



INDEPENDENT DEVELOPMENT TRUST

Contract No: DOE/NCSIP/2022/10/02
A Tender for Category **7GB** or higher CIDB Registered Contractors

COMPLETION OF JTG SCHOOL PHASE 2B

LOCATED AT DITHAKONG VILLAGE NEAR KURUMAN IN JOE MOROLONG LOCAL
MUNICIPALITY, NORTHERN CAPE PROVINCE

Name of Bidder : _____

Name of duly authorized person: _____

CRS Number : _____

CIDB Grading : _____

CSD Number : _____

Address : _____

Tel. Number : _____

Cell number : _____

E-mail : _____

ISSUED BY:

Independent Development Trust
P.O Box 1404
Kimberly
8301
Mr. Boipelo Koloti
Tel: 071 892 1242

PREPARED BY:

UM Consultants (Pty) Ltd
P.O. Box 717
Boksburg
1460
Mr. Ulunji Msiska
Tel: 011 894 7615

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS
PHASE 2B

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C3	Scope of Work
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C4	Site Information
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INDEPENDENT DEVELOPMENT TRUST

T1.1 Tender Notice and Invitation to Tender

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

It is estimated that tenderers must have a CIDB contractor grading of **7GB** or higher

The physical address for **collection** of tender documents is:

INDEPENDENT DEVELOPMENT TRUST OFFICES
OLD MAGISTRATE COURT
21-23 MARKET SQUARE
KIMBERLY
8301

Documents will be available from the **04 November 2022**.

Tender documents must be downloaded from IDT website and National Treasury e-tender on the following link: http://www.idt.org.za/business_opportunities/current-tenders ,and www.treasury.gov.za

BID Enquiries relating to the issues of these documents may be addressed to:

Bid Administration Enquiries

E-mail: BoipeloK@idt.org.za

Technical Enquiries

E-mail: admin@umconsultants.co.za

Tender documents to be submitted at the tender box of the IDT office:

INDEPENDENT DEVELOPMENT TRUST OFFICES
OLD MAGISTRATE COURT
21-23 MARKET SQUARE
KIMBERLY
8301

A compulsory clarification meeting with representatives of the Employer will take place on site at

Tender

1

T1.1

Part T1: Tendering procedures

DITHAKONG TRIBAL OFFICE, DITHAKONG VILLAGE IN THE JOE MOROLONG LOCAL MUNICIPALITY OF THE NORTHERN CAPE PROVINCE on the 10th NOVEMBER 2022 starting at 12h00. Tenderers must sign the attendance register in the name of the tendering entity.

The closing date and time for receipt of tenders is 02 DECEMBER 2022 @ 12H00 .

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

PLEASE NOTE THE FOLLOWING IMPORTANT DATES
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- Compulsory Clarification Meeting (Site Inspection) Date: 10 NOVEMBER 2022 at 12h00
- Bid Closing Date: 02 DECEMBER 2022 @ 12h00

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

T1.2 Tender Data

The conditions of tender are the Standard Conditions of Tender as contained in **Annex C** of the CIDB Standard for Uniformity in Construction Procurement. (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to this Tender Data.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The additional conditions of tender are:

Clause number	Tender Data for BID NO: DOE/NCSIP/2022/10/02
C.1.1	The employer is the Independent Development Trust, Northern Cape Region
C.1.2	The tender documents
C.1.4	<p>The employer's agent is:</p> <p>Name: UM Consultants Address: UNIT 20, Oaklane Office Park, Cnr Trichards & Grippen Roads, Boksburg, 1459 Tel: 011 894 7616 E-mail: admin@umconsultants.co.za / ulunji@umconsultants.co.za</p>
C.2.1	<p>Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulations 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a Grade 7GB or higher class of construction work, are eligible to have their tenders evaluated.</p> <p>The contractor shall achieve in the performance of the contract the Contract Skills Development Goal (CSDG) established in the Standard for Developing Skills through Infrastructure Contracts (published in GN 43495 of 3 July 2020).</p> <p>The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the cidb Standard for Indirect Targeting for Enterprise Development through Construction works Contracts Gazette Notice No 36190 of 25 February 2013.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none">1. every member of the joint venture is registered with the CIDB;2. the lead partner has a contractor grading designation in the Grade 7GB or higher class of construction work; and3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in

Part T2: Returnable documents

BID No: DOE/NCSIP/2022/10/02

accordance with the sum tendered for a **(7GB or higher) General Building** class of construction work or a

C.2.7 A compulsory briefing with representatives of the Employer will take place on site on **10 NOVEMBER 2022 starting at 12H00**. Tenderers must sign the attendance register in the name of the tendering entity. Addenda (if any) will be issued only to those tendering entities appearing on the attendance list

C.2.11 Bidders are required to not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All Signatories to the tender offer shall initial all such alterations

C.2.12 No alternative tender offers will be considered

C.2.13.2 Return all returnable documents to the employer after completing them in their entirety by writing in **non-erasable black Ink**

C.2.13.3 Parts of each tender offer communicated on paper shall be submitted as one original (i.e. no copies should be submitted).

C.2.13.5 The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:

Location of tender box: Physical address: -

INDEPENDENT DEVELOPMENT TRUST OFFICES

OLD MAGISTRATE COURT
21-23 MARKET SQUARE
KIMBERLY
8301

Sealed Tender with Tender reference number, Title of Tender and the closing date and time of the tender

Identification details:

Project no: BID No: DOE/NCSIP/2022/10/02

Title:

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

C.2.15.1 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.

Closing date: 02 DECEMBER 2022
Closing time: 12h00

Telephonic, Telegraphic, Telex, Facsimile or E-mailed tender offers will not be accepted.

C.2.16.1 The tender offer validity period is **120 (Hundred and Twenty days) days.**

The contract duration is **12** months from date of site handover

Part T2: Returnable documents

BID No: DOE/NCSIP/2022/10/02

C.3.4.1 Tenders will not be opened immediately after the closing time; they will be posted on the IDT Website within 7 days of closure.

C.3.11 **Tender offers will only be accepted if the following are submitted**

PROPOSALS WILL BE EVALUATED IN TERMS OF THE MANDATORY REQUIREMENTS AND GENERIC FUNCTIONALITY CRITERIA AS FOLLOWS:

PHASE ONE - MANDATORY REQUIREMENTS/ DOCUMENTATION	
MANDATORY RETURNABLE DOCUMENTS	
1	Authority to Sign this Bid (for companies that has more than one director)
2	Service Providers must be registered on Central Supplier Database (MAAA Number to be used to verify registration)
3	Valid and Active CIDB Grading certificate of Grade 7GB or higher - JV's to submit consolidated CIDB Grading, which equates to the required grading
4	Valid COIDA or FEM certificates - If JV all partners must submit COIDA or FEM Certificates
5	Fully Completed and Signed form of offer All blanks spaces must be completed
6	<p>Fully Completed and signed</p> <ul style="list-style-type: none">• SBD1: Invitation to bid• SBD4: Bidder's disclosure• SBD 6.1: Preference points claim form in terms of PPPFA, Procurement Regulations 2017<ul style="list-style-type: none">➤ Fully & Duly Completed and Signed Preference points claim form in terms of PPPFA, Procurement Regulations 2017 (SBD 6.1). All blanks spaces must be completed. Bidders to indicate items that are not applicable• SBD 6.2 Local Content form<ul style="list-style-type: none">➤ Fully & Duly Completed and Signed Local content form (SBD 6.2) including all the annexures C, D & E. Bidders must return Annexure C. Annexure D & E to be kept by the bidder for verification/audit upon appointment. All blanks spaces must be completed. Bidders to indicate items that are not applicable.➤ Only locally (South Africa) manufactured product that meet the stipulated minimum threshold for local content will be considered (Preferential Procurement Regulations 2017).➤ A Bid that fails to meet the stipulated threshold for local production content is unacceptable

7	<p>30% Subcontracting</p> <ul style="list-style-type: none"> In order to advance selected designated groups, IDT has decided to apply pre-qualifying criteria for this bid in terms of regulation 4(1) (c) of the Preferential Procurements Regulations of 2017 that only tenderers sub-contracting a minimum of 30% to any <ul style="list-style-type: none"> a) An Exempted Micro Enterprise (EMEs) or Qualifying Small Enterprise (QSEs) which is at least 51% owned by black people living in rural and underdeveloped areas and townships. The bidders must select sub-contractors from the CIDB database who are registered on CSD A list of suppliers to be used for sub-contracting purpose will be made available on the IDT website Bidders or contractors must submit proof of subcontracting agreement, which is signed between the main contractor and the subcontractor. The following must be attached to the subcontracting agreement <ul style="list-style-type: none"> ➤ Proof of BBBEE status of the subcontractor ➤ CIDB Grading -Grade 6GB The maximum grading required is grade 6Gb if the bidder intent to subcontract more than 1 company. Should the bidder subcontract multiple companies the consolidated grading must equate to Gr 6GB ➤ CSD Registration ➤ Signed Subcontracting Agreement Should the bidder subcontract more than one bidder, the consolidated percentage must equate to 30% allocated for subcontracting. 30% subcontracting is a Condition of Tender <p>NB: The Tenderers who fail to comply with this requirement would be considered as being not acceptable and will be disqualified and will not be considered for further evaluation or award</p>
8	Confirmation of addendum (If Applicable)
9	Fully & Duly Completed Detailed Bill of Quantities (BOQ), Written in Ink
10	Compulsory Briefing Session – Briefing session attendance Register must be signed at Briefing Meeting
11	Joint Venture Agreement - If Applicable Joint Venture Agreement must be signed by all parties of the JV.

Failure to comply with the above requirement will result in automatic disqualification.

Instruction notes:

- All blanks spaces must be completed on all the SBD forms.
- Bidders to indicate items that are not applicable to them on all the forms.
- Bidders are advised to fill in the correct information on all the SBD forms.
- Bidders are encouraged to familiarize themselves with the project site in order to assist them in planning, pricing and executing the project.
- ~~All Bidders are required to be registered on CSD (Central Supplier Database) with National Treasury. CSD Registration report with supplier number with your Bid.~~

4.3.3 Functionality Criteria

The functionality will be scored using the following values:

A maximum equal to 100 tender evaluation points will be awarded for quality, sub-divided according to the following:

- 100 points – Quality
 - 35 points – Experience on similar scale projects
 - 20 points – Qualifications & competencies of key staff
 - 10 points – Schedule / Availability of Plant & Equipment
 - 15 points – Client References
 - 10 points – Safety Health & Environmental Quality (SHEQ) Project Specific Plan
 - 10 points – Project Specific Programme schedule and cash flow

Experience on similar scale projects: 35 Points

Value of work – 15 Points

Nature of work – 20 Points

Notes:

1. Bidders are required to score minimum points of 70 (70%) for Functionality stated in tender data.
2. Bidders who fail to meet the required minimum number of points for functionality stated in the tender data will not be evaluated further.
3. Bidders who fail to submit information as per the returnable schedules will not be allocated points.

Value of work evaluation (No points will be allocated for value of works for Civil Engineering Projects, Water, Transport, Traffic Engineering and all Electrical & Mechanical Projects)

Value of work (7GB)	Point Breakdown	Total Points
Submitted 5 relevant projects – 20.1m and above 5 Projects – 15 Points 4 Projects – 12 Points 3 Projects – 9 Points 2 Projects – 6 Points 1 Projects – 3 Points	3 Points per Project	15
Submitted 5 relevant projects 10.1m – 20m 5 Projects – 10 Points 4 Projects – 8 Points 3 Projects – 6 Points 2 Projects – 4 Points 1 Projects – 2 Points	2 Points per Project	10
Submitted 5 relevant projects 5.1m – 10m 5 Projects – 5 Points 4 Projects – 4 Points 3 Projects – 3 Points 2 Projects – 2 Points 1 Projects – 1 Points	1 Points per Project	5
Submitted 5 relevant projects 0m – 5m	0 Points per Project	0

Nature of Work (Completion Certificates Must be Submitted)	Point Breakdown	Total Points
Construction of major project and renovations of Hospitals, Clinics, Schools, Libraries, Hotels, Malls, shopping Complex, Courts, Office blocks, Town Houses, prisons, Church, Civic center 5 Projects – 20 Points 4 Projects – 16 Points 3 Projects – 12 Points 2 Projects – 8 Points 1 Projects – 4 Points	4 Points per Project	20
Construction and renovation of Residential Houses and Community Hall, indoor sport complex and stadia 5 Projects – 15 Points 4 Projects – 12 Points 3 Projects – 9 Points 2 Projects – 6 Points 1 Projects – 3 Points	3 Points per Project	15

Nature of work evaluation

Construction and renovations of Enviro-loo toilets, Low-cost houses (RDP), Taxi Rank. 5 Projects – 10 Points 4 Projects – 8 Points 3 Projects – 6 Points 2 Projects – 4 Points 1 Projects – 2 Points	2 Points per Project	10
Construction and renovations of residential household toilets (VIP toilets) 5 Projects – 5 Points 4 Projects – 4 Points 3 Projects – 3 Points 2 Projects – 2 Points 1 Projects – 1 Points	1 Points per Project	5
Engineering Projects (Water, Transport, Traffic Engineering, Electrical & Mechanical Projects).	0 Points per Project	0

Qualifications & Key Personnel

Qualifications and Competencies of Key Projects Resources	20	<p>Points allocated for required competencies & Built Environment qualification of allocated personnel for the project in consideration. Required Key Project Resources; Verification Certificate from SAQA must be attached for international qualifications in order to get points</p> <p>Project Manager must be professionally registered with the SACPCMP as Project Manager</p> <p>CV's Submitted should indicate that key personnel are employees of the tendering company, failure to adhere to this condition will result in the non-allocation of points</p> <p>Project Manager:</p> <p>Site Agent:</p>
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Education	Project Manager (List a minimum of 1 for each)		
	Professionally Registered Personnel (CV, Proof of registration, Proof of qualifications (Building=Pm, Arch, QS. Civil, PM, CE,))		5
	Non-Registered Personnel (with Degree, Proof of Qual + CV)		4
	Non-Registered Personnel (Diploma, Proof of Qual + CV)		3
	Non-Registered Personnel (Certificates, Proof of Qual + CV)		2
Competence	Years of Experience-1 to 2 (Degree/Diploma, Proof of qualifications + CV)		2
	Years of Experience-3 to 5 (Degree/Diploma, Proof of qualifications + CV)		3
	Years of Experience-5 to 6 (Degree/Diploma, Proof of qualifications + CV)		4
	Years of Experience-above 6 (Degree/Diploma, Proof of qualifications + CV)		5
Education	Site Agent (List a minimum of 1 for each)		
	Registered Personnel (Degree/Diploma, Proof of qualifications + CV)		5
	Non-Registered Personnel (Degree/Diploma, Proof of qualifications + CV)		2

Compe tence	Years of Experience-1 to 2 (Degree/Diploma, Proof of qualifications + CV)		1
	Years of Experience-3 to 5 (Degree/Diploma, Proof of qualification + CV)		3
	Years of Experience-above 6 (Degree/Diploma, Proof of qualification + CV)		5

Schedule / Availability of Plant & Equipment – 10 Points

Plant and Equipment	Description (With proof of ownership /rental)	POINTS
Plant and Equipment 1	Heavy duty machinery, TLBs, Excavators, Rollers	4
Plant and Equipment 2	Trucks, 6- 10 trucks, Water tanks	3
Plant and Equipment 3	LDVs, Bakkies	2
Plant and Equipment 4	Scaffolding, Trestles, Step Ladders, Concrete Mixers, Generators, Jack Hammer	1

Plant & Equipment	<p>In order to demonstrate capacity to deliver on time the tenderers will need to demonstrate the following:</p> <p>(i) Proof of ownership by submitting registration certificates/ purchases invoices</p> <p>(ii) Lease agreement or letter from the leasing entity confirming the agreement to lease the required plant and Equipment</p> <p>Failure to submit the above required proof will result in non-allocation of points</p>
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Client References

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Relevant Experience” returnable schedule. “Client Reference Scorecards” will be completed, signed by either respective Clients or principal agents and stamped for the projects listed in the “Relevant Experience” returnable schedule.

Contracting Document

JBCC Series 2000 PBA March 2005, Edition 4.1

SHEQ Safety Health & Environmental Quality (SHEQ) Project Specific Plan - 10 Points

Health and Safety Plan (SHE)	Max Points Possible
OHS Plan submitted with Legal requirements & regulations ✓ Related to scope of work – 3 Points ✓ Safe working procedure – 2 Points	5
Safety Officer in the Organogram, qualification & CV ✓ CV- 1 points ✓ Safety related qualification – 2 points	3
Risk Management plan submitted	2
Not submitted	0

Project Specific Programme schedule and cash flow – 10 Points

Programme/ Project Schedule	Max Points
Submitted Project Schedule relating to the scope of work ✓ Sequence of activities - 4 Points ✓ Project duration within stipulated time – 3 Points ✓ Project schedule not related to scope of work – 0 Points ✓ Project duration outside the stipulate time – 0 Points	7
Cash Flow as per the project duration	3
Schedule not submitted	0

3.4. Preferential procurement system

90/10 preferential procurement system to be utilized as per PPPFA 2017. The project is above R50m.

Variables	Total Points	Criteria	Description Of Criteria	Points
<u>B-BBEE</u>	10	B-BBEE Contributor level 1	Points allocated to entities who are contributing towards the empowerment of black people (a SANAS accredited B-BBEE Certificate MUST be submitted with the bid documents before any points can be allocated)	10
		B-BBEE Contributor level 2		9
		B-BBEE Contributor level 3		6
		B-BBEE Contributor level 4		5
		B-BBEE Contributor level 5		4
		B-BBEE Contributor level 6		3
		B-BBEE Contributor level 7		2
		B-BBEE Contributor level 8		1
		Non-compliant contributor	Bidders to submit Original Sworn Affidavit B-BBEE or SANAS certified copies not older than 6 months). Joint Ventures / Consortia entities must submit a consolidated B-BBEE certificate from SANAS-Accredited verification agency in order to qualify for points for their B-BBEE status level as an incorporated entity. Sworn affidavits for joint ventures will not be considered.	0
Financial Offer / Price:				
Financial Offer/Price	90	Formula=2 Option 1,A=(1-{p-pm/pm})	Formula used to calculate financial offer/price points	
		Pm=The comparative Price offer of the mean/average quantifying tenderer		
		P=The comparative offer of the tender under consideration		
	100			

BBBEE

A bidder must submit proof of B-BBEE status level of contributor. A tenderer failing to submit proof of B-BBEE status level of contribution or is a non-compliant contributor to B-BBEE may not be disqualified, but may only score points out of 80 for price; and scores 0 points out of 20 for B-BBEE.

Bidders who qualify as EMEs should submit Original Sworn affidavit signed by the EME representative and attested by a Commissioner of oaths.

Joint Ventures / Consortia entities must submit a consolidated B-BBEE certificate from SANAS-Accredited verification agency in order to qualify for points for their B-BBEE status level as an unincorporated entity. Including EMEs and QSE, sworn affidavit Join Venture will not be considered as is not valid.

Part T2: Returnable documents

BID No: DOE/NCSIP/2022/10/02

1. LIST OF RETURNABLE SCHEDULES

Returnable Schedules required only for tender evaluation purposes (certified copies not older than six months or originals of the following documents):

No	Non Statutory (Non Compulsory) Requirements	Non Statutory (Non Compulsory) Requirements Description
1	Checklist for Tender Submission	Checklist for Tender Submission
2	Details of Tender	Details of Tender
3	Tax Compliance Status	Submission of valid Tax compliance status form (PIN)
4	Certificate of Compliance with Tender Documentation	Certificate of Compliance with Tender Documentation
5	Banking Details	Bank Account Confirmation Letter
6	Letter of Intent to Provide Security / Guarantee	Letter of Intent to Provide Security/ Guarantee from accredited financial institution
7	Contractor's Health and Safety Declaration	Contractor's Health and Safety Declaration
8	Litigation History	Litigation History – bidder to disclose all the pending litigations against their company
9	Past Projects undertaken by the Tenderer in the last 10 years	Past Completed Projects undertaken by the Tenderer in the last 10 years
10	BBBEE certificate	<p>Points allocated to entities who are contributing towards the empowerment of black people (an Original Sworn Affidavit B-BBEE or SANAS accredited B-BBEE Certificate MUST be submitted with the bid documents before any points can be allocated)</p> <p>Bidders to submit Original Sworn Affidavit B-BBEE or SANAS certified copies not older than 6 months).</p> <p>Joint Ventures / Consortia entities must submit a consolidated B-BBEE certificate from SANAS-Accredited verification agency in order to qualify for points for their B-BBEE status level as an incorporated entity. Sworn affidavits for joint ventures will not be considered.</p>
11	Tenderer's Competence & Performance on Similar Projects	Tenderer's Competence & Performance on Similar Projects
12	Record of Addenda to Tender Documents	Record of Addenda to Tender Documents
13	Proposed amendments and Qualifications	Proposed amendments and Qualifications
14	Method Statement	Method Statement
15	Detailed Construction Programme	Detailed Construction Programme
16	Detailed Cash-Flow	Detailed Cash-Flow
17	Key Personnel	Curriculum Vitae of Key Personnel and Certified Qualifications that are not older than 6 months
18	Proposed Project Organogram	Proposed Project Organogram
19	Detailed Resourcing schedule	Detailed Resourcing schedule
20	Schedule of Proposed Domestic Sub-Contractors	Schedule of Proposed Domestic Sub-Contractors
21	Schedule of Plant and Equipment	Schedule of Plant and Equipment
22	Trade References	Trade References
23	Contractor's Safety Record	Contractor's Safety Record
24	Project Specific SHEQ Plan	Project Specific SHEQ Plan

Notes:

1. Tenderers are required to score minimum points of 70 for Functionality stated in tender data.
2. Tenderers who fail to meet the required minimum number of points for functionality stated in the tender data will not be evaluated further.
3. Tenderers who fail to submit information as per the returnable schedules will not be allocated points.

T2.1.20 EVALUATION SCHEDULE: CLIENT REFERENCES MUST BE ALIGNED TO SUBMITTED PROJECTS

EVALUATION SCHEDULE: EXPERIENCE ON PREVIOUS PROJECTS REFERENCES

The Tenderer shall provide details of his performance on each of the previous projects listed in the "Relevant Experience" returnable schedule. "Client Reference Scorecards" will be completed by each of the respective Clients for the projects listed in the "Previous Experience" returnable schedule.

REPORT ON BIDDER'S COMPETENCE & PERFORMANCE ON A PROJECT FOR TENDER RECOMMENDATION PURPOSES

The following are to be completed by the Client or principal agent and is to be supported in each case accompanied by Signed Appointment Letter; (ii) Signed and Stamped Reference (in the form issued to the tenderer); Practical or Final Completion

PROJECT NAME A:

Type of Project, e.g.:

.....
(New school, renovation of clinic, general scope, etc.)

Client:

Tender Amount:

Name of Project and description:

Contract Duration:.....

RATE SERVICE PROVIDER ON THEIR OVERALL PERFORMANCE

DESCRIPTION	SCORE	TICK APPROPRIATE SCORING
Very Good	3	
Good	2	
Fair	1	
Poor	0	

Any other remarks considered necessary to assist in evaluation of the Service Provider?

.....
Client's contact person:.....

Telephone:.....

I hereby declare that to the best of my knowledge, information completed above is true and correct and I understand that I will be held responsible for any misrepresentation.

Client Signature:

Date:.....

STAMP

T2.1.20 EVALUATION SCHEDULE: CLIENT REFERENCES MUST BE ALIGNED TO SUBMITTED PROJECTS

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REPORT ON BIDDER'S COMPETENCE & PERFORMANCE ON A PROJECT FOR TENDER RECOMMENDATION PURPOSES

The following are to be completed by the Client or principal agent and is to be supported in each case accompanied by Signed Appointment Letter; (ii) Signed and Stamped Reference (in the form issued to the tenderer); Practical or Final Completion

PROJECT NAME A:

Type of Project, e.g.:

.....
(New school, renovation of clinic, general scope, etc.)

Client:

Tender Amount:

Name of Project and description:

Contract Duration:.....

RATE SERVICE PROVIDER ON THEIR OVERALL PERFORMANCE

DESCRIPTION	SCORE	TICK APPROPRIATE SCORING
Very Good	3	
Good	2	
Fair	1	
Poor	0	

Any other remarks considered necessary to assist in evaluation of the Service Provider?

.....
Client's contact person:

Telephone:

I hereby declare that to the best of my knowledge, information completed above is true and correct and I understand that I will be held responsible for any misrepresentation.

Client Signature:

Date:.....

STAMP

Part T2: Returnable documents

BID No: DOE/NCSIP/2022/10/02

T2.1.20 EVALUATION SCHEDULE: CLIENT REFERENCES MUST BE ALIGNED TO SUBMITTED PROJECTS

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PROJECT NAME A:

Type of Project, e.g.:

.....
(New school, renovation of clinic, general scope, etc.)

Client:

Tender Amount:

Name of Project and description:

Contract Duration:.....

RATE SERVICE PROVIDER ON THEIR OVERALL PERFORMANCE

DESCRIPTION	SCORE	TICK APPROPRIATE SCORING
Very Good	3	
Good	2	
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Any other remarks considered necessary to assist in evaluation of the Service Provider?

.....

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Telephone:.....

I hereby declare that to the best of my knowledge, information completed above is true and correct and I understand that I will be held responsible for any misrepresentation.

Client Signature:

Date:.....

STAMP

Part T2: Returnable documents

BID No: DOE/NCSIP/2022/10/02

T2.1.20 EVALUATION SCHEDULE: CLIENT REFERENCES MUST BE ALIGNED TO SUBMITTED PROJECTS

EVALUATION SCHEDULE: EXPERIENCE ON PREVIOUS PROJECTS REFERENCES

The Tenderer shall provide details of his performance on each of the previous projects listed in the "Relevant Experience" returnable schedule. "Client Reference Scorecards" will be completed by each of the respective Clients for the projects listed in the "Previous Experience" returnable schedule.

REPORT ON BIDDER'S COMPETENCE & PERFORMANCE ON A PROJECT FOR TENDER RECOMMENDATION PURPOSES

The following are to be completed by the Client and is to be supported in each case accompanied by Signed Appointment Letter; (ii) Signed and Stamped Reference (in the form issued to the tenderer) Practical or Final Completion

PROJECT NAME A:

Type of Project, e.g.:

.....
(New school, renovation of clinic, general scope, etc.)

Client:

Tender Amount:

Name of Project and description:

Contract Duration:.....

RATE SERVICE PROVIDER ON THEIR OVERALL PERFORMANCE

DESCRIPTION	SCORE	TICK APPROPRIATE SCORING
Very Good	3	
Good	2	
Fair	1	
Poor	0	

Any other remarks considered necessary to assist in evaluation of the Service Provider?

.....
Client's contact person:.....

Telephone:.....

I hereby declare that to the best of my knowledge, information completed above is true and correct and I understand that I will be held responsible for any misrepresentation.

Client Signature: **Date:**.....

STAMP

T2.1.20 EVALUATION SCHEDULE: CLIENT REFERENCES MUST BE ALIGNED TO SUBMITTED PROJECTS

EVALUATION SCHEDULE: EXPERIENCE ON PREVIOUS PROJECTS REFERENCES

The Tenderer shall provide details of his performance on each of the previous projects listed in the "Relevant Experience" returnable schedule. "Client Reference Scorecards" will be completed by each of the respective Clients for the projects listed in the "Previous Experience" returnable schedule.

REPORT ON BIDDER'S COMPETENCE & PERFORMANCE ON A PROJECT FOR TENDER RECOMMENDATION PURPOSES

The following are to be completed by the Client or principal agent and is to be supported in each case accompanied by Signed Appointment Letter; (ii) Signed and Stamped Reference (in the form issued to the tenderer); Practical or Final Completion

PROJECT NAME A:

Type of Project, e.g.:

.....
(New school, renovation of clinic, general scope, etc.)

Client:

Tender Amount:

Name of Project and description:

Contract Duration:.....

RATE SERVICE PROVIDER ON THEIR OVERALL PERFORMANCE

DESCRIPTION	SCORE	TICK APPROPRIATE SCORING
Very Good	3	
Good	2	
Fair	1	
Poor	0	

Any other remarks considered necessary to assist in evaluation of the Service Provider?

.....
Client's contact person:.....

Telephone:.....

I hereby declare that to the best of my knowledge, information completed above is true and correct and I understand that I will be held responsible for any misrepresentation.

Client Signature: **Date:**.....

STAMP

T2.1.20 EVALUATION SCHEDULE: CLIENT REFERENCES MUST BE ALIGNED TO SUBMITTED PROJECTS

EVALUATION SCHEDULE: EXPERIENCE ON PREVIOUS PROJECTS REFERENCES

The Tenderer shall provide details of his performance on each of the previous projects listed in the "Relevant Experience" returnable schedule. "Client Reference Scorecards" will be completed by each of the respective Clients for the projects listed in the "Previous Experience" returnable schedule.

REPORT ON BIDDER'S COMPETENCE & PERFORMANCE ON A PROJECT FOR TENDER RECOMMENDATION PURPOSES

The following are to be completed by the Client or principal agent and is to be supported in each case accompanied by Signed Appointment Letter; (ii) Signed and Stamped Reference (in the form issued to the tenderer); Practical or Final Completion

PROJECT NAME A:

Type of Project, e.g.:

.....
(New school, renovation of clinic, general scope, etc.)

Client:

Tender Amount:

Name of Project and description:

Contract Duration:.....

RATE SERVICE PROVIDER ON THEIR OVERALL PERFORMANCE

DESCRIPTION	SCORE	TICK APPROPRIATE SCORING
Very Good	3	
Good	2	
Fair	1	
Poor	0	

Any other remarks considered necessary to assist in evaluation of the Service Provider?

.....
Client's contact person:.....

Telephone:.....

I hereby declare that to the best of my knowledge, information completed above is true and correct and I understand that I will be held responsible for any misrepresentation.

Client or Principal Agent Signature:..... **Date:**.....

STAMP

Relevant Experience (Returnable schedule)

The Tenderer shall provide details of his performance on each of the previous relevant projects. Failure to complete the table below will result in no points allocated. No “see attached” will be accepted

PROJECT DESCRIPTION	PROJECT VALUE (Including VAT)	START DATE	COMPLETION DATE
A			
B			
C			
D			
E			

Record of Addenda to tender documents

We confirm that the following communications received from the Employer 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.		
6.		
7.		
8.		

Attach additional pages if more space is required.

Signed	Date
Name	Position
Identity number
Tenderer

SCHEDULE OF PLANT AND EQUIPMENT

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract if my / our tender is accepted. **(Please attach proof of ownership of plant owned)**

(a) **Details of major equipment owned by me / us and immediately IVavailable for this contract.**

PLANT AND EQUIPMENT	DESCRIPTION (type, size, capacity etc.)	LICENSE NUMBER	YEAR OF MANUFACTURE
<i>Plant and Equipment 1</i>			
<i>Plant and Equipment 2</i>			
<i>Plant and Equipment 3</i>			
<i>Plant and Equipment 4</i>			

Attach additional pages if more space is required

(b) **Details of major equipment that will be hired, or acquired for this contract if my / our tender is accepted**

PLANT AND EQUIPMENT	DESCRIPTION (type, size, capacity etc.)	LICENSE NUMBER	HOW ACQUIRED	
			HIRE/ BUY	SOURCE
<i>Plant and Equipment 1</i>				
<i>Plant and Equipment 2</i>				
<i>Plant and Equipment 3</i>				
<i>Plant and Equipment 4</i>				

Attach additional pages if more space is required

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

Failure to complete this form properly and correctly, will lead to the conclusion that the tenderer does not have the necessary plant and equipment resources at his disposal, which will prejudice his tender.

SIGNATURE: IDENTITY NUMBER:

(of person authorised to sign on behalf of the Tenderer)

DATE:

REFERENCES

The following is a statement of traceable, current References (suppliers and/or plant hire):

[illegible]

SIGNATURE: IDENTITY NUMBER:

(of person authorised to sign on behalf of the Tenderer)

DATE:.....

KEY PERSONNEL

In terms of the Project Specification and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

The bidder shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

Note: Please Note for grade **7GB**: Projects Manager must be professionally registered with the SACPCMP as Project Manager. (No points will be allocated to the **7GB** if the requirement is not met on the qualification and experience)

No.	Key Person Name	Category of key personnel	Qualifications	Professional Registration	Years of Experience
1.		Projects Manager (No points will be allocated to the 7GB if the requirement on the note above (Professional Registration) is not met on the qualification and experience)			
2.		Site Agent			
3.		Foreman;			
4.		OHS Officer			

The Tenderer shall attach hereto the *curricula vitae*, in the form included hereafter, of at least the site agent and the project manager. The information is necessary for evaluation of the tender.

SIGNATURE: IDENTITY NUMBER:

(of person authorised to sign on behalf of the Tenderer)

DATE:.....

***This section must be completed in full and aligned to attachments organogram submitted
failure to do so will result in no allocation of points***

CURRICULUM VITAE OF KEY PERSONNEL (COMPULSORY)

(CVs and Certified Qualifications that are not older than 6 months are required only for site agent and contract or project manager).

CV FOR PROJECT MANAGER

Name:	Date of birth:
Profession:	Nationality:
Qualifications:	
Professional Registration Number:	
Name of Employer :	
Current position:	Years of Experience:
<u>Employment Record:</u>	
<u>Relevant Experience Required:</u>	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

.....
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....
DATE

.....
INCUMBANT'S IDENTITY NUMBER

CV FOR SITE AGENT

Name:	Date of birth:
Profession:	Nationality:
Qualifications:	
Professional Registration Number:	
Name of Employer:	
Current position:	Years of Experience:
<u>Employment Record:</u>	
<u>Relevant Experience Required:</u>	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

.....
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....
DATE

.....
INCUMBANT'S IDENTITY NUMBER

CV FOR FOREMAN

Name:	Date of birth:
Profession:	Nationality:
Qualifications:	
Professional Registration Number:	
Name of Employer :	
Current position:	Years of Experience:
<u>Employment Record:</u>	
<u>Relevant Experience Required:</u>	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

.....
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....
DATE

.....
INCUMBANT'S IDENTITY NUMBER

CV FOR OHS Officer

Name:	Date of birth:
Profession:	Nationality:
Qualifications:	
Professional Registration Number:	
Name of Employer :	
Current position:	Years of Experience:
<u>Employment Record:</u>	
<u>Relevant Experience Required:</u>	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

.....
SIGNATURE OF THE INCUMBANT IN THE SCHEDULE

.....
DATE

.....
INCUMBANT'S IDENTITY NUMBER

PRELIMINARY PROGRAMME

The Tenderer shall **attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this Contract**. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of his Tender.

NOTE: ONLY COMPUTIRSED PRELIMINARY PROGRAM WILL BE CONSIDERED
--

PROGRAMME (EXAMPLE ONLY)

ACTIVITY	MONTHS									
	1	2	3	4	5	6	7	8	9	10

[Note: The programme must be based on the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed in Table (b) of Form I hereafter and supported by a detailed statement to that effect, all as specified in the Tender Data]

The following aspects of the preliminary programme will be considered:

- *Programme Heading*
- *The programme is specific and tailored for the execution of the project, is comprehensive and is logically correct*
- *The activities are well articulated with headings and sub headings and show relevant milestones*
- *The activities that occur simultaneously are showing*
- *The activities that depend on each other are linked*
- *The activities that required stages are indicated*
- *Milestones are shown*
- *There are resources aligned / embedded to the programme*
- *Cause and effect of the programme can be determined such that the critical path is shown*
- *The lead times and lag times are clear and being considered for ordering of materials and staffing requirements*
- *Non-Working Days and Been Taken Into Consideration*
- *Has the Programme been divided into Phases*
- *The Cash Flow to Relate to the Programme*
- *The programme to show resource histogram*
- *The Resource Histogram to Show Unskilled Labour*

SIGNATURE: IDENTITY NUMBER:

(of person authorised to sign on behalf of the Tenderer)

DATE:.....

PART A

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE INDEPENDENT DEVELOPMENT TRUST					
BID NUMBER:	DOE/NCSIP/2022/10/02	CLOSING DATE:	02 DECEMBER 2022	CLOSING TIME:	12h00
DESCRIPTION	CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED					
OLD MAGISTRATE COURT 21-23 MARKET SQUARE					
Kimberly					
8301					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Mr Boipelo Koloti		CONTACT PERSON	Mr Ulunji Msiska	
TELEPHONE NUMBER	071 892 1242		TELEPHONE NUMBER	011 894 7615	
FACSIMILE NUMBER	N/A		FACSIMILE NUMBER	N/A	
E-MAIL ADDRESS	BoipeloK@idt.org.za		E-MAIL ADDRESS	admin@umconsultants.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
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		a) ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS 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?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
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:
<p>1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.</p> <p>1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED- (NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</p> <p>1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE JOINT BUILDING CONTRACT COMMITTEE (JBCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT</p> <p>1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A JBCC AGREEMENT.</p>
2. TAX COMPLIANCE REQUIREMENTS
<p>2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.</p> <p>2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.</p> <p>2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.</p> <p>2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.</p> <p>2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.</p> <p>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.</p> <p>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."</p>

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:

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

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

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

2. Bidder's declaration

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

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

Full Name	Identity Number	Name of State institution

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

2.2 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**

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

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

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

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

- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

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

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

.....
Signature Date

.....
Position Name of bidder

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- 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

- a) The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable; or
- b) The 90/10 preference point system will be applicable to this tender

1.3 Points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contributor.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	90
B-BBEE STATUS LEVEL OF CONTRIBUTOR	10
Total points for Price and B-BBEE must not exceed	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“prices”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contributor”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A Sworn affidavit as prescribed by the B-BBEE Codes of good practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

80/20

or

90/10

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for price of bid under consideration

P_t = Price of bid under consideration

P_{\min} = Price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

- 6.1 B-BBEE Status Level of Contributor: . = (maximum of 10 or 20 points)
(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.)

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?
(*Tick applicable box*)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

- 7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES		NO	
-----	--	----	--

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at least 51% owned by:	EME ✓	QSE ✓
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. **DECLARATION WITH REGARD TO COMPANY/FIRM**

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 **TYPE OF COMPANY/ FIRM**

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

8.5 **DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

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

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we 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 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding 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 by the National Treasury 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.

WITNESSES

- 1.
- 2.

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:
ADDRESS

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) on the date of advertisement of the bid as indicated in paragraph 3.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

1.6 A bid may be disqualified if –

(a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

3.

Item	Description of Service	Stipulated Minimum Threshold
A	Roof Sheeting	100%
B	Reinforcing bars	100%
C	Window Frames	100%
D	Door Frames	100%
E	Gutters and Downpipes	100%
F	Wire Products	100%

3. Does any portion of the services, works or goods offered have any imported content?

(Tick applicable box)

YES		NO	
-----	--	----	--

3.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za.

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

4. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO.

ISSUED BY: (Procurement Authority / Name of Institution):

.....
NB

1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names),

do hereby declare, in my capacity as

of(name of bidder entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that:

- (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (ii) the declaration templates have been audited and certified to be correct.

(c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

(C1)	Tender No.	DOE/NCSIP/2022/10/02
(C2)	Tender description:	JTG School Phase 2B
(C3)	Designated product(s)	Steel Products and components for construction
(C4)	Tender Authority:	Independent Development Trust
(C5)	Tendering Entity name:	
(C6)	Tender Exchange Rate:	Pula <input type="text" value="0"/>
(C7)	Specified local content %	

Bill Page
No.

(C20) Total tender value	R 0	
(C21) Total Exempt imported content	R 0	
7/ Tender value net of exempt imported content	R 0	
(C23) Total Imported content		R
(C24) Total local content		R
(C25) Average local content % of tender		

Date: _____

(D1)	Tender No.	
(D2)	Tender description:	
(D3)	Designated Products:	
(D4)	Tender Authority:	
(D5)	Tendering Entity name:	
(D6)	Tender Exchange Rate:	Pula

EU	R 9,00	GBP	R 12,00
----	--------	-----	---------

Summary

(D19) Total exempt imported value	R 0
-----------------------------------	-----

Summary

(D32) Total imported value by tenderer	B 0
--	-----

Summary

(D45) Total imported value by 3rd party	R 0
---	-----

Summary of payments

Local value of payments

(D51)

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above	R 0
--	-----

**This total must correspond with
Annex C - C 23**

INDEPENDENT DEVELOPMENT TRUST

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:

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

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

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

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

.....

..... Rand (in words);

R (in figures)

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

Signature Date

Name Identity number

Capacity

for the tenderer

(Name and
address of

organization)
Name and

signature of witness
.....

NOTE: Failure of a Bidder to complete and sign this part of the tender form (offer) in full including witnessing will invalidate the tender.

ACCEPTANCE

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

The terms of the contract, are contained in:

- Part C1: Agreements and contract data, (which includes this agreement)
- Part C2: Pricing data
- Part C3: Scope of work.
- Part C4: Site information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

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

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

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

Signature	Date
Name	Identity number
Capacity	
for the Employer	
	INDEPENDENT DEVELOPMENT TRUST
	OLD MAGISTRATE COURT
	21-23 MARKET SQUARE
	KIMBERLY
	8301
Name and signature of witness	
	Date

Schedule of Deviations

1 Subject
Details
.....
.....
.....

2 Subject
Details
.....
.....
.....

3 Subject
Details
.....
.....

4 Subject
Details
.....
.....

5 Subject
Details
.....

By the duly authorized representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

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

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

C1.2 Contract Data for BID NO: DOE/NCSIP/2022/10/02

The Conditions of Contract are clauses 1 to 41 of the **JBCC Series 2000 Principal Building Agreement (Edition 4.1 March 2005)** published by the Joint Building Contracts Committee.

The contractor shall achieve in the performance of the contract the Contract Skills Development Goal (CSDG) established in the CIDB Standard for Developing Skills through Infrastructure Contracts published in Gazette Notice No. 43495 of 3 July 2020.

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

Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors (011-3154140), Master Builders Association (011-205-9000; 057-3526269) South African Association of Consulting Engineers (011-4632022) or South African Institute of Architects (051-4474909; 011-4860684; 053-8312014;)

The JBCC Principal Building Agreement makes several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the JBCC Principal Building Agreement.

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

The additions, deletions and alterations to the JBCC Principal Agreement are:

Clause Additions, deletions and alterations

- 1.1 Replace the following definitions in **DEFINITIONS AND INTERPRETATIONS** with the following wording:
- AGREEMENT** means the agreement arising from the signing of the Form of Offer and Acceptance by the parties.
- BILLS OF QUANTITIES** means the document drawn up in accordance with the Pricing Instructions contained in the Pricing Data.
- CONSTRUCTION PERIOD** means the period commencing on the date of site hand over and ending on the date of practical completion.
- CONTRACT DOCUMENTS** means the Agreement and all documents referenced therein.
- CONTRACT DRAWINGS** means the drawings listed in the Scope of Work.
- CONTRACT SUM** means the total of prices in the Form of Offer and Acceptance.
- SCHEDULE** means the variables listed in the Contract Data.
- CORRUPT PRACTICE** means the offering, giving, receiving and soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution
- FRAUDULENT PRACTICE** means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer, and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.
- INTEREST** means the interest rates applicable to 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).

SECURITY means the form of security provided by the **employer** or **contractor**, as stated in the **schedule**, from which the **contractor** or **employer** may recover expense or loss.

1.6 Any notice given may be delivered by hand, sent by prepaid registered post or telefax. Notice shall be presumed to have been duly given when:
Delete sub-clause 1.6.4

3.5 Delete sub-clause 3.5

3.6 Delete sub-clause 3.6.

3.7 Add to the end thereof:

The **contractor** shall supply and keep a copy of the **JBCC Series 2000 Principal Building Agreement and Preliminaries** applicable to this contract on the site, to which the **employer**, **principal agent** and **agents** shall have access at all times.

3.9 Delete sub-clause 3.9

3.10 Replace the second reference to "**principal agent**" with the word "**employer**".

4.3 No clause

5.1.2 Under clause 41 – include reference 32.6.3; 34.3; 34.4 and 38.5.8 in terms of which the **employer** has retained its authority and has not given a mandate to the **principal agent** and in terms of which the **employer** shall sign all documents.

9 Clause 9.0 is amended by adding Clause 9.1.4:

The **contractor** indemnifies and holds harmless the **employer** against all liability, losses, claims, damages, penalties, actions, proceedings or judgments (collectively referred to as "Losses") arising from any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the **contractor**, but such indemnity shall not cover any use of the equipment of part thereof otherwise than in accordance with the provisions of the specification. All payments and royalty's payable in one sum or by installments or otherwise shall be included by the **contractor** in the price and shall be paid by him to those to whom they may be payable. The **contractor** shall reimburse the **employer** for all legal and other costs and expenses, including without limitation attorney's fees on attorney-client scale incurred by the **employer** in connection with investigation, defending or settling any Losses in connection with pending or threatening litigation in which the **employer** is a party.

10.5 Add the following as 10.5:

Damage to the works

(a) Without any way limiting the **contractor's** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary.

(b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**.

(c) The **employer** shall carry the risk of damage to or destruction of the **works** and materials paid for by The **employer** that is the result of the expected risks as set out in 10.6.

(d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof.

10.6 Add the following as 10.6:

Injury to Persons or loss of or damage to Properties

- (a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable.
- (b) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immoveable 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, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable.
- (c) The **contractor** shall upon receiving a **contract instruction** from the **principal agent** cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost therefore from the **contractor** or to deduct the same from amounts due to the **contractor**.
- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**.
- (e) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed.
- (f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and / or repair such property and to execute the **works**.

10.7 Add the following as 10.7:

HIGH RISK INSURANCE

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

10.7.1 **Damage to the works**

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

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

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

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

The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property or 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 construction.

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the **commencement date** but before commencement of the **works** submit to the **employer** proof of such insurance policy, if requested to do so.

10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred subsequent upon the **contractor's** default of his obligations as set out in 10.7.1, 10.7.2 and 10.7.3. 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 on indivisible whole.

15.1.4 Add 15.1.4 as follows:

An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within twenty-one (21) **calendar days** of date of acceptance of the tender.

15.2.1 Under 41: Amend to read as follows:

Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1

20.1.3 No clause.

21 Replace sub-clauses 21.1.2 to 21.1.4 and 21.2 to 21.6 with the following:

The **contractor** and **principal agent** shall appoint a **selected subcontractor** in accordance with the provisions of the Scope of Work.

29 Clause 29.0 is amended by: -

i) The addition of the following clauses: -

Clause 29.9

"Revision to the date for **practical completion** shall only be considered when work on the critical path of the agreed programme for the works is delayed."

ii) Clause 29.10 – Acceleration

Clause 29.10.1

Irrespective of whether or not the **principal agent** rules that the **contractor** is entitled to an extension of time or a revision of the date for **practical completion**, the **principal agent** shall nevertheless, at any time, be entitled to instruct the **contractor** in writing to accelerate the progress of the remaining **works** to ensure that the **works** are completed by the original date for **practical completion** or revised date as the case may be.

Clause 29.10.2

Upon receipt of such instruction, the **contractor** shall take all necessary steps to ensure that the

works are completed timeously including the provision by him of additional resources, plant, manpower, etc. and the working overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The **contractor** shall prove that such steps are being taken if called upon to do so.

Clause 29.10.3

The **contractor's** entitlement to compensation arising out of or in respect of any revision to the date for **practical completion** that may have been granted by the **principal agent** or alternatively where the **principal agent** has instructed the **contractor** to accelerate, shall be adjudicated strictly in terms of clause 32.

- 30.1 Replace reference to 36.3 at end of sentence with 36.0

- 31.12 Delete "Payment shall be subject to the **employer** giving the **contractor** a **tax** invoice for the amount due."

- 32.5.1 Add the following to the end of each of these clauses: "... due to no fault of the **contractor**."
- 32.5.4
- 32.5.7

- 32.12 Delete sub-clause

- 34.2 Add # next to 34.2

- 34.13 Replace "seven (7) **calendar days**" with "thirty-one (31) **calendar days**" and delete the words "subject to the **employer** giving the **contractor** a **tax** invoice for the amount due"

- 36.1 Add the following clauses 36.1.3 to 36.1.5 under 36.1 to read as follows:

- 36.1.3 The **contractor's** refusal or neglect to comply strictly with any of the conditions of contract.

