35039, Newton Park, 6055
 Tel: 041 581 2807
 Fax: 041 581 2808



DESIGN	TENDER	CONSTRUCTION
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

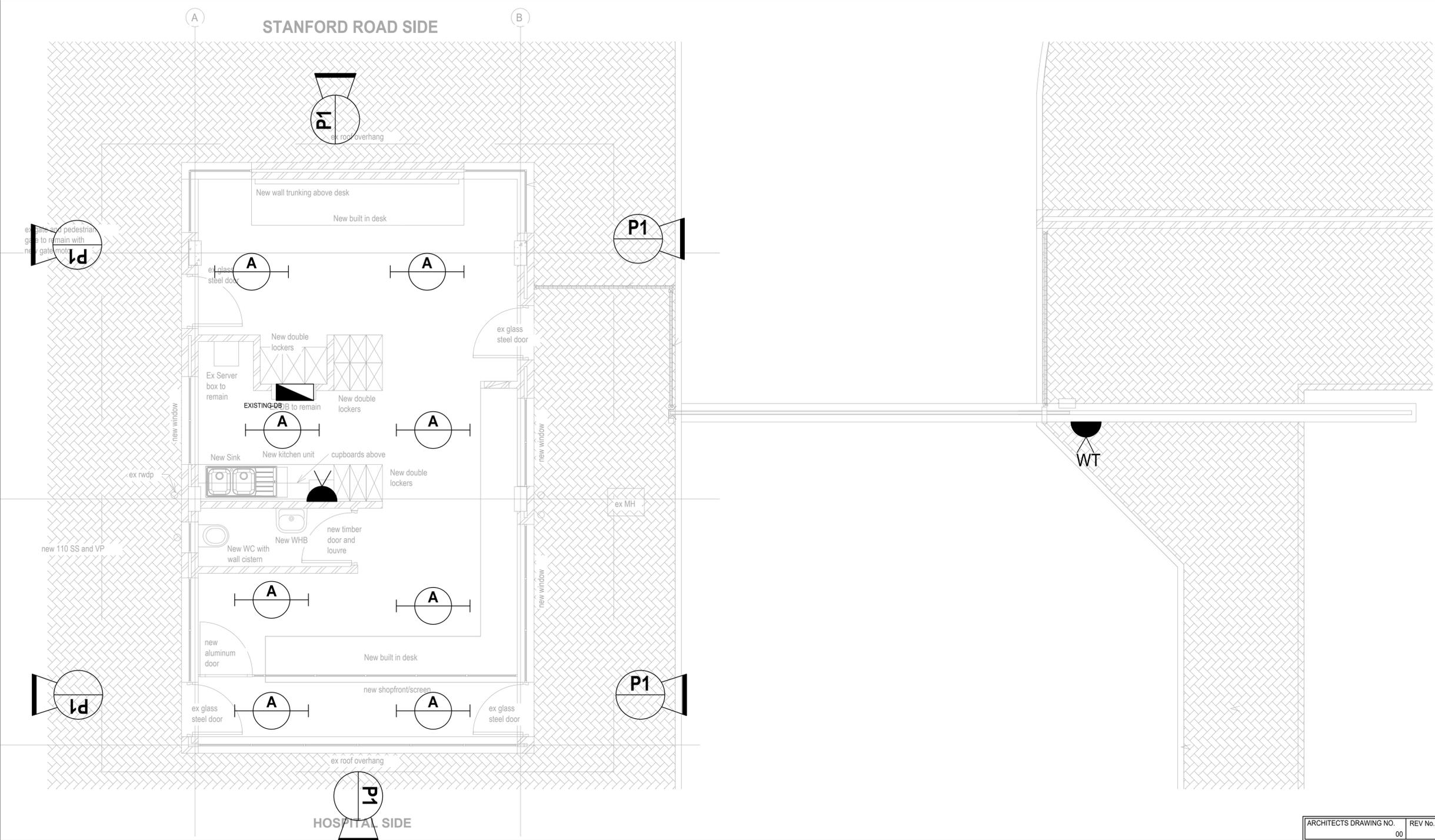
DESIGNED BY: **B.GEELBOOI** SCALE: 1:100

DRAWN: **B.GEELBOOI** DATE: 10/11/2023 PRINT DATE: 23/09/2025

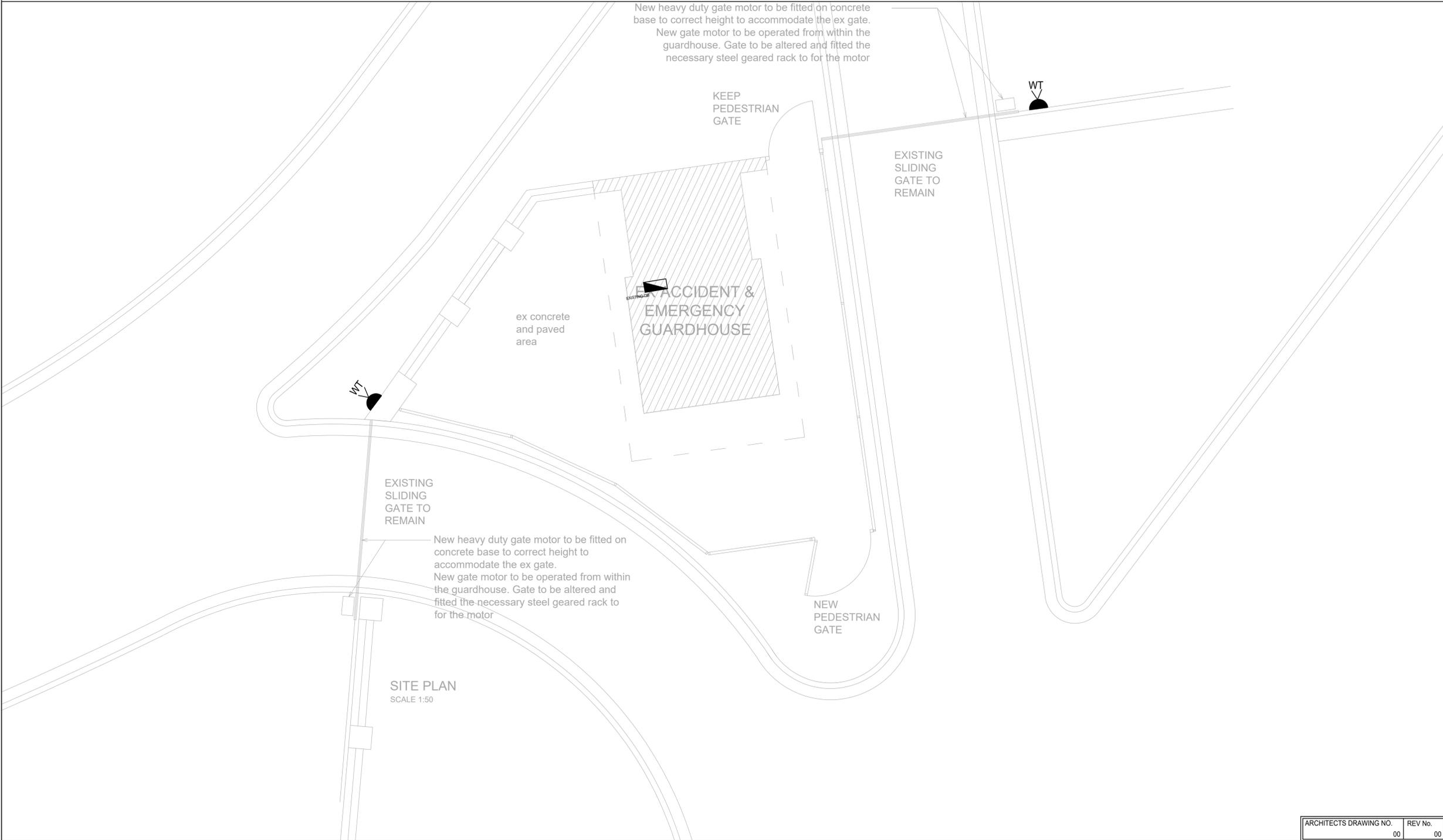
CHECKED BY: **E. CEBA**
 REGISTRATION No. 201930053
 SIGNED: _____

ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-101 GH 1 REV No. 00



LIGHTING LEGEND	
	16A 3 - Pin switched socket outlet (Weatherproof) to comply with SANS 164-1 (white) 450mm AFFL (Normal Supply)
	EXISTING ELECTRICAL DISTRIBUTION BOARD



- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 30mmØ & 4 X 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SURTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:
 - AC = AIR CONDITIONING
 - D = DEDICATED SSO
 - L = LIGHTING CIRCUIT
 - P = STANDARD SSO
 - XL = LIGHTING CIRCUIT ON STANDBY POWER
 - XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	19-09-25	E.C.	ISSUED FOR TENDER.

CLIENT



Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT
LIVINGSTONE HOSPITAL, GQEBERHA

TITLE

A&E GATE HOUSE -
POWER LAYOUT

COPYRIGHT



RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hengh Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@rnaza.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808



CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DESIGNED BY: B.GEELBOOI SCALE: 1:100

DRAWN: B.GEELBOOI DATE: 10/11/2023 PRINT DATE: 23/09/2025

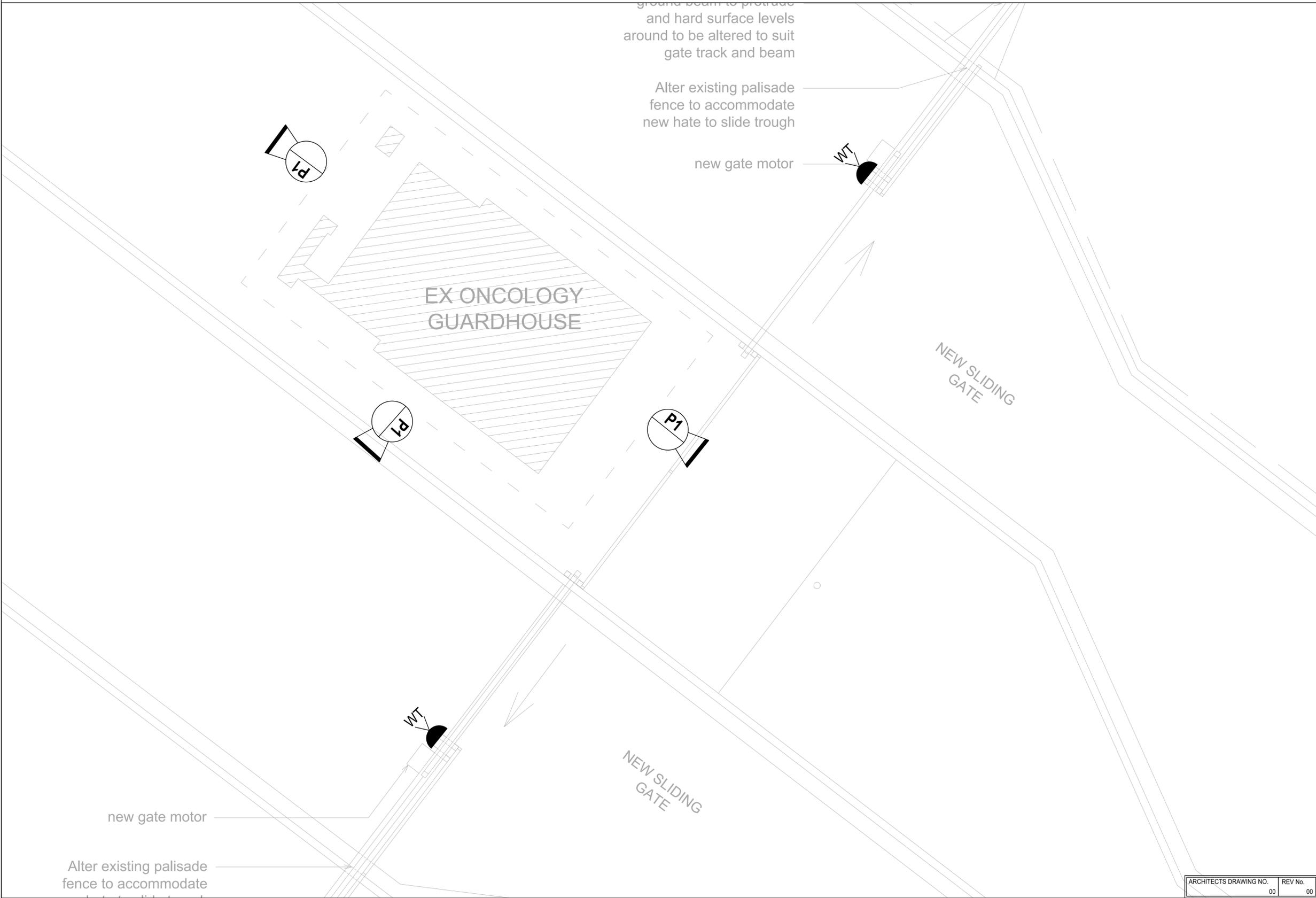
CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED: _____

ARCHITECTS DRAWING NO. 00	REV No. 00	DRAWING NO. 2316-T-E-102 GH 2	REV No. 00
------------------------------	---------------	----------------------------------	---------------

LIGHTING & POWER LEGEND	
●	PHOTO CELL
Ⓟ	150W LED FLOODLIGHTS MOUNTED AT 3500 A.F.F.L (IP 66 Rating)
◀WT	16A 3 - Pin switched socket outlet (Weatherproof) to comply with SANS 164-1 (white) 450mm AFFL (Normal Supply)
▬	EXISTING ELECTRICAL DISTRIBUTION BOARD

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 30mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SURTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM)
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.



REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	19-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT LIVINGSTONE HOSPITAL, GQEBERHA

TITLE

ONCOLOGY GATE HOUSE - LIGHTING & POWER LAYOUT

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Henge Road, Walmer, Port Elizabeth, 6070
E-Mail: rna-pe@rna.co.za

P.O. Box 35039, Newton Park, 6055
Tel: 041 581 2807, Fax: 041 581 2808

CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
✓		

DESIGNED BY: B.GEELBOOI SCALE: 1:100

DRAWN: B.GEELBOOI DATE: 10/11/2023 PRINT DATE: 23/09/2025

CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED: _____

ARCHITECTS DRAWING NO. 00 REV No. 00

DRAWING NO. 2316-T-E-103 GH 3 REV No. 00

new gate motor

Alter existing palisade fence to accommodate

LEGEND

BUSBAR

—+— SINGLE POLE

—+—+ TRIPLE POLE

—+— ISOLATOR

—+—/— CIRCUIT BREAKER
SIZE AS SHOWN

CH = WIRING CHANNEL

—+—/— EL EARTH LEAKAGE PROTECTION UNIT WITH DISCONNECTOR

—+—/— C2 3 POLE CONTACTOR

—+—/— E MM ELECTRONIC CONSUMPTION MULTIMETER

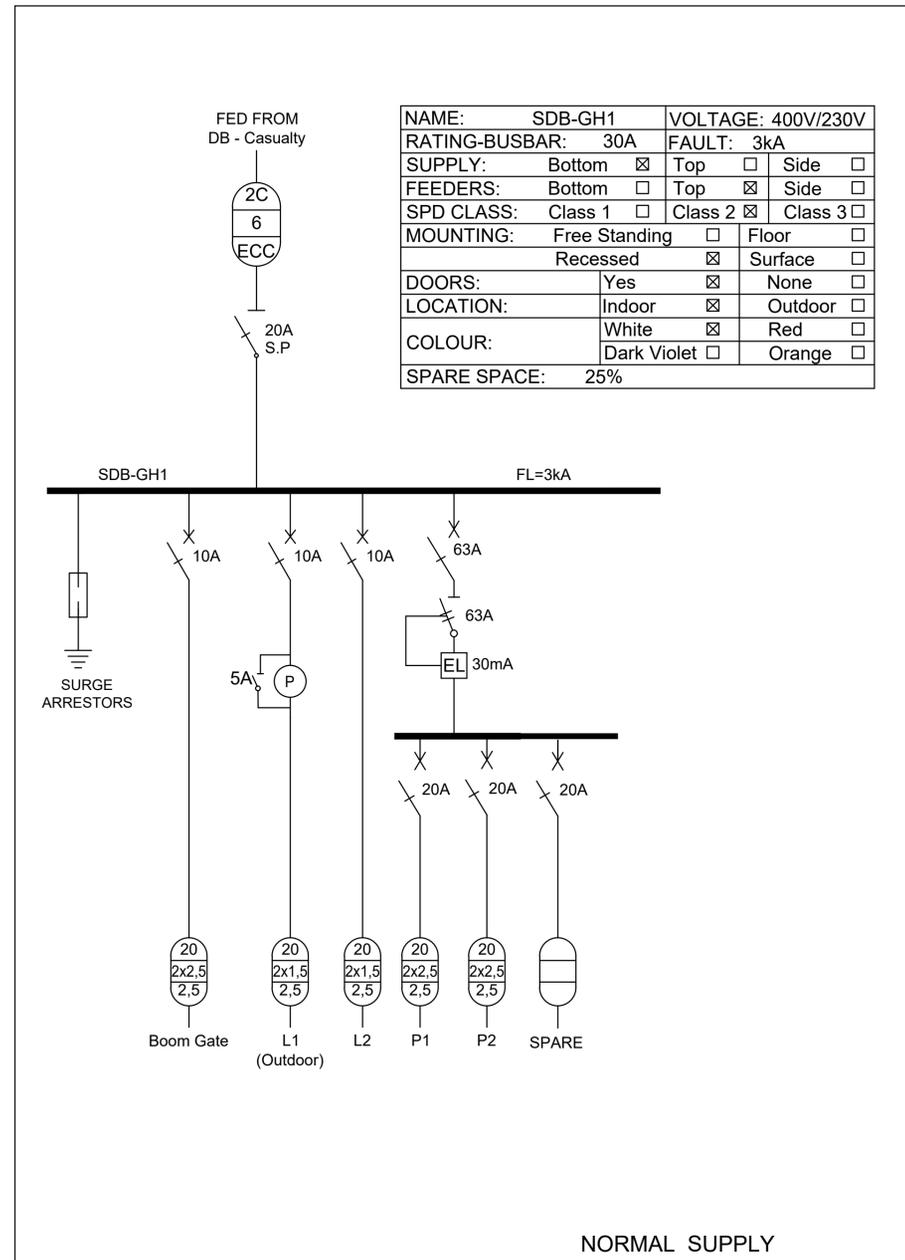
—+—/— P PHOTOCELL WITH BYPASS SWITCH

CABLES

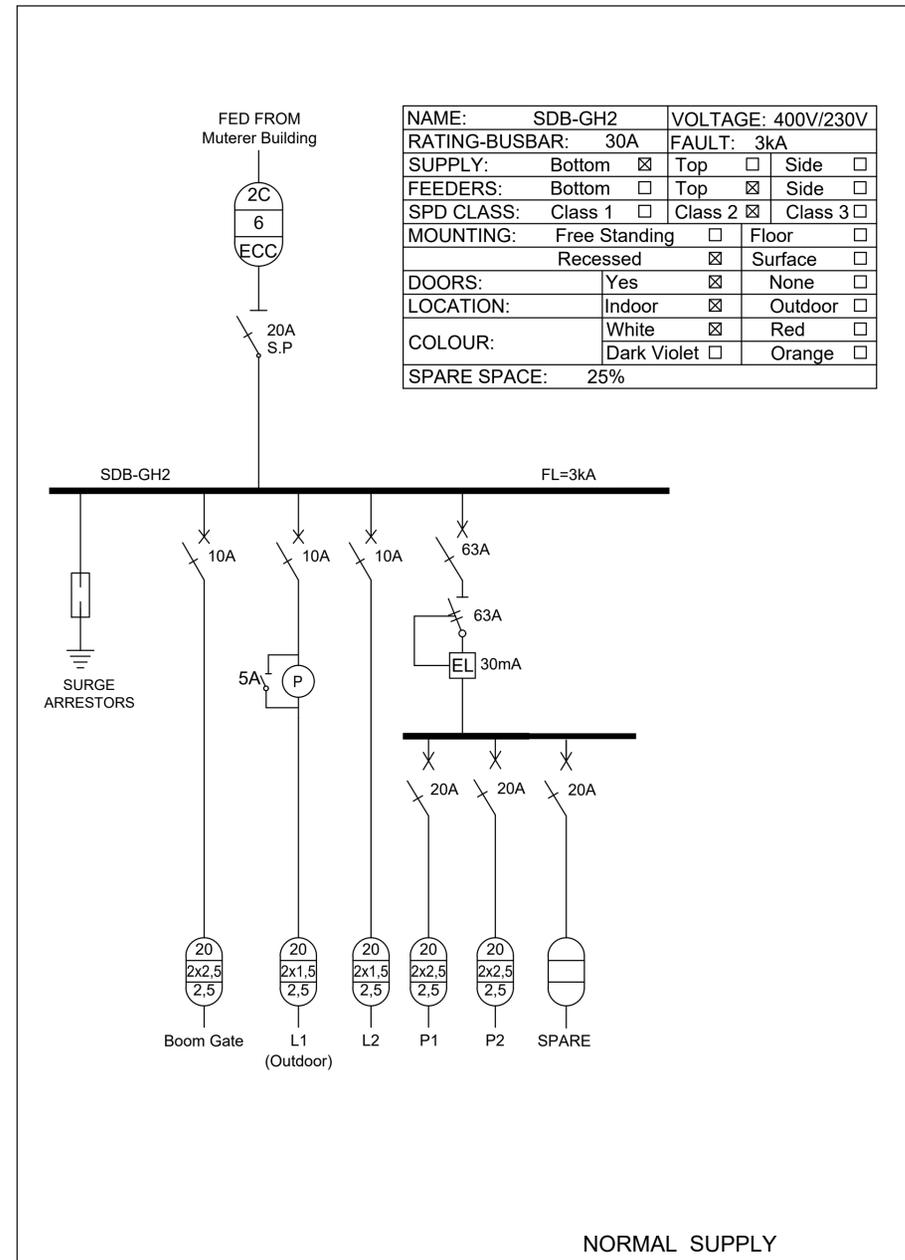
4C NO. OF CORES
16 CORE SIZE mm
ECC EARTH CONTINUITY CONDUCTOR mm

WIRING IN CONDUIT

25 CONDUIT SIZE mm
2x4 No. & CONDUCTOR SIZE mm²
2.5 EARTH CONDUCTOR mm²



ENTRANCE GUARD HOUSE



EXIT GUARD HOUSE

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB'S)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING: AC = AIR CONDITIONING
D = DEDICATED SSO
L = LIGHTING CIRCUIT
P = STANDARD SSO
XL = LIGHTING CIRCUIT ON STANDBY POWER
XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	23-09-25	E.C.	ISSUED FOR TENDER.

CLIENT



Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH,
GQEBERHA

TITLE

NEW ENTRANCE GUARD HOUSE AND
NEW EXIT GUARD HOUSE -
DB SCHEMATIC DIAGRAM

COPYRIGHT



RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@conusa.co.za

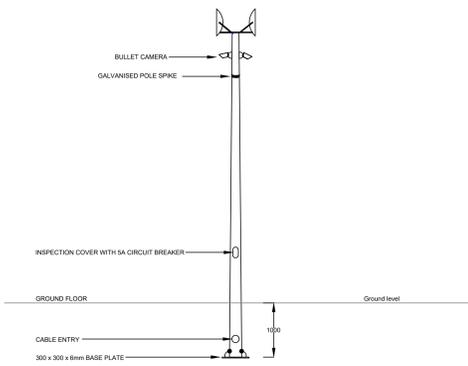
P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808



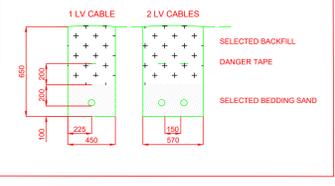
CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	
DESIGNED BY:	SCALE	
B.GEELBOOI	1:100	
DRAWN	DATE	PRINT DATE
B.GEELBOOI	13/11/2023	23/09/2025
CHECKED BY:	E. CEBA	
REGISTRATION No.	201930053	
SIGNED:		
ARCHITECTS DRAWING NO.	REV No.	DRAWING NO.
00	00	2316-T-E-300 GH1-2
		REV No.
		00

TYPICAL FLOOD LIGHT DETAIL



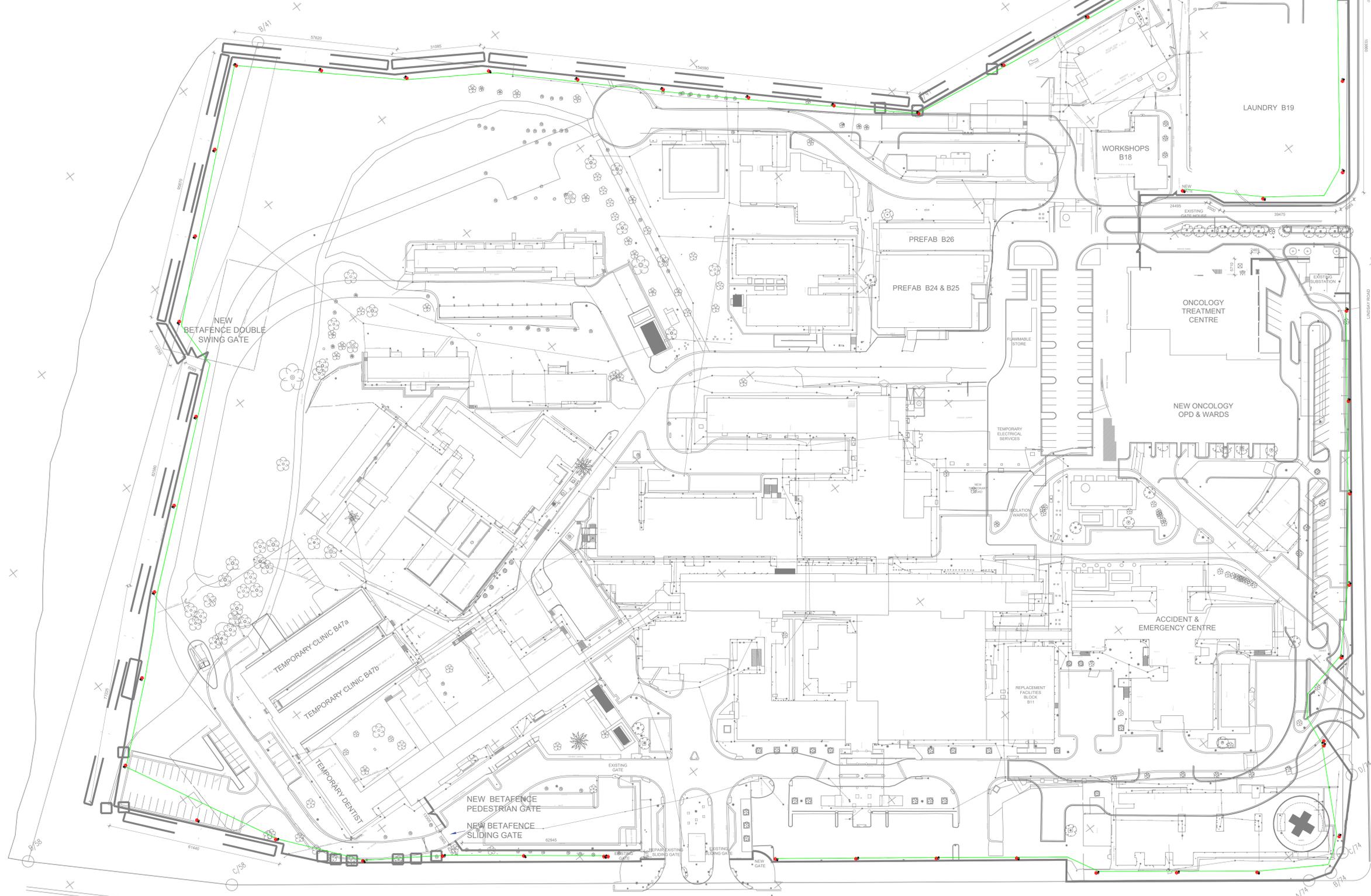
TYPICAL CABLE TRENCH DETAIL



ICT LEGEND

	DATA LINE CONNECTION POINT IN CEILING VOID OR FOR CCTV UNIT
	VANDAL PROOF STATIC SURVEILLANCE CAMERA
	110mm PVC SLEEVE
	6m GALVANISED POLE FOR FLOODLIGHTS INSTALLED ALONG THE FENCES

- GENERAL NOTES:
1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 2. DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 7. NON-CORRODING DRAW WIRE STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 9. ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB).
 10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 11. CIRCUITING:
 - AC - AIR CONDITIONING
 - CD - DEDICATED CIRCUIT
 - L - LIGHTING CIRCUIT
 - SP - STANDING POWER
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING POWER ON STANDBY POWER
 12. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.



TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	26-09-25	ISSUED FOR TENDER	EC

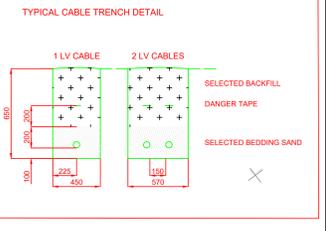
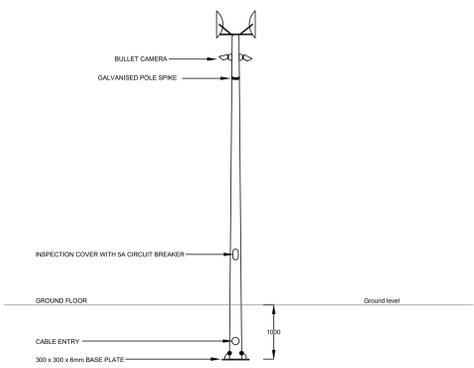


DISCIPLINE: ELECTRICAL
 SERVICE: LIVINGSTONE HOSPITAL : PERIMETER CCTV.

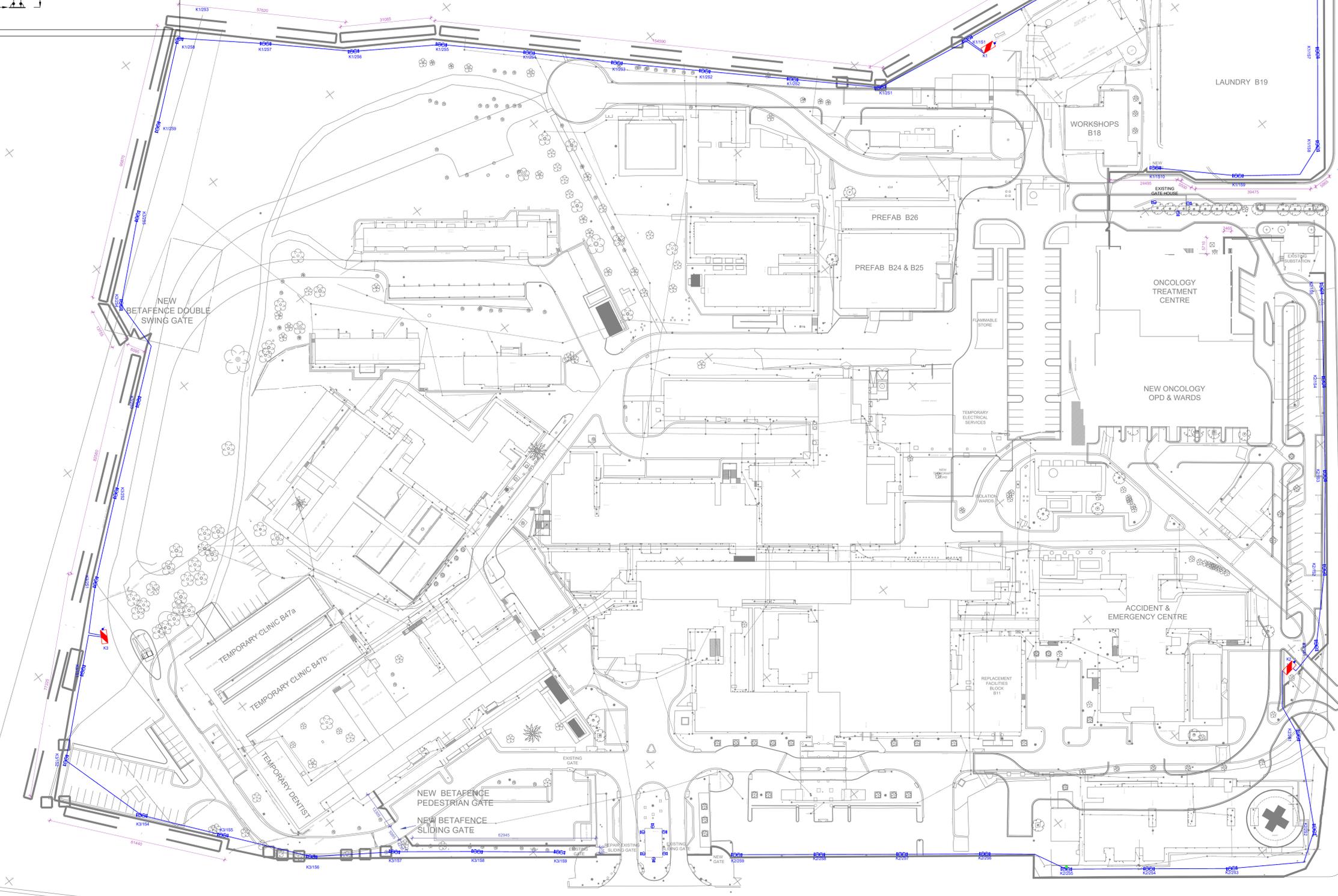
DRAWING TITLE: SITE PLAN: CCTV & SLEEVE LAYOUT

SCALE: 1:500	DRAWN: B. GEELEBOO
DATE: FEBRUARY 2017	DRAWN: B. GEELEBOO
PRINT DATE: 26/09/2025	CHECKED: ERIC CEBA
ARCHITECTS DRAWING NO. 00	REV No. 00
2316-T-E-100B CCTV	00

TYPICAL FLOOD LIGHT DETAIL



SECURITY LEGEND	
	150W LED FLOODLIGHTS MOUNTED AT 6000 A.F.F.L (IP 66 Rating)
	PHOTO CELL
	2 x 150W LED FLOODLIGHTS MOUNTED ON A 6m GALVANISED POLE INSTALLED ALONG THE FENCES
	OUTDOOR DISTRIBUTION KIOSK
	150W LED FLOODLIGHTS MOUNTED AT 3500 A.F.F.L (IP 66 Rating)
	6mm 4C Cu ECC IN A 50mm PVC SLEEVE



- GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - CD - DEDICATED CIRCUIT
 - L - LIGHTING CIRCUIT
 - ST - STANDING STAND
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING STAND ON STANDBY POWER
 - ALL 500 AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.

TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	26-09-25	ISSUED FOR TENDER	EC



DISCIPLINE: ELECTRICAL
 SERVICE: LIVINGSTONE HOSPITAL : UPGRADING SECURITY FENCE.

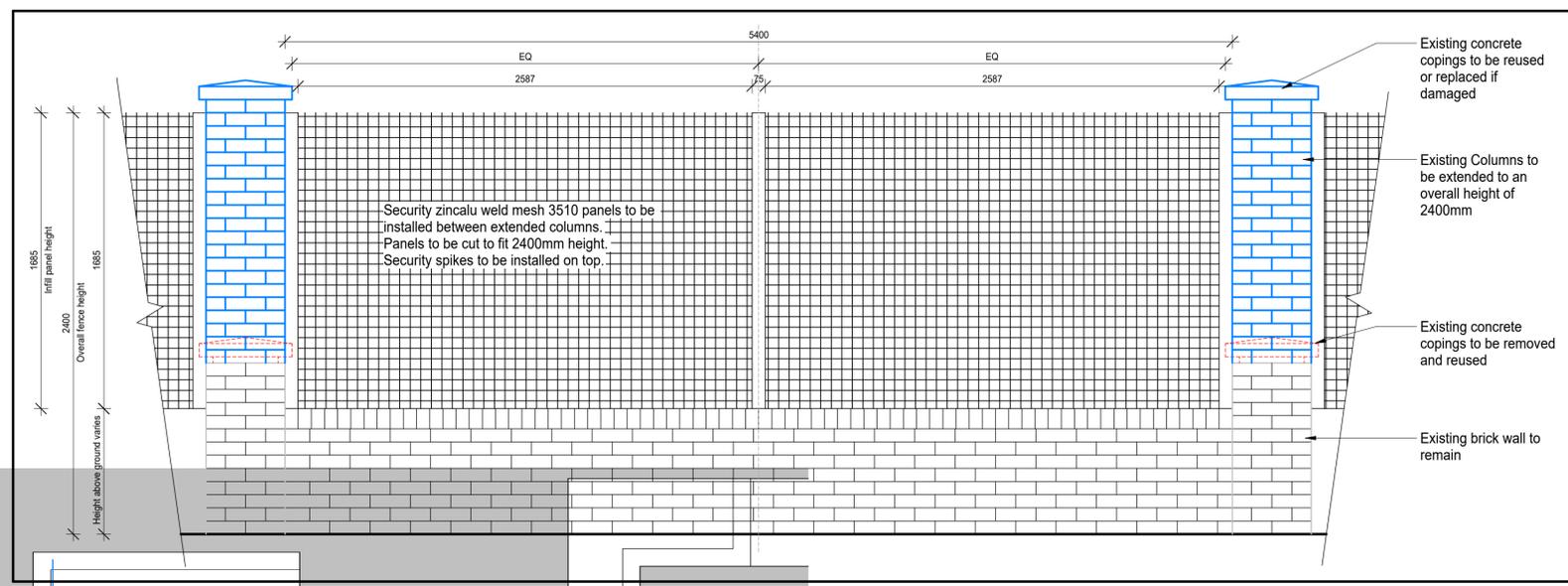
DRAWING TITLE: SITE PLAN: PERIMETER LIGHTING & SLEEVE LAYOUT

SCALE	DRAWN
1:500	B. GEELEBOO
DATE: FEBRUARY 2017	DATE: FEBRUARY 2017
PRINT DATE: 26/09/2025	DESIGNED: ERIC CEBA
PROJECT NUMBER: 2316-T-E-100A AL	REV No: 00

PE PROVINCIAL HOSPITAL

ALL ARCHITECT'S DRAWINGS

New Fence Specification:
Rigid Mesh Security Fencing
 Security zincalu weld mesh 3510 fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
 Rigid mesh panels with bends. Core wire (3mm) to be manufactured from Zincalu® Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanizing
 Bekafix® Secure Posts: H - shaped profile post 70mm x 44mm. The panel is to fit securely behind the lip of the post. Height: (to be altered top suit the wall infill panel heights) or 3000mm hot dipped galvanized mild steel posts.
 Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
 Secured using tamper-proof shear-off nuts. (no self drilling screws)
 All fixator components to be stainless steel Grade 304 per ISO 9223.
 All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete. (were applicable)
 Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
 Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
 Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations.



COPYRIGHT NOTICE
 Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
 This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
 This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
 Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
 All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
 All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
 Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
 IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Remove Trade Names	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE: Entrance Guardhouse - Layout

Scale: As indicated

Date: 23 September 2025

Drawn by: PV

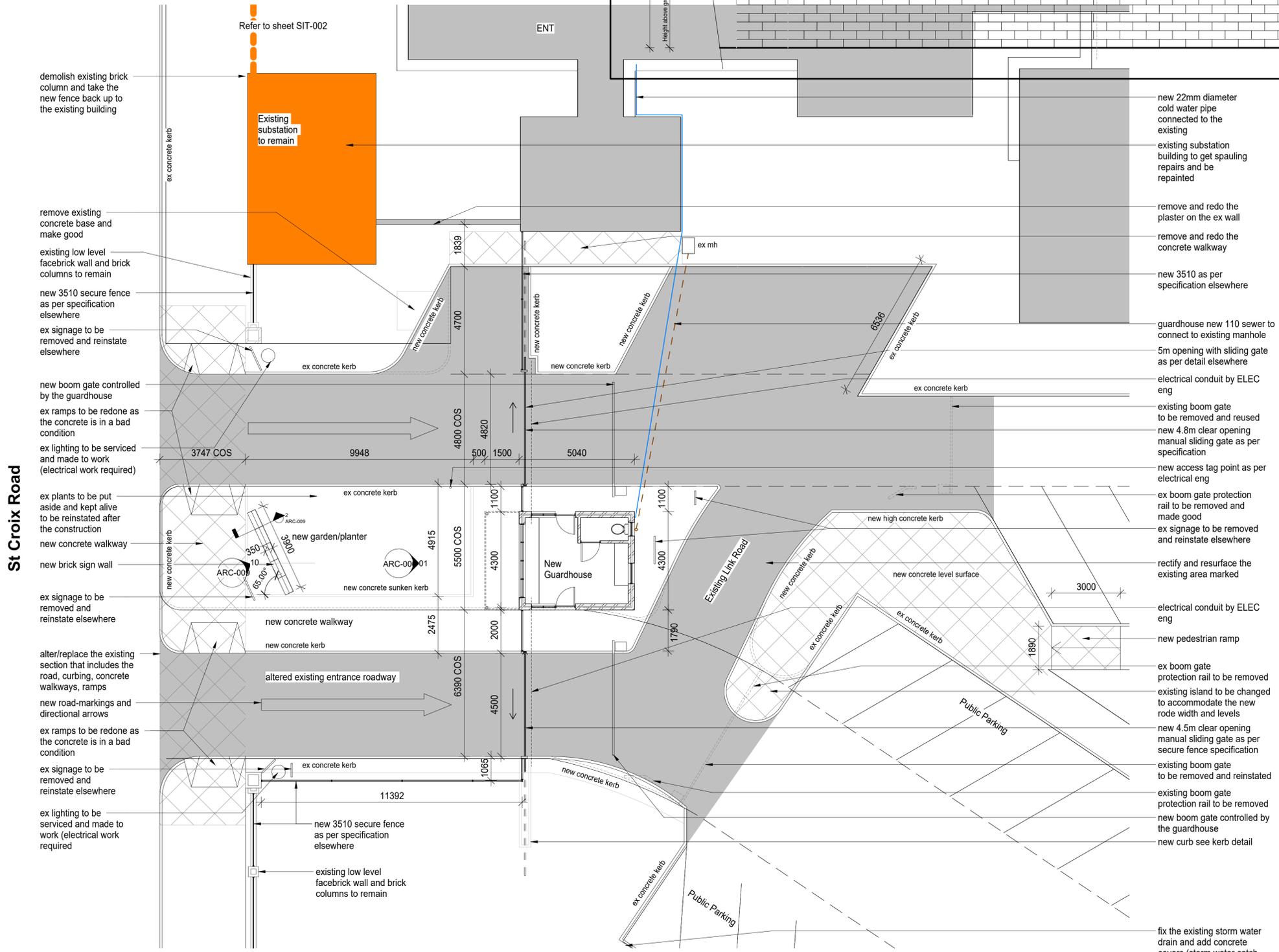
Designer: PV

Professional Architect: BB

Checked by: BB

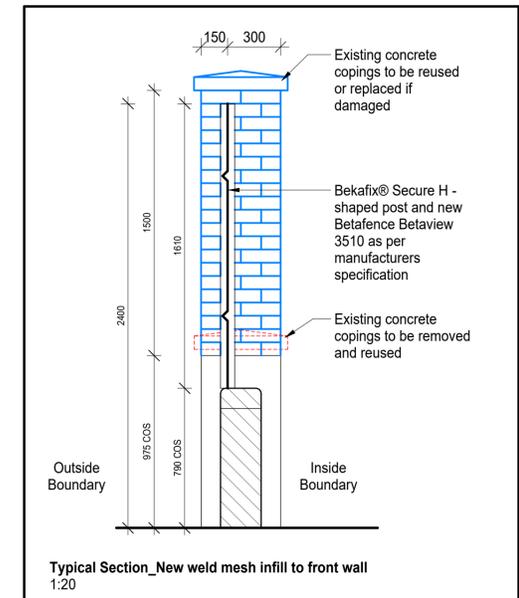
DWG No: ARC-001

FOR TENDER ONLY REV: 2

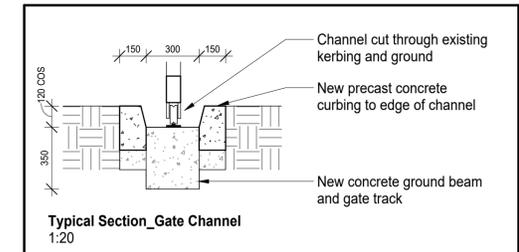


2 Typical Weld Mesh_SIT-003 Copy 1
1:20

Casualty



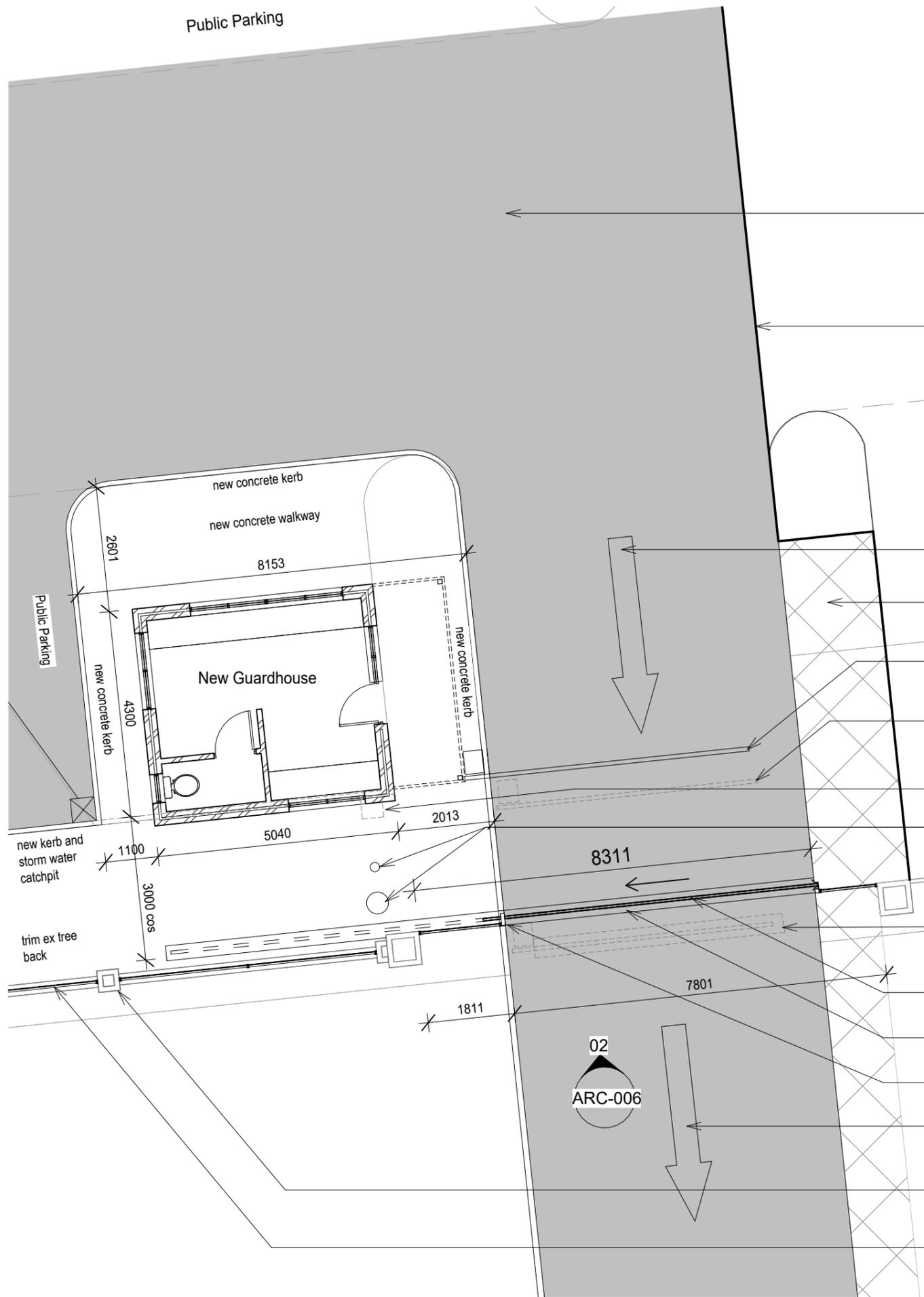
3 Typical Weld Mesh_SIT-003 Copy 1 Copy 1
1:20



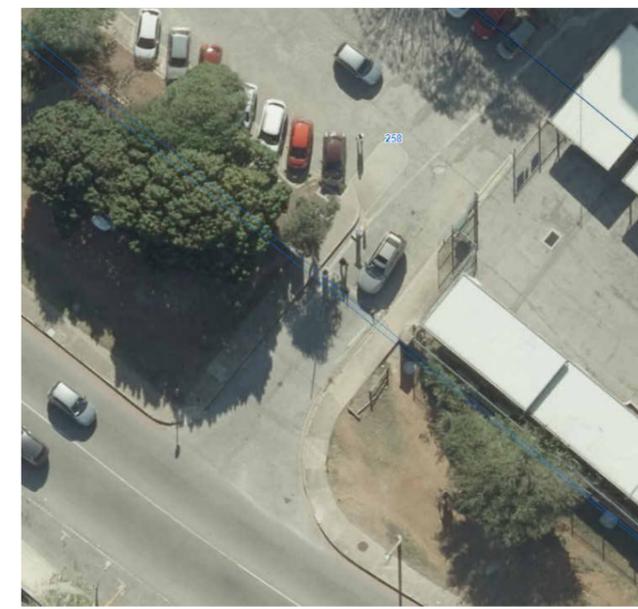
4 Curb Cut Detail_Grass
1:20

1 Ground Floor_Entrance Guard House Layout
1:100

Public Parking



- ← rectify and resurface the existing area marked
- ← keep existing fence and gate
- ← new road-markings and directional arrows
- ← remove and replace the ex concrete walkway
- ← new boom gate controlled by the guardhouse
- ← remove the existing broken boom
- ← ex storm water catch pit to be made redundant and reinstated elswere
- ← remove and cut down the tree and shrub remove there roots/stump and make good
- ← remove existing boom, road spikes, overflow and make good to the road
- ← new 6.5m opening with sliding gate as per detail elsewhere
- ← New level 300mm x 350mm concrete ground beam and gate track
- ← existing kerb to be altered to take the new sliding gate
- ← existing road to be repaired and to be redone
- ← existing low level facebrick wall and brick columns to remain
- ← new 3510 secure fence as per specification elsewhere



COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any work, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS	No.	Description	Date
	1	Remove Trade Names	27-10-2023
	2	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE: Exit Guardhouse - Layout

Scale	1 : 100
Date:	23 September 2025
Drawn by:	Author
Designer:	Designer
Professional Architect:	Approver
Checked by:	Checker

DWG No: **ARC-003**

FOR TENDER ONLY REV 2

COPYRIGHT NOTICE
Copyright © 2016 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Remove Trade Names	27-10-2023
2	Issued for Tender	23-09-2025

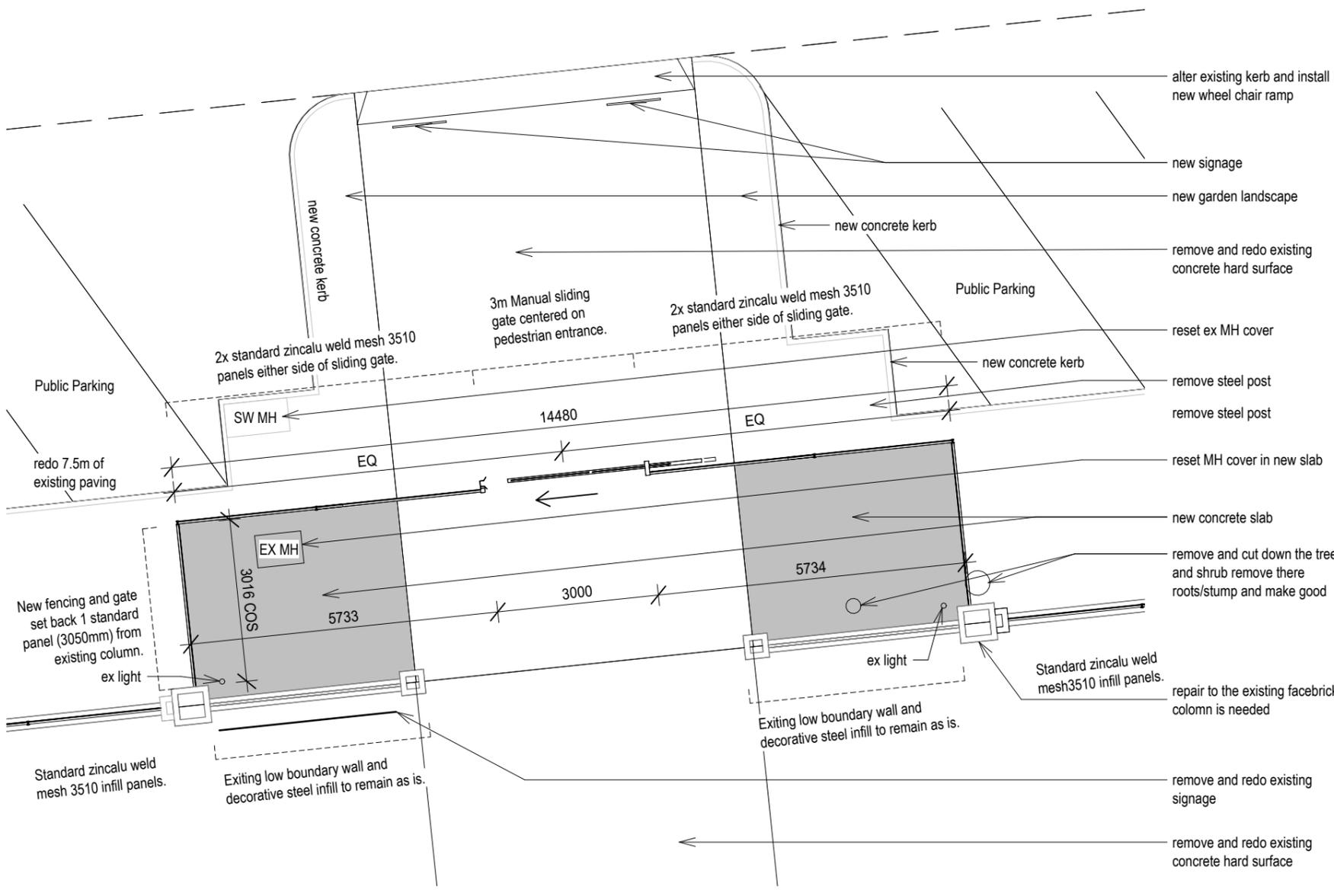
PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE: Pedestrian Entrance - Layout

Scale	1 : 100
Date:	23 September 2025
Drawn by:	Author
Designer:	Designer
Professional Architect:	Approver
Checked by:	Checker

DWG No: ARC-005

FOR TENDER ONLY REV 2

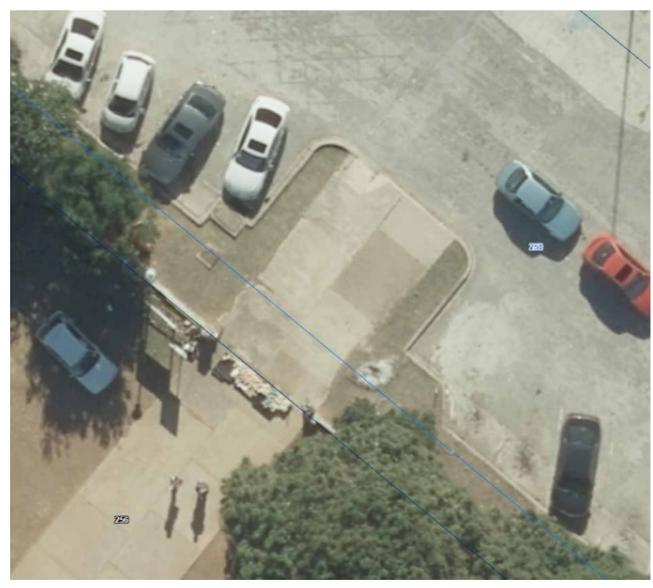


New Fence Specification:
Rigid Mesh Security Fencing
Security zincalu weld mesh 3510 fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
Rigid mesh panels with bends. Core wire (3mm) to be manufactured from Zincalu Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanising
Secure Posts: H - shaped profile post 70mmx 44mm. The panel is to fit securely behind the lip of the post. Height: 3000mm hot dipped galvanized mild steel posts. Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
Secured using tamper-proof shear-off nuts. (no self drilling screws).
All fixator components to be stainless steel Grade 304 per ISO 9223.
All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete.
Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations.

1 Ground Floor_Pedestrian Entrance Layout
1 : 100



Existing Perdestrian Entrance



Existing Perdestrian Entrance Areal Photo

2025/09/23 08:09:32



PROJECT NAME: SRH10.19.2023. - PEPH. Guardhouse 1 & 2.

PROFESSIONAL: B4 Architects

CONSULTANT: Shaun Harvey

REVISION: v 1

REPORT DATE: 19/10/2023

dormakaba 

Project Information

All aspects of this Door Hardware Schedule should be checked and confirmed with all the current documentation available for this project by the hardware distributor prior to the ordering of any hardware.