- 36.1.4 The **contractor's** estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force with the Republic of South Africa.

- 36.1.5 The **contractor**, in the judgment of the **employer**, has engaged in **corrupt** or **fraudulent practices** in competing for or in executing the contract.

- 36.3 Replace "**principal agent**" with "**employer**".

- 37.3.5 Replace "ninety (90)" with "one hundred and twenty (120)".
- 38.5.4

- 39.3.5 Add the following words at the end thereof: "within one hundred and twenty (120) **working days** of completion of such a report."

- 1.1 Delete in the Substitute Provisions (41.0 State Clauses) clause 41.1.3 the definitions for
- (41.1.3) **CONSTRUCTION PERIOD** and **INTEREST**. Sub-clause 1.1 definitions will apply (see contract data)

- 10.1 Delete in the Substitute Provisions (41.0 State Clauses) clauses 10.1, 10.2 and 10.4 so that the
- 10.2 provisions of sub-clauses 10.1, 10.2 and 10.4 of the non-**state** clauses will apply to the **state**.
- 10.4
- (41.0)

- 11.1 Delete in the Substitute Provisions (41.0 State Clauses) clause 11.1 so that the provisions of clause 11.1
- (41.0) of the non-**state** clause will apply to the **state**.

- 12.1 Delete in the Substitute Provisions (41.0 State Clauses) clause 12.1 so that the provisions of clause 12.1
- (41.0) of the non-**state** clause will apply to the **state** and replace "**contractor**" in clause 10.1 in the Substitute

Provisions (41.0 State Clauses) with “The party responsible in terms of 12.1”

- 12.2 Amend the first part of the first sentence in clause 12.2 of the Substitute Provisions (41.0 State Clauses)
(41.0) to read “Where the **contractor** is responsible for insurances, the **contractor** shall”
- 31.11.1 Delete in the Substitute Provisions (41.0 State Clauses) sub-clauses 31.11.1 and 31.11.2 so that the
31.11.2 provisions of sub-clause 31.11.1 of the non-**state** clause will apply to the **state**.
(41.0)
- 36.7 Add in the Substitute Provisions (41.0 State Clauses) as clauses 36.7, 37.5 and 39.5, the following:
37.5 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the **employer** or
39.5 the **contractor**, or for any reason whatsoever, the **contractor** shall on written instruction, discontinue
(41.0) with the **works** on a stated date and withdraw himself from the **site**. The contractor shall not be entitled to
refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of
any other right whatsoever.
- 40.2.1 Delete in the Substitute Provisions (41.0 State Clauses) clauses 40.2.1, 40.2.2, 40.3, 40.4, 40.5 and 40.6
40.2.2 and replace with the following:
40.3
40.4
40.5
40.6
(41.0)
- 40.1 Should any dispute between the **employer**, his **agents** or **principal agent** on the one hand and
the contractors on the other arise out of this **agreement**, such dispute shall be referred to
adjudication.
- 40.2 Adjudication shall be conducted in accordance with the edition of the JBCC Rules for Adjudication
current at the time when the dispute is declared. The party, which raises the dispute, shall select
three adjudicators from the panel of adjudicators published by the South African Institution of Civil
Engineering or Association of Arbitrators (Southern Africa), determine their hourly fees and
confirm that these adjudicators are available to adjudicate the dispute in question. The other party
shall then select within 7 days one of the three nominated adjudicators, failing which the chairman
for the time being of the Association of Arbitrators (Southern Africa) shall nominate an adjudicator.
The **adjudicator** shall be appointed in terms of the Adjudicators Agreement set out in C1.4.
- 40.3 If provided in the **schedule**, a dispute shall be finally settled by a single Arbitrator to be agreed on
between the parties or, failing such agreement within 28 days after referring the dispute to
Arbitration, an Arbitrator nominated by the chairman for the time being of the Association of
Arbitrators (Southern Africa). Any such reference shall be deemed to be a submission to the
arbitration of a single arbitrator in terms of the Arbitration Act (Act No 42 of 1965, as amended), or
any legislation passed in substitution thereof. In the absence of any other agreed procedure, the
arbitration shall take place in accordance with the Rules for the Conduct of Arbitrations issued by
the Association of Arbitrators (Southern Africa) which are current at the time of the referral to
arbitration. The Arbitrator shall, in his award, set out the facts and the provisions of the contract
on which his award is based.
- 40.4 If the **schedule** provides for court proceedings to finally resolve disputes, disputes shall be
determined by court proceedings.

The additions to the JBCC Principal Agreement are:

Clause	Additions	
A1	A1.0	Labour intensive component of the works
	A1.1	Payment of labor-intensive component of the works. Payment for works identified in the Scope of Work as being labor-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.
	A1.2	Applicable labour laws The Ministerial Determination, Special Public Works Programme, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° 35310 04 May 2012, as reproduced below, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.
	1	Introduction
	1.1	This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.
	1.2	In this document – (a) “department” means any department of the State, implementing agent or contractor; (b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP; (c) “worker” means any person working in an elementary occupation on a SPWP; (d) “elementary occupation” means any occupation involving unskilled or semi-skilled work; (e) “management” means any person employed by a department or implementing agency to administer or execute an SPWP; (f) “task” means a fixed quantity of work; (g) “task-based work” means work in which a worker is paid a fixed rate for performing a task; (h) “task-rated worker” means a worker paid on the basis of the number of tasks completed (i) “time-rated worker” means a worker paid on the basis of the length of time worked.
	2	Terms of Work
	2.1	Workers are employed on a temporary basis or contract basis.
	3	Normal Hours of Work
	3.1	An employer may not set tasks or hours of work that require a worker to work– (a) more than forty hours in any week; (b) on more than five days in any week; and (c) for more than eight hours on any day.
	3.2	An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
	4	Meal Breaks
	4.1	A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

	4.2	An employer and worker may agree on longer meal breaks.
	4.3	A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
	4.4	A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.
	5	Special Conditions for Security Guards
	5.1	A security guard may work up to 55 hours per week and up to eleven hours per day.
	5.2	A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.
	6	Daily Rest Period
		Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.
	7	Weekly Rest Period
		Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").
	8	Sick Leave
	8.1	Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
	8.2	A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.
	8.3	A worker may accumulate a maximum of twelve days' sick leave in a year.
	8.4	Accumulated sick-leave may not be transferred from one contract to another contract.
	8.5	An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
	8.6	An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
	8.7	An employer must pay a worker sick pay on the worker's usual payday.
	8.8	Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
		(a) absent from work for more than two consecutive days; or
		(b) absent from work on more than two occasions in any eight-week period.
	8.9	A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorized to issue medical certificates indicating the duration and reason for incapacity.
	8.10	A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.
	9	Maternity Leave
	9.1	A worker may take up to four consecutive months' unpaid maternity leave.
	9.2	A worker is not entitled to any payment or employment-related benefits during maternity leave.

	9.3	A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
	9.4	A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
	9.5	A worker may begin maternity leave –
		<ul style="list-style-type: none"> (a) four weeks before the expected date of birth; or (b) on an earlier date – <ul style="list-style-type: none"> (i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or (ii) if agreed to between employer and worker; or (c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
	9.6	A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
	10	Family responsibility leave
	10.1	Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -
		<ul style="list-style-type: none"> (a) when the employee's child is born; (b) when the employee's child is sick; (c) in the event of a death of – <ul style="list-style-type: none"> (i) the employee's spouse or life partner; (ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.
	11	Statement of Conditions
	11.1	<p>An employer must give a worker a statement containing the following details at the start of employment –</p> <ul style="list-style-type: none"> (a) the employer's name and address and the name of the SPWP; (b) the tasks or job that the worker is to perform; and (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract; (d) the worker's rate of pay and how this is to be calculated; (e) the training that the worker will receive during the SPWP.
	11.2	An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
	11.3	An employer must supply each worker with a copy of these conditions of employment.
	12	Keeping records
	12.1	Every employer must keep a written record of at least the following –
		<ul style="list-style-type: none"> (a) the worker's name and position; (b) in the case of a task-rated worker, the number of tasks completed by the worker; (c) in the case of a time-rated worker, the time worked by the worker;

		(d) payments made to each worker.
	12.2	The employer must keep this record for a period of at least three years after the completion of the SPWP.
	13	Payment
	13.1	An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
	13.2	A worker may not be paid less than the minimum wage rate of R95 per day or per task. This will be adjusted annually on the 1 st of November in line with inflation (available CPI as provided by Stats SA six (6) weeks before implementation)
	13.3	A task-rated worker will only be paid for tasks that have been completed.
	13.4	An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
	13.5	A time-rated worker will be paid at the end of each month.
	13.6	Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
	13.7	Payment in cash or by cheque must take place –
		(a) at the workplace or at a place agreed to by the worker; (b) during the worker's working hours or within fifteen minutes of the start or finish of work; (c) in a sealed envelope which becomes the property of the worker.
	13.8	An employer must give a worker the following information in writing –
		(a) the period for which payment is made; (b) the numbers of tasks completed or hours worked; (c) the worker's earnings; (d) any money deducted from the payment; (e) the actual amount paid to the worker.
	13.9	If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.
	13.10	If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.
	14	Deductions
	14.1	An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
	14.2	An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
	14.3	An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
	14.4	An employer may not require or allow a worker to –
		(a) repay any payment except an overpayment previously made by the employer by mistake; (b) state that the worker received a greater amount of money than the employer actually paid to the worker; or

		(c) pay the employer or any other person for having been employed.
	15	Health and Safety
	15.1	Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
	15.2	A worker must –
		(a) work in a way that does not endanger his/her health and safety or that of any other person; (b) obey any health and safety instruction; (c) obey all health and safety rules of the SPWP; (d) use any personal protective equipment or clothing issued by the employer; (e) report any accident, near-miss incident or dangerous behavior by another person to their employer or manager.
	16	Compensation for Injuries and Diseases
	16.1	It is the responsibility of the employers (other than a contractor) to arrange for all persons employed to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
	16.2	A worker must report any work-related injury or occupational disease to their employer or manager.
	16.3	The employer must report the accident or disease to the Compensation Commissioner.
	16.4	An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.
	17	Termination
	17.1	The employer may terminate the employment of a worker for good cause after following a fair procedure.
	17.2	A worker will not receive severance pay on termination.
	17.3	A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
	17.4	A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
	17.5	A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
	18	Certificate of Service
	18.1	On termination of employment, a worker is entitled to a certificate stating-
		(a) the worker's full name; (b) the name and address of the employer; (c) (d) the work performed by the worker; (e) any training received by the worker as part of the SPWP;

		(f) the period for which the worker worked on the SPWP; (g) any other information agreed on by the employer and worker.
A2	A2.0	Mandatory Sub-Contracting 30% (Only for projects above R 30 Million)
	A2.1	The Contractor must sub-contract 30% of the work to Domestic Sub-Contractors. The Sub-Contractors shall have a CIDB grading.
		The Contractor shall, directly after appointment and without delay, enter into domestic sub-contracts with the Domestic Sub-Contractors and forward a copy of these agreements to the Principal Agent. The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.
		The Contractor will be responsible for all assistance and training required by the Sub-Contractor/s to complete the Project successfully. Irrespective of the mandatory sub-contracting requirement of this contract, the Contractor will at all times be the responsible party in accordance with the conditions of contract.
A3		
A4	A4.0	Attendance to Domestic Sub-Contractors in terms of clauses A2 above
	A4.1	The attendance of to the Domestic Sub-Contractor appointed in terms of clauses A2 above shall be priced under the relevant specific preliminaries item in the Preliminaries Section of the Bills of Quantities.
A5	A5.0	
	A5.1	
A6	A6.0	Expanded Public Works Programme
	A6.1	The Contractor will be required to employ staff which satisfies the EPWP requirements as per the Guidelines for the implementation of labor-intensive infrastructure projects.

Part 1: Contract Data Completed by the Employer

Clause	Item and data
1.2	<p>The Employer is THE INDEPENDENT DEVELOPMENT TRUST</p> <p>The address of the Employer is: P.O. Box 1404, Kimberly, 8301</p> <p>Telephone: 053-807 2660</p> <p>Facsimile: 015-295 6559</p> <p>Address (physical): IDT Kimberly, Old Magistrate Court, 21-23 Market Square Kimberly, 8301</p> <p>Address (postal): P.O. Box 1404, Kimberly, 8301</p>
1.3	<p>The Principal Agent is UM CONSULTANTS</p> <p>Telephone: 011 894 7615</p> <p>Facsimile: 086 733 6604</p> <p>Address (physical): Unit 20 Oakalane Office Park, Cnr Trichardt & Grippen Roads Bartlett X 91, Boksburg, 1459</p>
1.4	<p>Agent (1) is UM CONSULTANTS</p> <p>Agent's service: ARCHITECTS</p> <p>Telephone: 011 894 7615</p> <p>Facsimile: 086 733 6604</p> <p>Address (physical): Unit 20 Oakalane Office Park, Cnr Trichardt & Grippen Roads Bartlett X 91, Boksburg, 1459</p>
1.5	<p>Agent (2) is: PROCOST & ASSOCIATES</p> <p>Agent's service: Quantity Surveyors</p> <p>Telephone: 010 109 3383/4/5</p> <p>Facsimile: 010 109 3386</p> <p>Address (physical): 364 Marshall Street Polokwane 0699</p> <p>Address (postal): P.O. Box 2803, Polokwane, 0700</p>
1.6	<p>Agent (3) is: DWP CONSULTING ENGINEERS</p> <p>Agent's service: Civil and Structural Engineering</p> <p>Telephone: 018 462 6651</p> <p>Facsimile: 018 462 7910</p> <p>Address (physical): 45B Siddle Street Klerksdorp 2570</p> <p>Address (postal): P.O. Box 1504, Klerksdorp, 2570</p>

1.7

Agent (4) is: MEKAN ENGINEERING SERVICES

Agent's service: Electrical & Mechanical Engineering

Telephone: 053 832 4837

Facsimile: 053 832 1019

Address (physical): 13 Constantia Street Kimberly 8301

Address (postal): P.O. Box 3703 Kimberly 8300

2.0

The Works comprises of the

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

2.1 The **Site** is located at **DITHAKONG VILLAGE NEAR KURUMAN IN THE JOE MOROLONG LOCAL MUNICIPALITY IN NORTHERN CAPE PROVINCE**

2.2.1 CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

2.2 The Employer is an organ of **State**

- The interest 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) will apply.
- Lateral support insurance is to be effected by the **contractor**
- Payment will be made for materials and goods
- Extended **defects** liability period will apply to the following elements:
NOT APPLICABLE

2.3 Possession of the **site** is to be given on the date in the schedule providing the **employer** with **construction guarantees** in accordance with the provisions of 14.0.

Z The period for the commencement of the **works** after the **contractor** takes possession of the site is ten (10) **working days**.

For the **works** as a whole:

The date for **practical completion** is **12 Calendar Months** after contractual commencement date

The **penalty** per **calendar day** is **0.05 Cents per R100.00** of the contract value

5.11 The law applicable to the agreement shall be that of the Republic of South Africa.

5.11.1 Contract insurance is to be effected by the **contractor**.

10.1 Contract works insurance is to be effected by the **contractor** for a sum not less than the
10.2 **contract sum plus 20%** with a deductible in an amount that the **contractor** deems
12.1 appropriate.

10.1 Supplementary insurance is required. Such insurance shall comprise a Coupon Policy for
10.2 Special Risks issued by the South African Special Risk Insurance Association.
12.1

11.1, 12.1 Public liability insurance to be effected by the **contractor** for an amount of **R 10, 000,000.00** with a deductible in an amount as determined by the contractor's insurance company.

11.2, 12.1 Support insurance to be effected by the **contractor** for the sum of **NOT APPLICABLE** with a deductible in an amount that the **contractor** deems appropriate.

3.3, 15.1.3, 31.16.2 A waiver of the **contractor's** lien or right of continuing possession is not required.

3.7 Three copies of the construction documents are to be supplied to the **contractor** free of charge.

- 3.4 JBCC Engineering General Conditions are not to be included in the contract document.
- 31.5.3 The contract value is to be adjusted using CPAP indices. The base month for the application of CPAP is the month of the closing of the tender and the following alternative indices are applicable:
- 31.3 There is no latest day of the month for the issue of an interim payment certificate.
- 14.5 The employer will not provide advanced payments against an advanced payment guarantee.
- 14.2 and 14.4 The **construction guarantee** is to be a fixed guarantee in an amount of 10% of the contract sum and payment reduction
- 40.0 Dispute resolution shall be by adjudication

Part 2: Contract Data completed by the Contractor

Clause Item and data

- 1.2 The name of the Contractor is.
- The address of the contractor is:
- Telephone:
- Facsimile:
- Address (physical):
-
-
- Address (postal):
-
-

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

C1.3 Construction Guarantee

GUARANTOR DETAILS AND DEFINITIONS

Guarantor means

Physical address

Guarantor's signatory 1 Capacity

Guarantor's signatory 1 Capacity

Employer means **The Independent Development Trust**

Contractor means

Agent means **UM CONSULTANTS**

Works means **Bid no: DOE/NCSIP/2022/10/02**

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

Site means **The designated site to be shown to the contractor is at DITHAKONG VILLAGE NEAR KURUMAN IN THE JOE MOROLONG LOCAL MUNICIPALITY IN NORTHERN CAPE PROVINCE**

Agreement means **the JBCC Series 2000 Principal Agreement Edition 4.1 Code 2101 March 2005**

Contract Sum i.e. the total of prices in the Form of Offer and Acceptance inclusive of VAT

Amount in figures R

Amount in words (Rand)

Guaranteed Sum means the maximum aggregate amount of R

Amount in words (Rand)

1 The Guarantor's liability shall be limited to the amount of the Guaranteed Sum as follows:

GUARANTOR'S LIABILITY	PERIOD OF LIABILITY
Maximum Guaranteed Sum (not exceeding 10 % of the contract sum) in the amount of: (Rands) (R.....)	From and including the date of issue of this Construction Guarantee and up to and including the date of the only practical completion certificate or the last practical completion certificate where there are sections, upon which this Construction Guarantee shall expire.

2 The Guarantor hereby acknowledges that:

2.1 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 surety ship.

2.2 Its obligation under this Guarantee is restricted to the payment of money.

3 Subject to the Guarantor's maximum liability referred to in clauses 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in sub-clauses 3.1 to 3.3:

3.1 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 sub-clause 3.2

3.2 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 sub-clause 4.1 and that the sum certified has still not been paid therefore the Employer calls up this Guarantee and demands payment of the sum certified from the Guarantor.

3.3 A copy of the said payment certificate, which entitles the Employer to receive payment in terms of the Agreement of the sum certified in clause 3.

4 Subject to the Guarantor's maximum liability referred to in clause 1, the Guarantor undertakes to pay the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Guarantee stating that:

4.1 The Agreement has been cancelled due to the Contractor's default and that the Guarantee is called up in terms of clause 4. The demand shall enclose a copy of the notice of cancellation; or

4.2 A provisional sequestration or liquidation court order has been granted against the Contractor and that the Guarantee is called up in terms of clause 4. The demand shall enclose a copy of the court order.

5 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of clauses 3 and 4 shall not exceed the Guarantor's maximum liability in terms of clause 1.

6 Where the Guarantor is a registered insurer and has made payment in terms of clause 4, 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 Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this 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.

- 7 Payment by the Guarantor in terms of clause 3 or 4 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 8 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 Guarantee on account of any conduct alleged to be prejudicial to the Guarantor
- 9 The Guarantor chooses the physical address as stated above for all purposes in connection herewith.
- 10 This Guarantee is neither negotiable nor transferable and shall expire in terms of clause 1, or payment in full of the Guaranteed Sum or on the Guarantee expiry date, whichever is the earlier, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired
- 11 This Guarantee, with the required demand notices in terms of clauses 3 or 4, shall be regarded as a liquid document for the purpose of obtaining a court order.
- 12 Where this Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court 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 Court.

Signed at Date

Guarantor's
Signatory 1 Guarantor's
Signatory 2

Identity number Identity number

Witness 1 Witness 2

Guarantor's seal or stamp

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS
PHASE 2B

ADJUDICATOR'S AGREEMENT

This agreement is made on the day of between:

..... (name of company / organisation)

of

..... (address) and

..... (name of company / organisation)

of

..... (address)

(the Parties) and

..... (name)

of

..... (address)

(the Adjudicator).

Disputes or differences may arise/have arisen* between the Parties under a Contract dated

and known as.

and these disputes or differences shall be/have been* referred to adjudication in accordance with the JBCC 2000 Adjudication Rules, (hereinafter called "the Procedure") and the Adjudicator may be or has been requested to act.

* Delete as necessary

IT IS NOW AGREED as follows:

- 1 The rights and obligations of the Adjudicator and the Parties shall be as set out in the JBCC 2000 Adjudication Rules.
- 2 The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the JBCC 2000 Adjudication Rules.
- 3 The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses as set out in the Contract Data.
- 4 The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
- 5 The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

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

Contract Data

1	The Adjudicator shall be paid at the hourly rate of R. in respect of all time spent upon, or in connection with, the adjudication including time spent traveling.
2	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. (b) Telegrams, telex, faxes, and telephone calls. (c) Postage and similar delivery charges. (d) Travelling, hotel expenses and other similar disbursements. (e) Room charges. (f) Charges for legal or technical advice obtained in accordance with the Procedure.
3	The Adjudicator shall be paid an appointment fee of R. This fee shall become payable in equal amounts by each Party within 14 days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
4	The Adjudicator is/is not* currently registered for VAT.
5	Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6	All payments, other than the appointment fee (item 3) shall become due 31 days after receipt of invoice,

* Delete as necessary

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

C2.1 Pricing Instructions

- 1 The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work (as amended) published and issued by the Association of South African Quantity Surveyors (Sixth Edition (Revised)), 1999. Where applicable the:
 - a) Civil engineering work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardized Specifications for Civil Engineering Works.
 - b) Mechanical work has been drawn up in accordance with the provisions of the Model Bills of Quantities for Refrigeration, Air-Conditioning and Ventilation Installations, published by the South African Association of Quantity Surveyors, July 1990).
 - c) electrical work has been drawn up in accordance with the provisions of the Model Bills of Quantities for Electrical Work, published by the South African Association of Quantity Surveyors, (July, 2005).
- 2 The agreement is based on the JBCC Series 2000 Principal Building Agreement, prepared by the Joint Building Contracts Committee, Edition 4.1, and March 2005. The additions, deletions and alterations to the JBCC Principal Building Agreement as well as the contract specific variables are as stated in the Contract Data. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.
- 3 Preliminary and general requirements are based on the various parts of the JBCC Series 2000 Preliminaries as prepared by the Joint Building Contracts Committee, Edition 4.1, and March 2005. The additions, deletions and alterations to the various parts of the JBCC Series 2000 Preliminaries as well as the contract specific variables are as stated in the Specification Data in the Scope of Work. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.
- 4 It will be assumed that prices included in the Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).
- 5 The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- 6 The drawings listed in the Scope of Works used for the setting up of these Bills of Quantities are

	kept by the quantity surveyor and can be viewed at any time during office hours up until the completion of the works.
7	Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted.
8	The rates contained in the Bills of Quantities will apply irrespective of the final quantities of the different classes and kinds of work actually executed.
9	Rates for work of similar description occurring in different sections of the Bills of Quantities shall be identical.
10	An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
11	Where any item is not relevant to this specific contract, such item is marked N/A (signifying "not applicable")
12	The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminary and General) of the Bills of Quantities
13	The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor's risk.
14	The amount of the Preliminary and General Section to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount for the Preliminary and General Section and any amount in respect of contract price adjustment provided for in the contract.
15	Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in 14 but taking into account the revised period for completing the works.
16	The amount or items of the Preliminary and General Section shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities: <ul style="list-style-type: none"> a) an amount which is not to be varied, namely Fixed (F) b) an amount which is to be varied in proportion to the contract value, namely Value Related (V); and c) an amount which is to be varied in proportion to the contract period as compared to the initial construction period excluding revisions to the construction period for which no adjustment to the contractor is not entitled to in terms of the contract, namely Time Related (T).
17	Where no provision is made in the Bills of Quantities to indicate which of the three categories in 12 apply or where no selection is made, the adjustments shall be based on the following breakdown:

- a) 10 percent is Fixed;
- b) 15 percent if Value Related
- c) 75 percent is Time Related.

- 18 The adjustment of the Preliminary and General Section shall apply notwithstanding the actual employment of resources in the execution of the works. The contract value used for the adjustment of the Preliminary and General Section shall exclude any contingency sum, the amount for the Preliminary and General Section and any amount in respect of contract price adjustment provided for in the contract. Adjustments in respect of any staged or sectional completion shall be prorated to the value of each section.
- 19 All work is to be constructed using labor-intensive methods. The use of plant to provide such works, other than plant specifically provided for in the scope of works, is a variation order to the contract
- 20 Payment for items, which are designated to be constructed under labour-intensively, will not be made unless they are constructed using labor-intensive methods. Any unauthorized use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
- 21 The tenderer is to acquaint himself as to the specific requirements of this tender as contained in additional clauses A1 to A6 to the JBCC Principal Agreement as incorporated in the Contract Data. These clauses may be priced under the relevant Preliminaries items in SECTION C: SPECIFIC PRELIMINARIES of the Preliminaries Bill. No claim will be entertained due to the failure of the tenderer to allow for these requirements
- 22 The contractor shall determine the contract skills participation goals, expressed in Rand, which shall not be less than the contract amount multiplied by a percentage (0.25%) factor given in Table 2 in the Standard for the applicable class of construction works
- 23 **Payment to the contractor to accommodate Part/Full Occupational qualification and Trade qualifications**
- The contractor shall 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 provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.*
- 24 **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 (P 1 and P 2 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 provision for training as for provided in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.
25. **Payment to the contractor for supervision and mentoring Part/Full Occupational qualification and Trade qualifications leaners**

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 and General section in the Bill of Quantities/Pricing schedules/Activity schedule for the training of part/full time occupational learners and/or trade qualification learners.

26. Payment to the contractor for mentoring Work Integrated Learners and Candidates for professional registration

The contractor shall apportion the cost of mentoring work integrated learners (P 1 and P 2 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 and General section in the Bill of Quantities/Pricing schedules/Activity schedule for training

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AT

COMPLETION OF JTG SCHOOL PHASE 2B

C2.2 Bills of Quantities

Item No	Quantity	Rate	Amount
<u>SECTION NO 1</u>			
<u>BILL NO. 1</u>			
<u>PRELIMINARIES</u>			
All prices/rates to be net, excluding Value Added Tax			
<u>General</u>			
i)		The agreement is to be the JBCC Series 2000 Principal Building Agreement (Edition 5) prepared by the Joint Building Contracts Committee, July 2007	
ii)		The preliminaries are to be the JBCC Series 2000 Preliminaries prepared by the Joint Building Contracts Committee, March 2005 edition and shall be deemed to be incorporated herein	
iv)		Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading	
iii)		Tenderers are referred to the abovementioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary	
v)		Where any item is not relevant to this specific contract such item is marked N/A (signifying "not applicable")	
vi)		If Alternative A as set out in clause B10.3 hereinafter is to be used for the adjustment of the preliminaries each item priced is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time	
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vii) Any reference to the words "Tender" or "Tenderer" herein and/or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder"

SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT

Definitions (A1)

- 1
- Definitions and interpretation (clause 1)
- Clause 1.1 Definition of "**Agreement**" is amended by replacing it with the following:
- Agreement** means the agreement arising from the signing of the Form of Offer and Acceptance by the parties.
- Clause 1.1 Definition of "**Bills of Quantities**" is amended by adding the following:
- "...and the Pricing Instructions contained in the Pricing Data" after the word measuring system.
- Clause 1.1 Definition of "**Contract Documents**" is amended by adding the following:
- ".....this Agreement and all other documents referenced therein.." after the word this document"
- Clause 1.1 Definition of "**Contract Drawings**" is amended by replacing it with the following:
- Contract Drawings** means the drawings upon which the tender was accepted and used in preparing the bills of quantities and are available for viewing at the offices of the Principal Agent at the time of tender
- Clause 1.1 Definition of "**Contract Sum**" is amended by replacing it with the following:
- Contract Sum** means the total of prices in the Form of Offer and Acceptance.
- Clause 1.1 Definition of "**Schedule**" is amended by adding the following:
- ".....and in the **Contract Data**". at the end on the

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sentence ending with **agreement**

Clause 1.1 Definition of "**Commencement Date**" is added:

"**Commencement date**" means the date that the **agreement**, made in terms of the Form of Offer and Acceptance, comes into effect

Clause 1.1 Definition of "**Construction Guarantee**" is amended by replacing it with the following:

"**Construction guarantee**" means guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's** construction guarantee form as selected in the **schedule**

Clause 1.1 Definition of "**Construction Period**" is amended by replacing it with the following:

"**Construction period**" means the period commencing on the commencement date and ending on the date of practical completion

Clause 1.1 Definition of "**Corrupt Practice**" is added:

"**Corrupt Practice**" means the offering , giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution

Clause 1.1 Definition of "**Fraudulent Practice**" is added:

"**Fraudulent Practice**" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.

Clause 1.1 Definition of "**Interest**" is amended by replacing it with the following:

"**Interest**" means 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

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section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999).				
Clause 1.1 Definition of " Principal Agent " is amended by replacing it with the following:				
"Principal Agent" means the person or entity appointed by the employer and named in the schedule . 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 a representative of the employer as named in the schedule .				
Clause 1.1 Definition of " Security " is amended by replacing it with the following:				
Security" means the form of security provided by the employer or contractor , as stated in the schedule , from which the contractor or employer may recover expense or loss				
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
<u>Objective and Preparation (A2 - A14)</u>				
2	Offer, acceptance and performance (clause 2)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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7	Compliance with laws and regulations (clause 7) Note: A separate clause has been included in Section C: Specific Preliminaries of the bills of quantities for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
8	Works risk (clause 8)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
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9	<p>Indemnities (clause 9)</p> <p>Clause 9.0 is amended by adding Clause 9.1.4:</p> <p>The contractor indemnifies and holds harmless the employer against all liability, losses, claims, damages, penalties, actions, proceedings or judgments (collectively referred to as "Losses") arising from any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the contractor, but such indemnity shall not cover any use of the equipment of part thereof otherwise than in accordance with the provisions of the specification. All payments and royalties payable in one sum or by installments or otherwise shall be included by the contractor in the price and shall be paid by him to those to whom they may be payable. The contractor shall reimburse the employer for all legal and other costs and expenses, including without limitation attorney's fees on attorney-client scale incurred by the employer in connection with investigation, defending or settling any Losses in connection with pending or threatening litigation in which the employer is a party.</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>			
10	<p>Works insurances (clause 10)</p> <p>Clause 10.0 is amended by the addition of the following clauses</p> <p>10.5 Damage to the Works</p> <p>(a) Without in any way limiting the contractor's obligations in terms of the contract, the contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the</p> <p>Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PREMINARIES AND GENERAL Procost & Associates</p>			<p>R</p>

<p>contractor may deem necessary</p> <p>b) The contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works</p> <p>(c) The employer shall carry the risk of damage to or destruction of the works and material paid for by the employer that is the result of the excepted risks as set out in 10.6</p> <p>(d) Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof</p> <p>10.6 Injury to Persons or loss of or damage to Properties</p> <p>(a) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the works unless due to any act or neglect of any person for whose actions the employer is legally liable</p> <p>(b) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable 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, arising out of or in the course of or by reason of the execution of the works unless due to any act or neglect of any person for whose actions the employer is legally liable</p> <p>c) The contractor shall, upon receiving a contract instruction from the principal agent, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the employer shall be entitled to cause it to be made good and to recover the</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PREMINARIES AND GENERAL Procost & Associates</p>			<p style="text-align: center;">R</p>
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- cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**
- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**
- (e) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed
- (f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**

10.7 High risk insurance

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

10.7.1 Damage to the works

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

When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or

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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

10.7.2 Injury to persons or loss of or damage to property

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

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

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. 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

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	Time Related	Item		
18	Setting out of the works (clause 18)			
	<i>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 encroachments</i>			
	<i>The contractor shall perform tolerance control checks regularly throughout the contract period and report on this at regular interval to the Principal Agent in the approved format. Should the contractor fail to comply with this requirement to the satisfaction of the the Principal Agent, progressively as the structure is being constructed, the Employer will commission a Registered Land Surveyor to do so on the Contractor's behalf and at the Contractor's Expense.</i>			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
19	Assignment (clause 19)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
20	Nominated sub-contractors (clause 20)			
	Clause 20.0			
	Clause 20.1.3 is amended by replacing it with the following:			
	No Clause			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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21	Selected sub-contractors (clause 21)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
22	Employer's direct contractors (clause 22)				
	<p><i>The Contractor shall allow the direct contractors and employers agents access to the work, allocate reasonable space in the building for storage of their materials, tools and equipment, all to the satisfaction of the Principal Agent. The contractor shall also allow the direct contractors, etc. free of charge, use of their ablution facilities and water and power supply to the and shall in no way hinder or prevent the execution of their works. Attendance may be priced against the relevant specified items in the bills of quantities.</i></p>				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
23	Contractor's domestic sub-contractors (Clause 23)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
	<p><u>COMPLETION</u></p> <p><u>Completion (A24-A30)</u></p>				
24	Practical completion (clause 24)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
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Add Clause 29.9 as follows:

Revision to the date for **practical completion** shall only be considered when work on the critical path of the agreed programme for the works is delayed.”

Add Clause 29.10 as follows:

Clause 29.10 - Acceleration

Clause 29.10.1
Irrespective of whether or not the **principal agent** rules that the **contractor** is entitled to an extension of time or a revision of the date for **practical completion**, the **principal agent** shall nevertheless, at any time, be entitled to instruct the **contractor** in writing to accelerate the progress of the remaining **works** to ensure that the **works** are completed by the original date for **practical completion** or revised date as the case may be.

Clause 29.10.2
Upon receipt of such instruction, the **contractor** shall take all necessary steps to ensure that the **works** are completed timeously including the provision by him of additional resources, plant, manpower, etc and the working overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The **contractor** shall prove that such steps are being taken if called upon to do so.

Clause 29.10.3
The **contractor’s** entitlement to compensation arising out of or in respect of any revision to the date for **practical completion** that may have been granted by the **principal agent** or alternatively where the **principal agent** has instructed the **contractor** to accelerate, shall be adjudicated strictly in terms of clause 32.

Fixed

Item

Value Related

Item

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		Time Related	Item	
30	<p>Penalty for non-completion (clause 30)</p> <p>Clause 30 is amended by replacing reference to 36.3 at end of sentence with 36.0</p>			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
	<u>Payment (A31 - A35)</u>			
31	<p>Interim payment to the contractor (clause 31)</p> <p>Clause 31.9 is amended by replacing "seven (7) calender days" with "thirty (30) calender days" and by deleting the words "subject to the contractor giving the employer a tax invoice for the amount due</p> <p>Clause 31.12 is amended by deleting the following</p> <p>Payment shall be subject to the employer giving the contractor a tax invoice for the amount due</p>			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
32	<p>Adjustment to the contract value (clause 32)</p> <p>Clause 32.0</p> <p>Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence:</p> <p>"due to no fault of the contractor"</p>			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
	Carried to Collection			R
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Cancellation (A36-A39)

- 36 Cancellation by employer - contractor's default (clause 36)
- Clause 36.1 is amended by the additions of the following clauses:
- 36.1.3 refuses or neglects to comply strictly with any of the conditions of contract
- 36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa
- 36.1.5 in the judgement of the **employer**, has engaged in **corrupt** or **fraudulent practices** in competing for or in executing the contract
- Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "**principal agent**" with "**employer**"
- Clause 36.0 is amended by the addition of the following clause:
- 36.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

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37	Cancellation by employer - loss and damage (clause 37)			
	Clause 37.3.5 is amended by replacing "ninety (90)" with "one-hundred and twenty (120)"			
	Clause 37.0 is amended by the addition of the following clause:			
	37.5 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor ; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site . The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
38	Cancellation by contractor - employer's default (clause 38)			
	Clause 38.5.4 is amended by replacing "ninety (90) with "one-hundred and twenty (120)"			
	Clause 38.0 is amended by the addition of the following clause:			
	38.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor ; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site . The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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39	<p>Cancellation - cessation of the works (clause 39)</p> <p>Clause 39.3.5 is amended by the addition of the following at the end of the sentence: "within one-hundred and twenty (120) working days of completion of such report"</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p> <p><u>Dispute Settlement (A40)</u></p>	Item			
40	<p>Disputes Settlement (clause 40)</p> <p>Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years"</p> <p>Clause 40.6 is amended by removing the reference to:</p> <p>No clause</p> <p>Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following:</p> <p>Whether or not mediation resolves the dispute, the parties shall bear their own cost concerning the mediation and equally share the costs of the mediator and related costs.</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p> <p><u>State Provision (A41)</u></p>	Item			
41	<p>State Substitutions (clause 41)</p> <p>Delete in the Substitute Provisions (41.0 State Clauses) clauses 40.2.1, 40.2.2, 40.3, 40.4, 40.5 and 40.6 and replace with the following:</p> <p>Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PREMINARIES AND GENERAL Procost & Associates</p>				
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- 40.1 Should any dispute between the **employer**, his **agents** or **principal agent** on the one hand and the contractors on the other arise out of this **agreement**, such dispute shall be referred to adjudication.
- 40.2 Adjudication shall be conducted in accordance with the edition of the JBCC Rules for Adjudication current at the time when the dispute is declared. The party, which raises the dispute, shall select three adjudicators from the panel of adjudicators published by the South African Institution of Civil Engineering or Association of Arbitrators (Southern Africa), determine their hourly fees and confirm that these adjudicators are available to adjudicate the dispute in question. The other party shall then select within 7 days one of the three nominated adjudicators, failing which the chairman for the time being of the Association of Arbitrators (Southern Africa) shall nominate an adjudicator. The **adjudicator** shall be appointed in terms of the Adjudicators Agreement set out in C1.4 .
- 40.3 If provided in the **schedule**, a dispute shall be finally settled by a single Arbitrator to be agreed on between the parties or, failing such agreement within 28 days after referring the dispute to Arbitration, an Arbitrator nominated by the chairman for the time being of the Association of Arbitrators (Southern Africa). Any such reference shall be deemed to be a submission to the arbitration of a single arbitrator in terms of the Arbitration Act (Act No 42 of 1965, as amended), or any legislation passed in substitution therefore. In the absence of any other agreed procedure, the arbitration shall take place in accordance with the Rules for the Conduct of Arbitrations issued by the Association of Arbitrators (Southern Africa) which are current at the time of the referral to arbitration. The Arbitrator shall, in his award, set out the facts and the provisions of the contract on which his award is based.
- 40.4 If the **schedule** provides for court proceedings to finally resolve disputes, disputes shall be determined by court proceedings.

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	<u>Definition and interpretation (B1)</u>			
43	Definition and interpretation			
	See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
	<u>Documents (B2)</u>			
44	Checking of documents (B2.1)			
	<i>These bills of quantities:</i>			
	<i>(1) contain pages and annexes as indexed, and;</i>			
	<i>(2) are in multiple procurement format, i.e. all trades are fully measured with minor budgetary allowances</i>			
	<i>Items in these bills of quantities are to be read and priced in conjunction with and the descriptions regarded as amplified by the Model Preambles for Trades, 2008 edition, as recommended and published by the Association of South African Quantity Surveyors and no claim arising from brevity of description of items fully described in the said Model Preambles for Trades will be entertained</i>			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
45	Provisional bills of quantities (B2.2)			
	Fixed	Item		
	Value Related	Item		
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	Time Related	Item		
46	Availability of construction documentation (B2.3)			
	<i>The minor budgetary allowances included in this document will be separately procured, based on multiple procurement of selected sub-contractors during the construction period</i>			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
47	Interests of agents (B2.4)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
48	Priced documents (B2.5)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
49	Tender submission (B2.6)			
	<i>Notwithstanding anything contained in this clause tenders shall be valid for a period of ninety (90) days from the closing date of tenders</i>			
	<i>Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance C1.1"</i>			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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	<u>The site (B3)</u>			
50	Defined works area (B3.1)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
51	Geotechnical investigation (B3.2)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
52	Inspection of the site (B3.3)			
	<i>Tenderers are instructed to familiarise themselves before submission of their tender with regard to the relevant local site conditions, site accessibility, the nature of operations required, availability of labour and any conditions pertaining thereto, together with conditions relating to unloading, carting and storage of materials, equipment and tools required for the works.</i>			
	<i>No claims for extras arising from the contractor having failed to comply with this clause will be entertained</i>			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
53	Existing premises occupied (B3.4)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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54	Previous work - dimensional accuracy (B3.5)				
	<i>Work executed under a previous contract and the extent thereof will be pointed out to the contractor by the principal agent on handing over of the site</i>				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
55	Previous work - defects (B3.6)				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
56	Services - known (B3.7)				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
57	Services - unknown (B3.8)				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
58	Protection of trees, etc (B3.9)				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
59	Articles of value (B3.10)				
	Fixed	Item			
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4. shall be in sufficient and approved detail to ensure effective control of the work, including all items necessary to enable calculations to be made for the distribution of finance during the cashflow analysis.
5. shall be accompanied by a full written method statement

The principal agent shall examine and comment on the contract programme and method statement within two weeks of its submission.

Following on these comments the contractor shall amend the contract programme and method statement as may be necessary and submit the final contract programme and method statement to the principal agent for approval within a further two weeks thereafter.

The contract programme shall be processed by computer and be presented to the principal agent in the form of logic charts and bar charts in such a way as to determine the critical path and the float on non-critical activities. All supporting printouts must be available to the principal agent on demand.

The acceptance by the principal agent of the contract programme, or any revision thereof, does not necessarily sanction the accuracy of validity of the network logic, the correctness of individual activities in terms of description or duration, the comprehensiveness of networks or the discrepancies between drawings and any other documents presented by the contractor, and in no way relieves the responsibility of the contractor to comply with the requirements of the Agreement.

No policy decisions other than the planning requirements, procedures and policies provided, will be enforced on the contractor regarding construction of the project and the contractor shall be responsible at all times for ensuring the accuracy, validity and reasonableness of programming information.

Documentation will not be available in complete detail at the date of award of the contract. Non-availability of information will not be deemed an excuse for non-presentation of programmes. In the event of inadequate information, the contractor shall estimate the predicted time applications on available information and quality the submission accordingly.

Development of the contract programme and method

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statement

Within two weeks of award of the contract, the contractor shall submit an updated contract programme and written method statement which shall include the latest information in sufficient detail to permit comprehensive monitoring.

Progress of the works will be monitored by the principal agent. The contractor shall liaise with the principal agent in order to provide whatever information is required to facilitate such monitoring.

Revisions to the contract programme

Revisions to the contract programme may be introduced periodically by the contractor subject to compliance with the contract completion and handover dates.

Providing the required consultation between the relevant parties has highlighted the implications of the required changes, the programming strategy on the project may be changed and the changes noted and specified on logic charts delivered to the principal agent. The changes to the programme will be recorded as firm and binding once the principal agent has sanctioned the said changes.

A revision to the programme will not invalidate the contractual completion dates and applications for extensions of time will be processed by the principal agent in accordance with the conditions of contract.

Should the contractor fail to submit a request for revision to the construction programme, progress monitoring shall be based on the latest revised programme sanctioned by the principal agent.

The contractor shall make all his necessary revisions on the approved network sheets clearly marking, inter-alia, the logic changes and duration changes. These will then be processed by the necessary parties and then approved in the normal manner.

Progress Monitoring

The contractor shall provide regular progress reports showing actual and expected progress against the latest contract programme. Progress reports shall be submitted at each site progress meeting and shall

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outline the progress against key target dates and deviation which has occurred against the most recently updated control programme due to the progress reflected in the as-built construction programme.

The status of each activity must also be reported as follows:

Target - If the activity is not complete, the latest predicted completion date shall be supplied.

Start - If the activity has commenced, the actual date shall be supplied.

Finish - If the activity is complete, the actual completion date shall be supplied.

Problems which may occur during execution of the contract must be specifically identified in progress reports under a separate section of the contractor's report.

Should problems occur during the execution of the contract or the scope of work be increased or decreased, the contractor may be requested to increase the extent or the detail of the programme.

The principal agent may recommend action to be taken by the contractor, including the revision of resource levels, but this information will not be binding on the contractor unless the recommendations are enforced in terms of the conditions of contract by the principal agent and will in no way relieve the contractor's responsibility to comply with the requirements of the Agreement.

Extension of time

Any extension of time which is granted by the principal agent will be annotated to affect selected activities in the programme and the associated activities will be incorporated by revisions to the programme by the contractor. Should the additional activities or the extension of time on existing activities fall on a non-critical area of the programme, extension will be limited to the activities affected by the said additional activities or extensions and the contract dates shall not be affected. If, however, the additional activities fall on the critical path, the principal agent shall take this into account when granting any extension of time in terms of the conditions of contract.

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74	Main notice board (B6.5)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
75	Subcontractors notice board (B6.6)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
	<u>Temporary services (B7)</u>				
76	Location (B7.1)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
77	Water (B7.2)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
78	Electricity (B7.3)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
79	Telecommunication facilities (B7.4)	Fixed	Item		
		Value Related	Item		
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		Time Related	Item		
80	Ablution facilities (B7.5)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
	<u>Prime cost amounts (B8)</u>				
81	Responsibility for prime cost amounts (B8.1)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
	<u>Attendance on nominated and selected subcontractors (B9)</u>				
82	General attendance (B9.1)				
	The schedule rates providing for attendance on nominated subcontractors and other contractors , will be adjusted only if the scope of the work has changed				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
83	Special attendance (B9.2)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
84	Commissioning - Fuel, water and electricity (B9.3)				
		Fixed	Item		
		Value Related	Item		
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	Time Related	Item		
	<u>Financial aspects (B10)</u>			
85	Statutory taxes, duties and levies (B10.1)			
	<i>Provision is made in the summary of these bills of quantities for the inclusion of Value Added Tax (VAT)</i>			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
86	Payment of preliminaries (B10.2)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
87	Adjustment of preliminaries (B10.3)			
	Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site " with "when submitting his priced bills of quantities "			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
88	Payment certificate cash flow (B10.4)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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100	Tenant installations (B11.12)				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
	Schedule of variables (B12)				
101	Pre-tender information (B12.1)				
	This schedule contains all variables referred to in this document and is divided into pretender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries.				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
	12.1.1 Provisional bills of quantities (B12.1.1)				
	The quantities are provisional:				
	Yes				
	12.1.2 Availability of construction documentation (B12.1.2)				
	Construction documentation is complete:				
	Yes				
	12.1.3 Interest of agents (B12.1.3)				
	No				
	12.1.4 Defined works area (B12.1.4)				
	<i>The area of the works to be occupied by the contractor, any restriction on the area and the limit of access or exit will be pointed out to the contractor by the principal agent on handing over of the site</i>				
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12.1.5 Geotechnical investigation (B12.1.5)

The geotechnical report is attached at the back of these bills of quantities

Yes

12.1.6 Existing premises occupied (B12.1.6)

[3.4] Specific requirements:
The contractor shall execute the works with as little noise and disturbance as possible

12.1.6 Existing premises occupied

[3.4] Specific requirements:
The contractor shall execute the works with as little noise and disturbance as possible

12.1.7 Previous work - Dimensional accuracy (B12.1.7)

[3.5] Details:
No additional details

No

12.1.8 Previous work - defects

[3.6] Details:
No additional details

12.1.9 Services - known (B12.1.9)

Existing services and points of connection are shown on the site plan and/or will be pointed out on site by the principal agent

12.1.10 Protection of trees

[3.9] Specific requirements:
No trees to be damaged or removed except those specifically designated in writing by the Architect

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12.1.11 **Inspection of adjoining properties**

[3.11] Specific requirements:
None

12.1.12 **Enclosure of the works**

[6.2] Specific requirements:
Areas where work is taking place shall at all times be blocked off by appropriate means

12.1.13 **Offices**

[6.4.3] Specific requirements:
The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times.

12.1.14 **Main notice board**

[6.5] Specific requirements:
The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering.

12.1.15 **Subcontractors' notice board**

[6.6] A notice board is required (yes/no)
NO
Specific requirements:

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12.1.16 Water				
[7.2] YES	Option A (by contractor)	(yes/no)		
12.1.17 Electricity				
[7.3] YES	Option A (by contractor)	(yes/no)		
12.1.18 Telecommunications				
[7.4] YES	Telephone	(yes/no)		
YES	Facsimile	(yes/no)		
YES	E-mail	(yes/no)		
12.1.19 Ablution facilities				
[7.5] YES	Option A (by contractor)	(yes/no)		
NO	Option B (by employer)	(yes/no)		
12.1.20 Protection of existing/sectionally occupied works				
[11.2] YES	Protection is required	(yes/no)		
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102	12.1.21 Special attendance			
	The contractor must obtain information from all subcontractors at tender stage regarding special attendance that might be required and make allowance for each and every subcontract that requires special attendance			
	[9.2] Subcontractor (1) Details:			
	Subcontractor (2) Details:			
	Subcontractor (3) Details:			
	12.1.22 Protection of the works			
	[11.1] Specific requirements: All work that requires protection during construction must be adequately protected up to practical completion by the contractor			
	12.1.23 Disturbance			
	[11.5] Specific requirements: The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent			
	12.1.24 Environmental disturbance			
	[11.6] Specific requirements: Yes - There are identified national protected trees, such trees will not be removed without permits.			
	Post-tender information (B12.2)			
	All post-tender information for this section will be determined once tender is awarded			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
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104	<p>Clause C1 - Contract drawings</p> <p>The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed</p> <p>Should any part of the drawings not be clearly understood by the the tenderer he shall, before submitting his tender, obtain clarification in writing from the principal agent</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
105	<p>Clause C2 - General Preambles</p> <p>The "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the trades is deemed to be included herein and shall be read in conjunction with the bills of quantities and be referred to for the full decriptions of work to be done and materials to be used.</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
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106	<p>Clause C3 - Site instructions</p> <p>All site instructions issued on site shall be recorded in writing within seven (7) calendar days in site instruction book (A4 size and triplicate carbon format), which is to be provided and maintained by the contractor. The said site instruction book shall be kept on site at all times for the exclusive use of recording site instructions only</p> <p>Site instructions may be issued by the architect or any of the consultants only. Copies of the site instructions are to be submitted to the architect and quantity surveyor within seven (7) calendar days of such recording in the site instruction book</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
107	<p>Clause C4 - Trade Names</p> <p>Wherever a trade name for any product has been described in the bills of quantities, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders</p> <p>If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
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108	Clause C5 - Overtime				
	Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorized and indicated in writing, prior to the execution thereof, that costs for such overtime will to be borne by the employer				
	Fixed	Item			
	Value Related	Item			
109		Time Related	Item		
	Clause C6 - As-built drawings				
	The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records				
	Fixed	Item			
110		Value Related	Item		
		Time Related	Item		
	Clause C5 - Labour record				
	At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
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111	<p>Clause C6 - Plant record</p> <p>At the end of each calendar week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
112	<p>Clause C7 - Non-cession of monies</p> <p>The contractor shall not cede nor assign his rights or claims to any monies due or to become due to him under this contract</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
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113	<p>Clause C8 - Occupational Health and Safety Act</p> <p>The contractor shall comply with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).</p> <p>It is required of the contractor to thoroughly study the latest Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document.</p> <p>The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.</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>				
	Fixed	Item			
	Value Related	Item			
	Time Related	Item			
114	<p>Clause C9 - Viewing of the school areas</p> <p>The site is situated in a school area and the tenderer must arrange with the Principal or other responsible school staff to obtain permission to enter the site for tendering purposes</p>				
	Fixed	Item			
	Value Related	Item			
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	Time Related	Item	
115	<p>Clause C10 - Commencement of Works in School Areas</p> <p>As the works falls within a school area the contractor must give the Principal or other responsible staff member notice before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account</p> <div style="margin-left: 180px;">Fixed</div> <div style="margin-left: 160px;">Value Related</div> <div style="margin-left: 170px;">Time Related</div>	Item Item Item	
116	<p>Clause C11 - Entrance Permits to School Areas</p> <p>As the works falls within a school area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Principal, or chief security officer</p> <div style="margin-left: 190px;">Fixed</div> <div style="margin-left: 170px;">Value Related</div> <div style="margin-left: 180px;">Time Related</div>	Item Item Item	
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117	<p>Clause C12 - Security Check of Personnel</p> <p>The principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified</p> <p>In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or to any document or information relating to the works</p> <p style="text-align: right;">Fixed</p> <p style="text-align: right;">Value Related</p> <p style="text-align: right;">Time Related</p>			
118	<p>Clause C13 - HIV/Aids Awareness</p> <p>It is required of the contractor to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the bills of quantities. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained</p> <p>The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of Clause A 31.0 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</p> <p style="text-align: right;">Fixed</p> <p style="text-align: right;">Value Related</p>			
	<p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PREMINARIES AND GENERAL Procost & Associates</p>		R	

		Time Related	Item	
119	Clause C13.1 - Awareness Champion			
	Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
120	Clause C13.2 - Awareness Workshop			
	Selection and appointment of a competent Service Provider approved by the principal agent , provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
121	Clause C13.3 - Posters, booklets, videos, etc.			
	Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period , all in accordance with the HIV/AIDS Specification			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
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122	<p>Clause C13.4 - Access to Condoms</p> <p>Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p style="text-align: right;">Fixed</p> <p style="text-align: right;">Value Related</p> <p style="text-align: right;">Time Related</p>	<p>Item</p> <p>Item</p> <p>Item</p>	
123	<p>Clause C13.5- Monitoring</p> <p>Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification</p> <p style="text-align: right;">Fixed</p> <p style="text-align: right;">Value Related</p> <p style="text-align: right;">Time Related</p>	<p>Item</p> <p>Item</p> <p>Item</p>	
124	<p>Clause C13.6- COVID-19 Monitoring</p> <p>Prepare site for COVID-19 social distancing Monitoring COVID-19 awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, screening of employees with COVID-19 symptoms, COVID-19 testing of employees with possible infection for the duration of the construction period and close out, all in accordance with the COVID-19 Specification</p> <p style="text-align: right;">Fixed</p> <p style="text-align: right;">Value Related</p> <p style="text-align: right;">Time Related</p>	<p>Item</p> <p>Item</p> <p>Item</p>	
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125	<p>Clause C13.7- Emergency preparedness</p> <p>Prepare Isolation area for person presenting with symptoms of COVID-19 infection for the duration of the construction period and close out, all in accordance with the COVID-19 Specification</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
126	<p>Clause C13.8- Provide, supply and maintenance for all workers the following SANS approved personal protective equipment and clothing</p> <p>1. Face masks for COVID-19 2. Safety shields for COVID-19 3. Surgical gloves for COVID-19 3. Non contact thermometers 4. Spill kits 5. Hand sanitizers 6. Cleaning and detergents for disinfection/sanitizing everyday 7. BIO Hazard bin for waste disposal</p> <p>for the duration of the construction period and close out, all in accordance with the COVID-19 Specification</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
127	<p>Clause C13.9- Safety Signage</p> <p>COVID-19 Signage and Posters</p> <p>for the duration of the construction period and close out, all in accordance with the COVID-19 Specification</p> <p>Fixed</p> <p>Value Related</p> <p>Time Related</p>	Item			
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Clause C13.10- Environmental

Provide for the adequate and safe collection and disposal of Biological waste material from site by an approved method

for the duration of the **construction period** and close out, all in accordance with the COVID-19 Specification

Fixed

Item

Value Related

Item

Time Related

Item

Health and Safety

Enterprise Development

Enterprise Development of Targeted Enterprise or JV Partners

129	Needs analysis and enterprise development plan per targeted enterprise	Item	1,104,126.11
130	Monitoring and Interim report per targeted enterprise (Per Quarter)	Item	80,000.00
131	Project completion report per targeted enterprise	Item	1,104,126.11

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	<p><u>SECTION NO.2</u></p> <p><u>BILL NO. 1</u></p> <p><u>ALTERATIONS</u></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades</p> <p><u>REMOVAL OF EXISTING WORK:</u></p> <p>NATURE OF WORK: Tenderers are advised to visit the site and to satisfy themselves as to the nature and extent of the work to be done and provide in their tenders any items not specifically mentioned which they may deem necessary for the proper completion of the work.</p> <p>DIMENSIONS The Contractor is advised to take all dimensions affecting the existing buildings on the site, as he will be held solely responsible for all new work being of the correct size.</p> <p>PIPES, ETC Special care is to be taken not to interfere unnecessary with any supply pipes or other piping that may be met with and found necessary to disconnect or cut, are to be effectively stopped off and any new connections that may be necessary are to be made with proper fittings and to the satisfaction of the Principal Agent to whom due notice must be given of any alterations to the existing services.</p> <p>PROTECTION In taking down and removing existing work the utmost care is to be observed to avoid any structural or other damage to the remaining portions of the buildings. The Contractor must also protect all work not removed such as walls, floors, doors, windows or other joinery, loose and fixed fittings and electrical appliances, etc. from damage during the progress of the work and provide all necessary materials for doing so. The Contractor will be held solely responsible for any damage to persons or property and for the safety of the structure throughout the whole of this Contract and must make good at his own expense any damage that may occur.</p>			
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OLD USABLE MATERIALS from the alterations/demolitions are to become the property of the Client. Old materials for re-use are to be carefully removed, stored and protected from injury including making good any damaged or defective parts as required before fixing. Old reusable materials are to be handed over to the Client are to be carefully removed and neatly stacked on site where directed. The remainder of the old materials and all rubbish to be immediately carted away and the site left clean and unencumbered. The Contractor should allow for removing of rubble from site on daily basis, failing which the client might stop the construction until the site has been cleaned. None of the old stock bricks from the pulling down are to be re-used for any new work. Materials to be handed over to the Client should be kept safely and handed over to the School Governing Body or the school principal who shall sign for all materials received.

MATERIALS, ETC The materials to be used and work to be done to be similar in all respects to that described for new work insofar as they concur. All work in making good is to be properly jointed to the existing.

Unless otherwise stated, all usable material from the demolitions should be kept safely and handed over to the school governing body or the school principal who shall sign for all material received.

Breaking up and removing mass concrete including reinforcement

1	85mm Thick surface bed	m2	500
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Breaking down and removing brickwork etc

2	Half brick wall in beamfilling	m2	20
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3	One brick walls	m2	300
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Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc

4	Internal plaster	m2	10
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	<u>Taking out and removing steel door frames, windows, etc from brickwork to be demolished</u>		
5	Single gate and frame size 813 x 2032mm high	No	3
6	Frame for door 813 x 2032mm high	No	25
7	Frame for door 1000 x 2032mm high	No	6
8	Window code E1 size 533 x 654mm High	No	22
9	Window code NE1 size 533 x 654mm High	No	4
10	Window code SS31 size 978 x 511mm high	No	13
11	Window code SS33, size 978 x 1445mm high	No	45
	<u>EXTERNAL WORKS</u>		
	<u>Excavating to a depth of not more than 2m deep to:</u>		
12	Take out existing 75mm diameter water line pipes including fittings (New pipes, fittings, bedding, backfilling etc measured elsewhere)	m	1,120
13	Take out existing 160mm diameter sewer line pipes including fittings (New pipes, fittings, bedding, backfilling etc measured elsewhere)	m	1,398

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<p><u>SECTION NO.2</u></p> <p><u>BILL NO.1</u></p> <p><u>FOUNDATIONS (PROVISIONAL)</u></p> <p><u>PREAMBLES</u></p> <p><u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Nature of ground</u></p> <p>The nature of the ground is assumed to be sandy weathered granite, therefore "earth", but possibly interspersed with "hard rock"</p> <p><u>Excavation for working space in rock</u></p> <p>Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be</p> <p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Filling</u></p> <p>Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material</p>			
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	<u>Soil poisoning</u>		
	Ant and weed poisoning will be applied in accordance to SABS specifications by Registered and Approved Specialists who will issue a five (5) year guarantee. The contractor will only be paid for this items once they have produced the said certificate to the Principal Agent		
	<u>SITE CLEARANCE ETC</u>		
	<u>Site clearance</u>		
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	4,176
	<u>EXCAVATION, FILLING, ETC</u>		
	<u>Excavation in earth not exceeding 2m deep</u>		
2	Trenches	m3	514
3	Holes	m3	16
	<u>Extra over trench and hole excavations in earth for excavation in</u>		
4	Soft rock	m3	28
5	Hard rock	m3	56
	<u>Extra over all excavations for carting away</u>		
6	Surplus material from excavations on site to a dumping site to be located by the contractor	m3	103
	<u>Risk of collapse of excavations</u>		
7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	1,611
	<u>Keeping excavations free of water</u>		
8	Keeping excavations free of all water other than subterranean water		Item
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	<u>Earth filling obtained from the excavations and /or prescribed stock piles on site including compacted to 93% Mod AASHTO density</u>		
9	Under floors, steps, paving, etc	m3	322
10	Backfilling to trenches, holes, etc	m3	146
	<u>Earth filling supplied by the contractor compacted to 93% Mod AASHTO density</u>		
11	Under floors, steps, paving etc.	m3	640
	<u>Compaction of surfaces</u>		
12	Compaction of ground surface under floors 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	3,184
	<u>Prescribed density tests on filling</u>		
13	"Modified AASHTO Density" test	No	51
	<u>SOIL POISONING</u>		
	<u>Weedkiller mixed in accordance to supplier's specifications</u>		
14	Under floors etc	m2	3,184
15	To bottoms and sides of trenches, etc.	m2	2,348
	<u>Soil insecticide</u>		
16	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	3,184
17	To bottoms and sides of trenches etc	m2	2,348
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>		

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	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
	<u>15MPa/19mm concrete</u>		
18	Blinding	m3	39
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
	<u>25MPa/19mm Compressive strength concrete at 28 days:</u>		
19	Strip footings	m3	165
20	Beams including stepped beams	m3	60
21	Surface beds cast in panels on waterproofing	m3	38
22	Surface beds cast in panels on waterproofing for rafts	m3	166
23	Bases	m3	5
24	Walls	m3	40
25	Thickening down surface bed to underside, average 420mm wide and 150mm thick, including excavations, ramming, etc.	m	49
	<u>TEST CUBES</u>		
26	Allow for preparing a set of three concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith.	Sets	41.0
	<u>CONCRETE SUNDRIES</u>		
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
27	Surface beds, slabs etc	m2	3,184
	<u>Grooves, channels, mortices, sinkings, etc in concrete</u>		
28	20 x 20mm Grooves in top (Provisional)	m	317
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MOVEMENT JOINTS ETC

Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces

29	15mm Joints exceeding 300mm high (Provisional)	m	317
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Saw cut joints

30	Saw cut joints in top of concrete (Provisional)	m	317
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Horizontal joggle construction joints through concrete including thick cement slurry to one face

31	Slabs not exceeding 300mm thick (Provisional)	m	79
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SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth formwork to

32	Edges not exceeding 300mm high/wide	m	1,142
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33	L-Shaped foundation beams	m2	24
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34	Sides of walls	m2	388
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REINFORCEMENT

Mild steel bar reinforcement to structural concrete work

35	10mm Diameter bars	t	2.80
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High tensile steel bar reinforcement to structural concrete work

36	12mm Diameter bars	t	7.84
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37	16mm Diameter bars	t	0.5
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Fabric reinforcement

38	Ref. 193 Fabric reinforcement laid horizontally in concrete surface beds, slabs, etc	m2	3,184
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39	Ref. 193 Fabric reinforcement laid vertically in concrete surface beds, slabs, etc	m2	387
<u>BRICKWORK</u>			
<u>Brickwork of NFX bricks in class II mortar</u>			
40	Half brick walls linings to concrete	m2	411
41	One brick walls	m2	148
<u>BRICKWORK SUNDRIES</u>			
<u>Brickwork reinforcement</u>			
42	75mm Wide reinforcement built in horizontally	m	2,466
43	150mm Wide reinforcement built in horizontally	m	1,607
<u>FACE BRICKWORK</u>			
<u>Face bricks "Topaz Satin" in stretcher bond pointed with recessed horizontal and vertical joints</u>			
44	Half brick walls pointed and faced on one side linings to concrete	m2	168
<u>Brick-on-edge header course copings, sills, etc of face bricks (Purchase price R4 800,00/1000 VAT excl. delivered to site) pointed with recessed joints on all exposed faces</u>			
45	Coping on top of one brick wall	m	44
<u>WATERPROOFING</u>			
<u>JOINT SEALANTS ETC</u>			
<u>Silicone sealing compound including backing cord, bond breaker, primer, etc:</u>			
46	12 x 20mm In vertical expansion joints including raking out expansion joint filler as necessary	m	317

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	<u>Approved bond breaker tape</u>		
47	Approved bond breaker to be applied to one half of the 16mm diameter dowel	m	149
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>		
	<u>One layer of 250 micron polythene "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>		
48	On bottoms and sides of trenches, holes etc	m2	2,348
49	Under floors	m2	3,184

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Formwork

Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use

The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself

Formworks to soffits of solid slabs etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described

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

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"

REINFORCED CONCRETE

25MPa/19mm Concrete compressive strength concrete at 28 days:

1	Isolated beams	m3	200
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CONCRETE SUNDRIES

Finishing top surfaces of concrete smooth with a steel trowel

2	Surface beds, slabs, etc	m2	4
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	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY I)</u>		
	<u>Smooth formwork to</u>		
3	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	76
	<u>Smooth formwork to soffits of</u>		
4	Beams	m2	8
	<u>Smooth formwork to sides of</u>		
5	Beams	m2	126
	<u>TEST CUBES</u>		
6	Allow for preparing a set of three concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith. (Provisional)	Sets	6.0
	<u>MOVEMENT JOINTS ETC</u>		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces</u>		
7	15mm Joints exceeding 300mm high (Provisional)	m	164
	<u>Saw cut joints</u>		
8	Saw cut joints in top of concrete (Provisional)	m	102
	<u>DIVIDING STRIPS, ETC.</u>		
9	6 x 38mm Angle iron step guard cast into concrete with 3 x 6mm anchors (Provisional)	m	27
	<u>REINFORCEMENT (PROVISIONAL)</u>		
	<u>Mild steel bar reinforcement to structural concrete work</u>		
10	8mm Diameter bars	t	0.25
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<u>High tensile steel bar reinforcement to structural concrete work</u>	t	0.82	R
11 12mm Diameter bars			
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<u>SUPPLEMENTARY PREAMBLES</u>			
<u>BRICKWORK</u>			
<u>Sizes in descriptions</u>			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
<u>Linings to concrete</u>			
Descriptions of linings to concrete, unless otherwise described, shall be deemed to include wire ties			
<u>Hollow walls etc</u>			
Descriptions of hollow walls shall be deemed to include wire ties and leaving every fifth perpend of the bottom course of the external skin open as a weep hole			
<u>Reinforced brick lintels</u>			
Lintels shall bear at least 160mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous			
<u>Face bricks</u>			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
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Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

SUPERSTRUCTURE

Brickwork of NFP bricks in class II mortar

1	Piers	m3	7
2	Half brick walls	m2	172
3	Half brick walls in beamfilling.	m2	25
4	One brick walls	m2	2,361
5	One brickwalls in beamfilling	m2	28
6	280mm Hollow walls of two half brick skins including wire ties	m2	439

BRICKWORK SUNDRIES

7	Extra over brick work for leaving ventilation openings size 230 x 150mm high	No	7
8	Extra over brick work for leaving ventilation openings size 110 x 1700mm high at 300mm cc.	No	1

Concrete Pier Cap

9	570 x 570mm x 280mm Precast concrete pier cap set level on brick pier	No	8
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Brickwork reinforcement

10	75mm Wide reinforcement built in horizontally	m	820
11	150mm Wide reinforcement built in horizontally	m	2,897

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	<u>Air Bricks</u>		
12	Standard 230 x 150mm with and including PVC and Terra-Cotta vermin proofed louvred air grating on the inside and outside (Provisional)	No	7
	<u>Turning pieces</u>		
13	110mm Wide turning piece to lintels etc	m	118
14	230mm Wide turning pieces to lintels etc	m	57
	<u>"Allied Concrete" prestressed fabricated lintels</u>		
15	110 x 75mm Lintels in lengths not exceeding 3m	m	126
16	110 x 75mm Lintels in lengths exceeding 3m but not exceeding 4,5m	m	29
17	220 x 75mm Lintels in lengths not exceeding 3m	m	5
	<u>Galvanised wire ties etc</u>		
18	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork (Provisional)	No	111
	<u>Holes</u>		
19	Leave or form opening through one brickwall for pipe n.e 100mm diameter (Provisional)	No	3
20	Leave or form opening through one brickwall for pipe exceeding 100mm and n.e 200mm diameter (Provisional)	No	4
	<u>FACE BRICKWORK</u>		
	<u>Face bricks "Topaz Satin" in stretcher bond pointed with recessed horizontal and vertical joints</u>		
21	Extra over brickwork for face brickwork	m2	1,232
22	Half brick walls pointed and faced on one side linings to concrete	m2	60
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23	One brick walls pointed and faced on both sides	m2	48
24	Face brick in piers, including bonding and pointed with recesses joints on all exposed faces	m3	14
25	Fair cutting and fitting around pipe not exceeding 100mm diameter (Provisional)	No	13
26	Fair cutting and fitting around pipe exceeding 100mm and not exceeding 200mm diameter (Provisional)	No	14
	<u>Brick-on-edge header course copings, sills, etc of face bricks "Tropaz Satin" pointed with recessed joints on all exposed faces</u>		
27	Extra over brickwork for brick-on-edge header course lintel	m	132
28	Coping on top of one brick wall	m	159
	<u>Brick-on-edge header course copings, sills, etc of face bricks "Tropaz Satin" pointed with recessed joints on all exposed faces</u>		
29	220mm Wide sill set flat and slightly projecting outside	m	5
30	220mm Wide sill set sloping and slightly projecting outside	m	77
	<u>NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS</u>		
	<u>Nutec window internal sill, size 150mm x 15mm thick, manufactured in accordance with SANS 803:2005 and installed below window with window sill lug screwed to underside of sill at 400mm centres, minimum of 75mm from end of window sill and bedded in Class II mortar with plastic slip joints at end of sills at plaster reveals and projecting from the finished face of wall, all in accordance with the manufacturer's recommendations.</u>		
31	15mm x 150mm Wide sills set flat and slightly projecting	m	82

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SECTION NO.2

BILL NO.4

WATERPROOFING (PROVISIONAL)

PREAMBLES

For preambles see "Specifications of materials and methods to be used - PW371-A"

SUPPLEMENTARY PREAMBLES

Waterproofing

Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee by an approved applicator. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs

DAMP-PROOFING OF WALLS AND FLOORS

One layer of 375 micron Consol Plastic Brikgrip DPC"
embossed damp proof course

1	In walls	m2	10
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JOINT SEALANTS ETC

Silicone sealing compound including backing cord, bond breaker, primer, etc

2	6 x 20mm In expansion joints including raking out of expansion joint filler as necessary (Provisional)	m	20
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WATERPROOFING (PROVISIONAL)

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Traffic Green color to be as follows:

Colour: Traffic Green
Gloss: 30+/-Gardner 60
Film Thickness: 17 - 22 Microns
Primer: Global Prime 204
Pencil Hardness: H
Flexibility: >8mm
Impact Resistance: >30 INLB on HDG
Bending: 2 Ton HDG
Solvent Resistance: > 100 Double Rubs with MEK
Salt Spray Test: 500 Hours ECCA T8. Corrosion, Blisters, Loss of Adhesion less than 3mm from the scribe
Weather-0-meter: 2000 Hours ECCA T10, loss of gloss less than 50% average colour change not greater than 5 units (CEILAB)
Florida Exposure Test: After two (2) years loss of gloss less than 75%, average colour change not greater than three (3) units (CEILAB)

PROFILED METAL SHEETING AND ACCESSORIES

0,6mm "Brownbuilt Klip-Lok Light Industrial" galvanised troughed sheeting steel with "Chromadek" finish on one side, in single lengths fixed to timber purlins or rails and 0,6mm galvanised steel accessories with "Chromadek" finish on one side, fixed to roof members by a firm of Specialists who will give a five (5) year guarantee, all in accordance with the manufacturer's instructions

1	Roof covering with pitch not exceeding 20 degrees	m2	951
2	Ridge capping (Code FK3) to be Brownbuilt Klip-Lok 406 550mm girth, three times bent along girth and notched on site to suit roof profile.	m	34
3	Hip capping to be Brownbuilt Klip-Lok 406 550mm girth, three times bent along girth and notched on site to suit roof profile.	m	34

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	<u>0.6mm "Brownbuilt Klip-Lok Light Industrial" galvanised troughed sheeting steel with "Chromadek" finish on one side, in single lengths fixed to steel purlins/channels and 0.6mm galvanised steel accessories with "Chromadek" finish on one side, fixed to roof members by a firm of Specialists who will give a five (5) year guarantee, all in accordance with the manufacturer's instructions</u>		
4	Roof covering with pitch not exceeding 20 degrees	m2	929
5	Ridge capping (Code FK3) to be Brownbuilt Klip-Lok 406 550mm girth, three times bent along girth and notched on site to suit roof profile.	m	49
6	Standard type FK8 head wall flashing including fixing and sealing top edge of flashing against wall	m	40

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<p>Section No. 3 BUILDING Bill No. 6 CARPENTRY AND JOINERY (PROVISIONAL) Procost & Associates</p>			

PRE-FABRICATED TIMBER ROOF TRUSSES

Pre-fabricated metal connected timber roof trusses

All trusses shall be fabricated by an approved truss manufacturer who holds a current Certificate of Competence awarded by the Institute for Timber Construction

Timber

Timber for trusses to be South African softwood and shall be in accordance with the grades as defined in SABS Specification No 563 or as defined in SABS Specification No 1460

Bolts

Bolts shall be in accordance with BS 4190 or SABS 135

Shear plates, tooth connectors and split rings

Shear plates, tooth connectors and split rings shall be in accordance with BSS 1759 : 1960 and installed in accordance with the CSIR Publication HOUT 468, "The Design, Manufacturing and Erection of Timber Trusses"

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Washers

Square or round washers of the following dimensions shall be used with all bolts:

- 1. Bolts up to 8mm diameter:
Washers shall be minimum 25mm wide of minimum 2,50mm thickness
- 2. Bolts up to 12mm diameter:
Washers shall be minimum 36mm wide of minimum 4,00mm thickness
- 3. Bolts up to 20mm diameter:
Washers shall be minimum 60mm wide of minimum 5,00mm thickness

Metal connector plates

Metal connector plates shall be fabricated out of not less than 1mm thick drawn quality galvanised steel

The steel shall have a minimum yield strength of 228MPa and a minimum ultimate tensile strength of 330MPa. The corrosion resisting coating shall be not less than 275g/m2 commercial class hot dipped galvanising as per SABS 934 before stamping

All connector plates shall have been tested by the CSIR and be of a size capable of transmitting the forces between members of a truss without exceeding the design values published in the CSIR report

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Truss construction

Trusses shall be constructed in jigs specially designed to ensure the correct profile, overhangs and cambers

Where metal connector plates are used all joints are to be close fitted butt joints made by precision pressing of the metal connector plates into each side of the joint

Truss design

All trusses shall be designed by a registered Professional Engineer in accordance with SABS 0163 ("Design of Timber Structures") and Code 0160 ("Loadings")

Truss spacing

The truss centres shall be less than or equal to that as described in this bill for each respective truss

Truss pitch

The truss pitch shall be as described in this bill for each respective truss type

Truss loading

Trusses shall be designed for a live load of 0,50kN/m2 and dead load as specified under the sub-heading "Specific load specifications for roof trusses"

Shop drawings, design and erection guarantee certificates

It will be expected from the Contractor to timeously prepare, submit and obtain the necessary approvals from the Representative/Agent in respect of the required shop drawings, design and erection guarantee certificates as specified

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Dimensions

All dimensions given in the descriptions of the trusses are nominal and actual measurements are to be obtained by actual measurements taken on the site before design or fabrication commences

Erection

All trusses are to be hoisted and erected strictly in accordance with the procedures and recommendations of the manual "The Erection and Bracing of Timber roof Trusses" as published by the Institute for Timber Construction and the CSIR, or the SABS Code of Practice "The Design, Manufacture and Erection of Timber Roof Trusses", or as designed and detailed by the designer

Design system

The design system as documented in this bill is based on the "MiTek" system and all references given in the descriptions are related to specific type of trusses based on this design system

However, Contractors are to note that any design system of similar quality may be used subject to the prior written approval of the Representative/Agent

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Specific specifications for roof trusses

Unless otherwise described, the following specifications will apply:

1. All trusses to be with a 20° pitch
2. The dead load consists of 0,6mm "Klip-Lok Light Industrial"galvanised troughed sheet steel roof covering with "Chromadek" finish, purlins at approximately 1200mm centres, 6mm fibre-cement, 6,4mm gypsum, nailed up ceilings and 50mm and 100mm glass fibre insulation blanket laid on top of ceilings

Rates

Tendered rates to include for the complete roof construction, including the design of the roof construction, all timber of required grade and type shown on the design, all cutting and waste, cutting to the exact lengths and end angles to manufacture the respective truss type, supply of all connector plates, fabrication of trusses, checking the completed truss for quality, loading up, transporting to the site of the works and off loading, storing under cover and protecting from the weather, hoisting up in position and erection of the roof truss structure, necessary supervision, submission of all shop drawings, design and erection guarantee certificates, etc. as specified

ROOFS ETC

Allow for the preparation and submission of the following documents in respect of all buildings:

- | | |
|---|--|
| 1 | Detailed shop drawings indicating truss sizes, truss positions, bracings, details, etc. to be submitted for approval prior the commencement of any fabrication |
|---|--|

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COMPLETION OF JTG PHASE 2B

2	Design certificate indicating the licensed programme used, SABS specifications adhered to, general procedures and loadings adopted, sizes and grading of timber components, details, etc.	Item
3	Erection guarantee certificate after the whole completed roof truss structure have been inspected, all defective work have been taken out and made good, etc. to the full satisfaction of the Representative/Agent	Item

ROOFS TRUSSES

The following in prefabricated timber roof constructions should be of treated timber:

4	Complete Roof construction for Guard House complete with trusses, jack rafters, permanent bracing and purlins/battens etc 31m2 on plan (measured flat)	No	1
5	Complete Roof construction for Hall complete with trusses, jack rafters, permanent bracing and purlins/battens etc 368m2 on plan (measured flat)	No	1
6	Complete Roof construction for Cafeteria complete with trusses, jack rafters, permanent bracing and purlins/battens etc 427m2 on plan (measured flat)	No	1

ROOF TIMBERS SUNDRIES Sawn Softwood (Grade 5):

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	<u>Sawn softwood</u>		
7	38 x 114mm Wall plates	m	190
8	76 x 50mm Beamfill close rail	m	190
	<u>Sundries</u>		
9	Two coats creosote on sawn timbers	m2	21
	<u>EAVES, VERGES, ETC</u>		
	<u>"Everite FC77" pressed fibre-cement</u>		
10	12 x 300mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	308
	<u>DOORS, ETC</u>		
	<u>Framed, ledged and braced wrought meranti batten doorformed of 44 x 150mm stiles and top rail, 16 x 150mm middle ledge rail and diagonal braces and 22 x 230mm bottomrail, filled in flush one side with 22 x 76mm tongued and grooved vertical battens, V-jointed one side with V-jointed continued along stiles and top rail, the other side covered with 6mm concealed hardboard panel let flush into, inside 813 x 300 x 1,6mm satin finished stainless steel protection plate and including rebate in framing and weather bar:</u>		
11	44mm Door size 813 x 2032mm high	No	10
	<u>Solid flush panel doors with hard board both sides and two concealed edges hung to steel frame</u>		
12	40mm Door 813 x 1882mm high	No	6
	<u>Solid flush panel doors with approved veneer on both sides and two concealed edges hung to steel frame</u>		
13	40mm Door 813 x 2032mm high	No	15
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	<u>Semi-solid core flush panel doors with concealed hardwood edges and 4mm thick masonite covering on both sides hung to steel frame</u>				
14	40mm Door size 1000 x 2032mm high	No	1		
	<u>JOINERY FITTINGS ETC</u>				
15	Joinery Fittings Complete installed to Hall (PC Amount R40 000-00 Vat excl. supplied, delivered and installed to site by Specialists)				
		No	1		
16	Joinery Fittings Complete installed to Cafeteria (PC Amount R90 000-00 Vat excl. supplied, delivered and installed to site by Specialists)				
		No	1		
17	Joinery Fittings Complete installed to Guard House (PC Amount R20 000-00 Vat excl. supplied, delivered and installed to site by Specialists)				
		No	1		
	<u>LOOSE FURNITURE, ETC.</u>				
	<u>Cafeteria</u>				
18	Loose furniture for Cafeteria Block (PC Amount R5 000-00 VAT excluded, supplied, delivered to site and installed)				
		No	1		
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Bill No. 6

CARPENTRY AND JOINERY (PROVISIONAL)

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<u>SECTION NO.2</u>			
<u>BILL NO.7</u>			
<u>CEILING , ETC. (PROVISIONAL)</u>			
<u>PREAMBLES</u>			
<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Descriptions:</u>			
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere			
<u>CEILING CONSTRUCTION, CORNICES, ETC.</u>			
<u>Insulation</u>			
1	50mm glass fibre insulation blanket to manufacturer's specification, laid on ceiling.	m2	1,682
<u>Sawn softwood</u>			
2	38 x 114mm Ceiling joists (Provisional)	m	59
<u>NAILED UP AND SCREWED UP CEILINGS</u>			
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Section No. 3 BUILDING Bill No. 7 CEILINGS, ETC (PROVISIONAL) Procost & Associates			

	<u>6.4mm gypsum ceiling boards</u>		
3	Ceilings including 38mm x 38mm sawn softwood brandering at 450mm centres and H-strips.	m2	314
	<u>6mm "Everite Nutec" fibre-cement boards with H- profile primed steel jointing cover strips over joints</u>		
4	Ceilings including 38 x 38mm brandering at 90deg to trusses at maximum centres of 400mm by 32mm long galvanised nails.	m2	57
5	Extra over ceiling for opening for 610 x 610mm trap door of 50 x 76mm wrought softwood rebated framing with one 38 x 38mm sawn softwood cross brander covered with ceiling board and fitted flush in opening	No	3

SUSPENDED CEILINGS

Ceilings formed of Everite Embossed white vinyl clad
square edged ceiling pre-painted acoustic panels size
1195 x 595 x 6mm thick laid on exposed tee suspension
system comprising T38 main tees at 600mm centres
with T24/38 cross tees between each, holding down
clips, etc., all suspended with galvanised 4mm diameter
suspension rod and hook with spring clip and T-
suspension plate an centres not exceeding 1200mm in
both direction. Suspension rods are to be attached with
25 x 25 x 25mm x 1,6mm angle cleats shot nailed to
concrete, bolted to steel or screwed to timber purlins,
etc.

6	Ceilings suspended exceeding 1m and not exceeding 2m steel purlins/trusses (trusses exceeding 7500mm centres)	m2	133
7	Extra over ceilings for openings 600 x 600mm light fittings	No	3
8	Extra over ceilings for openings 600 x 1200mm light fittings	No	3
9	Extra over ceilings for openings 600 x 1500mm light fittings	No	3

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COMPLETION OF JTG PHASE 2B

10	Sloping ceilings suspended not exceeding 1m below steel trusses, trusses spacing not exceeding 7500mm cc	m2	1,052
11	Extra over ceilings for openings 600 x 600mm light fittings	No	15
12	Extra over ceilings for openings 600 x 1200mm light fittings	No	25
13	Extra over ceilings for openings 600 x 1500mm light fittings	No	12
	<u>6mm "Everite Nutec" fibre-cement boards with H-profile primed steel jointing cover strips over joints</u>		
14	Ceilings suspended exceeding (exceeding 1m and not exceeding ?m) below timber steel purlins at ?mm centres (trusses at ?m centres)	m2	124
15	Extra over ceilings for openings 600 x 600mm light fittings	No	2
16	Extra over ceilings for openings 600 x 1200mm light fittings	No	2
17	Extra over ceilings for openings 600 x 1500mm light fittings	No	2
	<u>CORNICES</u>		
	<u>S.A. Pine</u>		
18	50 x 19mm Cornices nailed	m	524
	<u>Shadowline cornices</u>		
19	47 x 53mm "LSM25" pre-painted recessed cornices plugged	m	196

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PARTITIONS ETC

Rhino-Drywall partitioning shall comprise of steel studding formed of 51 x 35mm top and bottom tracks with vertical studs at maximum 400mm centres, friction fitted or pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc and clad on both sides with 12,5mm thick taper edges Rhino board fixed with 25mm Rhinoboard sharp point screws at maximum 220mm centres with all external angles to have drywall corner beads. Boards are to be butt jointed and finished with "Rhino" tape and "Rhino Glide" jointing compound all in accordance with the manufacturer's instructions. Intersections and abutments are measured separately and descriptions shall be deemed to include any additional studs, corner beads, jointing compound, tape, etc

Rhino-Drywall steel stud partitioning with "Rhino Wallboard" with a fire rating of 30 minutes and a sound rating of Rw 39dB including fibre tape and skimmed joints on both sides

20	Partitioning 3000mm high with bottom track plugged and top track fixed to suspended ceiling tees or plugged	m	39
21	Extra over partitioning for vertical abutment	No	2
22	Extra over partitioning for corner	No	2
23	Extra over partitioning for irregular corner	No	2
24	Extra over partitioning for T-intersection of solid partitioning	No	2
25	Extra over partitioning for fair end	No	2

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	<p><u>SECTION NO.3</u></p> <p><u>BILL NO.8</u></p> <p><u>STRUCTURAL STEELWORK(PROVISIONAL)</u></p> <p><u>PREAMBLES</u></p> <p><u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Description</u></p> <p>Description 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 L-shaped and U-shaped anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p><u>STEEL COLOUMNS AND BEAMS</u></p> <p><u>Welded columns in single lengths with flat base, cap, bearer and connection plates, bolted to brickwork or concrete</u></p>			
1	356 x 171 x 45mm (44.80kg/m) I section columns (In No 16)	t	4.35	
	<p><u>STEEL PORTAL FRAMES</u></p>			
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	<p>Section No. 3</p> <p>BUILDING</p> <p>Bill No. 8</p> <p>STRUCTURAL STEELWORKS (PROVISIONAL)</p> <p>Procost & Associates</p>			

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COMPLETION OF JTG PHASE 2B

	<u>Welded portal frames with flat bearer, gusset and connection plates, bolts, angle cleats etc bolted to concrete or steel</u>		
2	Double pitched portal frames 17,24m wide x 2,83m high extreme of 254 x 146 x 43mm 43.20kg/m I-section rafters (In No 2)	t	1.71
3	Double pitched portal frames 19,19m wide x 3,23m high extreme of 254 x 146 x 43mm 43.20kg/m I-section rafters (In No 1)	t	5.58
	<u>STEEL TRUSSES</u>		
	<u>Welded roof channel truss rafters, tie beams, rails, struts, braces, cleats, cambering etc and flat bearer, gusset and connection plates, bolted to steel including paintwork</u>		
4	Double pitched trusses 19192 x 3225mm high extreme (In No 1)	t	0.92
	<u>PURLINS, GIRTS, BRACING, ETC</u>		
	<u>Purlins and girts bolted to steel including paintwork</u>		
5	200 x 75 x 20 x 3mm (8.66kg/m) Cold framed lipped channel	t	7.97
	<u>Steel plates, bolted to steel</u>		
6	288 x 148mm x 16mm Thick plate with 4no holes	No	8
7	462 x 171mm x 16mm Thick plate with 6no holes	No	16
8	550 x 350mm x 16mm Thick plate with 6no holes	No	16
9	780 x 146mm x 16mm Thick plate with 6no holes	No	16
	<u>BOLTS, FASTENERS, ETC</u>		
10	16mm Diameter threaded holding down bolt 300mm long embedded in concrete with and including 70 x 70 x 10mm thick washer plate	No	16

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Item No		Quantity	Rate	Amount
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	<u>BILL NO.9</u>			
	<u>IRONMONGERY (PROVISIONAL)</u>			
	<u>PREAMBLES</u>			
	<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs			
	<u>Finishes to ironmongery</u>			
	Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded			
	<u>HINGES, BOLTS,ETC</u>			
	<u>Dorma or similar approved</u>			
1	"DWC-006" Stainless steel WC indicator and turnknob	Sets	8.0	
	<u>CATCHES,CABIN HOOKS, ETC</u>			
	<u>"Dorma" or similar approved</u>			
2	"DHC-SS-031B" Stainless steel hat and coat hook with rubber buffer	No	11	
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COMPLETION OF JTG PHASE 2B

LOCKS

"Union" or similar approved

3	37651 Lock swing over type with and including occupancy signal and emergency release	No	1
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"Dorma" or similar approved

4	"DMWC-SS-008" Stainless steel bathroom deadlock	No	8
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5	"DDC056001KD" Satin nickel 60mm Five pin euro-profile double cylinder	No	22
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6	"DBC006001" Satin nickel 60mm Euro-profile bathroom/privacy cylinder	No	1
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7	"D036S SS" Stainless steel cylinder sash lock	No	24
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8	"D037D SS" Stain steel cylinder dead lock	No	5
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9	"DKC056501KD" Satin nickel 65mm Five pin Euro-profile knob cylinder	No	6
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HANDLES, ETC

Dorma or equal approved

10	"DHP-SS-CL 150 x 300mm" DPH301 Pull handle	No	3
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11	"DHP-SS-BL 75 x 170mm" DPH301 Pull handle	No	8
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12	"SH875 CYL S.S" Stainless steel lever on plate with cylinder cutout	Sets	24.0
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13	"DPH301B" Stainless steel 325 x 25mm Straight tubular pull handle flange fixing	No	2
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14	"DHP-SS-CR 150 x 300" DPH301 Pull handle on 150 x 300 x 1.2mm plate cylinder right	No	2
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PUSH PLATES, KICKING PLATES ETC.

15	"DPP-SS-BL 170 x 75mm" Brushed stainless steel blank push plate	No	8
16	"DPP-SS-CL 150 x 300mm" Push plate cylinder left 150 x 300 x 1.2mm	No	2
17	"DPP-SS-CR 150 x 300mm" Push plate cylinder right 150 x 300 x 1.2mm	No	3
18	DKP-SS-200 Kick plate size 1000 x 200 x 1.2mm	No	2

SUNDRIES

"Dorma" or equal approved

19	"DDS-NP-018" Nickel plated floor mounted door stop	No	34
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LETTERS, NAMEPLATES, ETC

"Dorma" or similar approved

20	"DSS-132 M/F" Stainless steel 150 x 150mm Male/Female sign	No	2
21	"DSS-133 P" Stainless steel 150 x 150mm Disabled Persons sign	No	1
22	"DSS-131 F" Stainless steel 150 x 150mm Female sign	No	2
23	"DSS-130 M" Stainless steel 150 x 150mm Male sign	No	2
24	"DSS-143 A" Stainless steel 150 x 150mm Arrow sign	No	4

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25	"DSS-140 RH" Stainless steel 150 x 150mm Running Man sign	No	4		
<u>DOOR CLOSERS</u>					
<u>"Dorma" or simialr approved</u>					
26	TS90 EN 3/4 Cam action slide channel NON HOLD OPEN door closer - with hydraulic speed control, pull side - leaf or transform fixing, push side - leaf or transformfixing (Silver) mounted overhead door closer to door of width up to 950mm. (Provisional)	No	5		
27	TS73V EN 2-4 Parallel arm DELAYED ACTION push side fixing including parallel arm bracket (Silver) mounted overhead door closer to door of width up to 950mm.	No	1		
<u>LETTERS, NAME PLATES, ETC</u>					
<u>Approved 150 x 150 x 3mm thick PVC standard safety signage</u>					
28	Fire extinguisher sign plugged	No	1		
29	"Arrow" sign plugged	No	1		
<u>SUNDRIES</u>					
30	Medical aid kit hung on wall (Allow a PC Sum of R2000.00 for a medical aid kit excluding vat and including delivery to site)	No	1		
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Section No. 3 BUILDING Bill No. 10 METALWORK (PROVISIONAL) Procost & Associates			

AAAMSA guide

All windows, doors, etc shall comply with and meet the minimum recommended performance requirements as set out in the General Specification for Architectural Aluminium and Glass Products (Third Edition) as published by the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA)

Finish

The windows, doors, etc shall be natural anodised to a thickness of 25 micron and shall comply with SABS 999 and 1407

Glass

Glazing to be with patent rubber gaskets with glazing beads and comply with BS 952. Thickness of glass shall be in accordance with table 1 (Part N : Glazing). Safety glass shall comply with SABS 1263. The National Building Regulations shall be observed with regard to the specification of safety glass

Design indemnity

The contractor is to submit with his tender the "Form of Indemnity", annexed to this document, fully completed and signed

Drawings

Tenderers are referred to architect's drawings annexed to these bills of quantities for full details of windows, doors, etc

Pricing.