- For pricing of this door hardware schedule, please contact your regular architectural hardware distributor or contact **dormakaba** for a list of distributors in your area. Alternatively, product and pricing assistance can be obtained via info.za@dormakaba.com
- Door and frame details (including sizes) shown in this door hardware schedule are indicative only and only used as a guide to hardware requirements. All door and frame details should be confirmed from the Architect's most recent documentation.
- If **dormakaba** Automatic doors have been noted in this specification, the full specification, pricing and installation details should be confirmed and priced by **dormakaba**. Please contact your preferred dormakaba consultant for further information.
- All non **dormakaba** hardware specified in this door hardware schedule must be checked with the relevant manufacturer for suitability and availability by the hardware distributor prior to ordering of the hardware.
- The hardware distributor will need to confirm all handing of all products from the latest floor plans prior to the ordering of any hardware. This includes, but is not limited to, all handed locks, furniture, offset pivots, lift-off hinges, etc.
- Where the **dormakaba** ED Series are specified, the provision / installation of fire stopping products or material to penetrations is not allowed for under the **dormakaba** scope of works. This to be carried out by others.
- Panic Bars (where specified) will need to have final sizes confirmed with actual door widths and heights by the hardware distributor prior to ordering.
- Where surface mounted door closers have been scheduled, they should generally be installed to the less visible side of the door. The door closers scheduled require minimum nib room of 60mm when mounted to the pull side of the door.
- Where surface mounted door closers have been scheduled to aluminium or timber glazed doors, a larger top rail (nominal 110mm) should be specified to allow for secure mounting of the door closer. The hardware distributor is to confirm with the door supplier the need for a drop or trim plate.
- Where kickplates have been specified, the builder should organize and allow for the cost of providing final kickplate measurements to the hardware distributor prior to ordering.
- Where door seals have been specified, the hardware distributor will need to confirm the seal sizes and types are compatible with the actual door type, door widths and heights prior to ordering.
- Where seals have been specified to match acoustic requirements, the acoustic consultant is to confirm these seals are suitable to achieve the acoustic ratings required. The door hardware specified may need to be altered if different seals are used.
- Where seals have been specified to smoke doors, the fire / smoke door contractor is to confirm these seals are suitable to comply with the SABS requirements for this project. The door hardware specified may need to be altered if different seals are used.

Project Information

- Where access control and security products have been scheduled, they are only indicatively specified in this door hardware schedule. For full details and specifications refer to the separate Access Control Quotation. The electronic products included in this door hardware schedule should be checked and coordinated with the information shown on the separate Access Control Quotation to ensure adequate power and cabling has been allowed for. The builder is to confirm that the electronic products included in this door hardware schedule are to be part of the hardware distributor's package.
- Refer to individual doors, hardware sets and products for notes that will need to be addressed.

Abbreviations used, finishes and descriptions

CYL	Cylinder
MK	Master Keyed
GMK	Grand Master Keyed
KA	Keyed Alike
KD	Keyed to Differ
BT	Bolt Through
BTB	Back to Back
LH	Left Hand
RH	Right Hand
N/S	Narrow Stile
H/O	Hold Open
D/A	Delayed Action
DD	Double Door
SLD	Sliding Door
EAC	Electronic Access Control
PSS	Polished Stainless Steel
SSS	Satin Stainless Steel
SS	Stainless Steel
GAL	Galvanized
ZP	Zinc Plated
PB	Polished Brass
SB	Satin Brass
PCP	Polished and Chrome Plated
SCP	Satin Chrome Plated
PNP	Polished Nickel Plated
SNP	Satin Nickel Plated
PC	Powder Coated
EP	Electro-plating
PVD	Physical Vapor Disposition

Colouring Legend

	Door / Product has been added to this revision.
	Door / Product has changed since the last revision.
	Door / Product has been removed from this revision.

PROJECT NAME: SRH10.19.2023. - PEPH. Guardhouse 1 & 2.

REPORT DATE: 19/10/2023

PROFESSIONAL: B4 Architects

REVISION DATE: 19/10/2023

CONSULTANT: Shaun Harvey

REVISION: v 1

Door Number	Hardware Set	Area	Location	Door Type	Handing	Door Material
D01	01	GUARDHOUSE 1	SECURITY	A	SA	ALUMINIUM
D01	01	GUARDHOUSE 1	SECURITY	A	SA	ALUMINIUM
D02	02	GUARDHOUSE 1	WC (Security)	B	SA	TIMBER
D01	01	GUARDHOUSE 2	KITCHENETTE	A	SA	ALUMINIUM
D02	02	GUARDHOUSE 2	WC (Kitchenette)	B	SA	TIMBER

HARDWARE PER SET

PROJECT NAME: SRH10.19.2023. - PEPH. Guardhouse 1 & 2.

REPORT DATE: 19/10/2023

PROFESSIONAL: B4 Architects

REVISION DATE: 19/10/2023

CONSULTANT: Shaun Harvey

REVISION: v 1

HARDWARE FOR SET:		01		
Hardware Set Quantity :	1			
Notes	Aluminium Fabricator To Utilise R4 - 85mm Upright Styles. This Needed To Suit Lockcase Depth. Hinges Powder Coated To Match Door Frame Colour. Bottom Of Aluminium Door Prepared To Accept Doorstop And Holder Specified.			
Doors (3)	D01, D01, D01			
Product Code	Description	Finish	Qty	Units
2040	Alufab 2040 200mm Aluminium Sinkless Hinges, Centre Pin, Anodised		4	Each
CR001 Cyl S.S	dormakaba Lever handle on rose with Cylinder escutcheons	Stainless Steel	1	Set
D036S SS	dormakaba Cylinder Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm.	Stainless Steel	1	Each
DDC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Double Cylinder Key to Differ	Satin Nickel	1	Each
BARREL	a Barrel Bolt 150x32mm SC On Brass		1	Each
NECKED	a Necked Bolt 150x32mm SC On Brass		1	Each
401SC	Halcastt HALCAST 401SC Doorstop And Holder		1	each

HARDWARE PER SET

PROJECT NAME: SRH10.19.2023. - PEPH. Guardhouse 1 & 2.

REPORT DATE: 19/10/2023

PROFESSIONAL: B4 Architects

REVISION DATE: 19/10/2023

CONSULTANT: Shaun Harvey

REVISION: v 1

HARDWARE FOR SET:		02		
Hardware Set Quantity :	1			
Notes	Escutcheon Plates To Be Epoxy Glued			
Doors (2)	D02, D02			
Product Code	Description	Finish	Qty	Units
DBB-SS-009	dormakaba 102x75x3mm, EN1935 Grade 13, Two ball bearing butt hinge. Fire rated. 120kg Carrying capacity per pair. Finish: Stainless steel.	Stainless Steel	1	Pair
CR001 Latch S.S	dormakaba Lever handle on rose - Latch	Stainless Steel	1	Set
D035S SS	dormakaba Bathroom Sash Lock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm. Centres 57mm.	Stainless Steel	1	Each
DWC-005	dormakaba Bathroom WC indicator (Red and White) and turnknob	Stainless Steel	1	Set
DHC-SS-030A	dormakaba Hat and Coat Hook	Stainless Steel	1	Each

BILL OF MATERIALS

PROJECT NAME: SRH10.19.2023. - PEPH. Guardhouse 1 & 2.

REPORT DATE: 19/10/2023

PROFESSIONAL: B4 Architects

REVISION DATE: 19/10/2023

CONSULTANT: Shaun Harvey

REVISION: v 1

Product Image	Product Code	Description	Finish	Units	Qty	Price (ZAR)	Total (ZAR)
	2040	Alufab 2040 200mm Aluminium Sinkless Hinges, Centre Pin, Anodised		Each	12.0		
	DBB-SS-009	dormakaba 102x75x3mm, EN1935 Grade 13, Two ball bearing butt hinge. Fire rated. 120kg Carrying capacity per pair. Finish: Stainless steel.	Stainless Steel	Pair	2.0		
	CR001 Cyl S.S	dormakaba Lever handle on rose with Cylinder escutcheons	Stainless Steel	Set	3.0		
	CR001 Latch S.S	dormakaba Lever handle on rose - Latch	Stainless Steel	Set	2.0		
	D035S SS	dormakaba Bathroom Sash Lock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm. Centres 57mm.	Stainless Steel	Each	2.0		
	D036S SS	dormakaba Cylinder Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm.	Stainless Steel	Each	3.0		
	DDC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Double Cylinder Key to Differ	Satin Nickel	Each	3.0		
	DWC-005	dormakaba Bathroom WC indicator (Red and White) and turnknob	Stainless Steel	Set	2.0		
	BARREL	a Barrel Bolt 150x32mm SC On Brass		Each	3.0		
	NECKED	a Necked Bolt 150x32mm SC On Brass		Each	3.0		
	401SC	Halcastt HALCAST 401SC Doorstop And Holder		each	3.0		
	DHC-SS-030A	dormakaba Hat and Coat Hook	Stainless Steel	Each	2.0		
Total (ZAR)							

ALL PRODUCTS, PRODUCT SPECIFICATIONS, PRICES AND DATA SHEETS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

dormakaba South Africa Pty Ltd, and its employees, and all persons acting on its or their behalf, disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any specification document or in any other disclosure relating to any product.

dormakaba South Africa Pty Ltd makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product.

To the maximum extent permitted by applicable law, dormakaba South Africa Pty Ltd disclaims

- i. any and all liability arising out of the application or use of any product,
- ii. any and all liability, including without limitation special, consequential or incidental damages, and
- iii. any and all implied warranties, including warranties of fitness for particular purpose, non infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on dormakaba South Africa Pty Ltd knowledge of typical requirements that are often placed on dormakaba products in generic applications.

Such statements are not binding statements about the suitability of products for a particular application.

It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Product specifications do not expand or otherwise modify dormakaba South Africa Pty Ltd terms and conditions of purchase, including but not limited to the warranty expressed therein.

Customers using or selling dormakaba products not expressly indicated for use in such applications do so at their own risk.

Please contact authorized dormakaba personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of dormakaba South Africa Pty Ltd.

Product names and markings noted herein may be trademarks of their respective owners.

Department of Health & CDC

305-026 : Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

Door Schedule

b4 Architects cc

Resuscitating Healthcare Design

Port Elizabeth

PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070

Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban

1 Tamarine Close, Sunningdale, Umhlanga, 4139

Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



DOOR TYPE A

FRAME:

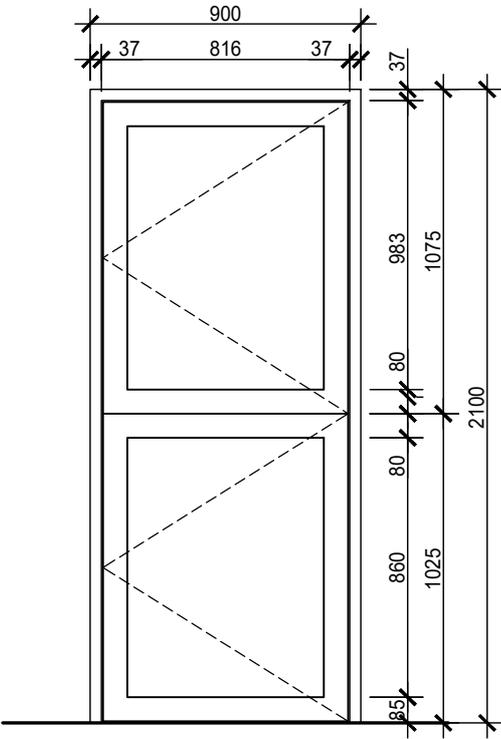
Aluminium frame, white powder coated.
Clip44 system

DOOR:

Aluminium framed stable door to fit in opening
2100 x 900mm - white powder coated

IRONMONGERY:

As per ironmongery schedule.



QUANTITY	DOOR NUMBERS
1	D01
GLAZING	6.4mm Laminated safety glass as glazing with spacer and decicant

Province of the EASTERN CAPE HEALTH

b4 Architects cc
Resuscitating Healthcare Design

SAKHIWO SALES SOLUTIONS | bigen | HDG | NEMA SA

COPYRIGHT NOTICE
Copyright © 2023. B4 Architects | Copyright exists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the perpetrator liable for civil law copyright infringement and may in certain circumstances render the perpetrator liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ALL WORK IS TO COMPLY WITH THE VARIOUS SANS-10400 BUILDING REGULATIONS AND ALL OTHER REGULATIONS REFERRED TO THEREIN.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, and drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS	No.	Description	Date
1	1	Issued for Tender	23-09-2025

NOTE: DETAILS ARE AS FOR TYPICAL DOOR ILLUSTRATED

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

Scale: 1 : 10
Date: 23 September 2025
Drawn by: ET
Checked by: BB

B4 Ref No.: Architect Dwg No:
305-026 DS- 001

FOR TENDER ONLY

Door Type A

Sakhiwo Ref No:

REV	1
-----	---

DOOR TYPE B

FRAME:

Timber frame.

DOOR:

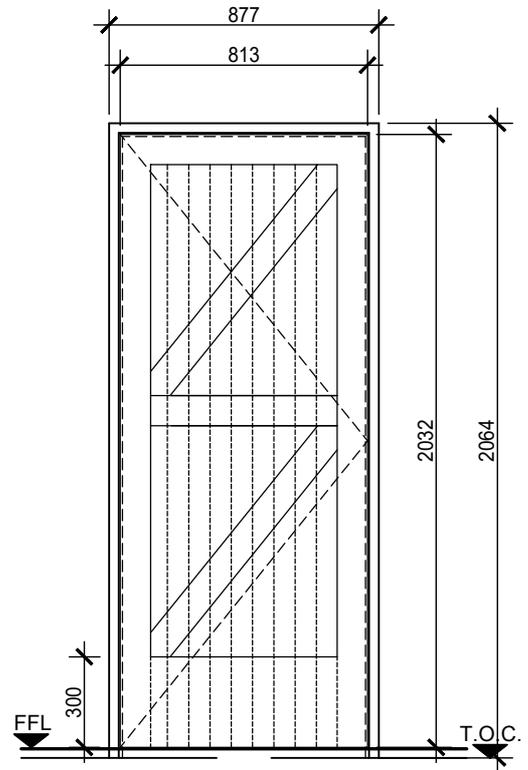
44mm thick Hardwood framed, ledged, braced and battened door.

Weatherboard on outside.

Plywood flush panel to inside.

IRONMONGERY:

As per ironmongery schedule.



QUANTITY	DOOR NUMBERS
1	D02

NOTE: DETAILS ARE AS FOR TYPICAL DOOR ILLUSTRATED.
CONTRACTOR TO MEASURE ALL DOOR OPENINGS BEFORE MANUFACTURE

Province of the **EASTERN CAPE**
HEALTH

b4 Architects cc
Resuscitating Healthcare Design

SAKHIWO HEALTH SOLUTIONS | HDG | NEMA SA

COPYRIGHT NOTICE
Copyright © 2023 (b4 Architects) Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce (including to the extent necessary to carry out and complete the project described in the title block of this drawing).
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.
Any unauthorised reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any work, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

REVISIONS	No.	Description	Date
	1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Door Type B
Sakihiwo Ref No:

Scale: 1 : 10
Date: 23 September 2025
Drawn by: ET
Checked by: BB
B4 Ref No.: Architect Dwg No:
305-026 DS- 002

FOR TENDER ONLY REV 1

**EASTERN CAPE
DEPARTMENT OF HEALTH**

**LIVINGSTONE PEPH HOSPITAL COMPLEX
SECURITY & INFRASTRUCTURE UPGRADES
PEPH GUARD HOUSES**

**FINISHES SCHEDULE
SCHEDULE**

Rev 1

EASTERN CAPE DEPARTMENT OF HEALTH
LIVINGSTONE PEPH SECURITY & INFRASTRUCTURE UPGRADES
SCHEDULE OF FINISHES

DOCUMENT NUMBER: 305-026_FIN-001
DOCUMENT NAME: Schedule of Finishes
DATE: 2025-09-22
REVISION: 1

ISSUED FOR INFORMATION

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** show specifications under review.
3. Items indicated in **green** show new/additional specifications.

DATE	REVISION	DESCRIPTION
2025-09-22	1	Issued for Re-tender

EASTERN CAPE DEPARTMENT OF HEALTH
LIVINGSTONE PEPH SECURITY & INFRASTRUCTURE UPGRADES
SCHEDULE OF FINISHES

External

Walls:

- Face brick to like "Marocon Red Travertine FBS" from COROBRIK or similar approved (to match face brick at Nurses Home).
- Window cills – face brick on edge.

Roof:

- Klip-Lock 406 precoated Aluminium roof sheeting installed to manufacturer's specification with all flashings, cappings, counter flashings, broad flute closers and poly closers, fixed at a pitch of 22° to 50 x 76mm timber purlins at maximum 1200mm centers purlins fixed to prefab SA Pine trusses at max 1400mm centers.
- Open eaves – exposed timber to be prepared and painted with Plascon Velvagio (White)
- Facia – 200mm fibre cement facia painted with Plascon Velvagio (White).
- Barge Boards – 200 x 80mm fibre cement barge boards painted with Plascon Velvagio (White).
- Gutters and downpipes - domestic Ogee profile aluminium seamless gutter with 75 x 50 x 0,6mm rectangular fluted downpipes with Crimped bends.

Internal

Floor:

- 2mm "POLYFLOR FOREST FX PUR" *Rural Deckwood 3102* fully flexible laminated vinyl floor sheeting fixed to smooth cement floor, including 4mm approved epoxy based self-levelling screed.

Skirting:

- 94 x 19mm H/W skirting with 19mm H/W quadrant bead, painted with Plascon Velvagio colour *WHITE*, as per manufactures specifications.

Walls:

- Face brick to like "Marocon Red Travertine FBS" from COROBRIK or similar approved (to match face brick at Nurses Home).
- Window cills – face brick on edge.

Doors:

- Plascon Velvagio colour *WHITE*, as per manufactures specifications.

Wall tiles:

- Splashback behind kitchen counter and whb - 2 rows of 250 x 200 x 6.5mm Johnson AL4 mat white ceramic wall tiles or similar approved, laid with 2mm wide joints. White grout.

Department of Health & CDC

305-026 : Upgrading of security related infrastructure at Livingstone
PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

Joinery

b4 Architects cc

Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070

Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :	No.	Description	Date
	1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 01

Scale 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

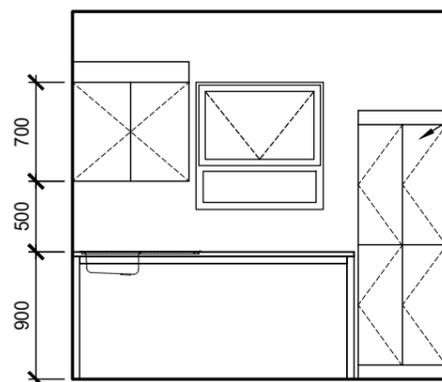
Professional Architect: BB

Checked by: BB

DWG No: 305-026 JP-01

FOR TENDER

REV

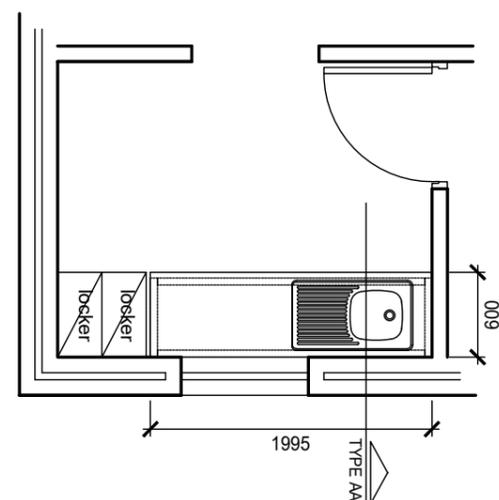


Locker 5P- slanted Industrial locker manufactured from 1.2mm-2.0mm steel from "METMEISTER" or similar approved

Lockers with split full-height cubicles are rigid and made from 1.2mm and 2mm heavy duty quality steel, epoxy coated in blue & grey texture, with 4 compartments and shelf. Each compartment fitted with 3 point lever lock. Locker mounted onto a 50mm plinth epoxy powder coated in RAL 9011 black

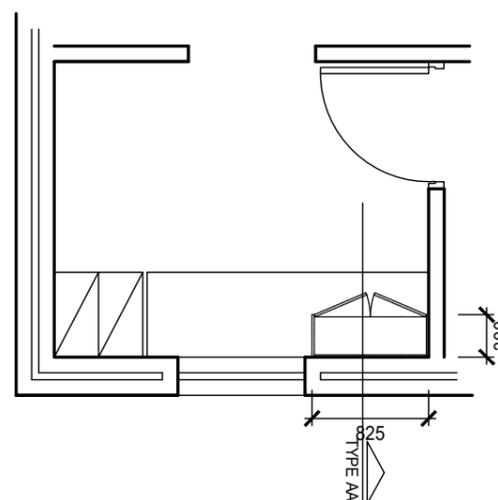
ELEVATION A

SCALE 1:50



PLAN (LOWER LEVEL)

SCALE 1:50



PLAN (UPPER LEVEL)

SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to sink units to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel finger grip flat handles in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 02

Scale: 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

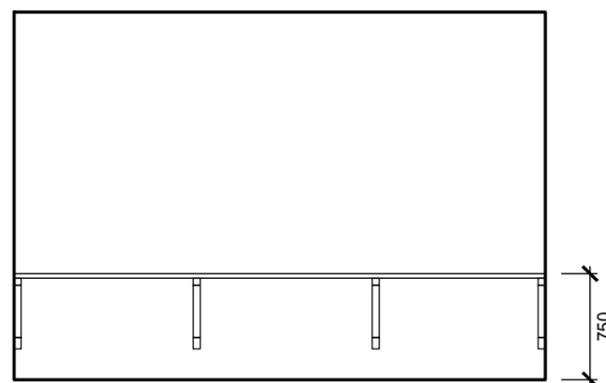
Professional Architect: BB

Checked by: BB

DWG No: 305-026 JP-02

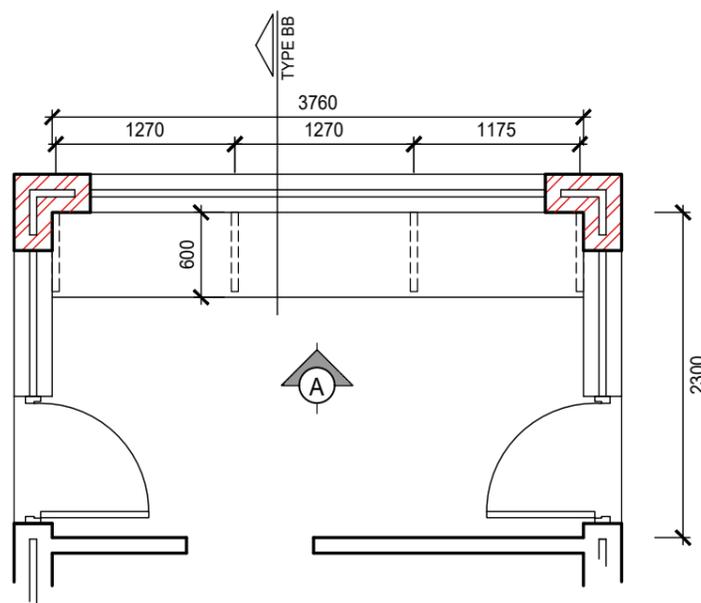
FOR TENDER

REV



ELEVATION A

SCALE 1:50



PLAN SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to sink units to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel finger grip flat handles in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :	No.	Description	Date
	1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 03

Scale: 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

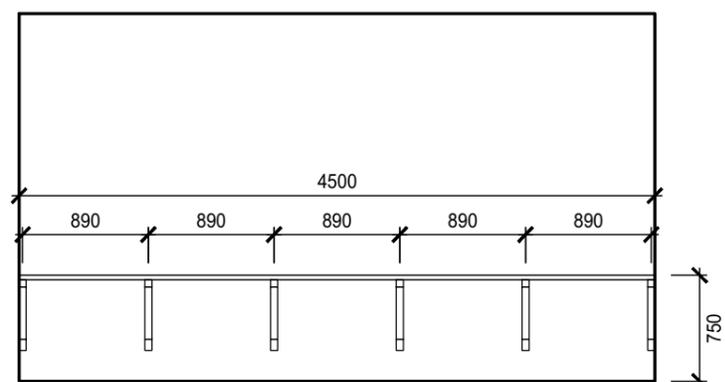
Professional Architect: BB

Checked by: BB

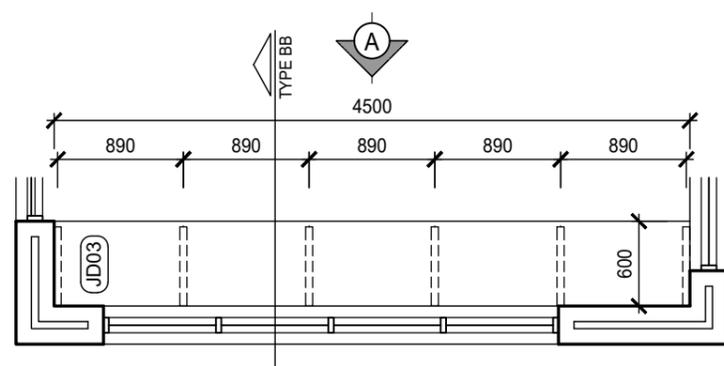
DWG No: 305-026 JP-03

FOR TENDER

REV



ELEVATION A
SCALE 1:50



PLAN SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel finger grip flat handels in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

COPYRIGHT NOTICE

Copyright © 2018 (b4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of b4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities.
Contract No. CDC/377/25

TITLE: Joinery Plan 04

Scale: 1 : 20

Date: 23 September 2025

Drawn by: ET

Designer: ET

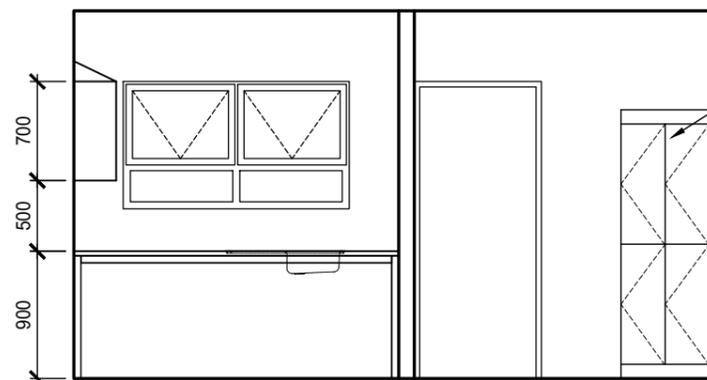
Professional Architect: BB

Checked by: BB

DWG No: 305-026 JP-04

FOR TENDER

REV

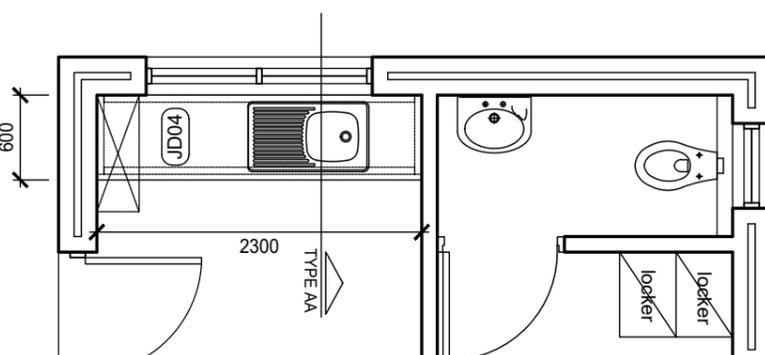


Locker 5P- slanted Industrial locker manufactured from 1.2mm-2.0mm steel from "METMEISTER" or similar approved

Lockers with split full-height cubicles are rigid and made from 1.2mm and 2mm heavy duty quality steel, epoxy coated in blue & grey texture, with 4 compartments and shelf. Each compartment fitted with 3 point lever lock. Locker mounted onto a 50mm plinth epoxy powder coated in RAL 9011 black

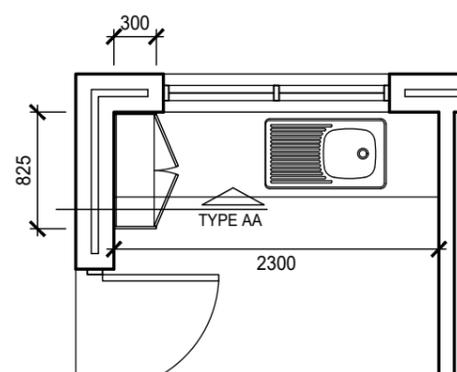
ELEVATION A

SCALE 1:50



PLAN (LOWER LEVEL)

SCALE 1:50



PLAN (UPPER LEVEL)

SCALE 1:50

ALL dimensions to be verified on site prior to manufacture. Any discrepancies above 10mm to be brought to the attention of the architect for clarification.

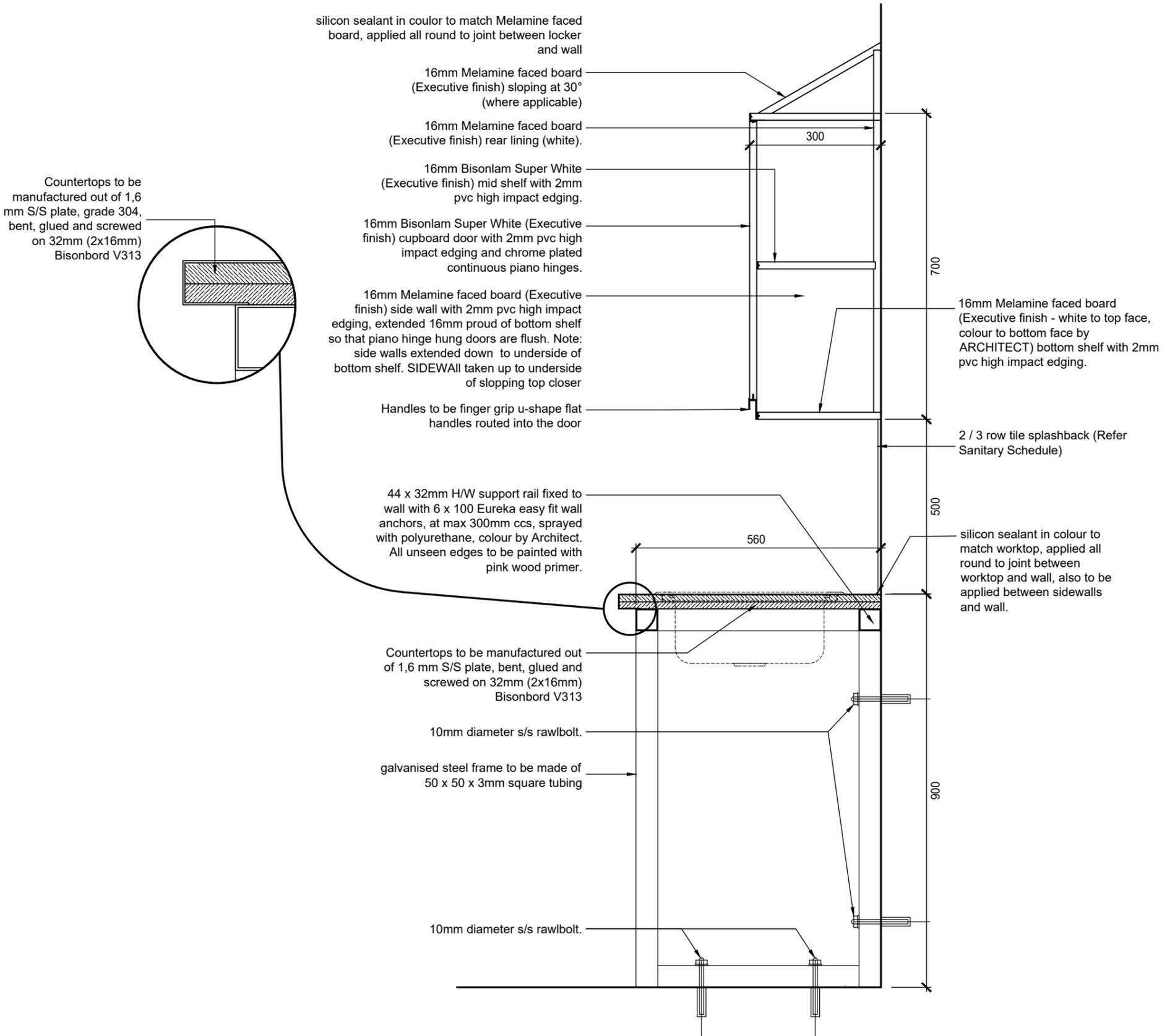
note (where applicable)

- All internal shelves to be of BISONLAM SUPER WHITE. Exposed edges to be finished with 2mm high impact edging, colour to match board. Internal selves to sink units to be of BISON BOARD V313 moisture resistant board.
- All shelving to be adjustable. All cupboards to be lockable with SISA 71550-20-23-00 (brass) cylinder cupboard locks or other approved.
- All doors to be fixed on chrome plated continuous piano hinges.
- All drawers to be fitted with MEPLA or other approved easyglide slides.
- All drawers, cupboard doors & fixed panels to be 16mm MELAMINE faced board with 2mm high impact edge to doors. Colour by Architect.
- 16mm BISONLAM SUPER WHITE board backing to fitting.
- Where joinery is fixed against drywall, walls to be braced with suitable timber studs. (by others).
- All handles to be Raiel finger grip flat handles in natural anodized aluminium pull handle.
- Skirting: refer to detail section.
- Countertops: 32mm Formica Lifeseal Worktops width as per detail with one edge to have 90° quadrant edge / 180° bullnose edge (as per detail) Colour by Architect.
- All bases to be of solid SA Pine, treated for moisture resistance.
- White silicone to be applied between worktops and walls / tiles.
- All internal cutouts to accommodate pipes to be cut neat & square / rectangular / circular and to be closed up with 4mm white faced MASONITE board cut to shape around pipe.

TYPE AA

GENERAL NOTES:

- All exposed edges to joinery units (including drawers, doors, etc.) to be finished using 2mm PVC high impact edging in colour matching board face.
- All doors and draws to be finished with Raiel Fingergrasp Flat Handles (code: RAH841) in Natural Anodised Aluminium finish. Handle to extend full length of door/drawer top, with ends deburred and neatened to a smooth finish. sample to be approved by architect.
- All hinges to be heavy duty chrome plated continuous piano hinges.
- All runners and sliders to be full extension ball bearing slides.
- All doors and drawers to be fitted with locks.
- All joints between walls, basins, sinks and joinery sealed with Sikaflex -11 FC+ (colour: White).
- All shelves to be supported on 3 sides.



SECTION SCALE 1:10

Province of the
EASTERN CAPE
HEALTH

b4 Architects cc
Resuscitating Healthcare Design

SAKHIWO bigen HDG RYP Quantity Surveyors

COPYRIGHT NOTICE

Copyright © 2023 (B4 Architects.) Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23 September 2025

PROJECT:
TITLE:

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Joinery Detail
Type A-A

Sakhiwo Ref No:

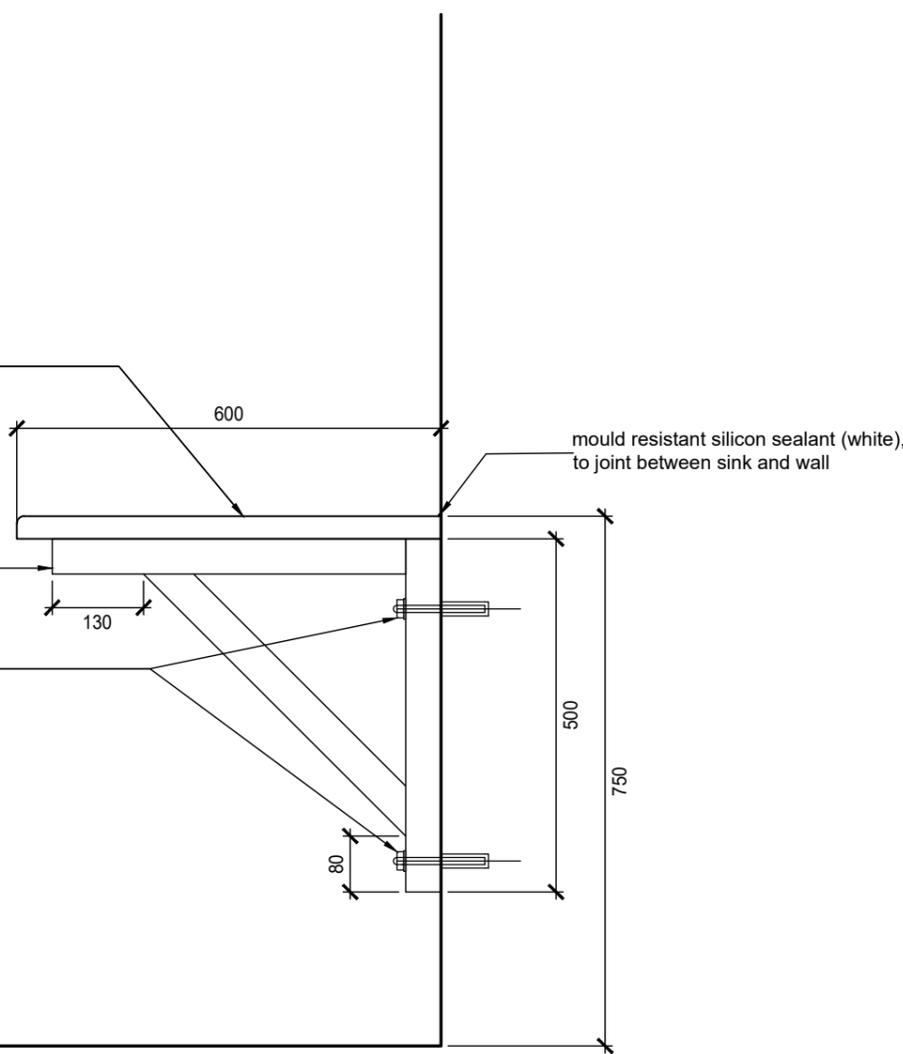
Scale	1 : 10
Date:	23 September 2025
Drawn by:	ET
Checked by:	BB
B4 Ref No.:	Architect Dwg No:
305-026	JD- 001
FOR TENDER	
REV	1

TYPE BB

600 x 32mm Life seal FORMICA finished post formed worktop with 90° bullnose edging. All cuts and rear edges to be painted with pink wood primer. Worktop screwed and fixed to support rails from below

mild steel bracket to be made of 50 x 50 x 3mm square tubing, painted (colour white)

10mm diameter s/s rawlbolt.



SECTION

SCALE 1:10



b4 Architects cc
Resuscitating Healthcare Design

COPYRIGHT NOTICE

Copyright © 2023 (B4 Architects.) Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquires concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	23 September 2025

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Joinery Detail
Type B-B

Sakhiwo Ref No:

Scale 1 : 10

Date: 23 September 2025

Drawn by: ET

Checked by: BB

B4 Ref No.: Architect Dwg No:

305-026

FOR TENDER

REV
1



**EASTERN CAPE
DEPARTMENT OF HEALTH**

**LIVINGSTONE PEPH HOSPITAL COMPLEX
SECURITY & INFRASTRUCTURE UPGRADES
PEPH GUARD HOUSES**

**SANITARY SPECIFICATION
SCHEDULE**

Rev 1

**EASTERN CAPE DEPARTMENT OF HEALTH
LIVINGSTONE PEPH SECURITY & INFRASTRUCTURE UPGRADES
SANITARY SPECIFICATION SCHEDULE**

DOCUMENT NUMBER: 305-026_SAN-001
DOCUMENT NAME: Sanitary Specification Schedule
DATE: 2025-09-16
REVISION: 1

ISSUED FOR INFORMATION

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** show specifications under review.
3. Items indicated in **green** show new/additional specifications.

DATE	REVISION	DESCRIPTION
2025-09-16	1	Issued for Re-tender

EASTERN CAPE DEPARTMENT OF HEALTH
LIVINGSTONE PEPH SECURITY & INFRASTRUCTURE UPGRADES
SANITARY SPECIFICATION SCHEDULE

WASH HAND BASIN: Staff Ablutions

- Basin:
Polymer composite vandal resistant whb like Whyte House Psych Basin (WHBPSYCH-8), fixed as per Manufacturers specifications.
- Mixer:
Cobra metering pillar tap (code: COB-KM2-100) in chrome finish. Includes self-closing, non-hold open, flow controller with flow cycle of 1-20 seconds, ½" male inlet, backnut, washer and streamline outlet for flow aesthetics. Contractor to place tap centre on basin with hole for tap to be cut by basin manufacturer.
- Waste/Trap:
To be made up with 40mmØ upvc wastepipe with 3 x 40mmØ bend plain 87,5° and 1 x bend access heel 87,5°, glued together with approved pvc weld.

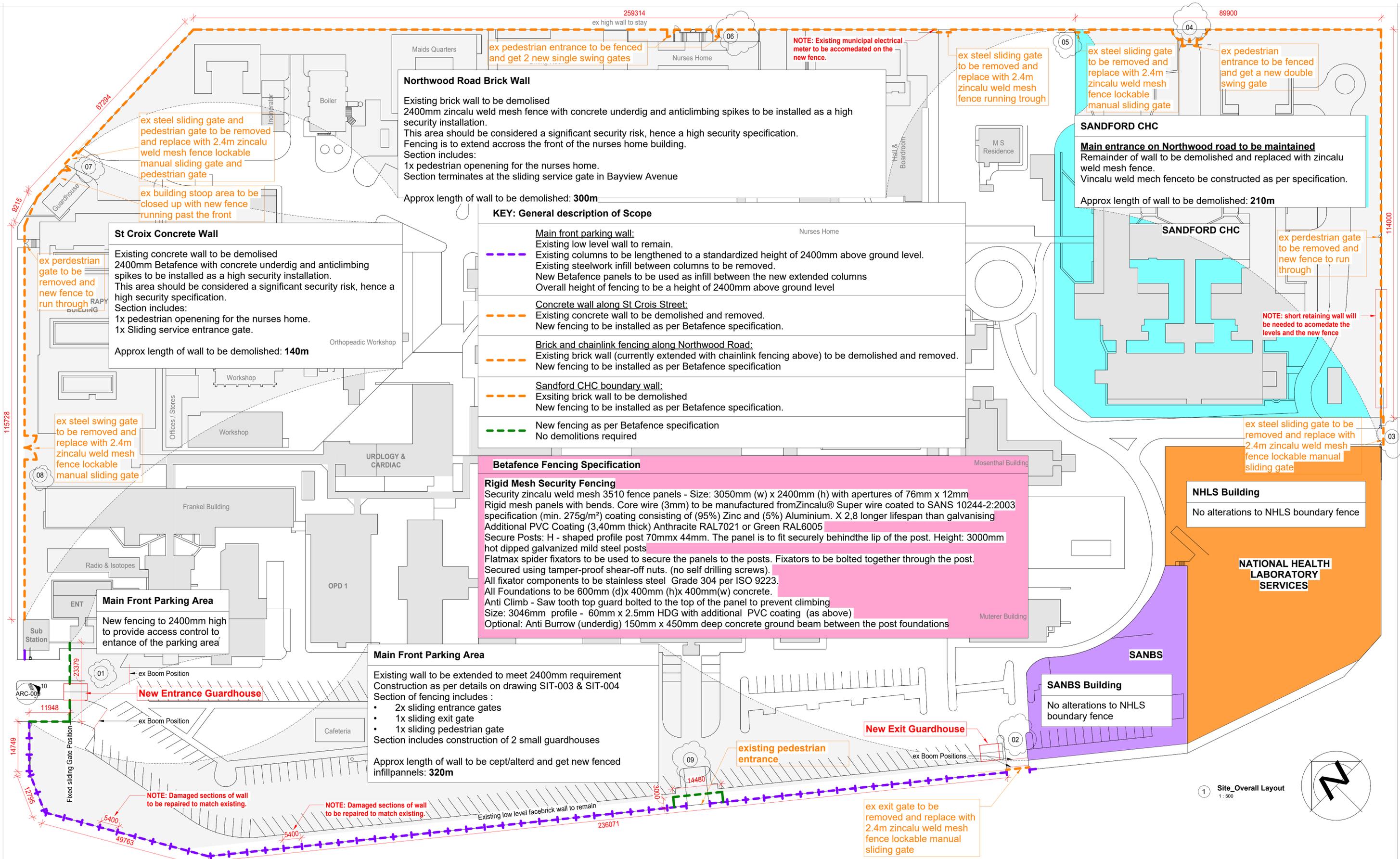
S1 SINK: Kitchenette

SINK:

- Sink:
Franke NVN611 Single End Bowl Sink Drop-on Sink (Code: 101.0167.171 / 811023), 800 x 460mm Single End Bowl S/S grade 304 18/10, 1,2 mm drop-in sink unit.
- Mixer:
Cobra Karoo (product code: KO-970) single lever sink mixer with swivel outlet with ½" BSP female inlet including sink mixer swivel outlet and 400mm long flexible inlets.
- Waste/Trap:
du Bois 50mm PVC trap inside cupboard.
- Accessories:
 - Hydroboil:
Franke Stainless Steel Hydroboil with concealed plumbing and electrical connections, to be installed as per manufacturer's specifications. Capacity: 2,5 litres (12-15 cups).

WC1 TOILET: Staff Ablutions

- Cistern:
Where cisterns will be built into brickwork:
38643001 Uniset for WC flushing cistern GD2 with small maintenance access sound-insulating EPS module for masonry – in 830x470x130mm rail adaptors for modular fixing for single or rail installation. Wall rail with fixing accessories for single installation. 2x WC fixing bolts, distance of fixing bolts 180/230mm fixing device for ceramic outlet bend 90mm dia., depth adjustable 90/110mm dia. reducer inlet and outlet connecting set adjustment ex. Factory 6ℓ and 3ℓ pneumatic discharge valve offering 3 modes of operation:
 - Dual flush
 - Start/stop.
 - Single flush water supply.From left/right/back or top low noise DIN approved insulated against condensation ½" water supply connection including integrated angle valve and push fit flexible hose union for vertical or horizontal hose union for vertical or horizontal use.
- Actuator Plate/Wall Plate
Grohe Air Button single flush (code: 37059000) actuator with 1500mm pneumatic hose, 100mm flange plate in Grohe StarLight® chrome finish.
- Pan:
Polymer composite vandal resistant wc pan like Whyte House Psych Basin (WHP-1), fixed as per Manufacturers specifications.
- Accessories:
 - Toilet Roll Holder:
Franke recessed type toilet roll holder (code: 359635) 118Ø x 110mm manufactured from Grade 304 (18/10) stainless steel, 2mm gauge. Unit with 20mm flange and 2x M10 treaded rods for bolting the unit through the wall.



Northwood Road Brick Wall

Existing brick wall to be demolished
 2400mm zincalu weld mesh fence with concrete underdig and anticlimbing spikes to be installed as a high security installation.
 This area should be considered a significant security risk, hence a high security specification.
 Fencing is to extend across the front of the nurses home building.
 Section includes:
 1x pedestrian opening for the nurses home.
 Section terminates at the sliding service gate in Bayview Avenue
 Approx length of wall to be demolished: **300m**

SANDFORD CHC

Main entrance on Northwood road to be maintained
 Remainder of wall to be demolished and replaced with zincalu weld mesh fence.
 Vincalu weld mech fenceto be constructed as per specification.
 Approx length of wall to be demolished: **210m**

St Croix Concrete Wall

Existing concrete wall to be demolished
 2400mm Betafence with concrete underdig and anticlimbing spikes to be installed as a high security installation.
 This area should be considered a significant security risk, hence a high security specification.
 Section includes:
 1x pedestrian opening for the nurses home.
 1x Sliding service entrance gate.
 Approx length of wall to be demolished: **140m**

KEY: General description of Scope

- Main front parking wall:**
 Existing low level wall to remain.
 Existing columns to be lengthened to a standardized height of 2400mm above ground level.
 Existing steelwork infill between columns to be removed.
 New Betafence panels to be used as infill between the new extended columns
 Overall height of fencing to be a height of 2400mm above ground level
- Concrete wall along St Croix Street:**
 Existing concrete wall to be demolished and removed.
 New fencing to be installed as per Betafence specification.
- Brick and chainlink fencing along Northwood Road:**
 Existing brick wall (currently extended with chainlink fencing above) to be demolished and removed.
 New fencing to be installed as per Betafence specification
- Sandford CHC boundary wall:**
 Existing brick wall to be demolished
 New fencing to be installed as per Betafence specification.
- New fencing as per Betafence specification**
 No demolitions required

Betafence Fencing Specification

Rigid Mesh Security Fencing
 Security zincalu weld mesh 3510 fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
 Rigid mesh panels with bends. Core wire (3mm) to be manufactured fromZincalu® Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanising
 Additional PVC Coating (3,40mm thick) Anthracite RAL7021 or Green RAL6005
 Secure Posts: H - shaped profile post 70mmx 44mm. The panel is to fit securely behindthe lip of the post. Height: 3000mm
 hot dipped galvanized mild steel posts
 Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
 Secured using tamper-proof shear-off nuts. (no self drilling screws).
 All fixator components to be stainless steel Grade 304 per ISO 9223.
 All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete.
 Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
 Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
 Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations

Main Front Parking Area

Existing wall to be extended to meet 2400mm requirement
 Construction as per details on drawing SIT-003 & SIT-004
 Section of fencing includes :
 • 2x sliding entrance gates
 • 1x sliding exit gate
 • 1x sliding pedestrian gate
 Section includes construction of 2 small guardhouses
 Approx length of wall to be cept/alterd and get new fenced infillpanels: **320m**

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
 PO Box 5690, Walmer, Port Elizabeth, 6065
 Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
 Walmer, Port Elizabeth, 6070
 Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
 Westville, Durban, 3630
 Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Province of the
EASTERN CAPE
 HEALTH

SAKHIWO
 HEALTH SOLUTIONS

HDC
 HEALTH DEVELOPMENT CORPORATION

bigen

NEMA SA

COPYRIGHT NOTICE
 Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing .

ACTS OF PARLIAMENT
 All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ACCURACY & DIMENSIONS
 Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

REVISIONS:

No.	Description	Date
1	Gate Numbers	27-10-2023
2	Issued for Tender	23-09-2025

No.	Description	Date
1	Gate Numbers	27-10-2023
2	Issued for Tender	23-09-2025

Department of Health & CDC

PROJECT: Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 23 September 2025

Scale:	1 : 500
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE: Overall Site Layout

B4 Ref No.: 305-026
 Architect DWG No.: SIT-001

FOR TENDER ONLY

REV: 2

Photos of Existing Condition



Existing steel sliding gate and pedestrian gate to be removed and replace with 2.4m Betafence lockable manual sliding gate and pedestrian gate



Internal section of wall to be demolished along with boundary wall.



Existing pedestrian gate to be removed.
New pedestrian gate as per zincalu weld mech fence detailing, in same position.
Pedestrian gate width 2375mm.



Note:
Entire section of concrete wall along St Croix Avenue to be demolished.
Where existing foundations are unsuitable for use (due to spalling and cracking), a new ground beam is to be cast to account for existing level differences between internal grassed areas and external paved areas.

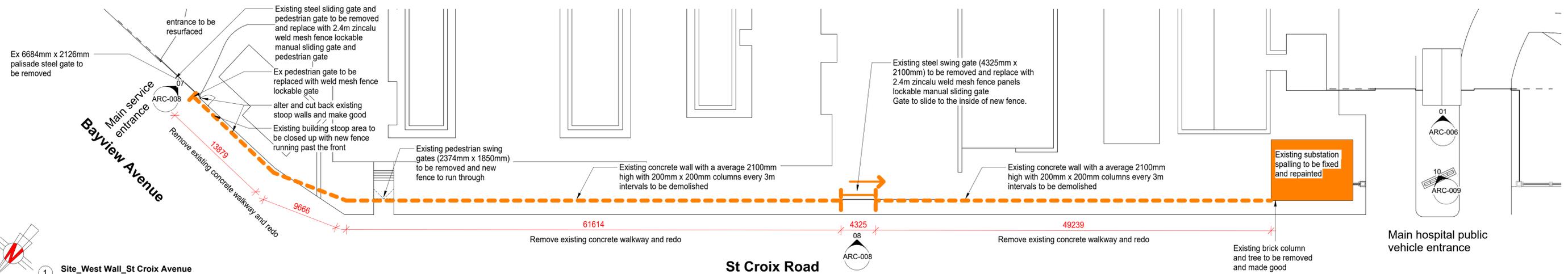
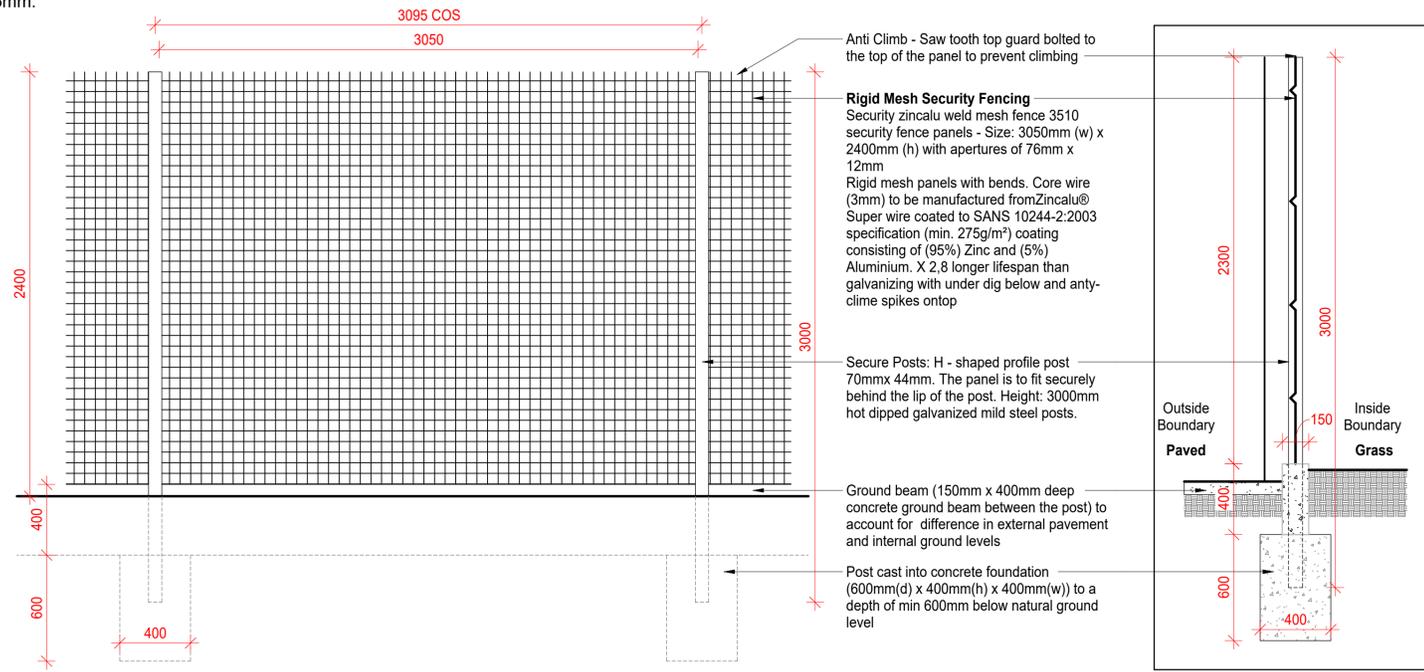


Existing entrance swing gate to be removed.
New sliding entrance gate as per Betafence detailing, in same position.
Sliding gate opening 4325mm.



New Security zincalu weld mesh fence to terminate at side of existing substation and continue on the opposite side.
New public entrance gate as part of Buckingham Road wall section upgrade.