All window prices should include aluminium louvres as shown

General

Workshop drawings to be approved by the architect before manufacture

WELDED SCREENS, GATES, ETC

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<u>Gates to external doors</u>		
1	Single gate and frame 813 x 2032mm high complete with 50 x 25 x 2,5mm hollow section frame and 50 x 25 x 2mm hollow section horizontal middle rail filled in with 16 x 16mm square section vertical rails at 75mm centers and fitted with a pair of suitable hinges welded to frame and with locking mechanism for padlock all in and including outer frame of 50 x 25 x 2mm hollow section welded frame bolted to brickwork	No 3
2	Double gate 2500 x 2812mm high complete with 100 x 75 x 1,6mm mild steel hollow section frame and 100 x 25 x 1,6mm mild steel hollow section vertical and horizontal main bars and 50 x 50 x 1,6mm hollow section horizontal and vertical middle cross braces and cranked sheet metal on both openings welded to gate and fitted with a pair of suitable heavy duty hinges welded to frame with locking mechanism and including stay hole with striker plate fixed to brickwork	No 2
<u>PRESSED STEEL DOOR FRAMES</u>		
<u>1,2mm Double rebated frames suitable for half brick walls</u>		
3	Frame for door 813 x 2032mm	No 14
4	Frame for door size 1000 x 2032mm high (Disabled)	No 1
<u>1,2mm Double rebated frames suitable for one brick walls</u>		
5	Frame for door 813 x 2032mm high	No 11
<u>PRESSED STEEL COMBINATION DOORS AND FRAMES</u>		
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	<u>French doors</u>		
6	Code DDA Door overall size 1653 x 2125mm high with and including 2 lever mortice lockset	No	7
7	Code DSDDA Door overall size 4795 x 2125mm high with and including 2 lever mortice lockset	No	6
<u>STEEL WINDOWS, DOORS, ETC</u>			
	<u>Steel residential windows with burglar bars to all sashes</u>		
8	Window code E1 size 533 x 654mm High	No	22
9	Window code NE1 size 533 x 654mm High	No	4
10	Window code SS31, size 978 x 511mm high	No	13
11	Window code SS33, size 978 x 1445mm high	No	45
<u>NATURAL ANODISED ALUMINIUM DOORS, WINDOWS, ETC.</u>			
	<u>Bronze powder coated aluminium windows, doors, etc including frames and sub-frames, fixing, silicone sealant all round, ironmongery and glazing with 6.5mm clear safety glass</u>		
12	Window size 967 x 1500mm high	No	2
13	Window size 1500 x 1036mm high	No	1
14	Window size 1795 x 1500mm high	No	2

STEEL ROLLER SHUTTERS ETC

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	<u>"Wispeco" roller shutter door with "Chromadek" finish complete with manufactures fittings fixed to brickwork or concrete</u>			
15	Chain operated slatted roller shutter for 1551 x 1251mm high opening	No	3	
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<u>PLASTERING (PROVISIONAL)</u>				
<u>PREAMBLES</u>				
<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>				
<u>SCREEDS</u>				
<u>Screeds on concrete</u>				
1	20mm Thick on floors	m2	1,437	
<u>GRANOLITHIC</u>				
<u>Untinted granolithic on concrete</u>				
2	20mm Thick on floors	m2	74	
<u>INTERNAL PLASTER</u>				
<u>Cement plaster on brickwork</u>				
3	On walls	m2	1,915	
4	On narrow widths	m2	40	
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<u>TILING (PROVISIONAL)</u>			
<u>PREAMBLES</u>			
<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the architect			
<u>Descriptions</u>			
Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding			
<u>WALL TILING</u>			
<u>Wall tiles (PC R110.00/m2 VAT excl.) fixed with adhesive to plaster (plaster elsewhere)</u>			
1	On walls	m2 437	
2	On narrow widths	m2 8	
<u>FLOOR TILING</u>			
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<p><u>SECTION NO.2</u></p> <p><u>BILL NO.13</u></p> <p><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></p> <p><u>PREAMBLES</u></p> <p><u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>"Polycop" polypropylene pipes:</u></p> <p>Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated</p> <p>Pipes shall be firmly fixed to walls etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p>All pipe diameters are nominal external</p> <p><u>"Polylink" polypropylene pipes:</u></p> <p>Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints</p> <p>Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured</p> <p>Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 3 BUILDING Bill No. 13 PLUMBING AND DRAINAGE (PROVISIONAL) Procost & Associates</p>			
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Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions

All pipe diameters are nominal external

Concrete pipes:

Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings

Vitrified clay pipes:

Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

uPVC pipes and fittings:

Soil, waste and vent pipes and fittings shall be solvent weld jointed

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

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Copper pipes:

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground

Fixing of pipes

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

Lead pipes and fittings

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel

Reducing fittings

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

Wire gratings

Septic tanks

Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions

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Exposed concrete surfaces

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

Excavations

No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling

"Soft rock" and "hard rock" shall be as defined in "Earthworks"

Laying, backfilling, bedding, etc. of pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium-pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB : Earthworks (Pipe trenches) Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding

Flush pans

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

Stainless steelbasins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable

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Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, "Layflat" sheeting, securing of same, etc

RAINWATER DISPOSAL

0,6mm Galvanised sheet iron with "Chromadek" finish on one side

1	100 x 100mm Eaves gutters with beaded front edge	m	287
2	Extra over eaves gutter for angle	No	32
3	Extra over eaves gutter for outlet for 100mm diameter pipe	No	32
4	100 x 75mm Rainwater pipes	m	96
5	Extra over rainwater pipe for eaves or plinth offset 450mm projection	No	32
6	Extra over rainwater pipe for shoe	No	32
	<u>Rainwater tank, etc.</u>		
7	Jojo or equal approved 5000 litre dark green water tank with an approved UV rust	No	3

SOIL DRAINAGE

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	<u>uPVC pipes</u>		
8	110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m	90
9	110mm Pipes laid in and including trenches not exceeding 1m deep	m	75
	<u>Extra over "Corflo" double walled radial ribbed uPVC pipes with integral moulded cuff joints and rubber seal rings for uPVC fittings</u>		
10	110mm Bend	No	22
11	110mm Junction	No	11
12	110mm Access bend	No	10
13	110mm Inspection eye	No	6
14	110mm Rodding eye	No	8
15	110mm Vent pipe	No	15
16	110mm uPVC "ABC" cleaning eye	No	11
	<u>uPVC gulleys</u>		
17	110mm Gully not exceeding 750mm deep including standard pre-cast concrete surround	No	18
	<u>SUNDRIES</u>		
18	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m3	13
19	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m3	26
20	Testing soil drainage pipe system		Item

SANITARY FITTINGS

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	<u>"Franke" stainless steel or equal approved</u>		
21	Franke Trendline Model 1200 x 535 Grade 304 18/10 polished stainless steel double end bowl drop on sink (Code: 312081), overall size 1200 x 535mm wide with two 343 x 410 x 140mm deep bowls, fitted onto cupboard (elsewhere specified) including 38mm waste fitting and PVC traps (traps elsewhere specified).	No	5
	<u>"Vaal" or equal approved</u>		
22	Hibuscus white vitreous china lavatory basin (code:113202) with one tap hole including integrated overflow and chainstay hole bolted to wall with two 10mm bolts (Disabled)	No	1
23	Hibuscus white vitreous china lavatory basin (code:113202) with pedestal code (code:2477) with one tap hole including integrated overflow and chainstay hole bolted to wall with two 10mm bolts	No	11
24	Hibuscus Elite vitreous china close coupled suite code VAA-772480 including Eco Jazz seat code 8512Z0 including lid, fitments and flush pipe elbow	No	11
25	Vaal Sanitaryware Protea Paraplegic vitreous china floor mounted paraplegic washdown suite colour White (Code:VAA-750246) comprising 90° outlet pan and matching 9 litre cistern including lid, fitments and purpose-made chromium plated side flush lever and Buxton Sta-Tile seat (Code:VAA-411-65533)	No	1
26	VAA-705326 415 x 315 x 275mm White vitreous china wall hung urinal complete with 38mm chrome plated domical grating, chrome plated top inlet spreader and two hanger brackets	No	1
	<u>WASTE UNIONS ETC</u>		
	<u>"Cobra Watertech" or equal approved</u>		
27	38mm "Cobra 316" unslotted waste and plug with chain	No	17

TRAPS ETC

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	<u>"Marley" or equal approved</u>		
28	40 x 300mm Sink combination for double bowl with deepseal "P" trap	No	4
29	40mm Flexi butyl rubber trap with reseal "P" trap	No	13
	<u>"Cobra Watertech" or equal approved</u>		
30	"Cobra Ref. 365/40" CP bottle trap	No	2
	<u>TAPS, VALVES, ETC</u>		
	<u>"Cobra Watertech" or equal approved</u>		
31	Code COB-LO-214-15 Ledimo chrome plated pillar tap	No	11
32	Code COB-505-21B Elbow action tap	No	1
33	"Cobra Ref. 232/350" Angle regulating valve	No	13
34	Cobra Ref. 296 One hole 1mm mixer with aerated swivel outlet. Light pattern	No	4
35	Cobra Watertech 15mm MI x FI x 75mm long extension piece with sliding wall flange (Code: 059-15).	No	17
36	Cobra Watertech exposed urinal chrome plated Junior Flushmaster flushvalve (code: FJ6.000) with non-hold open feature, wall flange and 20mm "Ball-o-Stop" control inlet.	No	1
37	Cobra Watertech chrome plated 15mm outlet x 215mm long with 27mm offset urinal flush pipe (Code: FJT5.5).	No	1
	<u>SANITARY PLUMBING</u>		
	<u>uPVC pipes</u>		
38	50mm Pipes	m	65
39	110mm Pipes	m	87
40	50mm Pipes chased into brick walls	m	35

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COMPLETION OF JTG PHASE 2B

41	50mm Pipes laid in and including trenches not exceeding 1m deep	m	40
42	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds	m	60
	<u>Extra over uPVC pipes for fittings</u>		
43	50mm BSP adaptor	No	14
44	110mm Pan connector	No	12
45	50mm Bend	No	12
46	50mm Access bend	No	10
47	100mm Bend	No	9
48	50mm Junction	No	9
49	110mm Junction	No	12
50	110mm Reducing junction	No	9
51	110mm Access bend	No	12
52	110mm Double junction	No	10
53	110mm Access junction	No	8
54	110mm "GI Two-way" vent valve	No	8

Sundries

55	Testing waste pipe system		Item
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WATER SUPPLIESClass 16 uPVC pressure pipes with solvent welded joints

56	32mm Pipes laid in and including trenches not exceeding 1m deep	m	75
57	50mm Pipes laid in and including trenches not exceeding 1m deep	m	65

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	<u>Extra over class 16 uPVC pressure pipes for fittings with solvent welded joints</u>		
58	32mm Bend	No	33
59	32mm Reducer	No	31
60	32mm Tee	No	33
61	50mm Bend	No	31
62	50mm Tee	No	29
	<u>Class 0 copper pipes</u>		
63	15mm Pipes	m	90
64	22mm Pipes	m	100
	<u>Extra over class 0 copper pipes for capillary fittings</u>		
65	15mm Fittings	No	135
66	22mm Fittings	No	130
	<u>Sundries</u>		
67	Testing water pipe system		Item
	<u>ELECTRIC WATER HEATERS</u>		

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	<u>"Kwikot"</u>		
68	Kwikot 250 Litre Standard 600 Dual electric water heater (Code : EF-250-2D) complying with SABS 151-2002, overall size 1650 x 535mm high, operating at 400kPa with temperature and pressure safety relief valve including 20mm female draincock with inlet compression. Geyser to be installed horizontally in roof space with 1820 x 560mm wide polyethylene drip tray with union and back nut connected to 20mm PVC overflow pipe taken out at eaves (Code : GSTP-1940) and 22mm pipe work including two 22mm vacuum breakers (Code : KHN4.200CX) installed on hot and cold water supply. Installation to include a 22mm 400kPa Kwikot Mono control and expansion relief valve (Code : KHN3.114), all in accordance with SANS 10254, connected to single phase electrical power supply with isolator 1m away from connection on geyser.	No	3
	<u>Sundries</u>		
69	22mm Brass gate valve	No	3
70	35mm Brass gate valve	No	3
71	35mm Cobra watertech 1050 strainer	No	3
72	PB1.10RB Vacuum breaker	No	3
73	PA1.1RB "Kwikflo" 400kpa pressure reducing valve	No	3
74	Tray	No	3
75	22mm Overflow pipe 500mm girth twice bent	No	3
	<u>FIRE APPLIANCES ETC</u>		
	<u>'Chubb'</u>		
76	4.5Kg Dry chemical powder fire extinguisher, including standard hard wood backing plugged and backing finished with one coat dark stain and two coats clear suede polyurethane varnish	No	1
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COMPLETION OF JTG PHASE 2B

77	9kg Dry chemical powder fire extinguisher, including standard hard wood backing plugged and backing finished with one coat dark stain and two coats clear suede polyurethane varnish	No	15
78	"Everyway" hose reel complete with 30m plastic hose, chromium plated stopcock, shut-off nozzle and wall bracket	No	8
<u>WATER SUPPLIES TO FIRE APPLIANCES</u>			
<u>Class 0 copper pipes with capillary couplings</u>			
79	50mm Pipes	m	120
<u>Extra over class 0 copper pipes for capillary fittings</u>			
80	50mm Fittings	No	115
<u>TESTING</u>			
81	Provide all necessary water, etc., for and test the whole of the plumbing services, sanitary fittings, pumps, etc., and in stages as deemed necessary, including chlorination, complete to the satisfaction of the architect and the local authority, replace any defective work free of charge, including any necessary re-testing and leave in perfect condition upon completion and provide a certificate of compliance for plumbing work		Item

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	<u>SECTION NO.2</u>			
	<u>BILL NO.14</u>			
	<u>GLAZING (PROVISIONAL)</u>			
	<u>PREAMBLES</u>			
	<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>			
	<u>GLAZING TO STEEL WITH PUTTY</u>			
	<u>6.5mm Clear float glass</u>			
1	Panes exceeding 0,1 m2 and not exceeding 0,5m2	m2	7	
2	Panes exceeding 0,5 m2 and not exceeding 2m2	m2	50	
3	Panes exceeding 2m2 and not exceeding 4m2	m2	7	
	<u>6.5mm Obscure glass</u>			
4	Panes exceeding 0,1 m2 and not exceeding 0,5m2	m2	12	
	<u>MIRRORS, ETC</u>			
	<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>			
5	Mirror 400 x 600mm high with four screws	No	11	
6	Mirror 400 x 900mm high with four screws	No	1	
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<u>SECTION NO.2</u>				
<u>BILL NO.15</u>				
<u>PAINTWORK (PROVISIONAL)</u>				
<u>PREAMBLES</u>				
<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>				
<u>PAINTWORK ETC TO NEW WORK</u>				
<u>ON FLOATED PLASTER</u>				
<u>Plascon Polvin Super Acrylic to interior new cement plaster (NW 205).Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat of Plascon Plaster Primer (UC 56) with an overcoating time of 16 hours and finish with two coats of Polvin Super Acrylic (EPL) with 1 hour drying time between coats, for a maintenance cycle of 5 years in a C1 - inland environment.</u>				
1	On internal walls	m2	1,508	
<u>ON SMOOTH CONCRETE</u>				
<u>One coat universal undercoat and three coats super acrylic PVA paint</u>				
2	On ceilings and beams	m2	133	
<u>ON FIBRE-CEMENT</u>				
<u>One coat primer, one coat universal undercoat and two coats super acrylic PVA paint</u>				
3	On ceilings and cornices	m2	1,418	
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	<u>Plascon Sure Coat Gloss Enamel to exterior new fibre cement (NW 174).Surface to be dry, sound and clean, with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat of Plascon Plaster Primer (UC 56) with an overcoating time of 16 hours and finish with two coats of Sure Coat Gloss Enamel (SGE) with 16 hours drying time between coats, for a maintenance cycle of 2 years in a C1 - inland environment.</u>		
4	On fascias and barge boards	m2	171
	<u>Plascon Sure Coat Gloss Enamel to interior new fibre cement (NW 274).Surface to be dry, sound and clean, with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat of Plascon Plaster Primer (UC 56) with an overcoating time of 16 hours and finish with two coats of Sure Coat Gloss Enamel (SGE) with 16 hours drying time between coats, for a maintenance cycle of 4 years in a C1 - inland environment.</u>		
5	On window sills not exceeding 300 mm girth	m	80
<u>ON METAL</u>			
	<u>Plascon Velvagio Satin to exterior new mild steel (NW 683).Surface to be clean and dry. Remove surface contaminants using Plascon Aquasolv Degreaser (GR 1) with bristle brush or Brillo pads. Rinse thoroughly with tap water until surface is water break-free. Remove rust and millscale by abrasive blasting to ISO 8501 - 01:1988 - Sa2½ or by hand/mechanical wire brushing to St3 of the same standard. Allow to dry completely and prime within 4 hours of cleaning. Prime with one coat of Metal Primer (UC 501) with an overcoating time of 16 hours and finish with two coats of Velvagio Satin (VLO) with 16 hours drying time between coats, for a maintenance cycle of 3 years in a C1 - inland environment.</u>		
6	On door frames	m2	35
7	On doors and frames	m2	165
8	On windows with burglar bars	m2	160
9	On structural steel columns, beams, etc	m2	322

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10	On gates, grilles, burglar screens, balustrading, etc (both sides measured over the full flat area)	m2	40
	<u>ON WOOD</u>		
	<u>Plascon Velvaglo Satin to interior new wood (NW 571). Surface to be dry, sound and clean. Wash knots and resinous areas with Lacquer Thinners (ILS 1) and coat with Woodcare Knot Seal (PK 2) and apply one coat of Plascon Woodcare Pretreatment (WWP 1), overcoated within 48 hours with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) < 14% or less. Prime with one coat of Wood Primer (UC 2) with an overcoating time of 16 hours and finish with two coats of Velvaglo Satin (VLO) with 16 hours drying time between coats, for a maintenance cycle of 7 years in a C1 - inland environment.</u>		
11	On doors	m2	77
	<u>Three coats matt varnish</u>		
12	On doors	m2	15

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	<u>SECTION NO.3</u>			
	<u>BILL NO.1</u>			
	<u>APRONS AROUND BUILDINGS</u>			
	<u>(PROVISIONAL)</u>			
	<u>PREAMBLES</u>			
	<u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u>			
1	Excavate in earth to reduce ground levels	m3	43	
2	Rip and scarify ground level	m2	432	
3	Cart away surplus material from excavations to a dumping site to be located by the contractor	m3	44	
4	Compaction of ground surface under aprons including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	432	
5	Ant poisoning surface of ground under aprons	m2	432	
6	Weed killer	m2	432	
7	20MPa Concete to aprons cast in panels	m3	43	
8	20Mpa Concrete to ramps cast in panels to falls	m3	4	
9	20Mpa/19mm Stormwater channel cast in panels	m3	14	
10	Extra over concrete for thickening size 300mm deep, 150mm wide at top and tapering to 100mm thick, incl. of all excavations, cart away etc.	m	360	
11	Smooth formwork to sides of edges, risers, ends and reveals not exceeding 300mm high or wide	m	720	
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12	Finishing top surfaces of concrete with a wooden float, surface beds, slabs, etc to falls	m2	432		
13	Segmental channel with radius 290mm and minimum depth of 100mm on top of concrete, incl. all excavations, cart away etc.	m	393		
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EXTERNAL WORKS

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	<u>SECTION 3</u>			
	<u>BILL NO. 2</u>			
	<u>WALKWAYS (PROVISIONAL)</u>			
	NOTE : All excavations are measured as being in "earth" and/or filling compacted to 98% modified AASHTO density -----			
	<u>EARTHWORKS</u>			
	<u>EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Holes	m3	32	
2	Trenches	m3	152	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
3	Soft rock	m3	15	
4	Hard rock	m3	8	
	<u>Extra over all excavations for carting away</u>			
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	54	
	<u>Risk of collapse of excavations</u>			
6	Sides of trench and hole excavations not exceeding 1,5m deep	m2	508	
	<u>Keeping excavations free of water</u>			
7	Keeping excavations free of all water other than subterranean water	Item		
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	<u>G7 filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>		
8	Backfilling to trenches, holes, etc	m3	61
	<u>SOIL POISONING</u>		
	<u>Soil insecticide</u>		
9	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	363
10	Trenches , holes, etc	m2	725
	<u>CONCRETE</u>		
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
	<u>25MPa/19mm concrete</u>		
11	Bases	m3	26
12	Footings	m3	54
13	Ramps	m3	4
	<u>CONCRETE SUNDRIES</u>		
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
14	Ramps	m2	7
	<u>MASONRY</u>		
	<u>FOUNDATIONS (PROVISIONAL)</u>		
	<u>Brickwork in extra hard burnt clay bricks in (5:1) cement mortar with all joints grouted in solid with liquid cement mortar</u>		
15	Piers	m3	26
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16	One brick walls	m2	225
	<u>Face bricks "Topaz Satin" in stretcher bond pointed with recessed horizontal and vertical joints</u>		
17	Coping on top of one brick wall	m	363
18	Extra over ordinary brickwork for face brickwork.	m2	61

BRICKWORK SUNDRIES

Brickwork reinforcement

19	150mm Wide reinforcement built in horizontally	m	2,538
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CONCRETE

SUPPLEMENTARY PREAMBLES

Cost of tests

The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Principal Agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Principal Agent. (Test cubes are measured separately)

TEST BLOCKS

20	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	7
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WATERPROOFING

NOTE :
 Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 120 for CPAP formula purposes

DAMP-PROOFING OF WALLS AND FLOORS

Carried to Collection

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 COVERED WALKWAYS (PROVISIONAL)
Procost & Associates

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	<u>One layer of 375 micron "Consol Plastics Brikgrit DPC" or other equal and approved embossed damp proof course</u>		
21	In walls	m2	83
	<u>PAVING</u>		
22	Supply, deliver and spread 20mm crusher sand for paving bedding. Rate shall include for the removal of excess sand.	m3	54
23	Vibration of approved locking sand between paving with plate vibrator and finish surface.	m2	462
24	Cutting units to fit edge restraints.	m	363
25	Supply, deliver and install 60mm thick 25MPa type S-A interlocking concrete paving blocks to line and level according to SABS 1200 MJ & CMA specifications		
	It is important to note that the strength as required by SANS 1058 is based on day of despatch and not 28 day strength.	m2	462
26	1:3 cement sand filling between kerb and paving blocks where the gap is smaller than 25mm.	m3	2
27	Rate for the testing of the compressive strength of concrete paving blocks. Compressive strength test frequency and quantity will be in accordance with requirements of SABS 1058 (min 12 sample blocks per test per 1500m2) and as instructed by the Engineer.	Sets	4.0

ROOF COVERINGS ETC

NOTE :

Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 124 for CPAP formula purposes

PROFIED METAL SHEETING AND ACCESSORIES

Carried to Collection

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Procost & Associates

	<u>0.6mm "Brownbuilt Klip-Lok Light Industrial" galvanised troughed sheeting steel with "Chromadek" finish on one side, in single lengths fixed to timber purlins or rails and 0.6mm galvanised steel accessories with "Chromadek" finish on one side, fixed to roof members by a firm of Specialists who will give a five (5) year guarantee, all in accordance with the manufacturer's instructions</u>		
28	Roof covering with pitch not exceeding 25 degrees	m2	462
29	Extra over roof covering for cranking	m	181

**SUNDRY GALVANISED
STRUCTURAL STEELWORK
(PROVISIONAL)**

NOTE :

Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 136 for CPAP formula purposes

Supply structural steel members, fabricate to approved shop drawings complete with bolts and/or 6mm continuous fillet welds, with one under coat primer and two coats approved metal coating min thickness 0.15mm, include process control, loading, transporting to site, off loading and erection

30	75 x 75 x 3mm thick cold rolled square tube beams welded on 75 x 75 x 3mm thick cold rolled square tube columns	m	363
31	Extra on last for mitred corners	No	145
32	Base plates 150mm x 150mm x 6mm thick, holed four times and welded to columns (elsewhere)	No	145
33	10mm diameter x 50mm long bolts	No	290
34	10mm diameter x 250mm long J-bolts embeded in concrete(concrete elsewhere measured)	No	290

Purlins and girts bolted to steel

35	125 x 50 x 20 x 2mm Thick galvanised purlin	m	363.00
36	75 x 50 x 20 x 2mm Thick galvanised purlin	m	544.00

Carried to Collection

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37	40 x 40 x4mm Angle fixing plate 75mm girth, twice holed for 10mm bolts (elsewhere), welded to portal frame, prior to galvanising	No	218.00		
Carried to Collection					
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Section No. 4

EXTERNAL WORKS

Bill No. 2

COVERED WALKWAYS (PROVISIONAL)

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Procost & Associates

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Item No		Quantity	Rate	Amount
	<u>SECTION No. 3</u>			
	<u>BILL No. 3</u>			
	<u>SOCCER FIELD, COMBI COURTS, ETC. (PROVISIONAL)</u>			
	NOTETenderers are advised to study the "Specification of Materials and Methods to be used" (OOG-001E) before pricing this bill			
	All excavations are measured as being in "earth" and/or filling compacted to 98% modified AASHTO density			
	Descriptions of excavations shall be deemed to include for setting aside surplus excavated material in spoil heaps for use as filling or for depositing within 150m of the perimeter of the excavations and spreading and roughly levelling as directed, as well as for increase in bulk and multiple handling of excavated material caused by the Contractor's method of operation			
	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 and for bulking			
	<hr/>			
	<u>SOCCER FIELD</u>			
	<u>EARTHWORKS</u>			
	<u>(JBCC CPAP WORK GROUP No. 104)</u>			
	<u>Excavations</u>			
1	Open face excavation in earth to reduce levels	m3	1,604	
2	Extra over all excavations for carting away surplus material from excavations and/or from stockpiles on site to a dumping site to be located by the Contractor	m3	820	
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3	Allow for keeping excavations free of all water other than subterranean water		Item
	<u>Filling, etc.</u>		
4	Earth filling from the excavations to make up levels compacted to 93% modified AASHTO density	m3	267
5	Imported earth filling supplied by the Contractor and brought onto site to make up levels on sports field compacted to 90% modified AASHTO density	m3	880
6	Imported top soil filling supplied by the Contractor, brought onto site and spread and levelled over sports field	m3	1,660
7	Prepare ground surface by scarifying top 150mm layer of ground and re-compact to 93% modified AASHTO density	m2	5,465
	<u>Tests</u>		
8	Tests to determine the degree of compaction, etc. of ground or filling	No	46
	<u>GRASSING</u>		
	<u>Grassing with weed free sods approximately 500 x 500 x 75mm thick and maintaining (elsewhere) to approval until date of first delivery</u>		
9	Kikuyu grass on sportsfield	m2	8,800
	<u>Fertilizing</u>		
10	Fertilizing top soil with 2.3.2 fertilizer spread at a rate of 0,25kg/m2 including working evenly into top 150mm depth of soil	m2	8,800
11	Fertilizing grassed areas with 2.3.2 fertilizer spread at a rate of 0,1 kg/m2 and well irrigated after completion of planting	m2	8,800
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	<u>Maintenance</u>		
12	Maintenance of grassed areas until date of first delivery (total area approximately 8800m2) including regularly weeding, mowing and irrigating as necessary		Item
	<u>MARKING</u> Thick lime slurry applied with a mechanical marker machine on well compacted ground surfaces including setting out		
13	Soccer field marking lines 100mm wide	m	494
14	Soccer field marking lines 100mm wide set out circular	m	100
	<u>IRONMONGERY</u>		
	<u>Standard sports nets including all fixing ropes, attachments, etc.</u>		
15	Soccer goal post net to fit frame with front size 7,52 x 2,54m high and handing over to the Representative/Agent	No	2
	<u>METALWORK(JBCC CPAP WORK GROUP No. 134)HOT-DIPPED GALVANISED MILD STEEL</u>		
	NOTE		
	The following are to be hot-dipped galvanised after fabrication of complete units		
	<u>The following in two framed and welded hot-dipped double spelter galvanised mild steel removable soccer goal post frames</u>		
16	16mm Diameter rod handle 600mm girth twice bent and welded to framing (In No 12)	kg	11
17	8mm Diameter rod rope fastening eye bent semi-circular and welded to framing (In No 96)	kg	3
	Carried to Collection		
	Section No. 4 EXTERNAL WORKS Bill No. 3 SOCCER FIELD AND COMBI COURTS (PROVISIONAL) Procost & Associates		

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TENDER NO: DOE/NCSIP/2022/10/02
COMPLETION OF JTG PHASE 2B

18	100 x 100 x 3,5mm Square hollow section framing	m	63
19	Extra for mitred and welded angle intersection	No	12
20	Extra for welded T-intersection	No	4
21	Extra for welded Y-intersection	No	8
<u>COMBI</u> <u>COURTSEARTHWORKSExcavationsE</u> <u>xcavate in earth not exceeding 2m</u> <u>deep below natural, elevated or</u> <u>reduced ground level for</u>			
22	Reducing levels under slab	m3	339
<u>(End of excavations in earth)</u>			
23	Extra over all excavations for carting away surplus material from excavations and/or from stockpiles on site to a dumping site to be located by the Contractor	m3	361
24	Risk of collapse of sides of excavations for trenches and holes not exceeding 1,5m deep from natural, elevated or reduced ground level	m2	106
25	Allow for keeping excavations free of all water other than subterranean water		Item
<u>Filling, etc.</u>			
26	Compaction of ground surface under slab, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compact to 93% modified AASHTO density	m2	1,583
<u>Tests</u>			
27	Tests to determine the degree of compaction, etc. of ground or filling	No	15

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Procost & Associates

Protection against termites

28	Poisoning surface of ground in bottoms of trenches, bases, etc.	m2	32
29	Poisoning surface of ground or filling under floors, steps, etc. including raking out 75mm deep V-shaped channels against the walls, etc treating with poison solution, backfilling and ramming	m2	1,561

IRONMONGERY(JBCC CPAP WORK GROUP No. 132)

Standard sports nets including all fixing ropes, attachments, etc.

30	Netball net including fixing in position complete to netball ring (elsewhere)	No	4
31	Basketball net including fixing in position complete to basketball ring (elsewhere)	No	2
32	Volleyball net and handing over to the Representative/Agent	No	1
33	Tennis court net and handing over to the Representative/Agent	No	1

METALWORK(JBCC CPAP WORK GROUP No. 134)HOT-DIPPED GALVANISED MILD STEEL

NOTE

The following are to be hot-dipped galvanised after fabrication of complete units

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**The following in framed and welded
hot-dipped double spelter galvanised
mild steel poles, rings, etc. for sports
equipment**

34	Support for basketball net (elsewhere) formed of 16mm diameter rod ring to 450mm internal diameter with 60 x 10mm flat section L-shaped arm 300mm girth and with two 10mm diameter rod supporting arms each 500mm girth twice bent and welded onto ring and onto and including 450 x 350 x 6mm flat section backing plate four times holed for bolts (elsewhere) including bolting unit in position complete to steel framework (elsewhere) as detailed on combi court details - sheet 1 included at the back of these Bills of Quantities	No	2
35	Sleeve for removable pole formed of 102mm diameter x 2,5mm thick hollow section 700mm long with 140 x 140 x 10mm flat section flange with machine bevelled and scribed opening to suit sleeve diameter welded onto top end and with 250 x 250 x 6mm flat section base plate welded onto bottom end including setting up and embedding in position complete in concrete base (elsewhere) as detailed on combi court details - sheet 2 included at the back of these Bills of Quantities	No	6
36	Removable tennis pole formed of 89mm diameter x 4mm thick hollow section 1,9m long with top end welded closed with flat section, the pole once holed for and including net tension arm with eye formed of 16mm diameter threaded rod 450mm long complete with crank handle formed of 10mm diameter rod 350mm girth with threaded collar formed of 50 x 50 x 30mm flat section welded on and bolting onto tension arm; net straining eye formed of 8mm diameter rod welded onto pole including setting up unit in position complete in sleeve (elsewhere) and later removing and handing over to the Representative/Agent as detailed on combi court details - sheet 2 included at the back of these Bills of Quantities	No	2

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37	Removable volleyball pole formed of 89mm diameter x 4mm thick hollow section 3,3m long with mushroom cap welded onto top, the pole with and including four net straining eyes formed of 8mm diameter rod welded onto pole including setting up unit in position complete in sleeve (elsewhere) and later removing and handing over to the Representative/Agent as detailed on combi court details - sheet 2 included at the back of these Bills of Quantities	No	2
38	Removable netball pole formed of 89mm diameter x 4mm thick hollow section 3,9m long with mushroom cap welded onto top, the pole with and including support for netball net (elsewhere) formed of 16mm diameter rod ring to 380mm internal diameter with 16mm square section L-shaped arm 250mm girth welded onto pole and onto ring including setting up unit in position complete in sleeve (elsewhere) and later removing and handing over to the Representative/Agent as detailed on combi court details - sheet 2 included at the back of these Bills of Quantities	No	2
39	Basketball pole formed of 127mm diameter x 4mm thick hollow section 3,9m long with mushroom cap welded onto top end and 250 x 250 x 6mm flat section base plate welded onto bottom end, the pole with and including support for netball net (elsewhere) formed of 16mm diameter rod ring to 380mm internal diameter with 16mm square section L-shaped arm 250mm girth welded onto pole and onto ring; L-shaped arm 2,913m girth formed of 102mm diameter x 2,8mm thick hollow section with one end welded onto pole and other end welded closed with 6mm flat section; stay formed of 102mm diameter x 2,8mm thick hollow section 1,602m long extreme with ends scribed and welded onto pole and arm; 1200 x 450 x 6mm flat section mounting plate eight times holed for bolts (elsewhere) and with three 450 x 60 x 6mm overall flat section flanges welded onto mounting plate and scribed as necessary and welded onto L-shaped arm including setting up unit and embedding in position complete in concrete base (elsewhere) as detailed on combi court details - sheets 1 and 2 included at the back of these Bills of Quantities	No	2

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Procost & Associates

**The following in framed and welded
hot-dipped double spelter galvanised
mild steel framing for two basketball
backboards and fixing in position
complete**

40	Screw bolts with nuts and washers	kg	1
41	25 x 25 x 1,8mm Square hollow section framing holed for and bolted to 18mm thick timber backboard (elsewhere) with and including 6mm diameter galvanised gutter bolts at 400mm centres	m	17
42	Extra for mitred and welded angle intersection	No	8
43	Extra for welded T-intersection	No	16
44	Hole through both 2,5mm thick sides of hollow section and 18mm thick timber backboard for 10mm diameter bolt (elsewhere)	No	16

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SOCCER FIELD AND COMBI COURTS (PROVISIONAL)

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Item No	SANS Pay Ref	Unit	Quantity	Rate	Amount
		<p><u>SECTION NO 3</u></p> <p><u>BILL NO. 4</u></p> <p><u>PAVING AND EARTHWORKS(PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u></p> <p><u>Nature of ground</u></p> <p>A soils investigation has been carried out on site. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" 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>			
		Carried to Collection			R
		<p>Section No. 4</p> <p>EXTERNAL WORKS</p> <p>Bill No. 4</p> <p>PAVE AND EARTHWORKS (PROVISIONAL)</p> <p>Procost & Associates</p>			

	SANS 1200	<u>SITE PREPARATION</u>				
1	SANS 1200	Provide for the setting out of works for construction & the survey of the constructed road for the compilation of as-built plans; as required in SABS 1200				SUM
		<u>SITE CLEARANCE, ETC.</u>				
		<u>Site clearance</u>				
2	D-8.3.1.1	Clear and grub site: The rate shall cover the cost of clearing and stripping from designated areas of surface soil to a depth not exceeding 150mm. Spoil as directed by the Engineer on the site, including all shrubs and trees with a diameter smaller than 300mm.	m2	5,050		
	SANS 1200	<u>ROAD BED</u>				
		<u>All levels as shown on drawings and in documents must be checked by the contractor before the commencement of construction and the engineer must be notified in writing of any discrepancies. If not, levels & quantities will be considered as correct. Free haul distance of 3km to be included in the rateThe rates shall cover the cost of scarifying, watering, shaping and compacting the road-bed material to the applicable minimum degree of compaction including mixing of in-place and imported material if required</u>				
3	DM-8.3.4a	Cut to fill: Compact to 95% of modified AASHTO maximum dry density in 150mm layers, including free haul up to 3km	m3	195		
4	DM-8.3.4a	Cut to stockpile and/or spoil, where indicated by the Engineer for use on other road reserves; free haul up to 3km	m3	1,845		
		Carried to Collection				R
		Section No. 4 EXTERNAL WORKS Bill No. 4 PAVE AND EARTHWORKS (PROVISIO Procost & Associates				

COMPLETION OF JTG PHASE 2B

5	DM-8.3.3a(2)	Rip & compact insitu 150mm thk layer to minimum 95% of modified AASHTO dry density. Rip and compact only where road bed is in cut	m3	1,020		
6	DM-8.3.6a	Extra over for intermediate excavation	m3	375		
7	DM-8.3.6b	Extra over for hard excavation	m3	193		
8	DM-8.3.6c	Boulder excavation Class A&B	m3	33		
9	DM-7.2	Provide a sum for the testing of the compaction of the roadbed layer. Compaction tests frequency and quantity will be in accordance with requirements of SABS 1200 DM 7.2 (min 4 tests per 2000m2 of roadbed area)	Sets	14		
	SANS 1200	<u>BASE AND SUBBASE</u>				
	SANS 1200	<u>Construct a base, sub-base and upper selected course with material from approved commercial sources or mechanical stabilizing. Rates to include all costs for transporting, placing, shaping and compacting of material according to specified tolerances and specifications. The rate shall cover the cost of locating the source, complying with all the relevant precautions required in terms of SABS 1200 D-5.1, procuring the material, basic selection, transporting from source to point of deposition on the road, spreading, watering, compacting, final grading, complying with the tolerances and testing.</u>				
10	ME-8.3.1	Construct the subbase with approved imported G5 material from own commercial source; compacted to 95% MOD AASHTO, 150mm thick	m3	1,020		
		Carried to Collection				
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COMPLETION OF JTG PHASE 2B

11	ME-7.2.1	Provide a sum for the testing of the compaction of the subbase layer. Compaction tests frequency and quantity will be in accordance with requirements of SABS 1200 ME 7.2 (min 4 tests per 1500m2 of subbase area)	Sets	19	
12	MF-8.3.3b	Construct the base with approved imported C4 material (G2 with 2% cement stabilized) from own commercial source; compacted to 95% MOD AASHTO, 150mm thick. (The rate shall also include the processing as well as the stabilization agent.)	m3	1,020	
13	MF-7.2	Provide a sum for the testing of the compaction of the base layer. Compaction tests frequency and quantity will be in accordance with requirements of SABS 1200 MF 7.2 (min 4 tests per 1500m2 of roadbed area)	Sets	19	
	SANS 1200	<u>PAVING</u>			
14	MJ-8.2.2	Supply, deliver and spread 20mm crusher sand for paving bedding. Rate shall include for the removal of excess sand.	m3	138	
15	MJ-8.2.2	Vibration of approved locking sand between paving with plate vibrator and finish surface.	m2	6,800	
16	MJ-8.2.3	Cutting units to fit edge restraints.	m	1,550	
17	MJ-8.2.2	Supply, deliver and install 80mm thick 25MPa type S-A interlocking concrete paving blocks to line and level according to SABS 1200 MJ & CMA specifications It is important to note that the strength as required by SANS 1058 is based on day of despatch and not 28 day strength.	m2	6,800	
Carried to Collection					R
Section No. 4 EXTERNAL WORKS Bill No. 4 PAVE AND EARTHWORKS (PROVISIO Procost & Associates					

COMPLETION OF JTG PHASE 2B

18	MJ-8.2.1	1:3 cement sand filling between kerb and paving blocks where the gap is smaller than 25mm.	m3	3		
19	MJ-3.1.2	Rate for the testing of the compressive strength of concrete paving blocks. Compressive strength test frequency and quantity will be in accordance with requirements of SABS 1058 (min 12 sample blocks per test per 1500m2) and as instructed by the Engineer.	Sets	5.0		
	SANS 1200	<u>KERBING AND CHANNELLING</u>				
	SANS 1200	The unit rate for precast kerbing shall cover the cost of supply of all materials for the kerbing and bedding, and for bedding, jointing, excavation, compacting and for all labour in laying and jointing, together with all backfilling (class 25/19 concrete haunching behind each joint), compacting, and removal of excess material.				
20	MK-8.2.1(b)	Supply, deliver and install to specification pre-cast Fig 8.C Blitz concrete kerbing or similar approved, as per SABS 1200 MK.	m	1,584		
	SANS 1200	<u>MISCELLANEOUS</u>				
	SANS 1200	<u>ROAD SIGNS</u>				
	SANS 1200	Approved road signs with and including 100mm diameter treated timber supporting post 2,4m high. Including excavation and setting post in concrete soilcrete with 12% cement content.				
21	SANS 1200	Erection of any and all road signs complete. As per instruction by Engineer in writing		Item		44,000.00
	SANS 1200	<u>ROAD MARKINGS</u>				
	SANS 1200	Establishment of paint team at least 14 days after surfacing has been completed.				
Carried to Collection						R
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22	SANS 1200	Painting of any and all road markings complete. As per instruction by Engineer in writing		Item	66,000.00
	SANS 1200	<u>FINISHING OF ROAD AND ROAD RESERVE</u>			
23	SANS 1200	Single carriageway road. Rates shall include full compensation for levelling and scarifying of surfaces and tying old roads and temporary deviations as specified.	m	1,050	
Carried to Collection					R
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Item No	SANS Pay Ref	Unit	Quantity	Rate	Amount
<p><u>SECTION NO 2</u></p> <p><u>BILL NO. 5</u></p> <p><u>WATER RETICULATION (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>For preambles see "Specifications of materials and methods to be used - PW 371-A"</u></p> <p><u>Nature of ground</u></p> <p>A soils investigation has been carried out on site. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" 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>					
				R	
<p>Carried to Collection</p> <p>Section No. 4 EXTERNAL WORKS Bill No. 5 WATER RETICULATION (PROVISIONAL) Procost & Associates</p>					

		<u>EXCAVATIONS, FILLINGS ETC</u>			
		All excavations must be done by hand. Only in the case of excavation in hard rock will the Engineer approve any other method of excavation. All levels as shown on the drawings and documents must be checked by the Contractor before the commencement of the construction and the Engineer must be notified in writing of any discrepancies. If not, levels will be considered as correct.			
		<u>Excavation in earth not exceeding 2m deep</u>			
1	DB-8.3.2b.1	Trenches	m3	941	
2	DB-8.3.2c	Bottom of trenches	m3	79	
		<u>Extra over excavations for excavations in</u>			
3	DM-8.3.6a	Intermediate excavation	m3	94	
4	DM-8.3.6b	Hard rock excavation	m3	47	
5	DM-8.3.6c	Boulder excavation class A and B	m3	2	
6		Blasting	m3	3	
		<u>Keeping excavations free of water</u>			
7		Keeping excavations free of water		Item	
		<u>Earth filling with suitable material from excavations compacted to 95% Mod AASHTO</u>			
8	LB-8.2.1	Preparation of Class C bedding as per SABS 1200 LB, using suitable material	m3	79	
9	LB-8.2.2.1b	Backfill by hand the pipe blanket around and 300mm above the pipe	m3	298	
		Carried to Collection			
		Section No. 4 EXTERNAL WORKS Bill No. 5 WATER RETICULATION (PROVISIONA Procost & Associates			R

10		<p><u>Earth filling with insitu material compacted to 95% Mod AASHTO dry density</u></p> <p>To trenches after completion of the blanket filling</p> <p><u>Earth filling supplied by the contractor compacted to 95% Mod. AASHTO dry density</u></p> <p>The rate for importing from commercial sources and borrow pits selected by the contractor shall cover the cost additional to extra over excavations and excavation ancillaries of royalties if applicable and acquiring suitable material, including applicable forming access, removal of overbudden, loading, transportation, off-loading to point of stock pile or construction area, loading at point of placing removal of access and replacing of overburden as ordered by Engineer.</p>	m3	808	
11	DB-8.3.3.1b	<p>In trenches to make up for deficiency of material</p> <p><u>WATER SUPPLIES</u></p> <p><u>High density polyethylene (HDPE) pipes and fittings</u></p> <p>Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings</p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 4 EXTERNAL WORKS Bill No. 5 WATER RETICULATION (PROVISIONA Procost & Associates</p>	m3	5	R

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		<p>Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of Mod AASHTO density as defined by the drawings and disposal of surplus material on site</p> <p><u>Supply, deliver, install, joint, disinfect water pipes with pigot and socket with rubber ring joint</u></p>				
12	L-8.2.1	<p>75mm diameter PN10 Marley Megatuff HDPE pipe system or similar approved by the Engineer. Contractor shall ensure that the complete system is verified by the supplier/manufacturer/installer at tender phase; to ensure that all has been include for in the tender rates.</p> <p><u>Extra over 75mm HDPE pipes for fittings</u></p> <p><u>Valves (electrofusion or butt-welded jointing only):</u></p>	m	1,120		
13	L-8.2.3	<p>75mm Class 16 right-hand non-rising with cap top, socketed gate valves. Complete with all required to be fixed to HDPE pipe system</p> <p><u>Special fitting where flexibility of piping system is not permissible: PN10 Megatuff HDPE or similar (electrofusion or butt-welded jointing only):</u></p> <p><u>Bends</u></p>	No	4		
14	L-8.2.1	75mm x 22.5 degree	No	2		
15	L-8.2.1	75mm x 45 degree	No	2		
16	L-8.2.1	75mm x 90 degree	No	20		
Carried to Collection						
Section No. 4 EXTERNAL WORKS Bill No. 5 WATER RETICULATION (PROVISIONA Procost & Associates						
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Section No. 4				
EXTERNAL WORKS				
Bill No. 5				
WATER RETICULATION (PROVISIONAL)				
<u>COLLECTION</u>				
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TENDER NO: DOE/NCSIP/2022/10/02
COMPLETION OF JTG PHASE 2B

	SANS 1200	<u>Placing and finish to level. Provision of bedding and blanket covering imported material from own source</u>				
7	LB-8.2.1a	Preparation of Class C bedding as per SABS 1200 LB, using suitable sieved material from trench excavations	m3	99		
8	LB-8.2.1a	Backfill by hand the pipe blanket around and 300mm above the pipe with suitable material from excavations, compact to 93% MOD AASHTO dry density	m3	297		
9	LB-8.2.1a	Bulk backfilling of trenches with insitu material, after the completion of the blanket filling, to 93% MOD AASHTO dry density, incl around manholes	m3	1,871		
10	LB-8.2.2.2	Make up deficiency in backfill material due to spoiling of unsuitable or rock material, from own source. Rate shall included loading and transport.	m3	149		
11	LB-8.2.3	19mm stone to be used for bedding if requested by the Engineer in the site instruction book. Quantities to be measured and recorded in the site instruction for payment certificates, by the Engineer's representative. Item shall cover the cost of acquiring the material regardless of the distance, delivering to points alongside the trenches, and the disposal of material displaced by such importation.	m3	99		
	SANS 1200	<u>SEWER MAINS</u>				
	SANS 1200	<u>Supply, deliver and install pipelines, (rate shall include all cutting and joining if required)</u>				
12	LD-8.2.1	160mm dia Pn 10 PE 100 P/ended uPVC sewer pipes or similar	m	1,398		
13	LD-8.2.1	Electro fusion couplings for every joint on 160mm dia. Pn10 PE 100 P/ended sewer pipes	No	330		
Carried to Collection						R
Section No. 4 EXTERNAL WORKS Bill No. 6 SEWER NETWORK (PROVISIONAL) Procost & Associates						

	SANS 1200	<u>BUILDING OF MANHOLES</u>				
	SANS 1200	<u>Construct manholes complete from a single length 1000mm diameter HDPE (8kN/m2 ring stiffness) pipe type PE 100 to SABS ISO 4427. Price includes complete manhole with benching, step irons, concrete base, ringbeam at top, manhole covers & all fusion welding required. Installation must be strictly to all specialist requirements.</u>				
14	LD-8.2.3	0 - 1m deep	No	2		
15	LD-8.2.3	0 - 1.5m deep	No	16		
16	LD-8.2.3	0 - 2m deep	No	4		
17	LD-8.2.3	0 - 2.5m deep	No	7		
18	LD-8.2.3	0 - 3m deep	No	2		
		<u>TESTS OF WORKS</u>				
		<u>Tests of works</u>				
19	L-8.2.1	Test of sewer pipeline, Testing to specialist pipe system suppliers specifications; the suppliers must issue a formal test certificate.			SUM	
		<u>AS BUILT DRAWINGS</u>				
		<u>As Built Drawings</u>				
20	A-5.1.1	Provide for the setting out of works for the construction and the survey of the constructed sewer network for the compilation of as-built plans as required in SABS 1200			SUM	
		Carried to Collection			R	
		Section No. 4 EXTERNAL WORKS Bill No. 6 SEWER NETWORK (PROVISIONAL) Procost & Associates				

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Item No	SANS Pay Ref		Unit	Quantity	Rate	Amount
<p><u>SECTION NO.3</u></p> <p><u>BILL NO.7</u></p> <p><u>STORM WATER (PROVISIONAL)</u></p> <p><u>PREAMBLES</u></p> <p><u>For preambles see "Specifications of materials and methods to be used - PW371-A"</u></p> <p><u>Nature of ground</u></p> <p>A soils investigation has been carried out on site. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" 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>EXCAVATIONS, FILLING, ETC.</u></p>						
1	DM-8.3.2	<p>Restricted excavation of stormwater channels to line and level. Spoil excess material on site as instructed by the Engineer.</p>	m3	75		
<p>Carried to Collection</p> <p>Section No. 4 EXTERNAL WORKS Bill No. 7 STORMWATER (PROVISIONAL) Procost & Associates</p>						R

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Section No. 4			
EXTERNAL WORKS			
Bill No. 7			
STORMWATER (PROVISIONAL)			
<u>COLLECTION</u>			
	Page No	Amount	
Total Brought Forward from Page No.	181		
	182		

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Item No	Quantity	Rate	Amount
<u>SECTION NO.4</u>			
<u>BILL NO.1</u>			
<u>PROVISIONAL SUMS</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
NOTE: Tenderers are referred to the definition of general attendance on nominated sub-contractors given in Clause 9 of the Preliminaries			
NOTE: Under no circumstances may any Prime Cost - Provisional Amount, etc be extended at an amount lower than the amount given in the Bill			
Carried to Collection			R
Section No. 5 PROVISIONAL SUMS Bill No. 1 PROVISIONAL SUMS Procost & Associates			

TENDER NO: DOE/NCSIP/2022/10/02
COMPLETION OF JTG PHASE 2B

THE FOLLOWING PROVISIONAL SUMS ARE FOR
 WORK TO BE EXECUTED BY SELECTED
 SUBCONTRACTORS

The following Provisional Sums are for specialists work to be executed by a selected Sub-contractor who upon appointment in terms of the Conditions of Contract shall be deemed to be a Domestic Sub-Contractor to the Contractor

A Selected Sub-Contractor shall be a Sub-contractor executing work for which a sum of money is provided for in the Bills of Quantities or a Sub-contractor executing additional specialist work which arises as a result of an instruction by the Principal Agent/Engineer

Tender documents for such work shall be prepared by the Principal Agent/Engineer in consultation with and to the approval of the Contractor and such tender document shall be issued by the Principal Agent/Engineer to a list of tenderers agreed upon between the Principal Agent/Engineer and Contractor. Tenders shall be submitted to the Principal Agent/Engineer

The Selected Sub-contractor shall be chosen by the Principal Agent/Engineer and the Contractor, and the Contractor shall satisfy himself that such selected sub-contractor can meet the requirements of the Sub-Contract agreement and the Contractor shall inform the Principal Agent/Engineer accordingly

The procedure relating to the method of selection, obtaining of tenders, adjudication thereof and the appointment of the Selected Sub-contractor shall not create any contractual relationship between the Client and the Selected Sub-contractor

Signage

- 1 Provide the sum of R100 000,00 (One hundred thousand rands) for signage by Specialists
- 2 Allow for giving every facility to Specialists as described
- 3 Allow for profit on above if required

Item

100,000.00

Item

Item

Carried to Collection

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Section No. 5
 PROVISIONAL SUMS
 Bill No. 1
 PROVISIONAL SUMS
Procost & Associates

TENDER NO: DOE/NCSIP/2022/10/02
COMPLETION OF JTG PHASE 2B

	<u>Handrails</u>			
4	Provide the sum of R100 000,00 (One hundred thousand rands) for Handrails installation by Specialists	Item	100,000.00	
5	Allow for giving every facility to Specialists as described	Item		
6	Allow for profit on above if required	Item		
	<u>Carpots</u>			
7	Provide the sum of R750 000,00 (Seven hundred and fifty thousand rands) for Carpots by Specialists	Item	750,000.00	
8	Allow for giving every facility to Specialists as described	Item		
9	Allow for profit on above if required	Item		
	<u>Landscape</u>			
10	Provide the sum of R750 000,00 (Seven hundred and fifty thousand rands) for Landscape by Specialists	Item	750,000.00	
11	Allow for giving every facility to Specialists as described	Item		
12	Allow for profit on above if required	Item		
	<u>BUDGETARY ALLOWANCES</u>			
	<u>Community Liason Officer</u>			
13	Provide the sum of R72 000,00 (Seventy two thousand rands) for Community liason Offier (CLO)	Item	270,000.00	
	<u>Contract Price Adjustment Provision</u>			
14	Provide the sum of R3 500 000,00 (Three million five hundred thousand rands) for Contract Price Adjustment Provisions	Item	3,500,000.00	
	Carried to Collection		R	
	Section No. 5 PROVISIONAL SUMS Bill No. 1 PROVISIONAL SUMS Procost & Associates			

Section No. 5

PROVISIONAL SUMS

Bill No. 1

PROVISIONAL SUMS

COLLECTION

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No**

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Amount

Carried to Final Summary

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Section No. 5
PROVISIONAL SUMS
Bill No. 1
PROVISIONAL SUMS
Procost & Associates

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**K2040E Constrction of JTG School and Hostel Phase 2B - ELECTRICAL
INSTALLATION
BILL OF QUANTITIES**

BILL No: 01 : PREAMBLE TO BILLS OF QUANTITIES

Introduction

- 1,1 The pages of each bill are numbered consecutively as indicated in the contents. Before the Tenderer submits his tender, he should check the number of the pages and if any are found missing or duplicated, or the figures or writing indistinct, or should the Bills of Quantities contain any obvious errors, he should apply to the Engineer at once and have same rectified, as no liability whatsoever will be admitted by the Engineer or the Employer in respect of errors in tender due to the foregoing.
- 1,2 The Bills of Quantities form part of and shall 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 and unless otherwise described in the Bills of Quantities, reference should be made to the Specification for the full meaning of descriptions of work to be done and materials and equipment to be used in this service.
- 1,3 All items in the Bills of Quantities shall be priced and submitted at the same time of tendering. Any item left unpriced shall be assumed to be covered elsewhere in the Bills of Quantities.
- 1,4 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, in the Bills of Quantities as no claim for arithmetical errors will be considered.
- 1,5 The priced Bill of Quantities of the successful Tenderer will be checked and the Engineer/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.
- 1,7 The responsibility for the accuracy of the quantities written into the Bills remains with the Engineer and the Employer. 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 Bill, although he will be required to make his assessment of items such as brackets, fixings, etc., from details stated in the Bill and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the specification.
- 1,8 The bill of quantity cannot be used for ordering material after appointment.
- 1.9 Any equipment or material ordered without prior approval from the relevant consulting engineer regarding type of equipment, material and quantities hereof, shall be to contractor's account no claims will be entertained without copy of approved equipment and quantity. It is the successful tenderer's responsibility to ensure that the relevant consulting engineer has a detail copy of equipment that need to be procured for approval timeously to ensure that all lead items and required material is available in time on-site to meet all relevant milestones. This clause does not relieve the successful tender's project manager to coordinate all procurements and works to meet all milestones as stipulated in conditions of contract.
- 1.10 Any equipment not priced by the tender in order to deliver a fully operational system shall be for tenderer responsibility.
- 1,10 Variations in the scope and extent of the work included in the bill shall be allowed to meet the requirements and shall be measured and costed at rates entered in the bill, where appropriate, and shall form an addition to or deduction from the total of the Bill. Any items or variation for which rates have not been included in the Bill shall be agreed and priced as non-scheduled items.

- 1,11 A separate rate for the supply and for the installation of each item is specifically called for:
- 1,12 The rates quoted for supply and installation of each item shall, unless otherwise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, cutting and waste, patterns, models and templates, plant, temporary works, return of packages, establishment charges sundry services, profit and all other obligations arising out of the conditions of contract.
- 1,13 Where mentioned in the Bill that a wire/cable length is based on a single length measurement, it means that the length given shall be multiplied by the total amount of wiring cores required.
- 1,14 Where mentioned in the Bill that a wire/cable is based on a 2-wire system, the total length of wiring required is as stated in the Bills.
- 1,15 Additional length per conductor has been measured for conductors drawn into conduit, per termination point. Tenderers shall allow in their rate for any conductor lengths required for his own purposes.
- 1,16 All measurements are net, unless otherwise stated, and Tenderers shall allow in the rate for wastage.
- 1,17 The Tenderers shall allow for scaffolding, ladders, tackle, tools, slings, etc. which may be required in the execution of this subcontract.
- 1,18 Where it is desired to offer alternative prices for equipment, materials, etc. of different manufacture, the price for the equipment must be quoted against the relevant item in the Bill of Quantities. The alternative prices must be furnished separately and shall comply with the specification 100%.
- 1,19 Where any item in the Bills of Quantities is listed as a provisional quantity, such items shall be adjusted and agreed to during the course of the sub-contract. No work for which "Provisional" items are provided shall be commenced without written instructions from the Engineer.
- 1,20 The Tenderer shall notify the Engineer in writing during the tender period of any discrepancies, between the Bills of Quantities & Specification. Failure to comply with this condition will invalidate any claim arising out of discrepancies in the quantities between the Bill of Quantities and Specifications and actual quantities allocated to the project.
- 1,21 Tenderers shall note that the total for each page of the bill of quantities shall be carried forward to the summary sheet of the complete bill of quantities.
- 1,22 It is a requirement of this tender document that all tenderers shall complete the bill of Quantities in full and submit the completed bill of quantities at tender submission stage. Non-compliance to the above statement shall lead to disqualification.
- 1,23 The prices are deemed to include (unless otherwise specifically stated) but shall not be limited to the following:
- 1,24 Materials and consumables, including waste, necessary for the completion of the work.
- 1,25 Provision and use of contractor's and/or supplied equipment. Overhead charges and profit. Overtime working necessary to complete the works in accordance with the completion date. Payments to labour in respect of time worked and all other payments and costs relating to labour of any denomination. Stoppage for inspection purposes by the Engineer or other authorised company personnel. Testing and completion in accordance with the specification.
- 1,26 All values in the BOQ to exclude VAT.VAT to be added in the Total.

Bill No 02 : Provisional and General Items

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply unit rate	Installation unit Rate	Amount [R]
1	GENERAL COSTS					
1,1	Loading and off loading of material and equipment.	Sum	1			
1,2	Technical submittals	Sum	1			
1,3	Transport	Sum	1			
1,4	Compliance With Health and Safety Regulations	Sum	1			
1,5	Development of workshop drawings, according to the specification	sum	1			
1,6	CADDED "As Installed" drawings, marking up drawings, as specified	sum	1			
1,7	Testing ,Load bancing and commissioning of complete Works to engineer and client satisfaction.	sum	1			
1,8	End User Training	sum	1			
1,9	Inspection and handing over of fully operational electrical and electronic installation.	sum	1			
1,10	Compilation of detail operational manuals and maintenance Manuals(with all test results), according to engineer's specification(3 sets) and 1 memeory stick	sum	1			
1,11	Marking and labeling of all cabling for all equipment installed	sum	1			
1,12	Comprehensive 12 months Maintenance after practical completion	sum	1			
1,13	Complete on-site secured electrical equipment storage facility, as specified	Sum	1			
1,14	Submission certificate of compliances	Sum	6			
TOTAL FOR BILL NO. 2 CARRIED FORWARD TO THE SUMMARY PAGE(Excl.VAT)						

BILL NO.03: POWER AND LIGHTING INSTALLATION FOR SCHOOLS						
ELECTRICAL INSTALLATION						
ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL PRICE
	PSUM					
3	Soccer field irrigation equipment	Sum	1	R113 000,00		R113 000,00
3,1	Multi Purpose Hall PA system	Sum	1	R460 000,00		R460 000,00
3,2	ELECTRICAL DISTRIBUTION BOARD Supply, Installation and commissioning of the specified Distribution Boards, including making off all wire connections and circuit breakers included (external wiring, conduit, armoured cable and terminations given					
	SINGLE BLOCKS					
3.2.1	Guard House DB	sum	1			
3.2.2	Multi Purpose Hall DB	sum	1			
3.2.3	Cafeteria DB	sum	1			
	ELECTRICAL DISTRIBUTION BOARDS					
	Supply, Installation and commissioning of the specified Distribution Boards, including making off all wire connections and circuit breakers included (external wiring, conduit, armoured cable and terminations given elsewhere) as per the Distribution drawings and listed below.					
	board as indicated or instructed by Engineer.					
3.2.4	350A triple pole circuit breaker	each	1			Rate only
3.2.5	300A triple pole circuit breaker	each	1			Rate only
3.2.6	250A triple pole circuit breaker	each	1			Rate only
3.2.7	80A triple pole circuit breaker, 5kA	each	1			Rate only
3.2.8	60A Tripple pole circuit breaker, 5kA	each	1			Rate only
3.2.9	60A double pole circuit breaker, 5kA	each	1			Rate only
3.2.10	63A double pole earthleakage unit, 5kA	each	1			Rate only
3.2.11	50A double pole circuit breaker, 5kA	each	1			Rate only
3.2.12	40A double pole circuit breaker, 5kA	each	1			Rate only
3.2.13	30A double pole circuit breaker, 5kA	each	1			Rate only
3.2.14	30A single pole circuit breaker, 5kA	each	1			Rate only
3.2.15	20A Single pole circuit breaker, 5kA	each	1			Rate only
3.2.16	20A Double pole circuit breaker, 5kA	each	1			Rate only
3.2.17	10A single pole circuit breaker, 5kA	each	1			Rate only
3,3	FEEDER CABLES Supply, install and connect 660/1000 Volt multi-core PVC insulated copper, armoured cables: Supply, install and connect 660/1000 Volt multi-core PVC insulated copper, armoured cables: connection of conductors, cable lugs, captive glands shrouds, cable management labeling, and handing fully compliant and operational 660/1000V multi-core PC insulated, armoured feeder cables in accordance with SANS 10142-1 ; SANS 1507, SANS 10119: 2004, SANS 10313, SANS 62305-1-2-3-4 as revised, SANS10400, municipality electrical					
	GUARD HOUSE					
3.2.18	Complete 6mm ² x 3 core cable - in ducts, trenches or on cable tray, as specified	meter	110			
3.2.19	Complete 6mm ² x 2 core electrical Cable ends	each	5			
3.2.20	Complete 4mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	110			
	Amount carried forward					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	LABOUR	TOTAL
				RATE	RATE	PRICE
	Amount brought forward					
	MULTI PURPOSE HALL					
3.2.21	Complete 25mm ² x 4 core cable - in ducts, trenches or on cable tray, as specified	meter	95			
3.2.22	Complete 25mm ² x 4 core electrical Cable ends	each	5			
3.2.23	Complete 16mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable, as specified.	meter	95			
	CAFETERIA BLOCK					
3.2.24	Complete 50mm ² x 4 core cable - in ducts, trenches or on cable tray, as specified	meter	95			
3.2.25	Complete 50mm ² x 4 core electrical Cable ends	each	2			
3.2.26	Complete 35mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	95			
	CABLES					
3.2.27	Complete 6mm ² x 3 core cable - in ducts, trenches or on cable tray, as specified	meter	65			
3.2.28	Complete 6mm ² x 2 core cable - in ducts, trenches or on cable tray, as specified	meter	104			
3.2.29	Complete 4mm ² x 2 core cable - in ducts, trenches or on cable tray, as specified	meter	100			
3.2.30	Complete 4mm ² x 3 core cable - in ducts, trenches or on cable tray, as specified	meter	85			
3.2.31	Complete 2.5mm ² x 2 core cable - in ducts, trenches or on cable tray, as specified	meter	370			
3.2.32	Complete 2.5mm ² x 3 core cable - in ducts, trenches or on cable tray, as specified	meter	20			
3.2.33	Complete 25mm ² x 3 core electrical cable ends	each	4			
3.2.34	Complete 16mm ² x 3 core electrical cable ends	each	9			
3.2.35	Complete 6mm ² x 3 core electrical cable ends	each	7			
3.2.36	Complete 6mm ² x 2 core electrical cable ends	each	7			
3.2.37	Complete 4mm ² x 3 core electrical Cable ends	each	7			
3.2.38	Complete 4mm ² x 2core electrical Cable ends	each	9			
3.2.39	Complete 2.5mm ² x 2 core electrical Cable ends	each	23			
3.2.40	Complete 2.5mm ² x 3core electrical cable ends	each	3			
3.2.41	Complete 16mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	80			
3.2.42	Complete 10mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	90			
3.2.43	Complete 4mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	171			
3.2.44	Complete 2.5mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	65			
3.2.45	Complete 1.5mm ² Bare cu Earthwire run in parallel with above cables including the terminations either end of cable run, as specified	meter	75			
	WIRING CHANNEL INSTALLATION					
	Supply, delivery and Installation of Galvanized Wiring Channel as specified , including hangers, threaded rods, locknuts and metal covers.					
3.2.46	Complete P8000 galvanized Wiring Channel with metal covers, as specified	meter	56			
	Amount carried forward					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	LABOUR	TOTAL
				RATE	RATE	PRICE
	Amount brought forward					
3.3	LUMINAIRES					
	Supply, install and connect luminaires complete with lamps, fixings, brass screws, washers, etc. (all light fittings samples shall be approved by the electrical engineer prior to placing orders).					
	GUARD HOUSE					
3.3.1	Type B1: Complete Decorative Ceiling mounted IP65 rated interior bulkhead complete with 22W LED lamp, control gear, similar or equal and approved.	each	3			
3.3.2	Type B3: Complete Wall mounted IP65 rated exterior bulkhead complete with 22W LED lamp, control gear, similar or equal and approved. Black Trim.	each	4			
3.3.3	Type F2: Complete 1200mm 2 lamp 2x28W Double open channel luminaire with LED energy saving lamps.	each	2			
	MULTI PURPOSE HALL					
3.3.4	Type F1: Complete 1200mm 1 lamp 1x28W open channel luminaire with LED energy saving lamps.	each	3			
3.3.5	Type F2: Complete 1200mm 2 lamp 2x28W Double open channel luminaire with LED energy saving lamps.	each	6			
3.3.6	Type F3-1: Complete 1200x600mm surfaced mounted decorative LED luminaire with 4 x 28W lamps and low brightness diffuser	each	5			
3.3.7	Type F3: Complete 1200x600mm recessed decorative LED luminaire with 4 x 28W lamps and low brightness diffuser	each	27			
3.3.8	Type B2: Complete Ceiling mounted IP65 rated interior bulkhead complete with 22W LED lamp with wire guard, control gear, similar or equal and approved.	each	9			
3.3.9	Type B3: Complete Wall mounted IP65 rated exterior bulkhead complete with 22W LED lamp, control gear, similar or equal and approved. Black Trim.	each	16			
3.3.10	Type B4-1: Complete high bay 400W LED lamp, control gear, similar or equal and approved to BekaBay	each	20			
3.3.11	Type D1: Complete 14 W LED 190 Diameter down lighter with glass	each	5			
3.3.12	TYPE E1: Complete wall mounted LED exit luminaire complete with LED lamps, control gear, similar and equal and approved.	each	9			
3.3.13	Type B4 50w LED Flood lights	each	12			
	Amount brought forward					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	LABOUR	TOTAL
				RATE	RATE	PRICE
	Amount brought forward					
	CAFETERIA BLOCK					
3.3.14	Type F2: Complete 1200mm 2 lamp 2x28W Double open channel luminaire with LED energy saving lamps.	each	31			
3.3.15	Type F2-1: Complete 1200mm 2 lamp 2x28W Double open channel luminaire with LED energy saving lamps flamen retardant poly carbonate diffuser.	each	2			
3.3.16	Type B3: Complete Wall mounted IP65 rated exterior bulkhead complete with 22W LED lamp, control gear, similar or equal and approved. Black Trim.	each	6			
3.3.17	Type B2: Complete Ceiling mounted IP65 rated interior bulkhead complete with 22W LED lamp with wire guard, control gear, similar or equal and approved.	each	3			
3.4	TRENCHING					
3.4.1	Supply and installation of cable sleeves as specified,in trenches or cast in concrete.excluding trenching or backfilling					
3.4.2	Complete 600mm deep x 450mm wide, soft excavation	m	100			
3.4.3	Complete 600mm deep x 450mm wide, intermediate excavation	m	100			
3.4.4	Complete 600mm deep x 450mm wide, Careful excavation	m	100			
3.4.5	CABLE SLEEVES					
3.4.6	specified, in trenches or cast in concrete, excluding trenching or backfilling.					
3.4.7	Complete 110mm Ø Cable Sleeve	m	100			
3.4.8	Complete 50mm Ø Cable Sleeve	m	100			
3.5	CONDUCTORS					
	Supply and install 600/1000Volt PVC insulated stranded copper conductors drawn into conduits,cable trays, trunking and					
3.5.1	4mm² PVC Twin & Earth cable, including terminations	m	9500			
3.5.2	2.5mm² PVC Twin & Earth cable, including terminations	m	13380			
3.6	CONDUIT					
	cutting,threading, bending, reaming, short lengths,1-/2-/3-4-way boxes, bushes,					
	Installed on surface in ceiling space:					
3.6.1	20mm PVC	m	1500			
3.6.2	25mm PVC	m	1500			
	Chased into brickwork:					
3.6.3	20mm PVC	m	1500			
3.6.4	25mm PVC	m	2000			
3.6.5	32mm PVC	m	1200			
	Supply and installation of 60mm Dia round 1-4 way ceiling boxes including					
3.9.8	20mm PVC	no	400			
3.9.9	25mm PVC	no	350			
3.9.10	Supply and install 1,6mm diameter steel galvanised draw wires drawn into conduit/sleeves	m	6000			
	Supply and installation of galvanised pressed boxes flush in wall, including bushes, locknuts and box extensions where required:					
3.9.11	Complete 100x100x50mm outlet box complete with cover lid, as specified	no	70			
	Amount carried forward					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL PRICE
	Amount brought forward					
3,10	<u>LIGHT SWITCHES</u>					
	Supply, fitting and electrical connection of a flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.					
3.10.1	Complete 16A 1-lever / 1-way on 100x50x50mm, as specified	each	28			
3.10.2	Complete 16A 1-lever / 2-way on 100x50x50mm, as specified	each	6			
3.10.3	Complete 16A 2-lever / 1-way on 100x50x50mm, as specified	each	5			
3.10.4	Complete Motion ensor light switch	each	5			
3.10.5	Complete Photo Cell Switch	each	2			
3,11	<u>POWER SOCKET OUTLETS</u>					
NOTE:	Supply, fitting and electrical connection of flush or surface mounted switched or un-switched socket in either 100 x 100, x 50, round box or wiring channel, excluding box (for flush type) and conduit connections, but including cover plate.					
3.11.1	Complete 16A switched socket outlet in accordance with SANS 164-1 and SANS 164-2 on 100x100x50mm outlet as specified.	each	28			
3.11.2	Complete 16A single switched socket on 100x100x50mm outlet	each	20			
3.11.3	Complete 16A double switched socket on 100x100x50mm outlet	each	8			
3.11.4	Complete Multi power box in Staff Room	each	5			
3.11.6	Complete 5A un-switched socket on 60mm Diameter Round outlet	each	250			
3,12	<u>ISOLATORS</u>					
3.12.1	Supply and install isolator in wall box complete with cover plate.					
3.12.2	Complete 30A 3-pole surfaced mount Isolators for AC units , as specified	each	6			
3.12.3	Complete 30A 2-pole surfaced mount Isolators for AC units , as specified	each	2			
3.12.4	Complete 10A 1-pole surfaced mount Isolators for AC units , as specified	each	10			
3.12.5	Complete 20A 2-pole surfaced mount Isolators for AC units , as specified	each	6			
3.12.6	Complete 20A 2-pole surfaced mount Water tight external Isolators for AC units , as specified	each	6			
3.12.7	Complete 10A 3-pole surfaced mount Isolators for AC units , as specified	each	4			
3.12.8	Complete 20A 3-pole surfaced mount Isolators for AC units , as specified	each	4			
3.12.9	Complete 60A 3-pole surfaced mount Isolators for AC unit , as specified	each	4			
	<u>POWER SKIRTING INSTALLATION</u>					
3.13.1	Supply and install power skirting including cutting, ends, covers, elbows, T's, short lengths, screws ect. 2-Compartment as specified.:	m	20			
3.13.1	complete white 16A single socket outlet	no	14			
3.13.2	Data outlet on powerskirting	no	4			
3.13.3	dedicated red 16A single socket outlet	no	4			
3.13.4	outlet for fax and printer on powerskirting	no	2			
3.13.5	complete white 16A two point pin socket outl	no	4			
3.13.6	Supply and install telephone outlets on power skirting with cradles and telephone sockets.	no	16			
3.13.7	Supply and install a flush mounted telephone board complete with frame,door,wallbox,fixings including termination of all conduits 450mmx450mmx150mm deep	no	3			
3.13.8	Supply and install a 5Kva fully online UPS complete with by-pass switch and 30min back up time as specified	no	4			
	Amount carried forward					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL PRICE
	Amount brought forward					
3.14	<u>LIGHTNING PROTECTION INSTALLATION</u> Supply, install and test a complete lightning protection installation, including aluminium and copper conductors, test joints, PVC conduit, earth electrodes for the following building but not limited to: -					
3.14.1	Whole Buildings, as specified	sum	1			
3.15	<u>EARTHING AND BONDING</u> Earthing of all buildings to comply with the latest SANS 10142 , as revised Code of Practice, as revised for The Wiring of Premises as amended and as specified. Bonding of all hot, cold and waste pipes complete with 12,5mm x 1mm thick solid or perforated copper tape including terminations.	p/bld	sum			
3.16	<u>TESTING AND COMMISSIONING</u> Inspections, testing and handing over of the complete installation in the presence of the complete installation in the presence of the Engineer and certify the results on the Certificate of compliance by an accredited person.	p/bld	sum			
TOTAL FOR BILL 03 (Excl Vat) CARRIED FORWARD TO SUMMRY PAGE						

Bill NO. 04 : INTRUSION ALARM SYSTEM INSTALLATION						
Item	Description	Unit	QTY	MATERIAL RATE	LABOUR RATE	TOTAL PRICE
	Supply & Install the following equipment including all connectors, terminal screws in the following blocks. Cafeteria block.					
5,1	Complete keypad access control unit, as specified	No	3			
5,2	Complete Intrusion Alarm panel with batter backup , as specified	No	3			
5,3	Complete cabling, testing and labeling thereof, as specified	m	200			
5,4	Complete magnetic door contact, as specified	No	4			
5,5	Complete magnetic Window contact, as specified	No	30			
5,6	Complete passive infra red motion detector linked to the burglar alarm panel as specified	No	6			
5,7	Complete 25W sounders, as specified	No	1			
5,8	Complete 2 pair multi core cabling, as specified	m	600			
	TOTAL FOR BILL 4 (Excl Vat) CARRIED FORWARD TO SUMMRY PAGE					

Summary of Bill of Quantities

(PHASE 2B-ELECTRICAL INSTALLATION)

ITEM	DESCRIPTION	TOTAL
	ELECTRICAL INSTALLATION:	
	Bill No.:01 Preambles to Bill of Quantities	NIL
	Bill No.: 02 Provisional and General Items(P&G's)	
	Bill No.: 03 Electrical: Power and Lighting Installation	
	Bill No.: 04 Alarm System Installation	
	TOTAL AMOUNT (Excl Vat)	
	15% Vat	
	SUB TOTAL	

COMPANY REGISTERED NAME:

COMPANY REGISTRATION NUMBER:.....

COMPANY INCOME TAX NUMBER:.....

COMPANY'S CSD NUMBER:.....

COMPANY'S DEPARTMENT OF LABOUR:.....

COMPANY'S UNEMPLOYMENT INSURANCE REGISTRATION:

COMPANY'S CIDB NUMBER AND CIDB GRADING(S):.....

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
MECHANICAL WET SERVICES PHASE 2B

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	Bill 1: Preliminary and General				
1,1	Technical Submissions	sum	1		R -
1,2	Workshop Drawings	sum	1		R -
1,3	Transport	sum	1		R -
1,4	Rigging	sum	1		R -
1,5	Compliance With Health and Safety Regulations	sum	1		R -
1,6	Attendance	sum	1		R -
1,7	Site Establishment	sum	1		R -
	Project Engineering Management and Quality Control				
1.8.1	Testing, balancing, commissioning and handover of air conditioning units and fans including compilation of submitted to the Engineer for approval.	Item	1		R -
1.8.2	Operation and Maintenance Instruction Manuals	Set	4		R -
1.8.3	User Training	hours	1		R -
1.8.4	Three Sets of "as built" drawings "including 1 on memory stick"	no	4		R -
1.8.5	12 Months free maintenance	Item	1		R -
1.8.6	Any other item necessary that might have been omitted (allow 5%)	Items	lot		R -
	Preliminaries & Generals Carried to Summary Page				

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
Bill 2: Guard House

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
Bill 2: Guard House					
	<i>uPVC soil and waste piping with seal ring joints in accordance with SABS 967 fixed to walls, concrete soffits, etc. (It must be noted that all underground pipework must be HDPE with fusion welded joints and fittings)</i>				
2.1	Cold Water Supply				
2.1.1	15mm dia. PVC pipe	m	2		R -
2.1.2	22mm dia. PVC pipe	m	2		R -
2.1.3	15mm dia. 90° Bend	No	4		R -
2.1.4	15mm dia. Tee	No	1		R -
2.1.5	22mm dia. Tee	No	1		R -
2.1.6	22mm x 15 mm Reducer	No	2		R -
2.1.7	Ball-type isolation valve	No	2		R -
2.3	Sanitation Plumbing				
2.3.1	50mm dia. PVC pipe	m	2		R -
2.3.2	50mm dia. Coupling	No	1		R -
2.3.3	50mm dia. X 90° Bend	No	4		R -
2.3.4	50mm dia. X 90° Bend with Inspection Eye	No	4		R -
2.3.5	50mm dia. Tee	No	2		R -
2.3.6	110mm dia. PVC pipe	m	2		R -
2.3.7	110mm dia. Coupling	No	2		R -
2.3.8	110mm dia. x 135° Bend with inspection eye	No	2		R -
2.3.9	110mm dia. X 90° Bend with inspection eye	No	2		R -
2.3.10	110mm dia. Vent Horn Bend	No	1		R -
2.3.11	110mm dia. Y-junction with inspection eye	No	10		R -
2.3.12	Single reducer 110mm x 50mm	No	2		R -
2.3.13	110mm dia. Rodding Eye	No	1		R -
2.3.14	Stub stack 2-way vent valve	No	1		R -
Total					R -

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
Bill 3: Multi-Purpose Hall

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
Bill 3: Multi-Purpose					
	<i>uPVC soil and waste piping with seal ring joints in accordance with SABS 967 fixed to walls, concrete soffits, etc. (It must be noted that all underground pipework must be HDPE with fusion welded joints and fittings)</i>				
3.1	Cold Water Supply				
3.1.1	15mm dia. PVC pipe	m	10		R -
3.1.2	22mm dia. PVC pipe	m	5		R -
3.1.3	15mm dia. 90° Bend	No	30		R -
3.1.4	15mm dia. Tee	No	8		R -
3.1.5	22mm dia. Tee	No	6		R -
3.1.6	22mm x 15 mm Reducer	No	10		R -
3.1.8	Ball-type isolation valve	No	19		R -
3.3	Sanitation Plumbing				
3.3.1	50mm dia. PVC pipe	m	20		R -
3.3.2	50mm dia. Coupling	No	5		R -
3.3.3	50mm dia. X 90° Bend	No	20		R -
3.3.4	50mm dia. X 90° Bend with Inspection Eye	No	10		R -
3.3.5	50mm dia. Tee	No	10		R -
3.3.6	110mm dia. PVC pipe	m	50		R -
3.3.7	110mm dia. Coupling	No	10		R -
3.3.8	110mm dia. x 135° Bend	No	15		R -
3.3.9	110mm dia. X 90° Bend with inspection eye	No	5		R -
3.3.10	110mm dia. Vent Horn Bend	No	10		R -
3.3.11	110mm dia. Y-junction with inspection eye	No	15		R -
3.3.12	Single reducer 110mm x 50mm	No	5		R -
3.3.13	110mm dia. Rodding Eye	No	4		R -
3.3.14	Stub stack 2-way vent valve	No	10		R -
Total					R -

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
Bill 4; Cafeteria

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
Bill 4: Cafeteria					
	<i>uPVC soil and waste piping with seal ring joints in accordance with SABS 967 fixed to walls, concrete soffits, etc. (It must be noted that all underground pipework must be HDPE with fusion welded joints and fittings)</i>				
4.1	Cold Water Supply				
4.1.1	15mm dia. PVC pipe	m	1		R -
4.1.2	22mm dia. PVC pipe	m	1		R -
4.1.3	15mm dia. 90° Bend	No	2		R -
4.1.4	15mm dia. Tee	No	2		R -
4.1.5	22mm dia. Tee	No	10		R -
4.1.6	22mm x 15 mm Reducer	No	15		R -
4.1.7	32mm dia. PVC pipe	No	1		R -
4.1.8	32mm x 22mm Reducing Tee	No	1		R -
4.1.8	Ball-type isolation valve	No	8		R -
4.3	Sanitation Plumbing				
4.3.1	50mm dia. PVC pipe	m	20		R -
4.3.2	50mm dia. Coupling	No	5		R -
4.3.3	50mm dia. X 90° Bend	No	10		R -
4.3.4	50mm dia. X 90° Bend with Inspection Eye	No	5		R -
4.3.5	50mm dia. Tee	No	5		R -
4.3.6	110mm dia. PVC pipe	m	30		R -
4.3.7	110mm dia. Coupling	No	10		R -
4.3.8	110mm dia. x 135° Bend with inspection eye	No	10		R -
4.3.9	110mm dia. X 90° Bend with inspection eye	No	2		R -
4.3.10	110mm dia. Vent Horn Bend	No	2		R -
4.3.11	110mm dia. Y-junction with inspection eye	No	5		R -
4.3.12	Single reducer 110mm x 50mm	No	2		R -

4.3.13	110mm dia. Rodding Eye	No	2		R	-
4.3.14	Stub stack 2-way vent valve	No	4		R	-
	Total				R	-

SUBJECT : BILL OF QUANTITIES
CONSTRUCTION OF JTG NEW SCHOOL Phase 2
Bill 5: Sportfield irrigation

No	Description	Unit	QTY	Rate	Total
Bill 5: SportsFields					
	Class O hard drawn copper pipes complying with SABS 460:				
5.1	SportsFields Irrigation as provisional sum	Lot	1	R 265 234,37	R 265 234,37
TOTAL FOR THE BILL					R 265 234,37

SUBJECT : BILL OF QUANTITIES
CONSTRUCTION OF JTG NEW SCHOOL Phase 2
Bill 6: Site Fire Protection

No	Description	Unit	QTY	Rate	Total
	<i>Medium class galvanised mild steel screwed and socketed piping in accordance with BS 1387</i>				
6.1	25mm dia. Pipe	No	50		R -
6.2	25mm dia. 90° Bend	No	50		R -
6.3	100mm dia. Pipe	No	50		R -
6.4	100mm dia. Couplings	No	10		R -
6.5	100mm dia. Tee	No	15		R -
6.6	100mm dia. 90° Bend	No	10		R -
6.7	100mm x 25mm reducer	No	20		R -
6.8	Fire Hydrant	No	5		R -
6.9	Hose Reel	No	35		R -
6.10	Allow for a fire booster pump as a P-Sum amount	No	1		R -
6.11	Approved fire and escape route signages	no	5		R -
6.12	Allow for a 144kL fire storage tank as a P-Sum amount	no	1		R -
6.13	Approved 4.5Kg DCP cylindrical fire extinguisher fixed on and including backing boards to walls	no	10		R -
TOTAL FOR THE BILL					R -

SUBJECT : BILL OF QUANTITIES
CONSTRUCTION OF JTG NEW SCHOOLS Phase 2
WET SERVICES OVERALL SUMMARY OF SCHEDULE OF QUANTITIES

ITEM	DESCRIPTION	AMOUNT (ZAR)
5		
1	Preliminary and General	
2	Guard House	
3	Multi Purpose Hall	
4	Cafeteria	
5	Sportsfield Irrigation	
6	Fire Protection and Suppression	
TOTAL SUM (EXCLUDING VAT) CARRIED TO MECHANICAL WORKS SUMMARY		

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
AND VENTILATION INSTALLATION

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	Bill 1: Preliminary and General				
1.1	Technical Submissions	sum	1		R -
1.2	Workshop Drawings	sum	1		R -
1.3	Transport	sum	1		R -
1.4	Rigging	sum	1		R -
1.5	Compliance With Health and Safety Regulations	sum	1		R -
1.6	Attendance	sum	1		R -
1.7	Site Establishment	sum	1		R -
	<u>Project Engineering Management and Quality Control</u>				
1.8	Testing, balancing, commissioning and handover of air conditioning units and fans including compilation of submitted to the Engineer for approval.	Item	1		R -
1.9	Operation and Maintenance Instruction Manuals	Set	4		R -
1.10	User Training	hours	1		R -
1.11	Three Sets of "as built" drawings "including 1 on memory stick"	no	4		R -
1.12	maintenance on Mechanical Equipment	1st	year		R -
		2nd	year		R -
		3rd	year		R -
		4th	year		R -
		5th	year		R -
1.13	Any other item necessary that might have been omitted (allow 5%)	Items	lot		R -
	Preliminaries & Generals Carried to Summary Page				R -

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
AIR CONDITIONING AND VENTILATION INSTALLATION

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	<u>JTG NEW SCHOOL</u>				
2	<u>Bill 2: Guard House</u>				
2.1	<u>VENTILATION</u>				
	Fresh Air Supply fans				
	<i>Install and connect with all necessary fittings and accessories</i>				
2.1.1	Wall-mounted axial fresh air supply fan c/w 1.5D attenuators before and after and all fittings and collars to connect to duct.	No	1		R -
	Extraction Fans				
2.1.2	Wall-Mounted Axial Extraction fan unit with a duty of 50L/s @100Pa	No	1		R -
	Air Terminals				
	<i>Install and connect with all necessary fittings and accessories</i>				
2.1.3	300X200mm Door Grilles	No	3		R -
	<i>Install and connect with all necessary fittings and accessories</i>				
2.1.4	Wall Mounted Split unit with 2.5kW Cooling Capacity and 3.0kW Heating Capacity c/w 1.5D attenuators before and after and all fittings and collars to connect to duct.	No	1		R -
	Refrigerant Piping				
	<i>Supply, Deliver and Install the entire refrigeration pipe network to suit the AC units (indoor and outdoor) offered as in drawing</i>				
2.1.5	6.35mm dia. Liquid pipe	m	3		R -
2.1.6	12.70mm dia Gas Pipe	m	3		R -
2.1.7	32mm Outside dia. And 25mm Inside Dia Drain pipe	m	3		R -
2.3	<u>Electrical Installations & connections</u>				
2.3.1	Cabling, power supply and all electrical work related to HVAC installation on this project	Item	1		R -
	TOTAL FOR GUARD HOUSE CARRIED FORWARD				

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
AIR CONDITIONING AND VENTILATION INSTALLATION

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	JTG NEW SCHOOL				
3	Bill 3: Multi Purpose Hall				
3.1	VENTILATION				
	Fresh Air Supply Fans				
	<i>Install and connect with all necessary fittings and accessories</i>				
3.1.1	Axial ducted fresh air fans with duty of 680L/s @ 150Pa c/w 1.5D attenuators before and after and all fittings and collars to connect to duct.	No	2		R -
	Extraction Air Fans				
	<i>Install and connect with all necessary fittings and accessories</i>				
3.1.2	Wall-mounted axial extraction fan with a duty of 50L/s	No	14		R -
	Air Terminals				
	<i>Install and connect with all necessary fittings and accessories</i>				
3.1.4	250x250mm Door Grille	No	12		R -
3.1.5	600x600mm Weather Louvre c/w vermin proof sheet	No	3		R -
3.1.6	Return Air Grille complete with filter box	No	1		R -
	Duct Work				
3.1.7	Category 1 Ducting	m ²	20		R -
3.1.8	Category 1 Duct Fittings	ea	year		R -
3.1.9	200mm Dia. Round Flexible Ducts	m ²	20		R -
3.2	HEATING AND AIR CONDITIONING				
	<i>Install and connect with all necessary fittings and accessories</i>				
3.2.1	HSP ducted Hideaway unit rated at 28kW cooling capacity	No	3		R -
	Refrigerant Piping				
	<i>Supply, Deliver and Install the entire refrigeration pipe network to suit the AC units (indoor and outdoor) offered as in drawing</i>				
3.2.2	6.35mm dia. Liquid pipe	m	10		R -
3.2.3	12.70mm dia Gas Pipe	m	10		R -
3.2.4	32mm Outside dia. And 25mm Inside Dia Drain pipe	m	10		R -
3.3	ELECTRICAL INSTALLATIONS AND CONNECTIONS				
3.3.1	Cabling, power supply and all electrical work related to HVAC installation on this project	item	1		R -
	TOTAL FOR MULTI-PURPOSE HALL				R -

SUBJECT : BILL OF QUANTITIES
JTG CONSTRUCTION OF NEW SCHOOL
AIR CONDITIONING AND VENTILATION INSTALLATION

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	JTG NEW SCHOOL				
4	Bill 4: Cafeteria				
4.1	VENTILATION				
	Fresh Air Supply Fans				
	<i>Install and connect with all necessary fittings and accessories</i>				
4.1.1	Wall-mounted axial fan with duty of 25L/s @100Pa	No	1		R -
	Air Terminals				
4.1.2	<i>Install and connect with all necessary fittings and accessories</i>				
4.1.3	300x300 Weather Louvres c/w vermin proof screen	No	2		R -
	HEATING AND AIR CONDITIONING				
	<i>Install and connect with all necessary fittings and accessories</i>				
4.1.4	Roof Evaporative Cooler with duty of 200L/s	No	2		R -
4.1.5	Midwall split unit rated at 12000 BTU inverter type	No	2		R -
4.2	KITCHEN EQUIPMENT				
4.2.1	Kitchen equipment as Provisional sum	lot	1	R 1 764 538,99	R 1 764 538,99
4.3	Electrical Installations & connections				
4.2.1	Cabling, power supply and all electrical work related to HVAC installation on this project	item	1		R -
	TOTAL FOR CAFETERIA BLOCK				

**AIR CONDITIONING AND VENTILATION INSTALLATION**
SUMMARY : PAGE 1 OF 1

Bill No.	DESCRIPTION	AMOUNT (ZAR)
1	PRELIMINARIES & GENERALS	
2	GUARD HOUSE	
3	MULTI PURPOSE HALL	
4	CAFETERIA (INCL. KITCHEN EQUIPMENT)	
	Carried to Summary Page	

MECHANICAL WORKS SUMMARY		
Phase	Service	Estimate
2B	HVAC	
	WET	
	<i>Carried to Final Summary</i>	<i>R</i> -

C2.2.1 Payment to the contractor to accommodate Part/Full Occupational qualification and Trade qualifications learners

The contractor shall be paid as follows:

Should the contractor select Part/Full Occupational qualification and/or Trade qualifications, then the employer shall make provision for payment to the contractor as indicated in Table 3 in the Standard as provided in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule for training.

C2.2.2 Payment to the contractor to accommodate Work Integrated Learners and Candidates for professional registration

The contractor shall be paid as follows:

Should the contractor select Work Integrated Learners and/or Candidates for professional registration, then the employer shall make provision for payment to the contractor as indicated in Table 3 in the Standard as provided in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule for training.

C2.2.3 Payment to the contractor for Mentors to accommodate Work Integrated Learners and Candidates for professional registration

The contractor shall be paid as follows:

Should the contractor select Work Integrated Learners and/or Candidates for professional registration, then the employer shall make provision for payment to the contractor as indicated in Table 3 in the Standard as provided in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule for training.

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

C3 Scope of Work

1. DESCRIPTION OF THE WORKS

1.1 Employer's objectives

The employer's objective is to provide:

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

To train occupational qualifications, trade qualifications, work integrated learners – P1 and P2 learners, professional candidates. (The Employer will inform which training will take place when the contractor is on site)

1.1.1 Employer's objectives in relation to Indirect targeting

The objective of the project is to provide for a minimum contract participation goal (CPG) of 5% of the total project value and to develop targeted enterprises by the main or lead partner contractors.

1.2 Overview of the works

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

1.3 Extent of the works

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

1.4 Location of the works

The designated site to be shown to the contractor is at DITHAKONG VILLAGE NEAR KURUMAN IN THE JOE MOROLONG LOCAL MUNICIPALITY IN NORTHERN CAPE PROVINCE

1.5 Temporary works

To be communicated to the winning bidder before construction commences

2. DRAWINGS

The drawings used for setting up the Bills of Quantities are attached at the back of this tender document.

- **Architectural drawings**

Three (3) sets to be provided to the successful tenderer at site hand over

3. PROCUREMENT

3.1 Preferential procurement procedures

The works shall be executed in accordance with the conditions attached to preferences granted in accordance with the preferencing schedule.

3.1.1 Requirements for the sourcing and engagement of labour.

3.1.1.1 Labour required for the execution of all labor-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

3.1.1.2 The rate of pay set for this project is as follows:

Description	Daily wage for 8hour work day (Minimum)	Important Note to Bidders
Unskilled labour	R 120.00	NB: Bidders are to check and verify rates used in the area during compulsory briefing or before submitting bid document.
Semi-skilled labour	R 160.00	
Skilled labour	R 190.00	
Supervisor	R 230.00	

3.1.1.3 Tasks established by the contractor must be such that:

- a) the average worker completes 5 tasks per week in 40 hours or less; and
- b) the weakest worker completes 5 tasks per week in 55 hours or less.

3.1.1.4 The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 3.1.1.3.

3.1.1.5 The Contractor shall, through all available community structures, inform the local community of the labor-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

- a) where the head of the household has less than a primary school education;
- b) that have less than one full time person earning an income;
- c) where subsistence agriculture is the source of income;
- d) those who are not in receipt of any social security pension income

- 3.1.1.6 The Contractor shall endeavor to ensure that the expenditure on the employment of temporary workers is in the following proportions:
- a) 25 % women;
 - b) 50% youth who are between the ages of 18 and 25; and
 - c) 2% on persons with disabilities.

3.1.2 Specific provisions pertaining to SANS 1914-5

3.1.2.1 Definitions

- 3.1.2.1.1 Targeted labour: Unemployed persons who are employed as local labour on the project.

3.1.2.2 Contract Participation Goal

- 3.1.2.2.1 The minimum Contract Participation Goal applicable to the Contract is 30%.
- 3.1.2.2.2 The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes. The Person / days will be calculated in accordance with Addendum F: Contract Person / Days Calculation Format.

3.1.2.3 Terms and conditions for the engagement of targeted labour

- 3.1.2.3.1 Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts to be signed between the Contractor and workers will be in accordance with the pro-forma contract, attached as Addendum D.
- 3.1.2.3.2 Further to the provisions of clause 5.2 of SANS 1914-5, the Contractor will use the pro-forma attendance register, attached as Addendum E, to record the required information as per said clause.

3.1.2.4 Variations to the SANS 1914-5

None

3.1.2.5 Training of targeted labour

- 3.1.2.5.1 The Employer will appoint a service provider that will provide training to the workers. The Contractor need not to provide for payment of said service provider.
- 3.1.2.5.2 Workers will receive 2 days training per every 22 working days for the duration of the Contract.
- 3.1.2.5.3 An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend training, in terms of 3.1.2.5.
- 3.1.2.5.4 Records pertaining to the attendance, progress and performance of trainees will be kept by the Contractor and made available to the Employer monthly. These records shall be attached to the monthly progress payment certificates to the Employer.
- 3.1.2.5.5 The Contractor shall do nothing to dissuade targeted labour from participating in training programmes.

3.2 Subcontracting

3.2.1 Scope of mandatory subcontract work

As per the mandatory sub-contracting clause, the Contractor must not sub-contract more than 30% of work to Domestic Sub-contractors.

The Contractor shall without delay enter into contracts with the Domestic Subcontractors as submitted on the returnable schedule and forward a copy of these agreements to the Principal Agent. The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

The Contractor to take note of item 3.2.2 below

3.2.2 Preferred subcontractors / suppliers

3.2.3 Subcontracting procedures

See items 3.2.1 and 3.2.2 as well as tender data

3.2.4 Attendance on subcontractors

Attendance to Domestic Sub-contractors as stated above should be priced under the relevant items in the Preliminaries section of the bills of quantities. Attendance to nominated sub-contractors should be priced under the relevant items in the Provisional Sums section of the bills of quantities.

4. MANAGEMENT

4.1 Recording of weather

The Contractor shall erect an effective rainfall gauge on the site and record the daily rainfall figures in a book. Such book shall be handed to the employer's representative for his signature no later than 12 days after rain that is considered to justify an extension of time occurs.

4.2 Unauthorized persons

The Contractor shall keep unauthorized persons from the works at all times. Under no circumstances may any person except guards be allowed to sleep on the building site.

4.3 Management meetings

The Employer's Representative and the Contractor shall hold meetings relating to the progress of the works at regular intervals and at other such times as may be necessary. The Contractor shall attend all site meetings and shall ensure that all persons under his jurisdiction are notified timeously of all site meetings should the Employer's Representative require their attendance at such meetings.

The Contractor shall keep on site a set of minutes of all site meetings, daily records of resources (people and equipment employed), a site instruction book, a complete set of contract working drawings and a copy of the procurement document and make these available at all reasonable times to all persons concerned with the contract.

4.4 Forms for contract administration

The Contractor shall be required to submit an updated contractor monthly report during site meetings, which will be used by the consultant to update the client.

4.5 Payment certificates

The Contractor to ensure that the VAT invoice required with each certificate is delivered timeously. The date of the certificate will be that of the date when the certificate is received by the consultant.

The Contractor to ensure timeous submission of all required documentation for the expedient processing of payment certificates, as required by the client, eg BAS entity forms, company registration details, VAT clearance certificates, etc. The Contractor is responsible for such documentation submission.