New Fence Specification:
Rigid Mesh Security Fencing
 Security zincalu weld mesh 3510 fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
 Rigid mesh panels with bends. Core wire (3mm) to be manufactured from Zincalu® Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanizing
 Secure Posts: H - shaped profile post 70mmx44mm. The panel is to fit securely behind the lip of the post. Height: 3000mm hot dipped galvanized mild steel posts.
 Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
 Secured using tamper-proof shear-off nuts. (no self drilling screws).
 All fixator components to be stainless steel Grade 304 per ISO 9223.
 All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete.
 Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
 Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
 Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations.



b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue, Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
Westville, Durban, 3630
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Province of the **EASTERN CAPE** HEALTH

SAKHIWO HEALTH SOLUTIONS | bigen | HDG | NEMA SA

COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display, print and/or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Remove Trade Names	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 23 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	-
Professional Architect:	B Brinkman
Checked by:	B Brinkman

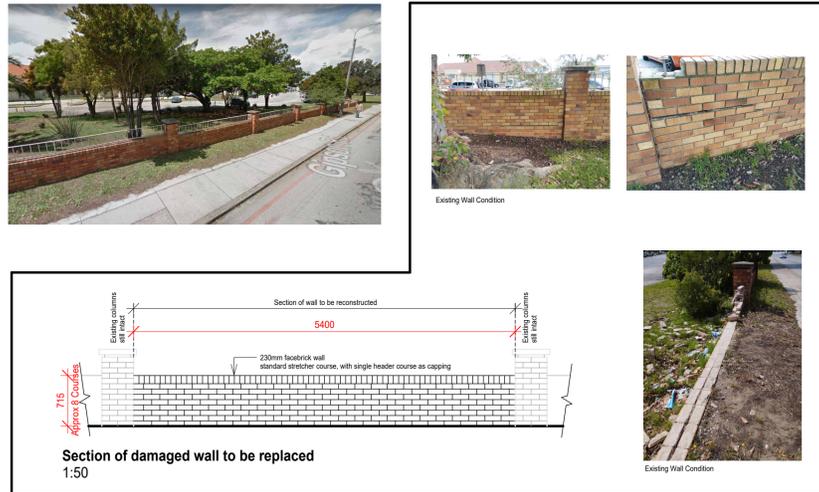
TITLE: West Wall - St Croix Road

B4 Ref No.: 305-026
Architect DWG No.: SIT-002

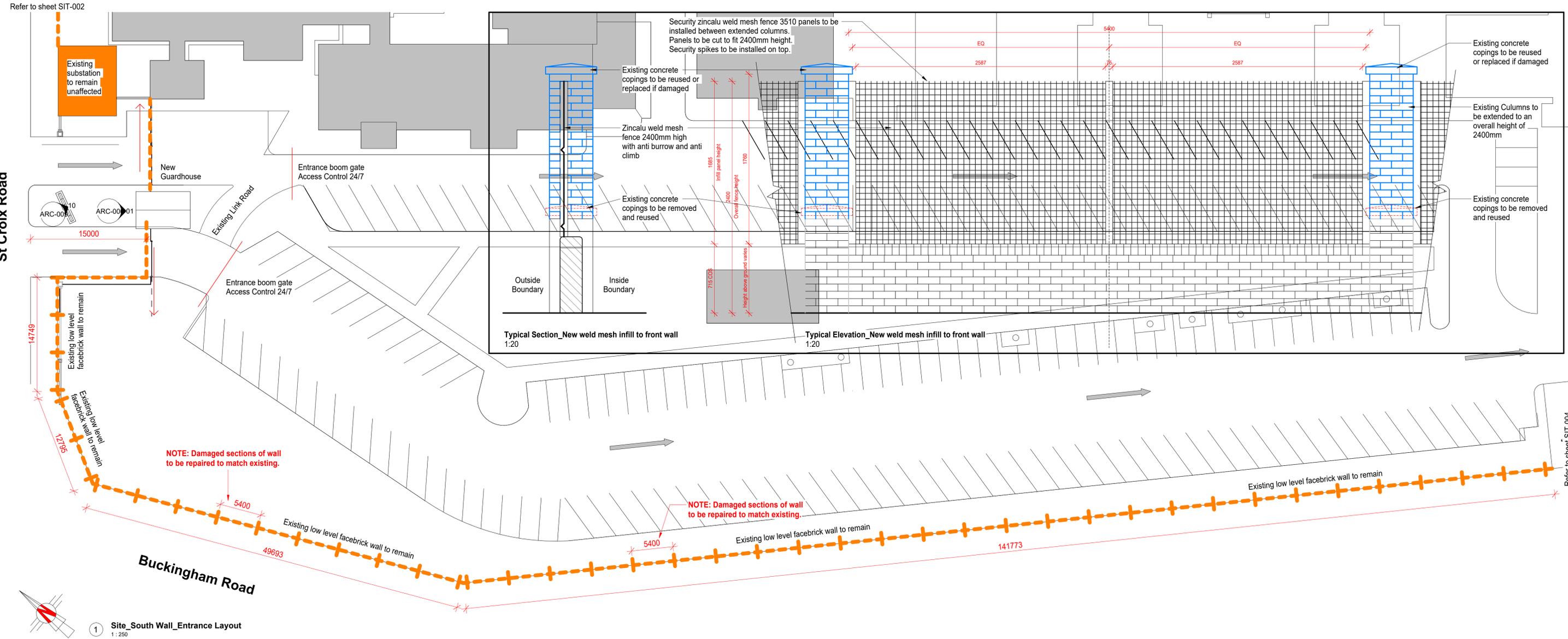
FOR TENDER ONLY

REV: 2

Photos of Existing Condition



New Fence Specification:
Rigid Mesh Security Fencing
 Security zincalu weld 3510 mesh fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
 Rigid mesh panels with bends. Core wire (3mm) to be manufactured from Zincalu® Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanizing.
 Secure Posts: H - shaped profile post 70mmx 44mm. The panel is to fit securely behind the lip of the post. Height: 3000mm hot dipped galvanized mild steel posts.
 Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
 Secured using tamper-proof shear-off nuts. (no self drilling screws).
 All fixator components to be stainless steel Grade 304 per ISO 9223.
 All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete.
 Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
 Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
 Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations.



b4 Architects cc
 Resuscitating Healthcare Design

Port Elizabeth
 PO Box 5690, Walmer, Port Elizabeth, 6065
 Unit 12, Bloomingdales Office Park, 34 Ninth Avenue, Walmer, Port Elizabeth, 6070
 Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
 Westville, Durban, 3630
 Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Province of the **EASTERN CAPE** HEALTH

SAKHIWO HEALTH SOLUTIONS | bigen | HDG | NEMA SA

COPYRIGHT NOTICE
 Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and/or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

ACTS OF PARLIAMENT
 All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ACCURACY & DIMENSIONS
 Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Remove Trade Names	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC
 Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

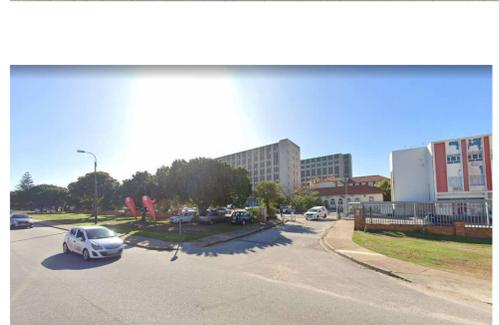
Date: 23 September 2025

Scale:	As indicated	TITLE: South Wall - Buckingham Road B4 Ref No.: 305-026 Architect DWG No.: SIT-003
Drawn by:	J Thomson	
Designer:	-	
Professional Architect:	B Brinkman	
Checked by:	B Brinkman	
FOR TENDER ONLY		REV: 2

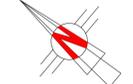
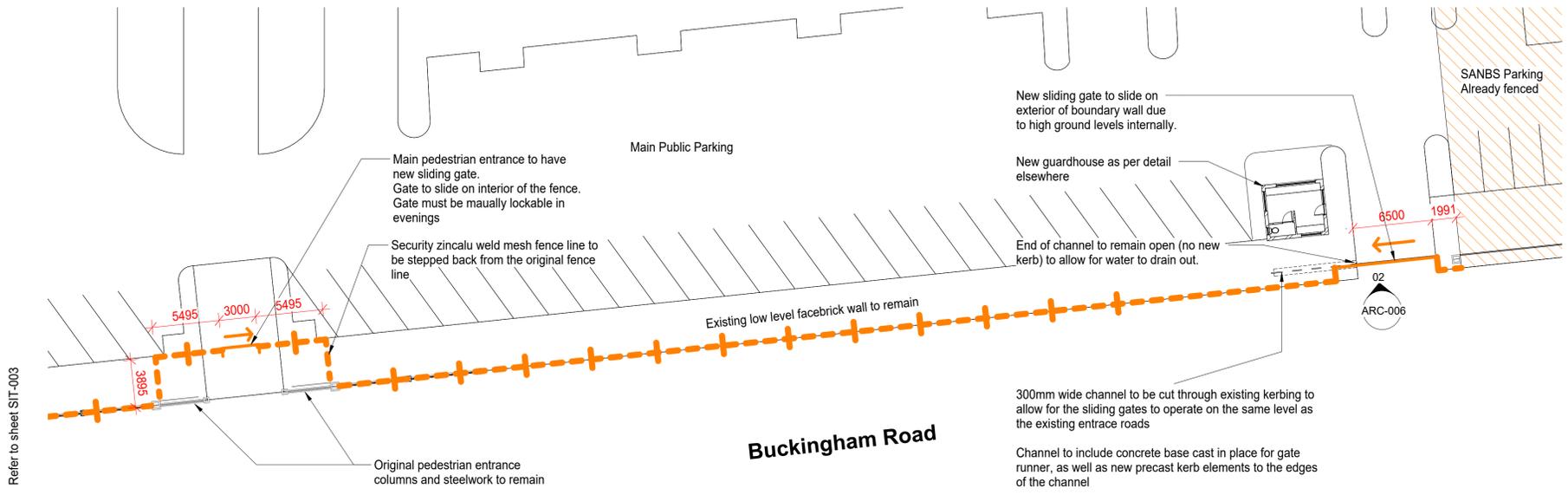
Photos of Existing Condition



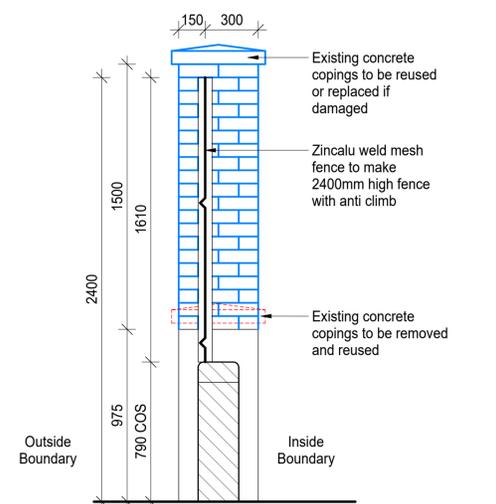
Main entrance to have single sliding gates
Swing gates as per standard betafence detailing
Gates must be lockable



Single sliding gate to parking exit.
Existing boom arm to remain on inside of new gate position
Existing redundant security spikes to be removed and road made good.

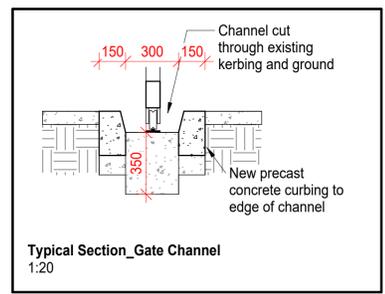


1 Site_South Wall_Buckingham Road_Part 2
1:250



Typical Section_New weld mesh infill pannel to front wall
1:20

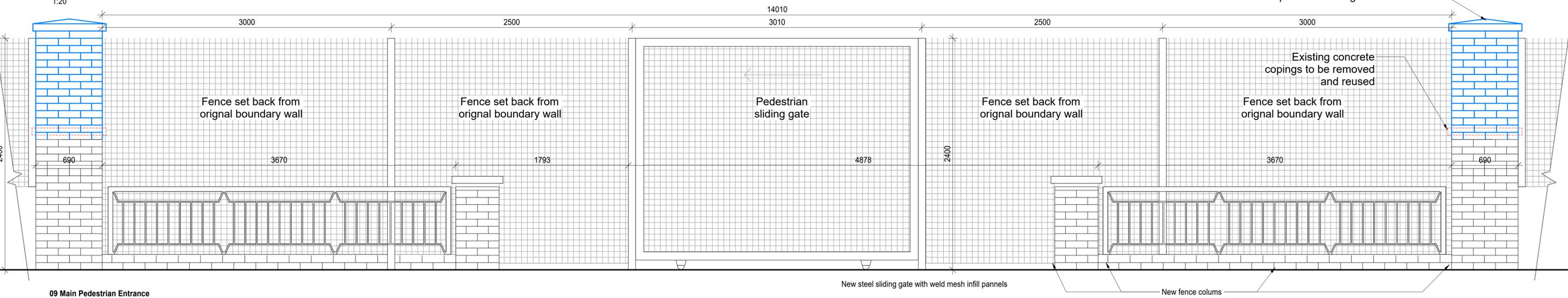
New Fence Specification:
Rigid Mesh Security Fencing
 Security zincalu weld mesh 3510 fence panels - Size: 3050mm (w) x 2400mm (h) with apertures of 76mm x 12mm
 Rigid mesh panels with bends. Core wire (3mm) to be manufactured from Zincalu® Super wire coated to SANS 10244-2:2003 specification (min. 275g/m²) coating consisting of (95%) Zinc and (5%) Aluminium. X 2,8 longer lifespan than galvanising
 Secure Posts: H - shaped profile post 70mmx 44mm. The panel is to fit securely behind the lip of the post. Height: 3000mm hot dipped galvanized mild steel posts
 Flatmax spider fixators to be used to secure the panels to the posts. Fixators to be bolted together through the post.
 Secured using tamper-proof shear-off nuts. (no self drilling screws).
 All fixator components to be stainless steel Grade 304 per ISO 9223.
 All Foundations to be 600mm (d)x 400mm (h)x 400mm(w) concrete.
 Anti Climb - Saw tooth top guard bolted to the top of the panel to prevent climbing
 Size: 3046mm profile - 60mm x 2.5mm HDG with additional PVC coating (as above)
 Optional: Anti Burrow (underdig) 150mm x 450mm deep concrete ground beam between the post foundations



Typical Section_Gate Channel
1:20



Existing security boom and floor spikes currently unused, no longer functional and redundant due to dirt ingress. Should be removed entirely as position will clash with sliding gate.



09 Main Pedestrian Entrance
1:20



Port Elizabeth
 PO Box 5690, Walmer, Port Elizabeth, 6065
 Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
 Walmer, Port Elizabeth, 6070
 Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
 Westville, Durban, 3630
 Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE
 Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution, equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
 All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
 Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Remove Trade Names	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT: Department of Health & CDC
 Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 23 September 2025

Scale: As indicated
Drawn by: J Thomson
Designer: -
Professional Architect: B Brinkman
Checked by: B Brinkman

TITLE: South Wall - Buckingham Road
B4 Ref No.: 305-026
Architect DWG No.: SIT-004
FOR TENDER ONLY
REV: 2

PORT ELIZABETH PROVINCIAL HOSPITAL

305-026 : BOUNDARY FENCING AND GUARDHOUSE

Window Schedule

b4 Architects cc

Resuscitating Healthcare Design

Port Elizabeth

PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070

Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban

1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

REVISIONS :

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type A

Scale

1 : 20

Date:

23 September 2025

Drawn by:

PHV

Designer:

ET

Professional Architect:

BB

Checked by:

BB

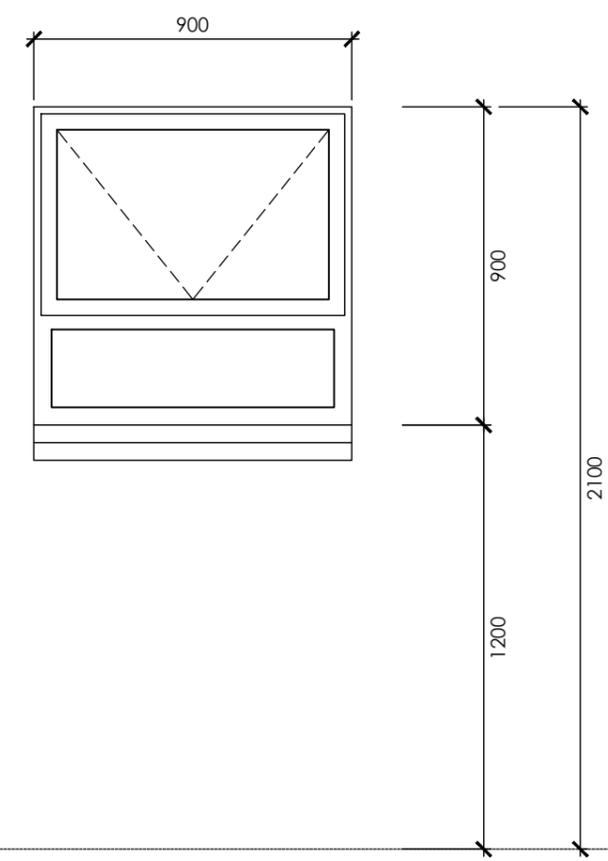
DWG No:

305-026 WIN-01

FOR TENDER ONLY

REV 2

WINDOW TYPE A



WINDOW NO'S	W05
QUANTITY	01
DESCRIPTION	900 x 900 Aluminium framed window with top hung opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with aluminum sections defender stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

REVISIONS :

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type B

Scale: 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

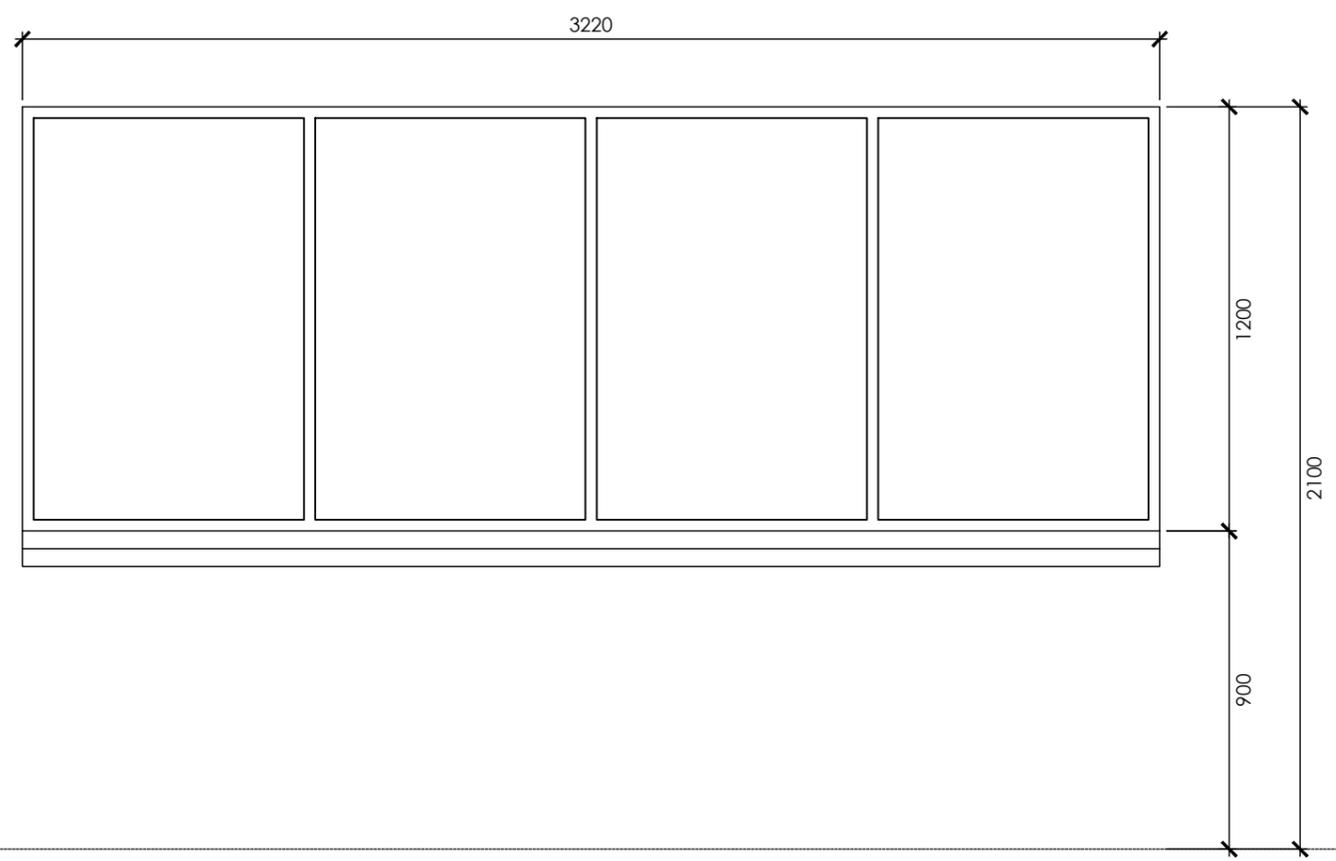
Professional Architect: BB

Checked by: BB

DWG No: 305-026 WIN-02

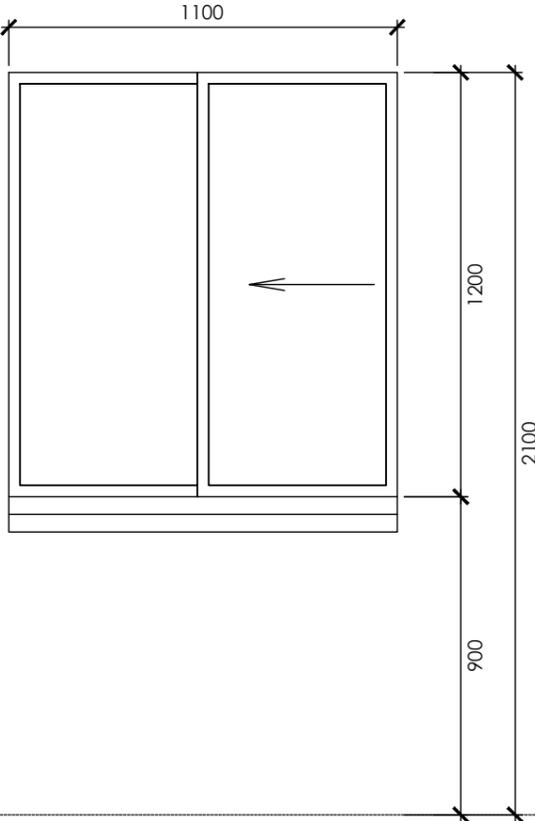
FOR TENDER ONLY REV 2

WINDOW TYPE B



WINDOW NO'S	W02
QUANTITY	02
DESCRIPTION	3220 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with Defender Stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

WINDOW TYPE C



WINDOW NO'S	W01
QUANTITY	01
DESCRIPTION	1100 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	HBS 900 Series slider system
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdale's Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Applied description	27-10-2023
2	Window size change	31-10-2023
3	Issued for Tender	23-09-2025

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type C

Scale: 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

Professional Architect: BB

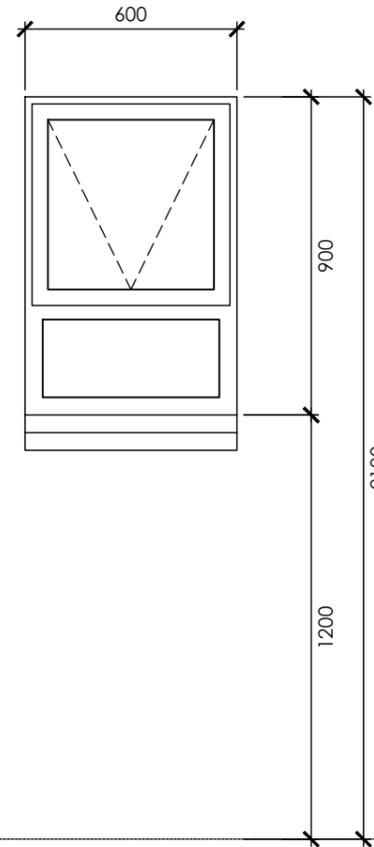
Checked by: BB

DWG No: 305-026 WIN-03

FOR TENDER ONLY

REV	3
-----	---

WINDOW TYPE D



WINDOW NO'S	W04
QUANTITY	02
DESCRIPTION	600 x 900 Aluminium framed window with top hung opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with aluminum sections defender stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

PROJECT:

Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type D

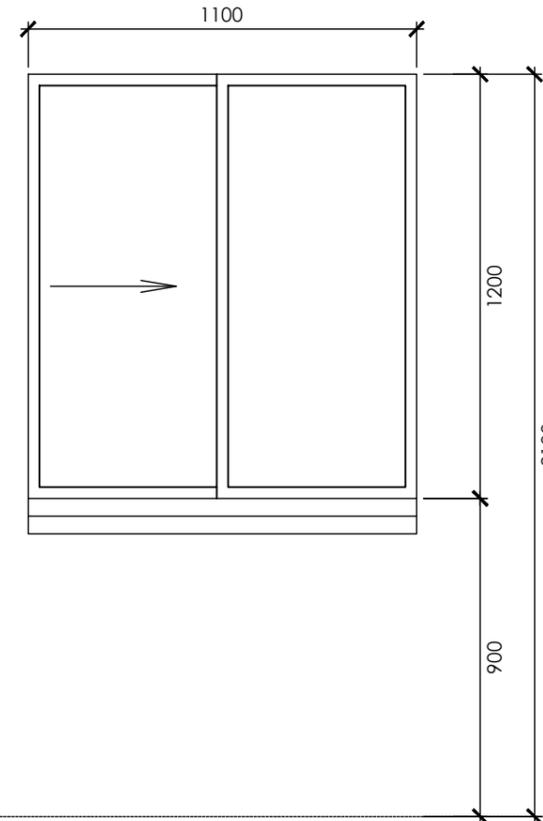
Scale: 1 : 20
Date: 23 September 2025
Drawn by: PHV
Designer: ET
Professional Architect: BB
Checked by: BB

DWG No: 305-026 WIN-04

FOR TENDER ONLY

REV	2
-----	---

WINDOW TYPE E



WINDOW NO'S	W01
QUANTITY	01
DESCRIPTION	1030 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	HBS 900 Series slider system
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

REVISIONS :

No.	Description	Date
1	Added description	27-10-2023
2	Window size change	23-09-2025
3	Issued for Tender	31-10-2023

PROJECT:

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE:

Window Type E

Scale: 1 : 20

Date: 23 September 2025

Drawn by: PHV

Designer: ET

Professional Architect: BB

Checked by: BB

DWG No: 305-026 WIN-05

FOR TENDER ONLY

REV	3
-----	---

Copyright © 2018 (B4 Architects) . Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing .

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects .

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution . Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

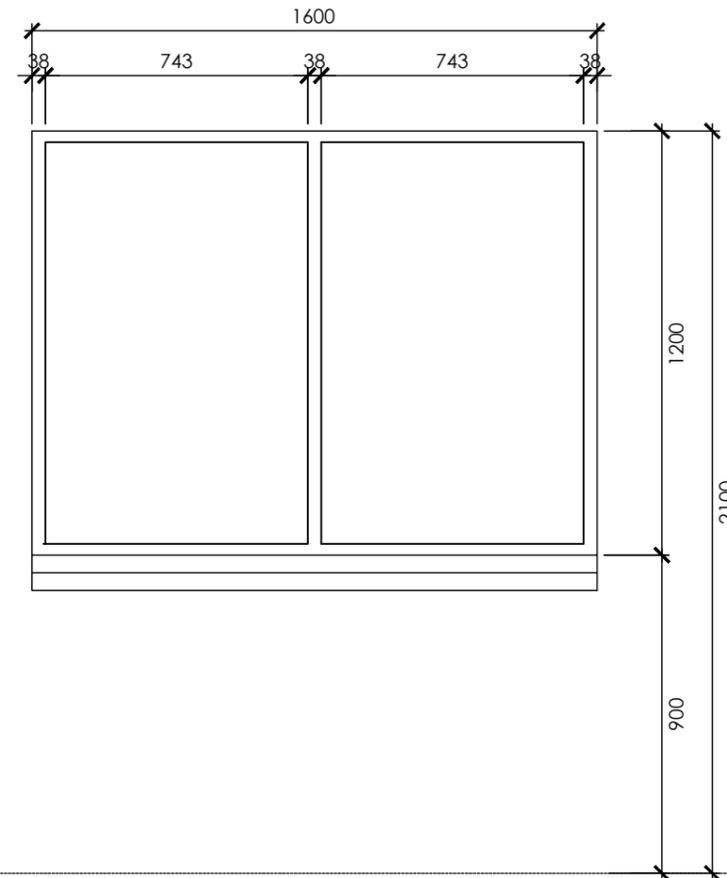
Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

23 September 2025

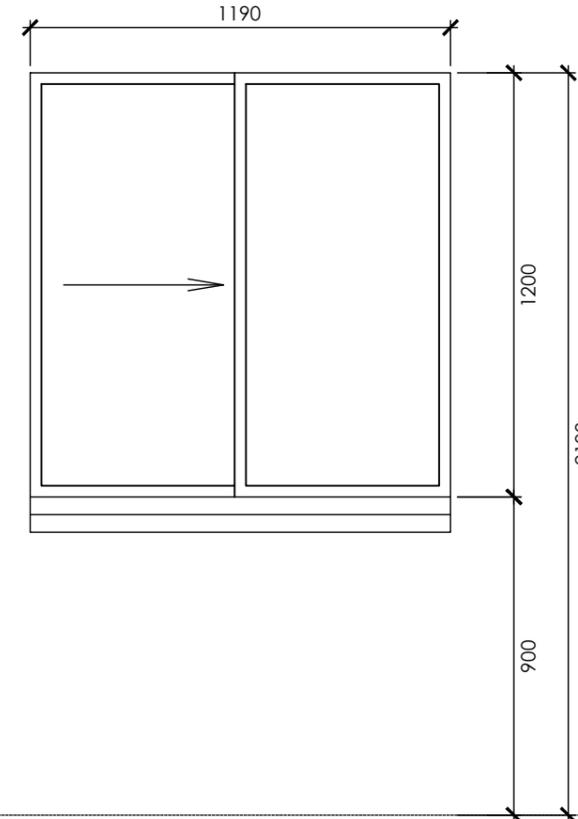
FOR TENDER ONLY

WINDOW TYPE F



WINDOW NO'S	W03
QUANTITY	01
DESCRIPTION	1600 x 1200 Aluminium framed window with top hung opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	38 Casement with aluminum sections defender stays
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

WINDOW TYPE G



WINDOW NO'S	W06
QUANTITY	01
DESCRIPTION	1030 x 1200 Aluminium framed window with NO opening sections as shown
FRAME	Aluminium double glazed window frame
FRAME TYPE	HBS 900 Series slider system
FINISH	White Powder Coat
GLAZING	2 x 6.4mm Laminated safety glass as double glazing with spacer and deciccant

Copyright © 2018 (B4 Architects) . Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing .

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects .

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution . Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Added description	27-10-2023
2	Issued for Tender	23-09-2025

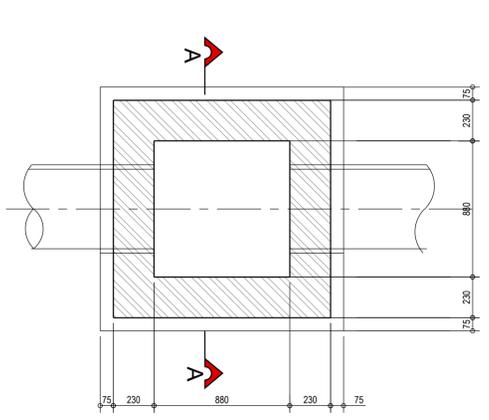
Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

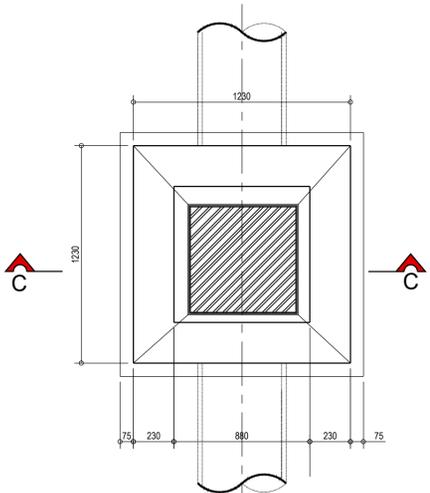
23 September 2025

PE PROVINCIAL HOSPITAL

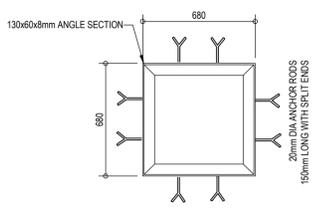
**ALL CIVIL & STRUCTURAL
DRAWINGS**



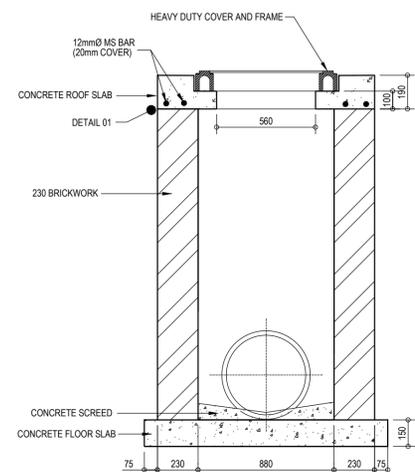
PLAN OF STORMWATER MANHOLE
SCALE: 1:20



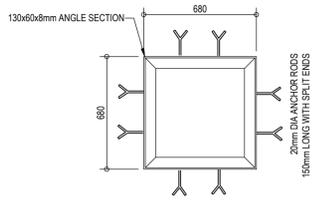
TYPE A - SINGLE GRID CATCHPIT PLAN
SCALE: 1:20



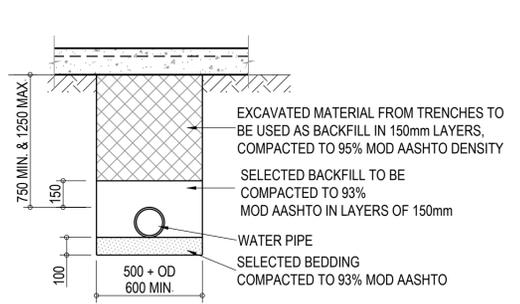
DETAIL OF SINGLE GRID CATCHPIT FRAME
NTS



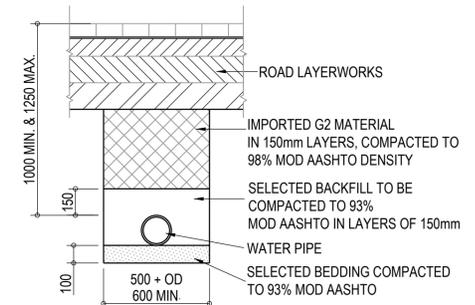
TYPICAL STORMWATER MANHOLE FOR PIPES UP TO 450 DIA SECTION A-A
SCALE: 1:20



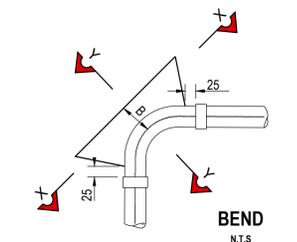
DETAIL OF SINGLE GRID CATCHPIT FRAME
NTS



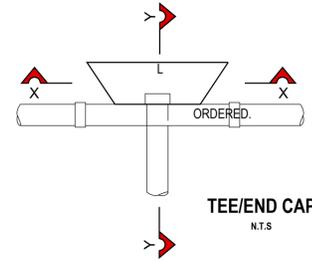
TYPICAL WATER TRENCH CROSS SECTION WALKWAY
N.T.S



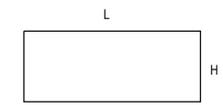
TYPICAL WATER TRENCH CROSS SECTION ROADWAY
SCALE N.T.S



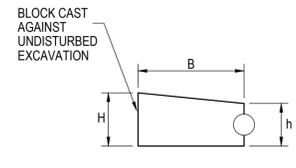
BEND
N.T.S



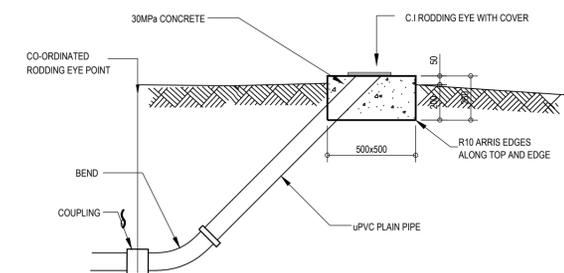
TEE/END CAP
N.T.S



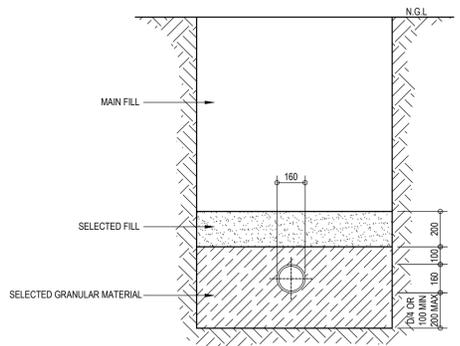
SECTION X-X
N.T.S



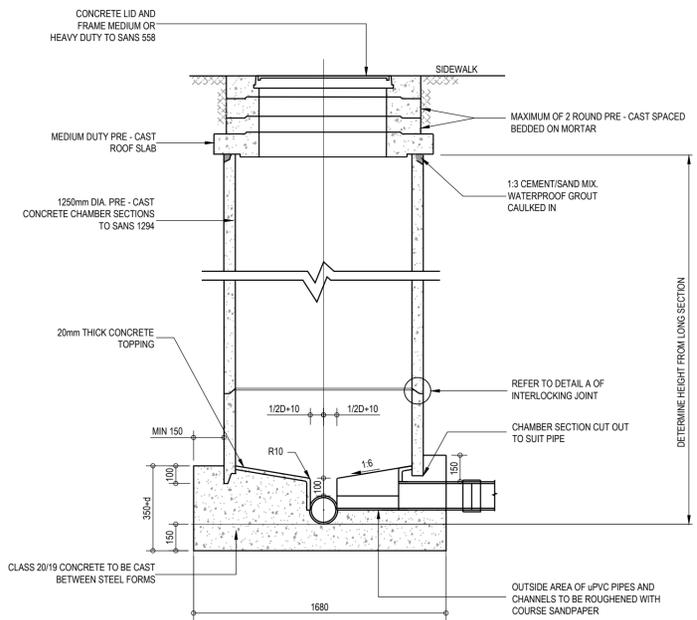
SECTION Y-Y
N.T.S



DETAIL OF RODDING EYE FOR SEWERMAIN
SCALE 1:20

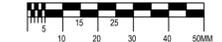


TYPICAL SECTION OF A FLEXIBLE PIPE BED
SCALE 1:20



SECTION B-B: TYPICAL SECTION OF A MANHOLE ON SIDEWALKS
SCALE 1:20
(IF OVER 3.0m DEEP USE SHAFT AS FOR DEEP MANHOLE)

THESE NOTES SERVE AS AN ADDENDUM TO THE SPECIFICATION IN THE BILL OF QUANTITIES (BOQ). IN THOSE CASES WHERE THE BOQ SPECIFICATIONS DIFFER FROM THESE NOTES, THESE NOTES SHALL TAKE PREFERENCE.



No	Date	Details	Chd	Appd
B	2025.09.22	ISSUED FOR TENDER	ES	GK
A	2025.09.16	ISSUED FOR TENDER	ES	GK

Client: EASTERN CAPE HEALTH

Implementing Agent: Sakhisa HDG NEMA SA BIGEN AFRICA

Architect: b4 Architects

Engineer: KEON CONSULTING ENGINEERS

Project: UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES

Description: SEWER, STORMWATER AND WATER RETICULATION DETAILS

Engineer: G. Kuchhera Pr Eng (20110431)

Drawn By: L. Moya	Designed By: S. Makwedini	Checked By: S. Makwedini
-------------------	---------------------------	--------------------------

Size: A1 Scale: As Shown Original Date: July 2019

Project No: J117	Drawing No: J117-05-CIV-02	Revision: B
------------------	----------------------------	-------------

ISSUED FOR CONSTRUCTION

Z:\PROJECTS\1 - Active Projects\117 PEPH\Drawings\05-CIV\01 Working\02 Layouts and Sections\117_05_PEPH\Manhole Catchpit Details.dwg | KEON CONSULTING | 20250922 14:21:38

SECTION 11

PE PROVINCIAL HOSPITAL

**ALL DRAWINGS FOR ELECTRICAL
INSTALLATION, PERIMETER LIGHTING
AND CCTV INSTALLATION**

LIGHTING LEGEND	
●	PHOTO CELL
⌂	1 LEVER - 1 WAY - LIGHT SWITCH
⌂	2 LEVER - 1 WAY - LIGHT SWITCH
⌂	50W LED CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
⌂	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE CEILING / WALL MOUNTED BULKHEAD.
⌂	ELECTRICAL DISTRIBUTION BOARD

POWER LEGEND	
⌂	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (White) 450mm AFFL (Normal Supply)
⌂	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (White) 1200mm AFFL OR 300mm ABOVE WORKTOPS (Normal Supply)

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SWIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	23-09-25	E.C.	ISSUED FOR TENDER.

CLIENT



Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH,
GQEBERHA

TITLE

NEW ENTRANCE GUARD HOUSE AND NEW
EXIT GUARD HOUSE -
LIGHTING & POWER LAYOUT

COPYRIGHT



RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@csa.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2809



CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION

DESIGNED BY: B.GEELBOOI

SCALE: 1:100

DRAWN: B.GEELBOOI

DATE: 15/11/2023

PRINT DATE: 23/09/2025

CHECKED BY: E. CEBA

REGISTRATION No. 201930053

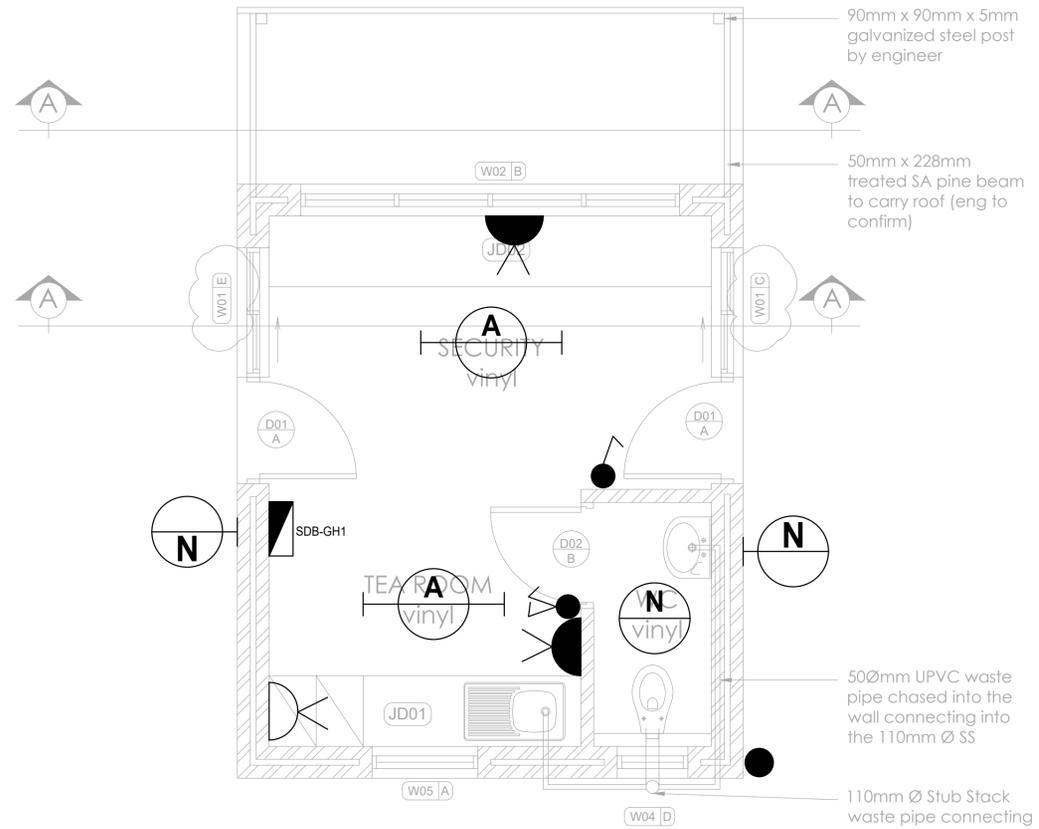
SIGNED.

ARCHITECTS DRAWING NO. 00

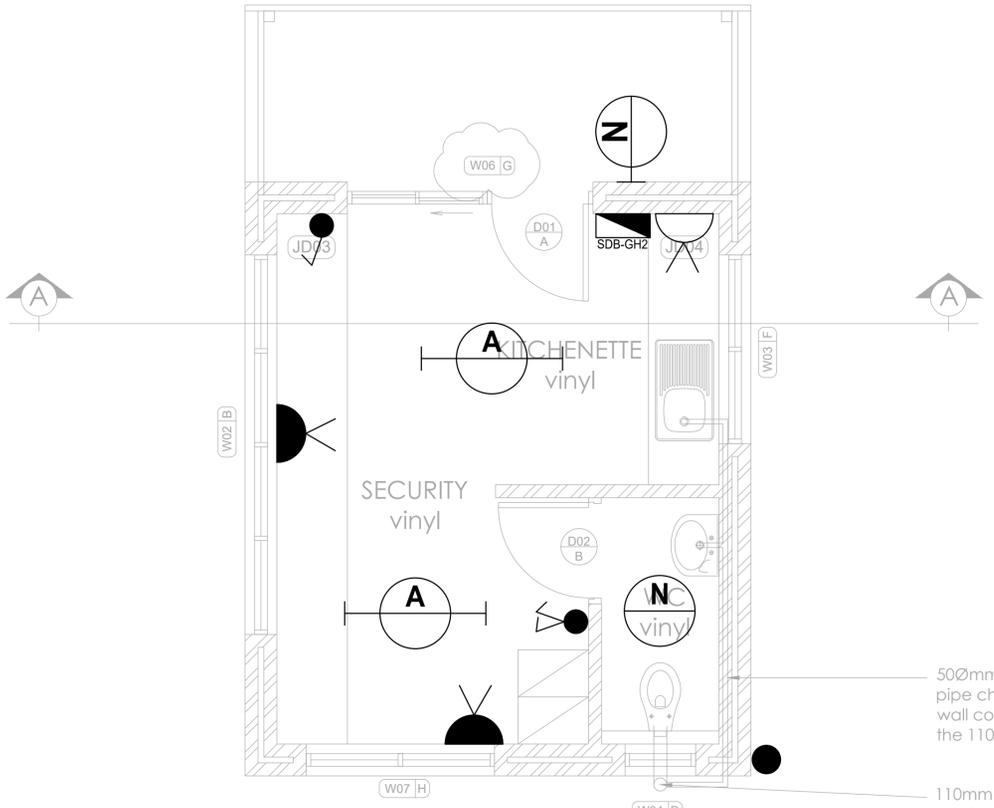
REV No. 00

DRAWING NO. 2316-T-E-101 GH1-2

REV No. 00



NEW ENTRANCE GUARD HOUSE (SCALE 1:30)



NEW EXIT GUARD HOUSE (SCALE 1:30)

LEGEND

BUSBAR

—+— SINGLE POLE

—+—+ TRIPLE POLE

—+— ISOLATOR

—+—/— CIRCUIT BREAKER
SIZE AS SHOWN

CH = WIRING CHANNEL

—+— EL — EARTH LEAKAGE PROTECTION UNIT WITH DISCONNECTOR

—+— C2/1 C2/2 C2/3 — 3 POLE CONTACTOR

—+— E MM — ELECTRONIC CONSUMPTION MULTIMETER

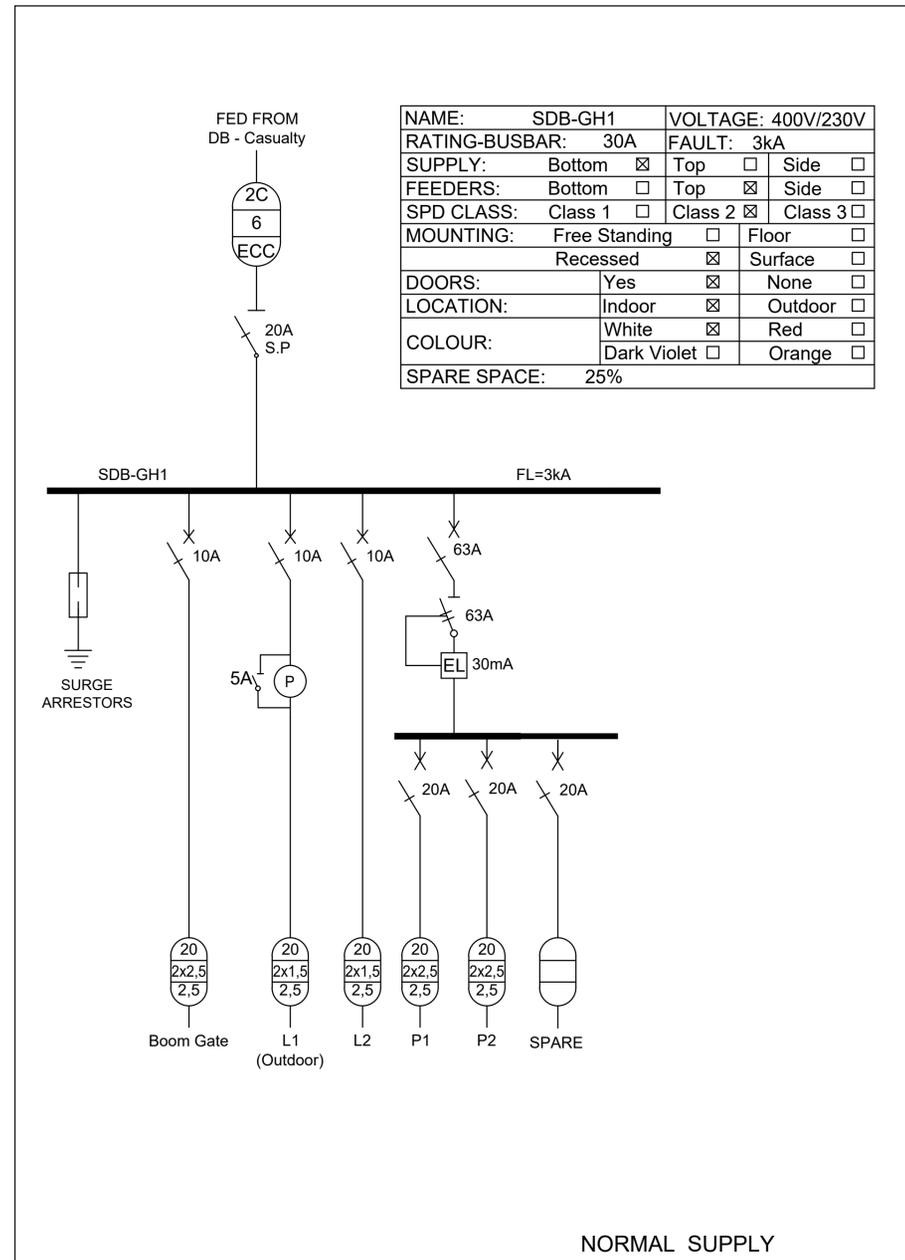
—+— P — PHOTOCELL WITH BYPASS SWITCH

CABLES

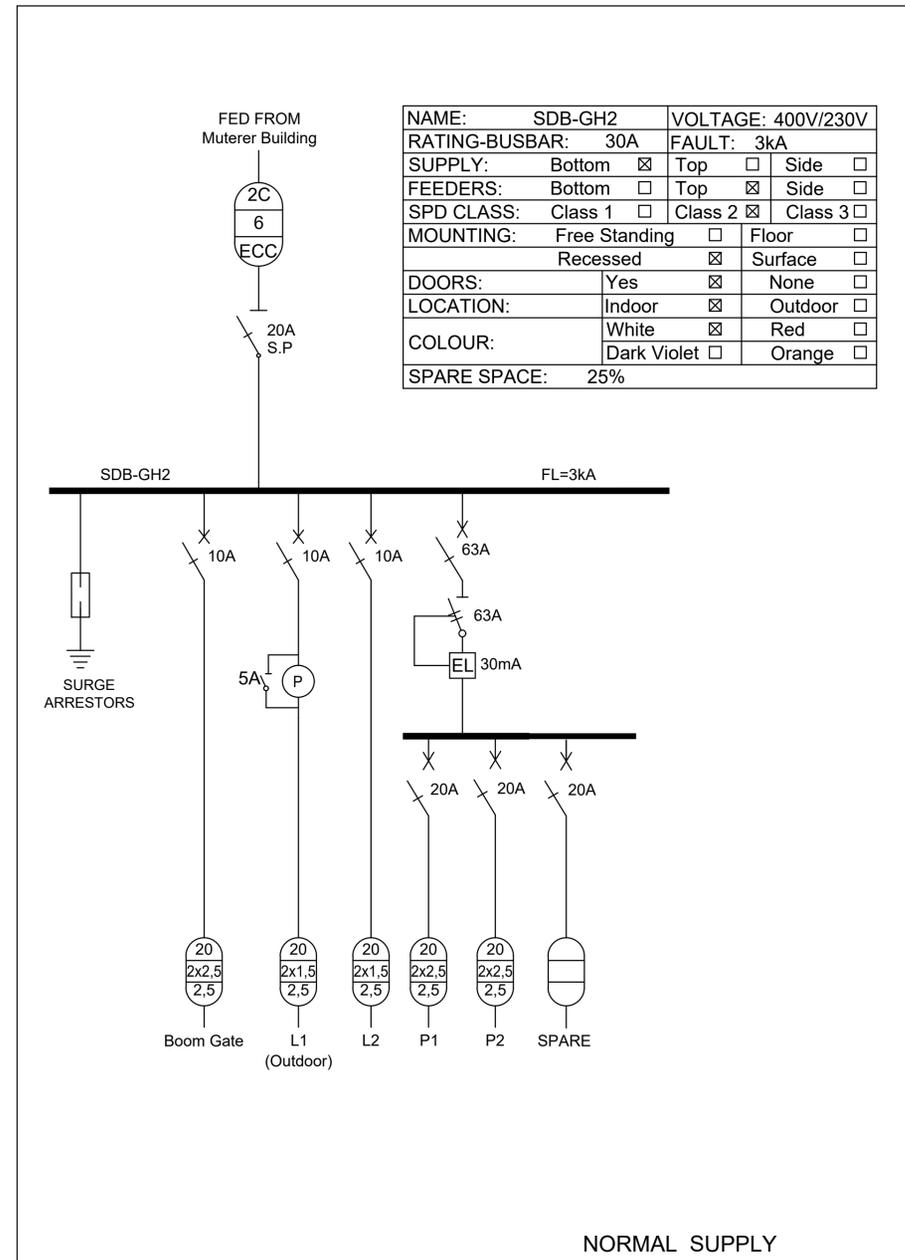
4C
16
ECC
—+— NO. OF CORES
CORE SIZE mm
EARTH CONTINUITY CONDUCTOR mm

WIRING IN CONDUIT

25
2x4
2.5
—+— CONDUIT SIZE mm
No. & CONDUCTOR SIZE mm²
EARTH CONDUCTOR mm²



ENTRANCE GUARD HOUSE



EXIT GUARD HOUSE

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB'S)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING: AC = AIR CONDITIONING
D = DEDICATED SSO
L = LIGHTING CIRCUIT
P = STANDARD SSO
XL = LIGHTING CIRCUIT ON STANDBY POWER
XP = STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	12-03-24	E.C.	ISSUED FOR TENDER.

CLIENT

Province of the
EASTERN CAPE
HEALTH

PROJECT

ALTERATIONS AND ADDITIONS AT PEPH,
GQEBERHA

TITLE

NEW ENTRANCE GUARD HOUSE AND
NEW EXIT GUARD HOUSE -
DB SCHEMATIC DIAGRAM

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hough Road,
Walmer,
Port Elizabeth, 6070
E-Mail: rna-pe@conusa.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807
Fax: 041 581 2808

CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	
DESIGNED BY: B.GEELBOOI	SCALE 1:100	
DRAWN B.GEELBOOI	DATE 13/11/2023	PRINT DATE 12/03/2024
CHECKED BY: E. CEBA	REGISTRATION No. 201930053	SIGNED.
ARCHITECTS DRAWING NO. 00	REV No. 00	DRAWING NO. 2316-T-E-300 GH1-2
		REV No. 00

- GENERAL NOTES:**
1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 2. DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 7. NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 9. ALLOW 4 x 20mm ϕ & 4 x 25mm ϕ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs).
 10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 11. TELEPHONE AND DATA CONDUITS TO BE 25 ϕ mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 12. IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SHIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 13. CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 14. DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES
 - 1200mm WIDE FOR POWER CABLES (MINIMUM).
 15. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 16. AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	23-09-25	E.C.	ISSUED FOR TENDER.