4.6 Addenda

- 4.6.1 Occupational Health and Safety Regulations (*ADDENDUM A*)
- 4.6.2 Standard Occupational Health and Safety Specification (*ADDENDUM B*)
- 4.6.3 Environmental Management Plan (*ADDENDUM C*) (will be made available to the successful bidder)
- 4.6.4 Pro-forma contract between Contractor and Worker (*ADDENDUM D*)
- 4.6.5 Pro-forma Attendance Register (*ADDENDUM E*)
- 4.6.6 Contract Person / Days Calculation Format (*ADDENDUM F*)
- 4.6.7 Contractor monthly report format (see 4.4 above) also available in electronic format (*ADDENDUM G*)
- 4.6.8 Guidelines for the implementation of labor-intensive infrastructure projects under the Expanded Public Works Programme (*ADDENDUM H*) (available on the following website www.epwp.gov.za)
- 4.6.9 Drawings (*ADDENDUM I*)
- 4.6.10 IDT Addendum to the JBCC (*ADDENDUM J*)

INDEPENDENT DEVELOPMENT TRUST

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS
PHASE 2B

C4 Site Information

PROCUREMENT

Based on the agreed skills methods the contractor may employ part/full Occupational Qualification Learners and /or Trade Qualification, Learners and/or Work Integrated Learners and/or Candidates directly or through a Skills Development Agency (training provider or skills development facilitator (Form A 1 List of cidb accredited SDAs)

The contractor shall ensure that no more than one Method shall be applied to any individual concurrently in the calculation of the CSDG for the contract

The contractor may only place 33 employed employees or that of his subcontractors contributing to the CSDG

The contractor shall employ at least 60% of the learners from a Public FET / TVET college should the contractor select to have trade qualification learners (Method 2) contributing to the CSDG.

PROCUREMENT (Indirect Targeting)

The Employer shall stipulate in the tender data that the contractor shall provide a minimum Contract Participation Goal (of 5 of the total project value and develop targeted enterprises in two agreed developmental areas

The contractor shall appoint an Enterprise Development Co Ordinator who shall: develop a project specific Enterprise Development plan to improve the targeted enterprise's performance in the identified developmental areas and shall allocate resources to monitor progress in relation to improved performance and submit to the employer's representative a monthly enterprise development report (Performa ED 105 P) which documents all mentoring activities that have taken place during that month and the progress made in improving the targeted enterprise's performance in the agreed developmental areas, countersigned by the targeted enterprise.

Competence Criteria for an Enterprise Development Co-ordinator

The enterprise development co-ordinator shall have the following competencies:

–Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.

–Minimum experience of 2 years in training and development in Building or Construction; and

–National Diploma or B Degree in the Built Environment or Business Management

MANAGEMENT

State the requirements for Training:

The contractor shall achieve the measurable CSDG by providing opportunities to learners requiring structured work place learning using one or a combination of any of the Skills Methods as agreed: Part/Full Occupational Qualification Learners (Method1) and/or Trade Qualification Learners (Method2)

Contract

101

C4

Part 4 : Site information

Site information

BID No: DOE/NCSIP/2022/10/02

and/or Work Integrated Learners (Method3) and/or Candidates (Method4) as per the Standard in relation to work directly related to the contractor or der as indicated under clause 4.2 and 4.3 in the Standard.

The contractor must ensure all beneficiaries of the Standard are registered with CIDB Skills Development Agency (SDA).

The contractor shall provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

The Format of Communications: CSDG

The contractor shall submit to the Employer's representative within 30days of award of the contract a baseline training planning the specific format (Form A2 Baseline Training Plan). The contractor's hall submits to the Employers Representative:

- an interim contract compliance training report in the specific format (Form A3 Project Interim Report) at intervals which do not exceed 3 months; and

- a final contract compliance training report in the specific format (Form A5 Project Completion Report) within 15 days of reaching completion, end of the service, the delivery date for all work required or practical completion in the case of professional service, service, design and construct contracts, and engineering and construction works contracts respectively.

The contractor shall submit to the employer's representative project interim report in the specified format (Pro forma A 3 on the progress of each of part/full occupational qualification learner, trade qualification learner, work integrated learner, candidate (delete that which is not applicable) every three months.

The contractor shall submit to the employer's representative the names and particulars in the specified format (Pro forma A 4 of the supervisor, mentors for the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) within 30 days of start of the contract.

The contractor shall keep a daily record of all the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates on site and their daily activities and shall be made available to the employer's representative on request.

The contractor shall submit to the employer's representative the reports on the progress and status of the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) with the monthly invoice for the payment certificate.

The contractor shall have health and safety inductions for all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable)

The contractor shall conduct entry and exit medical tests of all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable)

The contractor shall provide personal protective equipment (to all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) at the start of their employment on site.

The Format of Communications Indirect Targeting

The contractor shall submit to the Employer's Representative:

- Project interim reports in the specified format (ED105P) detailing interim values of the CPG that was achieved together with an assessment of the enterprise development support provided should be tabled and discussed at least monthly at progress meetings between employer's representative and the contractor;
- Project completion report in the specified format (ED101P) to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise, and the value of the subcontracted works or the participation parameter of the joint venture entered into; and
- Enterprise development declaration (ED104P).

MANAGEMENT (Indirect Targeting)

The Key Personal:

The contractor shall appoint an Enterprise Development Co-Ordinator and a competent person/s to provide internal mentorship.

Management Meetings:

The contractor shall report to the Employer's Representative on the implementation and progress of the targeted enterprise development and CPG.

The forms for contract administration:

The contractor shall submit to the Employer's representative the following proformas:

- Form ED 105P Project Interim Report
- Form ED 104P Enterprise Development Declaration
- Form ED 101P Project Completion Report

Records:

The contractor shall:

- Keep records of the targeted enterprise development
- Keep records of the payments made to the targeted enterprises in relation to the CPG.
- Ensure all documentation required in terms of the Standard is provided in a timely manner and according to a prescribed format where applicable.

ADDENDUM A

Occupational Health and Safety Regulations

GOVERNMENT NOTICE

DEPARTMENT OF LABOUR

No. R.

7 February 2014

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

CONSTRUCTION REGULATIONS, 2014

The Minister of Labour has under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule.

ADDENDUM A

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
Regulation 3 of the Construction Regulations, 2014

NOTIFICATION OF CONSTRUCTION WORK

1.(a) Name and postal address of principal contractor:

(b) Name and tel. no of principal contractor's contact person:

2. Principal contractor's compensation registration number: _____

3.(a) Name and postal address of client:

(b) Name and tel no of client's contact person or agent:

4.(a) Name and postal address of designer(s) for the project:

(b) Name and tel. no of designer(s) contact person:

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6.(1). _____

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6.(2).

7. Exact physical address of the construction site or site office:

8. Nature of the construction work:

9. Expected commencement date: _____

10. Expected completion date: _____

11. Estimated maximum number of persons on the construction site.

12. Planned number of contractors on the construction site accountable to principal contractor:

13. Name(s) of contractors already chosen.

Principal Contractor

Date

Client

Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.
- **ALL PRINCIPAL CONTRACTORS** THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

ADDENDUM B

Occupational Health and Safety Specification

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

INDEPENDENT DEVELOPMENT TRUST

(Hereinafter referred to as the Employer)

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

This specification shall be used in conjunction with all other applicable safety specifications, legislation and regulations in force at the time of the contract. Where unique site specifications are in force, those site specifications shall take precedence over this Specification.

IDT Kimberly Office
OLD MAGISTRATE COURT
21-23 MARKET SQUARE
KIMBERLY
8301

Contact:
Name: Mr. Boipelo Koloti
Telephone: 071 892 1242

ADDENDUM “A”

PRO-FORMA AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT 1993

PRO-FORMA AGREEMENT IN TERMS OF

OCCUPATIONAL HEALTH AND SAFETY ACT 1993 – SECTION 37 (2)

NEW CONSTRUCTION SAFETY REGULATIONS

The above-mentioned regulations were promulgated in the Govt. Gazette on Friday, 18 July 2014 under the Occupational Health & Safety Act (85 of 1993) and are now in force.

The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act 1993 (Act 85 of 1993, hereinafter referred to as the Act), that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:

- (a) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all the relevant provisions of the Act and the regulations promulgated in terms of the Act, and the Employer's Health and Safety Specifications included in the contract documents.
- (b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations and the Employer's Health and Safety Specifications included in the contract documents will be complied with in all respects.
- (c) In relation to any work or activity performed by the Contractor, his workmen or any other person for whose acts or omissions the Contractor is responsible in terms of the Contract, the Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from itself being obliged to comply with any of the aforesaid duties, obligations and prohibitions.
- (d) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (a) and (b) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or to inspect any appropriate records held by the Contractor.
- (e) The Contractor shall be obliged to report forthwith in writing to the Representative/Agent full details of any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract.
- (f) Forward "safety meeting" minutes to the representative/Agent.

For the Employer: _____ Date: _____

Witnesses: 1) : _____ 2) _____

For the Contractor: _____ Date: _____

Witnesses: 1) : _____ 2) : _____

ADDENDUM “B”

NOTIFICATION OF CONSTRUCTION WORK

NOTIFICATION OF CONSTRUCTION WORK
(Regulation 3 of the Construction Regulations, 2014)

1. CONTRACTOR

1.1 Name and postal address of Contractor:

1.2 Name and telephone number of Contractor's contact person :

1.3 Contractor's compensation registration number :

1.4 Name and telephone number of Contractor's Construction Supervisor :

1.5 Physical address of the construction site or site office:

1.5 Estimated number of persons on the construction site :

1.6 Estimated number of Subcontractors on the construction site accountable to the Contractor :

2. EMPLOYER

2.1 Name and postal address of Employer :

IDT KIMBERELY

P.O. Box 1404

Kimberely

8301

2.2 Name and telephone number of Employer's Principal Agent:

UM CONSULTANTS
011 894 7615

3. DESIGN CONSULTANTS

3.1 Name and postal address of design consultants:

3.1.1 Construction project managers/ Principal Agents:

UM CONSULTANTS
P.O. BOX 717
BOKSBURG
1460

3.1.2 Architects:

UM CONSULTANTS
P.O. BOX 717
BOKSBURG
1460

3.1.3 Structural engineer:

DWP CIVIL & STRUCTURAL ENGINEERS
P.O. BOX 1504
KLERKSDORP
2570

3.1.4 Electrical engineer:

MEKANES ENGINEERING SERVICES
P.O. BOX 3703
DIAMOND, KIMBERELY
8300

3.1.5 Civil Engineer:

DWP CIVIL & STRUCTURAL ENGINEERS
P.O. BOX 1504
KLERKSDORP
2570

3.1.6 Security engineer:

To be appointed at a later stage if necessary

3.1.7 Mechanical Engineer:

MEKANES ENGINEERING SERVICES
P.O. BOX 3703
DIAMOND, KIMBERELY
8300

3.2 Name and telephone number of design consultant's contact person :

3.2.1 Construction project managers/ Principal Agent:

UM CONSULTANTS – 011 894 7615

3.2.2 Architects:

UM CONSULTANTS – 011 894 7615

3.2.3 Structural engineer :

DWP CIVIL & STRUCTURAL ENGINEERS – 018 462 6651

3.2.4 Electrical engineer:

MEKANES ENGINEERING SERVICES – 053 832 4837

3.2.5 Mechanical engineer:

MEKANES ENGINEERING SERVICES – 053 832 4837

3.2.6 Civil engineer:

DWP CIVIL & STRUCTURAL ENGINEERS – 018 462 6651

3.2.7 Security engineer:

To be appointed at a later stage if necessary

3.2.8 Other (if any):

4. THE WORKS

Nature of the works:

CONSTRUCTION OF 2 X REFUSE AREAS, 1 X GUARD HOUSE, 1 X CAFATERIA, ALL SPORTS FIELD, COMPLETION OF HALL WITH ASSOCIATED ELECTRICAL AND MECHANICAL WORKS PHASE 2B

Commencement date :

Completion date :

Contractor: _____ Date: _____

Employer: _____ Date: _____

THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

ALL CONTRACTORS THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER CONTRACTOR ON THE SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

IN TERMS OF THE CONSTRUCTION REGULATIONS 2014

Client:

INDEPENDENT DEVELOPMENT TRUST

Description of Project Works:

**COMPLETION OF NEW JOHN TAOLE
(JTG) SCHOOL AND HOSTEL (PHASE 2B)**

Project Number:

**DOE/NCSIP/2022/10/02
For UM CONSULTANTS 03/09/2022**

PROJECT HEALTH AND SAFETY SPECIFICATION

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1.0 SPECIFIC PROJECT INFORMATION

1.1 INTRODUCTION AND DEFINITIONS

PLEASE NOTE THAT THE REQUIREMENTS OF THE NEW CONSTRUCTION REGULATIONS 2014 HAVE BEEN IN EFFECT FROM 7TH AUGUST 2014. THE NEW REGULATIONS PLACE ADDITIONAL LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THESE NEW REQUIREMENTS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to plant and machinery. Compliance to the requirements of the Occupational Health and Safety Act 1993 is in addition to the requirements of this Health and Safety Specification and is part of the Contractor's responsibility. The Client will monitor that the Contractors comply with the requirements of such legislation.

This specification is a compliance document drawn up in terms of the Occupational Health & Safety Act no 85 of 1993 (OHSA) and is therefore binding. It must be read in conjunction with all other relevant legislation. The contractor shall ensure that it familiarizes itself with the requirements of the legislation listed below, and any related legislation including bylaws, and relevant policies and procedures and that its employees and any sub-contractors comply with the same.

- The Scope of work and information required for tender process, and prior commencement of work, and bill of quantities as described elsewhere
- The Occupational Health and Safety (OSHA) (Act 83 of 1993), and all applicable regulations in terms of the OHSA
- Construction Regulations, 2014;
- National Environmental Management Waste Act (NEMWA) (Act 59 of 2008), and as amended (Act 26 of 2014);
- National Road Transport Act of 1996 (Act 93 of 1996), and as amended in 2014;
- Compensation for Occupational Injuries and Diseases Act (Act 1993);

- Basic Conditions of Employment Act (Act 75 of 1997);
- National Health Act (Act 61 of 2003), as amended in 2013
- National Regulator for Compulsory Specifications Act, (Act no.5 of 2008) (NRCS Act)
- HCS VC 8041: Compulsory specification for microbiological safety cabinets (Classes 1,2 and 3)
- Government Notice No. 22014 GOVERNMENT GAZETTE, 2 FEBRUARY 2000
- Second-Hand Goods Act (Act 6 of 2009)
- Municipal By-laws applicable to scope of work
- South African National Standards (SANS) applicable to decontamination, decommission and commissioning of Tuberculosis laboratories
- Systems with particular focus on extraction and ventilation systems

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO CLIENT AGENT, WHERE SO APPOINTED.

Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

"Agent" means a competent person who acts as a representative for a client;
"angle of repose" means the steepest angle of a surface at which a mass of loose or Fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"Bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"Client" means any person for whom construction work is being performed;

"Competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"Construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"Construction site" means a work place where construction work is being performed;

"Construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"Construction work" means any work in connection with-

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any

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similar civil engineering structure or type of work ;

"Construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;

"fall protection plan" means a documented plan, which includes and provides for -

- all risks relating to working from a fall risk position, considering the nature of work undertaken;

- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file" means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R.919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the

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General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any false work, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support;

"temporary works" means any false work, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act , 1993 (Act No. 85 of 1993);

"tunneling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings and reports):

Tender documents

Drawings

IMPORTANT NOTE:

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has prepared this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract. The project will be signed off to the Contractor which comes with its own risks and technical control, adherence to legislation, and liability. This includes the risks to the scope of work is under control of the Contractor

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.

Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.

The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will conduct Health and Safety audits of the works too.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

The purpose of this site specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Client Agent to be applicable to this

project. This document also provides minimum health and safety requirements, standards and expectations that the principal contractor and contractors must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with Sub Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all sub-contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and

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legislation associated with scope of works and work environment, and these Specifications, which will need to be approved by Client prior to commencement with construction work.

1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to —definitions|| section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to “Client” will apply to their appointed “Client Agent”, where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor’s safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor’s health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor’s health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available

- to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the client requires additional work to be performed as a result of a design change or error in construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Client Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to —definitions|| section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.

Please note that the designer of temporary works must ensure that:

- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.

1.5 PROJECT DETAILS

Description of Works

CONSTRUCTION OF NEW JOHN TAOLE (JTG) SCHOOL AND HOSTEL (PHASE 2) – THE SCHOOL

The construction will include the following activities:

- *Site Establishment*

- *Construction of single storey x 5 blocks*
- *Construction of Administration block*
- *Construction of dining hall*
- *Construction of a Multi-pose hall*
- *Paving of walkways*
- *ECD*
- *Fence.*

This description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

Appointment: SAFETY OFFICER

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector **(SACPCMP)** and has necessary competencies and resources to assist the contractor

2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a

licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;

- appoint each contractor in writing for the part of the project on the construction site
- take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
- ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the client or the client's agent;
- hand over a consolidated health and safety file, hardcopy and CD to the client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

A contractor must ensure that all his or her employees have a **valid medical certificate of fitness** specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

2.3 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- Include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

2.4 Construction Work Permit

It must be noted that from August 2015 certain projects will require a construction work permit to be applied for at least 30 days prior to the work being carried out:

- Works contract value is equal to or exceeding R130 million or Construction Industry Grading Board (CIDB) grading level 9

It is the client's responsibility to apply for this permit from the Provincial Director and construction work may not commence until the permit has been issued by the Provincial Director.

A copy of this permit will be required to be kept in the principal contractor's safety file, and the site specific number issued by the Provincial Director must be displayed at the site entrance.

2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work.

2.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

2.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations.

2.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

2.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the client, client's agent, any contractor, any employee, a representative trade union, and a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved.

In general the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the

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extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors and subcontractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. He / she shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents and non-conformances.

2.12 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

2.13 Medical Certificate of Fitness

The contractor must ensure that their employees on site have **a valid medical certificate of fitness**, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

2.14 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

2.14.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, preferably weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health and safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence.

2.16 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

2.17 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

2.18 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service deliver protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel.

2.19 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site. First Aid box/es must be adequately stocked at all time, accessible and be controlled by a qualified First Aider. If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

2.20 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct

investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

2.21 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.22 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 db; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. In addition, the appropriate over coats, masks , eye protection / face shield to be worn during decontamination, decommissioning and commissioning procedures protecting them from toxic, oxidizing, flammable and corrosive chemicals, as well as TB bacilli. The Contractor shall be responsible to maintain the quality and replacement of signage.

2.23 Management Of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;

- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm; and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

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A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites; the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are

- recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids

2.29 Water environments

Not applicable to this project.

2.30 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;

- there are no flames or similar means of ignition;
- there are conspicuous notices prohibiting smoking;
- oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire- extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all –
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- changing facilities for each sex;
- and sheltered eating area.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where

adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection -

(1) A contractor must—

- (a) designate a competent person to be responsible for the preparation of a fall protection plan;
- (b) ensure that the fall protection plan contemplated in paragraph (a) is implemented, amended where and when necessary and maintained as required; and
- (c) take steps to ensure continued adherence to the fall protection plan.

(2) A fall protection plan contemplated in sub regulation (1), must include—

- (a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- (b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- (c) a programme for the training of employees working from a fall risk position and the records thereof;
- (d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
- (e) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

(3) A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

(4) A contractor must ensure that—

- (a) all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
- (b) no person is required to work in a fall risk position, unless such work is performed safely as contemplated in sub regulation (2);
- (c) fall prevention and fall arrest equipment are—
 - (i) approved as suitable and of sufficient strength for the purpose

- for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and
- (ii) securely attached to a structure or plant, and the structure or plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and
- (c) fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.
- (5) Where roof work is being performed on a construction site, the contractor must ensure that, in addition to the requirements set out in sub regulations (2) and (4), it is indicated in the fall protection plan that—
- (a) the roof work has been properly planned;
 - (b) the roof erectors are competent to carry out the work;
 - (c) no employee is permitted to work on roofs during inclement weather conditions or if any conditions are hazardous to the health and safety of the employee;
 - (d) all covers to openings and fragile material are of sufficient strength to withstand any imposed loads;
 - (e) suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
 - (f) suitable and sufficient guard-rails, barriers and toe-boards or other similar means of protection prevent, as far as is reasonably practicable, the fall of any person, material or equipment.

2.33 Temporary works

- (1) A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.
- (2) A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.
- (3) A contractor must ensure that—
 - (a) all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;

- (b) all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
- (c) detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee;
- (d) all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- (e) all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- (f) all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;
- (g) no person may cast concrete, until authorization in writing has been given by the competent person contemplated in paragraph (a);
- (h) if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
 - (i) adequate precautionary measures are taken in order to—
 - (i) secure any deck panels against displacement; and
 - (ii) prevent any person from slipping on temporary works due to the application of release agents;
- (j) as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- (k) upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person contemplated in paragraph (a);
- (l) the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- (m) provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- (n) a temporary works drawing or any other relevant document includes construction sequences and methods statements;
- (o) the temporary works designer has been issued with the latest revision of any relevant structural design drawing;

- (p) a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- (q) the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

- (4) No contractor may use a temporary works design and drawing for any work other than its intended purpose.

2.34 Excavation

A contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins. Comply with the rest of these regulations.
Demolition Work

Not applicable to this project.

2.35 Tunneling

Not applicable to this project.

2.36 Scaffolding

- (1) A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.
- (2) A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act.

Notes:

- a) Scaffolds must comply with SANS 10085

2.37 Bulk mixing plant

Not applicable to this project.

2.38 Rope Access Work

Not applicable to this project.

2.39 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must

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provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

PLEASE NOTE THAT THIS PREMISES CONTAINS HAZARDOUS CHEMICAL SUBSTANCES AND HAZARDOUS BIOLOGICAL AGENTS THAT WILL BE REQUIRED TO BE DECONTAMINATED BY THE CONTRACTOR, AND DISPOSED OF IN ACCORDANCE WITH WASTE MANAGEMENT REGULATIONS AND THE CLIENT'S REQUIREMENTS, AND ALL NECESSARY CERTIFICATION HANDED OVER TO THE CLIENT TO PROVIDE PROOF THEREOF.

2.40 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
- Engineering methods considered

- Admin control (number of employees exposed) considered
- Personal protective equipment considered/decided on
- Describe how records are going to be kept for 40 years.

2.41 Explosives and Blasting

Not applicable to this project.

2.42 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision and keep adequate quantities of SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site. (See also section 2.22)
Asbestos

Contractor to note that this is not thought to be applicable to this project but it cannot be said to be a qualified statement due to the age of the building. If the contractor comes into contact with any materials or substances that could be thought to contain asbestos then the project management team must be notified immediately and work halted in the area until the legal requirements are in place. Only contractors registered with Department of Labour as asbestos registered contractors may work with asbestos.

2.43 Pressure Vessels (Including Gas Bottles)

The Principal Contractor and all relevant Contractors shall comply with the Pressure Equipment Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing
- Inspect equipment regularly and keep records of inspections
- Providing appropriate fire fighting equipment (Fire Extinguishers) on hand
- **Provided the compressed air lance with a dead man's handle or similar device to ensure that it does not injure any one when it is dropped accidentally when under pressure.**

2.44 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to

use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

2.45 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated;
- Regular inspection and servicing is carried out;
- Records are kept of inspections and of service certificates;
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use.

2.46 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.47 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

2.48 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.49 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

2.50 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from on-site activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.51 Night Work

Not applicable to this project.

2.52 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc.). The Contractor's risk assessment process must take these risks into account.

2.53 Occupational Health

Exposure of workers to occupational health hazards and risks are very common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust; contaminated air-borne droplets and filters; chemicals fumes
- Ingestion through swallowing maybe through food intake; unhygienic practices, and handling of contaminated filters and materials
- Absorption through the skin (pores) e.g. painting or use of thinners; chemicals

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used during decontamination

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.54 Suspended Platforms

Not applicable to this project.

2.55 Material Hoists

Not applicable to this project.

2.56 Explosive Actuated Fastening Device

The Principal Contractor shall ensure that use and storage of all explosive actuated fastening devices and portable electrical tools are in compliance with relevant legislation. The Principal Contractor shall ensure that all-electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order. Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and control measures to be implemented e.g. personal protection equipment, guards, etc.

The Principal Contractor shall consider the following:

- A competent person undertakes routine inspections and records are kept;
- Only authorised trained persons use the tools;
- The safe working procedures apply;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.
- Signs to be posted up in the areas where explosive actuated fastening devices are being used.

2.57 Public and Site Visitor Health and Safety

The Principal Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers likely to arise from site activities, including the precautions to be taken to avoid or minimise those dangers. Appropriate health and safety notices and signs shall be posted up, but shall not be the only measure taken.

Both the Client and the Principal Contractor have a duty in terms of the OHS Act

85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the contractor's activities. Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these inductions must be kept on site in accordance with the Construction Regulations.

2.58 PERMITS

Permits may be required for certain activities and these are not limited to but may include the following:

- Use of Explosives and Blasting
- Work for which a fall prevention plan is required
- Removal of asbestos materials.
- Disposal of (old type) fire detectors with radioactive elements.
- Decanting/handling of Ammonia.

If and where applicable, the Employer will issue to the Principal Contractor, permits and log books (which log books shall thereafter be kept up to date by the Principal Contractor

All of the above are to be documented in the H&S plan

2.59 Lockout Systems - Electrical

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

2.60 Hot Works

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987 and Construction Regulations 2014, ensure that welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;

2.61 Hired Plant and machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates

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are kept on site in the health & safety file. All relevant Contractors must ensure the same.

2.62 Transport of Workers

The Principal Contractor and other Contractors shall not:

- Transport persons together with goods or tools unless there is an appropriate area of section to store them and all loose tool and plant are tied down and secured;
- Transport persons in a non-enclosed vehicle, e.g. truck; there must be a proper canopy (properly covering the back and top) with suitable sitting area. Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.
- Transport workers in LDV unless they are closed/ covered and have the correct number of seats for the passengers.

2.63 Welfare Facilities

A contractor shall, depending on the number of workers and the duration of the work, provide at or within reasonable access of every construction site, the following clean and maintained facilities:

- (a) at least one shower facility for every 15 workers;
- (b) at least one sanitary facility for every 30 workers;
- (c) changing facilities for each sex; and
- (d) sheltered eating areas.

A contractor shall provide reasonable and suitable living accommodation for the workers at construction sites which are remote from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.64 Alcohol and Other Drugs

- An employer or a user, as the case may be, shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.
- No person at a workplace shall be under the influence of or have in his possession or partake of or offer any other person intoxicating liquor or drugs.
- An employer or user, as the case may be, shall in the case where a person is taking medicines, only allow such person to perform duties at the workplace if the side effects of such medicine do not institute a threat to the health or safety of the person concerned or other persons at such workplace.

2.7 Copy of the Act and Regulations

Every employer with five or more persons in his employ shall have a copy of the

Act and the relevant regulations readily available at the work place: Provided that, where the total number of employees is less than five, the employer shall, on request of an employee, make a copy of the Act available to that employee.

2.8 Other Acts and Laws that may apply

The contractors attention is directed to the following Acts that may be applicable and must be adhered to at all times. It is the contractor's responsibility to become conversant with the requirements applicable in these laws:

**Compensation for Occupational Injuries and Diseases ACT 130 of 1993,
Mineral Act No. 50 of 1991,
Water Act No. 54 of 1956, and
Atmospheric Pollution Prevention Act No. 45 of 1965,
Occupational Health and Safety Act No. 85 of 1993,
Environmental Conservation Act No. 73 of 1989.
Hazardous Substances Act No.15 of 1973,
National Building Regulations and Building Standards Act No.103 of 1977,
National Environmental Management Act No. 107 of 1998,
National Road Traffic Act No. 93 of 1996,
National Water Act No. 36 of 1998,
Relevant By-laws.**

	OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION	31 Holly Street Van Dyk Park Boksburg 1460
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2.9 ACCEPTANCE OF CONDITIONS OF THESE SPECIFICATIONS

- ***The contractor must provide a certified copy of his Public Liability Insurance when signing this document.***

I, _____ the Contractor, do hereby

Declare that my company _____ acknowledge having read and understood the conditions contained in this legal document and furthermore we agree and accept to abide by the conditions and requirements of the act.

SIGNATURE CONTRACTOR: _____ DATE _____

SIGNATURE WITNESS _____ PRINT NAME: _____

AGENT ACTING ON BEHALF OF THE CLIENT:

NAME: _____ DATE _____

SIGNATURE: _____

SIGNATURE WITNESS _____ PRINT NAME: _____

	OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION	31 Holly Street Van Dyk Park Boksburg 1460
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INDEMNIFICATION

The Contractor hereby certifies that all contracting workmen recognize the inherent hazards that exist on the premises / property / site of _____

**_____ (Client detail and site address) and
that the Contractor;**

- **enters the property entirely at his/her own risk and therefore the Contractor waives any claim of whatsoever nature against _____, (Client) its employees, agents and/or mandatories in respect of any loss, damage and/or injury whether same is the result of any negligent act or omission on the part of _____ (contractor), it's employees, agents and/or mandatories or other independent Contractors or by a third person or by way of defective equipment or materials supplied by the company, and further the Contractor;**
- **Hereby indemnifies _____ (Client), its employees, agents and/or mandatories against any claims from the Contractor's employees and/or from any other person, arising and being caused in the manner set out above**

PROJECT BASELINE RISK ASSESSMENT

FOR UM CONSULTANTS – 03/09/2022

31 Holly Street
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PROJECT:	COMPLETION OF NEW JOHN TAOLE (JTG) SCHOOL AND HOSTEL (PHASE 2B)	CONTRACT NUMBER:	DOE/NCSIP/2022/10/02
CLIENT:	INDEPENDENT DEVELOPMENT TRUST	LOCATION:	LOCAL - JOE MOLORONG, VILLAGE - DITHAKONG

DOCUMENTATION REQUIRED	TRAINING REQUIRED	PERSONAL PROTECTIVE EQUIPMENT & SAFETY EQUIPMENT REQUIRED	PERSONS INVOLVED IN BASELINE RISK ASSESSMENT	RESPONSIBLE PERSONS
<ul style="list-style-type: none"> * OHS Act 85 of 1993 * Construction Regulation 2014 * Relevant Appointments * SANS Standards 	<ul style="list-style-type: none"> * Health and safety site induction * Toolbox Talks * Health and safety awareness training * Accredited training 	<ul style="list-style-type: none"> * Overalls, Safety footwear, Hard hats, Hand protection, Eye protection, Ear protection. Safety harnesses * Supply PPE as per Client's OHS specifications * First aid kit * Fire prevention equipment 	<ul style="list-style-type: none"> * Contract Manager * Construction Manager * Construction Health and Safety Agent * Construction Health and Safety Officer 	<ul style="list-style-type: none"> * Contract Manager * Construction Manager * Construction Supervisor * Construction Health and Safety Agent * Construction Health and Safety Officer * Health and Safety Representatives * Employees

NO	Construction Activity Construction activities identified to be undertaken	Potential Safety, Health & Environmental Hazards Identify the hazards (health and safety or environmental) associated with Construction Activity.	Potential Safety, Health & Environmental Risk/Impacts, Examine each hazard identified to find all possible risk factors	Risk Rating Of the risk you have identified on the left.	Recommended Corrective Action or Procedure Determine what action are necessary to eliminate or minimize all hazards that could lead to an accident, injury, illness or environmental incident. The risk must be reduced controlled to a level that is acceptable before work commences.	Responsible Person to perform the action
1	Hazard identification and Risk assessment	No Hazards identified nor Risk Assessed	Persons not informed of safety hazards and dangers in working area due to lack assessments of hazards and identification of risks could cause injuries and property damage. Persons not informed of health hazards and dangers in working area due to lack assessment of hazard and identification of risk could cause illness and occupational disease. Person not informed of correct working method in working area due to lack of assessment of aspects and identification of impacts that could cause impact to environment	H	1 Baseline Risk assessment to be discussed with all workers on induction Weekly safety talks with all the workers.(Toolbox Talks) Identify daily risks and deal with them during 10 minutes safety talks/ DSTI Daily DSTI to be conducted and discussed with workforce where intern they will sign acceptance thereof.(Workman's declaration) Enforce that the employees to do self-risk-assessment on the task that they are performing to focus them on the hazards that re related to the work that needs to performed, 4- Steps to safety & Self- risk assessment communicated in Induction and through Toolbox Talks. All employees to be instructed to do self-risk assessment on the task that they are about to carry out by asking themselves the 4-Steps to safety. Make use of the "Buddy-Buddy system to assist one another and remind one another of where your short coming are	Safety Officer ensure Employees to adhere prior to commencement of work
2	Site Establishment	The risk vary from risk to personal safety due to socio-economic elements as well as task related elements	Incompeted labourer could resulting in injuries/ property damage.	H	3 The team must be able to make contact with emergency services as well as head office at any time. No individual must be left on site alone. The yard area must be secured by way of fencing and gated access before other stock, material or facilities are delivered to site. The work must be supervised at all time.	Safety Officer ensure Employees to adhere prior to commencement of work
3	Material Handling	Carrying of material over rough terrain. Incorrect lifting techniques	Carrying of material over rough terrain could cause employees stumble and fall. Incorrect lifting techniques resulting in back injuries.	M	1 Ensure that area's is always clear of any obstacles. Correct lifting techniques enforce at all time.	Safety Officer ensure Employees to adhere prior to commencement of work

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4	Construction Vehicles, mobile plant and Equipment *Use inspection of all plant & Equipment	Construction vehicles, mobile plant and equipment not inspected before use	Equipment not inspected could result in the use of faulty equipment resulting in injuries and/or property damage. Equipment not inspected could result in the use of faulty equipment resulting in illness and occupational diseases through the exposure to hazardous substances such as oil and smoke. Equipment not inspected could result in the faulty equipment resulting fluid leaks and excessive smoke resulting in impact on the localised environment.	H	1	Enforce pre-use inspections against critical item check list. Faulty equipment to be repaired or replaced. Implementation of Preventative maintenance program. Spills kits to be provided.	Safety Officer ensure Employees to adhere prior to commencement of work
5	Construction vehicles, mobile plant and Equipment competent trained and finically fit operators	Construction vehicles, mobile plant and equipment operated by competent operators, or by any employee	Operators incompetent to operate equipment safety resulting in hazards and danger in working area could cause injuries and property damage. Operators incomplete to operate equipment safely in hazard and dangers to employees, sub-contractors and visitors health. Operators incompetent to operate equipment safely resulting in hazards and dangers in working area could cause impact to environment.	H	1	Enforce the use of trained competent operators only. Medical Fitness of all plant operators. Only appointed operators to operate construction vehicles, mobile plant and equipment	Safety Officer ensure Employees to adhere prior to commencement of work
6	Driving with vehicles on site	Incorrect operation if vehicle. Exposure to hazardous substances excessive exhaust smoke, lubricant oils and fuel spillages of hazardous substances to ground (soil),water. Air pollution.	Incorrect operation of vehicle could result in accident. Damage to equipment, Injury to employees, sub-contractors or visitor. Exposure to hazardous substances, excessive exhaust smoke, lubricant, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (Soil),water. Air pollution through excessive exhaust smoke.	H	2	Drivers of vehicles to always wear their safety belts. Switch on the lights of the vehicle to enhance visibility or make use of amber flash lights. Always give right way to construction vehicles. Yield for pedestrians. Obey all road traffic signs at all times. Obey to the speed limit on site. The speed limit 15km/h. Always park your vehicle in a designated area where it will not disrupt construction or cause traffic flow problem. Never leave your vehicle running unattended and always remove your keys from your ignition switch. Use your handbrake when your vehicle is parked	Safety Officer Supervisor to ensure employees to adhere during activity
7	Induction	Employees, Sub-contractors and visitors not inducted	Persons not informed of safety hazards and dangers in working area that could cause injuries and property damage. Persons not informed of health hazards and dangers in working area that could cause illness and occupational diseases. Persons not informed of correct working method in working area that could cause impact environment.	M	2	Induction Course to be attended by all persons, employees and visitors. Medicals for employees and sub-contractors prior to work commencement of work, Working at heights, close proximity to Hazardous biological agents, Hazardous Chemical Substances, Confined spaces and operating of plant. Induction program to include Health, Safety and Environmental as well as hazard and risk identification and assessment	Safety Officer Prior to commence to work
8	Medical Fitness	Unidentified occupational illness	Unidentified occupational illness can resulting in death of employee or property damage.	H	2	All employees needs to obtain a medical fitness certificate before any work commence.	Safety officer that medicals is done before commencement of work.



Pheladi 1 Stop
Occupational Health & Safety

Comp reg:
2014/014082/07

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9	Personal Protective Equipment	Employees, Sub-contractors and visitors not wearing prescribed Personal Protective Equipment	Persons not wearing correct PPE relevant to safety hazards and dangers in the working area that could cause injuries and property damage. Person not wearing correct PPE relevant to health hazards and dangers in the working area that could cause illness and occupational diseases. Persons not informed of correct disposal method for used PPE that could cause impact to environment.	H	3 Ensure the correct use of Personal Protective Equipment Gloves, Safety boots, Overall, Hard hat, Hearing protection, Eye protection Risk based PPE (a) When working in dusty conditions dust masks must worn. (b) When using the jackhammer Hear protection(Earmuffs), dust mask, safety goggles and gloves to be worn at all times. (c) When working in a noisy environment hearing protection will be worn (85dB) (d) Gloves to be worn when doing any hands on activities/where working with rough, sharp, hot materials. (e) Gum boots to be worn when placing concrete. Dispose of PPE in correct provided PPE waste collection bag, to be sent to Head Office for recycling	Safety Officer ensure Employees to adhere prior to commencement of work
10	Signage	No signage on site	Persons not informed of safety hazards and dangers In working area due to lack of information could cause injuries and property damage. Persons not informed of health hazards and dangers in working area due to lack of information could cause illness and occupational diseases. Persons not informed of correct working method in working area to lack of information that could cause impact to environment	M	2 Signages to be in place relevant to Hazards and risks identified. General information, Warning, Mandatory and Location of Fire Fighting equipment essential. Identify daily risks and deal with them during the safety talks/DSTI	Safety Officer ensure Employees, Contractors and visitors to adhere prior to commencement of work.
11	Construction vehicles, mobile plants and Equipment Grader, Roller, Excavator, TLB, Crane truck/Tractor trailers, Ready mix concrete trucks	Bumping, squashing, hit or run over by Earth Moving Machine. Machine operator not certified. Exposure to hazardous substances; excessive exhaust smoke, lubricant, oils and fuel. Spillages of hazardous substances to ground (soil), water. Air pollution	Bumping, Squashing, Hit or run over by Earth Moving Machine. Machine operator not certified resulting in injury to persons and damage to property or equipment . Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (soil) ,water. Air pollution through excessive exhaust smoke.	H	1 Doors of machines to be kept closed at all times. All safety guards to be in place. All machines to have reverse hooters, amber flash lights and seatbelts. All pinch points to be identified and guarded. No overloading of machines. Operators/ Drivers to be observant at all times and ensure all round visibility. Liaise with supervisor. Work with extreme caution and be on the lookout for people walking around. Keep clear of moving machinery at all times! (a) Drivers/Operator training certificate and Medical fitness certificate (b) Daily checks on machine and implementation of preventative maintenance program	Safety Officer, Supervisor to ensure. Employees to adhere During activity
12	Construction vehicle, mobile plant and Equipment Working with small plant like bobmag roller, Concrete cutter, concrete mixer, Water pump, Poker and Generator	Pinch points, Machine guarding. Ergonomics, Defective equipment. Exposure to hazardous substances excessive exhaust smoke, lubricants, oils and fuel. Spillages of hazardous substances to ground (soil), water. Air pollution	Pinch points, Machine guarding, Ergonomics, Defective equipment resulting in injury to persons. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (soil), water. Air pollution through excessive exhaust smoke.	H	1 All tools and equipment to be inspected before use to ensure that all the components are in place and secure and that the equipment meet the required standards. All machine-guarding needs to be in place and all possible pinch points identified. Employees to wear appropriate PPE when using hand tools. Employees to wear hearing protection when noisy tasks are performed. Secure Two point contact and a good footing to be maintained at all times	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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13	Transport of workers	Incorrect transport of employees. Transport of employees on a back of a truck and LDV. Not wearing safety belts. Exposure to hazardous substances excessive exhaust smoke.	Incorrect operation of vehicle could result in accident. Damage to equipment, Injury to employees. Slips trips and fall due to incorrect entry/ exit and climbing on or off vehicle resulting in injury. Exposure to hazardous substances; excessive exhaust smoke through inhalation.	M	2	Drivers of vehicles to always wear their safety belts. Switch on the lights of the vehicle to enhance visibility or make use of amber flash lights. Always give right way to construction vehicles. Obey all road traffic signs at all times. Obey speed limit on site. The speed limit is 15km/h. No employees to be transported with goods or materials. Canopy on back of vehicle must be fitted and secure	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
14	Road Traffic Accomodation	No road signage/ No flagmen in place. No Barricade of working area	No road signage/ No flagmen in place. No Barricade of the working area vehicle accidents injury to personnel/ damage to property and equipment. The South African Road Traffic signs manual no 13 - Signs not positions as per this manual no 3 can cause 3rd party claims.	M	1	Road signage's to be in place. Flagmen need to be in place. Flagmen only to leave their post if they are relieved by another person in the event should they want to the toilet etc. Identify daily risks and deal with them during the safety talk/DSTI.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
15	Structures	Damage to structures not known, stability and tolerance of structures	Damage to structures not known, stability and tolerance of structures could result in injury(s) fatality due to collapse of structure. Exposure to dust due to collapsing structures could result in inhalation of dust due to excessive dust created by collapsing structures	H	1	Structures will be inspected before each shift. The following information must be provided by the designer regarding the structures and the information provided will be available on site available at the applicable Engineer: -Geo-science technical report where appropriate -The design loading the structure -The method and sequence of construction -Design drawings	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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16	Excavation	No excavation permit is obtained. Falling or slipping into the excavation. Collapsing of trench	Damage to existing structures/ services if no excavation permit obtained. Falling or slipping into the excavation causing injury or fatality to persons. Collapsing of trench sides causing injury or fatality to persons. Damage to plant and equipment. Unsafe entry and exit from excavation. Exposure to hazardous biological/ chemical substances resulting in infections and/or diseases due to spillages of hazardous substances to ground(soil), water due to damage to services	H	1	Permit to be obtained from relevant Resident Engineer. Trenches exceeding 1.5m deep sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane/ where battering is not possible sides to be shored. Safe access to and exit from trench, such access shall not be further than 6m from the point where any worker within the excavation is working. Excavation to be inspected: (i) Daily, prior to each shift. (ii) After an unexpected fall of ground. (iii) After substantial damage to support and (iv) After rain All plant and material to be placed a safe distance from trench area to prevent excessive loading to trench slopes. Excavation where reinforcing is evident the access to and from the excavation will be constructed in such a manner that the rebar will be covered with shutter planks/ and other means of ensuring that in the event of a person falling on the access that the rebar will be guarded to such an extent that it won't cause any harm to the person. Barricade all excavations-Warning signs to be placed on excavation barricades barricading to be none less than 0.5m from the edge. All excavated trenches to be clearly marked and barricaded.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
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17	Insolation of existing services	Contact to live electrical services. Exposure to hazardous biological/ chemical substances.	Damage to electrical services could result in electrocution. Contact to services whilst removing could result in injuries such as abrasions, cuts and puncture wounds. Exposure to hazardous biological/ chemical substances resulting in infections and/ or diseases due to spillages of hazardous substances to ground (soil), water due to damage to services	M	2 Insolation and isolation of services. Location of services to be determined before exposure of services commences. All employees to stand well clear of services being removed if removed by plant or machinery. Correct use of PPE	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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17	Earth Moving	Bumping, squashing, hit or run over by Earth Moving machine. Machine operator not certified. Exposure to hazardous substances; excessive exhaust smoke, lubricant, oils, and fuel. Spillages of hazardous substances to ground (soil), water. Air pollution	Bumping, Squashing, Hit or run over by Earth Moving machine. Machine operator not certified resulting in injury to persons and damage to property or equipment. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impacts due to spillages of hazardous substances to ground (soil), water. Air pollution through excessive exhaust smoke	M	2	Barricade the area, visitors to be inducted. Discussed in safety talks, DSTI. All plant to be inspected for defects and oil leaks. Operators to do daily vehicle checklist. Operator competency and medical certificate to be kept in safety file. Never stand behind or in front of the machine whilst operational. Never stand under machine bucket. Do not use the machine to elevate/lower or transport employees. Never stand in swing area of the machine. Never stand close to a machine when tipping loads. Large pieces of materials that may be struck in the load bin can cause the load to fall over sideways. Always wear reflective vests to enhance visibility and keep well clear of all earth moving equipment and vehicles at all times. All rubble debris to be dumped at a municipal dumpsite.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
18	Placing of Steel/ PVC/ Concrete pipes	Uncontrolled swing of concrete pipe. Lifting equipment defective. Pinch points. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel spillages of hazardous substances to ground (soil), water. Air pollution	Uncontrolled swing of concrete pipe. Lifting equipment defective pinch points resulting in persons sustaining injury such as abrasions, lacerations. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (soil), water pollution through excessive exhaust smoke.	M	3	Barricading, DSTI, training, awareness through safety talks, daily checking of tools and equipment. Guide ropes to be used when lifting and lowering pipes. All lifting equipment to be inspected before use. No employees to be in the area where the pipes are to be lifted or lowered. Employees to be aware of pinch points when the pipe are being connected (Do not place your hand between the pipes)	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
19	Backfilling	Machinery, tools and equipment falling in excavations. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel spillages of hazardous substances to ground (soil), water. Air pollution	Machinery, tools and equipment falling in excavations resulting in property damage. Persons could be injured due to contact with machinery. Exposure to hazardous substances; excessive exhaust smoke lubricants, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (soil), water pollution through excessive exhaust smoke.	M	2	Construction plant to keep a safe distance away from the edge of the excavation. Operators to be observant. Tally man to control the movement of the vehicles. Dust suppressant	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
20	Housekeeping	Untidy/ Unhygienic work area. Hazardous biological substances. Tripping hazards	Untidy work area. Tripping hazards could cause injury. Unhygienic work area is risk to exposure of hazardous biological substances causing infections. Untidy work area could result in aesthetical negative impact to environment	M	3	Housekeeping standards to be established and implemented. Discussed in safety talks. There is a place for everything and everything in its place- always! Never leave tools, materials and equipment lying around unnecessary	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

NO	Construction Activity	Potential Safety, Health & Environmental Hazards	Potential Safety, Health & Environmental Risk/Impacts,	Risk Rating		Recommended Corrective Action or Procedure	Responsible Person
	Construction activities identified to be undertaken	Identify the hazards(health and safety or environmental)associated with Construction Activity.	Examine each hazard identified to find all possible risk factors	Of the risk you have identified on the left.		Determine what action are necessary to eliminate or minimize all hazards that could lead to an accident, injury, illness or environmental incident. The risk must be reduced controlled to a level that is acceptable before work commences.	to perform the action
21	Ergonomics	Stains/ pains, uncomfortable working condition	Stains/ pains due to uncomfortable working conditions prolonged uncomfortable working conditions could result in acute muscle and joint strains effecting employees work functions within muscles	L	1	Identify risks as discussed in safety talk/ DSTI. Good Ergonomics to be discussed in Toolbox Talks	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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22	Unloading and loading of equipment from low bed/ Pick up trucks	Slips trips and falls. Incorrect off loading practices. leaks of equipment fluids, exposure to hazardous chemical substances.	Slips trips and falls due to incorrect off loading/ loading practices resulting in injury and/ or property damage. Incorrect off-loading/ loading resulting in damage of property that could lead of equipment fluids causing risk to employees exposure to hazardous chemical substances. Incorrect off-loading/loading resulting in damage to property, that could be leaks of equipment fluids causing impact to the environment.	M	2	Always make use of handles provided when climbing on and off the truck. Never jump of the back of the truck or pick up when the off-loading is complete. Be aware of potential pinch points when opening the sides of the truck. When lifting heavy tools or equipment make use of assistance. Secure two point contact and ensure that a good footing is maintained at all times. When lifting tools and equipment keep your back straight and lift with the power in your legs (Never bend your back). Always keep clear of the crane truck when equipment is being offloaded by crane. Slew area must be barricaded as to prevent other employees entering the slew area.	Safety Officer / Supervisor to ensure. Employees to adhere during activity
23	Noise	Excessive noise	Excessive noise corrupting communication amongst two causing in improper operation resulting in injuries and/or property damage. Noise inducted. Hearing loss due to excessive sound generated through construction activities without sufficient hearing protection. Environmental impact on surrounding fauna and flora due to excessive noise made from construction activities	H	2	A maximum noise level at a distance of 1m of each sound producing mechanical equipment of 80dB(A). Where it is unable to restrict the noise the level of the machine to the maximum specified, by the appropriate selection of suitable equipment e.g. by selecting slow speed or silent type machines, quite type cooling fans, suitable silencers etc. then an alternative solution, such as acoustic hood or similar shall be offered	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
24	Vibration	May result in kidney complications	Excessive expose causing can resulting in injuries (kidney complications).	H	2	Training Rest breaks	Safety Officer to enforce.
25	Working at heights	Tripping and falling. Falling over handrail. Scaffold collapse. Safety harness not worn properly. Safety harness lanyards not connected. No tool lanyards – causing tools falling from heights	Scaffolding that are not proper erected and inspected can resulting in injuries/ fatalities/ property damages. No tool lanyards can causing tools falling from heights and resulting in body injuries.	H	1	As soon as the required platform is reached the worker must attach the one lanyard of his harness. Workers are not allowed to reach or stand on hand or knee railing or on the kick plates to get access. Workers are not allowed to reach or stand on the outside of the scaffold frame to work. Equipment and tools must be placed in such a way as not to cause a tripping hazard. Unnecessary tools and equipment must be lowered to the ground immediately. Workers must ensure that all hand tools are equipped with a lanyard.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
26	Barricading of work area's Stacking and storing in lay area Potential hazardous area	Persons can fall into the excavations. Unauthorised entrance from other employees, sub-contractors and visitors. Potential hazardous area. Incorrect control and demarcation of spillages	Workers could be endangered while working persons can fall into the excavations. Unauthorised entrance from other employees and bot being aware of the Hazard in the working area could lead to injuries to employees. Employees exposed to potential hazardous area resulting in risk to expose of hazardous biological substances causing infection/diseases. Environmental impact to immediate area due to incorrect control and demarcation of spillages	M	2	Barricading/ demarcating and signage's. All visitors to be made aware of the hazards in the working area before they enter the site. Visitors to be shown what the Mandatory PPE requirements are on the construction board before they may be allowed in the working area. All visitors to be accompanied by the supervisor of that area until their visit is complete and they are escorted of the working by the supervisor. Proper demarcation of oil spillages	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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27	Temporary works	Persons slipping, tripping and falling off of formwork /support work structures or untidy work.	Persons slipping and falling off of formwork/ support work structures or untidy work area which results in injury to persons, damage to property or loss of materials. Person fall from elevated position resulting in permanent disability of either extremities or brain. Untidy work area could result in aesthetical negative impact to environment	M	1	Formwork and support work structures are erected according to the design standards. All persons erecting/dismantling formwork/ support work structures above ground level must have full body harness. All persons erecting / dismantling formwork and support work structures must be competent to perform such operations. Suitable guard rails, toe-boards and platforms must be put in place to prevent any person from falling off formwork/ support work structures. No person shall perform any work on formwork and support work structures during inclement weather conditions	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
28	Temporary works: Shuttering	Hand tools, nails, electrical tools, skill saws, drill. Incorrect use in assembling shutters, faulty equipment. Manual handling, loss of production. Untidy work area.	Hand tools, nails, electrical tools, skill saws, drills etc. Persons could sustain injury due to incorrect use in assembling shutters, faulty equipment . Abrasions, lacerations strains and sprains, loss of production, concrete and materials due to incorrect assembly. Persons making contact with shutters oil digestion, inhale fumes resulting in exposure to hazardous chemical substances. Spillages, incorrect disposal of shutter oil resulting in environmental impact. Untidy work area could result in aesthetical negative impact to environment.	M	1	All shuttering to be stored in such a manner that it does not create a tripping hazard. Shuttering that is not in use must be stored in the demarcated storage area. All nails and sharp objects like nails etc. to be knocked flat or are to be removed to prevent injuries to workers. Employees to wear gloves when handling shutter boards due to splinters that can cause injuries	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
29	Ladders	Persons slip, trip on rungs or fall of ladders or untidy work area.	Persons slip, trip on rungs or fall off ladders or untidy work area which result in injury to persons, damage to property or the loss of materials. Persons fall from elevated position resulting in permanent disability of either extremities or brain. Untidy work area could result in aesthetical negative impact to environment.	M	3	Only one person at a time is allowed on a ladder at a time. Persons must climb the ladder according to the instruction given(three point rule). Ladders must be correctly placed and on stable surfaces and also properly secured during use. Persons must work from at least the third step from the top of the ladder, and should lean on the ladder and must use a sling or tool belt. Persons must not climb a ladder during inclement weather condition and ladder must be constructed of suitable materials to ensure their stability. Ladders providing access to elevated areas must be extend at least 1meter above the landing	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
30	Portable Electrical Equipment	Electrical shock, faulty equipment, flying debris, particles. Incorrect disposal	Shock, injury in form of abrasions, laceration to personnel due to incorrect operation and/ or faulty equipment. Inhalation, eye contact of dust generated through operation. Incorrect disposal of portable electrical equipment impact on environment	M	2	Be inspected before use to ensure that all the components are in place and secure and that the equipment meet the requirement meet the required standards. All machine guarding needs to be in place and all possible pinch points identified. Employees to wear appropriate PPE when using hand tools. Employees to wear hearing protection when noisy task are performed. Secure Two point contact and a good footing to be maintained at all times. All tools and equipment to returned to head office if broken for repair or recycling.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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31	Pouring concrete	Ergonomics, hand tools, HCS-cement dust generated. Incorrect disposal of excess cement and packages	Ergonomics, contact to chute or bucket could result in injuries ,abrasions ,laceration or inhalation, eye contact of concrete or cement(HCS) dust generated through operation resulting in affixation, occupational bronchitis. Incorrect disposal of excess concrete resulting in pollution to immediate environment	M	2	Gumboots and rubber coated gloves to be worn when casting concrete. Barricading. DSTI, training, awareness through safety talks, daily checking of tools and equipment. Correct disposal in predetermined for any excess concrete.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
32	Making of concrete	Material can fall whilst loading onto transport trucks. Concrete pieces flying. Equipment, HCS dust generated through operation, Incorrect disposal	Material can fall whilst loading onto transport trucks and whilst transporting. Concrete pieces flying into direction of the walkway. Persons could be injured/damage to equipment and property. Equipment can be damaged. Inhalation, eye contact of concrete, HCS substances generates through operations in affixation, occupational bronchitis. Incorrect disposal resulting in pollution ,dust generated polluting air.	M	2	Barricading buddy system, continuous cleaning and removing rubble of site. Discussed in safety talks, all employees must keep clear of earth moving equipment at all times and that the tipper trucks must not be overloaded or have materials hanging over the sides. Tallyman to communicate with truck driver and the excavator operator. Screens ,Netting, shutter boards to be placed in the area where the excavator has to break if it is close to the pedestrian walkway. Barricading and removing of rubble buddy system, continuous cleaning off site. Disposal at approved designated area	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
33	Reinforcing	Hand tools, wire, electrical tools, incorrect use, faulty equipment. steel filling, partials or rust, incorrect disposal.	Hand tools, wire, electrical tools. Persons could sustain injury due to incorrect use, faulty equipment. Abrasions, lacerations and puncture wounds. Inhalation, eye contact of steel fillings, partials or rust through operation resulting in affixation, and health defects. Incorrect disposal resulting in pollution. Untidy work area could result in aesthetical negative impact to environment.	M	2	Use a baby grinder when cutting reinforcement. Face shield and safety glasses required when cutting rebar with an angle grinder. Sufficient workbench to be used when a large number of steel is to be cut. Barricading ,DSTI ,training and awareness through safety talks, daily checking of tools and equipment. Safety gloves to be worn at all times while working with/or handling rebar. All rebar to be covered at access areas. Excess material to be recycled.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
34	Storage and handling of HCS & Flammable Liquids	Fire through incorrect handling and storage, vapours, spillages of hazardous substance, Slip trip and fall on spilled substances	Fire through incorrect handling and storage resulting in property damage, person sustaining injury, burns. Chemicals handling. Eye contact, Skin contact, Inhalation, Indigestion. Vapours harmful resulting in affixation, and various health defects. Localised environmental impact due to spillages of hazardous substances to ground(soil), water. Air pollution through excessive fumes, vapours. Incorrect disposal resulting pollution.	M	1	Appropriate PPE to be worn at all times. Rubber coated gloves, respirator, face shield and safety glasses, full rain coats and (Apron if the prime is heated) when handling and using prime. Ensure that at all hoses and fittings on spraying equipment are tightly secure and good working condition to ensure that the fitting don't come loose and spray unwittingly. Inspect rubber pipes on spraying equipment to ensure that there are no cracks in the pipes .Ensure that the spray equipment to ensure that there are no cracks in the pipes. Ensure that the spray nozzle is clean and not blocked which can lead to a pipe bursting. Ensure that all machine guarding is in place. Do not smoke near prime. Have a fire extinguisher readily available.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
35	Fire Prevention	Combustible refuse paper & plastics. Flammable liquids: petrol, diesel, etc. Electrical equipment	Poor housekeeping, Sub standard electrical equipment can resulting in a fire on site.	M	2	Training on fire prevention. Housekeeping, Segregated storage of materials	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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36	Stacking and storage	Untidy work area, Tripping hazards, Incorrect stacking and storage	Stains/pains due to uncomfortable working conditions, Untidy work area. Tripping hazards could cause injury. Prolonged uncomfortable working conditions could result in acute muscle and joint strains effecting employees nerve functions within muscles. Untidy work area could result in aesthetical negative impact to environment.	M	3	In compliance with Construction Regulation 26,and General Safety Regulation(8)(1)(a), a competent person with specific knowledge and experience designated to supervisor all stacking and storage operations, ensure that stacking is stable and on a firm level base, to prevent leaning and collapsing, to ensure that all irregular shapes are bonded, items are not stacked higher than 3x the smaller dimension of the base of the stack, and when items are removed from the top tier of the stack first. Ensure that adequate storage area is available, that the storage facilities are functional, demarcated, with bins and shelves if necessary. Special areas are designated/demarcated for HCS. flammables, Cement etc. The storage area is to be kept neat, safe and clear of superfluous materials. Any storage behind sheds is kept neat and under control, all storage areas are kept tidy.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
37	Electrical Installation and machinery	Electrocution, electrical burns, electrical fires, damage to property. Electrical shock resulting in affiliation. Smoke from fires.	Electrocution, electrical burns, electrical fires, damage to property. Electrical shock resulting in affiliation. Smoke from fires resulting in environmental impact	M	1	All electrical tools, electrical distribution boards, extension lead ,and plugs are always kept in safe working order. Electrical connections and installation shall only be done by an accredited electrician with a wireman's license; a competent person will issue a certificate of compliance after the installation of any temporary electrical installation. A competent person will be appointed in writing to inspect and report on the condition of the temporary electrical installation on site. The temporary electrical installation will be inspected once a week and record of inspection kept in a register. The appointed person will be responsible for reporting on safety of the electrical installation	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
38	Electrical & Mechanical Lockout	Electrocution. Moving mechanical components. Fumes	Electrocution. Moving mechanical components resulting in amputation of extremities, crushing ,abrasion, laceration and puncture wounds. Lack and Lack out causing Eye contact, Skin contact, Inhalation, Indigestion. Fumes resulting in affixation, and various health defects. Lack and Lock out resulting in environmental impact due to spillages of hazardous substances to ground(soil), water. Air pollution through excessive fumes, vapours. Incorrect disposal resulting in pollution.	M	1	Control system shall be implemented to prevent unauthorised person from energizing circuits, or activating machinery during maintained , even when machinery is out of commission as an extra precaution. Lock-outs will be tagged and tested before commencing with maintenance work. Electrical components such as distribution boards will be suitable door fitted and locked, preventing unauthorised access.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
39	General machinery	Bumping, squashing, hit or run over by Earth Moving Machine. Machine operator not certified. Exposure to hazardous substances. Spillages of hazardous substances.	Bumping, Squashing, Hit or run over by machinery. Machine Operator not certified, resulting in injury to person and damage to property or equipment. Exposure to hazardous substances; excessive smoke, lubricants , oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground(soil),water .Air pollution through excessive exhaust smoke.	M	1	Inspect machinery regularly, appointed a competent person to inspect and ensure maintenance. Using of PPE or clothing, and training those who use machinery	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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40	Cranes and lifting devices	Bumping, Squashing. Hit or knocked over by load. Lifting Machine Operator not certified. Overhead loads, Overloading. Exposure to HCS	Bumping, Squashing. Hit or knocked over by load. Lifting Machine operator not certified, resulting in injury to persons and damage to property or equipment. Exposure to hazardous substances, lubricants oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground(soil) ,water.	M	1 *All lifting machinery and tackle has a safe working load clearly indicated. *Regular inspection and servicing is carried out. *Records are to be kept of inspections and services certificate. *There is proper supervision in terms of guiding the loads that includes a trained banks man to direct lifting operations and check the lifting tackle. *A record of such inspection kept on the site H&S file. *The operators are competent as well as physically and psychologically fit to work and in possession of a medical certificate of fitness, which shall be available on site. *Equipment's such as slings, ropes ,chains an pipe lifting clamps shall be in good condition, with no excessive wear and corrosion being evident. A designated competent person shall examine such equipment on a weekly basis. *The lifting device shall be fitted with an arresting device, which locks the drums in the event of an engine failure. *Hooks shall be fitted with a locking device to prevent the rope/sling/chain from being able to slip off the hook.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
41	Hazardous Biological Agents	Slip, Trip and fall due to surface conditions. Sewerage and waste water, spillages of hazardous biological agent	Slip, Trip and fall due to surface conditions resulting in injuries. Sewerage and wastewater contains bacteria, funguses, parasites and viruses that can cause intestinal ,lung and other infections during any part of treatment, transport or application of sewerage sludge, staff can be exposed to materials that can cause diseases. Localised environmental impact due to spillages od hazardous biological agent to ground(soil),water.	M	2 All employees working within close proximity to HBS's shall undergo Entry, Annual and Exit-medical. Exposure limiting PPE such as waders and a one piece full body PVC suits. Breathing apparatus and head protection must be worn when working with HBA.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
42	Storage of hazardous substances or chemicals Working with hazardous substances or chemicals Disposing of hazardous substances or chemical containers	Spillage - Not well ventilated - Possible fire/explosion - Not stored separately - Not using the required PPE - Containers Not identified - Fumes - Not aware what to in an emergency situation - Poor communication - Not suing correct waste bins - Not using an accredited waste - removal company	Damage to property Injuries to person/s	M	2 Any spillages to be cleaned up with adequate spill kits - Storage facility to be well ventilated - Ensure adequate storage space - The required fire prevention equipment to be at hand - Use the required PPE when handling chemical of hazardous substances (Protective rubber respirator, safety, glasses or face shield, safety boots, hard hat.) - All container to be clearly marked of contents - Employees handling hazardous chemical to understand what to do in an emergency situation as per MSDS - Use required signage at storage areas - Use substances in well ventilated areas - Ensure good communication between workers handling chemicals or substances - Use the correct waste bin for chemicals - Use an accredited waste removal company to remove any hazardous chemical or substances.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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43	Waste generated through Construction activities	Untidy work area, Tripping hazards, Incorrect disposal practices	Untidy work area. Tripping hazards could cause injuries. Unhygienic work area in risk to exposure of hazardous biological and chemical substances causing infections. Untidy work area could result in aesthetical negative impact to environment. Incorrect waste disposal practices could result in environmental impact in the form of pollution.	M	3	<p>Domestic waste. This is waste that will be generated within the came and on site .Waste receptacles (most likely 200 litter drums or something similar)will be provided within the camp and on site in order for waste to be adequately disposed of. These receptacles must be impermeable and should have a lid attached in order to ensure that waste cannot be blown out by the wind. Provisions will be made to ensure that these receptacles must be emptied in a Domestic waste skip which will be serviced by 3rd party service provider.</p> <p>Hazardous waste Hazardous waste generated on site includes hydro carbons and chemicals, this particular waste must be appropriately disposed off. This storage area will either be a bunded area or a hazardous waste skip. Hazardous storage on site will not exceed the legislated time frames for such and transportation of such waste shall also fall within legislation. A specialised company will be contacted to dispose of the stored hazardous waste on site. Portable toilets will be made use of the servitude, these are to be regularly maintained by the service provider and proof of disposals shall be provided.</p> <p>Construction waste This is waste that will be generated within the construction site. Waste receptacles(most like 200 litter drum or something similar)will be provide within the camp and on site in order for waste to be adequately disposed of.</p>	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
46	Laying Paving-80mm/ Kerbs-fig 8b & 8c	Untidy work area. Tripping hazards, incorrect stacking and storage. Incorrect lifting techniques. Not wearing PPE	Stains/ pains due to uncomfortable working conditions. Untidy work area. Tripping hazards could cause injury. Prolonged uncomfortable working conditions could result in acute muscle and joint strains effecting employees nerve functions within muscles. Untidy work area could result in aesthetical negative impact to environment. Fingers get stuck between kerbs/ paving. Incorrect lifting of kerbs cause back injuries.	M	2	Wearing gloves when handling paving blocks/ kerbs and place it with caution to prevent your fingers from pinching between the block or the block and the ground. Make use of assistance when lifting the blocks. Keep your back straight and use the power in your legs to lift the paving blocks. Remove your hands when placing the paving blocks/kerbs. If the paving blocks/ kerbs are moved around by TLB ensure that the bucket is placed on the ground surface in case of the bucket lowering due to error. Keep clear of moving machinery at all times! Communicate with the operator when you have to remove the paving block/ kerb from the bucket of the TLB and only do so if the TLB is statuary. If paving blocks/kerbs are moved around with a wheel barrow ensure that the wheel barrow is not overloaded. Ensure that al paving blocks/kerbs are stacked accordingly: Stacking and Storage. If the paving /kerb are to be cut ensure that the equipment to cut with is in good working order and that all machine guarding is in place. Inspect equipment before use.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
47	Surveying - Road setting out	Incompetent surveyor. Bench marks not obtain. Surveyor poles not properly marked	Imcompetent surveyor can lead to work to be re-done. Poles can be stolen by community.	L	3	Appointment of a competent surveyor. Inform the community about the importance of the surveyor poles. Proper marking & identifying of surveyor poles.	Surveyor, CLO & Safety officer.

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48	Construction Vehicles, mobile plant and Equipment *Use inspection of all plant & Equipment	Construction vehicles, mobile plant and equipment not inspected before use	Equipment not inspected could result in the use of faulty equipment resulting in injuries and/or property damage. Equipment not inspected could result in the use of faulty equipment resulting in illness and occupational diseases through the exposure to hazardous substances such as oil and smoke. Equipment not inspected could result in the faulty equipment resulting fluid leaks and excessive smoke resulting in impact on the localised environment.	H	1	Enforce pre-use inspections against critical item check list. Faulty equipment to be repaired or replaced. Implementation of Preventative maintenance program. Spills kits to be provided.	Safety Officer ensure Employees to adhere prior to commencement of work
49	Construction vehicles, mobile plant and Equipment competent trained and finically fit operators	Construction vehicles, mobile plant and equipment operated by competent operators, or by any employee	Operators incompetent to operate equipment safety resulting in hazards and danger in working area could cause injuries and property damage. Operators incomplete to operate equipment safely in hazard and dangers to employees, sub-contractors and visitors health. Operators incompetent to operate equipment safely resulting in hazards and dangers in working area could cause impact to environment.	H	1	Enforce the use of trained competent operators only. Medical Fitness of all plant operators. Only appointed operators to operate construction vehicles, mobile plant and equipment	Safety Officer ensure Employees to adhere prior to commencement of work
50	Driving with vehicles on site (Grader, 10m3 Tipper Truck, Roller, Water tanker & Excavator)	Incorrect operation if vehicle. Exposure to hazardous substances excessive exhaust smoke, lubricant oils and fuel spillages of hazardous substances to ground (soil),water. Air pollution.	Incorrect operation of vehicle could result in accident. Damage to equipment, Injury to employees, sub-contractors or visitor. Exposure to hazardous substances, excessive exhaust smoke, lubricant, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (Soil),water. Air pollution through excessive exhaust smoke.	H	1	Drivers of vehicles to always wear their safety belts. Switch on the lights of the vehicle to enhance visibility or make use of amber flash lights. Always give right way to construction vehicles. Yield for pedestrians. Obey all road traffic signs at all times. Obey to the speed limit on site. The speed limit 15km/h. Always park your vehicle in a designated area where it will not disrupt construction or cause traffic flow problem. Never leave your vehicle running unattended and always remove your keys from your ignition switch. Use your handbrake when your vehicle is parked	Safety Officer Supervisor to ensure employees to adhere during activity
51	Placing of stormwater pipes	Uncontrolled swing of concrete pipe. Lifting equipment defective. Pinch points. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel spillages of hazardous substances to ground (soil),water. Air pollution	Uncontrolled swing of concrete pipe. Lifting equipment defective pinch points resulting in persons sustaining injury such as abrasions, lacerations. Exposure to hazardous substances; excessive exhaust smoke, lubricants, oils and fuel through inhalation, digestion or skin contact may result in health defects. Localised environmental impact due to spillages of hazardous substances to ground (soil), water pollution through excessive exhaust smoke.	M	3	Barricading, DSTI, training , awareness through safety talks, daily checking of tools and equipment. Guide ropes to be used when lifting and lowering pipes. All lifting equipment to be inspected before use. No employees to be in the area where the pipes are to be lifted or lowered. Employees to be aware of pinch points when the pipe are being connected (Do not place your hand between the pipes)	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
52	Brickwork - Building of community hall, guardhouse	Faulty hand tools; poor standard of scaffolding or trestles, unstable stacking of bricks, not using protective equipment, poor housekeeping,	Bruises to legs and feet; damage to bricks; loss of production.	M	2	Wearing of personal protective equipment at all time. Housekeeping need to be done on a daily basis. Scaffolding need to be erected according the SANS code. Proper stacking and storage principles must be implemented. Hand tools to be inspected before use.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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53	Plastering	Faulty hand tools; poor standard of scaffolding or trestles, not using protective equipment, poor housekeeping,	Trp and falling because of poor housekeeping. Unsafe scaffold can collapse cause injuries to the body. Incorrect or no use of personal protective equipment can cause injuries.	M	2	Wearing of personal protective equipment at all time. Housekeeping need to be done on a daily basis. Scaffolding need to be erected according the SANS code. Proper stacking and storage principles must be implemented. Hand tools to be inspected before use.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
54	Plumbing	Water being wasted due to supply that has not been cut off. Defective hand tools.	Water spilling all over the floor causing waste to water and delays due to drying the floor and floor can be slippery resulting in employees falling in the floor. Hand injuries due to defective hand tools.	M	2	Pre inspection to be done on a daily base. No mushroom heads or homemade tools allowed on site. Substandard hand tools need to be reported and remove from site. Ensure that you have proper sizes of tools to work with in order to make the job much easier with less force used.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
55	Installing Tiles	Sharp edges and flying tile particles. Incompetent operator. Defective equipment. Incorrect cutting disc. Noise/ dust	Reportable/ disability injury. Laceration to skin and damage to employee eyes	M	1	Pre used inspection on cutting machine/ angle grinder. Report defected hand tools. Wearing of safety gloves, glasses, ear protection and dust mask. Ensure that Safe work procedure is brief to operator of angle grinder. Use the right type of disc for tile cutting. Only competent operators to use angle grinder. Area clear of flammable material	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
56	Hand Painting	Incorrect handling contact with other materials that it is not compatible with. Painter's exposure to material. Lack of knowledge of first aid/ medical treatment.	Health issues to hands, eyes, lungs, damage to property.	M	1	Employees must be trained in the use of the material data sheets. Supervisor to make sure that this information is available.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
57	Landscaping	Method of pesticide application Weather conditions e,g, high winds. Setting up / dismantling equipment. Incorrectly assembled or defective equipment. Repetitive manual work. Contact with underground services.	Chemical related illness. Environmental damage. Reportable/ disability injury.	M	1	Trained / Certificated staff in accordance with Pesticide. Safe Work Procedures. Low toxicity approved chemicals Appropriate protective clothing & equipment. Spraying log. Staff training/awareness in correct manual handling methods and correct assembly of equipment. Well maintained tools & equipment. Horticultural knowledge.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
58	Installation of HV Cable	Wrongly connecting wires Poor quality parts/equipment Incorrect installation of wires Lack of knowledge	Burn wounds, Fatality, property damage. Fire, Explosion, Electrical shock	M	3	Competent personnel. System testing procedure Purchasing standard Supervision	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
59	Live work	Lack of knowledge. Exposed wires/ conductors. No barricade/ Isolation. No permit. Incompetence employees. Not paying attention to the work at hand	Burn wounds, Fatality, property damage. Fire, Explosion, Electrical shock	M	3	Supervision, Planned Task Observations, PTW, competent contractor and PPE. Toolbox talks, Barricade. Permit to work and competent staff.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

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60	Operating of an angle grinder	Electrical shock Not using the required PPE for the task Untrained/ incompetent person using grinder. Using grinder that is faulty or sub standard No guarding	Damage to Property Injuries to persons	M	3	Equipment to be checked and approved by electrician. Use the correct type of PPE that is required for the task in hand. Ensure that all employees are trained and certified competent. Use correct type of disc for the item that is being grind/ cut Inspect for any possible cracks or damage on the disc Ensure that the necessary guarding is attached to the grinder.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
61	Steel fixing and shuttering of civil work	Faulty hand tools Pinch points Tripping/ Slipping hazards Dropping objects Incompetent works Unsafe manual handlin of material Sharp edges on re-enforcing bars Carry heavy Items	Injuries to person/s Damage to property Back injuries	M	2	Ensure proper handling of material Ensure good housekeeping Ensure that the workers is trained and certified competent Good and proper stacking of shutters Be aware of possible sharp edges on re-enforcing bars - wearing of gloves.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity
62	Working close to or inside raw sewerage	Contamination.- Sustained diseases due to direct contact.- Inhalation of fumes.- Drowning.- Not using the correct type of PPE.- Spills- Not familiarized with hazards- No medical examinations conducted- Not immunization conducted- Incorrect disposal of waste	Ringworm,which is a skin infection, and thrush, which infects the skin and mucous membranes. Viral diseases include hepatitis, mumps, German measles and rabies, tuberculosis, tetanus boils or blood poisoning	M	2	Safe disposal of waste. Personal protective equipment. Immunization programs Adequate hygiene facilities. Personal hygiene. All contaminated equipment or material should be contained, labelled and isolated. Spills should be cleaned up immediately. No one should eat, drink or smoke in a potentially hazardous work area. Showers, lockers and laundry facilities should be used to prevent hazards from leaving the workplace. Certified members who work where biological agents are present will need to familiarize themselves with the specific hazards involved and the means of monitoring them. Bio-hazardous materials, including waste to be labelled, handled and disposed of in a manner that avoids contamination of the handler or the environment Life jackets to be used when working close to sewerage dams and channels. All employees shall be vaccinated and undergo a medical examinations.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

PROJECT BASELINE RISK ASSESSMENT

FOR UM CONSULTANTS – 03/09/2022

31 Holly Street
Van Dyk Park
Boksburg
1460

NO	Construction Activity Construction activities identified to be undertaken	Potential Safety, Health & Environmental Hazards Identify the hazards(health and safety or environmental)associated with Construction Activity.	Potential Safety, Health & Environmental Risk/Impacts, Examine each hazard identified to find all possible risk factors	Risk Rating Of the risk you have identified on the left	Recommended Corrective Action or Procedure Determine what action are necessary to eliminate or minimize all hazards that could lead to an accident, injury, illness or environmental incident. The risk must be reduced controlled to a level that is acceptable before work commences.	Responsible Person to perform the action
63	Prepare for Blasting Connect the detonator to the blast lead-in-line Fire the Blast Inspect blasted materialfor Misfires	Blasting Fly-rock Dust / poisonous gas Uneven ground / loose rocks Explosives Blasting cable / detonator Radio Miss communication Serious injury/ fatality Damage to property	Incorrect procedure connecting lead-in-line to of ignition.Not adhering to radio silence could lead to wrongful initiation of blast. Misfires found after the blast. Not adhering SLIP/ SLAM Not waiting for dust/ gas to settle. Incorrect connection of detonator to lead-lead-line Detonator and blasting cable not tested. Insufficient radio communication. Impacting/ heat/ friction on detonators/ shock tubes connection to the lead-in-line.	H 2	Only the blaster may connect the lead in line to the point of ignition. Only the blaster may connect the detonator to the lead in line. The blaster must test the blasting cable and detonator according to Regulations before connecting it to the blast. No person or plant allowed on the bench when connecting the lead in line to the POI. The blaster must report via radio when the detonator has been connected. The blasting supervisor must announce RADIO-SILENCE FOR BLASTING period. Blaster to give instruction for reoad closure and activation of Vibro recorders. No radio within 15m while connecting the detonator. The blaster must announce the blast about to take place and proceed with a 10 second countdown. Only the blaster can enter the danger zone after firing the blast when the dust/ gass has settle. The blaster must do a thorough inspection for miss-fires and smoldering explosives.	Safety Officer/ Supervisor/ Blaster to ensure. Employees to adhere during activity
64	Hygiene on site	Drinking of contaminated water - facilities Not clean and tidy - waste bins overflowing - Toilets Not clean and tidy - contaminated PPE - Not washing of hand before eating	Injuries to person/s Illnesses Infections Diseases	M 2	Ensure all eating facilities, kitchen facilities and ablution facilities is clean, neat and tidy at all times. Ensure no domestic waste bins overflows. Empty on regular intervals. Wash full body/shower at end of shift- Put on clean set of work clothes, before every shift. Immediately remove work clothes, if it became soiled with any chemicals, but particularly if it became soiled with oil. Gloves that become soiled with oil/grease must not be worn, discard of gloves. Before lunch, wash hands, fore-arms and face. Use a barrier cream before working with specific chemicals. Do not eat or drink on the workplace, use eating facilities. Don't smoke in the workplace. Don't store food in the workplace. Keep your work areas clean and tidy at all times. After using toilets wash hands. Use toilet paper in toilets and not newspaper or any other times. Ensure to drink clean water and not contaminated water. Take note of warning and information signs on site. In case of chemical toilets, ensure regular cleaning of waste products. Ensure regular inspections of all facilities and record deviations.	Safety Officer/ Supervisor to ensure. Employees to adhere during activity

FREQUENCY/ PROBABILITY	SEVERITY SCALE	MATRIX SEVERITY/FREQUENCY/ PROBABILITY																		
1. Frequent Occurrence/ Monthly (High) 2. It has happened/ 6 Monthly (Medium) 3. Could occur/ Yearly (Low)	H - Reportable/ Facility/ 1 Million damage M - Disabling Injury/ 0.5 Million Damage L - Non Disabling Injury/ < 1000 Thousand Damage	<table> <tr> <td>H</td><td>H</td><td>H</td></tr> <tr> <td>1</td><td>2</td><td>3</td></tr> <tr> <td>M</td><td>M</td><td>M</td></tr> <tr> <td>1</td><td>2</td><td>3</td></tr> <tr> <td>L</td><td>L</td><td>L</td></tr> <tr> <td>1</td><td>2</td><td>3</td></tr> </table>	H	H	H	1	2	3	M	M	M	1	2	3	L	L	L	1	2	3
H	H	H																		
1	2	3																		
M	M	M																		
1	2	3																		
L	L	L																		
1	2	3																		

ADDENDUM C

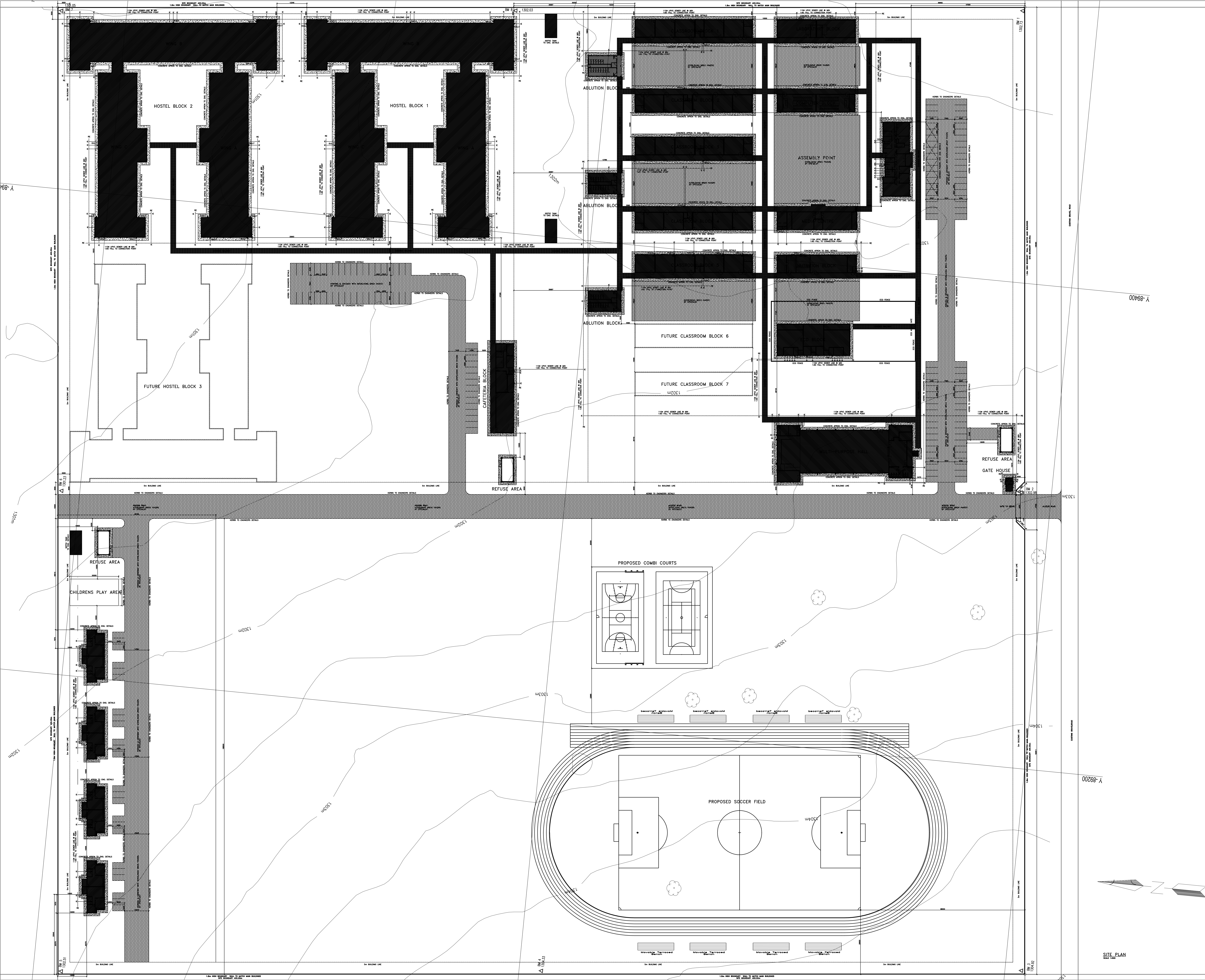
Environmental Management Plan

TO BE PROVIDED BY THE SUCCESSFUL TENDERER


ADDENDUM I

Drawings

See attached



job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	001	0



UM CONSULTANTS
MULTI DISCIPLINARY CONSULTANTS

UNIT 20, OAKLAND, Office Park
CNR TRICHARDS & CRIPPEN
ROAD
BARTLETT X91, BOKSBURG Tel : 011 894 7615
Cell : 073 232 9350
PO BOX 717, BOKSBURG Fax : 086 733 6604
1460 Email : ulunji@umarecitects.co.za

GENERAL NOTES

- THIS DRAWING IS NOT TO BE SCALED, USE FIGURED DIMENSIONS ONLY.
- ALL LEVELS & DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK COMMENCES.
- THE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR DIMENSIONAL ERRORS IF NOT NOTIFIED AT THE TIME OF COMMENCING WORK ON SITE.
- BUILDER TO CO-ORDINATE ALL DIMENSIONS, LEVELS, E.I.D., LINES & D. RESTRICTION LINES.
- FINISHES & SPECIFICATIONS TO BE CHECKED AND CO-ORDINATED BY BUILDER BEFORE ORDERING OR PUTTING ANY WORK TO HAND.
- ALL SETTING OUT TO BE BUILDERS ENTIRE RESPONSIBILITY.
- ALL SERVICES TO BE CO-ORDINATED BY THE BUILDER BEFORE COMMENCING ANY WORK.
- ALL WORK TO BE IN ACCORDANCE TO THE NATIONAL BUILDING REGULATIONS & TO THE ENTIRE SATISFACTION OF ALL LOCAL AUTHORITIES.

SECTION NOTES

- WATERPROOFING TO SPEC. DETAIL.
- D.P.C. TO WINDOWS AND CILLS.
- CONC. LINTELS OVER ALL WINDOWS.
- OBSCURE GLASS TO ALL BATHROOMS.

DRAINAGE NOTES


- I.E.'s TO ALL BENDS AND JUNCTIONS IN DRAIN WITH MARKED COVERS AT GROUND LEVEL.
- RE-SEAL TRAPS TO ALL WASTE FITTINGS.
- W.P.'s TO BE FULLY ACCESSIBLE ALONG ENTIRE LENGTH.
- WHERE W.P.'s PASS IN OR BELOW FLOOR SLAB THEY ARE TO BE SLEEVED WITH C.E.'s AT BOTH ENDS IN EASILY ACCESSIBLE POSITIONS.
- WHEN SOIL PIPE DROP EXCEEDS 1.22m ADEQUATE ANTI-SIPHONAGE TO BE PROVIDED.
- 38 WASTE PIPE TO BASIN / BATH.
- 50 WASTE PIPE TO SINK, W.M. AND SHOWER.
- BEGINNING OF DRAIN RUN TO HAVE INVERT LEVEL OF 450mm BELOW FGL MINIMUM.

SCHEDULE OF AREAS.

revisions	by	date	no

THIS DRAWING IS COPYRIGHT

job **CONSTRUCTION OF JOHN TAOLE GAETSEWE NEW SCHOOL AND HOSTELS**

client 
INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

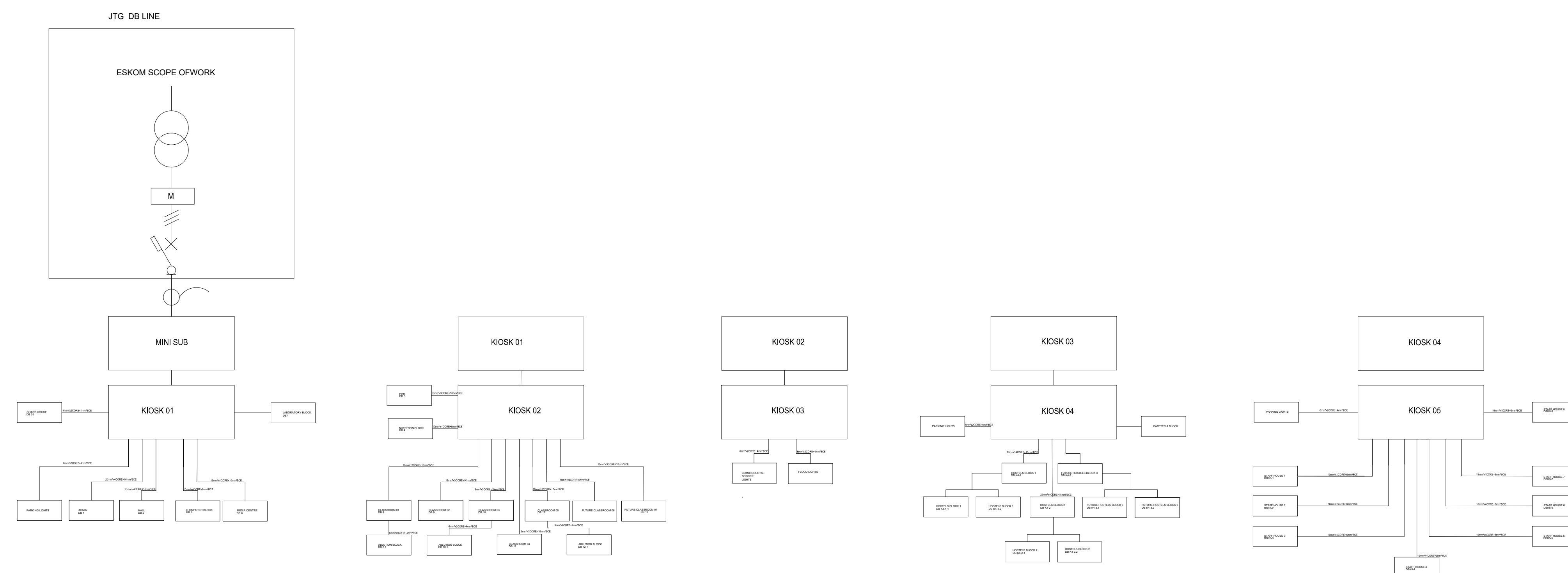
site **PORTION 0 OF FARM MOTIITON 509 HM - DITHAKONG VILLAGE JMM KURUMAN**

drawing **SITE PLAN**

scale	date started	designed by	drawn by
A/S	04/03/2016	UM	AJ

dwg.no	consult	dwg.stage	location	sheet.no	rev
ARC	CON	RES	001	0	

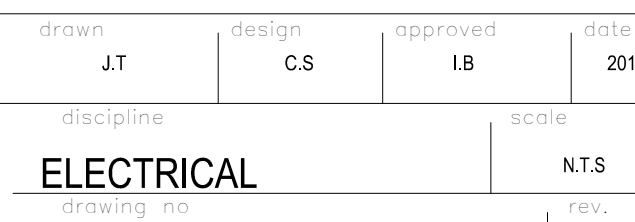
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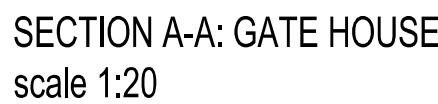
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4. ALL ELECTRICAL DB'S SHALL BE RECESSED WALL MOUNT UNLESS OTHERWISE INDICATED ☐ INSTRUCT ELECTRICAL ENGINEERS.