CLIENT
Province of the EASTERN CAPE HEALTH

PROJECT
 ALTERATIONS AND ADDITIONS AT PEPH, GQEBERHA

TITLE
 NEW ENTRANCE GATE HOUSE AND NEW EXIT GATE HOUSE - SITE PLAN

COPYRIGHT
RNA CONSULTING ENGINEERS
 Consulting Electrical & Mechanical Engineers

87 Hough Road, Walmer, Port Elizabeth, 6070
 E-Mail: rna-pe@rnaza.co.za

P.O. Box 35039 Newton Park, 6055
 Tel: 041 581 2807 Fax: 041 581 2808



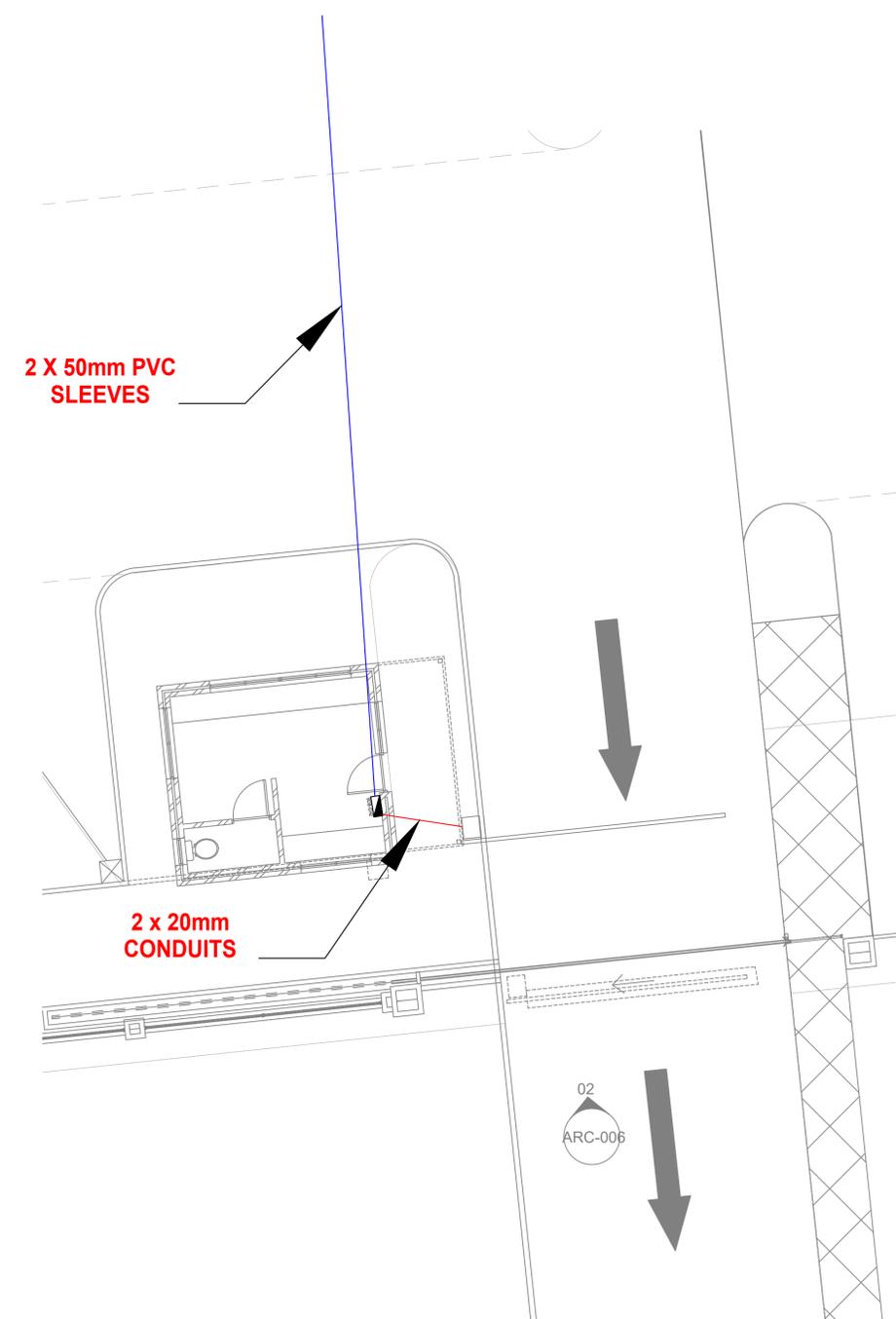
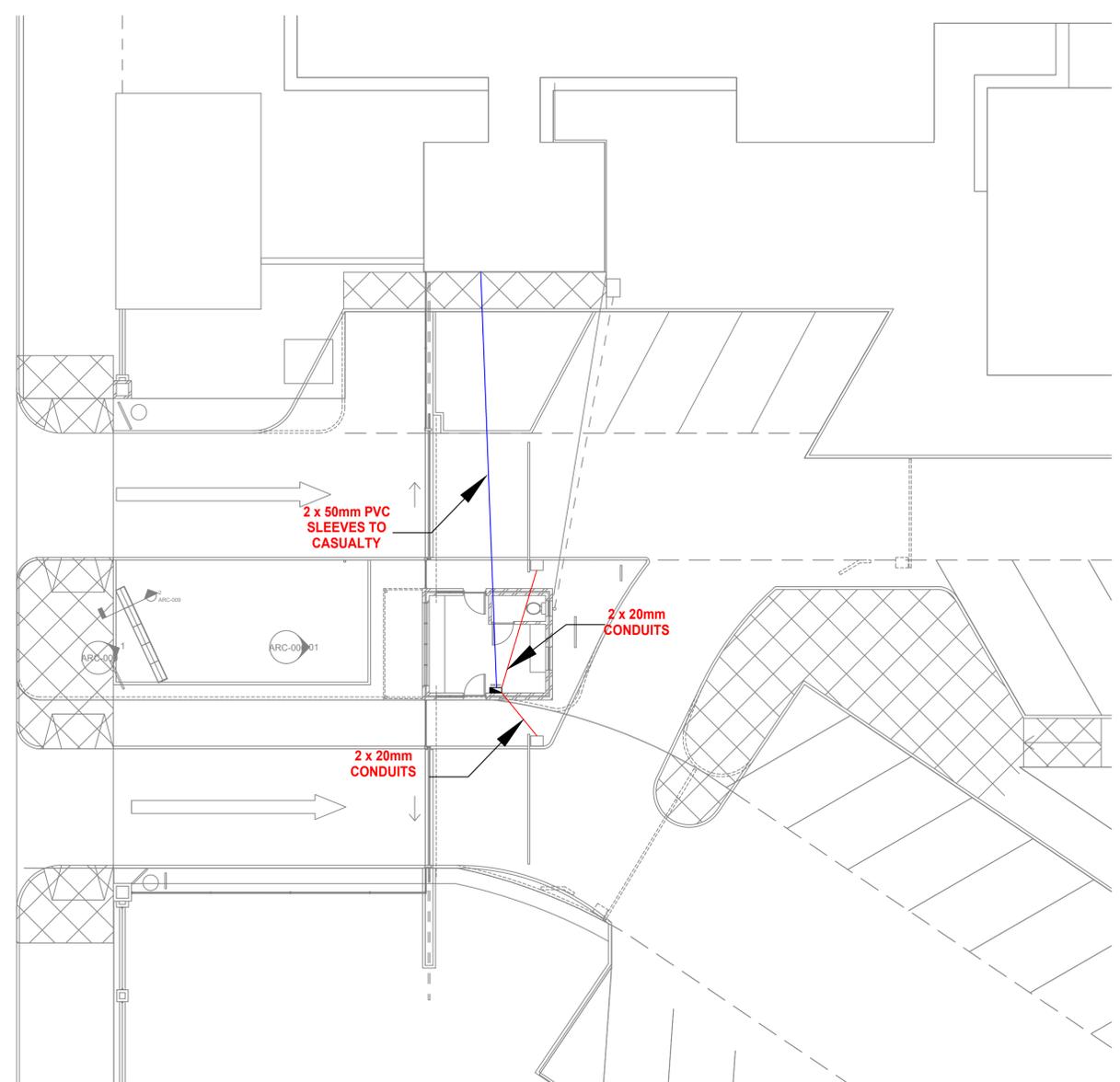
DESIGN	TENDER	CONSTRUCTION

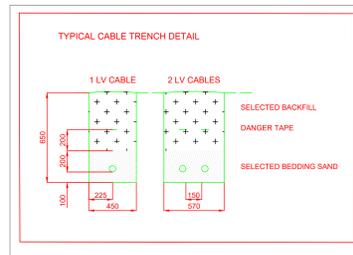
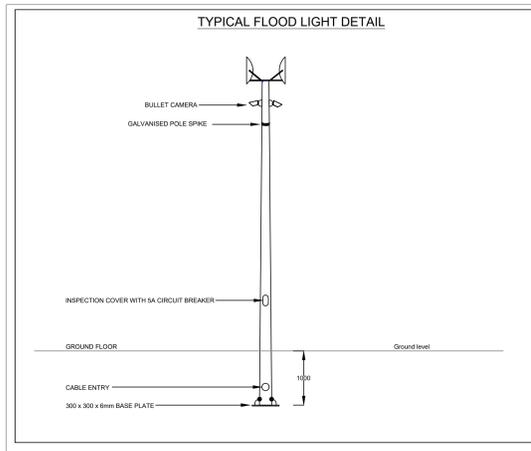
DESIGNED BY: **B.GEELBOOI** SCALE: 1:100

DRAWN: **B.GEELBOOI** DATE: 15/11/2023 PRINT DATE: 23/09/2025

CHECKED BY: **E. CEBA**
 REGISTRATION No. 201930053
 SIGNED: _____

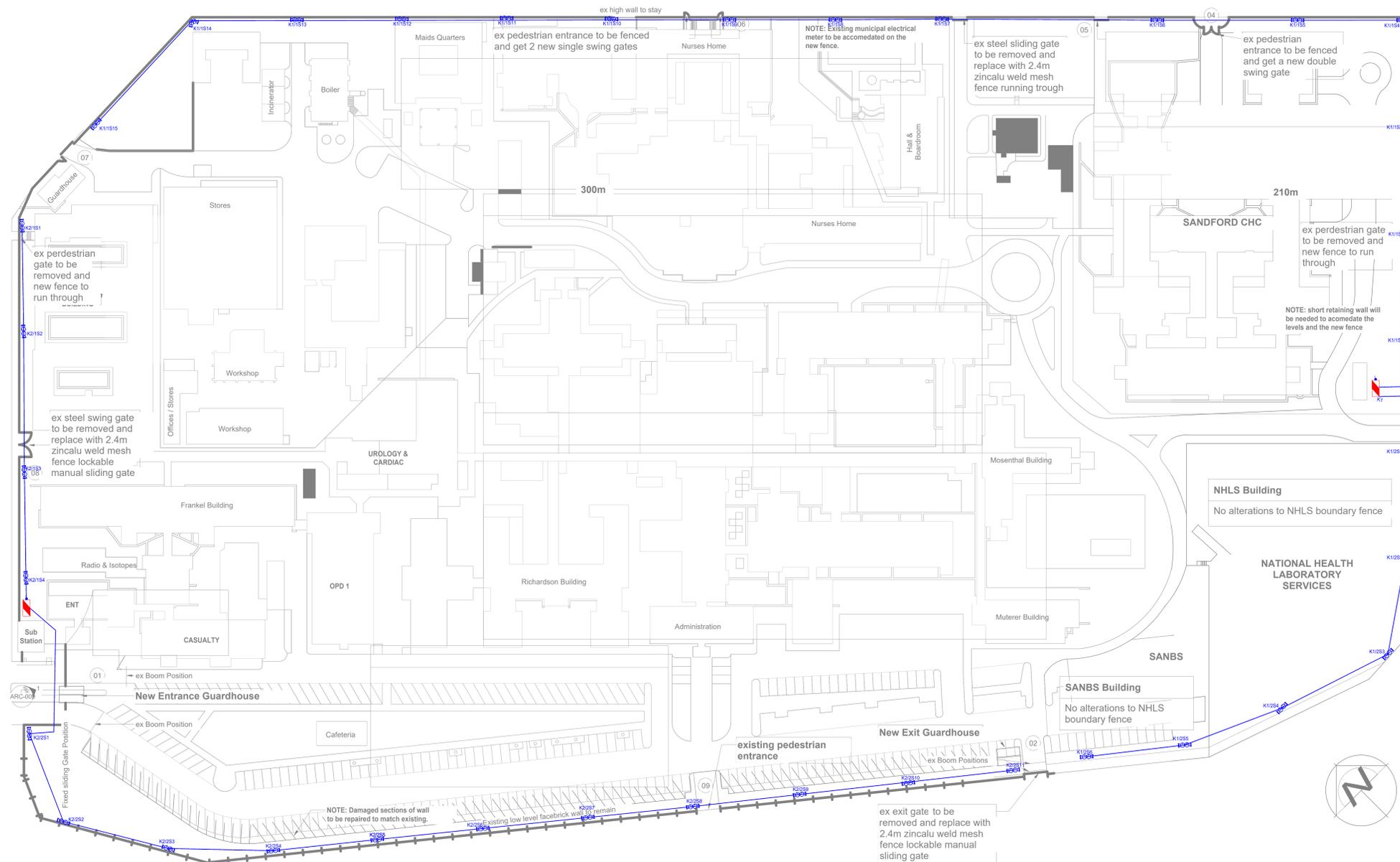
ARCHITECTS DRAWING NO. 00	REV No. 00	DRAWING NO. 2316-T-E-100 GH1-2	REV No. 00
---------------------------	------------	--------------------------------	------------





SECURITY LEGEND

	PHOTO CELL
	2 x 150W LED FLOODLIGHTS MOUNTED ON A 6m GALVANISED POLE INSTALLED ALONG THE FENCES
	OUTDOOR DISTRIBUTION KIOSK
	6mm 4C Cu ECC IN A 50mm PVC SLEEVE



- ### GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DBs).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - D - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - FP - STANDBY SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDBY SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.

TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC



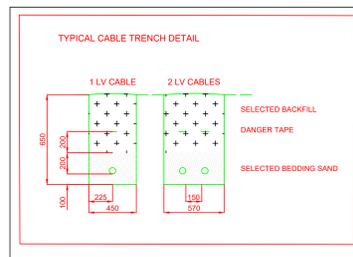
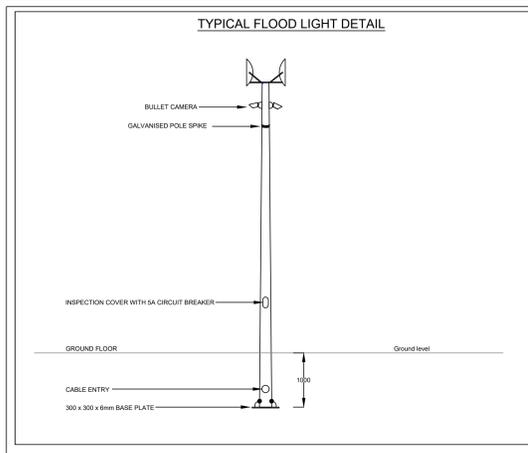
DISCIPLINE
ELECTRICAL

SERVICE
PORT ELIZABETH PROVINCIAL HOSPITAL (PEPH) : UPGRADING SECURITY FENCE.

DRAWING TITLE
SITE PLAN: PERIMETER LIGHTING & SLEEVE LAYOUT

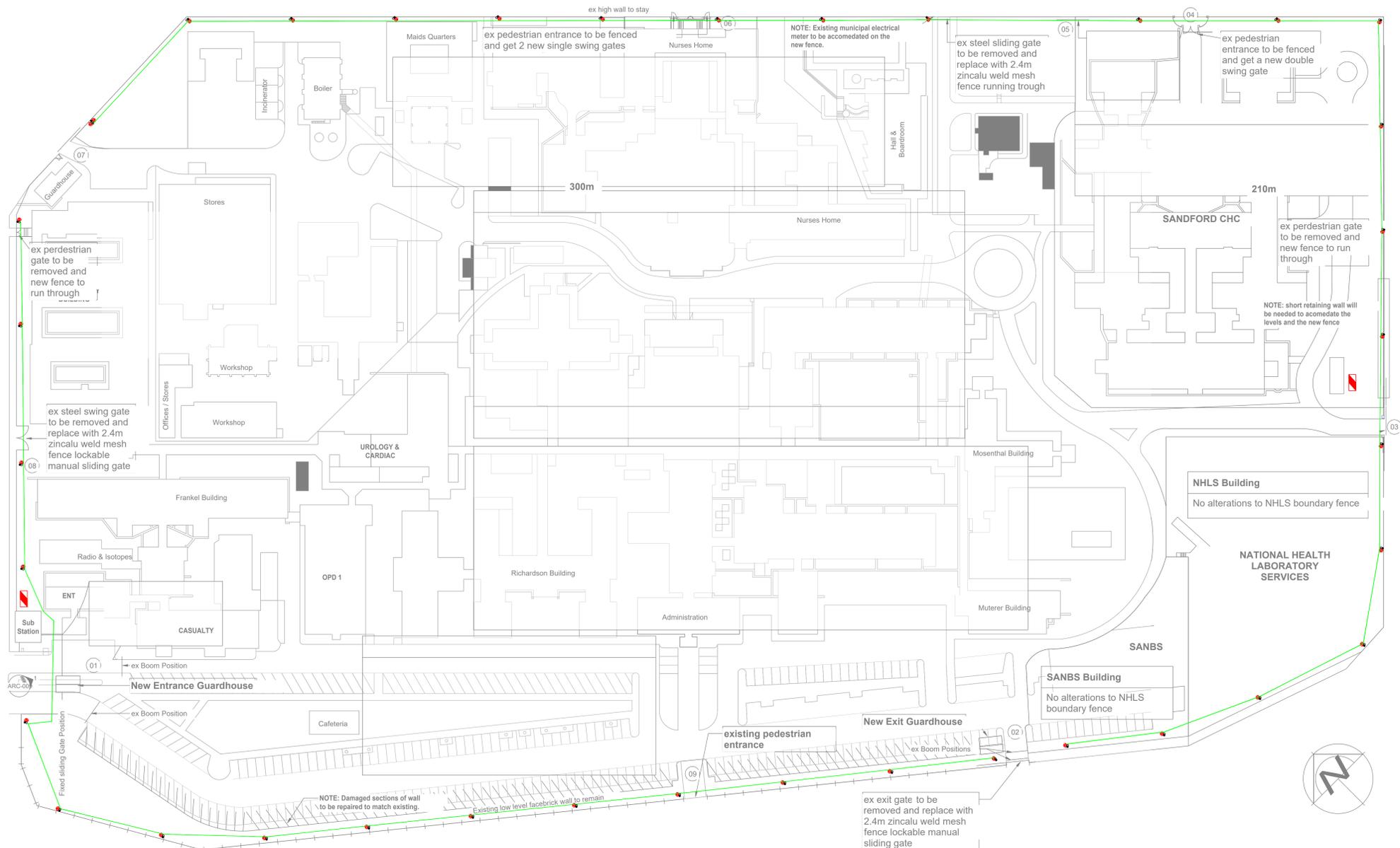
SCALE 1:500	DRAWN B. GEELEBOO
DATE FEBRUARY 2017	SKETCHED B. GEELEBOO
PRINT DATE 28/09/2025	CHECKED ERIC CEBA
DESIGN NUMBER 2316-T-E-100A AL	REVISION 00

ARCHITECTS DRAWING NO. 00 REV No. 00



ICT LEGEND

	DATA LINE CONNECTION POINT IN CEILING VOID OR FOR CCTV UNIT
	VANDAL PROOF STATIC SURVEILLANCE CAMERA
	110mm PVC SLEEVE
	6m GALVANISED POLE FOR FLOODLIGHTS INSTALLED ALONG THE FENCES



- ### GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVES, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB'S).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - D - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - P - STANDING SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.

TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC



DISCIPLINE
ELECTRICAL

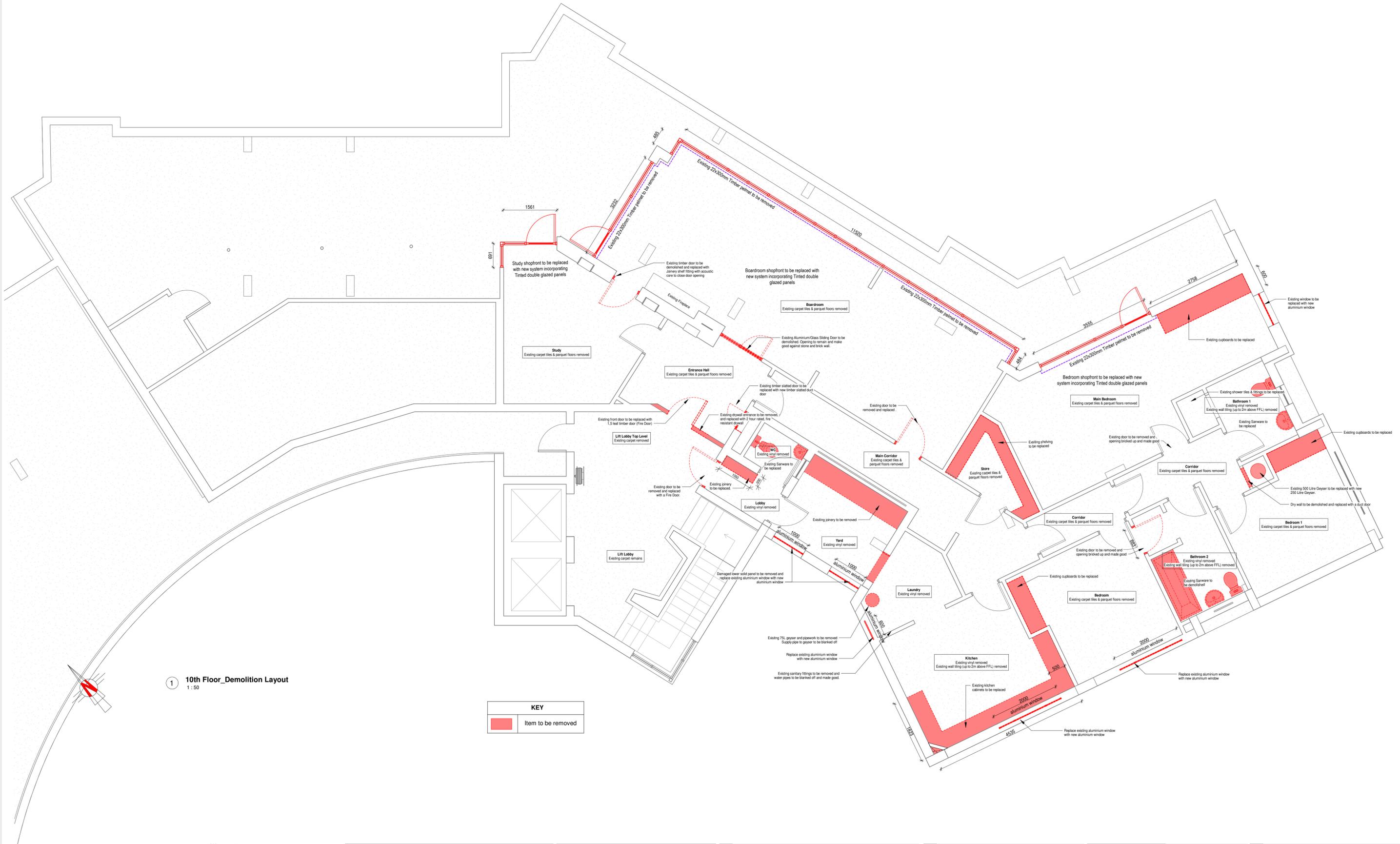
SERVICE
PORT ELIZABETH PROVINCIAL HOSPITAL (PEPH) : PERIMETER CCTV.

DRAWING TITLE
SITE PLAN: CCTV & SLEEVE LAYOUT

SCALE 1:500	DRAWN B. GEELEBOO
DATE FEBRUARY 2017	CHECKED B. GEELEBOO
PRINT DATE 29/09/2025	CHECKED ERIC CEBA
ARCHITECTS DRAWING NO. 2316-T-E-100B	REV No. 00

PROTEA FLATS

ALL ARCHITECT'S DRAWINGS



1 10th Floor_Demolition Layout
1 : 50

KEY	
	Item to be removed

b4 Architects cc
Resuscitating Healthcare Design

Province of the
EASTERN CAPE
HEALTH

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

SAKHIWO HEALTH SOLUTIONS bigen HDG NEMA SA

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Updated for Pricing	14/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	16/09/2025
5	Issued for Pricing	18/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale: 1 : 50
Drawn by: J Thomson
Designer: -
Professional Architect: B Brinkman
Checked by: Pieter Vorster
Sakhiwo Ref No:

TITLE: Demolition Layout
B4 Project Ref No.: 305-019
Architect DWG No.: ARC-002
FOR PRICING ONLY
REV: 5



1 10th Floor_Dimension Plan
1:50

Note:
All existing timber doors:
Door to be refurbished and all damage to be made good. Steel hinges to be serviced. New ironmongery to be installed to all existing doors.

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue, Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Province of the **EASTERN CAPE** HEALTH

SAKHIWO HEALTH SOLUTIONS | bigen | HDG | NEMA SA

COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Issued for Tender	27/11/2023
3	Issued for Pricing	16/09/2025
4	Issued for Pricing	18/09/2025

REVISIONS:

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale:	1 : 50	TITLE: Reference Plan
Drawn by:	J Thomson	
Designer:	b4 Architects	B4 Project Ref No.: 305-019
Professional Architect:	B Brinkman	Architect DWG No.: ARC-003
Checked by:	B Brinkman	FOR PRICING ONLY
Sakhiwo Ref No:		

REV: 4



1 10th Floor_Floor Finishes Layout
1 : 50

KEY	
	POLYFLOOR POLYURETHANE QUATTRO Polyfleur Polyurethane Quattro PUR 2mm vinyl floor, laid in acrylic adhesive, which is spread with a notched trowel on suitably prepared cement screed floors with a hygrometer reading showing a moisture content of less than 75%, with joints welded with a fully flexible coloured Polyfleur welding rod (colours to be confirmed) to provide a smooth, hygienic sealed finish and rolled with 68kg articulated floor roller, all in accordance with manufacturer's recommendations. Vinyl to be laid to fall towards shower trap. Colour: TBC NOTE: Polyfleur floor skirting MC210C installed as per manufacturer's instructions, but will be primed to vinyl sheeting.
	VINYL SHEETED PLANK Polyfleur 2mm thick Forest 14 PUR Heterogeneous heavy commercial vinyl floor sheeting, laid in acrylic adhesive, which is spread with a notched trowel on suitably prepared cement screed floors with a hygrometer reading showing a moisture content of less than 70%, with joints welded with a fully flexible coloured Polyfleur welding rod (colours to be confirmed) to provide a smooth, hygienic sealed finish and rolled with 68kg articulated floor roller, all in accordance with manufacturer's recommendations. Colour: TBC NOTE: Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip-resistant enamel.
	POLYFLOOR PALETTE PUR HOMOGENEOUS SHEETING Polyfleur 2mm thick Palette PUR Homogeneous sheeting vinyl floor, laid in acrylic adhesive, which is spread with a notched trowel on suitably prepared cement screed floors with a hygrometer reading showing a moisture content of less than 70%, with joints welded with a fully flexible coloured Polyfleur welding rod (colours to be confirmed) to provide a smooth, hygienic sealed finish and rolled with 68kg articulated floor roller, all in accordance with manufacturer's recommendations. Colour: TBC NOTE: Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip-resistant enamel.

Shower floor to be tiled in 50x50mm mosaics

Shower floor to be tiled in 50x50mm mosaics

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Province of the
EASTERN CAPE
HEALTH

SAKHIWO HEALTH SOLUTIONS
bigen
HDG
NEMA SA

COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Issued for Tender	27/11/2023
3	Issued for Pricing	16/09/2025
4	Issued for Pricing	18/09/2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman
Sakhiwo Ref No:	

TITLE: Floor Finshes Plan

B4 Project Ref No.: 305-019
Architect DWG No.: ARC-005

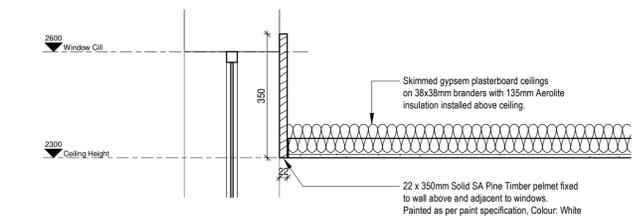
FOR PRICING ONLY

REV: 4



KEY	
	EXISTING SKIMMED CEILING: Existing skimmed ceiling to remain unaffected, unless specified otherwise in Finishes Schedule and/or on Ceiling Layout. NOTE: Existing ceiling to be removed completely to allow inspection and repair of roof structure, as well as for insulation to be installed in ceiling space.
	EXISTING TIMBER SLATTED CEILING: Existing ceiling to remain unaffected, unless specified otherwise in Finishes Schedule and/or on Ceiling Layout.
	NEW SKIMMED CEILING: Gyproc RhinoBoard 6.4mm plasterboard ceiling consisting of timber branders fixed at 400mm centres in one direction onto which RhinoBoard is fixed, printed side up, at right angles to the roof structure. All joints to be covered with Gyproc RhinoTape (double over butt joints) and then plastered with a 3-6mm coat of Gyproc RhinoLite or Gyproc CreteStone plaster applied as per manufacturers' instructions. Aerolite 135mm insulation to be installed above plasterboard. Final finish to be painted. Clean down, prepare and apply one (1) coat Plascon Professional Waterbased Gypsum Sealer (PGS1). Apply two (2) coats Plascon Professional Super Matt (PEM900TSA).

10th Floor
1:50



Office 2 Pelmet Detail
1:10

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue, Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

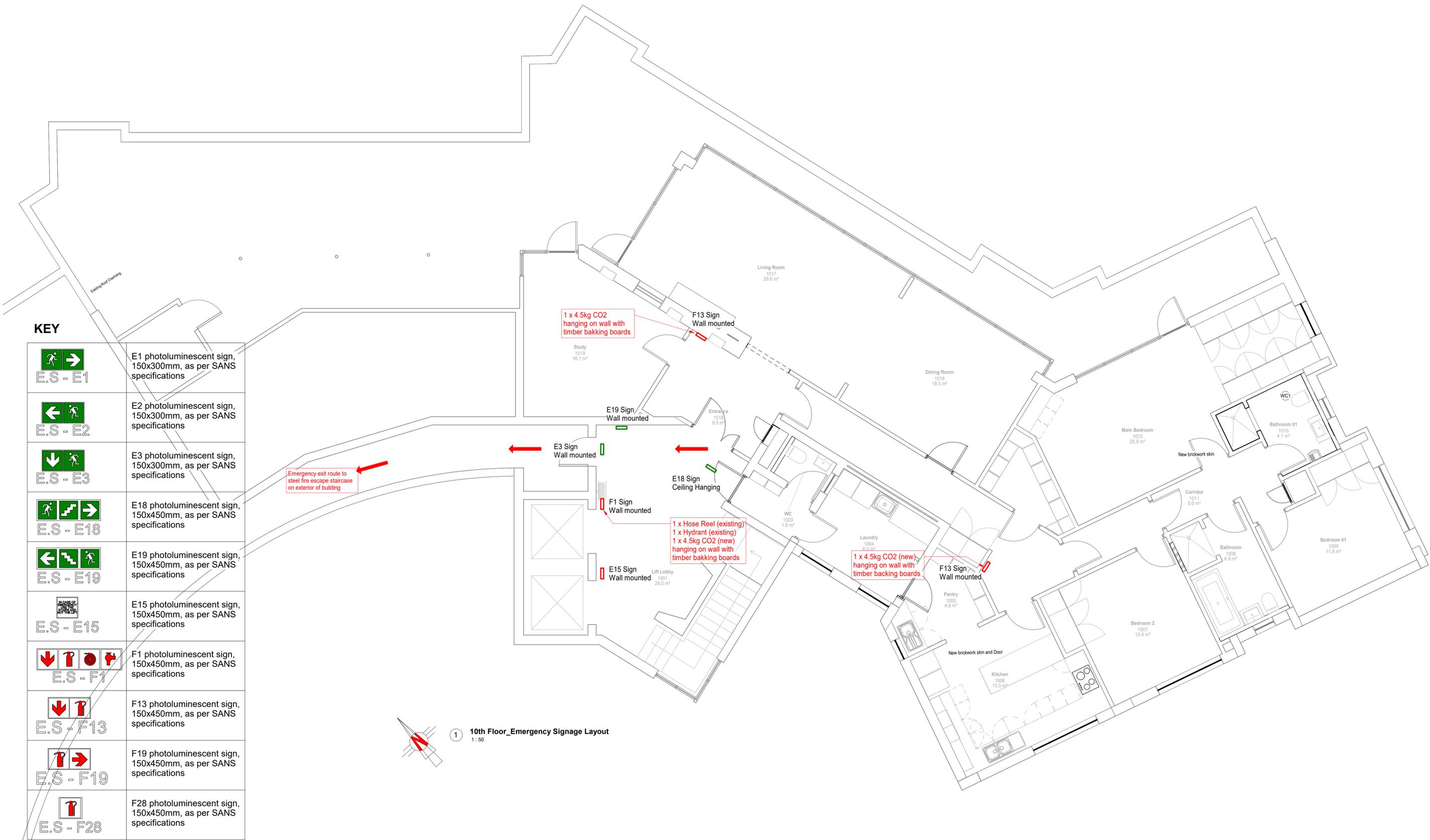
No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	31/10/2023
3	Update for pricing	08/11/2023
4	Issued for Tender	27/11/2023
5	Issued for Pricing	16/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman
Sakhiwo Ref No.:	

TITLE:	Ceiling Layout
B4 Project Ref No.:	305-019
Architect DWG No.:	ARC-006
FOR PRICING ONLY	
REV:	5



KEY

	E1 photoluminescent sign, 150x300mm, as per SANS specifications
	E2 photoluminescent sign, 150x300mm, as per SANS specifications
	E3 photoluminescent sign, 150x300mm, as per SANS specifications
	E18 photoluminescent sign, 150x450mm, as per SANS specifications
	E19 photoluminescent sign, 150x450mm, as per SANS specifications
	E15 photoluminescent sign, 150x450mm, as per SANS specifications
	F1 photoluminescent sign, 150x450mm, as per SANS specifications
	F13 photoluminescent sign, 150x450mm, as per SANS specifications
	F19 photoluminescent sign, 150x450mm, as per SANS specifications
	F28 photoluminescent sign, 150x450mm, as per SANS specifications

Emergency exit route to steel fire escape staircase on exterior of building

1 10th Floor_Emergency Signage Layout
1:50

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue, Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

Province of the **EASTERN CAPE** HEALTH

SAKHIWO HEALTH SOLUTIONS | bigen | HDG | NEMESA

COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution, equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for pricing	08/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

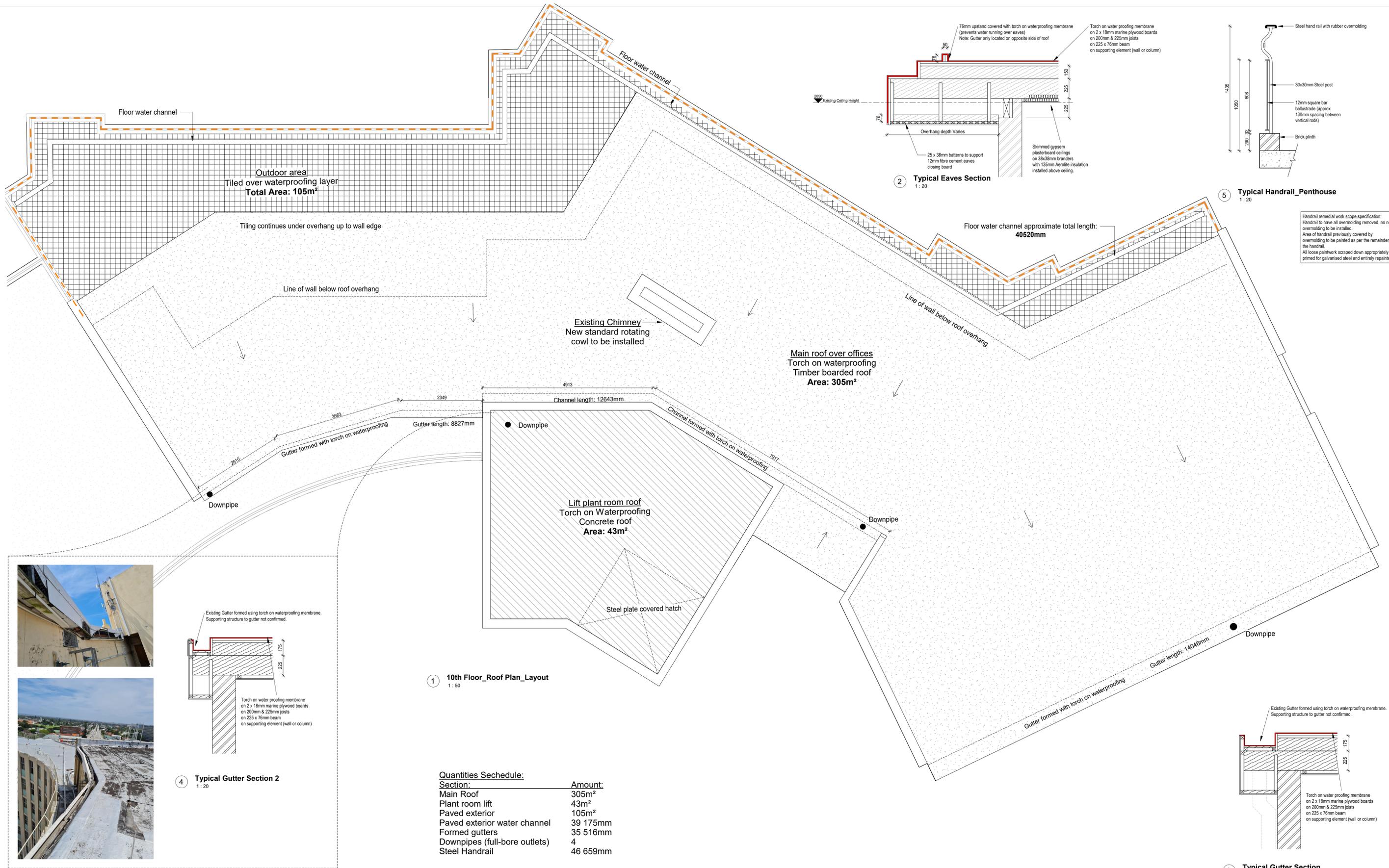
Scale:	1 : 50
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkamn
Sakhiwo Ref No:	

TITLE: Emergency Signage Layout

B4 Project Ref No.: 305-019
Architect DWG No.: ARC-007

FOR TENDER ONLY

REV: 4



Handrail remedial work scope specification:
 Handrail to have all overmolding removed, no new overmolding to be installed.
 Area of handrail previously covered by overmolding to be painted as per the remainder of the handrail.
 All loose paintwork scraped down appropriately primed for galvanised steel and entirely repainted.

Quantities Schedule:

Section:	Amount:
Main Roof	305m ²
Plant room lift	43m ²
Paved exterior	105m ²
Paved exterior water channel	39 175mm
Formed gutters	35 516mm
Downpipes (full-bore outlets)	4
Steel Handrail	46 659mm

b4 Architects cc
Resuscitating Healthcare Design

Port Elizabeth
 PO Box 5690, Walmer, Port Elizabeth, 6065
 Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
 Walmer, Port Elizabeth, 6070
 Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
 1 Tamarine Close, Sunningdale, Umhlanga, 4139
 Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za



COPYRIGHT NOTICE
 Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution, equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
 All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
 Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Issued for Pricing	24/10/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale: As indicated

Drawn by: J Thomson

Designer: B Brinkman

Professional Architect: B Brinkman

Checked by: J Thomson

Sakhiwo Ref No:

TITLE: Penthouse Roof Layout

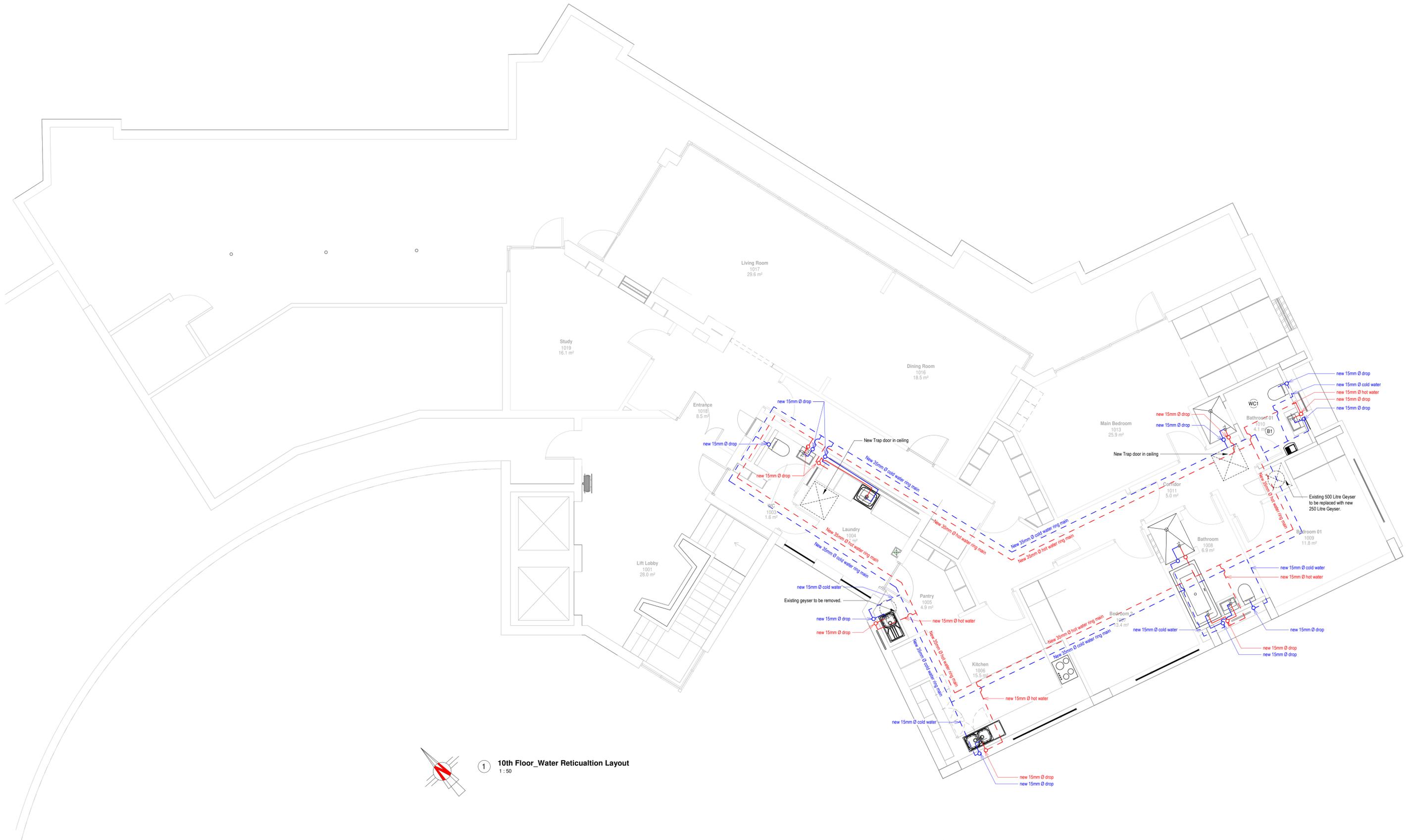
B4 Project Ref No.: 305-019

Architect DWG No.: ARC-008

FOR TENDER ONLY

REV: 4

2025/09/22 23:03:46



1 10th Floor_Water Reticulation Layout
1 : 50

COPYRIGHT NOTICE
Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing is hereby granted a non-exclusive license to use, display print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of **B4 Architects**.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Issued for Tender	27/11/2023
3	Issued for Pricing	16/09/2025
REVISIONS:		

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Date: 22 September 2025

Scale:	1 : 50
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman
Sakhiwo Ref No:	

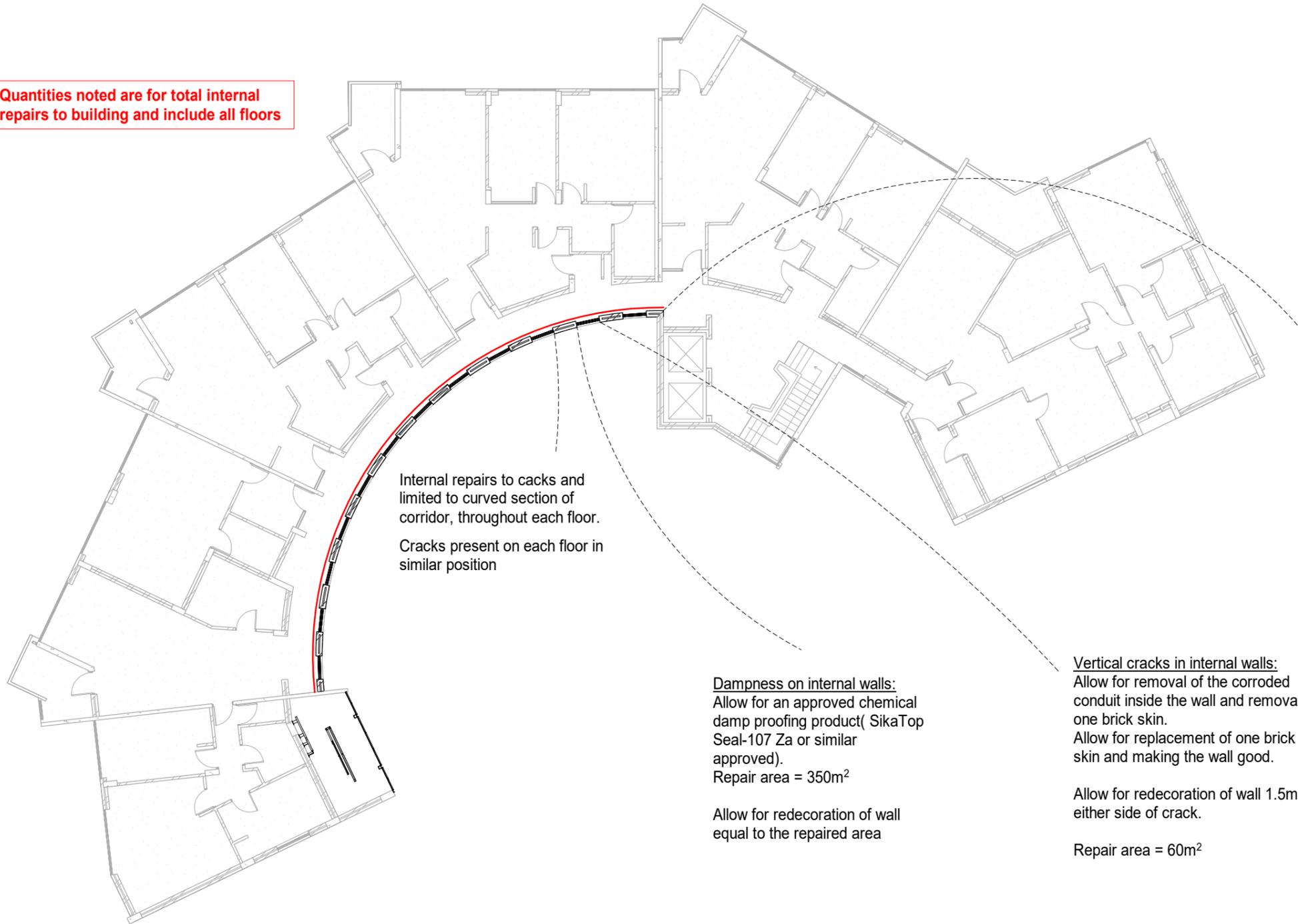
TITLE: Water Reticulation Layout

B4 Project Ref No.: 305-019
Architect DWG No.: ARC-010

FOR PRICING ONLY

REV: 3

Quantities noted are for total internal repairs to building and include all floors



Internal repairs to cacks and limited to curved section of corridor, throughout each floor.
Cracks present on each floor in similar position

Cracks on soffit of the slab:
Allow for use of crack injection resin(Sika Injection-201 or similar approved product).
Repair length = 20m

Allow for redecoration of soffit 1.5m either side of crack.

Dampness on internal walls:
Allow for an approved chemical damp proofing product(SikaTOP Seal-107 Za or similar approved).
Repair area = 350m²

Allow for redecoration of wall equal to the repaired area

Vertical cracks in internal walls:
Allow for removal of the corroded conduit inside the wall and removal of one brick skin.
Allow for replacement of one brick skin and making the wall good.

Allow for redecoration of wall 1.5m either side of crack.

Repair area = 60m²

1 9th Floor_Crack Repair Location
1 : 200

No.	Description	Date
1	Update for pricing	08/11/2023
2	Update for Pricing	14/11/2023
3	Update for Pricing	20/11/2023
4	Issued for Tender	27/11/2023

PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 200
Drawn by:	J Thomson
Designer:	-
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Internal Crack Repairs	
B4 Project Ref No.:	Architect DWG No.:	
	305-019	DET-001
FOR TENDER ONLY		
	REV	4

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Information	22/11/2023
2	Issued for Tender	27/11/2023
3	Issued for Pricing	22/09/2025
REVISIONS:		

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE: Fire Escape Stair Ballustrade & Screen Details

Scale: As indicated

Date: 22 September 2025

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

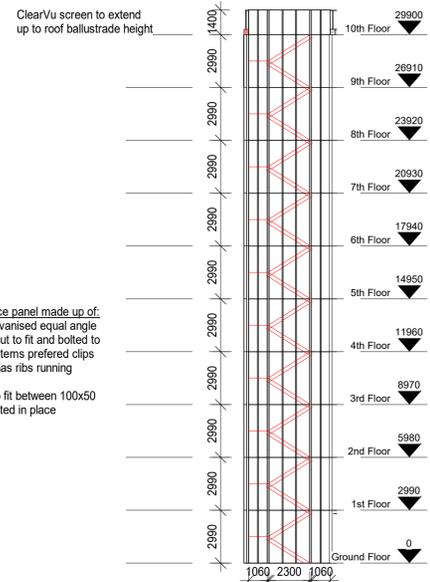
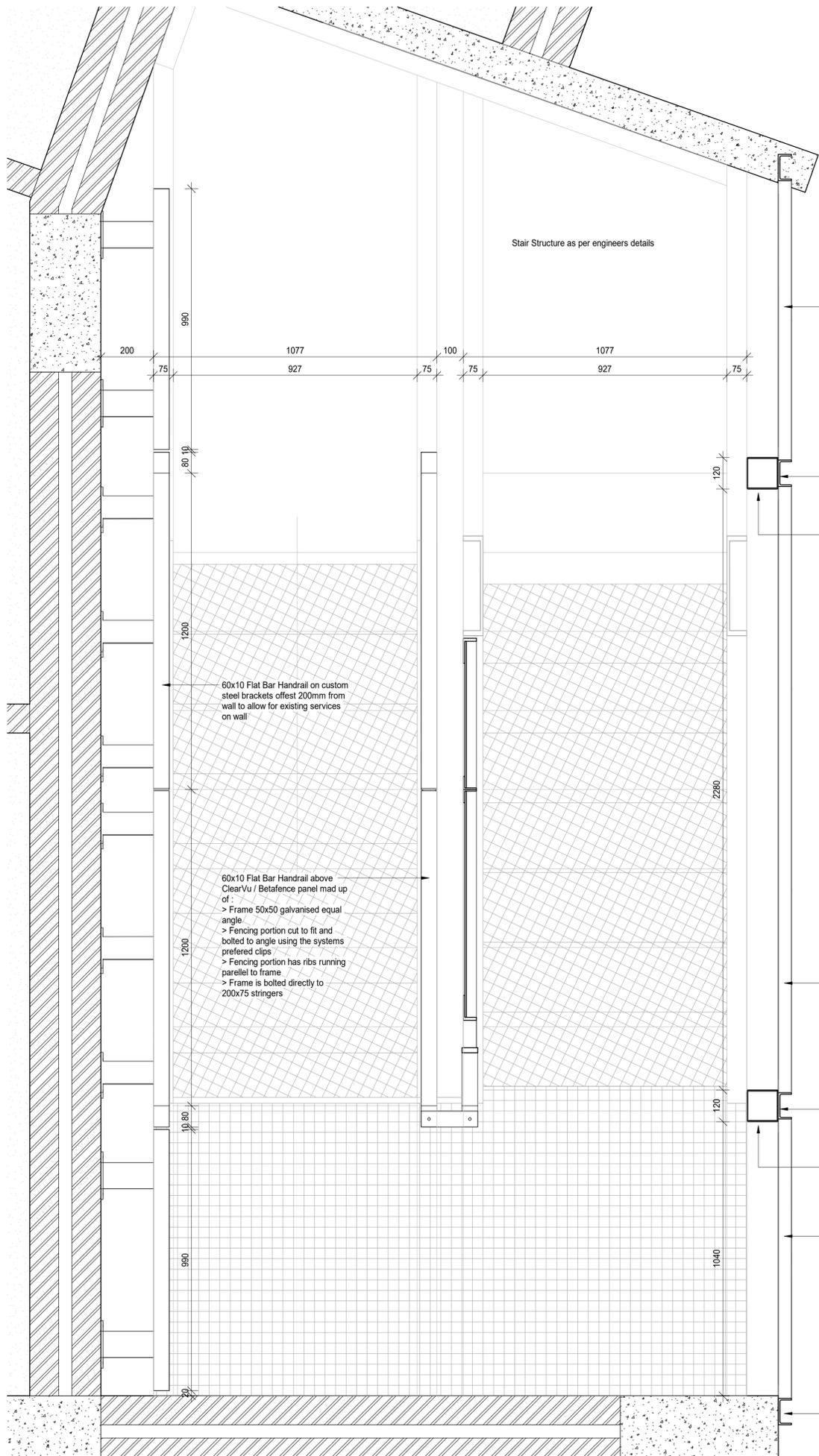
Checked by: B Brinkman

Sakhiwo Ref No:

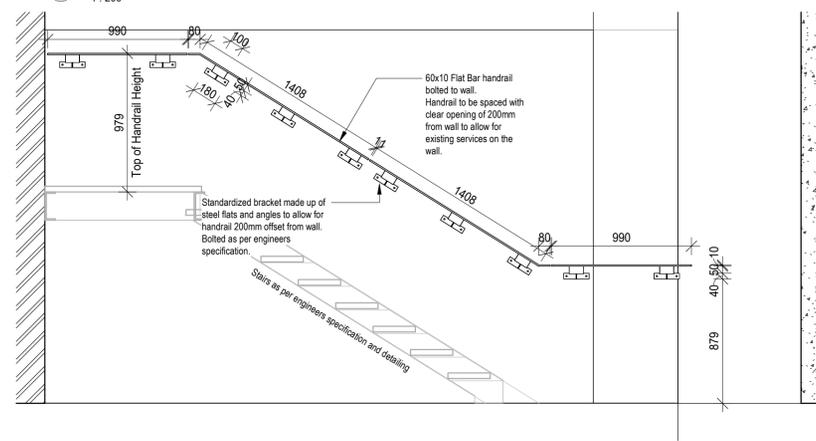
B4 Project Ref No.: Architect DWG No:

305-019 DET-002

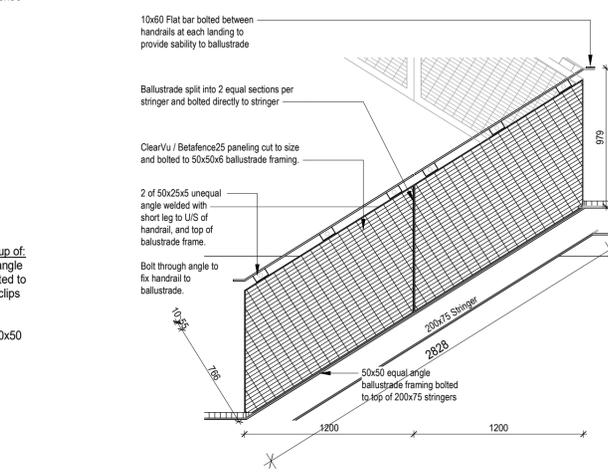
FOR TENDER ONLY REV: 3



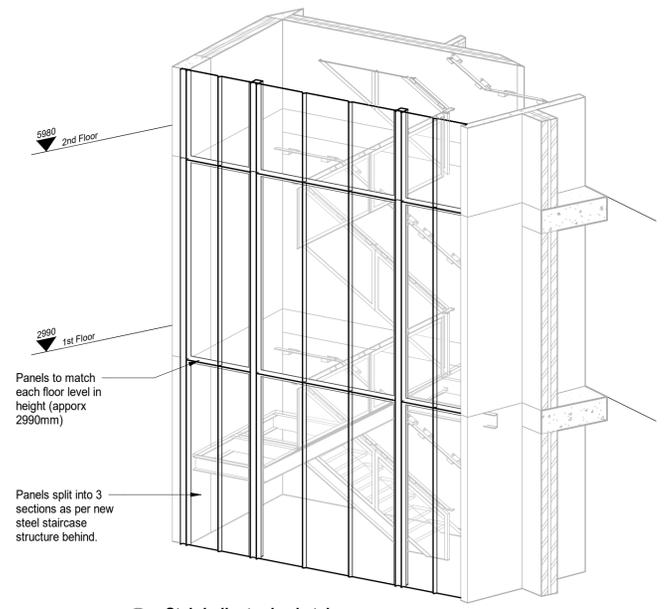
4 Escape Stair Panels Elevation
1 : 200



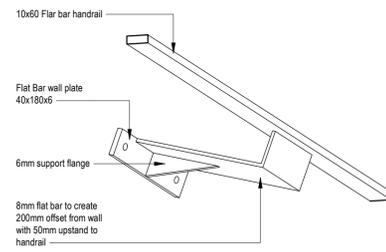
2 Stair sketch Typical Wall Handrail
1 : 25



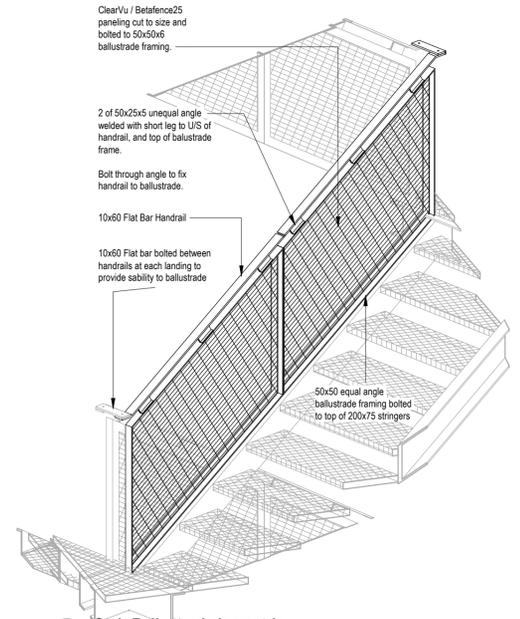
5 Stair sketch Typical Internal Ballustrade
1 : 25



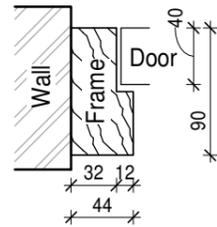
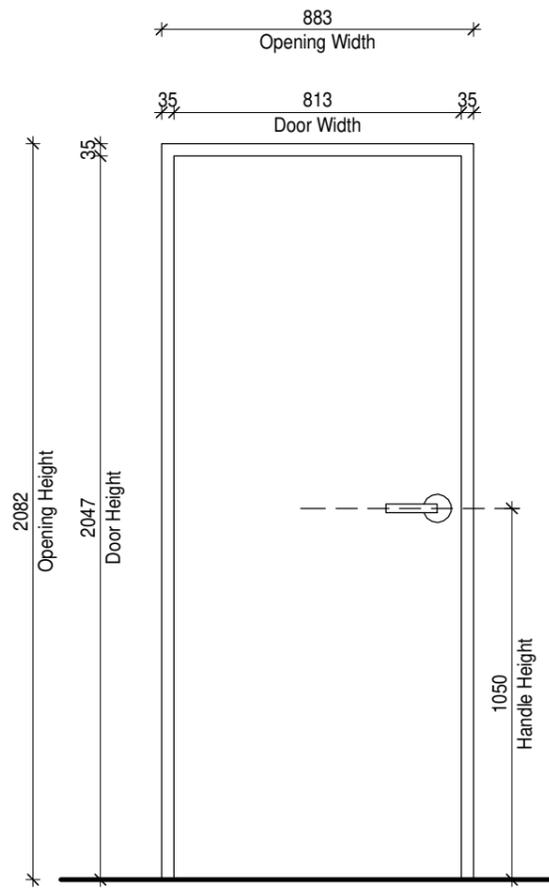
3 Stair ballustrade sketch



6 Stair Handrail detail

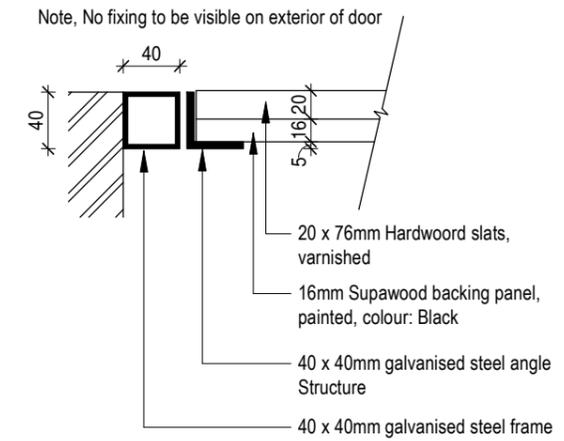
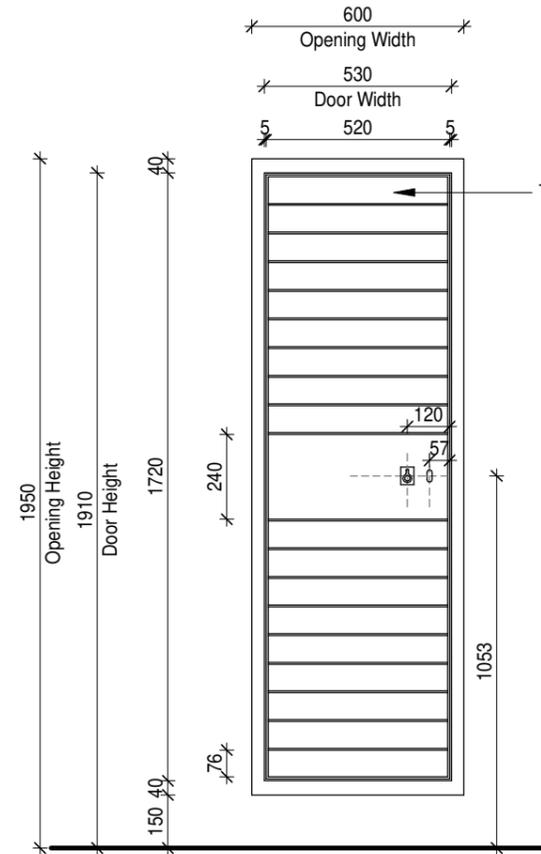


7 Stair Ballustrade Isometric



Door Type DT01

New standard hardwood timber frame (44x90mm) painted as per paint specification document



Door Type DT02

Solid 16mm timber infill layer with 20mm solid wood slats fixed on top

NOTE: All dimensions to be checked on site prior to manufacture

Door Schedule DT01-DT03

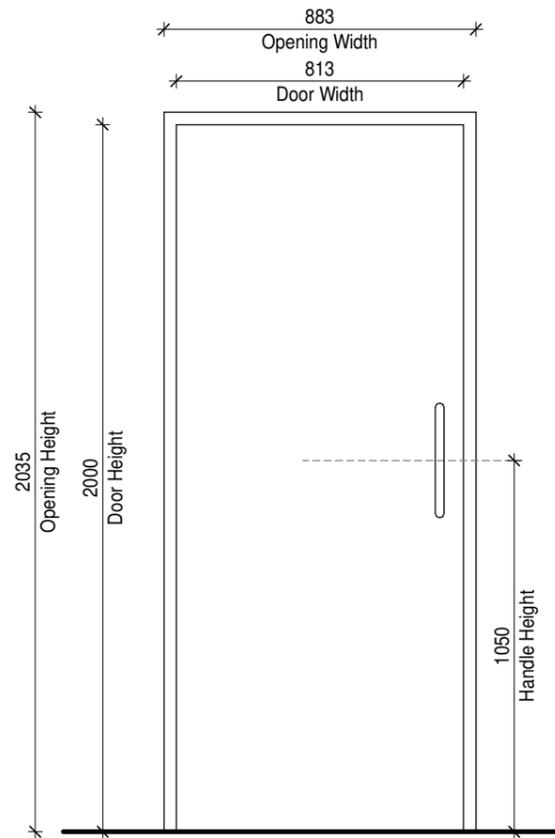
Mark	Type Mark	Height	Width	Construction Type	Finish	Comments
03	DT02	1950	600	Steel Frame, Timber slatted Duct Door	Natural Clear Varnish	40x40mm steel tube frame, 40x40mm Angle door rails and sides with timber infill
04	DT01	2082	883	Solid Core Timber	Painted as per finishes schedule	New Hardwood Timber Frame
05	DT02	1950	600	Steel Frame, Timber slatted Duct Door	Natural Clear Varnish	40x40mm steel tube frame, 40x40mm Angle door rails and sides with timber infill
06	DT01	2082	883	Solid Core Timber	Painted as per finishes schedule	New Hardwood Timber Frame

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for Pricing	31/10/2023
3	Update for pricing	08/11/2023
4	Issued for Tender	27/11/2023
5	Issued for Pricing	18/09/2025

PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Door Type DT01 , DT02
B4 Project Ref No.:	Architect DWG No:
305-019	DOR-001
FOR TENDER ONLY	
REV	5



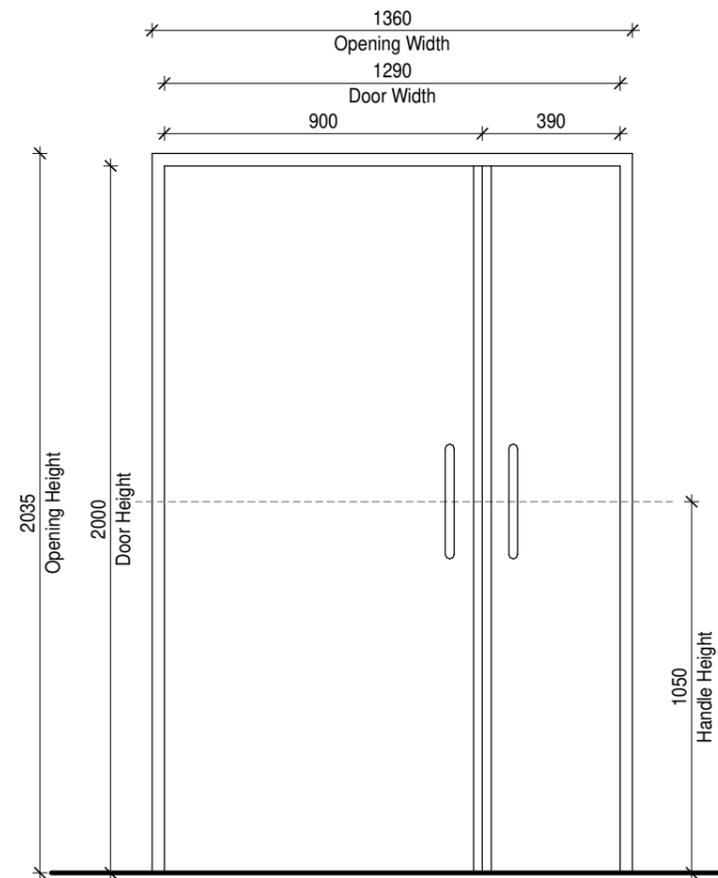
Lift Lobby Elevation

Door Type FD01

Door Specification:

- > ROCKLITE Class B Fire Door.
- > Commercial Veneer clad on both external and internal faces.
- > Door to have paint finish as per paint specification for new timber. Colour : TBC
- > Door (size 813mm x 2032mm door leaf) with chromadek channel surround.
- > Grade 316 1.6mm stainless steel frame with 3 x heavy duty stainless steel hinges per leaf to suit existing drywall opening 119mm deep.
- > Allow for modifications to existing opening and making good both sides of wall following fitting of door, including new paintwork to entirety of wall.

NOTE: All dimensions to be checked on site prior to manufacture



Lift Lobby Elevation

Door Type FD02

Door Specification:

- > ROCKLITE Class B Fire Door.
- > Commercial Veneer clad on both external and internal faces.
- > Door to have paint finish as per paint specification for new timber. Colour : TBC
- > Door (size 900mm x 2032mm door leaf) with (size 390mm x 2032mm door leaf) with chromadek channel surround.
- > Grade 316 1.6mm stainless steel frame with 3 x heavy duty stainless steel hinges per leaf to suit existing drywall opening 119mm deep.
- > Allow for modifications to existing opening and making good both sides of wall following fitting of door, including new paintwork to entirety of wall.

NOTE: All dimensions to be checked on site prior to manufacture

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Issued for Tender	27/11/2023
3	Issued for Pricing	18/09/2025

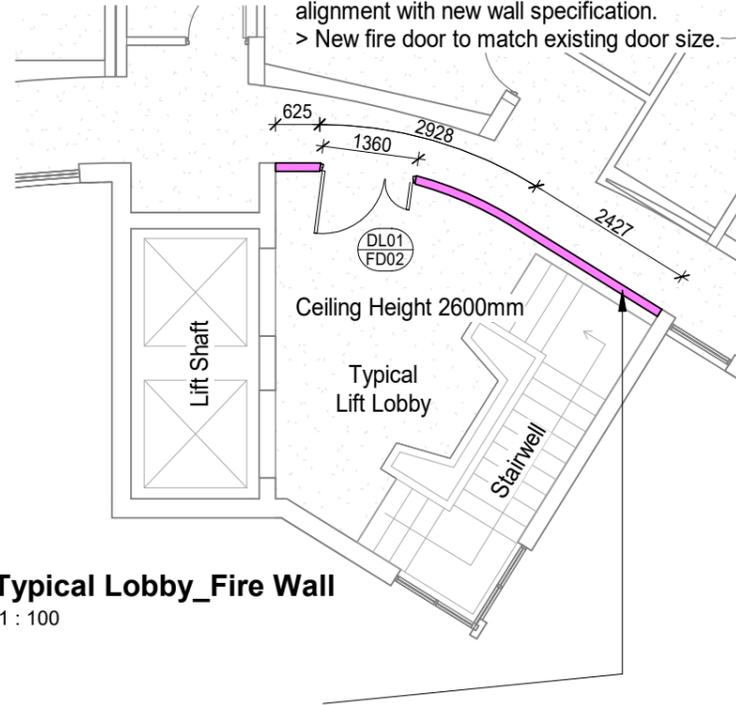
PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 20
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Door Type FD01 & FD02	
B4 Project Ref No.:	Architect DWG No.:	
	305-019	DOR-002
FOR PRICING ONLY		REV 3

NOTE: Existing surface mounted emergency fire buttons and conduits to be carefully removed from existing wall and kept intact while new firestop sheeting and cavity batt is installed.

- > New wall position to match existing wall position.
- > Existing wall paneling to be removed.
- > Existing wall stud structure to be reused if in alignment with new wall specification.
- > New fire door to match existing door size.



1 Typical Lobby_Fire Wall
1 : 100

Existing Drywall to be converted to 2 hour rated, fire resistant drywall.

Total Length: Approx 5980mm
Height: 2600mm

Drywall Specification:

Gypwall Firestop drywall, consisting of 2 layers Gyproc Firestop fixed to both sides of the framework using sharp point screws 3.5mm diameter x 25mm (for base layer) and 3.5mm x 42mm (for face layer) at maximum 220mm centres. Base layer of 15mm Gyproc Firestop and Face layer of 12.5mm Gyproc Firestop. All joint to be staggered on framework of Donn Ultrasteel studs 63.5mm x 35mm friction fitted into top and bottom Donn Ultrasteel track 63.5mm x 25mm at 600mm centres. Apply Gyproc Rhinotape to all joints and Donn corner bead to all external corners. Install Isover Cavitybatt, 63mm thick, in the cavity. All joints, angles and accessories shall have two separate coats of RhinoGlide jointing compound applied. All screw heads to be spotted. A thin skim coat of RhinoLite skim plaster shall be applied to the entire surface of the drywall. The surface shall be completely smooth and free of any marks and surface blemishes. The entire surface shall be painted in accordance with the paint specification.

New hardwood timber skirtings 69 x 13mm and hardwood timber quadrants 19 x 19mm. Varnish finish to match existing corridors.

New Fire Door to be installed within drywall to replace existing door, as per detail FD02

Each floor to have fire resistant wall installed (9 Floors)

No.	Description	Date
1	Issued for Pricing	06/11/2023
2	Update for pricing	08/11/2023
3	Update for Pricing	14/11/2023
4	Issued for Tender	27/11/2023
5	Issued for Pricing	22/09/2025

PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 100
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Lift Lobby Fire Door
B4 Project Ref No.:	Architect DWG No.:
305-019	DOR-FD02
FOR TENDER ONLY	
REV	5

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution, equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for Tender	27/11/2023
2	Issued for Pricing	22/09/2025

Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Existing Elevations - Marked Up

Scale: As indicated

Date: 22 September 2025

Drawn by: J Thomson

Designer: -

Professional Architect: B Brinkman

Checked by: B Brinkman

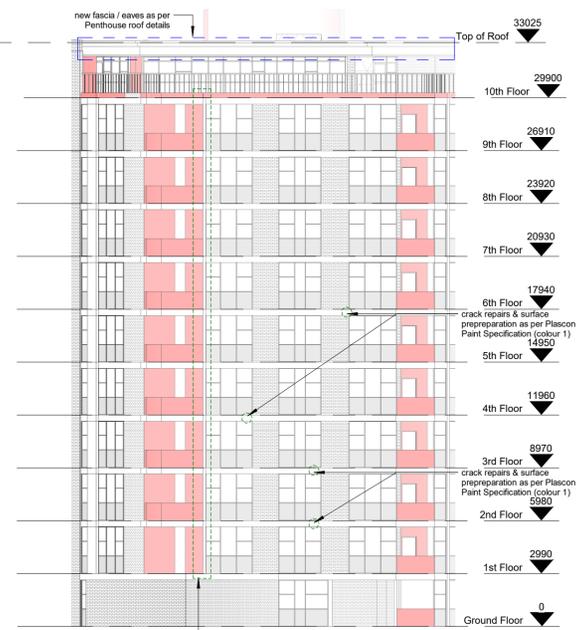
Sakhiwo Ref No:

B4 Project Ref No.: Architect DWG No:

305-019 ELE-001

FOR TENDER ONLY

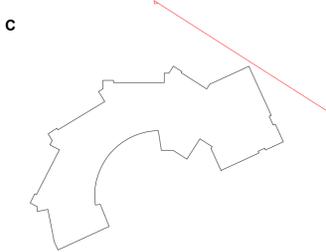
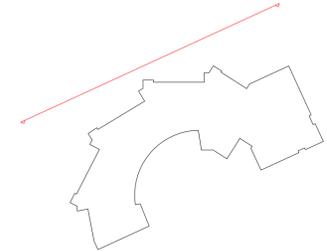
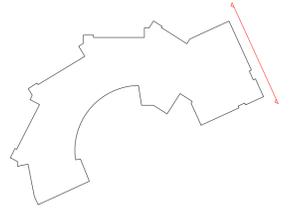
REV: 2



1 ELEVATION A
1:200

2 ELEVATION B
1:200

3 ELEVATION C
1:200



ELEVATION A
1:750

ELEVATION B
1:750

ELEVATION C
1:750



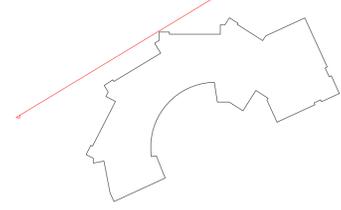
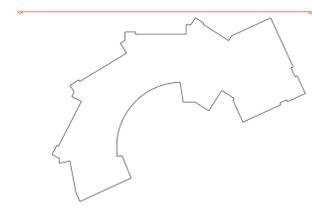
crack repairs & surface preparation as per Plascon Paint Specification (colour 1)

4 ELEVATION D
1:200

5 ELEVATION E
1:200

ELEVATION D
1:750

ELEVATION E
1:750



GENERAL NOTES:
- Existing top hung opening section aluminium windows with 6.38mm laminated safety glass to be fitted to replace missing or broken windows.
- Allow for replacement of all sealant around existing windows with ABE Flexthane 27 polyurethane sealing compound including primer.
- Allow for replacement of all vertical expansion joints.

EASTERN CAPE DEPARTMENT OF HEALTH

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH
HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

PROTEA FLATS : Penthouse Renovations

SCHEDULE OF FINISHES

Rev 5

DOCUMENT NUMBER: 305-019/FIN-001
DOCUMENT NAME: Schedule of Finishes
REVISION: 4

ISSUED FOR TENDER PURPOSES

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** shows specifications under review.
3. Items indicated in **green** are new specifications.

ROOM NO:	1001	ROOM NAME:	Lift Lobby
-----------------	------	-------------------	------------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Heterogeneous heavy commercial vinyl floor sheeting, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Nil
Pelmet:	Nil
Door Frame:	Nil
Door:	Nil
Cornice:	Nil
Ceiling:	Nil
Fittings:	Nil
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	Nil
Mechanical:	Nil
Notes:	Allow for KIRK Aluminium 45 x 30 (APRN450) Retro-fit Stair-Nosing with Luminescent Non Slip insert (ALNSRN37) fixed to the existing step. Note that the non slip insert is to be glued in place in accordance with the suppliers recommendations.

ROOM NO:	1002	ROOM NAME:	Lobby
-----------------	------	-------------------	-------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Quattro PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	<p>Existing vinyl skirting to be removed. Prepare wall for new vinyl skirting. Polyflor Inset skirting MC210C installed as per manufacturer's instructions, butt weld jointed to vinyl sheeting</p>
Wall:	<p>Allow for removal of existing timber door and steel frame and installation of new class B Fire Door as per door schedule. Make good to walls.</p> <p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Nil
Pelmet:	Nil
Door Frame:	<p>Allow for existing door frame to be removed New Class B Fire as per door schedule.</p>
Door:	<p>Allow for existing door to be removed New Class B Fire as per door schedule.</p>
Cornice:	<p>Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.</p>
Ceiling:	<p>New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Cretestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)</p>
Fittings:	Nil.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil.
Notes:	Refer to Demolition Notes.

ROOM NO:	1003	ROOM NAME:	WC
-----------------	------	-------------------	----

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Polysafe Quattro PUR vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Polyflor Inset skirting MC210C installed as per manufacturer's instructions, butt weld jointed to vinyl sheeting
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	As per wall finishes.
Window:	Existing steel window to be cleaned down, all loose and flaking paint removed, and repainted as per specification. Service window.
Pelmet:	Nil
Door Frame:	New Timber Door Frame. Clean down, prepare and apply one (1) coat Plascon Professional Wood Primer (PP800). Apply two (2 coats) Plascon Waterbased Velvaglo (VLW/TVW). Refer to Plascon Specification Document.
Door:	New Timber Door as per door schedule. Clean down, prepare and apply one (1) coat Plascon Professional Wood Primer (PP800). Apply two (2 coats) Plascon Waterbased Velvaglo (VLW/TVW). Refer to Plascon Specification Document.
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Nil
Sanitaryware:	As per sanitaryware schedule
Accessories:	As per sanitaryware schedule
Electrical:	New lighting to Electrical Engineer's specifications.
Mechanical:	New ventilation as per mechanical engineer specification
Notes:	

ROOM NO:	1004	ROOM NAME:	Laundry
-----------------	------	-------------------	---------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Polysafe Quattro PUR vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Polyflor Inset skirting MC210C installed as per manufacturer's instructions, butt weld jointed to vinyl sheeting
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish. Allow for repairs to water damaged external wall as per painting specification document.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	As per wall finishes.
Window:	Existing steel windows to be cleaned down, all loose and flaking paint removed, and repainted as per specification. Service windows .Existing aluminium windows to be removed, including boarded section below cills and replaced with new aluminium window to detail.
Pelmet:	Nil
Door Frame:	New Timber Door Frame. Clean down, prepare and apply one (1) coat Plascon Professional Wood Primer (PP800). Apply two (2 coats) Plascon Waterbased Velvaglio (VLW/TVW). Refer to Plascon Specification Document.
Door:	New Timber Door as per door schedule. Clean down, prepare and apply one (1) coat Plascon Professional Wood Primer (PP800). Apply two (2 coats) Plascon Waterbased Velvaglio (VLW/TVW). Refer to Plascon Specification Document.
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Creststone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Refer joinery schedule.
Sanitaryware:	As per sanitaryware schedule
Accessories:	As per sanitaryware schedule
Electrical:	New lighting to Electrical Engineer's specifications.
Mechanical:	New ventilation as per mechanical engineer specification
Notes:	Existing services running from roof to remain including downpipe.

ROOM NO:	1005	ROOM NAME:	Pantry
-----------------	------	-------------------	--------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Palettone PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish. Allow for repairs to water damaged external wall as per painting specification document.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.
Window:	Existing aluminium windows to be removed, and replaced with new aluminium window to detail.
Pelmet:	Nil
Door Frame:	Nil.
Door:	Nil.
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Cretestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Refer joinery schedule.
Sanitaryware:	As per sanitaryware schedule
Accessories:	
Electrical:	New lighting to Electrical Engineer's specifications.
Mechanical:	
Notes:	Existing services running from roof to remain including wastepipe. Existing geyser to be removed.

ROOM NO:	1006	ROOM NAME:	Kitchen
-----------------	------	-------------------	---------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Palettone PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Existing white glazed tiles to be removed. Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish. Allow for repairs to water damaged external wall as per painting specification document.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.
Window:	Existing aluminium windows to be removed, and replaced with new aluminium window to detail.
Pelmet:	Nil
Door Frame:	Existing steel door frame to remain. Clean down and repaint.
Door:	Existing timber door to remain. Service hinges. Repair and repaint timber door. Install new Ironmongery.
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Creststone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Refer joinery schedule.
Sanitaryware:	As per sanitaryware schedule
Accessories:	
Electrical:	New lighting to Electrical Engineer's specifications.
Mechanical:	
Notes:	

ROOM NO:	1007	ROOM NAME:	Bedroom 2
-----------------	------	-------------------	-----------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile) and parquet flooring beneath cupboard. Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed. New 30mm screed to be cast where parquet flooring removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	As per wall finishes.
Window:	Existing aluminium window to be replaced with new window to match with heavy duty window stays and 6.38mm laminated safety glass.
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Remove existing cupboard. New joinery as per details.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	Nil

ROOM NO:	108	ROOM NAME:	Bathroom 2
ITEM:	DESCRIPTION:		
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Quattro PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>		
Skirting:	Polyflor Inset skirting MC210C installed as per manufacturer's instructions, butt weld jointed to vinyl sheeting		
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p> <p><u>TILING</u> Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness. Aluminium square edge tile trim to all exposed edges.</p>		
Protection:	Nil		
Window Sill:	Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.		
Window:	Existing aluminium window to be cleaned and serviced.		
Pelmet:	Nil		
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)		
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)		
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.		
Ceiling:	New skimmed, screw up 12.5mm Rhinoboard MoistureResistant ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Cretestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)		
Fittings:	Nil		
Sanitaryware:	As per sanitaryware schedule		
Accessories:	As per sanitaryware schedule		
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.		
Mechanical:	New ventilation as per mechanical engineer specification		
Notes:			

ROOM NO:	1009	ROOM NAME:	Bedroom 1
-----------------	------	-------------------	-----------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile) and parquet flooring beneath cupboard. Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed. New 30mm screed to be cast where parquet flooring removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	As per wall finishes.
Window:	Existing aluminium window to be replaced with new window to match with heavy duty window stays and 6.38mm laminated safety glass.
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Creststone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Remove existing cupboard. New joinery as per details.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	Nil

ROOM NO:	1010	ROOM NAME:	Bathroom 1
ITEM:	DESCRIPTION:		
Floor:	<p>Allow for removal of existing floor finishes (VA Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Quattro PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>		
Skirting:	Polyflor Inset skirting MC210C installed as per manufacturer's instructions, butt weld jointed to vinyl sheeting		
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p> <p><u>TILING</u> Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness. Aluminium square edge tile trim to all exposed edges.</p>		
Protection:	Nil		
Window Sill:	Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.		
Window:	Existing aluminium window to be cleaned and serviced.		
Pelmet:	Nil		
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)		
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)		
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.		
Ceiling:	New skimmed, screw up 12.5mm Rhinoboard MoistureResistant ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestone as per manufacturer's instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)		
Fittings:	Nil		
Sanitaryware:	As per sanitaryware schedule		
Accessories:	As per sanitaryware schedule		
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.		
Mechanical:	New ventilation as per mechanical engineer specification		
Notes:			

ROOM NO:	1011	ROOM NAME:	Main Corridor
-----------------	------	-------------------	---------------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Heterogeneous heavy commercial vinyl floor sheeting, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Nil
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Cretestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Nil
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	

ROOM NO:	1012	ROOM NAME:	Corridor
-----------------	------	-------------------	----------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Palettone PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Nil
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Cretestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Nil
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	

ROOM NO:	1013	ROOM NAME:	Main Bedroom
-----------------	------	-------------------	--------------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile) and parquet flooring beneath cupboard. Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed. New 30mm screed to be cast where parquet flooring removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	As per wall finishes.
Window:	Existing aluminium shopfront to be removed and replaced with new aluminium shopfront as per shopfront schedule.
Pelmet:	Existing Pelmet to be removed.
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Creststone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Remove existing cupboard. New joinery as per details.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	Nil

ROOM NO:	1014	ROOM NAME:	Store
-----------------	------	-------------------	-------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Nil
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Creststone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Refer to Joinery Schedule
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	

ROOM NO:	1015	ROOM NAME:	Main Corridor
-----------------	------	-------------------	---------------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	As per wall finishes.
Window:	Existing steel windows to be cleaned down, all loose and flaking paint removed, and repainted as per specification. Service windows.
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	New joinery to detail.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil
Notes:	

ROOM NO:	1016	ROOM NAME:	Dining Room
-----------------	------	-------------------	-------------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Homogeneous lifelong polish free vinyl floor, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Existing aluminium shopfront to be removed and replaced with new aluminium shopfront as per shopfront schedule.
Pelmet:	Existing Pelmet to be removed.
Door Frame:	New Timber Door Frame. Clean down, prepare and apply one (1) coat Plascon Professional Wood Primer (PP800). Apply two (2 coats) Plascon Waterbased Velvaglo (VLW/TVW). Refer to Plascon Specification Document.
Door:	New Timber Door as per door schedule. Clean down, prepare and apply one (1) coat Plascon Professional Wood Primer (PP800). Apply two (2 coats) Plascon Waterbased Velvaglo (VLW/TVW). Refer to Plascon Specification Document.
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Cretestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Nil
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	
Notes:	Nil

ROOM NO:	1017	ROOM NAME:	Boardroom
-----------------	------	-------------------	-----------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Heterogeneous heavy commercial vinyl floor sheeting, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil.
Window:	Existing aluminium shopfront to be removed and replaced with new aluminium shopfront as per shopfront schedule.
Pelmet:	Existing Pelmet to be removed.
Door Frame:	Existing aluminium sliding door to be removed. Existing timber door to study to be removed. Brick up opening.
Door:	Existing aluminium sliding door to be removed. Existing timber door to study to be removed. Brick up opening.
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestone as per manufacturer's instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Refer to Joinery Schedule.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	
Notes:	Nil

ROOM NO:	1018	ROOM NAME:	Entrance
-----------------	------	-------------------	----------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Heterogeneous heavy commercial vinyl floor sheeting, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel.
Wall:	<p>Allow for demolition of existing entrance door and wall as per demolition drawing.</p> <p>Allow for new Fire Rated drywall to replace demolished section of wall.</p> <p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Nil
Pelmet:	Nil
Door Frame:	<p>Allow for existing door frame to be removed</p> <p>New Class B Fire door as per schedule.</p>
Door:	<p>Allow for existing door to be removed</p> <p>New Class B Fire door as per schedule.</p>
Cornice:	Existing beaded cornice to be sanded to remove loose material, spot primed with Plascon Woodcare Ultravarnish (thinned with mineral turpentine as per manufacturer specifications), and then overcoated with 2 undiluted coats, allowing 6 hours drying time between coats.
Ceiling:	Existing ceiling to be sanded to remove loose material, spot primed with Plascon Woodcare Ultravarnish (thinned with mineral turpentine as per manufacturer specifications), and then overcoated with 2 undiluted coats, allowing 6 hours drying time between coats.
Fittings:	Nil.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	Nil.
Notes:	Refer to Demolition Notes.

ROOM NO:	1019	ROOM NAME:	Office 1
-----------------	------	-------------------	----------

ITEM:	DESCRIPTION:
Floor:	<p>Allow for removal of existing floor finishes (Carpet Tile). Existing floor slab and/or screed to be repaired, where damage is visible, once floor finishes have been removed.</p> <p><u>TREATMENT OF EXISTING SCREED:</u> All holes in screed to be filled with PATCHiTe patching compound as manufactured by iTe Products, in strict accordance with their specifications. It is to be treated with BONDiTe keying agent, in strict accordance with the manufacturer's specifications.</p> <p><u>SELF-LEVELLING SCREED:</u> Apply LEVELiTe F30 self-levelling compound, as manufactured by iTe Products, in strict accordance with their specifications.</p> <p><u>VINYL SHEETING:</u> Polyflor 2mm thick Forest fx PUR Heterogeneous heavy commercial vinyl floor sheeting, laid in acrylic adhesive, with joints welded with a fully flexible coloured Polyflor welding rod in accordance with manufacturer's recommendations. Colour: TBC</p>
Skirting:	Standard 22x69mm Pine PAR skirting, primed with one coat wood primer, one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: White)
Wall:	<p>Allow for minor remedial work to wall and plaster (crack filling and patching), in preparation for painting final finish.</p> <p><u>PAINTING:</u> <u>BRICKWORK (CEMENT PLASTER)</u> Clean down, prepare and apply paint finish as per Plascon paint specification document (Colour: TBC)</p>
Protection:	Nil
Window Sill:	Nil
Window:	Existing aluminium shopfront to be removed and replaced with new aluminium shopfront as per shopfront schedule.
Pelmet:	Nil
Door Frame:	Existing door frame to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Door:	Existing door to be sanded down and painted with one coat universal undercoat, and two coats semi-gloss, chip resistant enamel. (Colour: TBC)
Cornice:	Existing cornice to be removed. New 20x15mm shadow plaster trim cornice to all wall/ceiling junctions to be installed.
Ceiling:	New skimmed, screw up 6.4mm rhinoboard ceiling to be installed. Rhinoboard to be supported by 38x38mm Pine branders and maximum spacings of 450mm. All joints and screws to be covered with Rhinotape, prior to application of Crestone as per manufacturers instructions. New ceiling to be painted finish as per Plascon paint specification document (colour: White)
Fittings:	Nil.
Sanitaryware:	Nil
Accessories:	Nil
Electrical:	New lighting and electrical sockets to Electrical Engineer's specifications.
Mechanical:	
Notes:	Nil

EASTERN CAPE DEPARTMENT OF HEALTH

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH
HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

PROTEA FLATS : Penthouse Renovations

IRONMONGERY SPECIFICATION

REV 5

DOCUMENT NUMBER: 305-019/IRN-001
DOCUMENT NAME: Ironmongery Specification
REVISION: 5

ISSUED FOR TENDER PURPOSES

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** show specifications under review.
3. Items indicated in **green** are new specifications.

Refer to Dormakaba specification for detailed list of ironmongery required, including product codes, masterkeying, etc

CONTROL LIST

Door No.	Hardware Set	Location	Door Type	Handling	Door Material
-	01 : 2 off	Duct2			Timber/Steel
-	02 : 3 off	Bathrooms			Timber
-	03 : 12 off	General			Timber
	04: 1 off	Entrance Door			Timber/Steel
-	05 : 9 off	Fire Doors	FD02	RHA	FD Material
-	06 : 11 off	Fire Escape Doors – All Floors	FD01	RH	FD Material

NOTE:

FD01 – 11 Units throughout Building

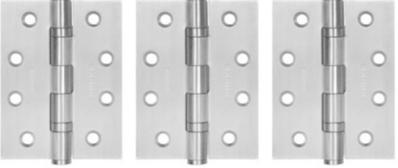
FD02 – 9 Units throughout building

Note : Type 04 subject to revision

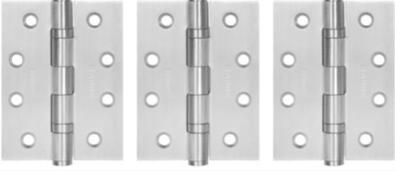
Hardware Set	01
Description / Notes	Duct service door
Doors (Total)	2

Image	Product	Finish	Quantity
	Dormakaba 102x75x3 EN1935 Grade 13. Two ball bearing butt hinge Double Ball Bearing Butt Hinge. Fire Rated. 120kg carrying capacity per pair. DBB-SS-009	Stainless Steel	1 Pair
	Dormakaba Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. D037D SS	Stainless Steel	1
	Dormakaba 40.5 – Europrofile Nickel Plated E-SP 5 Pin Cylinder – Masker Keyed DSC204101 MK	Satin Nikel	1
	Dormakaba Round Cylinder Escutcheon DCE-002 SS	Stainless Steel	0.5 pair
	Dormakaba 120 x 40mm Retangular Flush pull handle DFP-SS-025	Stainless Steel	1
	Dormakaba Adjustable roller bolt DBC-SS-022	Stainless Steel	1

Hardware Set	02
Description / Notes	Manually lockable WC stall door, Timber Door
Doors (Total)	3

Image	Product	Finish	Quantity
	Dormakaba 102x75x3 EN1935 Grade 13. Two ball bearing butt hinge Double Ball Bearing Butt Hinge. Fire Rated. 120kg carrying capacity per pair. DBB-SS-009	Stainless Steel	1,5 Pair
	Dormakaba Bathroom Sash Lock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm. Centres 57mm. D035S SS	Stainless Steel	1
	Dormakaba Lever handle on 170x170 plate with Bathroom/WC Furniture RH TH120 BP WC RH SS	Stainless Steel	1 Set
	Dormakaba Hat and Coat hook DHC-SS-030A	Stainless Steel	1
	Dormakaba Floor Mounted Door Stop. DDS-SS-017	Satin Chrome	1

Hardware Set	03
Description / Notes	Manually lockable door, Lock access both sides, Timber door
Doors (Total)	12

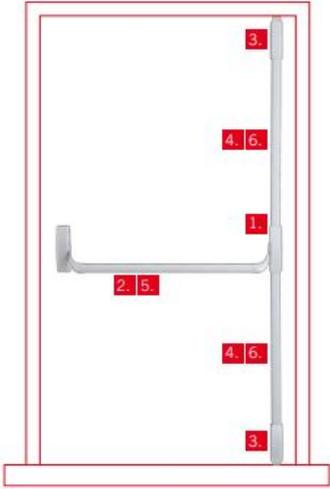
Image	Product	Finish	Quantity
	Dormakaba 102x75x3 EN1935 Grade 13. Two ball bearing butt hinge Double Ball Bearing Butt Hinge. Fire Rated. 120kg carrying capacity per pair. DBB-SS-009	Stainless Steel	1.5 Pairs
	Dormakaba Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm. D036S SS	Stainless Steel	1
	Dormakaba 63mm – 31.5+3.5mm Euro-profile Nickel Plated E-SP 5 Pin Double Cylinder – Master Keyed. DDC206301 MK	Satin Nickel	1
	Dormakaba Lever handle on 170x170 plate with Cylinder cutout TH120 BP CYL SS	Stainless Steel	1 Set
	Dormakaba Floor Mounted Door Stop. DDS-SS-017	Satin Chrome	1

Hardware Set	04
Description / Notes	
Doors (Total)	1

Image	Product	Finish	Quantity
	Hinges supplied as part of overall fire door frame		
	Parallel Arm HOLD OPEN Door Closer - Adjustable Strength	Silver	1
	325mm Straight tubular pull handle with flange	Stainless Steel	1 Set
	Floor Mounted Door Stop	Satin Chrome	2
	Single magnetic lock with 600lbf holding force	Anodized Aluminium	1
	L-Bracket for 600lbs maglock	Anodized Aluminium	1
	Access control by security specialist consisting of: 1x Biometric/Card Reader 1x 1-button intercom 1x Touch free door release 1x Emergency break glass unit 1x Wall mounted audio only handset	Stainless Steel and Plastic	1
	Cyclendar Deadlock	Stainless Steel	1
	Round Cylinder Escutcheon	Stainless Steel	2

Note: Access Control to be coordinated with Electrical engineer for approval and must interface with existing fire detection system on-site

Hardware Set	05
Description / Notes	Fire Door
Doors (Total)	09

Image	Product	Finish	Quantity
	Hinges supplied by fire door manufacturer		
	dormakaba EN 3-6 Parallel Arm NON HOLD OPEN Door Closer TS83 PA -Adjustable Strength, Hydraulic Speed Control. Push Side Fixing (Parallel Arm Bracket Included) EN3 850-950, EN4 950-1100, EN5 1100-1250, EN6 1250-1400. Door Closer tested to EN 1154. Approved to AS1905 Part 1 Fire Resistant Doors. Certified manufacturer to ISO 9001 NOTE: Parallel Arm Bracket (Rack & Pinion) to be used for push-side fixing. Please note fixing instructions supplied with the product	Silver	1 Set
	60X245X1,6mm Thick Grade 304 Stainless Steel Fixing Plate With Pre Drilled Holes To Suit Doorcloser Fixing Holes.Plate To Be Installed On Opposite Side Of Door Using dormakaba M5 Male/Female Fixing Screws. TS83-SS-FP		
	Dormakaba Patent fixing screws for door closers DOOR CLOSED M5 FIXING SCREWS	Satin Nickel	4 Each
	Dormakaba Two point locking panic bar – Single door - Door leaf 1000mm wide x 2270mm high (2201. 2104. PHX02. PHX04) PHA2 S SD		1 Set

Hardware Set	06
Description / Notes	Fire Door
Doors (Total)	11

Image	Product	Finish	Quantity
	Hinges supplied by fire door manufacturer		
	dormakaba ELECTRO MECHANICAL HOLD OPEN Co-ordinated door closer system for rebated doors between 1220-1350mm. Closing Force EN 3. Hydraulic speed control. Max door width 950mm per leaf. Pull-side fixing. Door closer compliant with EN 1154. Door coordinators tested to EN 1158. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120, MM/IMM 240. Certified manufacturer to ISO 9001. NOTE: dormakaba recommends that in addition to the connection to a fire alarm system; the G-SR EMF HO also should include a “push to release” button. This needs to be integrated into the circuit in close vicinity to the door, allowing for a controlled release of the door leaves for cleaning and maintenance. TS91B G-SR EMF 1 VK	Silver	1 Set
	Plate to be fabricated from 1.2mm thick stainless steel with 8mm diameter predrilled holes positioned according To the relevant drawings. All corners to receive 5mm radius fillet. TS91 EN3 FP	Stainless Steel	2 Each
	Dormakaba DPH301C Pull Handle BT fixed on a 170x170x1.2mm thick Grade 430 stainless steel plate with cylinder cutout left. Stainless Steel Plate to have 4 countersunk holes for screw fixing. (Special Order) DHP-430-CL-SF 170x170	430 Brushed Stainless Steel	1 Each
	dormakaba DPH301C Pull Handle BT fixed on a 170x170x1.2mm thick Grade 430 stainless steel plate with cylinder cutout right. Stainless Steel Plate to have 4 countersunk holes for screw fixing. (Special Order) DHP-430-CR-SF 170x170		

	Dormakaba Patent fixing screws for door closers DOOR CLOSED M5 FIXING SCREWS	Satin Nickel	8 Each
	Dormakaba M4 Patent Male / Female fixing screw pack (2 pairs per pack)	Stainless Steel	1 Pack
	Dormakaba Floor Mounted Door Stop. DDS-SS-017	Satin Chrome	1

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale: 1 : 25

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

Checked by: B Brinkman

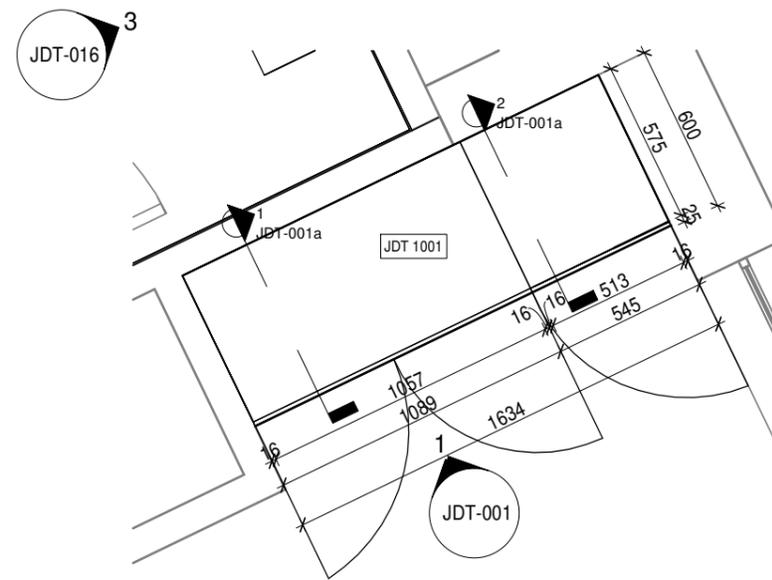
TITLE: Joinery Unit JDT1001

B4 Project Ref No.: 305-019

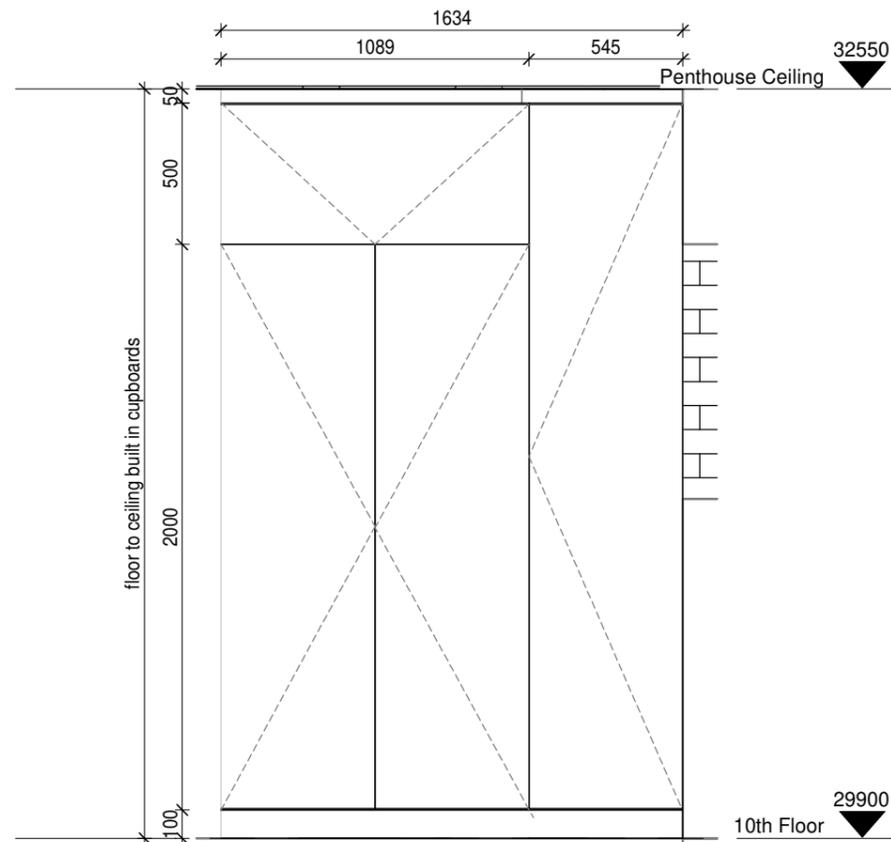
Architect DWG No.: JDT-001

FOR TENDER ONLY

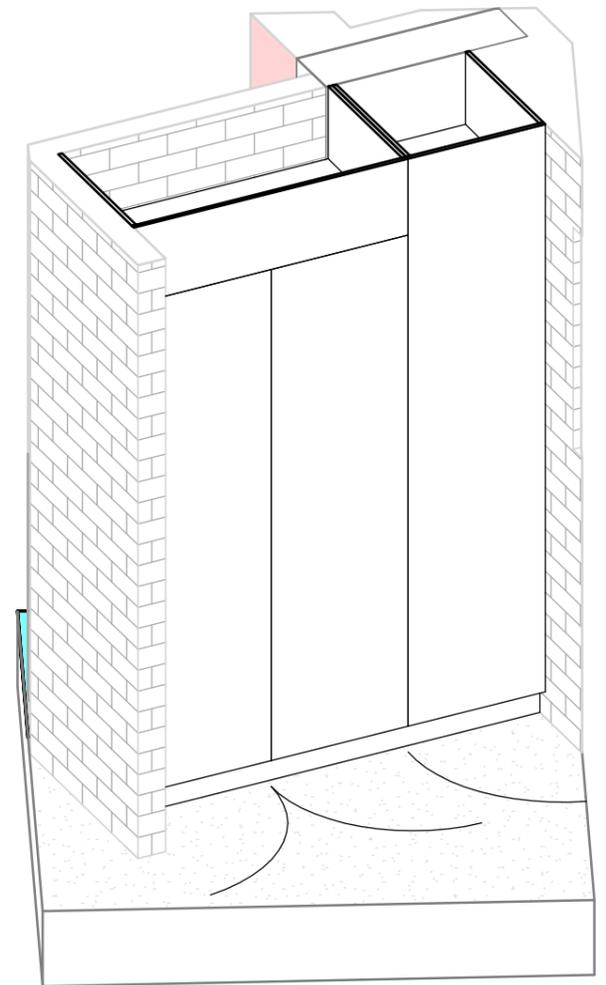
REV 4



3 JDT 1001_Plan
1 : 25



1 JDT1001_Elevation1
1 : 25



4 JDT1001_Isometric

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

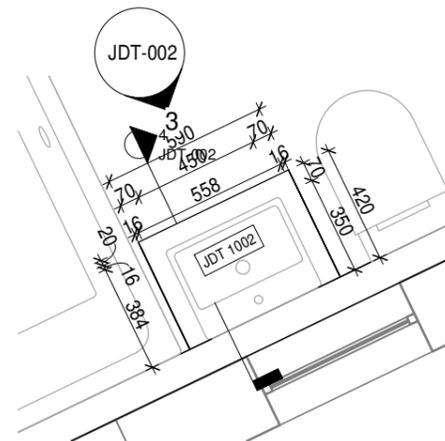
> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

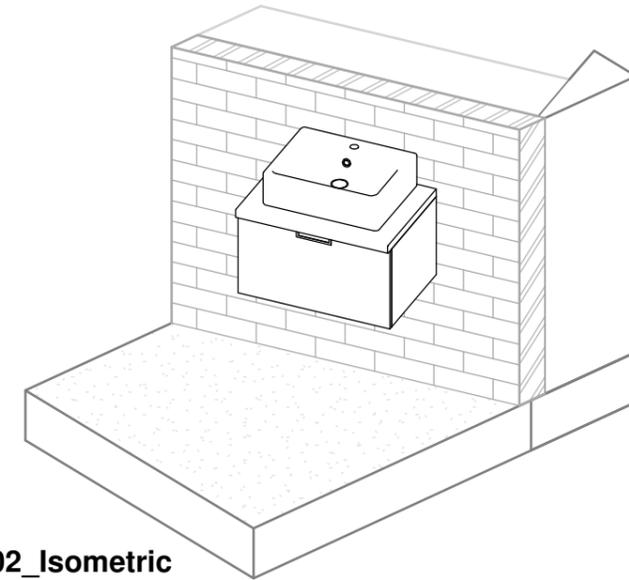
> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

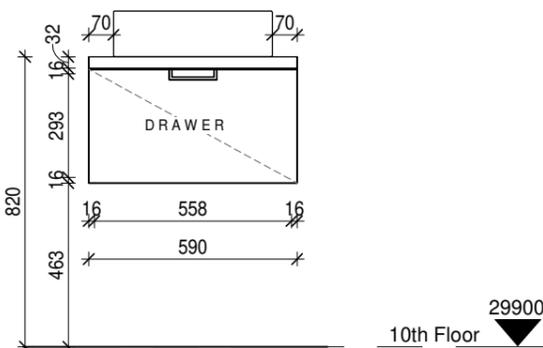
> All measurements to be confirmed on site prior to manufacture.



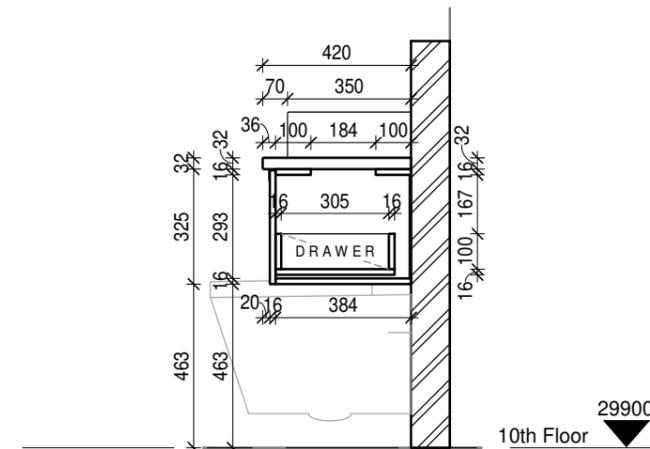
1 JDT 1002_Plan
1 : 25



2 JDT1002_Isometric



3 JDT1002_Elevation1
1 : 20



4 JDT1002_Section
1 : 20

No.	Description	Date

PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1002
B4 Project Ref No.:	Architect DWG No:
305-019	JDT-002
FOR TENDER ONLY	

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce (withdrawing to the extent necessary to carry out and complete the project described in the title block of this drawing).

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale: 1 : 25

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

Checked by: B Brinkman

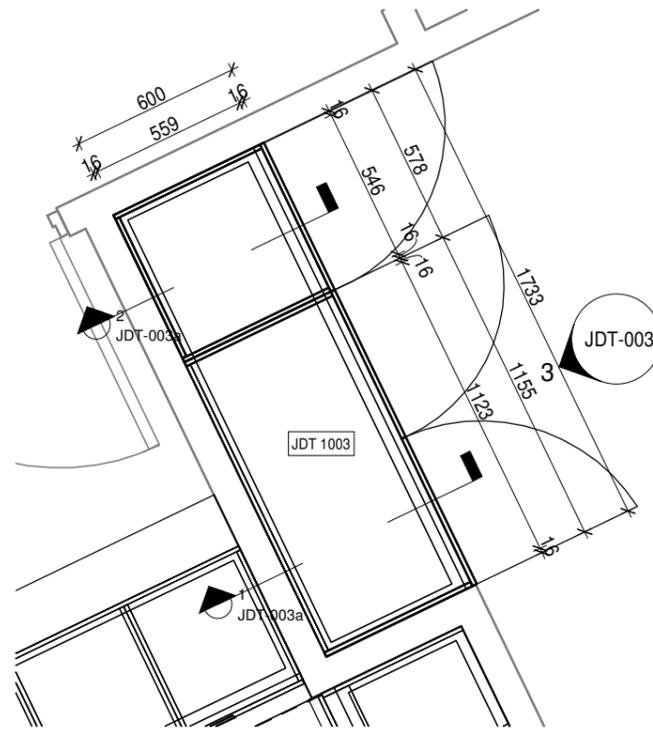
TITLE: Joinery Unit JDT1003

B4 Project Ref No.: 305-019

Architect DWG No.: JDT-003

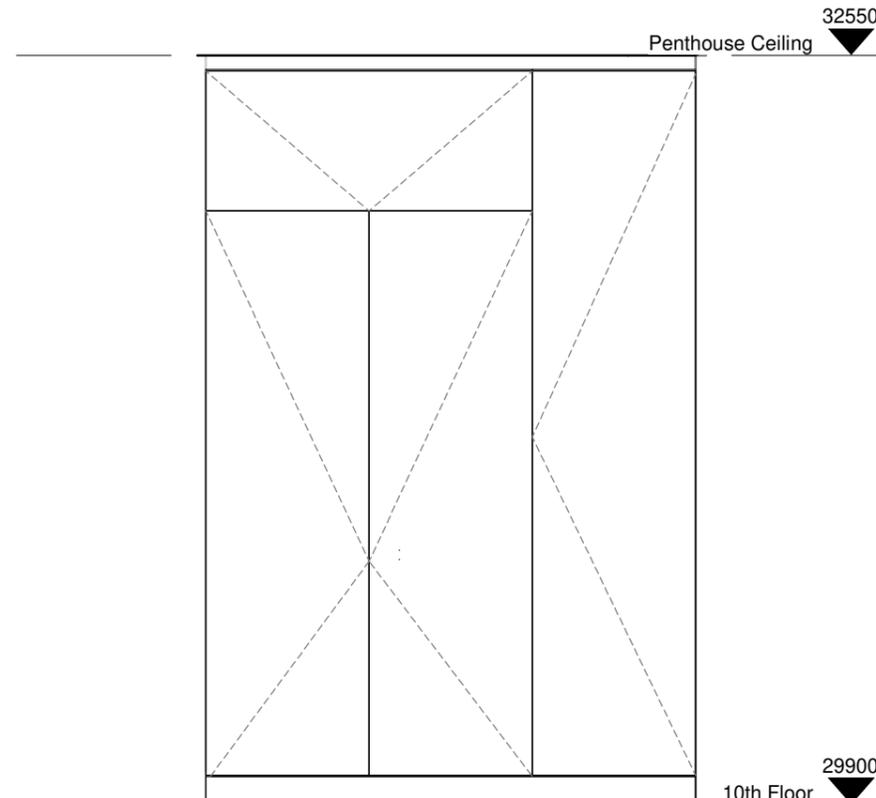
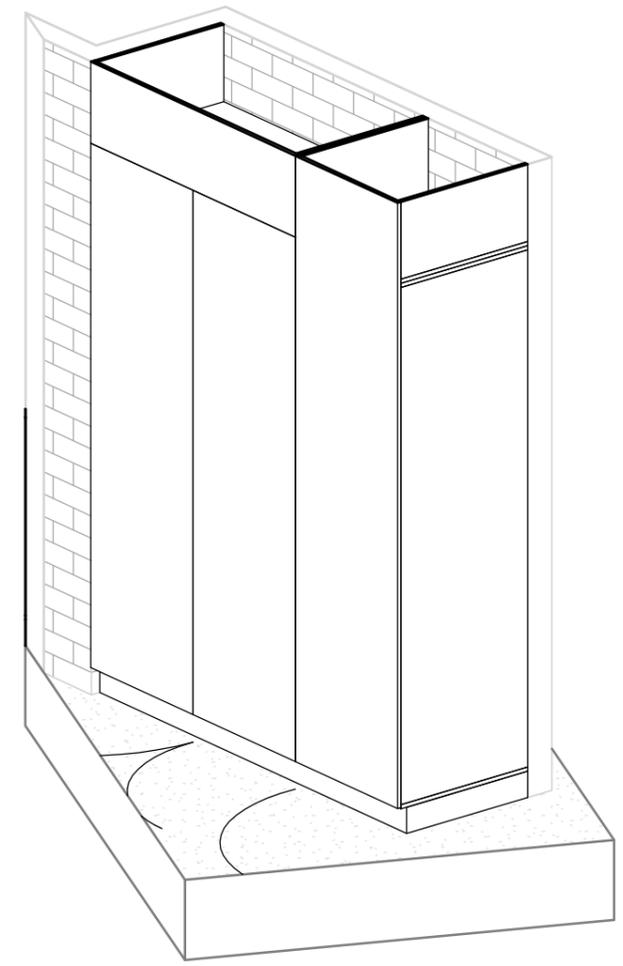
FOR TENDER ONLY

REV 4



1 JDT 1003_Plan
1 : 25

2 JDT1003_Isometric

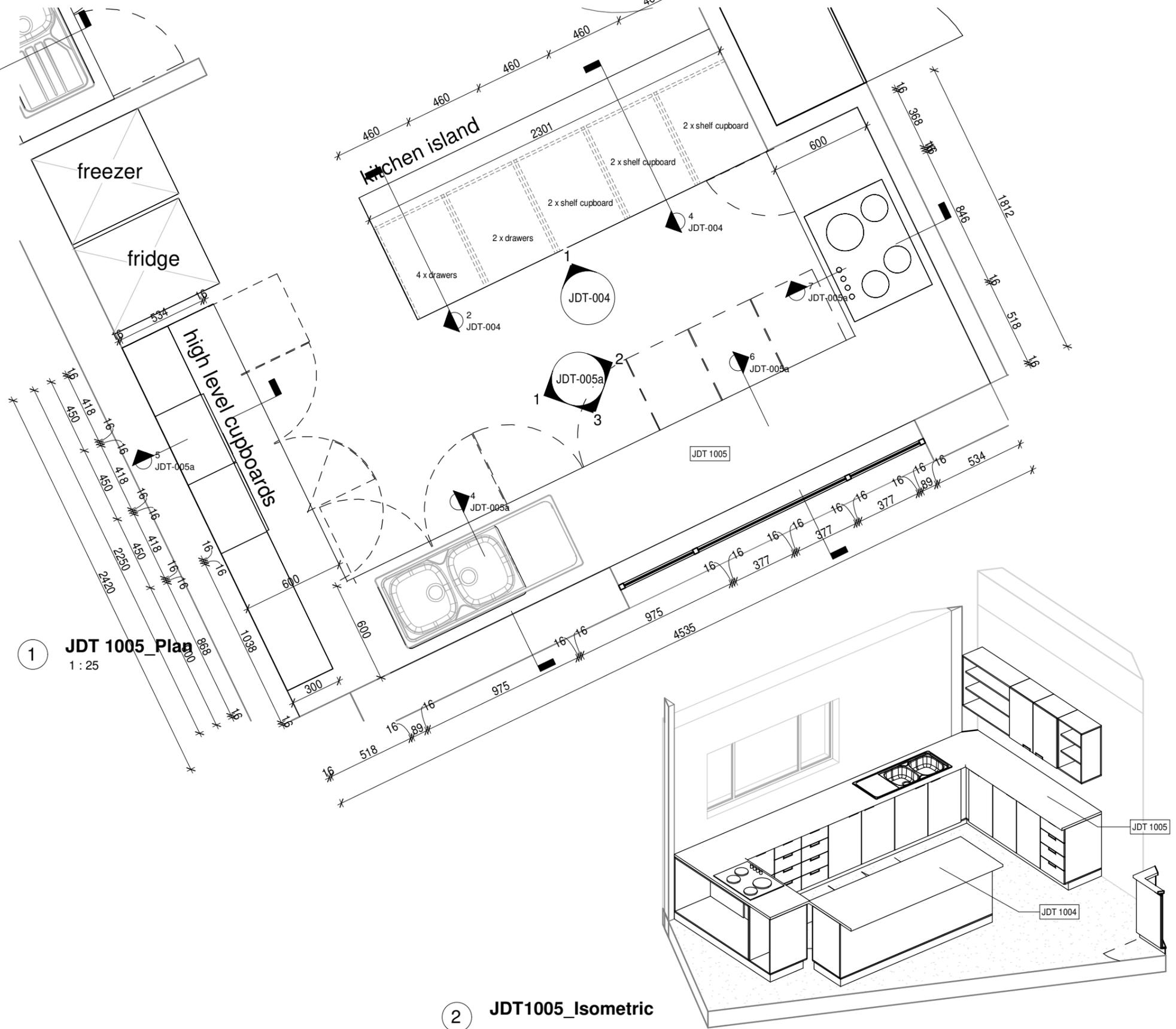


3 JDT1003_Elevation
1 : 25

2025/09/22 15:55:28

GENERAL JOINERY SPECIFICATION:

- > All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.
- > All internal shelves to be 16mm melamine faced board (COLOUR TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.
- > Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.
- > All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.
- > All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.
- > All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.
- > Backing board to units with open shelving to be 16mm melamine faced board to match shelving colour.
- > Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.
- > Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.
- > Handle specification:
Raiel Milano Grip Handle in Matt Chrome
- > All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.
- > Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing
- > All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)
- > All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.
- > Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.
- > All measurements to be confirmed on site prior to manufacture.



b4 Architects cc
Resuscitating Healthcare Design

Province of the **EASTERN CAPE**
HEALTH

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale: 1 : 25

Drawn by: J Thomson

Designer: J Thomson

Professional Architect: B Brinkman

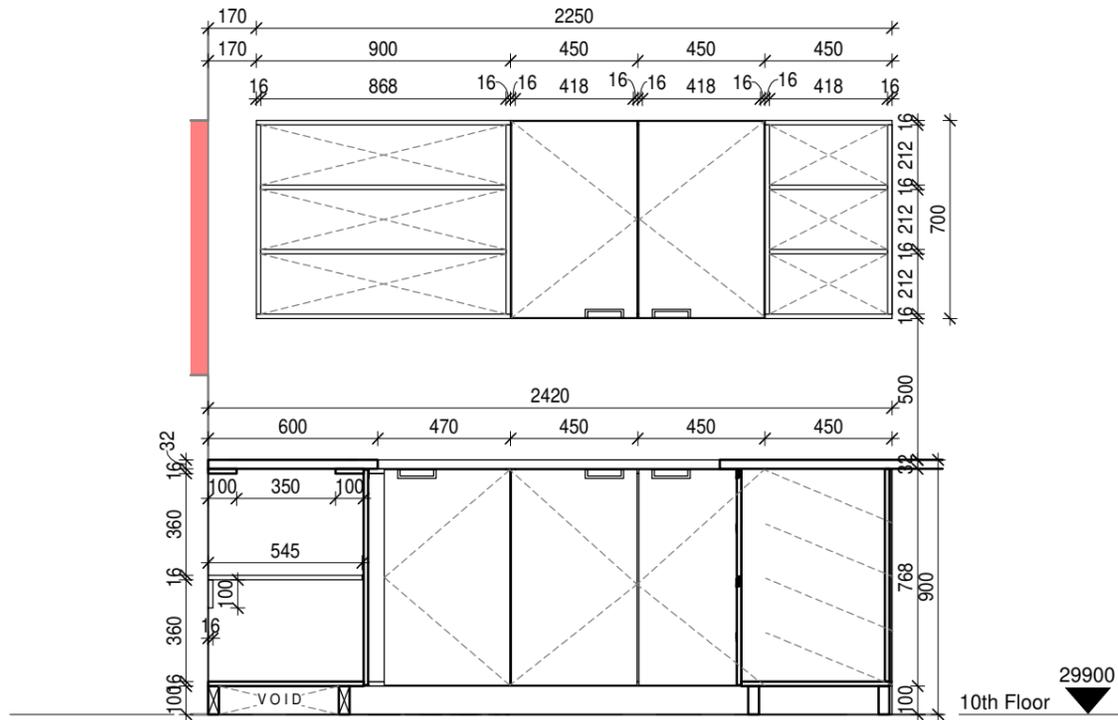
Checked by: B Brinkman

TITLE: Joinery Unit JDT1005

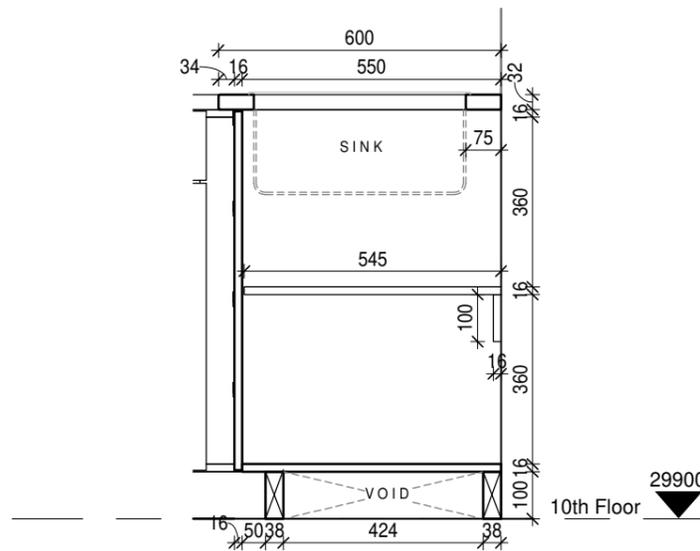
B4 Project Ref No.: 305-019
Architect DWG No.: JDT-005

FOR TENDER ONLY

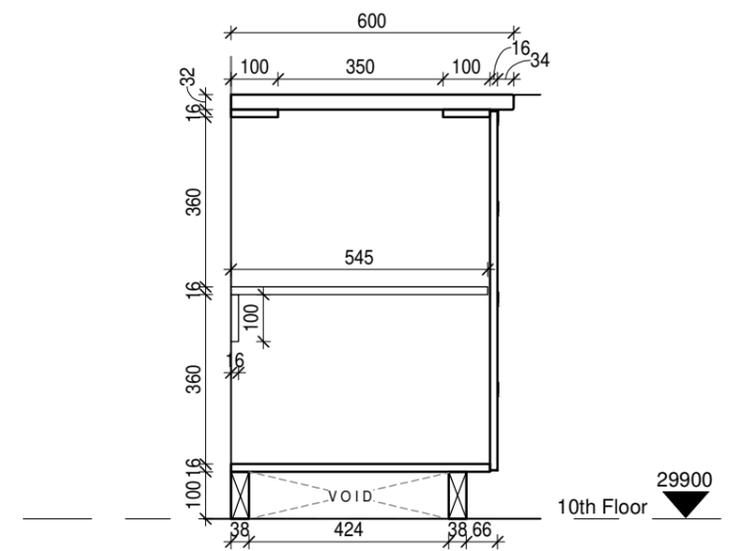
REV 4



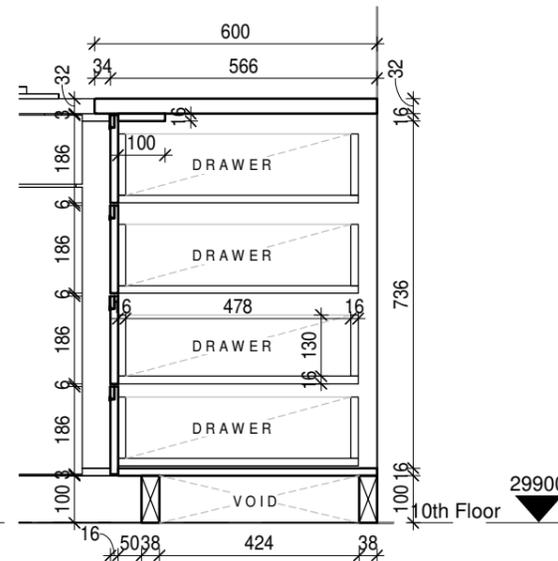
1 JDT1005_Elevation 1
1 : 25



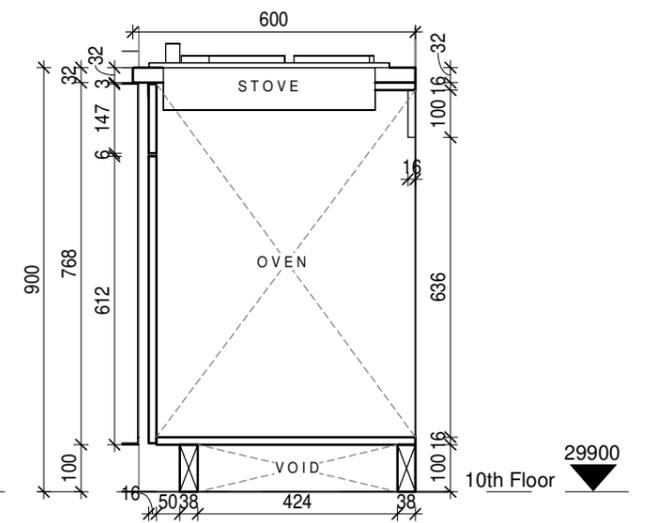
4 JDT1005_Section 1
1 : 15



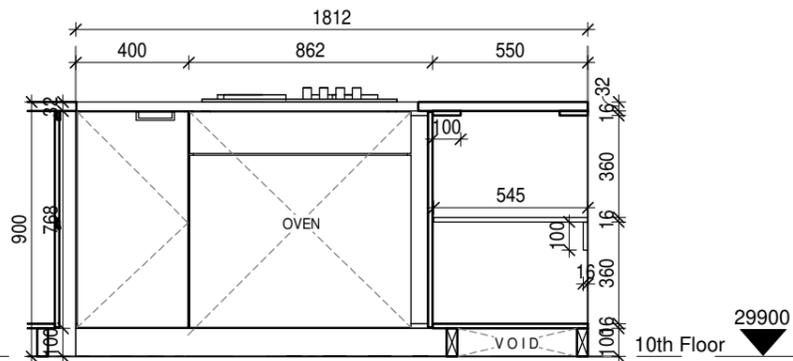
5 JDT1005_Section 2
1 : 15



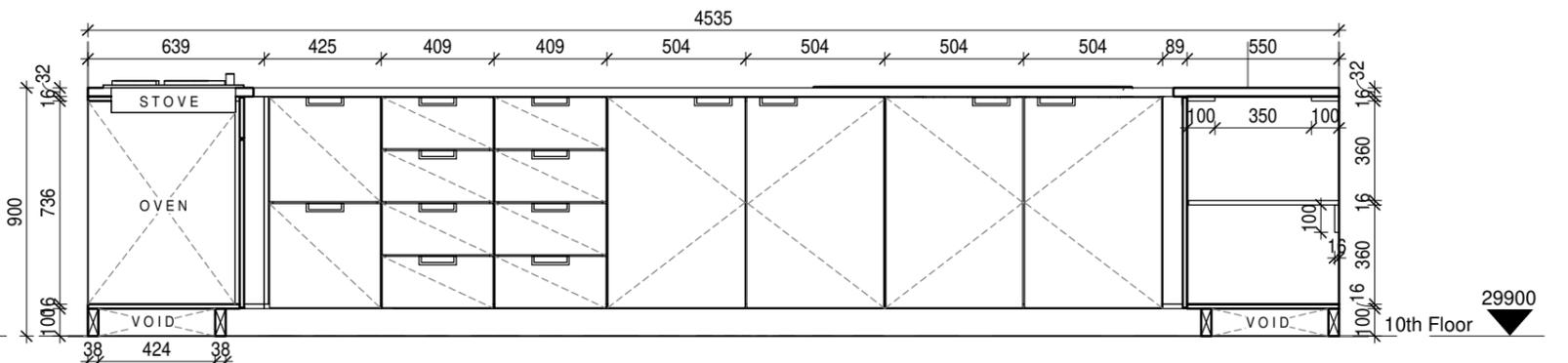
6 JDT1005_Section 3
1 : 15



7 JDT1005_Section 4
1 : 15



2 JDT1005_Elevation 2
1 : 25



3 JDT1005_Elevation 3
1 : 25

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

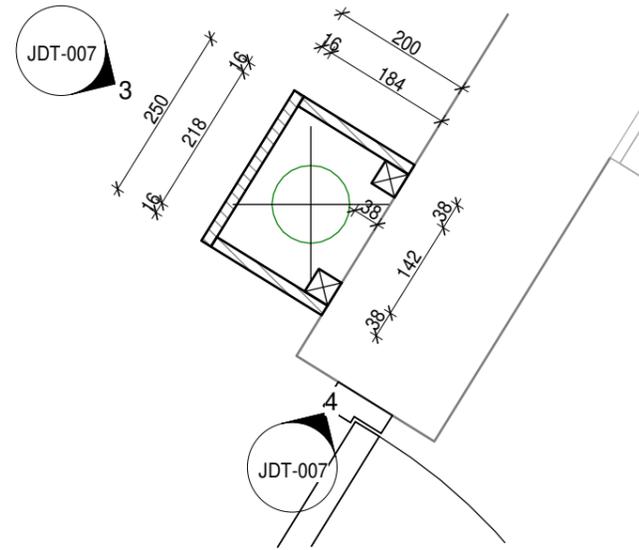
PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

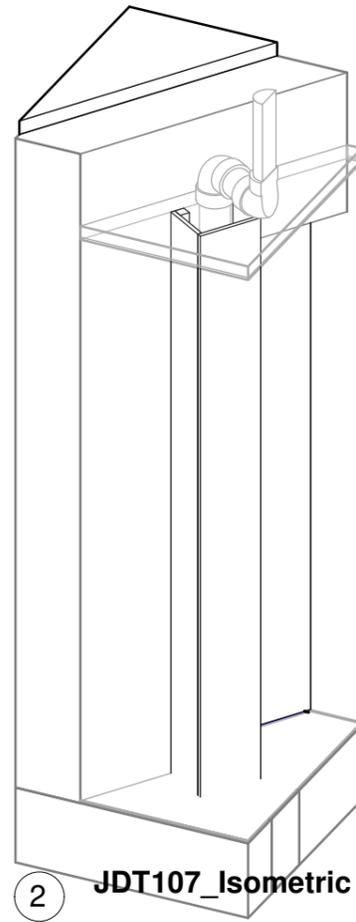
TITLE:	Joinery Unit JDT1005
B4 Project Ref No.:	Architect DWG No.:
305-019	JDT-005a
FOR TENDER ONLY	
REV	4

GENERAL JOINERY SPECIFICATION:

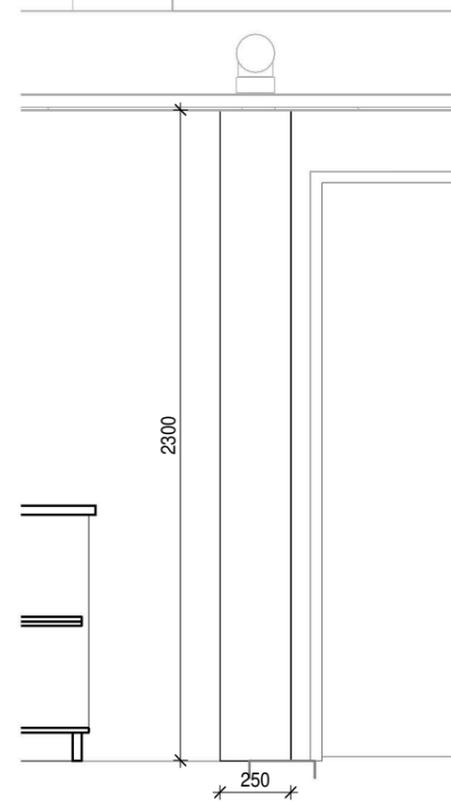
- > All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.
- > All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.
- > Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.
- > All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.
- > All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.
- > All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.
- > Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.
- > Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.
- > Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.
- > Handle specification:
Raiel Milano Grip Handle in Matt Chrome
- > All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.
- > Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing
- > All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)
- > All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.
- > Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.



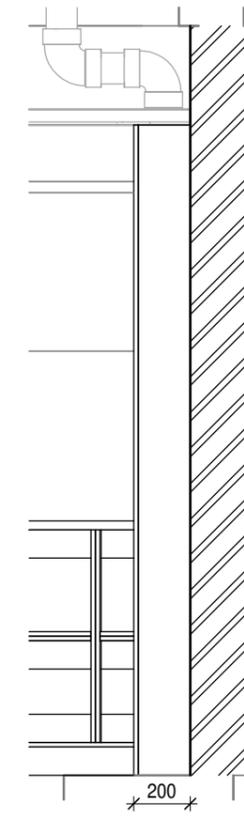
1 JDT 107_Plan
1 : 10



2 JDT107_Isometric



3 JDT107_Elevation 1
1 : 25



4 JDT107_Elevation 2
1 : 25

> All measurements to be confirmed on site prior to manufacture.

b4 Architects cc
Resuscitating Healthcare Design

Province of the **EASTERN CAPE**
HEALTH

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 B4 Architects. Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.
ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1007
B4 Project Ref No.:	Architect DWG No:
305-019	JDT-007
FOR TENDER ONLY	
REV	4

GENERAL JOINERY SPECIFICATION:

- > All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.
- > All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.
- > Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.
- > All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)
+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.
- > All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.
- > All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.
- > Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.
- > Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.
- > Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.
- > Handle specification:
Raiel Milano Grip Handle in Matt Chrome
- > All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.
+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.
- > Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing
- > All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.
+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)
- > All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.
- > Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.

b4 Architects cc
Resuscitating Healthcare Design

Province of the **EASTERN CAPE**
HEALTH

Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

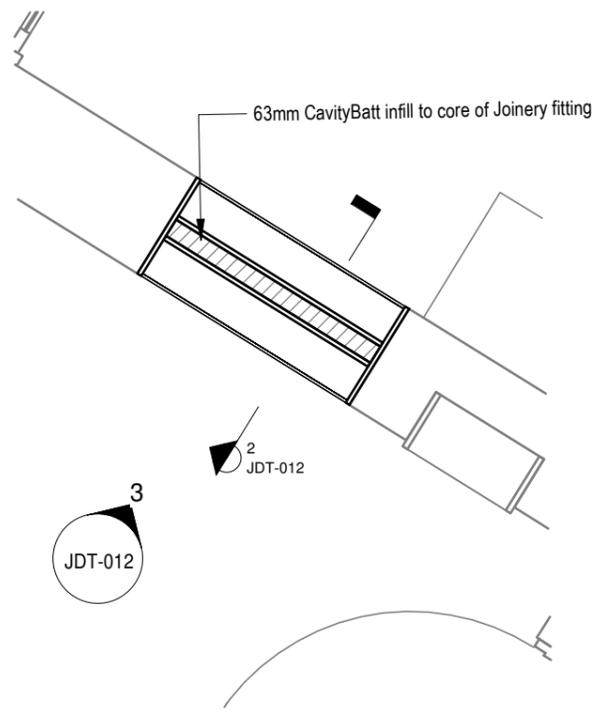
ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.
ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

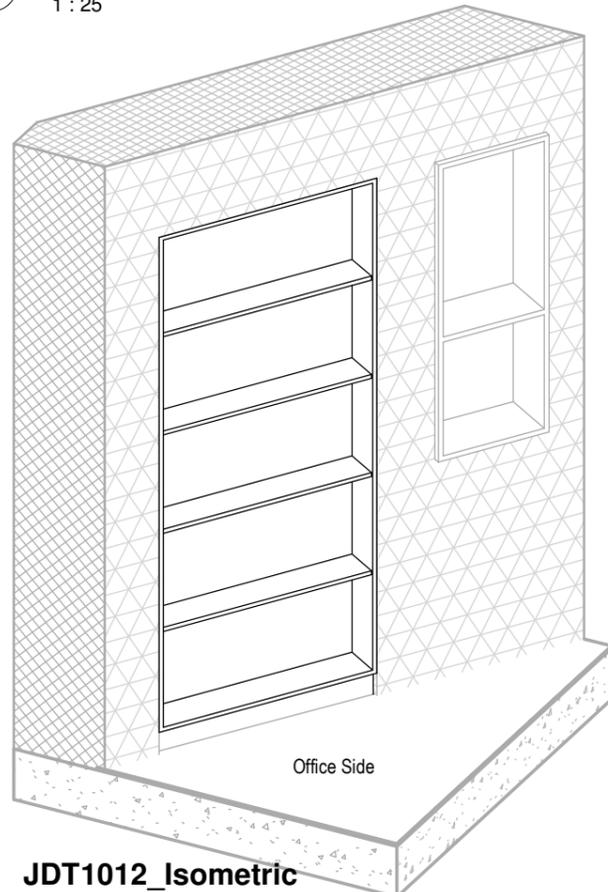
PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 25
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

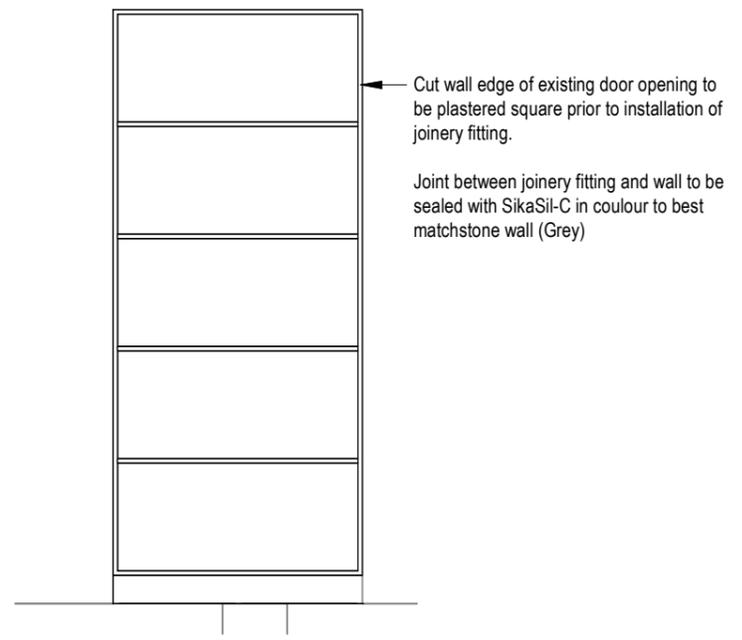
TITLE:	Joinery Unit JDT1012
B4 Project Ref No.:	Architect DWG No:
305-019	JDT-012
FOR TENDER ONLY	
REV	4



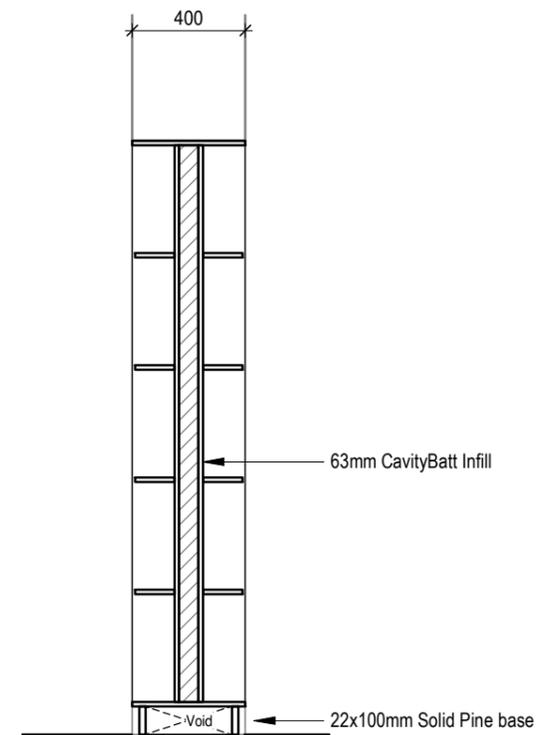
1 JDT 1012_Plan
1 : 25



4 JDT1012_Isometric



3 JDT1012_Elevation
1 : 25



2 JDT1012_Section
1 : 25

2025/09/22 15:59:27

GENERAL JOINERY SPECIFICATION:

> All casework and drawer fronts to be 16mm melamine faced board (COLOUR TBC) with 2mm high impact edging to all exposed edges.

> All internal shelves to be 16mm melamine faced board (Colour TBC), fixed into position. All exposed edges to be finished with 2mm High Impact Edging (Colour: to match shelving)
All doors and casework to be 16mm thickness.

> Sink and WHB Units: All casework and shelving to be water resistant BISON BOARD V313 as a substrate.

> All doors to be 16mm melamine faced board (COLOUR TBC) edged on all sides with 2mm high impact edging. (Colour to match door face)

+ All doors to be hung on 32mm continuous piano hinge (yellow zinc passivated finish), full length of door.

> All cupboards to be lockable with UNION 452-25PL (brass) cylinder cupboard locks or similar approved.

> All drawers to be fitted with UTA 45mm full extension ball bearing slides (1.2mm thick steel; load capacity 35kg per on 450mm wide drawer), or similar approved.

> Backing board to units *with open shelving* to be 16mm melamine faced board to match shelving colour.

> Backing board to units with closable cupboards (ie: not visible when cupboard doors are closed) to be 3.5mm white faced hardboard.

> Where joinery is fixed against drywall, wall to be braced with suitable nog-ins.

> Handle specification:
Raiel Milano Grip Handle in Matt Chrome

> All bases to be solid SA Pine, treated for moisture resistance, prior to fixing, with intermediary studs at max 450 ccs.

+ Bases to be painted 1 coat Plascon pink wood primer (UC 2) prior to installation.

> Kickplates: 97x2mm Aluminium flat bar (raw finish) to be glued to timber base backing

> All countertops to be 32mm FORMICA LIFESEAL WORKTOPS with 3mm radius edge. **Colour: TBC** to be finished with POST FORMED END TRIM in colour to be confirmed.

+ Any junctions in the tops to be flush jointed (no steel joiner strips to be used)

> All internal cutouts to accommodate plumbing and/or electrical or other services to be cut neat and square / rectangular / circular and to be closed up neatly with 4mm white faced masonite board cut to square around penetration.

> Seal between all worktops, sanitaryware, tiling and wall with SIKAFLEX FC-11 (for sanitaryware and/or wet areas) and SIKASIL-C everywhere else.

> All measurements to be confirmed on site prior to manufacture.



Port Elizabeth
PO Box 5690, Walmer, Port Elizabeth, 6065
Unit 12, Bloomingdales Office Park, 34 Ninth Avenue,
Walmer, Port Elizabeth, 6070
Tel: 041 581 1217 E-mail: b4.pe@b4arch.co.za

Durban
1 Tamarine Close, Sunningdale, Umhlanga, 4139
Tel: 082 828 6443 E-mail: b4.kzn@b4arch.co.za

COPYRIGHT NOTICE
Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.
This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.
This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.
Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT
All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.
All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.
ACCURACY & DIMENSIONS
Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.
IF IN DOUBT PLEASE ASK!

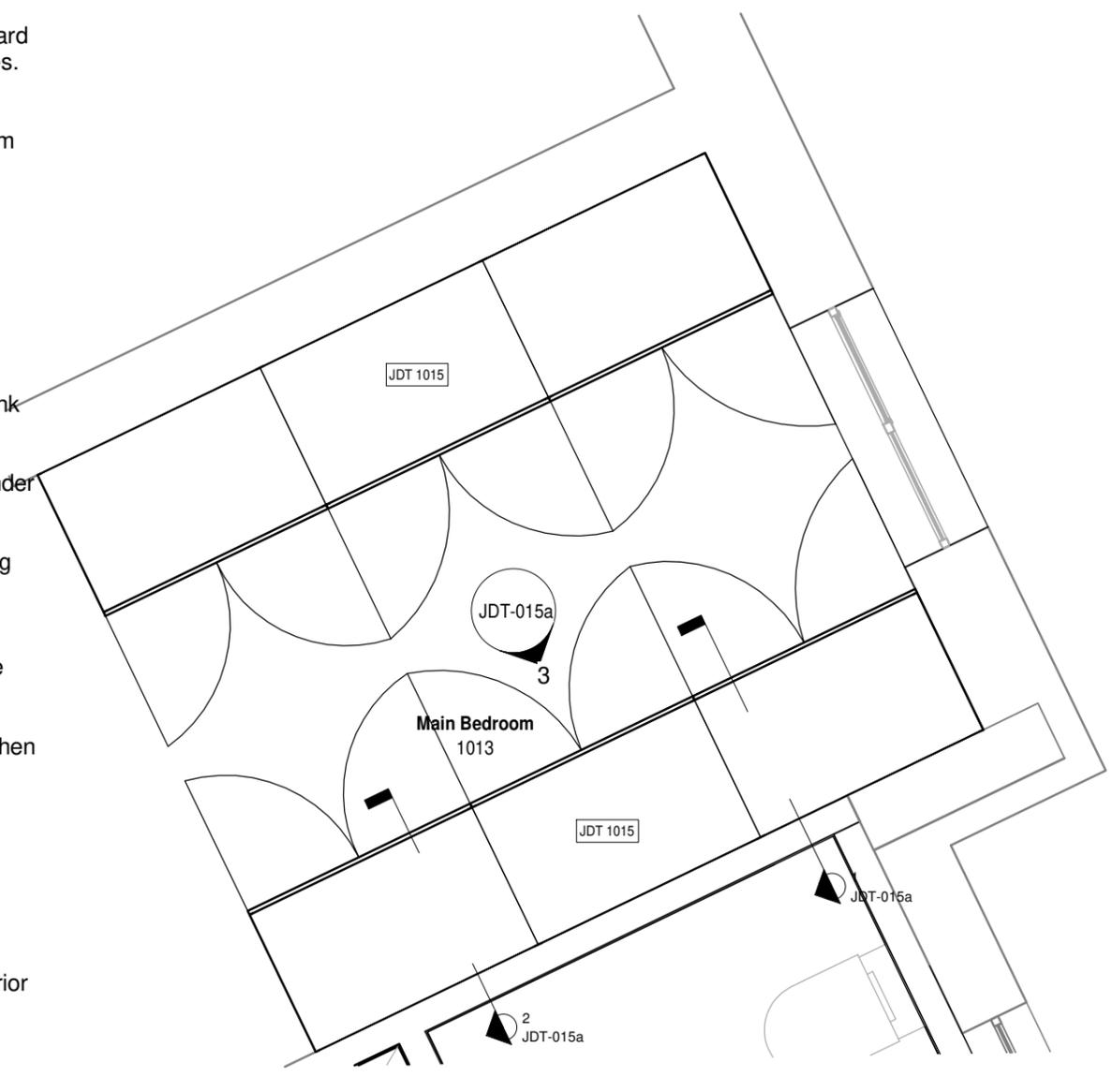
No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:
Date: 22 September 2025

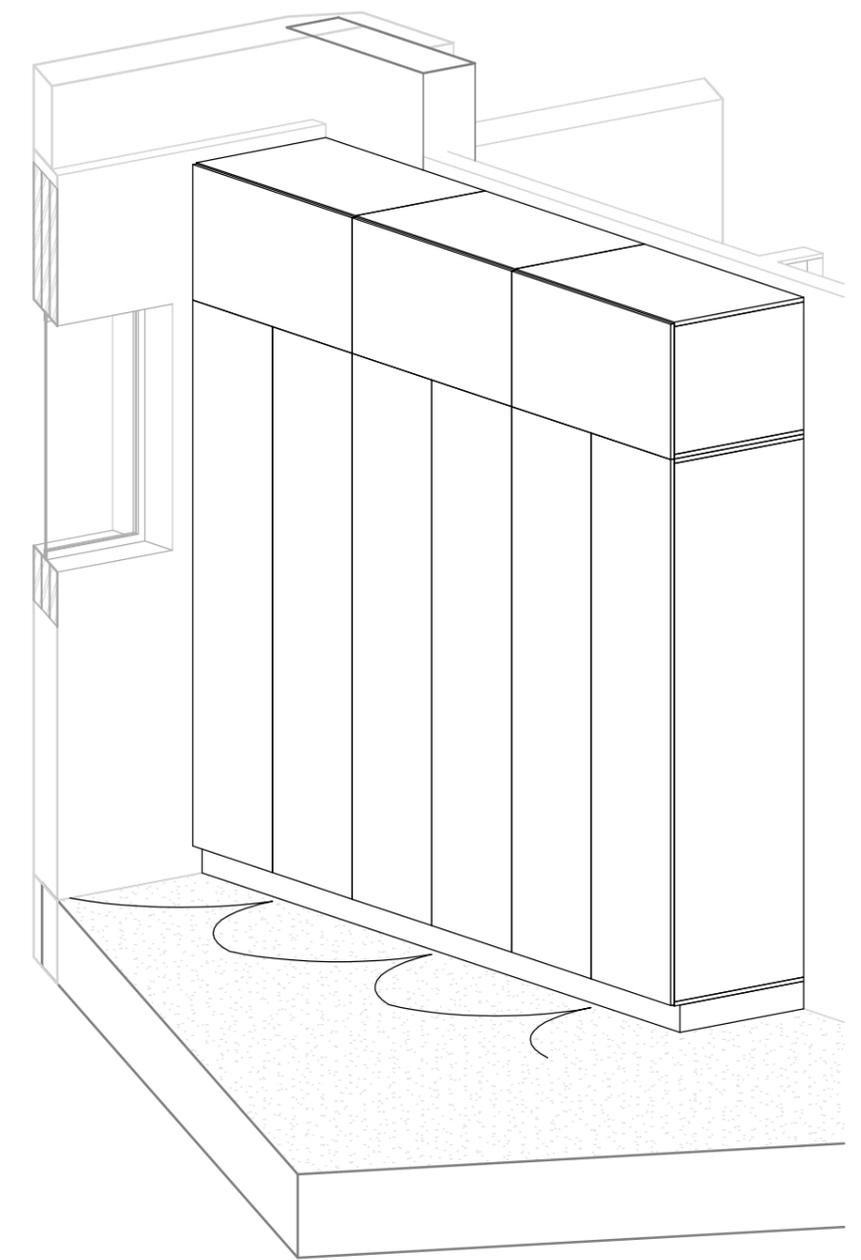
Scale: 1 : 25
Drawn by: J Thomson
Designer: J Thomson
Professional Architect: B Brinkman
Checked by: B Brinkman

TITLE: Joinery Unit JDT1015
B4 Project Ref No.: 305-019
Architect DWG No.: JDT-015
FOR TENDER ONLY

REV 4

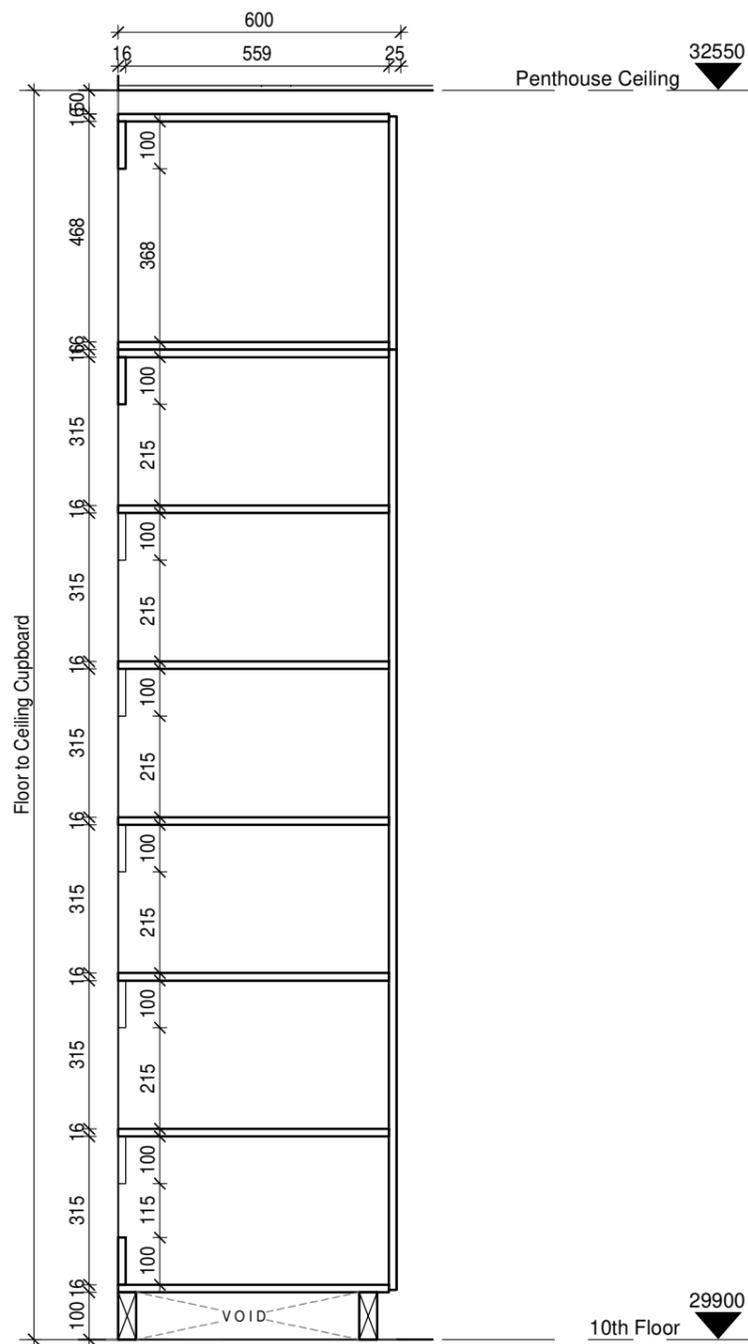


2 JDT 1015_Plan
1 : 25

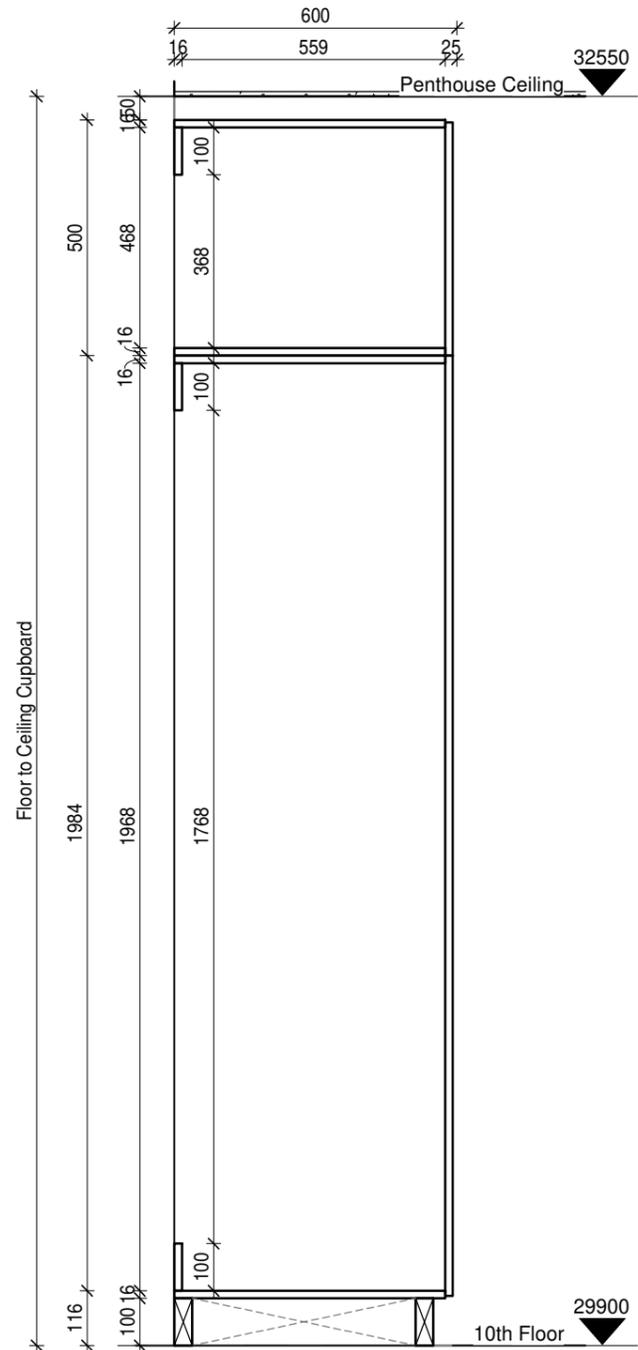


1 JDT1015_Isometric

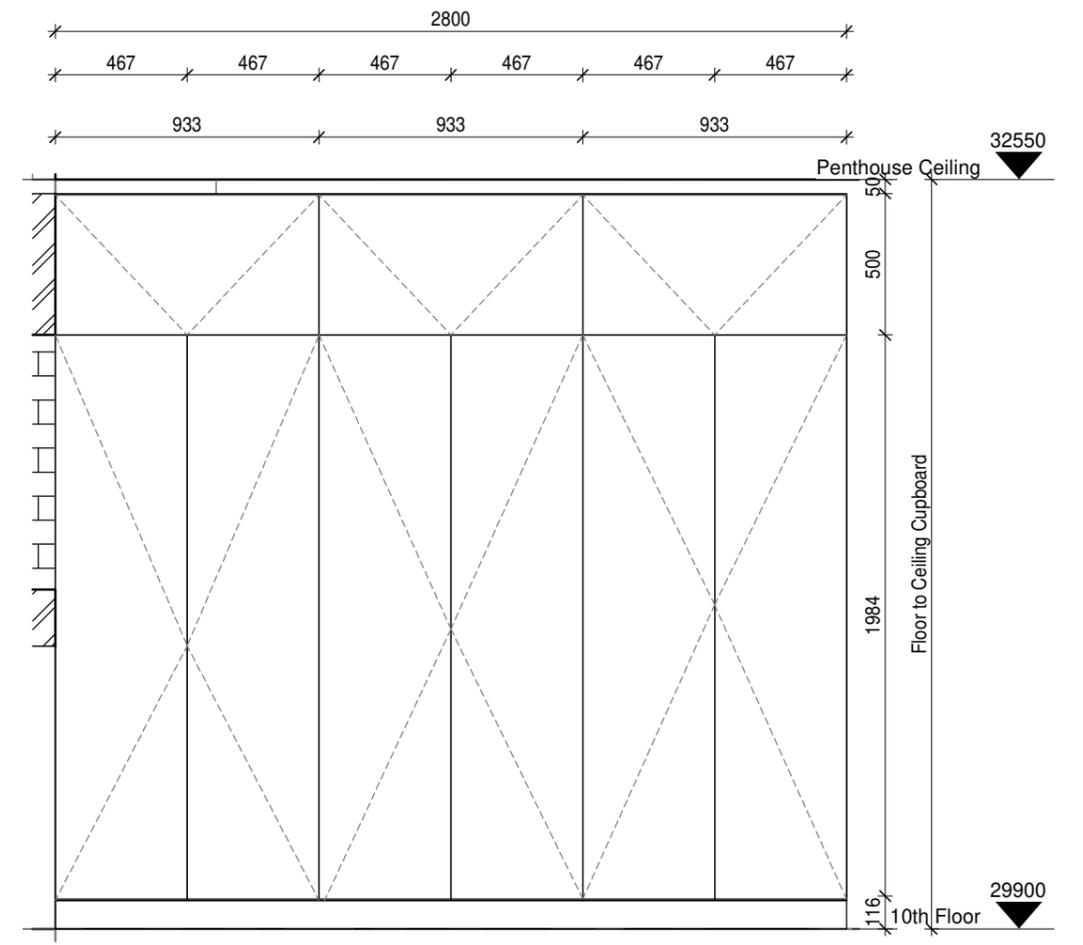
2025/09/22 16:02:29



1 JDT1015_Section 1
1 : 15



2 JDT1015_Section 2
1 : 15



3 JDT1015_Elevation 1
1 : 25

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for Pricing	20/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	22/09/2025

PROJECT:	Department of Health & CDC Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Joinery Unit JDT1015 - Sections
B4 Project Ref No.:	Architect DWG No:
305-019	JDT-015a
FOR TENDER ONLY	
REV	4

EASTERN CAPE DEPARTMENT OF HEALTH

**UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH
HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

PROTEA FLATS : Penthouse Renovations

SANITARYWARE SCHEDULE

Rev 3

DOCUMENT NUMBER: 305-019/SAN-001
DOCUMENT NAME: Sanitaryware Schedule
REVISION: 3

ISSUED FOR TENDER PURPOSES

NOTES:

1. Items indicated in **red** shows revised specifications.
2. Items indicated in **blue** show specifications under review.
3. Items indicated in **green** are new specifications.

CONTROL LIST

305-019 Protea Flats Penthouse

21 September 2025

Room Schedule Sanitaryware

Number	Name	Basin Code	Sink Code	Bath Code	Shower Code	WC Code	Other Fittings
1001	Lift Lobby	-	-	-	-	-	-
1002	Lobby	-	-	-	-	-	-
1003	WC	B1	-	-	-	WC1	-
1004	Laundry	-	S3	-	-	-	T1
1005	Pantry	-	S1	-	-	-	-
1006	Kitchen	-	S2	-	-	-	-
1007	Bedroom 2	-	-	-	-	-	-
1008	Bathroom 02	B1	-	BTH1	SH1	WC1	-
1009	Bedroom 01	-	-	-	-	-	-
1010	Bathroom 01	B1	-	-	SH1	WC1	-
1011	Corridor	-	-	-	-	-	-
1012	Corridor	-	-	-	-	-	-
1013	Main Bedroom	-	-	-	-	-	-
1014	Storage	-	-	-	-	-	-
1015	Main Corridor	-	-	-	-	-	-
1016	Dining Room	-	-	-	-	-	-
1017	Living Room	-	-	-	-	-	-
1018	Entrance	-	-	-	-	-	-
1019	Study	-	-	-	-	-	-

B1 WASH HAND BASIN: Bathroom, WHB

- Basin:



Cobra Welcome Medium round wall hung basin (Product Code: 709100WH). 430mm long x 390mm wide. 1 x pre-punched tap hole in the centre of the basin. Wall fixing set & installation manual included.

- Mixer:

Cobra Seine basin mixer, - one hole single lever, chrome. Flow restricted to 5.7 l/min. Includes 3/8 BSP, 400mm long, female flexible inlets, chrome plated.

Grohe Universal angle valves ½ (G-2201700M) with compression coupling 3/8 for copper pipe 10 mm plastic handle marking: neutral screw escutcheon, metal GROHE StarLight finish.

- Waste/Trap:



Cobra unslotted basin waste with 62mm diameter flange and 75mm long shank, and 1 ¼" BSP male outlet connection. du Bois 40mm PVC trap.

- Towel Rail:

Allure 600mm stainless steel single towel rail (Code : AL 264)

- Shelf:

Allure Glass Shelf (550 x 410mm) with polished stainless steel ea Polished Bathroom Shelf 26.5cm (Code: AL 054)

- Mirror:

500 x 850mm mirror with 10mm bevelled edge all round with Aluminium straight edge trim as frame

NOTE:

- All joints/surrounds to wash hand basin to be sealed with Sikaflex -11 FC+ (colour white).

SPLASHBACK:

- Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. Tiling 600mm wide (1 tile), centred on basin, from 100mm above FFL (i.e. above skirting), up to underside of ceiling, into window reveals where applicable. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.
- 2mm joints between tiles in TAL White grouting, in suitable tiling adhesive.

S1 SINGLE END BOWL SINK: Pantry / Scullery

- Sink:



Franke Nouveau Inset Sink model NVN611 Single End Bowl Sink Drop-on Sink (Product Code: 811023), 800 x 460mm Single End Bowl S/S grade 304 18/10, 1,6 mm drop-in sink unit. Unit to be manufactured from Austenitic Stainless Steel with a satin finish, and supplied complete with 90mm basket strainer waste fittings. Sink to be fitted to kitchen counter top.

- Mixer:



Nile Pillar Type Sink Mixer (Product Code: NL-970) single lever flow rate restricted to 6l/min G1/2 female connection ends chrome. Jaswic Approved.

Angle regulating valve (Product Code: 232-10/N) with durable ABS handle, DZR body, flow regulating spindle type headpart G1/2 X G1/2 BSP connections.

- Waste/Trap:



Du Bois 50mm PVC trap inside the cupboard.

NOTE:

- All joints/surrounds to wash hand basin to be sealed with Sikaflex -11 FC+ (colour white).

SPLASHBACK:

- Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. Tiling width of wall and width of countertop of return walls, centred on basin, from 100mm above FFL (i.e. above skirting), up to underside of ceiling, into window reveals where applicable. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.
- 2mm joints between tiles in TAL White grouting, in suitable tiling adhesive.

S2 DOUBLE END BOWL SINK: Kitchen

- Sink:



Franke NVN621 Single End Bowl Sink Drop-on Sink (Code: 101.0312.026), 1160 x 460mm Single End Bowl S/S grade 304 18/10, 1,6 mm drop-in sink unit. Comes with 2x 90mm Franke BSW waste fittings.

- Mixer:



Nile Pillar Type Sink Mixer (Product Code: NL-970) single lever flow rate restricted to 6l/min G1/2 female connection ends chrome. Jaswic Approved.

Angle regulating valve (Product Code: 232-10/N) with durable ABS handle, DZR body, flow regulating spindle type headpart G1/2 X G1/2 BSP connections.

- Waste/Trap:



du Bois 50mm PVC trap inside the cupboard.

SPLASHBACK:

- Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. Tiling 4 tiles wide and 1200mm high. All exposed edges to be finished with grade 316 stainless steel square edge 10mm trim to suit tile thickness.
- 2mm joints between tiles in TAL White grouting, in suitable tiling adhesive.

S3 LAUNDRY : Laundry Washtrough

- Washtrough:



Franke LDL Luxtub Wall Mounted/ Drop-on premium washtrough 90mm Designer Waste Fitting included. Product Code: 2990055. To be wall mounted using Pair of Falcon Brackets (Product Code: 2120007)

- Mixer:



Cobra Star Original (Product Code: 266/041/10/NV) Chrome plated, wall-mounted sink mixer with aerated swivel spout. The original star-shaped design. 2 X 1/2" BSP male iron connection ends. Isolation valve in ceiling.

BATH1: Bathroom

- Bath:



Duravit No.1 Bathtub Built-In Version 1700 x 750mm (white) [Code : B001905] complete with support frame for D-Code bathtubs, Bathtub anchors and Duravit Bathtub Filler (Waste & Overflow).

Cobra Shower Waste Square (Product Code: 373SQ/CP). Shower P-trap, stainless steel. Includes: shallow seal, square chrome-plated 115 x 115mm grid 50mm outlet.



- Tap :



Duravit No. 1 Bath Spout Round 198mm (Chrome) [Code : B006019]

- Mixer:



Nile Concealed Bath/Shower Mixer (Product Code: NL-956) single lever 2 x G1/2 female inlet, G1/2 female outlet chrome. Jaswic Approved.

- Robe Hook:



Franke Medius Robe Hook (Product Code: FRA-2120189). 54 x 55 x 54mm. installed according to manufacturer's instructions.

- Shower Soap Tray:

Allure Stainless Steel Bath Soap Rack (Code : AL 564)

- Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. Tiling 600mm wide (1 tile), centred on wall, from above Bath and return in on ends, up to underside of ceiling. All exposed edges to be finished with stainless steel trim to suit tile thickness.

SH1: Shower - Bathroom

- Shower Waste:



Cobra Shower Waste Square (Product Code: 373SQ/CP). Shower P-trap, stainless steel. Includes: shallow seal, square chrome-plated 115 x 115mm grid 50mm outlet.

- Shower Head:



Cobra Shower Arm 143 (Product Code: 027ZM-SHORT) Wall mounted shower arm short with wall flange 143mm long 2 x G1/2 male connection ends chrome.

Shower Head Round (Product Code: 076ZM-RND) Shower head round with ball joint connector Flow restricted to 8l/min G1/2 female connection ends chrome.

- Mixer:



Nile Concealed Bath/Shower Mixer (Product Code: NL-956) single lever 2 x G1/2 female inlet, G1/2 female outlet chrome. Jaswic Approved.

- Shower Soap Rack:

Allure Stainless Steel Shower Rack (Code : AL 774)

- Robe Hook:



Franke Medius Robe Hook (Product Code: FRA-2120189). 54 x 55 x 54mm. installed according to manufacturer's instructions.

- Shower Door

White Powder coated aluminium frame with 6.38 laminated glass pivot hinge glass shower door – size 2000mm x 850mm.

- Towel Rail:

Allure Double Rail 800mm stainless steel towel rail (Code : AL 404)

WALLS:

- Essence White Matt tile, 300 x 600mm rectified ceramic wall tiles with 2mm joints between tiles in TAL White Grouting in suitable tiling adhesive. Tiling 600mm wide (1 tile), centred on wall, from above Shower Tray, up to underside of ceiling. All exposed edges to be finished with stainless steel trim to suit tile thickness.

WC1 TOILET: Bathroom

▪ Cistern:

Where cisterns will be built into brickwork (230/280mm) thickness:



Uniset Concealed Cistern 80mm thick (Product Code: 38729000), 1108 x 556 x 80mm, with small maintenance access pneumatic discharge valve offering 3 modes of operation: dual flush or start/stop or single flush outlet bend ø 80 mm inlet and outlet connecting set steel frame, hot galvanized, with 4 fixing brackets 2 WC fixing bolts distance of fixing bolts 180/230 mm fixing device for ceramic water supply connection from top low noise (group I acc. to German Noise Specification) with plaster base coating made of vinyl fleece, angle valve 15 mm (½") with push-fit flexible hose union, shortable inspection shaft incl. protection during the construction phase, for vertical use. With Grohe adaptor (Product Code G-42242000)

Actuator Plate/Wall Plate



3873200 Skate Cosmopolitan wall plate for dual flush for pneumatic discharge valve. AV1 vertical and horizontal installation, 156x197mm ABS GROHE StarLight® chrome finish and GROHE EcoJoy® technology for less water and perfect flow.

▪ Pan:



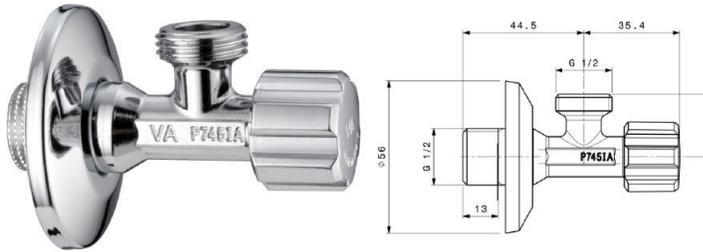
Vaal Sanitaryware vitreous china "Energy" 90° outlet back inlet closed rim wall hung pan, with quality thermostet soft-close seat (code: VAA-439500WH) and DP Flushfit pan collar (or equivalent). Flush volume 6/3 litres, subject to the pan being installed with a cistern providing an effective 6/3 litre flush volume.

▪ Accessories:

- Toilet Roll Holder
Allure Stainless Steel Toilet Roll Holder (Code AL584)
- Spare Toilet Roll Holder
Allure Stainless Steel Vertical Spare Toilet Roll Holder (Code : AL584)
- Toilet Brush
Allure Stainless Steel Wall-mounted Toilet Brush (Code : AL 634)

T1 LAUNDRY : Washing Machine Connection

- Angle Valve:

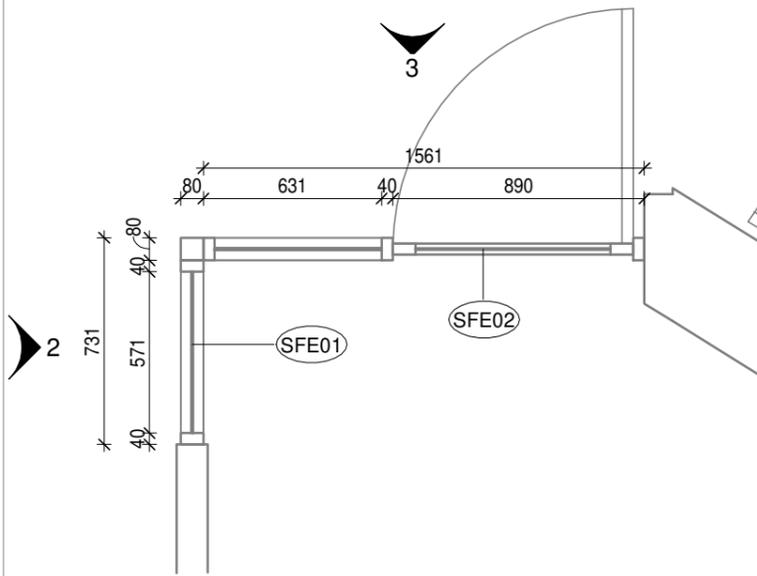


Angle regulating valve for washing machine connection with durable ABS handle, DZR body, flow regulating spindle type headpart G1/2 X G1/2 BSP connections. Product Code: 232-10/N

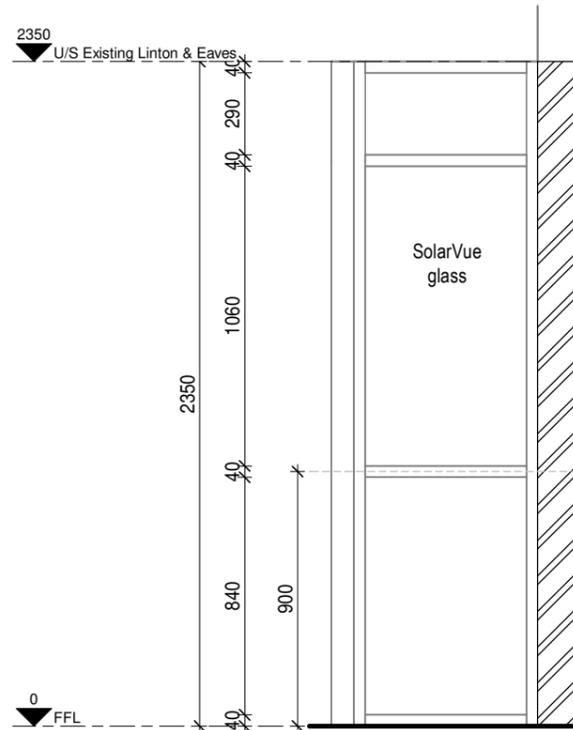
- Waste/Trap:



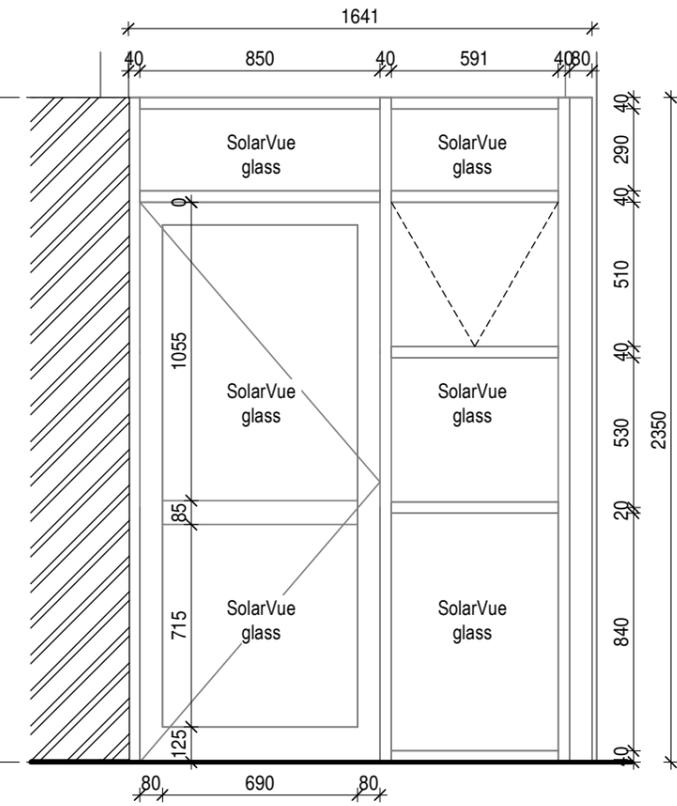
Du Bois 50mm PVC trap. Each outlet pipe provided for washing machine to have PVC trap.



1 Shopfront SFE01, SFE02_Plan
1 : 25



2 Shopfront SFE01_Elevation
1 : 25



3 Shopfront SFE02_Elevation
1 : 25

Shopfront Schedule SFE01, SHE02

Mark	Comments	Vinyl Decal	Glazing
E01	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E02	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E03	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E04	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E05	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E06	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)
E07	Typical aluminium frame structure, 80x40mm Mullions	Glass tinting specification to follow	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

COPYRIGHT NOTICE

Copyright © 2022 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and/or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution. Requests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

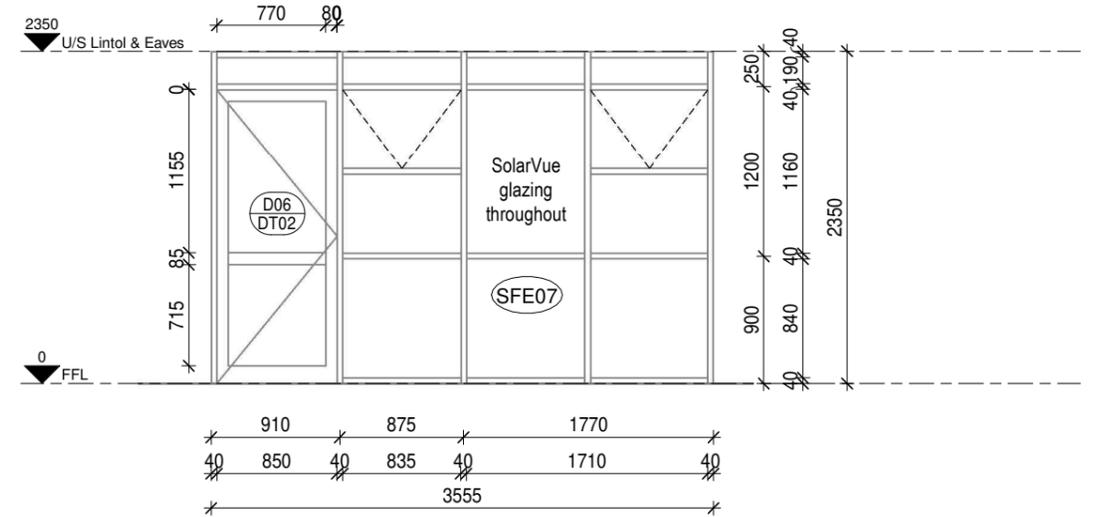
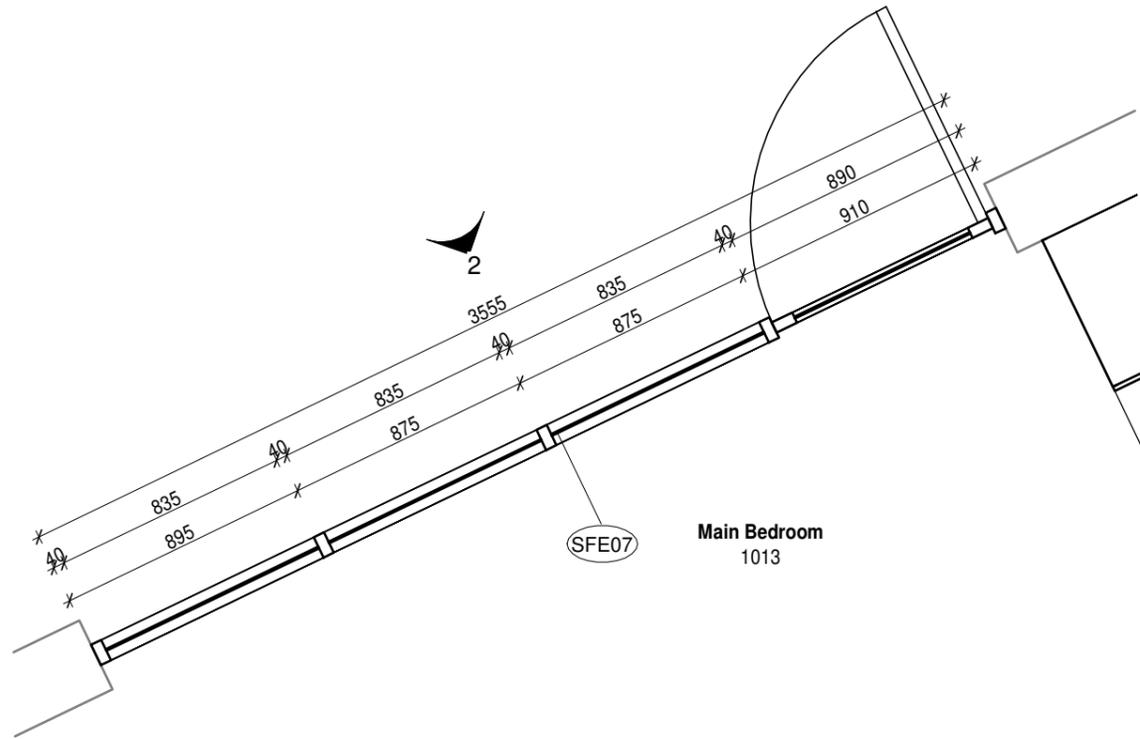
IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	18/09/2025

PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
Sakhiwo Ref No:	
Date:	22 September 2025

Scale:	1 : 25
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Shopfront Schedule SFE01, SFE02
B4 Project Ref No.:	Architect DWG No:
305-019	SHF-E01
FOR TENDER ONLY	
REV	4



1 Shopfront SFE07 - Plan
1 : 25

2 Shopfront SFE07 - External Elevation
1 : 25

Shopfront Schedule SFE07, SFE08

Mark	Comments	Glazing	Vinyl Decal
E01	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E02	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E03	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E04	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E05	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E06	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow
E07	Typical aluminium frame structure, 80x40mm Mullions	6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)	Glass tinting specification to follow

No.	Description	Date
1	Issued for pricing	20/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	19/09/2025

PROJECT: Department of Health & CDC
Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

Sakhiwo Ref No:

Date: 22 September 2025

Scale:	As indicated
Drawn by:	J Thomson
Designer:	J Thomson
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Shopfront Schedule SFE07
B4 Project Ref No.:	Architect DWG No:
305-019	SHF-E03
FOR TENDER ONLY	
REV	4

COPYRIGHT NOTICE

Copyright © 2018 (B4 Architects). Copyright subsists in this drawing. The person or entity whose name appears in the title block of this drawing, is hereby granted a non-exclusive license to use, display, print and / or reproduce this drawing to the extent necessary to carry out and complete the project described in the title block of this drawing.

This license in respect of the copyright is expressly limited as aforesaid and the person and/or entity referred to above shall not be entitled to grant sub-licenses in respect of the copyright in this drawing to any other entity.

This license confers no ownership rights in the copyright vesting in the drawing and this drawing and the copyright subsisting therein will, at all times, remain the property of B4 Architects.

Any unauthorized reproduction, publication, transmission, adaptation and/or inclusion of this drawing in a cinematograph film or television broadcast is an act of copyright infringement which will render the doer of the act liable for civil law copyright infringement and may in certain circumstances render the doer liable to criminal prosecution, equests and enquiries concerning this drawing and the rights subsisting therein should be addressed to the copyright owner.

ACTS OF PARLIAMENT

All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

All work is to comply with the various SANS-10400 Building Regulations and all other regulations referred to therein.

ACCURACY & DIMENSIONS

Contractor must verify and check all dimensions on site prior to commencing any works, shop drawings or fabrications. Do not scale this drawing. Any discrepancies should be immediately referred to the Architect.

IF IN DOUBT PLEASE ASK!

No.	Description	Date
1	Update for pricing	08/11/2023
2	Update for Pricing	20/11/2023
3	Issued for Pricing	24/11/2023
4	Issued for Tender	27/11/2023
5	Issued for Pricing	22/09/2025

PROJECT: Department of Health & CDC

Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25

TITLE: Site Plan

Scale: 1 : 200

Date: 22 September 2025

Drawn by: J Thomson

Designer: -

Professional Architect: B Brinkman

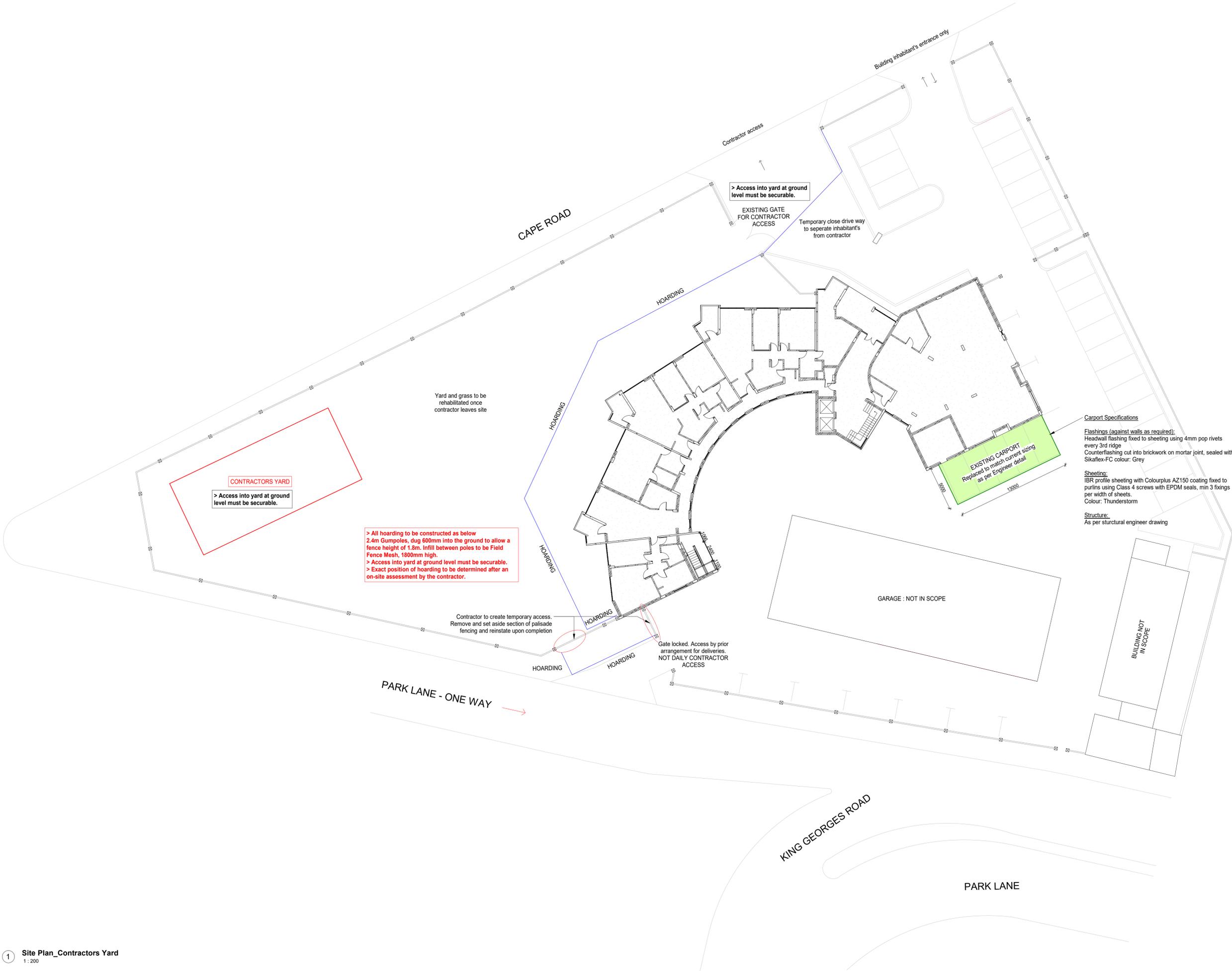
Checked by: B Brinkman

Sakhiwo Ref No:

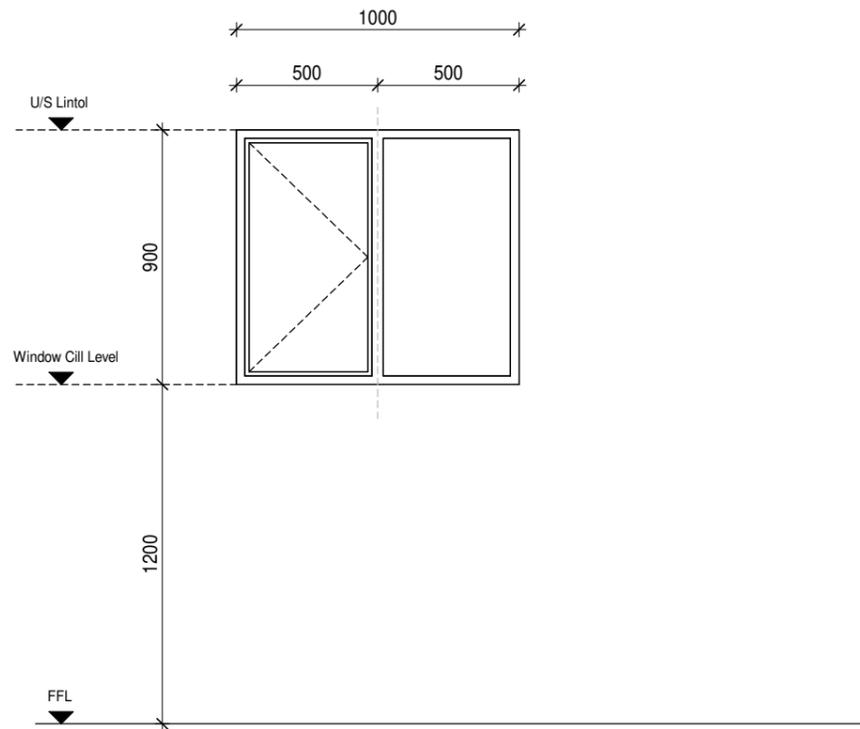
B4 Project Ref No.: 305-019 Architect DWG No.: SIT-001

FOR TENDER ONLY

REV: 5



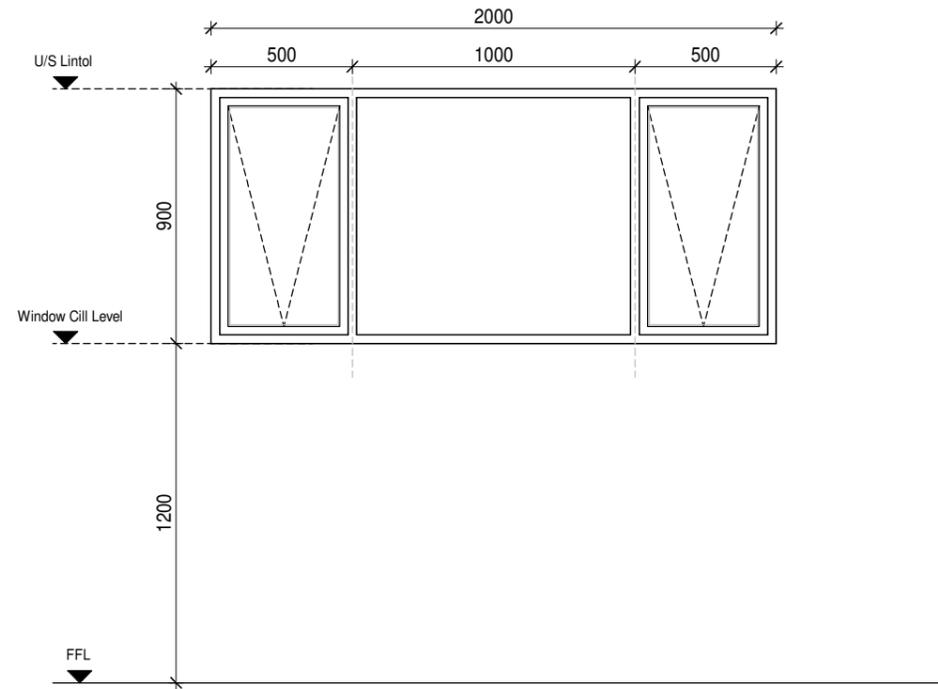
1 Site Plan_Contractors Yard
1 : 200



Window Type WT01

Standard aluminium window to specialist detail.
 Heavy duty friction stays to be installed as per specialist recommendation.
 Colour: To match existing windows
 Glazing: 6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

Note: Window to replace existing steel window



Window Type WT02

Standard aluminium window to specialist detail.
 Heavy duty friction stays to be installed as per specialist recommendation.
 Colour: To match existing windows.
 Glazing: 6,38mm Solarvue Neutral HL/12AG/6,38mm Clear Low E Inner. (2,9 sqm max)

Note: Window to replace existing aluminium window

No.	Description	Date
1	Issued for pricing	28/10/2023
2	Update for pricing	15/11/2023
3	Issued for Tender	27/11/2023
4	Issued for Pricing	18/09/2025

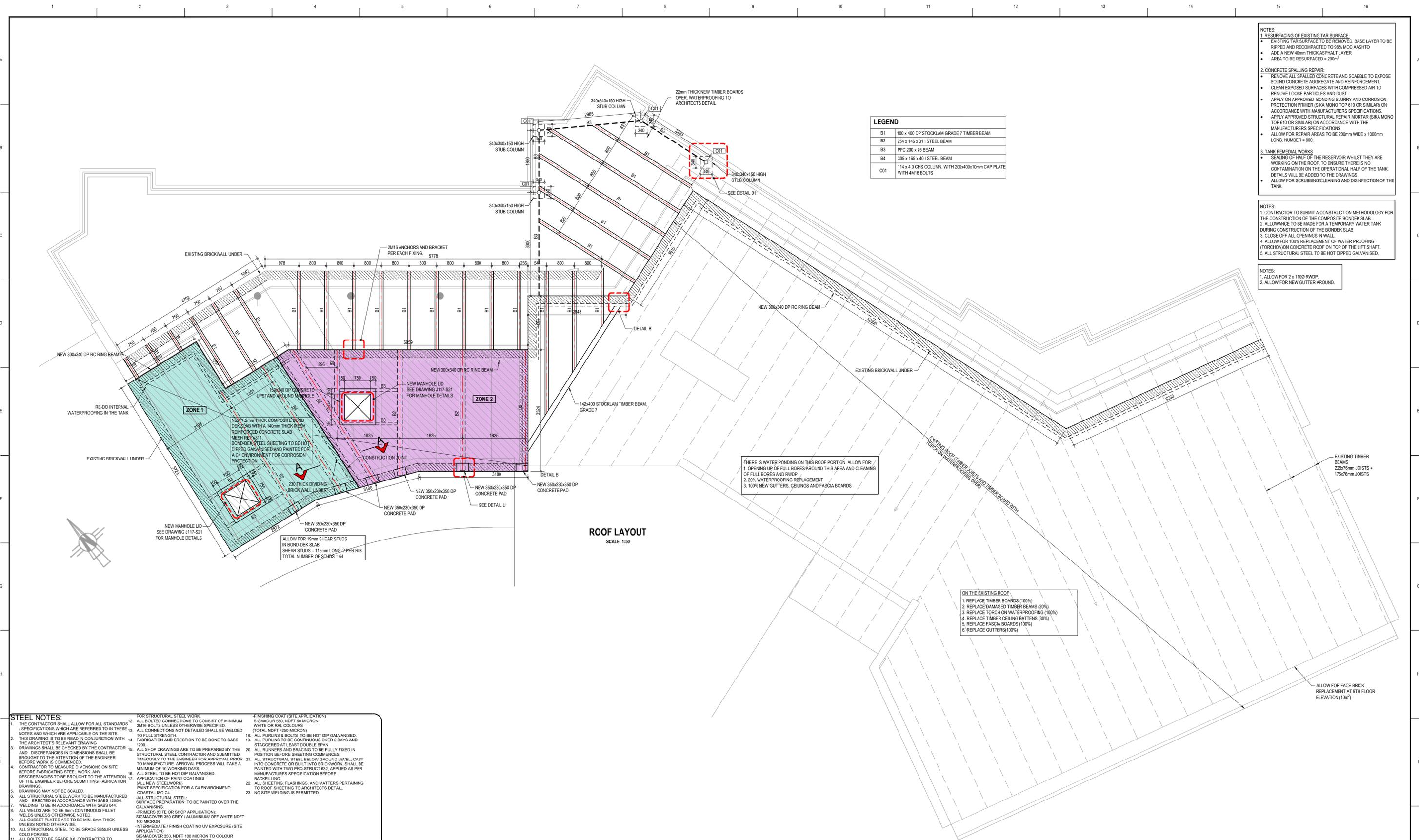
PROJECT:	Department of Health & CDC
	Upgrading of security related infrastructure at Livingstone PEPH Hospital Complex & Associated Referral PHC Facilities. Contract No. CDC/377/25
	Sakhiwo Ref No:
	Date: 22 September 2025

Scale:	1 : 25
Drawn by:	J Thomson
Designer:	b4 Architects
Professional Architect:	B Brinkman
Checked by:	B Brinkman

TITLE:	Window Type WT01 & WT02
B4 Project Ref No.:	Architect DWG No.:
305-019	WIN-001
FOR TENDER ONLY	
REV	4

PROTEA FLATS

**ALL CIVIL/STRUCTURAL
ENGINEER'S DRAWINGS**



LEGEND

B1	100 x 400 DP STOCKLAM GRADE 7 TIMBER BEAM
B2	254 x 146 x 31 I STEEL BEAM
B3	PFC 200 x 75 BEAM
B4	305 x 165 x 40 I STEEL BEAM
C01	114 x 4.0 CHS COLUMN, WITH 200x400x10mm CAP PLATE WITH 4M16 BOLTS

- NOTES**
- RESURFACING OF EXISTING TAR SURFACE:**
 - EXISTING TAR SURFACE TO BE REMOVED. BASE LAYER TO BE RIPPED AND RECOMPACTED TO 98% MOD AASHTO
 - ADD A NEW 40mm THICK ASPHALT LAYER
 - AREA TO BE RESURFACED = 200m²
 - CONCRETE SPALLING REPAIR:**
 - REMOVE ALL SPALLED CONCRETE AND SCABBLE TO EXPOSE SOUND CONCRETE. AGGREGATE AND REINFORCEMENT
 - CLEAN EXPOSED SURFACES WITH COMPRESSED AIR TO REMOVE LOOSE PARTICLES AND DUST.
 - APPLY ON APPROVED BONDING SLURRY AND CORROSION PROTECTION PRIMER (SIKA MONO TOP 610 OR SIMILAR) ON ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
 - APPLY APPROVED STRUCTURAL REPAIR MORTAR (SIKA MONO TOP 610 OR SIMILAR) ON ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS
 - ALLOW FOR REPAIR AREAS TO BE 200mm WIDE x 1000mm LONG. NUMBER = 800.
 - TANK REMEDIAL WORKS**
 - SEALING OF HALF OF THE RESERVOIR WHILST THEY ARE WORKING ON THE ROOF. TO ENSURE THERE IS NO CONTAMINATION ON THE OPERATIONAL HALF OF THE TANK. DETAILS WILL BE ADDED TO THE DRAWINGS
 - ALLOW FOR SCRUBBING/CLEANING AND DISINFECTION OF THE TANK.

- NOTES**
- CONTRACTOR TO SUBMIT A CONSTRUCTION METHODOLOGY FOR THE CONSTRUCTION OF THE COMPOSITE BONDEX SLAB.
 - ALLOWANCE TO BE MADE FOR A TEMPORARY WATER TANK DURING CONSTRUCTION OF THE BONDEX SLAB.
 - CLOSE OFF ALL OPENINGS IN WALL.
 - ALLOW FOR 100% REPLACEMENT OF WATER PROOFING (TORCHONON CONCRETE ROOF ON TOP OF THE LIFT SHAFT).
 - ALL STRUCTURAL STEEL TO BE HOT DIPPED GALVANISED.

- NOTES**
- ALLOW FOR 2 x 1100 RWD/P.
 - ALLOW FOR NEW GUTTER AROUND.

THERE IS WATER PONDING ON THIS ROOF PORTION. ALLOW FOR:
 1. OPENING UP OF FULL BORES AROUND THIS AREA AND CLEANING OF FULL BORES AND RWD/P
 2. 20% WATERPROOFING REPLACEMENT
 3. 100% NEW GUTTERS, CEILING AND FASCIA BOARDS

- ON THE EXISTING ROOF:**
- REPLACE TIMBER BOARDS (100%)
 - REPLACE DAMAGED TIMBER BEAMS (20%)
 - REPLACE TORCH ON WATERPROOFING (100%)
 - REPLACE TIMBER CEILING BATTENS (30%)
 - REPLACE FASCIA BOARDS (100%)
 - REPLACE GUTTERS (100%)

- STEEL NOTES:**
- THE CONTRACTOR SHALL ALLOW FOR ALL STANDARD SPECIFICATIONS WHICH ARE REFERRED TO IN THESE NOTES AND WHICH ARE APPLICABLE ON THE SITE.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECT'S RELEVANT DRAWING.
 - DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND DISCREPANCIES IN DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS COMMENCED.
 - CONTRACTOR TO MEASURE DIMENSIONS ON SITE BEFORE FABRICATING STEEL WORK. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING FABRICATION DRAWINGS.
 - DRAWINGS MAY NOT BE SCALED.
 - ALL STRUCTURAL STEELWORK TO BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH SABS 1200H. WELDING TO BE IN ACCORDANCE WITH SABS 1044.
 - ALL WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE NOTED.
 - ALL GUSSET PLATES ARE TO BE MIN. 6mm THICK UNLESS NOTED OTHERWISE.
 - ALL STRUCTURAL STEEL TO BE GRADE S355JR UNLESS OTHERWISE NOTED.
 - ALL BOLTS TO BE GRADE 8.8. CONTRACTOR TO SUPPLY ALL BOLTS, WASHERS, NUTS, LOCK NUTS ETC.
 - FOR STRUCTURAL STEEL WORK:
 - ALL BOLTED CONNECTIONS TO CONSIST OF MINIMUM 2M16 BOLTS UNLESS OTHERWISE SPECIFIED.
 - ALL CONNECTIONS NOT DETAILED SHALL BE WELDED TO FULL STRENGTH.
 - FABRICATION AND ERECTION TO BE DONE TO SABS 1200.
 - ALL SHOP DRAWINGS ARE TO BE PREPARED BY THE STRUCTURAL STEEL CONTRACTOR AND SUBMITTED TIMELY TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. APPROVAL PROCESS WILL TAKE A MINIMUM OF 10 WORKING DAYS.
 - ALL STEEL TO BE HOT DIP GALVANISED.
 - APPLICATION OF PAINT COATINGS (ALL NEW STEELWORK) TO ROOF SHEETING TO ARCHITECTS DETAIL. COASTAL ISO C4.
 - ALL STRUCTURAL STEEL SURFACE PREPARATION: TO BE PAINTED OVER THE GALVANISING.
 - PRIMERS (SITE OR SHOP APPLICATION): SIGMACOVER 350 GREY / ALUMINIUM / OFF WHITE NDFT 100 MICRON.
 - INTERMEDIATE / FINISH COAT NO UV EXPOSURE (SITE APPLICATION): SIGMACOVER 350, NDFT 100 MICRON TO COLOUR RAL COLOURS OR AS PER ARCHITECT.
 - FINISHING COAT (SITE APPLICATION): SIGMACOVER 350, NDFT 50 MICRON WHITE OR RAL COLOURS (TOTAL NDFT = 250 MICRON).
 - ALL PURLINS & BOLTS TO BE HOT DIP GALVANISED.
 - ALL PURLINS TO BE CONTINUOUS OVER 2 BAYS AND STAGGERED AT LEAST DOUBLE SPAN.
 - ALL RUNNERS AND BRACING TO BE FULLY FIXED IN POSITION BEFORE SHEETING COMMENCES.
 - ALL STRUCTURAL STEEL BELOW GROUND LEVEL, CAST INTO CONCRETE OR BUILT INTO BRICKWORK, SHALL BE PAINTED WITH TWO PRO-STRUCT 632, APPLIED AS PER MANUFACTURERS SPECIFICATION BEFORE BACKFILLING.
 - ALL SHEETING, FLASHINGS, AND MATTERS PERTAINING TO ROOF SHEETING TO ARCHITECTS DETAIL.
 - NO SITE WELDING IS PERMITTED.

- CONCRETE NOTES:**
- SETTING OUT AND GENERAL:
 - THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
 - ALL DIMENSIONS AND HEIGHTS ARE TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND.
 - REPORT DISCREPANCIES TO ARCHITECT OR ENGINEER.
 - THIS DRAWING MUST NOT BE USED TO SCALE OFF. USE ONLY WRITTEN DIMENSIONS. CONTACT THE ENGINEER OR ARCHITECT WHERE CLARITY IS SOUGHT.
 - FOR SETTING OUT DATA, SETTING OUT POINTS AND DATUM LEVELS REFER TO SURVEY INFORMATION AND ARCHITECT'S DRAWINGS.
 - STRUCTURAL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE RELEVANT SABS SPECIFICATIONS. ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH S.A.S 1200G AND EARTHWORKS IN ACCORDANCE WITH S.A.S 1200D.
 - CONSULT RELEVANT ARCHITECTS, MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS AND DETAILS AS RELEVANT FOR DRAINAGE, STORMWATER OUTLETS, RIVETS AND HOLES AND SLEEVES FOR THESE SERVICES. NO HOLES ARE TO BE CORED WITHOUT ENGINEERS WRITTEN APPROVAL.
 - FOUNDATIONS:
 - ALL FOUNDATION EXCAVATIONS TO BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE IS CAST.
 - NO FOUNDATIONS ARE TO BE CAST IN FILL MATERIAL. A 50mm THICK LAYER OF 100mm / 19mm BLINDING CONCRETE IS TO BE CAST UNDER ALL REINFORCED BASES, REINFORCED STRIP FOOTINGS AND GROUND BEAMS.
 - ANY OVER EXCAVATIONS ARE TO BE MADE GOOD WITH 10MPa / 19mm CONCRETE AT THE CONTRACTORS EXPENSE.
 - BACKFILLING OVER COLUMN BASES SHALL BE DONE WITH AN APPROVED MATERIAL COMPACTED IN LAYERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 - ALLOWABLE BEARING PRESSURE UNDER:
 - CONCRETE BASES = 150kPa
 - STRIP FOOTINGS = 100kPa
 - CONCRETE CHARACTERISTIC 28 DAY STRENGTH:
 - BASES = 20MPa / 19mm
 - STRIP FOOTINGS = 20MPa / 19mm
 - SURFACE BESS = 20MPa / 19mm
 - SUSPENDED SLABS & BEAMS = 30MPa / 19mm
 - COLUMNS = 30MPa / 19mm
 - CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BESS TO HAVE MINIMUM BLEED CHARACTERISTICS.
 - ALL CONCRETE TO BE ADEQUATELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 7 DAYS AFTER CASTING.
 - ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.S 1200G PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS B UNLESS SPECIFIED OTHERWISE.
 - CONCRETE CURB TEST RESULTS TO BE SUBMITTED TIMELY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.
 - CHARACTERISTIC STRENGTH:
 - MILD STEEL = 250N/mm²
 - HIGH YIELD STEEL: 450N/mm²
 - ALL REINFORCEMENT TO BE CHECKED AND APPROVED BY ENGINEER BEFORE ANY CONCRETE IS CAST. 48 HOURS WRITTEN NOTICE TO BE GIVEN TO ENGINEER BEFORE TIME OF INSPECTION.
 - LAP LENGTH TO REINFORCING TO BE MINIMUM 50 x SMALLER BAR DIAMETER, UNLESS OTHERWISE NOTED.
 - MESH REINFORCEMENT REFERENCE 246 TO BE PLACED IN SLAB (TOP) MINIMUM LAPS = 300mm UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR MUST TAKE PARTICULAR CARE TO ENSURE THAT THE SPECIFIED COVER TO ALL REINFORCEMENT HAS BEEN ATTAINED THROUGHOUT BEFORE THE ENGINEER IS CALLED TO SITE FOR INSPECTION OF THE REINFORCEMENT.
 - COVER TO REINFORCEMENT:
 - STRIP FOOTINGS: 50mm
 - BASES: 50mm
 - COLUMNS AND WALLS: 30mm
 - SUSPENDED SLABS: 30mm
 - SUSPENDED BEAMS: 30mm
 - CONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION.
 - COVERWORK AND PROPPING:
 - STRIP FOOTINGS: 50mm
 - BASES: 50mm
 - COLUMNS AND WALLS: 30mm
 - SUSPENDED SLABS: 30mm
 - SUSPENDED BEAMS: 30mm
 - STRIPPING TIMES FOR:
 - COLUMN AND WALL SHUTTERING: 1.5 DAYS
 - BEAM SHUTTERING: 7 DAYS
 - FLAT SLABS: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER, 14 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.

Client: Eastern Cape Health

Implementing Agent: Sakhivo, HDG, NEMA SA, RIBERA AFRICA

Architect: b4 Architects

Engineer: KEON CONSULTING ENGINEERS

Project: UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES

Description: PROTEA FLATS - ROOF LAYOUT

Issued For: TENDER

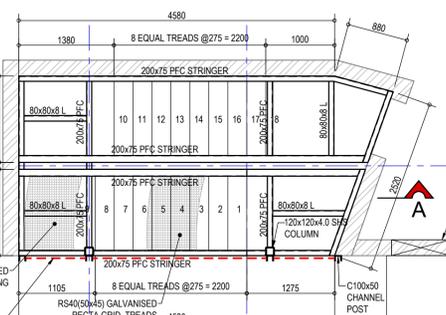
Project No: J117, Drawing No: S20, Revision: A

Size: A1, Scale: As Shown, Original Date: February 2019

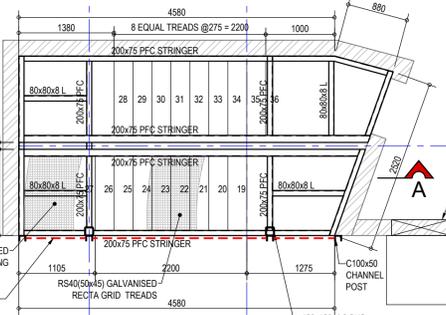
Engineer: G. Kuchirena Pr Eng (20110431)

Drawn By: A. Mooney, Designed By: S. Chiranga, Checked By: E. Saverhu

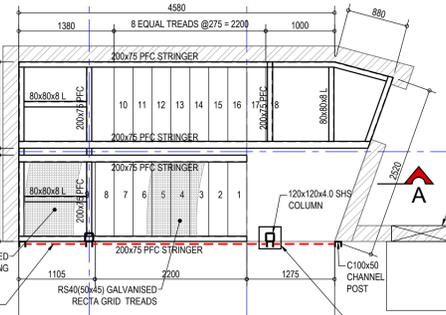
Issue Date: 2025.09.19, Issued For: TENDER, Revisions: Details, Chd, Appd



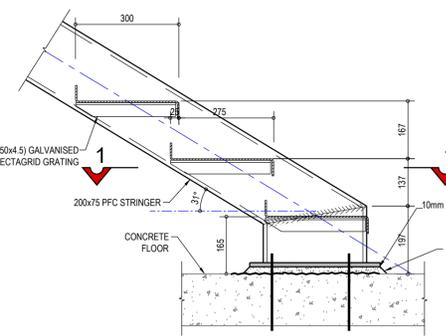
ROOF PLAN
SCALE: 1:50



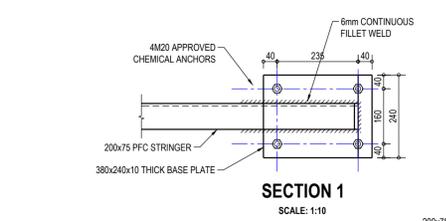
PLAN 02
SCALE: 1:50



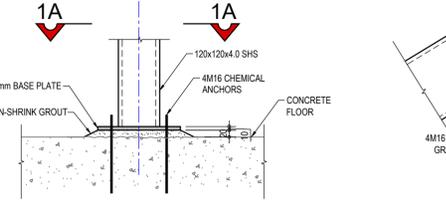
PLAN 01
SCALE: 1:50



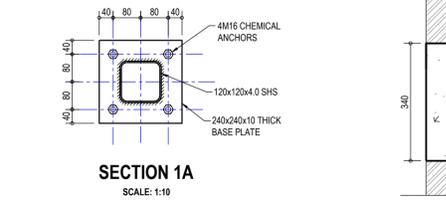
DETAIL 1
SCALE: 1:10



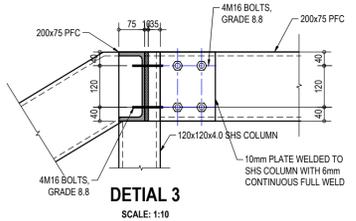
SECTION 1
SCALE: 1:10



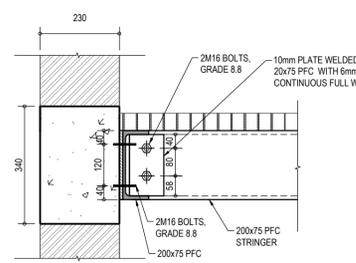
DETAIL 1
SCALE: 1:10



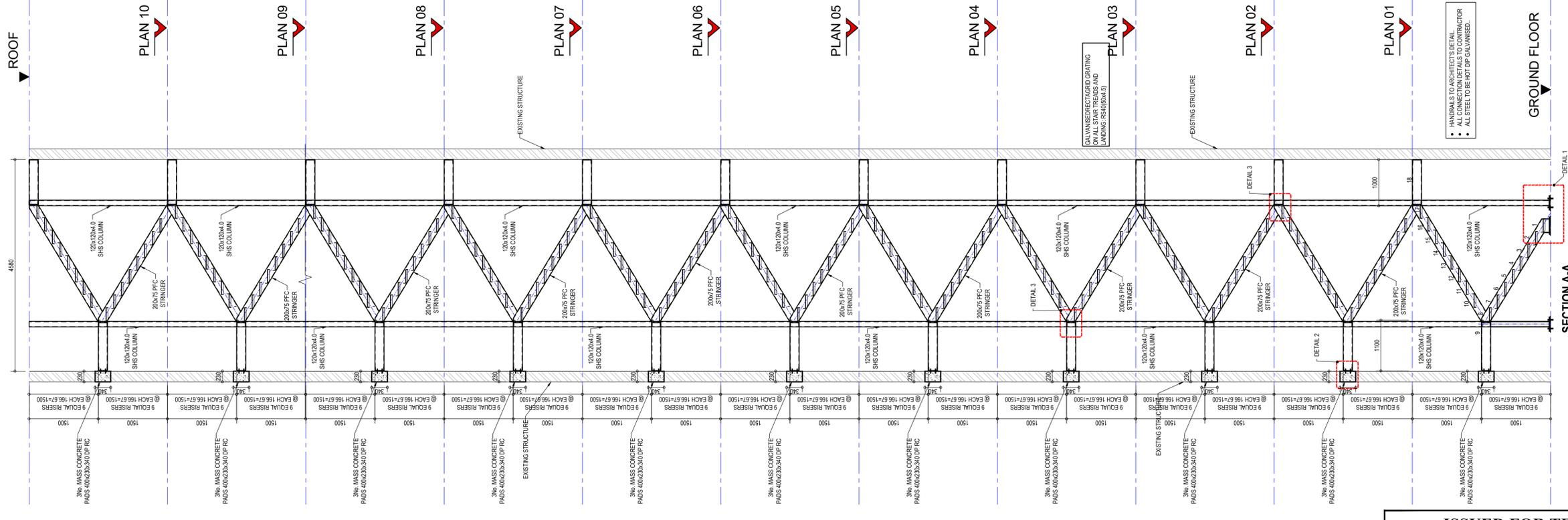
SECTION 1A
SCALE: 1:10



DETAIL 3
SCALE: 1:10



DETAIL 2
SCALE: 1:10



SECTION A-A
SCALE: 1:50

STEEL NOTES:

- THE CONTRACTOR SHALL ALLOW FOR ALL STANDARDS / SPECIFICATIONS WHICH ARE REFERRED TO IN THESE NOTES AND WHICH ARE APPLICABLE ON THE SITE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECT'S RELEVANT DRAWINGS.
- DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND DISCREPANCIES IN DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK COMMENCED.
- CONTRACTOR TO MEASURE DIMENSIONS ON SITE BEFORE FABRICATING STEEL WORK. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING FABRICATION DRAWINGS.
- DRAWINGS MAY NOT BE SCALED.
- ALL STRUCTURAL STEELWORK TO BE MANUFACTURED AND ERRECTED IN ACCORDANCE WITH SABS 1200H.
- WELDING TO BE IN ACCORDANCE WITH SABS 804.
- ALL WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE NOTED.
- ALL GUSSET PLATES ARE TO BE MIN. 6mm THICK UNLESS NOTED OTHERWISE.
- ALL STRUCTURAL STEEL TO BE GRADE S355JR UNLESS COLD FORMED.
- ALL BOLTS TO BE GRADE 8.8. CONTRACTOR TO SUPPLY ALL BOLTS, WASHERS, NUTS, LOCK NUTS ETC. FOR STRUCTURAL STEEL WORK.
- ALL BOLTED CONNECTIONS TO CONSIST OF MINIMUM 2M16 BOLTS UNLESS OTHERWISE SPECIFIED.
- ALL CONNECTIONS NOT DETAILLED SHALL BE WELDED TO FULL STRENGTH. FABRICATION AND ERECTION TO BE DONE TO SABS 1200.
- ALL SHOP DRAWINGS ARE TO BE PREPARED BY THE STRUCTURAL STEEL CONTRACTOR AND SUBMITTED THROUGLY TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. APPROVAL PROCESS WILL TAKE A MINIMUM OF 10 WORKING DAYS.
- STEELWORK PREPARATION: CLEANING BY HAND OR POWER TOOLS (CORROSION PROTECTION OF STRUCTURAL STEELWORK: SABS 1200 HC / 1988 PROVISION OF SUB CLAUSE 4.3.2), NOTWITHSTANDING THE PROVISION OF SUB CLAUSE 4.3.2. ALL STEEL SHALL BE PREPARED BY THOROUGH SCRAPPING AND WIRE BRUSHING, MACHINE BRUSHING, GRINDING, E.T.C. TO GRADE 3.1 OF SWEDISH SIS 028900 - 1967. THE TREATMENT MUST REMOVE LOOSE MILL SCALE, RUST AND FOREIGN MATTER. FINALLY THE SURFACE MUST BE CLEANED WITH A VACUUM CLEANER, CLEAN DRY COMPRESSED AIR OR CLEAN BRUSH. AFTER REMOVAL OF DUST, THE SURFACE MUST HAVE A PROTRUDING METALLIC APPEARANCE.
- ALL STEEL TO BE HOT DIP GALVANISED. FINAL COLOUR TO ARCHITECT'S SPECIFICATION.
- ALL PURLINS & BOLTS TO BE HOT DIP GALVANISED.
- ALL PURLINS TO BE CONTINUOUS OVER 2 BAYS AND STAGGERED AT LEAST DOUBLE SPAN.
- ALL RUNNERS AND BRACING TO BE FULLY FIXED IN POSITION BEFORE SHEETING COMMENCES.
- ALL BRACING TO BE FULLY FIXED IN POSITION BEFORE SHEETING COMMENCES.
- CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BEDS TO HAVE MINIMUM BLEED CHARACTERISTICS.
- ALL CONCRETE TO BE ABSOLUTELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 5 DAYS AFTER CASTING.
- ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.S 1200H PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS II UNLESS SPECIFIED OTHERWISE.
- CONCRETE CUBE TEST RESULTS TO BE SUBMITTED TIMELY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.
- CONCRETE CURE TEST RESULTS TO BE SUBMITTED TIMELY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.
- CHARACTERISTIC STRENGTH:
 - MILD STEEL: 250N/mm²
 - HIGH YIELD STEEL: 450N/mm²
- ALL REINFORCEMENT TO BE CHECKED AND APPROVED BY ENGINEER BEFORE ANY CONCRETE IS CAST. 48 HOURS WRITTEN NOTICE TO BE GIVEN TO ENGINEER BEFORE TIME OF INSPECTION.
- LAP LENGTH TO REINFORCING TO BE MINIMUM 50x SMALLER BAR DIAMETER UNLESS OTHERWISE NOTED.
- MESH REINFORCEMENT REFERENCE 245 TO BE PLACED IN SLAB (TOP) MINIMUM 100x300mm UNLESS OTHERWISE NOTED.
- THE CONTRACTOR MUST TAKE PARTICULAR CARE TO ENSURE THAT THE SPECIFIED COVER TO ALL REINFORCEMENT HAS BEEN ATTAINED THROUGHOUT BEFORE THE ENGINEER IS CALLED TO SITE FOR INSPECTION OF THE REINFORCEMENT.
- COVER TO REINFORCEMENT:
 - STRIP FOOTINGS: 50mm
 - BASES: 50mm
 - COLUMNS AND WALLS: 40mm
 - SUSPENDED SLABS: 40mm
 - SUSPENDED BEAMS: 40mm
- CONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION.
- FORMWORK AND PROPPING:
 - STRIPPING TIMES FOR:
 - COLUMN AND WALL SHUTTERING: 1.5 DAYS
 - BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.
 - SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.
 - PROPPING TIMES FOR:
 - SLABS & BEAMS (INCLUDING CANTILEVERS): 14 DAYS IN HOT WEATHER, 21 DAYS IN COLD WEATHER.
 - (SUBJECT TO CUBE TEST RESULTS BEING SUBMITTED TIMELY TO ENGINEER FOR APPROVAL).
 - NO DEPROPPING OF SUSPENDED ELEMENTS UNTIL INSTRUCTED BY ENGINEER.
- CONCRETE FINISHES UNLESS NOTED OTHERWISE:
 - COLUMNS AND WALLS: OFF SHUTTER
 - BEAMS AND SLAB SOFFIT: OFF SHUTTER
 - TOP OF SUSPENDED SLABS: SMOOTH
 - SIDES OF GROUND BEAMS TO BE SHUTTERED.

THESE NOTES SERVE AS AN ADDENDUM TO THE SPECIFICATION IN THE BILL OF QUANTITIES (BOQ). IN THOSE CASES WHERE THE BOQ SPECIFICATIONS DIFFER FROM THESE NOTES, THESE NOTES SHALL TAKE PREFERENCE ON ORIGINAL.

CONCRETE NOTES:

- SETTING OUT AND GENERAL:
- ALL DIMENSIONS AND HEIGHTS ARE TO BE CHECKED ON SITE BEFORE WORK BEGINS IN HAND.
- REPORT DISCREPANCIES TO ARCHITECT OR ENGINEER.
- THIS DRAWING MUST NOT BE USED TO SCALE OFF. USE ONLY WRITTEN DIMENSIONS. CONTACT THE ENGINEER OR ARCHITECT WHERE CLARITY IS SOUGHT.
- FOR SETTING OUT DATA, SETTING OUT POINTS AND DATUM LEVELS REFER TO SURVEY INFORMATION AND ARCHITECT'S DRAWINGS.
- STRUCTURAL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE RELEVANT S.A.S SPECIFICATIONS.
- ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH S.A.S 1200G AND EARLYWORKING IN ACCORDANCE WITH S.A.S 1200G.
- CONSULT RELEVANT ARCHITECTS, MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS AND DETAILS AS RELEVANT FOR BRANAGE, STORMWATER OUTLETS, R/W'S AND HOLES AND SLEEVES FOR THESE SERVICES. NO HOLES ARE TO BE CORED WITHOUT ENGINEER'S WRITTEN APPROVAL.
- FOUNDATIONS:
- ALL FOUNDATION EXCAVATIONS TO BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE IS CAST.
- NO FOUNDATIONS ARE TO BE CAST IN FILL MATERIAL. A 50mm THICK LAYER OF 10MPa / 19mm ISLAND CONCRETE IS TO BE CAST UNDER ALL REINFORCED BASES, REINFORCED STRIP FOOTINGS AND GROUND BEAMS.
- ANY OVER EXCAVATIONS ARE TO BE MADE GOOD WITH 10MPa / 19mm CONCRETE AT THE CONTRACTOR'S EXPENSE.
- BACKFILLING OVER COLUMN BASES SHALL BE DONE WITH AN APPROVED MATERIAL COMPACTED IN LAYERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- ALLOWABLE BEARING PRESSURE UNDER CONCRETE BASES = 150kPa.
- CONCRETE:
- CONCRETE CHARACTERISTIC 28 DAY STRENGTH:
 - BASES: 25MPa / 19mm
 - SURFACE BEDS: 30MPa / 19mm
 - SUSPENDED SLABS & BEAMS: 30MPa / 19mm
 - COLUMNS: 30MPa / 19mm
- CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BEDS TO HAVE MINIMUM BLEED CHARACTERISTICS.
- ALL CONCRETE TO BE ABSOLUTELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 5 DAYS AFTER CASTING.
- ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.S 1200H PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS II UNLESS SPECIFIED OTHERWISE.
- CONCRETE CUBE TEST RESULTS TO BE SUBMITTED TIMELY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.
- CONCRETE CURE TEST RESULTS TO BE SUBMITTED TIMELY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.
- CHARACTERISTIC STRENGTH:
 - MILD STEEL: 250N/mm²
 - HIGH YIELD STEEL: 450N/mm²
- ALL REINFORCEMENT TO BE CHECKED AND APPROVED BY ENGINEER BEFORE ANY CONCRETE IS CAST. 48 HOURS WRITTEN NOTICE TO BE GIVEN TO ENGINEER BEFORE TIME OF INSPECTION.
- LAP LENGTH TO REINFORCING TO BE MINIMUM 50x SMALLER BAR DIAMETER UNLESS OTHERWISE NOTED.
- MESH REINFORCEMENT REFERENCE 245 TO BE PLACED IN SLAB (TOP) MINIMUM 100x300mm UNLESS OTHERWISE NOTED.
- THE CONTRACTOR MUST TAKE PARTICULAR CARE TO ENSURE THAT THE SPECIFIED COVER TO ALL REINFORCEMENT HAS BEEN ATTAINED THROUGHOUT BEFORE THE ENGINEER IS CALLED TO SITE FOR INSPECTION OF THE REINFORCEMENT.
- COVER TO REINFORCEMENT:
 - STRIP FOOTINGS: 50mm
 - BASES: 50mm
 - COLUMNS AND WALLS: 40mm
 - SUSPENDED SLABS: 40mm
 - SUSPENDED BEAMS: 40mm
- CONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION.
- FORMWORK AND PROPPING:
 - STRIPPING TIMES FOR:
 - COLUMN AND WALL SHUTTERING: 1.5 DAYS
 - BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.
 - SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.
 - PROPPING TIMES FOR:
 - SLABS & BEAMS (INCLUDING CANTILEVERS): 14 DAYS IN HOT WEATHER, 21 DAYS IN COLD WEATHER.
 - (SUBJECT TO CUBE TEST RESULTS BEING SUBMITTED TIMELY TO ENGINEER FOR APPROVAL).
 - NO DEPROPPING OF SUSPENDED ELEMENTS UNTIL INSTRUCTED BY ENGINEER.
- CONCRETE FINISHES UNLESS NOTED OTHERWISE:
 - COLUMNS AND WALLS: OFF SHUTTER
 - BEAMS AND SLAB SOFFIT: OFF SHUTTER
 - TOP OF SUSPENDED SLABS: SMOOTH
 - SIDES OF GROUND BEAMS TO BE SHUTTERED.

No	Date	Revisions	Chd	Appd
B	19-09-25	ISSUED FOR TENDER	ES	GK
A	27-10-23	ISSUED FOR INFORMATION	ES	GK

Client: **Province of the EASTERN CAPE HEALTH**

Implementing Agent: **Sakhiso HDG NEMA SA HIGEN AFRICA**

Architect: **b4 Architects**

Engineer: **KEON CONSULTING ENGINEERS**

Project: **UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES**

Description: **PROTEA FLATS FIRE ESCAPE STEEL STAIRCASE**

Engineer: **G. Kuchera Pr Eng (20110431)**

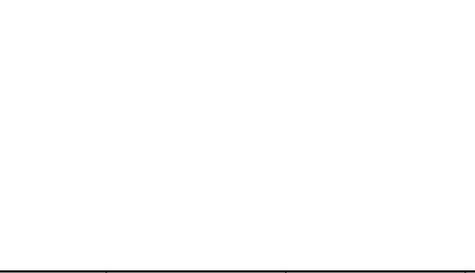
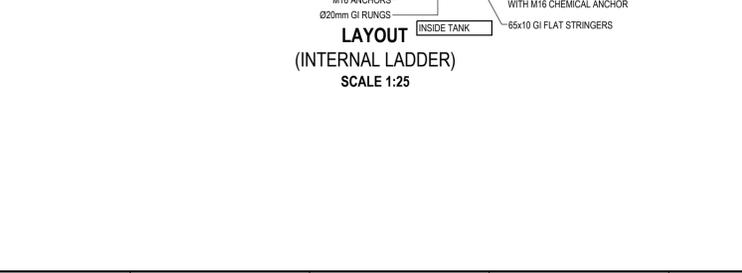
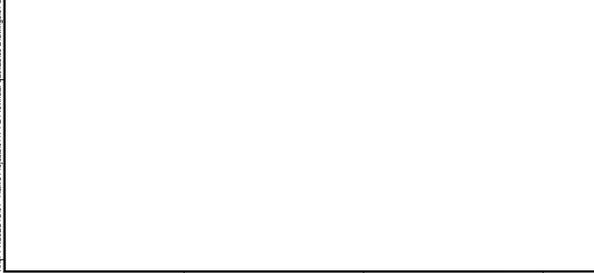
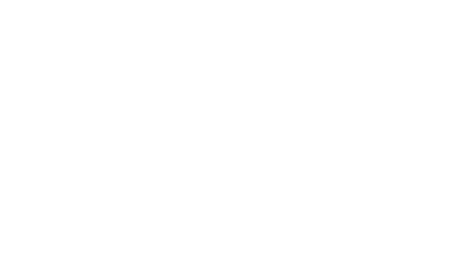
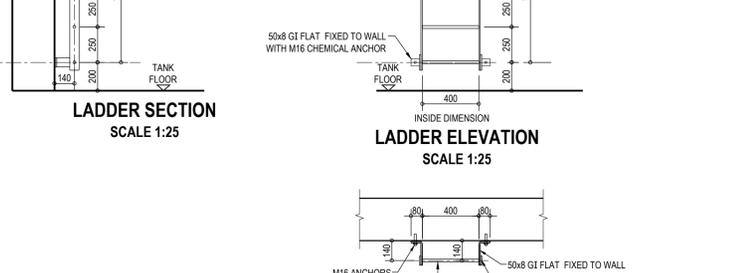
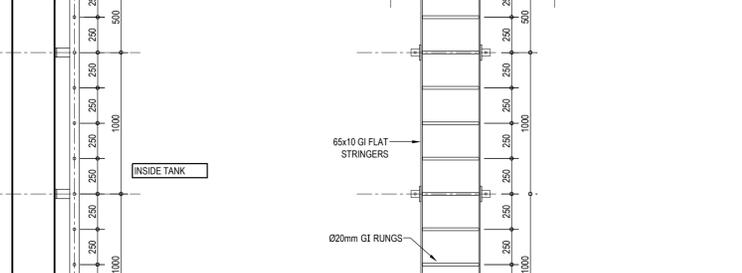
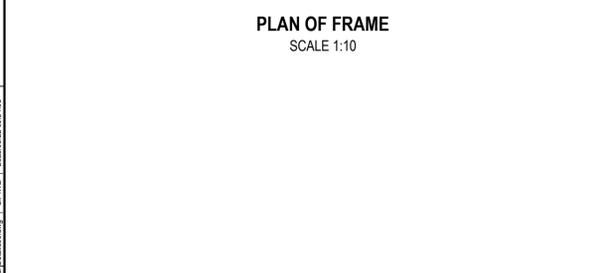
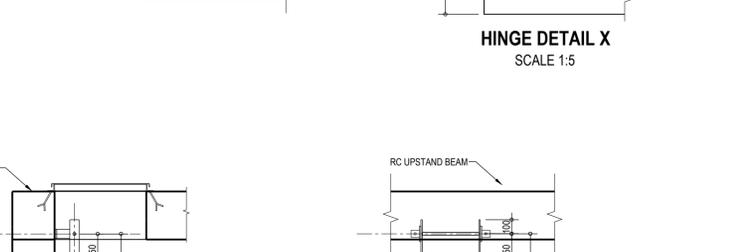
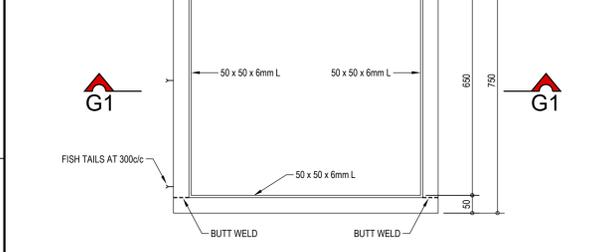
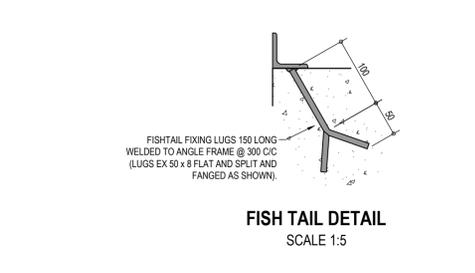
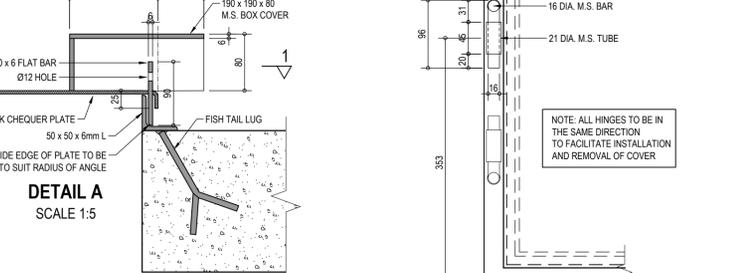
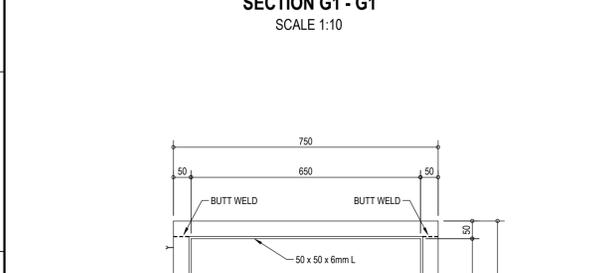
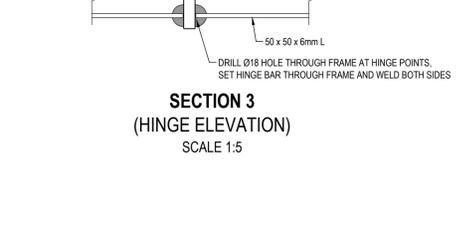
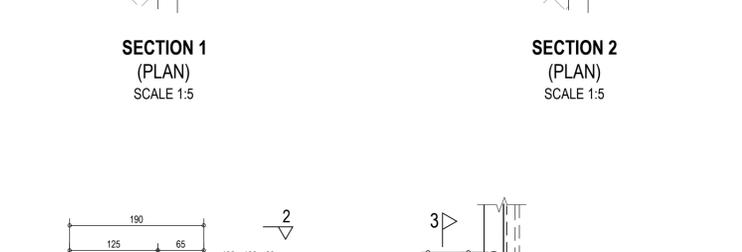
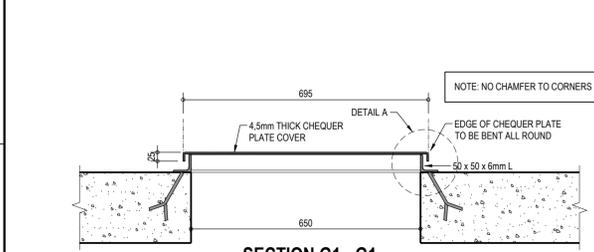
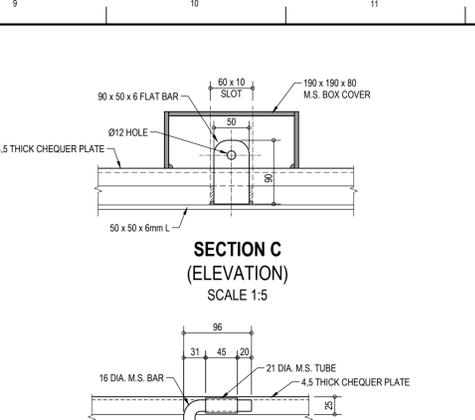
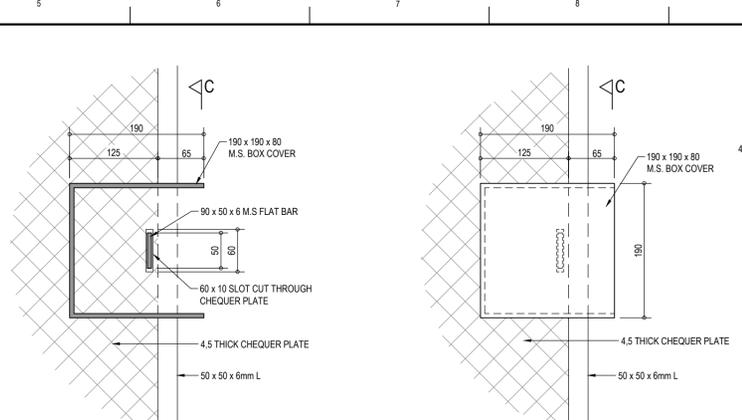
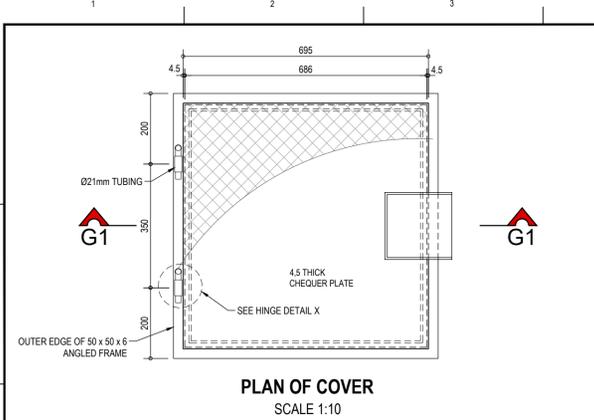
Drawn By: **S. Chiranga** | Designed By: **S. Chiranga** | Checked By: **G. Kuchera**

Scale: **As Shown** | Original Date: **October 2023**

Issued For: **TENDER**

Project No: **J117** | Drawing No: **S010** | Revision: **B**

ISSUED FOR TENDER



STEEL NOTES:

1. THE CONTRACTOR SHALL ALLOW FOR ALL STANDARDS / SPECIFICATIONS WHICH ARE REFERRED TO IN THESE NOTES AND WHICH ARE APPLICABLE ON THE SITE.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECT'S RELEVANT DRAWING.
3. DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND DISCREPANCIES IN DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS COMMENCED.
4. CONTRACTOR TO MEASURE DIMENSIONS ON SITE BEFORE FABRICATING STEEL WORK. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING FABRICATION DRAWINGS.
5. DRAWINGS MAY NOT BE SCALED.
6. ALL STRUCTURAL STEELWORK TO BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH SABS 1000H.
7. WELDING TO BE IN ACCORDANCE WITH SABS 644.
8. ALL WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE NOTED.
9. ALL GUSSET PLATES ARE TO BE MIN. 6mm THICK UNLESS NOTED OTHERWISE.
10. ALL STRUCTURAL STEEL TO BE GRADE E36 UNLESS COLD FORMED.
11. ALL BOLTS TO BE GRADE 8.8. CONTRACTOR TO SUPPLY ALL BOLTS, WASHERS, NUTS, LOCK NUTS ETC. FOR STRUCTURAL STEEL WORK.
12. ALL BOX JOINT CONNECTIONS TO CONSIST OF MINIMUM 2WELDS UNLESS OTHERWISE SPECIFIED.
13. ALL CONNECTIONS NOT DETAILED SHALL BE WELDED TO FULL STRENGTH. FABRICATION AND ERECTION TO BE DONE TO SABS 1200.
14. ALL SHOP DRAWINGS ARE TO BE PREPARED BY THE STRUCTURAL STEEL CONTRACTOR AND SUBMITTED TIMELY TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. APPROVAL PROCESS WILL TAKE A MINIMUM OF 10 WORKING DAYS.
15. STEELWORK PREPARATION: CLEANING BY HAND OR POWER TOOLS (CORROSION PROTECTION OF STRUCTURAL STEELWORK - S.A.S 1200:1989 PROVISION OF SUB CLAUSE 5.4.3.2). NOTWITHSTANDING THE PROVISION OF SUB CLAUSE 5.4.3.2, ALL STEEL SHALL BE PREPARED BY THOROUGH SCRAPING AND WIRE BRUSHING, MACHINE BRUSHING, GRINDING, E.T.C. TO GRADE S 3.1 OF SWEDISH SIS 055900:1967. THE TREATMENT MUST REMOVE LOOSE MILL SCALE RUST AND FOREIGN MATTER. FINALLY, THE SURFACE MUST BE CLEANED WITH A VACUUM CLEANER. CLEAN DRY COMPRESSED AIR OR CLEAN BRUSH AFTER REMOVAL OF DUST. THE SURFACE MUST HAVE A PRODUCE METALLIC APPEARANCE.
16. ALL STEEL TO BE HOT DIP GALVANISED. FINAL COLOUR TO ARCHITECT'S SPECIFICATION.
17. ALL PURLINS & BOLTS TO BE HOT DIP GALVANISED.
18. ALL PURLINS TO BE CONTINUOUS OVER 2 BAYS AND STAGGERED AT LEAST DOUBLE SPAN.
19. ALL RUNNERS AND BRACING TO BE FULLY FIXED IN POSITION BEFORE SHEETING COMMENCES.
20. ALL STRUCTURAL STEEL BELOW GROUND LEVEL CAST INTO CONCRETE OR BUILT INTO BRICKWORK SHALL BE HOT DIP GALVANISED AND PAINTED WITH TWO PROTECTIVE COATS APPLIED AS PER MANUFACTURERS SPECIFICATION BEFORE BACKFILLING.
21. ALL SHEETING, FLASHINGS, AND MATTERS PERTAINING TO ROOF SHEETING TO ARCHITECT'S DETAIL.
22. NO SITE WELDING IS PERMITTED.

CONCRETE NOTES:

- 1.0. SETTING OUT AND GENERAL
- 1.1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECT'S DRAWINGS.
- 1.2. ALL DIMENSIONS AND HEIGHTS ARE TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND.
- 1.3. REPORT DISCREPANCIES TO ARCHITECT OR ENGINEER.
- 1.4. THIS DRAWING MUST NOT BE USED AS SCALE OFF. USE ONLY WRITTEN DIMENSIONS. CONTACT THE ENGINEER OR ARCHITECT WHERE CLARITY IS REQUIRED.
- 1.5. FOR SETTING OUT DATA, SETTING OUT POINTS AND DATUM LEVELS REFER TO SURVEY INFORMATION AND ARCHITECT'S DRAWINGS.
- 1.6. ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE RELEVANT S.A.S SPECIFICATIONS. ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH S.A.S 1200G AND EARTHWORKS IN ACCORDANCE WITH S.A.S 1200D.
- 1.8. CONSULT RELEVANT ARCHITECTS, MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS AND DETAILS AS RELEVANT FOR DRAINAGE, STORMWATER OUTLETS, RWPS AND HOLES AND SLEEVES FOR THESE SERVICES. NO HOLES ARE TO BE CORED WITHOUT ENGINEER'S WRITTEN APPROVAL.
- 2.0. FOUNDATIONS
- 2.1. ALL FOUNDATION EXCAVATIONS TO BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE IS CAST.
- 2.2. NO FOUNDATIONS ARE TO BE CAST IN FILL MATERIAL. A 50mm THICK LAYER OF 100kPa / 15mm BLINDING CONCRETE IS TO BE CAST UNDER ALL REINFORCED BASES, REINFORCED STRIP FOOTINGS AND GROUND BEAMS.
- 2.3. ANY OVER EXCAVATIONS ARE TO BE MADE GOOD WITH 100kPa / 15mm CONCRETE AT THE CONTRACTOR'S EXPENSE.
- 2.4. BACKFILLING OVER COLUMN BASES SHALL BE DONE WITH AN APPROVED MATERIAL COMPACTED IN LAYERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- 2.5. ALLOWABLE BEARING PRESSURE UNDER CONCRETE BASES = 150kPa.
- 3.0. CONCRETE CHARACTERISTIC 28 DAY STRENGTH: BASES = 25MPa / 15mm STRIP FOOTINGS = 25MPa / 15mm SURFACE BEDS = 30MPa / 15mm SUSPENDED SLABS & BEAMS = 30MPa / 15mm COLUMNS = 30MPa / 15mm
- 3.2. CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BEDS TO HAVE MINIMUM BLEED CHARACTERISTICS.
- 3.3. ALL CONCRETE TO BE ADEQUATELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 14 DAYS AFTER CASTING.
- 3.4. ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.S 1200G PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS II UNLESS SPECIFIED OTHERWISE.
- 3.5. CONCRETE CURE TEST RESULTS TO BE SUBMITTED TIMELY TO THE ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.
- 4.0. REINFORCEMENT
- 4.1. CHARACTERISTIC STRENGTH: MILD STEEL = 250N/mm² HIGH YIELD STEEL = 450N/mm²
- 4.2. ALL REINFORCEMENT TO BE CHECKED AND APPROVED BY ENGINEER BEFORE ANY CONCRETE IS CAST. 48 HOURS WRITTEN NOTICE TO BE GIVEN TO ENGINEER BEFORE TIME OF INSPECTION.
- 4.3. LAP LENGTH TO REINFORCING TO BE MINIMUM SIX SMALLER BAR DIAMETER UNLESS OTHERWISE NOTED.
- 4.4. MESH REINFORCEMENT REFERENCE ZAS TO BE PLACED IN SLAB (TOP) MINIMUM LAPS = 300mm UNLESS OTHERWISE NOTED.
- 4.5. THE CONTRACTOR MUST TAKE PARTICULAR CARE TO ENSURE THAT THE SPECIFIED COVER TO ALL REINFORCEMENT HAS BEEN ATTAINED THROUGHOUT BEFORE THE ENGINEER IS CALLED TO SITE FOR INSPECTION OF THE REINFORCEMENT.
- 4.6. COVER TO REINFORCEMENT: STRIP FOOTINGS = 50mm BASES = 50mm COLUMNS AND WALLS = 40mm SUSPENDED SLABS = 40mm SUSPENDED BEAMS = 40mm
- 4.7. CONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION. FORMWORK AND PROPPING
- 5.0. STRIPPING TIMES FOR: COLUMN AND WALL SHUTTERING = 1.5 DAYS BEAM SHUTTERING = 7 DAYS IN HOT WEATHER, 4 DAYS IN COLD WEATHER, 7 DAYS IN COLD WEATHER.
- 5.1. SLABS SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER, 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.
- 5.2. PROPPING TIMES FOR: SLABS & BEAMS (INCLUDING CANTILEVERS): 14 DAYS IN HOT WEATHER, 21 DAYS IN COLD WEATHER (SUBJECT TO CUBE TEST RESULTS BEING SUBMITTED TIMELY TO ENGINEER FOR APPROVAL). NO DE-PROPPING OF SUSPENDED ELEMENTS UNTIL INSTRUCTED BY ENGINEER.
- 5.3. CONCRETE FINISHES: UNLESS NOTED OTHERWISE COLUMNS AND WALLS: OFF SHUTTER BEAMS AND SLAB SOFFIT: OFF SHUTTER TOP OF SUSPENDED SLABS: SMOOTH SIDES OF GROUND BEAMS TO BE SHUTTERED.

No	Date	Details	Chd	Appd
B	19-09-25	ISSUED FOR TENDER	ES	GK
A	16-09-25	ISSUED FOR INFORMATION	ES	GK
Revisions				

Client:	
Implementing Agent:	
Architect:	
Engineer:	

Project:
UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES

Description:
PROTEA FLATS ROOF MANHOLE AND LADDER DETAILS

Engineer:
G. Kuchhera Pr Eng (20110431)

Drawn By: S. Chithanga
Designed By: S. Chithanga
Checked By: G. Kuchhera

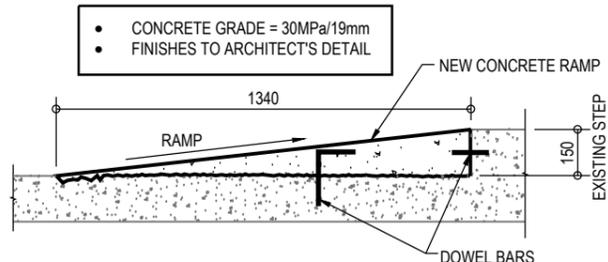
Size: A1
Scale: As Shown
Original Date: October 2023

Issued For: TENDER

Project No: J117
Drawing No: S12
Revision: B

ISSUED FOR TENDER

X:\PROJECTS\1301 - Active Projects\1317 PE Provincial (disabled) Drawings\07 Structural\Phase Plans\Manhole cover and Ladder\Detail07.dwg | S:\P\W\1 | 2023/09/22 08:54:08



NEW ACCESS RAMP DETAIL

SCALE: 1:20

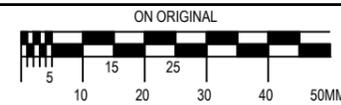
METHODOLOGY FOR CASTING ACCESS RAMP ON THE EXISTING SLAB

1. MARK THE POSITION OF THE RAMP ON THE EXISTING CONCRETE SLAB.
2. SCABBLE CONCRETE SURFACE TO EXPOSE AGGREGATE. CLEAN OFF ALL LOOSE AGGREGATE.
3. DRILL AND GROUT Y10 BARS INTO THE EXISTING CONCRETE SLAB. REBAR ESTIMATE = 60kg/m³ OF CONCRETE.
4. APPLY WET TO DRY EPOXY OR SIMILAR APPROVED BONDING AGENT ONTO THE EXPOSED CONCRETE SURFACE PRIOR TO CASTING THE NEW CONCRETE RAMP.
5. CAST THE NEW CONCRETE RAMP.

CONCRETE NOTES:

- | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1.0 SETTING OUT AND GENERAL:</p> <p>1.1 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECTS' DRAWINGS.</p> <p>1.2 ALL DIMENSIONS AND HEIGHTS ARE TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND.</p> <p>1.3 REPORT DISCREPANCIES TO ARCHITECT OR ENGINEER.</p> <p>1.4 THIS DRAWING MUST NOT BE USED TO SCALE OFF. USE ONLY WRITTEN DIMENSIONS. CONTACT THE ENGINEER OR ARCHITECT WHERE CLARITY IS SOUGHT.</p> <p>1.5 FOR SETTING OUT DATA, SETTING OUT POINTS AND DATUM LEVELS REFER TO SURVEY INFORMATION AND ARCHITECT'S DRAWINGS.</p> <p>1.6 STRUCTURAL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE RELEVANT S.A.N.S SPECIFICATIONS. ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH S.A.N.S 1200G AND EARTHWORKS IN ACCORDANCE WITH S.A.N.S 1200D.</p> <p>1.8 CONSULT RELEVANT ARCHITECTS, MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS AND DETAILS AS RELEVANT FOR DRAINAGE, STORMWATER OUTLETS, RWDPS AND HOLES AND SLEEVES FOR THESE SERVICES. NO HOLES ARE TO BE CORED WITHOUT ENGINEERS WRITTEN APPROVAL.</p> <p>2.0 FOUNDATIONS</p> <p>2.1 ALL FOUNDATION EXCAVATIONS TO BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE IS CAST.</p> <p>2.2 NO FOUNDATIONS ARE TO BE CAST IN FILL MATERIAL. A 50mm THICK LAYER OF 10MPa / 19mm BLINDING CONCRETE IS TO BE CAST UNDER ALL REINFORCED BASES, REINFORCED STRIP FOOTINGS AND GROUND BEAMS.</p> | <p>2.3 ANY OVER EXCAVATIONS ARE TO BE MADE GOOD WITH 10MPa / 19mm CONCRETE AT THE CONTRACTOR'S EXPENSE.</p> <p>2.4 BACKFILLING OVER COLUMN BASES SHALL BE DONE WITH AN APPROVED MATERIAL COMPACTED IN LAYERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.</p> <p>2.5 ALLOWABLE BEARING PRESSURE UNDER:</p> <p>CONCRETE BASES = 150kPa.</p> <p>STRIP FOOTINGS = 100kPa.</p> <p>3.0 CONCRETE</p> <p>3.1 CONCRETE CHARACTERISTIC 28 DAY STRENGTH:</p> <p>BASES : 25MPa / 19mm</p> <p>STRIP FOOTINGS: 25MPa / 19mm</p> <p>SURFACE BEDS: 30MPa / 19mm</p> <p>SUSPENDED SLABS & BEAMS: 30MPa / 19mm</p> <p>COLUMNS: 30MPa / 19mm</p> <p>3.2 CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BEDS TO HAVE MINIMUM BLEED CHARACTERISTICS.</p> <p>3.3 ALL CONCRETE TO BE ADEQUATELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 5 DAYS AFTER CASTING.</p> <p>3.4 ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.N.S 1200G PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS II UNLESS SPECIFIED OTHERWISE.</p> <p>3.5 CONCRETE CUBE TEST RESULTS TO BE SUBMITTED TIMEOUSLY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.</p> <p>4.0 REINFORCEMENT</p> <p>4.1 CHARACTERISTIC STRENGTH:</p> <p>MILD STEEL: 250N/mm²</p> | <p>4.2 HIGH YIELD STEEL: 450N/mm²</p> <p>4.3 ALL REINFORCEMENT TO BE CHECKED AND APPROVED BY ENGINEER BEFORE ANY CONCRETE IS CAST. 48 HOURS WRITTEN NOTICE TO BE GIVEN TO ENGINEER BEFORE TIME OF INSPECTION.</p> <p>4.4 LAP LENGTH TO REINFORCING TO BE MINIMUM 50 x SMALLER BAR DIAMETER, UNLESS OTHERWISE NOTED.</p> <p>4.5 MESH REINFORCEMENT REFERENCE 245 TO BE PLACED IN SLAB (TOP) MINIMUM LAPS = 300mm UNLESS OTHERWISE NOTED.</p> <p>4.6 THE CONTRACTOR MUST TAKE PARTICULAR CARE TO ENSURE THAT THE SPECIFIED COVER TO ALL REINFORCEMENT HAS BEEN ATTAINED THROUGHOUT BEFORE THE ENGINEER IS CALLED TO SITE FOR INSPECTION OF THE REINFORCEMENT.</p> <p>4.7 COVER TO REINFORCEMENT:</p> <p>STRIP FOOTINGS: 50mm</p> <p>BASES: 50mm</p> <p>COLUMNS AND WALLS: 30mm</p> <p>SUSPENDED SLABS: 30mm</p> <p>SUSPENDED BEAMS: 30mm</p> <p>4.8 CONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION.</p> <p>5.0 FORMWORK AND PROPPING</p> <p>5.1 STRIPPING TIMES FOR:</p> <p>COLUMN AND WALL SHUTTERING: 1.5 DAYS.</p> <p>BEAM SHUTTERING: 7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER.</p> <p>FLAT SLABS: 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.</p> | <p>5.2 PROPPING TIMES FOR:</p> <p>SLABS AND BEAMS: 14 DAYS IN HOT WEATHER, 21 DAYS IN COLD WEATHER</p> <p>CANTILEVER SLABS AND BEAMS: 21 DAYS</p> <p>(SUBJECT TO CUBE TEST RESULTS BEING SUBMITTED TIMEOUSLY TO ENGINEER FOR APPROVAL).</p> <p>NO DE-PROPPING OF SUSPENDED ELEMENTS UNTIL INSTRUCTED BY ENGINEER.</p> <p>5.3 CONCRETE FINISHES: UNLESS NOTED OTHERWISE</p> <p>COLUMNS AND WALLS: OFF SHUTTER</p> <p>BEAMS AND SLAB SOFFIT: OFF SHUTTER</p> <p>TOP OF SUSPENDED SLABS: STEEL FLOAT</p> <p>SURFACE BEDS: POWER FLOAT</p> <p>5.4 SIDES OF GROUND BEAMS TO BE SHUTTERED.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

THESE NOTES SERVE AS AN ADDENDUM TO THE SPECIFICATION IN THE BILL OF QUANTITIES (BOQ). IN THOSE CASES WHERE THE BOQ SPECIFICATIONS DIFFER FROM THESE NOTES, THESE NOTES SHALL TAKE PREFERENCE



No	Date	Details	Chd	Appd
B	19-09-25	ISSUED FOR TENDER	ES	GK
A	16-09-25	ISSUED FOR INFORMATION	ES	GK

Revisions

Client:

Architect:

Architecture | Interior Design | Project Management

b4 Architects

Engineer:

KEON

CONSULTING ENGINEERS

Project:

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES

Description:

PROTEA FLATS NEW ACCESS RAMP

Engineer:

G. Kucherera Pr Eng (20110431)

Drawn By:	Designed By:	Checked By:
S. Chinhanga	S. Chinhanga	g. Kucherera

Size: A3 Scale: As Shown Original Date: October 2023

Issued For: **TENDER**

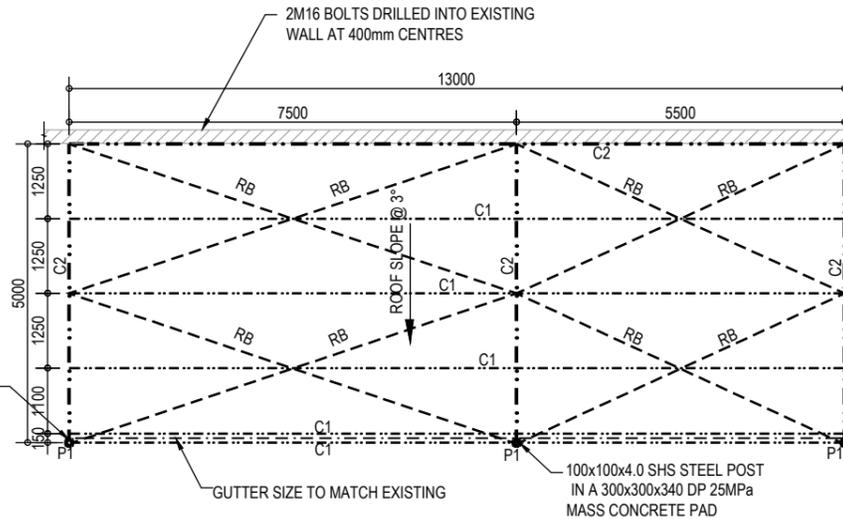
Project No:	Drawing No:	Revision:
J117	S13	B

STEEL MEMBER SIZES		
TYPE	MEMBER SIZE	DESCRIPTION
C1	PURLIN	175x75x20x2.5 CFLC
C2	STEEL BEAM	225x75x20x2.5 CFLC
P1	STEEL POST 1	100x100x4.0 SHS
RB	ROOF BRACING	60x60x5L

NOTE:

- ALL STEEL TO BE HOT DIP GALVANISED
- ROOF SHEETING AS PER ARCHITECT'S DETAIL
- CONNECTION DETAILS TO CONTRACTOR

100x100x4.0 SHS STEEL POST
IN A 300x300x340 DP 25MPa
MASS CONCRETE PAD



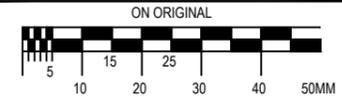
ROOF LAYOUT
SCALE: 1:100

100x100x4.0 SHS STEEL POST
IN A 300x300x340 DP 25MPa
MASS CONCRETE PAD

STEEL NOTES:

1. THE CONTRACTOR SHALL ALLOW FOR ALL STANDARDS / SPECIFICATIONS WHICH ARE REFERRED TO IN THESE NOTES AND WHICH ARE APPLICABLE ON THE SITE.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECT'S RELEVANT DRAWING
3. DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND DISCREPANCIES IN DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS COMMENCED.
4. CONTRACTOR TO MEASURE DIMENSIONS ON SITE BEFORE FABRICATING STEEL WORK. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING FABRICATION DRAWINGS.
5. DRAWINGS MAY NOT BE SCALED.
6. ALL STRUCTURAL STEELWORK TO BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH SABS 1200H.
7. WELDING TO BE IN ACCORDANCE WITH SABS 044.
8. ALL WELDS ARE TO BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE NOTED.
9. ALL GUSSET PLATES ARE TO BE MIN. 6mm THICK UNLESS NOTED OTHERWISE.
10. ALL STRUCTURAL STEEL TO BE GRADE S355JR UNLESS COLD FORMED.
11. ALL BOLTS TO BE GRADE 8.8. CONTRACTOR TO SUPPLY ALL BOLTS, WASHERS, NUTS, LOCK NUTS ETC. FOR STRUCTURAL STEEL WORK.
12. ALL BOLTED CONNECTIONS TO CONSIST OF MINIMUM 2M16 BOLTS UNLESS OTHERWISE SPECIFIED.
13. ALL CONNECTIONS NOT DETAILED SHALL BE WELDED TO FULL STRENGTH.
14. FABRICATION AND ERECTION TO BE DONE TO SABS 1200.
15. ALL SHOP DRAWINGS ARE TO BE PREPARED BY THE STRUCTURAL STEEL CONTRACTOR AND SUBMITTED TIMEOUSLY TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. APPROVAL PROCESS WILL TAKE A MINIMUM OF 10 WORKING DAYS.
16. STEELWORK PREPARATION:
CLEANING BY HAND OR POWER TOOLS (CORROSION PROTECTION OF STRUCTURAL STEELWORK - S.A.B.S 1200 HC -1988 PROVISION OF SUB CLAUSE 5.4.3.2). NOTWITHSTANDING THE PROVISION OF SUB CLAUSE 5.4.3.2. ALL STEEL SHALL BE PREPARED BY THOROUGH SCRAPPING AND WIRE BRUSHING, MACHINE BRASHING, GRINDING, E.T.C, TO GRADE 5.3 OF SWEDISH SIS 055900 - 1967. THE TREATMENT MUST REMOVE LOOSE MILL SCALE RUST AND FOREIGN MATTER. FINALLY, THE SURFACE MUST BE CLEANED WITH A VACUUM CLEANER, CLEAN DRY COMPRESSED AIR OR CLEAN BRUSH. AFTER REMOVAL OF DUST, THE SURFACE MUST HAVE A PRONOUNCED METALLIC APPEARANCE.
17. ALL STRUCTURAL STEEL BEAMS AND CONNECTIONS TO BE PAINTED WITH INTUMESCENT PAINT PROTECTION TO ACHIEVE A 2 HOUR FIRE RATING. CONTRACTOR TO PROVIDE PAINT SPECIFICATION DETAILS TO THE ENGINEER FOR APPROVAL.
18. ALL PURLINS & BOLTS TO BE HOT DIP GALVANISED.
19. ALL PURLINS TO BE CONTINUOUS OVER 2 BAYS AND STAGGERED AT LEAST DOUBLE SPAN.
20. ALL RUNNERS AND BRACING TO BE FULLY FIXED IN POSITION BEFORE SHEETING COMMENCES.
21. ALL STRUCTURAL STEEL BELOW GROUND LEVEL, CAST INTO CONCRETE OR BUILT INTO BRICKWORK, SHALL BE PAINTED WITH TWO PRO-STRUCT 632, APPLIED AS PER MANUFACTURES SPECIFICATION BEFORE BACKFILLING.
22. ALL SHEETING, FLASHINGS, AND MATTERS PERTAINING TO ROOF SHEETING TO ARCHITECTS DETAIL.
23. NO SITE WELDING IS PERMITTED.

THESE NOTES SERVE AS AN ADDENDUM TO THE SPECIFICATION IN THE BILL OF QUANTITIES (BOQ). IN THOSE CASES WHERE THE BOQ SPECIFICATIONS DIFFER FROM THESE NOTES, THESE NOTES SHALL TAKE PREFERENCE



No	Date	Details	Chd	Appd
B	19-09-25	ISSUED FOR TENDER	ES	GK
A	28-11-23	ISSUED FOR INFORMATION	ES	GK
Revisions				

Client:



Architect:

Architecture | Interior Design | Project Management

b4 Architects

Engineer:

KEON
CONSULTING ENGINEERS

Project:

UPGRADING OF SECURITY RELATED INFRASTRUCTURE AT LIVINGSTONE PEPH HOSPITAL COMPLEX AND ASSOCIATED REFERRAL PHC FACILITIES

Description:

STEEL CARPORT ROOF LAYOUT AND DETAILS

Engineer:

G. Kucherera Pr Eng (20110431)

Drawn By:

S. Chinhanga

S. Chinhanga

Designed By:

S. Chinhanga

S. Chinhanga

Checked By:

G. Kucherera

G. Kucherera

Size:

A3

Scale:

As Shown

Original Date:

NOVEMBER 2023

Issued For:

TENDER

Project No:

J117

Drawing No:

S14

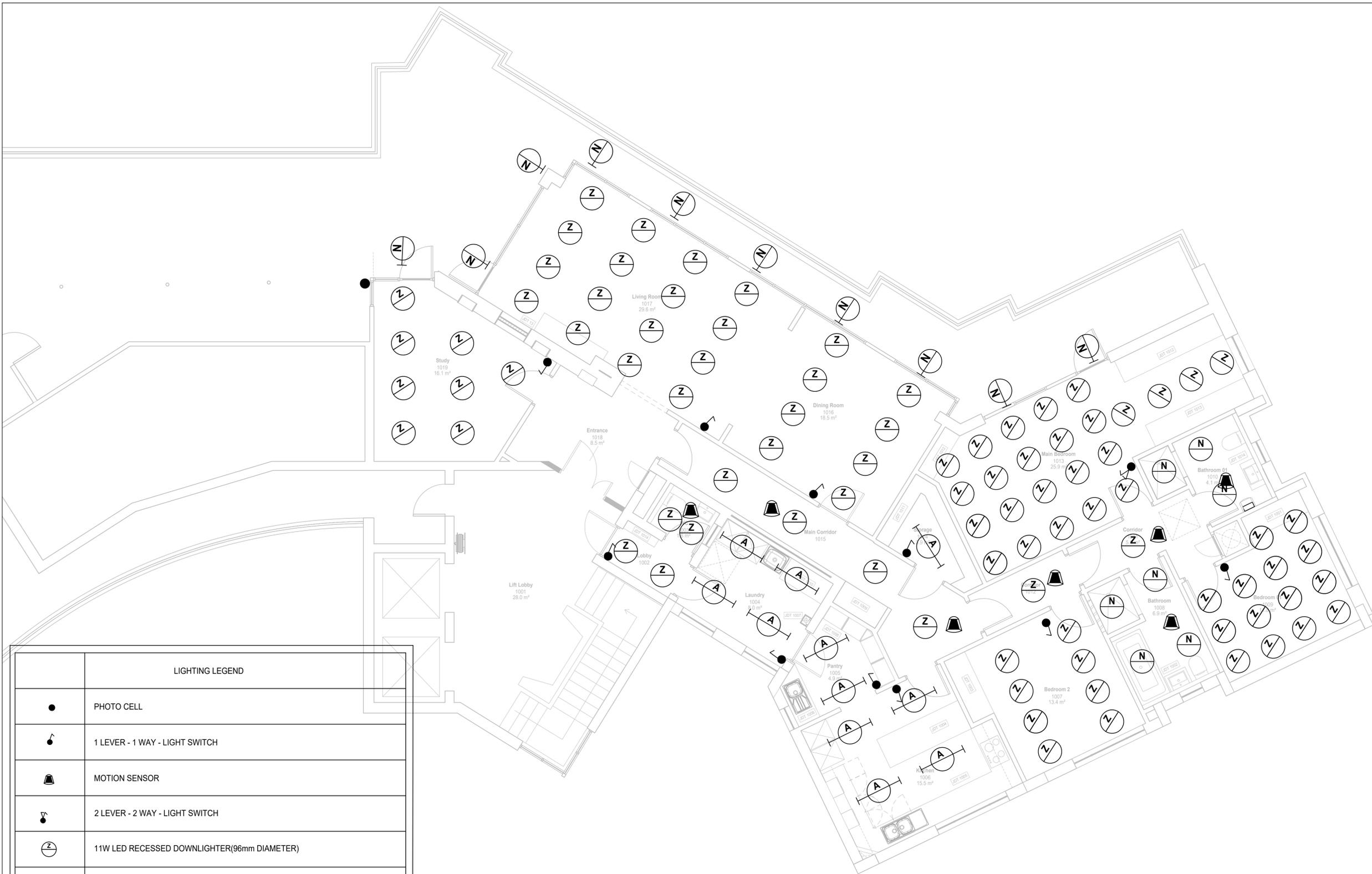
Revision:

B

SECTION 10

PROTEA FLATS

**ALL DRAWINGS FOR ELECTRICAL
INSTALLATION, PERIMETER LIGHTING
AND CCTV INSTALLATION**



LIGHTING LEGEND	
	PHOTO CELL
	1 LEVER - 1 WAY - LIGHT SWITCH
	MOTION SENSOR
	2 LEVER - 2 WAY - LIGHT SWITCH
	11W LED RECESSED DOWNLIGHTER(96mm DIAMETER)
	40W LED SURFACE MOUNTED LUMINAIRE (600mm X 600mm)
	40W LED SURFACE MOUNTED LUMINAIRE (600mm X 600mm) WITH 50% MAINTAINED EMERGENCY LIGHTING FOR 1 HOUR
	11W LED RECESSED DOWNLIGHTER(96mm DIAMETER) USED AS NIGHT LIGHT.
	50W LED LINEAR LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE CEILING / WALL MOUNTED BULKHEAD.
	ELECTRICAL DISTRIBUTION BOARD

- GENERAL NOTES:**
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 X 20mmØ & 4 X 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
 - CIRCUITING:

AC	=	AIR CONDITIONING
D	=	DEDICATED SSO
L	=	LIGHTING CIRCUIT
P	=	STANDARD SSO
XL	=	LIGHTING CIRCUIT ON STANDBY POWER
XP	=	STANDARD SSO ON STANDBY POWER
 - DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
 - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
 - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
 - ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
 - AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	29-09-25	E.C.	ISSUED FOR INFORMATION.

CLIENT

PROJECT
ALTERATIONS AND ADDITIONS AT PROTEA FLATS, GQEBERHA

TITLE
NEW GSA OFFICES - LIGHTING LAYOUT

COPYRIGHT



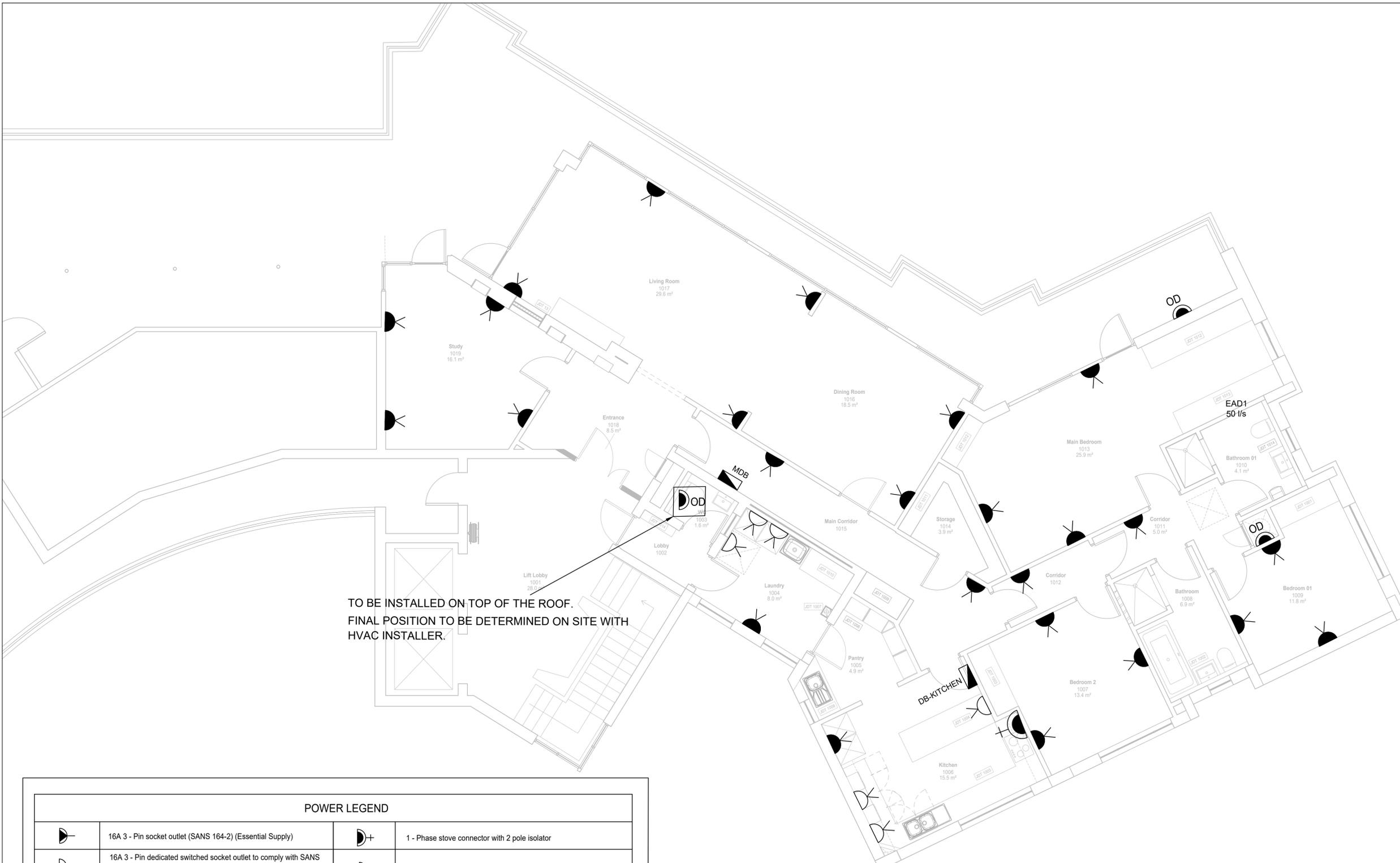
DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B.GEELBOOI
SCALE: 1:50

DRAWN: B.GEELBOOI
DATE: 29/06/2023
PRINT DATE: 29/09/2025

CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED:

DRAWING NO. 2316-T-E-101PF
REV No. 00



TO BE INSTALLED ON TOP OF THE ROOF.
FINAL POSITION TO BE DETERMINED ON SITE WITH
HVAC INSTALLER.

POWER LEGEND

	16A 3 - Pin socket outlet (SANS 164-2) (Essential Supply)		1 - Phase stove connector with 2 pole isolator
	16A 3 - Pin dedicated switched socket outlet to comply with SANS 164-1 (Red) (Essential Supply)		2 Pole isolator (Normal Supply)
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 on (White) 450mm AFFL (Normal Supply)		2 Pole Outdoor isolator (Normal Supply)
	16A 3 - Pin dedicated switched socket outlet to comply with SANS 164-1 & 2 (Red) (Essential Supply)		4 Pole isolator (Normal Supply)
	16A 3 - Pin dedicated switched socket outlet to comply with SANS 164-1 (Red) (Essential Supply)		Electrical distribution board
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 (White) mounted in the ceiling void (Normal Supply)		
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (white) 450mm AFFL (Normal Supply)		
	16A 3 - Pin switched socket outlet to comply with SANS 164-1 & 2 (White) 1200mm AFFL OR 300mm ABOVE WORKTOPS (Normal Supply)		

GENERAL NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DBs)
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
 - IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
13. CIRCUITING:
- | | | |
|----|---|-----------------------------------|
| AC | = | AIR CONDITIONING |
| D | = | DEDICATED SSO |
| L | = | LIGHTING CIRCUIT |
| P | = | STANDARD SSO |
| XL | = | LIGHTING CIRCUIT ON STANDBY POWER |
| XP | = | STANDARD SSO ON STANDBY POWER |
14. DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
15. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
16. AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	29-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

PROJECT

ALTERATIONS AND ADDITIONS AT PROTEA FLATS, GQEBERHA

TITLE

NEW GSA OFFICES - POWER LAYOUT



DESIGN	TENDER	CONSTRUCTION
	✓	

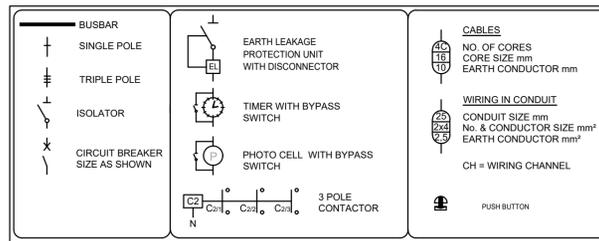
DESIGNED BY: B.GEELBOOI
SCALE: 1:50

DRAWN: B.GEELBOOI
DATE: 29/06/2023
PRINT DATE: 29/09/2025

CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED:

DRAWING NO. 2316-T-E-102PF
REV No. 00

LEGEND



GENERAL NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
- DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
- A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
- FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
- CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
- SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
- NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
- DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
- ALLOW 4 x 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB'S)
- IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
- TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
- IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
- CIRCUITING: AC = AIR CONDITIONING
D = DEDICATED SSO
L = LIGHTING CIRCUIT
F = STANDARD SSO
XL = LIGHTING CIRCUIT ON STANDBY POWER
XP = STANDARD SSO ON STANDBY POWER
- DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
- 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
- 1x200mm WIDE FOR POWER CABLES (MINIMUM).
- ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
- AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS			
REV	DATE	INIT.	DESCRIPTION
00	29-09-25	E.C.	ISSUED FOR TENDER.

CLIENT

PROJECT
ALTERATIONS AT PROTEA FLATS, GQEBERHA

TITLE
ELECTRICAL:
SCHEMATIC DIAGRAMS

COPYRIGHT

RNA CONSULTING ENGINEERS
Consulting Electrical & Mechanical Engineers

87 Hengh Road,
Walmer,
Port Elizabeth, 6070
E-Mail: office@rnaconsulting.co.za

P.O. Box 35039
Newton Park, 6055
Tel: 041 581 2807



DESIGN	TENDER	CONSTRUCTION

DESIGNED BY: E. CEBA

SCALE: N.T.S

DRAWN: B.GEELBOOI

DATE: 17/10/2023

PRINT DATE: 29/09/2025

CHECKED BY: E. CEBA

REGISTRATION No. 201930053

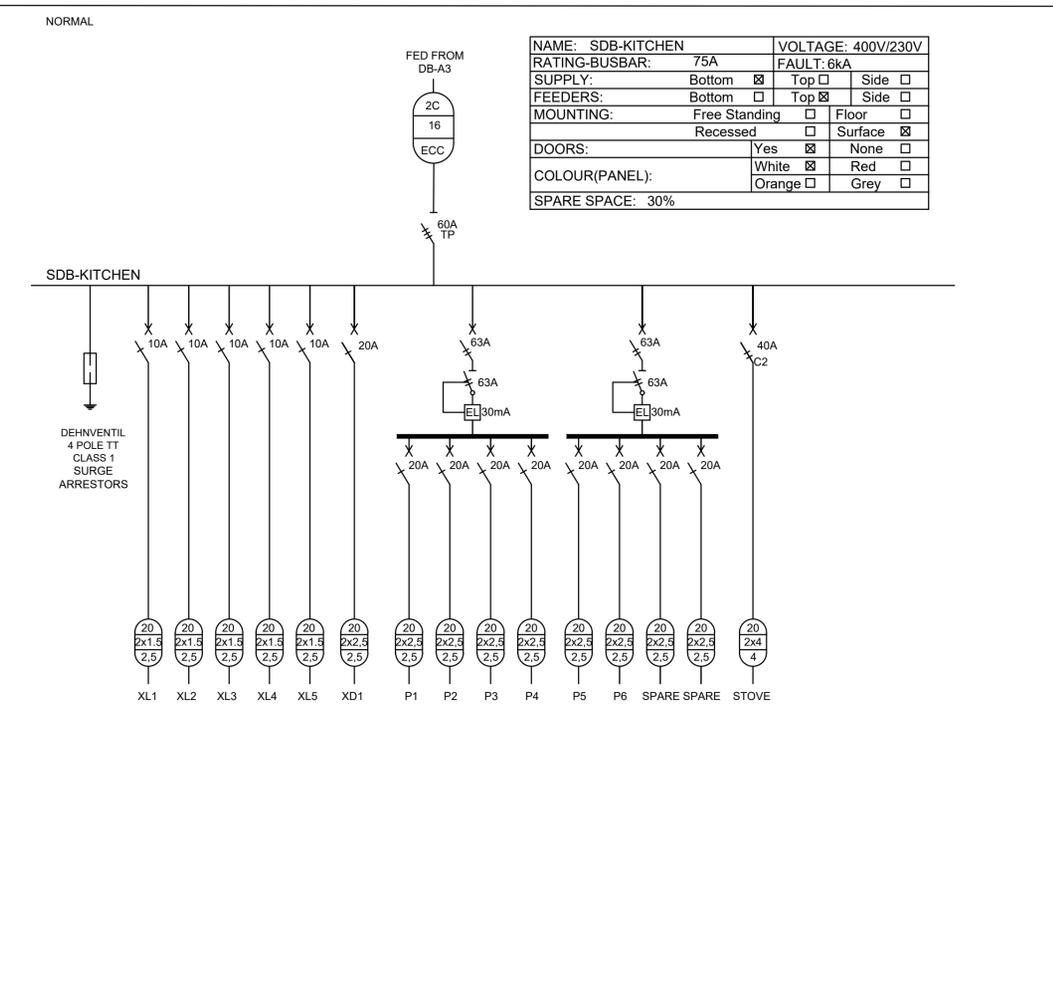
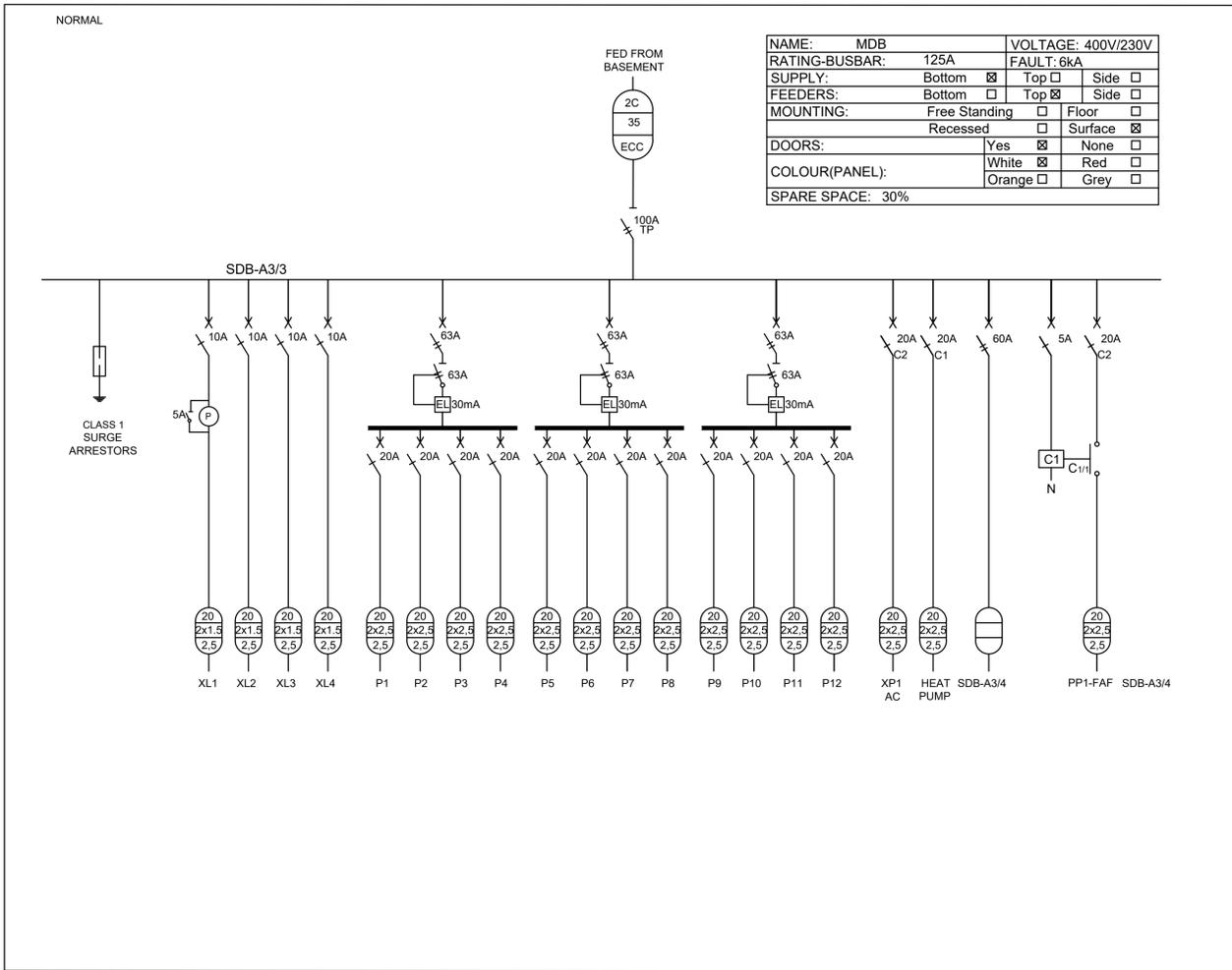
SIGNED:

DRAWING NO. 2316-T-E-300PF

REV No. 00

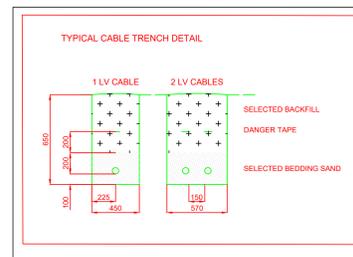
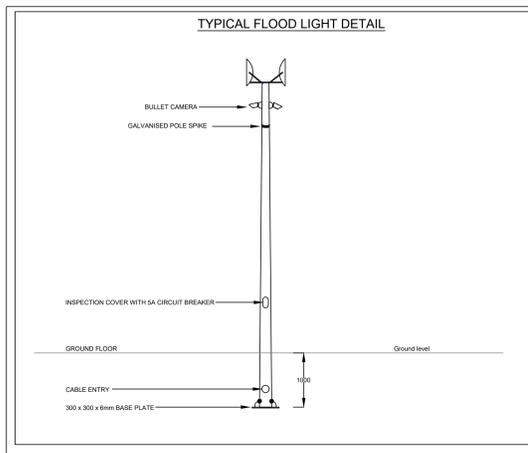
ARCHITECTS DRAWING NO.

REV No.



ARCHITECTS DRAWING NO.

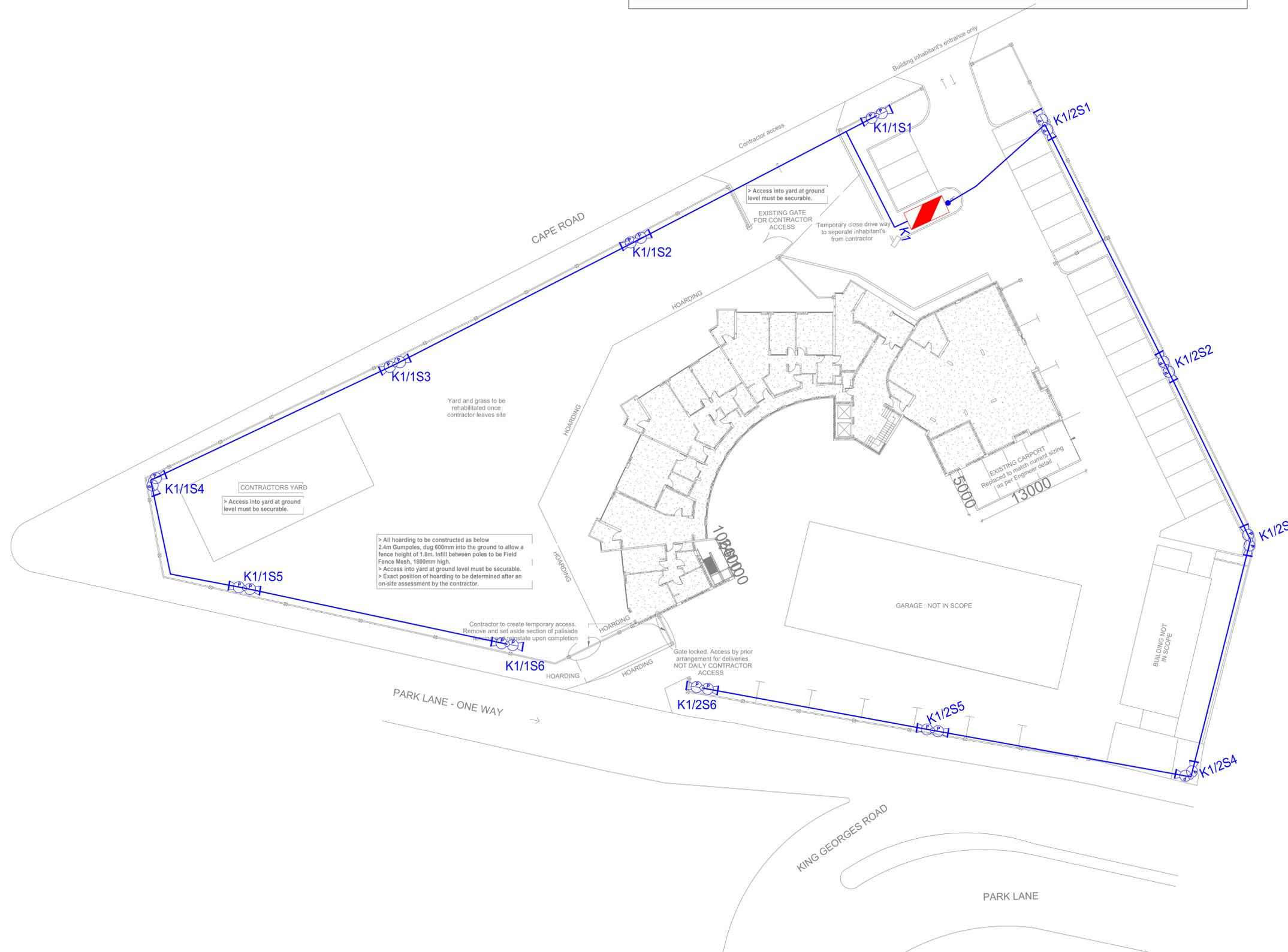
REV No.



SECURITY LEGEND

	PHOTO CELL
	2 x150W LED FLOODLIGHTS MOUNTED ON A 6m GALVANISED POLE INSTALLED ALONG THE FENCES
	OUTDOOR DISTRIBUTION KIOSK
	6mm 4C Cu ECC IN A 50mm PVC SLEEVE

- #### GENERAL NOTES:
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
 - DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS.
 - A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
 - FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
 - CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
 - SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
 - NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
 - DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
 - ALLOW 4 x 20mm² & 4 x 25mm² SPARE CONDUITS FROM EACH DB TO CEILING VOIDS (FLUSH MOUNTED DB'S).
 - IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - CIRCUITING:
 - AC - AIR CONDITIONING
 - CD - DEDICATED SMO
 - L - LIGHTING CIRCUIT
 - PS - STANDING SMO
 - XL - LIGHTING CIRCUIT ON STANDBY POWER
 - XP - STANDING SMO ON STANDBY POWER
 - ALL SMO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.



TENDER / WD

NO.	DATE	REVISIONS	P.W.D.
00	28-09-25	ISSUED FOR TENDER	EC



DISCIPLINE
ELECTRICAL

SERVICE
**PROTEA FLATS:
UPGRADING SECURITY FENCE.**

DRAWING TITLE
**SITE PLAN:
PERIMETER LIGHTING & SLEEVE
LAYOUT**

SCALE	1:500	DRAWN	B. GEELEBOO
DATE	FEBRUARY 2017	CHECKED	B. GEELEBOO
PRINT DATE	29/09/2025	CREATED	ERIC CEBA
DESIGN NUMBER	2316-T-E-100A AL	REVISION	00