[illegible]

KIOSK 344 DB SCHEMATIC LAYOUT





MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM- BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
Beam A	1	15 91	Y12 R10	6000 1000	15 91	A SA	20 73	(6000) 300	100	200		
Beam B	1	8 62	Y12 R10	6000 1000	8 62	B SB	20 60	(6000) 300	100			
	8	10	12	16	20	25	32	40	TOT			
R Y		95	123						95			
TOT		95	123						123			
									218			

NOTES:

1. BUILDING ACCURACY:
 - 1.1 ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
 - 1.2. DIMENSIONS TO BE CONFIRMED ON SITE.
 - 1.3. STRUCTURAL PLANS MUST BE READ IN CONJUNCTION WITH ARCHITECT'S PLANS.
 - 1.4. PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPANCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT

CRETE:

- 2.1. 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER;
- 2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER;
- 2.3. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR;
- 2.4. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED;
- 2.5. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- 3.1 STEEL MIN 350W;
3.2. 6mm FILLET WELDS MIN REQUIREMENT.
3.3. 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- 4.1. STRUCTURE DESIGN (0160):
- a. Structure self weight
 - b. Imposed loads
- 1.5kN/m²

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS

- 10162.
- 4.3. MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE I-H OR SABS 10162 TABLE D1.
- 4.4. REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
- 4.5. SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
- 4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.
- 4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
- 4.8. UNREINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SABS 10164-2.
- 4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:
ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:

- SABS 0155: Accuracy in buildings
 - SABS 0145 Concrete Masonry construction
 - SABS 0249 Masonry walling
 - SABS 1215 Concrete masonry units
 - SABS 227 Burt clay masonry units
 - SABS 1050 Aggregates from natural sources.
 - SABS 0243 The manufacture and erection of timber trusses.
-
- SANS 1200 A 1986 Section A: General
 - SANS 1200 AA 1986 Section AA: General (small works)
 - SANS 1200 AB 1986 Section AB: Engineer's office
 - SANS 1200 AD 1986 Section AD: General (small dams)
 - SANS 1200 AH 1986 Section AH: General (structural)
 - SANS 1200 C 1980 Section C: Site clearance
 - SANS 1200 D 1986 Section D: Earthworks

- SANS 1200 DA 1988 Section DA: Earthworks (small works)
- SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)
- SANS 1200 DK 1996 Section DK: Gables and pitching
- SANS 1200 DM 1981 Section DM: Earthworks (roads, subgrade)
- SANS 1200 DN 1982 Section DN: Earthworks (railway sidings)
- SANS 1200 GC 1982 Section G: Concrete (structural)
- SANS 1200 GA 1984 Section GA: Concrete (small works)
- SANS 1200 GB 1984 Section GB: Concrete (ordinary buildings)
- SANS 1200 GE 1984 Section GE: Precast concrete (structural)
- SANS 1200 GF 1984 Section GF: Prestressed concrete
- SANS 1200 GR 1989 Section GR: Structural steelwork
- SANS 1200 HA 1996 Section HA: Structural steelwork (sundry items)
- SANS 1200 HB 1985 Section HB: Cladding and sheeting
- SANS 1200 HC 1988 Section HC: Corrosion protection of structural steelwork
- SANS 1200 HE 1983 Section HE: Structural aluminiumwork
- SANS 1200 1983 Section L: Medium-pressure pipe lines
- SANS 1200 LB 1983 Section LB: Bedding (pipes)

- SANS 1200 LC 1981 Section LC: Cable ducts
- SANS 1200 LD 1982 Section LD: Sewers
- SANS 1200 LE 1982 Section LE: Stormwater drainage
- SANS 1200 LF 1983 Section LF: Erf connections (water)
- SANS 1200 M 1996 Section M: Roads (general)
- SANS 1200 ME 1981 Section ME: Subbase
- SANS 1200 MF 1981 Section MF: Base
- SANS 1200 MFL 1996 Section MFL: Base (light pavement structures)
- SANS 1200 MG 1996 Section MG: Bituminous surface treatment
- SANS 1200 MH 1996 Section MH: Asphalt: base and surfacing
- SANS 1200 MJ 1994 Section MJ: Segmental paving
- SANS 1200 MK 1983 Section MK: Kerbing and channelling
- SANS 1200 MM 1984 Section MM: Ancillary roadworks

CLIENT INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT
OF EDUCATION NORTHERN CAPE

PROJECT	CONSTRUCTION OF JOHN TAOLO GAETSEWE SCHOOL & HOSTEL
---------	---

DRAWING LAYOUT & DETAILS-GATE HOUSE FOUNDATIONS

PLANT CHARACTERISTICS

P.O. Box 1504
Klerksdorp
2570



DWP
CIVIL & STRUCTURAL ENGINEERS

Tel: (018) 462-6651
Fax: (018) 462-7910

DESIGN	M. Kromholz
--------	-------------

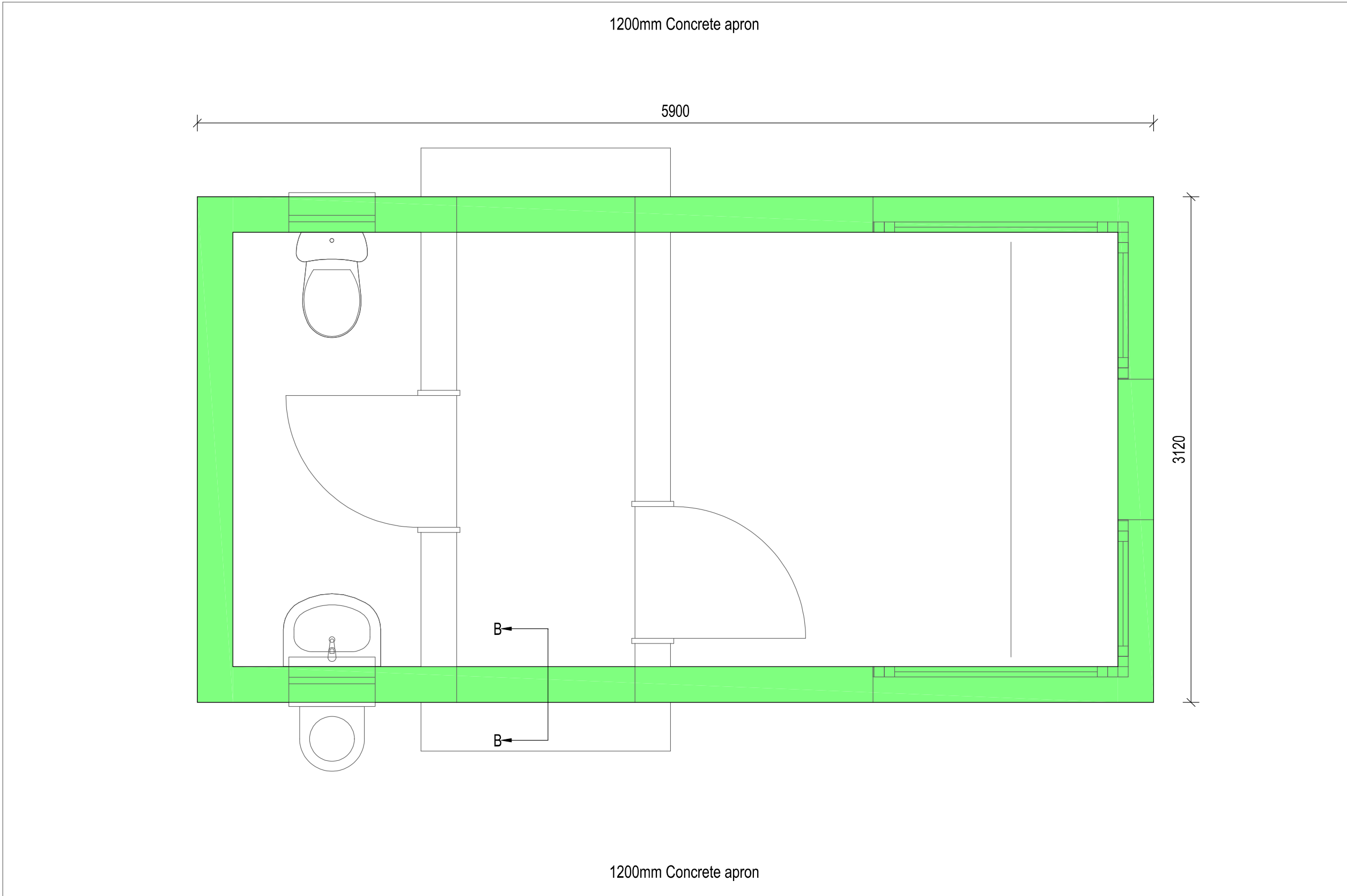
DRAWN BY	S. Laynes
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CHECKED & APPROVED

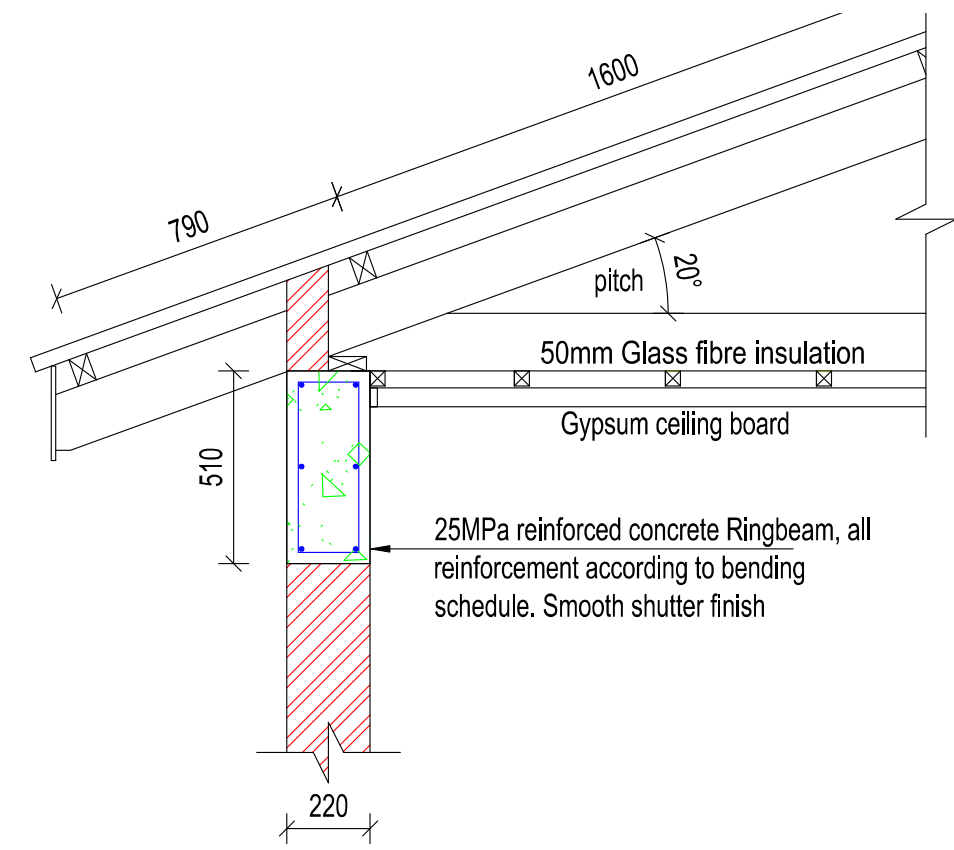
DATE	DRW NO
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23/09/2016

SCALE
as shown



LAYOUT: GATE HOUSE RINGBEAM
scale 1:25



SECTION B-B: TYPICAL RINGBEAM SECTION
scale 1:20

MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
Ring Beam	1	6	Y12	6000	6	A	20	6000	160			
		6	Y12	6000	6	B	20	6000				
		6	Y12	6000	6	C	20	6000				
		50	R8	1350	50	SA	60	410				

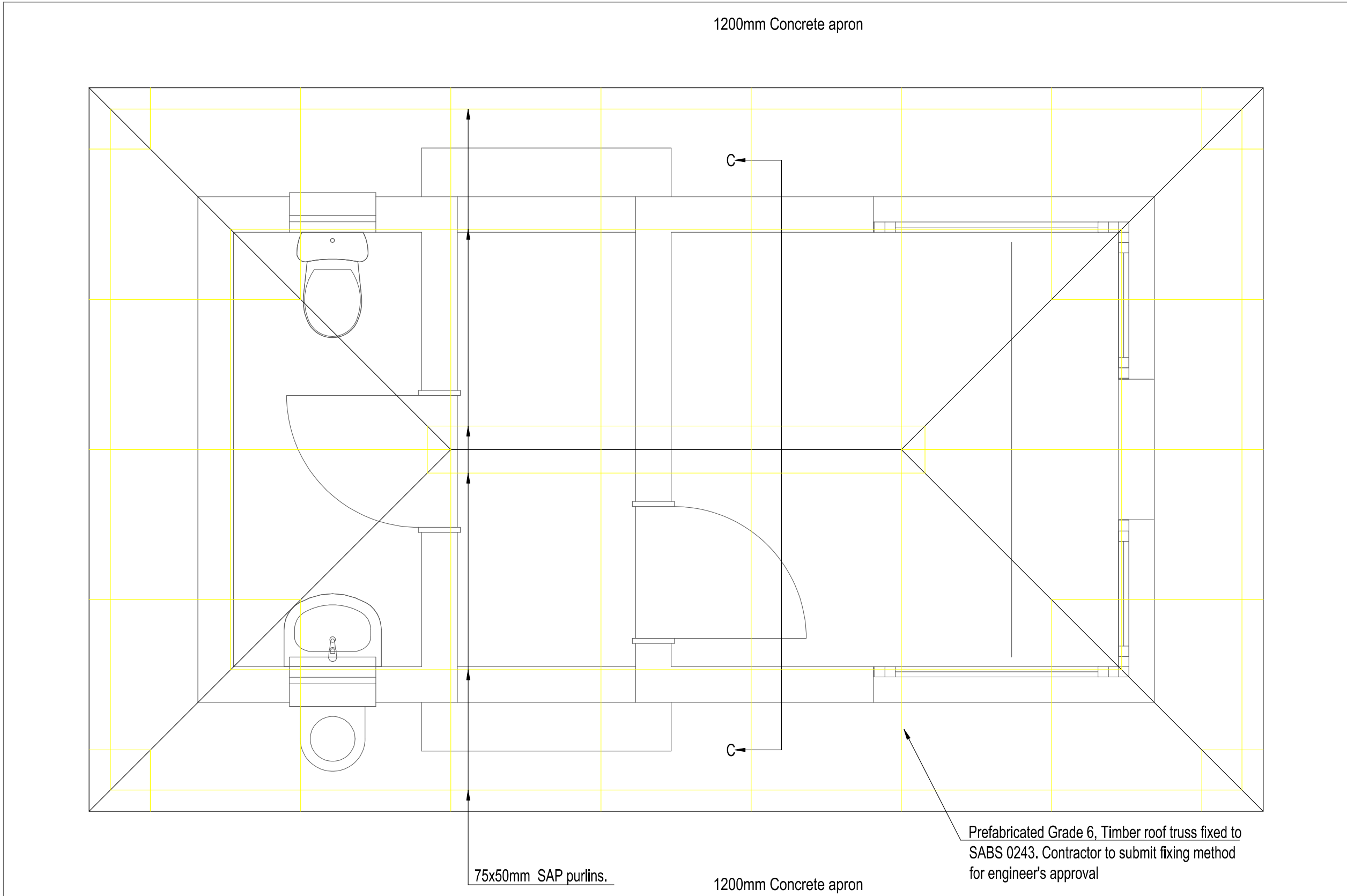
Mip 220mm

510

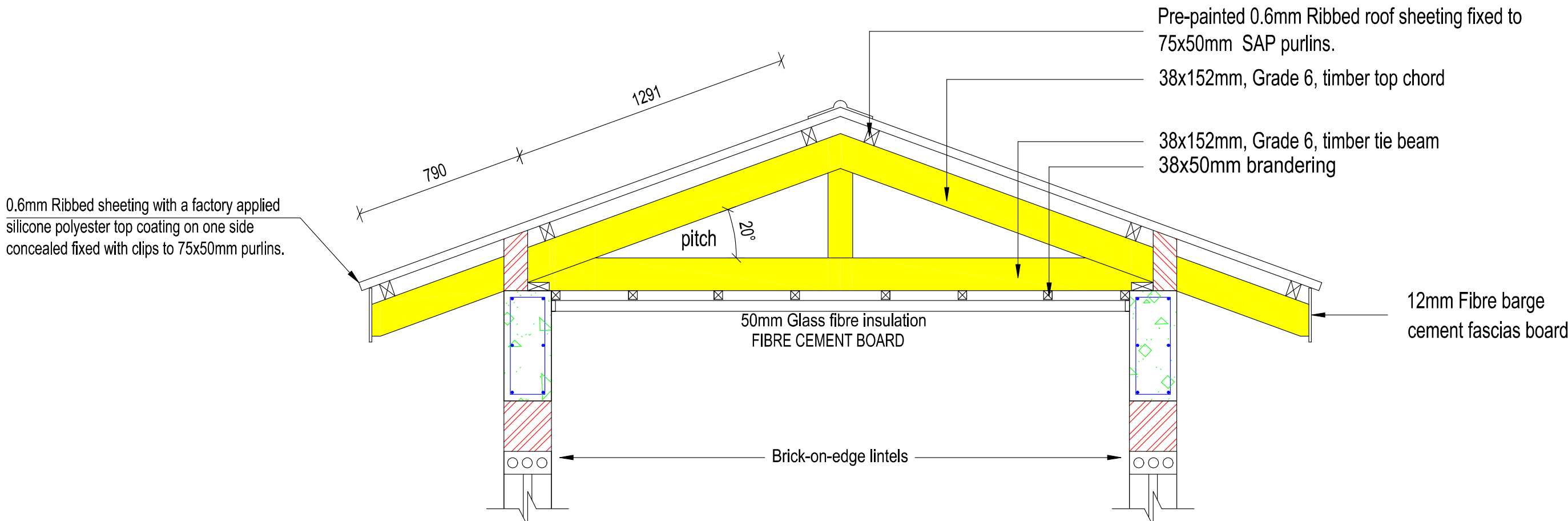
SECTION BEAM A

	8	10	12	16	20	25	32	40	TOT
R	27								27
Y			96						96
TOT	27		96						123

Concrete cover:
Bottom to stirup 30mm
Top to stirup 30mm
Sides 30mm



LAYOUT: GATE HOUSE ROOF
scale 1:25



TYPICAL SECTION C-C: GATE HOUSE ROOF TRUSS
scale 1:20

NOTES:

- BUILDING ACCURACY:
 - ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
 - DIMENSIONS TO BE CONFIRMED ON SITE.
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 - PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPENCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT

- CONCRETE:
 - 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
 - CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.
 - NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
 - MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED;
 - ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- STEEL MIN 350W:
 - 6mm FILLET WELDS MIN REQUIREMENT.
 - 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
- CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
 - Structure self weight
 - Imposed loads

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162:

- MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE L1 OR SANS 10162 TABLE D1.
- REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
- SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.

4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2:

4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1:

4.8. REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2:

4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:

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- SABS 1215: Concrete masonry units
- SABS 227: Burnt clay masonry units
- SABS 1050: Aggregates from natural sources
- SABS 0243: The manufacture and erection of timber trusses.

- SANS 1200 A 1986 Section A: General
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- SANS 1200 D 1988 Section D: Earthworks

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- SANS 1200 LF 1983 Section LF: Eri connections (water)
- SANS 1200 M 1996 Section M: Roads (general)
- SANS 1200 ME 1981 Section ME: Subbase
- SANS 1200 MF 1981 Section MF: Base
- SANS 1200 MFL 1986 Section MFL: Base (right pavement structures)
- SANS 1200 MG 1996 Section MG: Bituminous surface treatment
- SANS 1200 MH 1986 Section MH: Asphalt base and surfacing
- SANS 1200 MJ 1984 Section MJ: Segmented paving
- SANS 1200 MK 1983 Section MK: Kerbing and channelling
- SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT

INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT

CONSTRUCTION OF JOHN TAOLLO GAETSEWE SCHOOL & HOSTEL

DRAWING

GATE HOUSE: RINGBEAM & ROOF LAYOUT AND DETAILS

Amendments



P.O. Box 1504
Klerksdorp
2570
Tel: (018) 462-6651
Fax: (018) 462-7910
E-mail: office@dwpcoos.co.za

DESIGN

M. Kromhout

DRAWN BY

S. Laynes

CHECKED & APPROVED

DATE

15/09/2016

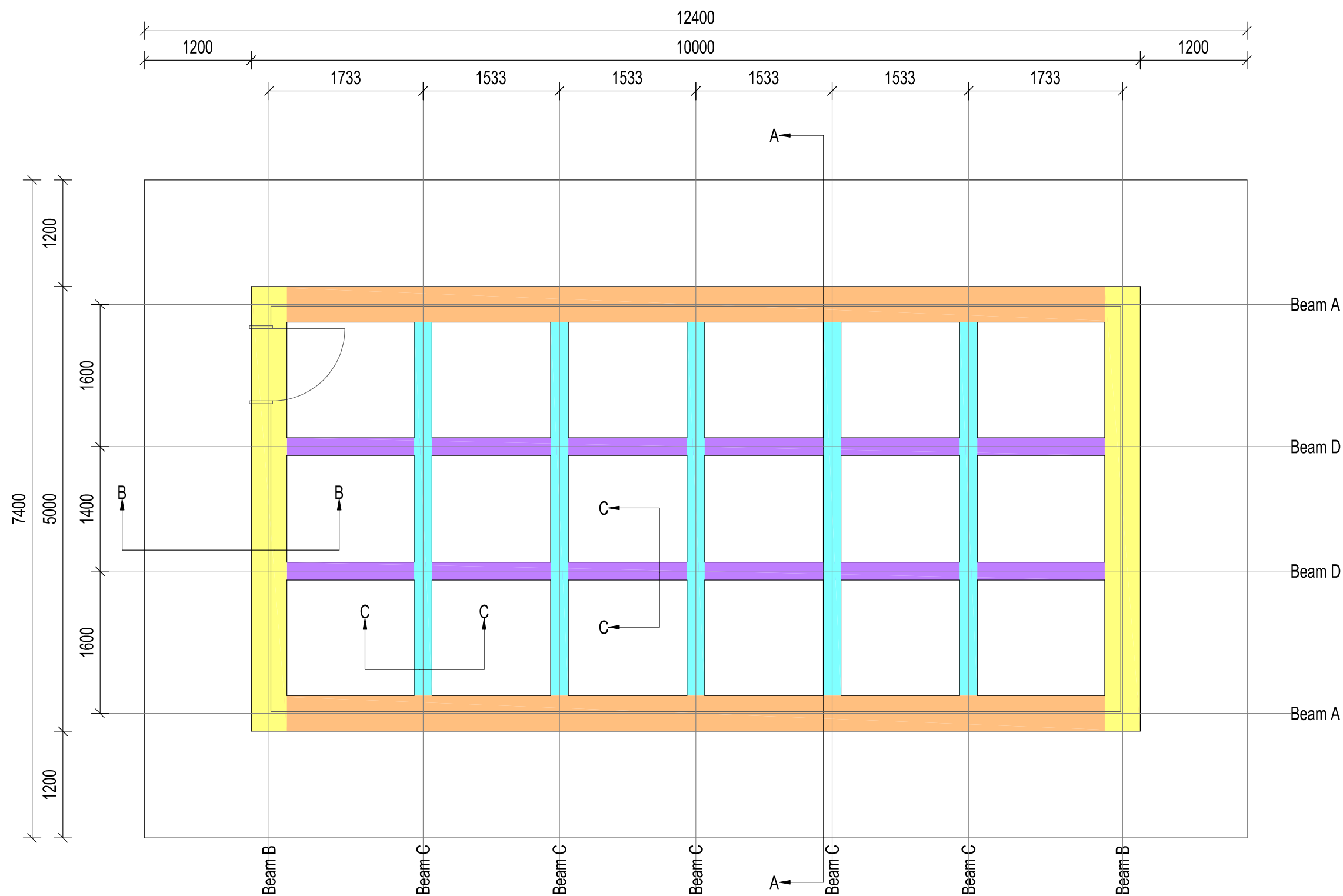
SCALE

as shown

REFERENCE

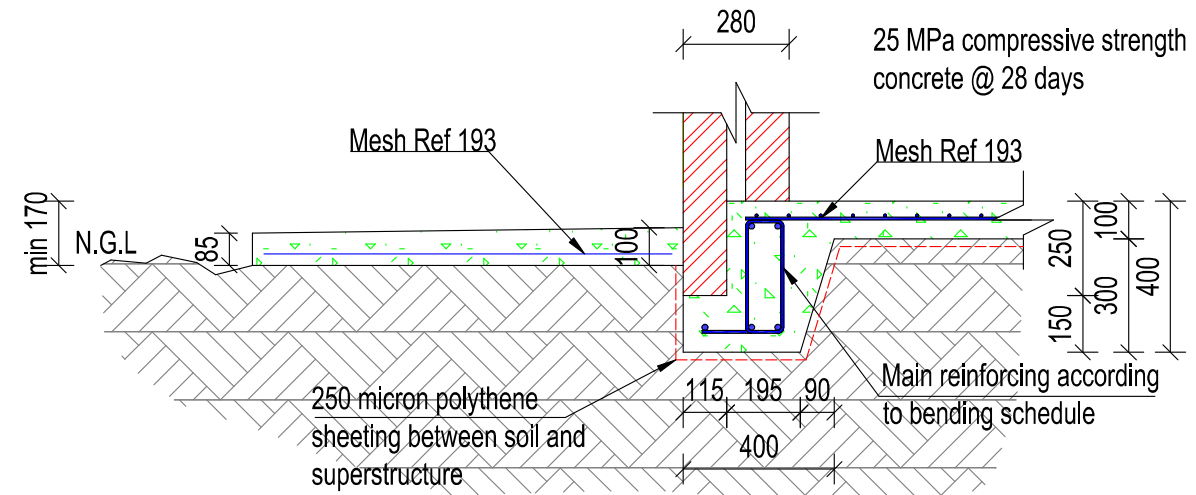
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Aug 2016/001...

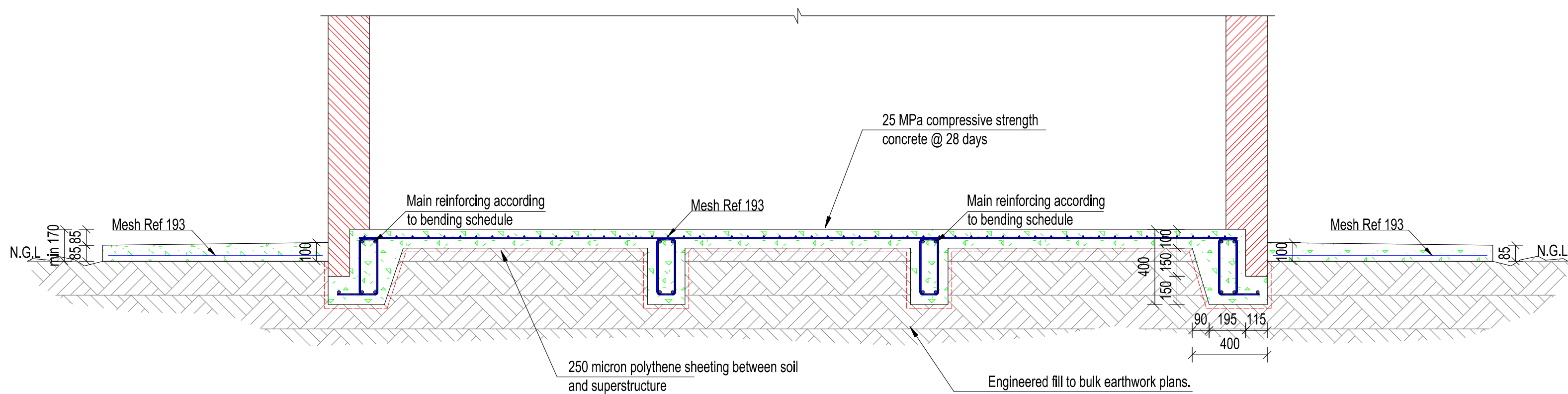


LAYOUT: REFUSE AREA FOUNDATION
scale 1:50

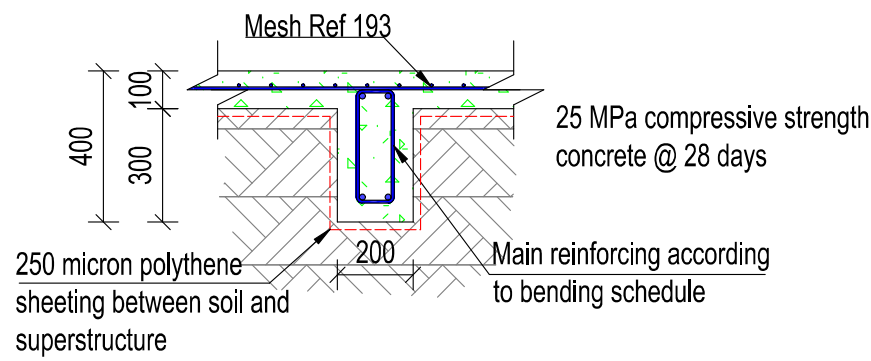
MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM- BER	MARK	S	C	B E N D I N G				
									A	B	C	D	E/r
Beam A	2	9 42	Y12 R10	6000 1000	18 84	A SA	20 73	(6000) 300		100	200		
Beam B	2	8 21	Y12 R10	4900 1000	16 42	B SB	20 60	(4900) 300		100			
Beam C	5	4 42	Y12 R10	4900 1000	20 180	C SC	20 73	(4900) 300		100	200		
Beam D	2	8 42	Y12 R10	6000 1000	16 84	D SD	20 73	(6000) 300		100	200		
	8	10	12	16	20	25	32	40	TOT				
R		78							78				
Y			130						130				
TOT		78	130						208				



SECTION B-B: REINFORCED CONCRETE BEAM A
scale 1:20



SECTION A-A: REFUSE AREA FOUNDATION
scale 1:20



SECTION C-C: REINFORCED CONCRETE BEAM C
scale 1:20

NOTES:

- BUILDING ACCURACY:
 - ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
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CONCRETE:

- 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
- CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.
- NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
- MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED;
- ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- STEEL MIN 350W;
- 6mm FILLET WELDS MIN REQUIREMENT.
- 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
- CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
 - Structure self weight
 - Imposed loads

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162:

- MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE L-1 OR SANS 10162 TABLE D1.
- REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
- SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
- STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.
- UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
- REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2.
- BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:

- SABS 0155: Accuracy in buildings
- SABS 0145: Concrete Masonry construction
- SABS 0249: Masonry walling
- SABS 1215: Concrete masonry units
- SABS 227: Burnt day masonry units
- SABS 1050: Aggregates from natural sources
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- SANS 1200 A 1986 Section A: General
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VENTILATION DEPARTMENT:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

ENGINEER MANAGER:

CLIENT INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT CONSTRUCTION OF JOHN TAOLLO GAETSEWE SCHOOL & HOSTEL

DRAWING LAYOUT & DETAILS: REFUSE AREA FOUNDATION

Amendments

DATE 15/09/2016

SCALE as shown

REFERENCE

2016/001/2400

2016/001/2400

2016/001/2400

2016/001/2400

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	056	0



UNIT 20, OAKLAND Office Park
CNR TRICHARDS & CRIPPEN
ROAD
BARTLETT X91, BOKSBURG Tel : 011 894 7615
PO BOX 717, BOKSBURG Cell : 073 232 9350
1460 Fax : 086 733 6604
Email : ulunj@umarchitects.co.za

GENERAL NOTES

- THIS DRAWING IS NOT TO BE SCALED, USE FIGURED DIMENSIONS ONLY.
- ALL LEVELS & DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK COMMENCES.
- THE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR DIMENSIONAL ERRORS IF NOT NOTIFIED AT THE TIME OF COMMENCING WORK ON SITE.
- BUILDER TO CO-ORDINATE ALL DIMENSIONS LEVELS/B/LD., LINES/B/LD. RESTRICTION LINES
- FINISHES & SPECIFICATIONS TO BE CHECKED AND CO-ORDINATED BY BUILDER BEFORE ORDERING OR PUTTING ANY WORK TO HAND
- ALL SETTING OUT TO BE BUILDERS ENTIRE RESPONSIBILITY
- ALL SERVICES TO BE CO-ORDINATED BY THE BUILDER BEFORE COMMENCING ANY WORK
- ALL WORK TO BE IN ACCORDANCE TO THE NATIONAL BUILDING REGULATIONS & TO THE ENTIRE SATISFACTION OF ALL LOCAL AUTHORITIES

SECTION NOTES

- WATERPROOFING TO SPEC. DETAIL
- D.P.C. TO WINDOWS AND CILLS
- CONC. LINTELS OVER ALL WINDOWS
- OBSCURE GLASS TO ALL BATHROOMS

DRAINAGE NOTES

- I.E.'s TO ALL BENDS AND JUNCTIONS IN DRAIN WITH MARKED COVERS AT GROUND LEVEL
- RE-SEAL TRAPS TO ALL WASTE FITTINGS
- W.P.'s TO BE FULLY ACCESSIBLE ALONG ENTIRE LENGTH
- WHERE W.P.'s PASS IN OR BELOW FLOOR SLAB THEY ARE TO BE SLEEVED WITH C.E.'s AT BOTH ENDS IN EASILY ACCESSIBLE POSITIONS
- WHEN SOIL PIPE DROP EXCEEDS 1,22m ADEQUATE ANTI-SIPHONAGE TO BE PROVIDED
- 38 WASTE PIPE TO BASIN / BATH
- 50 WASTE PIPE TO SINK, W.M. AND SHOWER
- BEGINNING OF DRAIN RUN TO HAVE INVERT LEVEL OF 450mm BELOW FGL MINIMUM.

SCHEDULE OF AREAS.

revisions	by	date	no

THIS DRAWING IS COPYRIGHT

job
**CONSTRUCTION OF JOHN TAOLE
GAETSEWE NEW SCHOOL AND
HOSTELS**



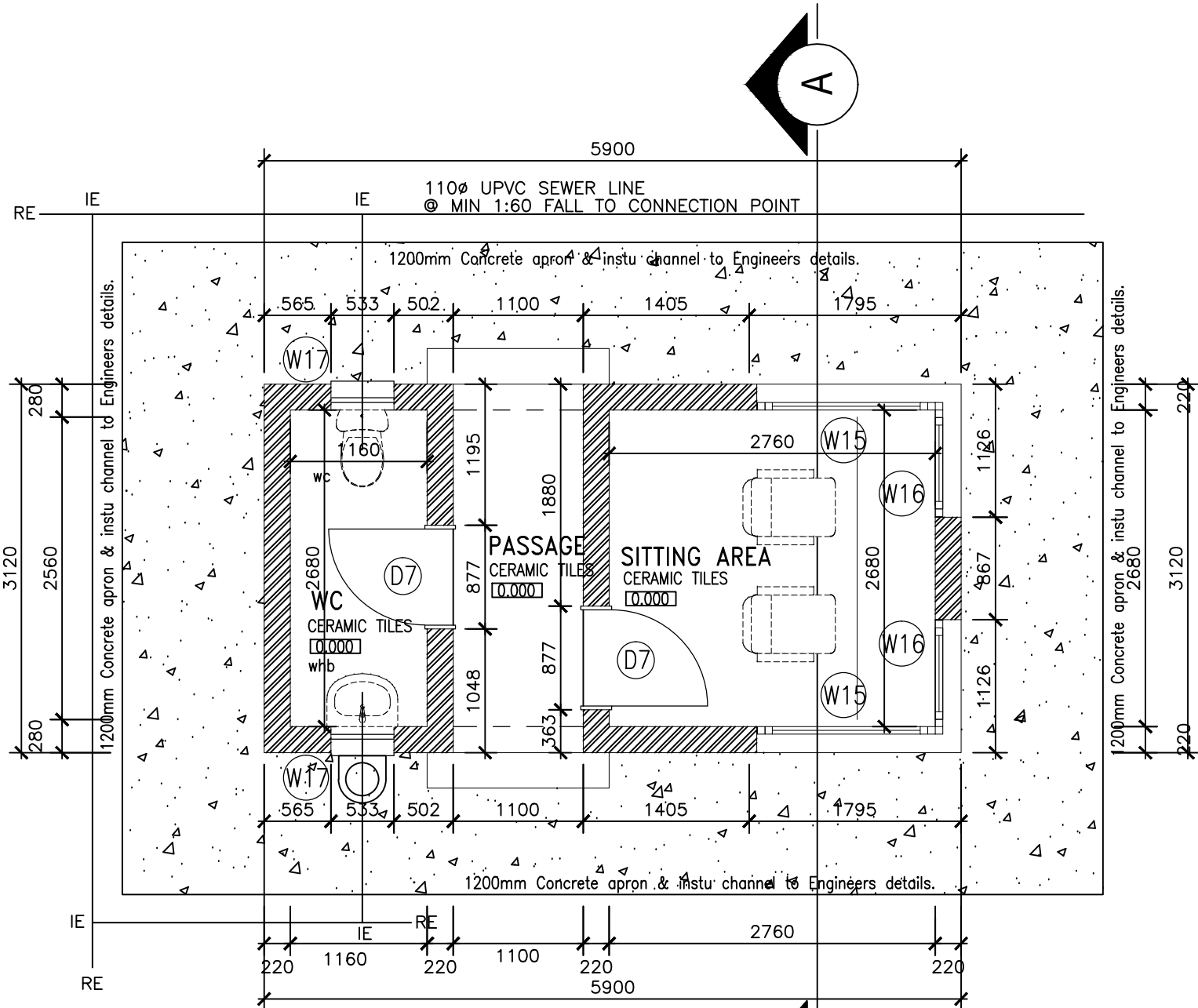
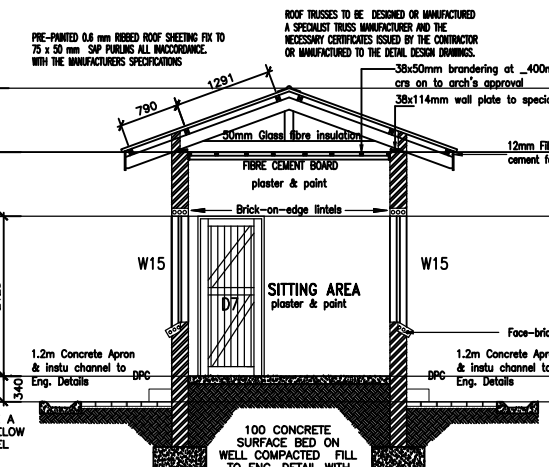
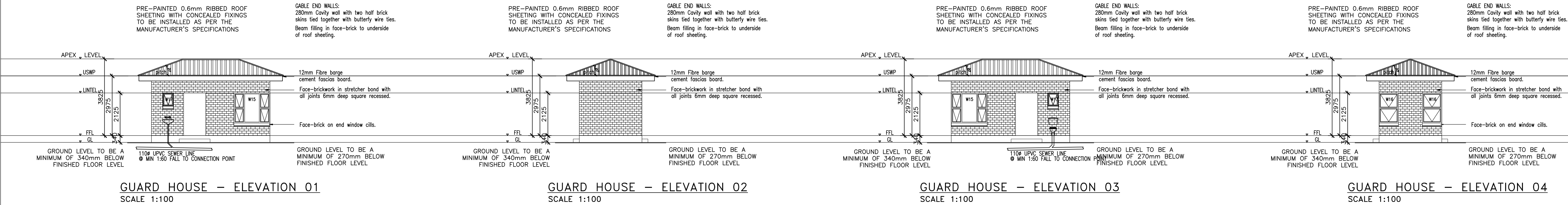
**INDEPENDENT DEVELOPMENT
TRUST FOR
DEPARTMENT OF EDUCATION
NORTHERN CAPE**

site **PORTION 0 OF FARM MOTIITON 509
HM - DITHAKONG VILLAGE JMM
KURUMAN**

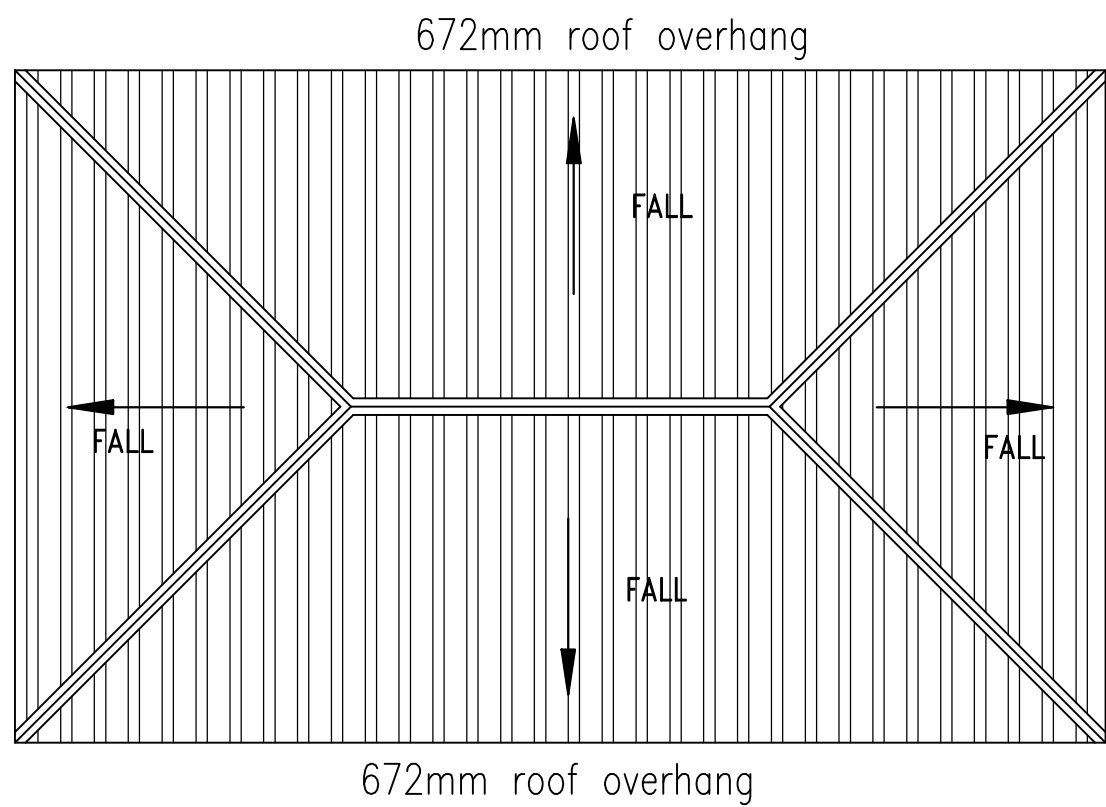
drawing
**FLOOR, ROOF & CEILING PLANS, ELEVATIONS &
SECTION - GUARD HOUSE & REFUSE AREA**

scale	date started	designed by	drawn by
A/S	04/03/2016	UM	AJ

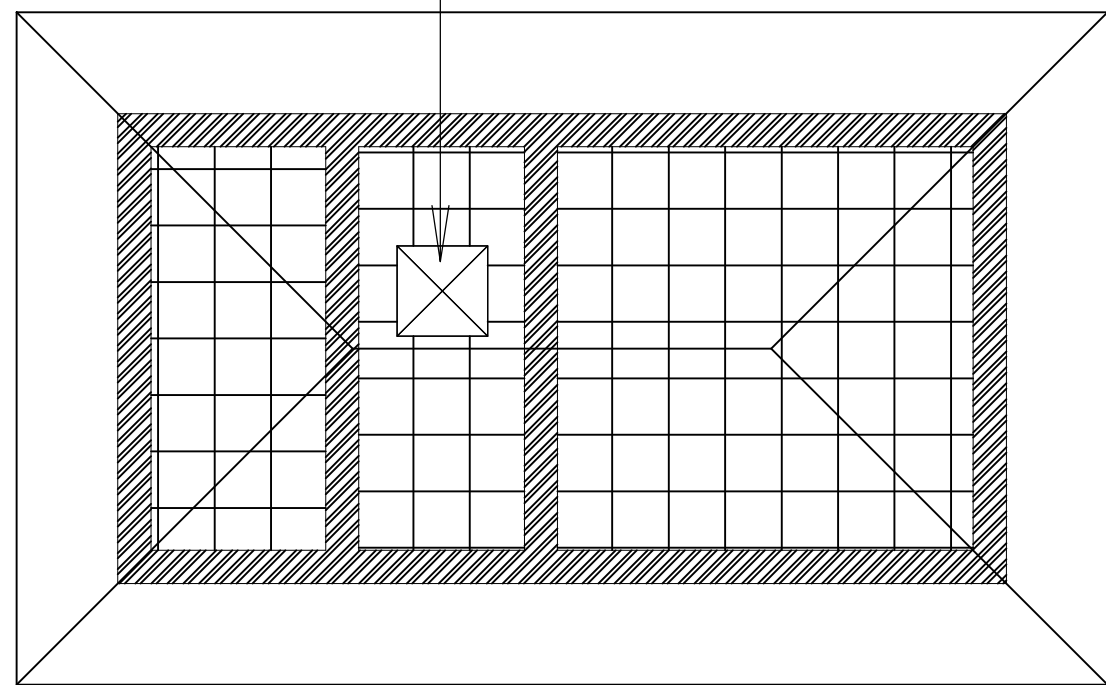
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consult	dwg stage	location	sheet no.	rev	
cad file					



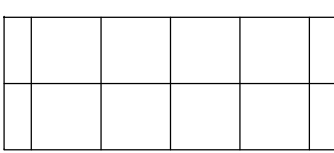
1x(228x38) SA Pine gangplank over entire length of building 1m off centre of roof & not above trap doors



600x600mm, hinged, pressed metal ceiling trap door with 38x50mm braced frame.



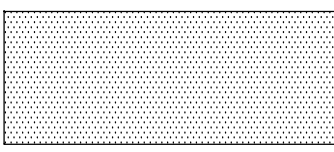
LEGEND



CEILING TYPE: AA
GYPSUM CEILING BOARD:

1200x6.4mm thick gypsum board complete with "h" profile junction strips and 50x19mm SA pine cornice. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

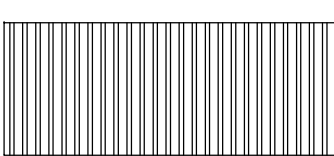
NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.



CEILING TYPE: AB
FIBRE CEMENT BOARD:

1200x6mm Thick pressed fibre cement ceiling boards complete with mild steel "h" profile junction strips and 50x19mm SA pine cornices. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.

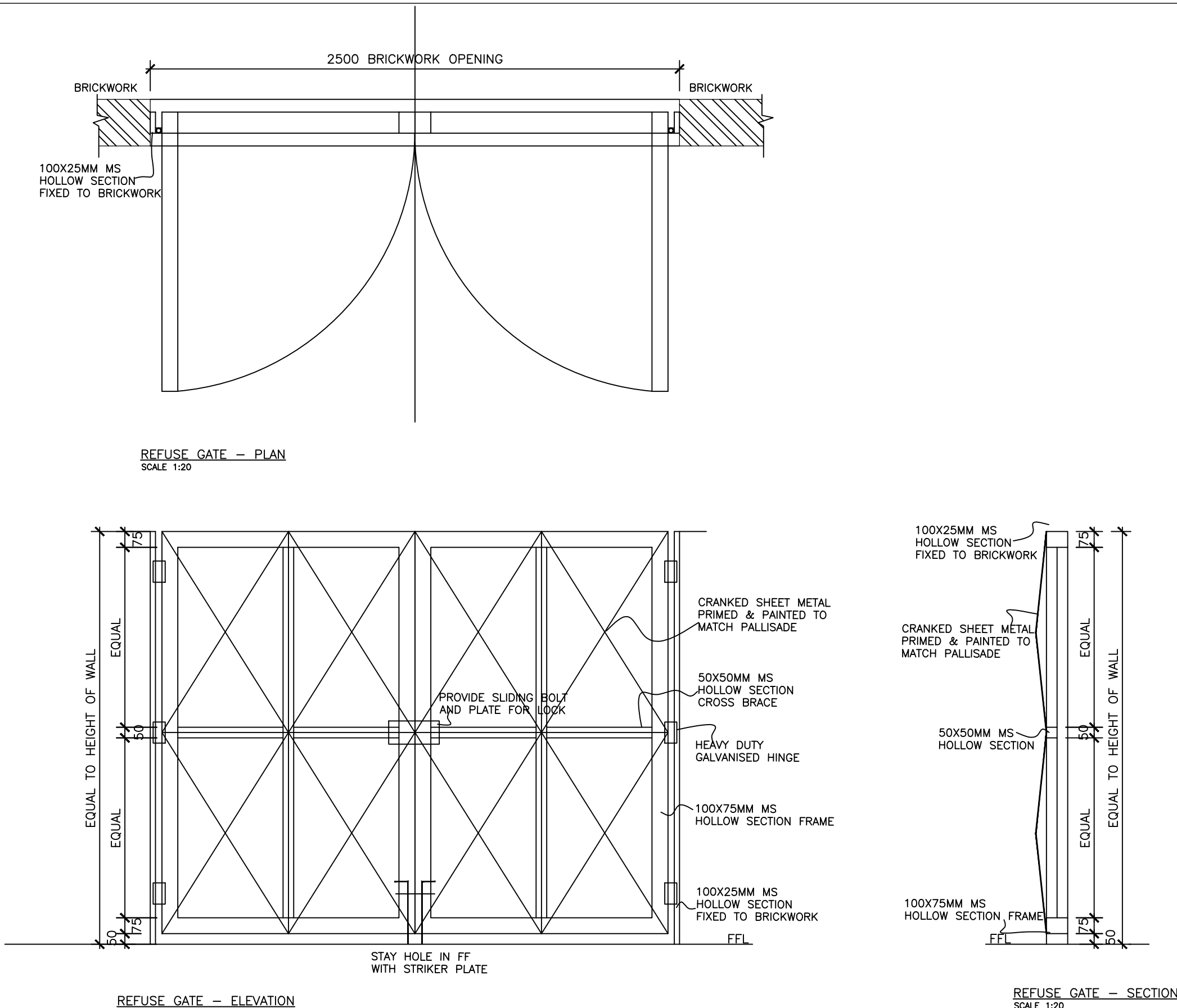
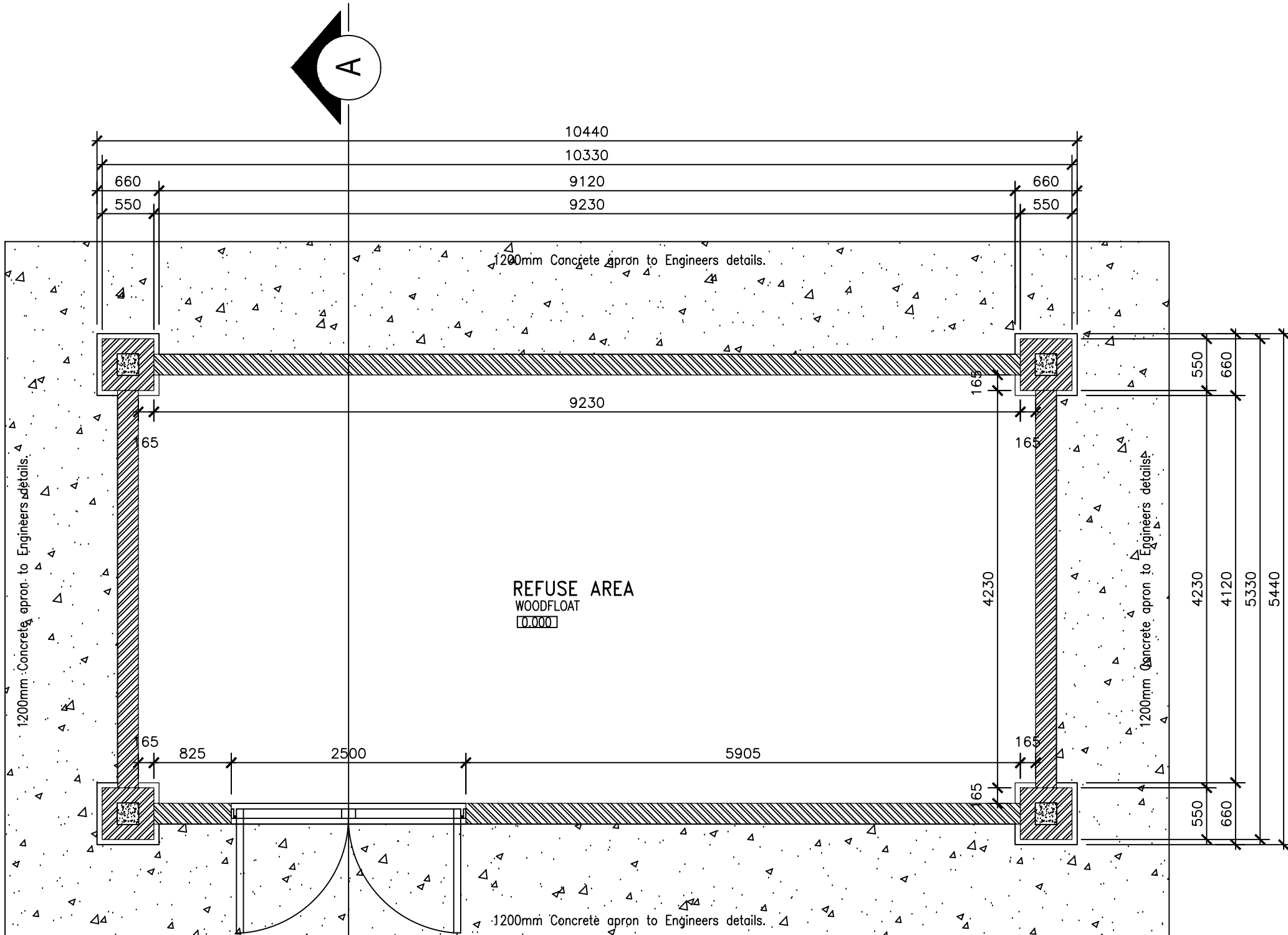
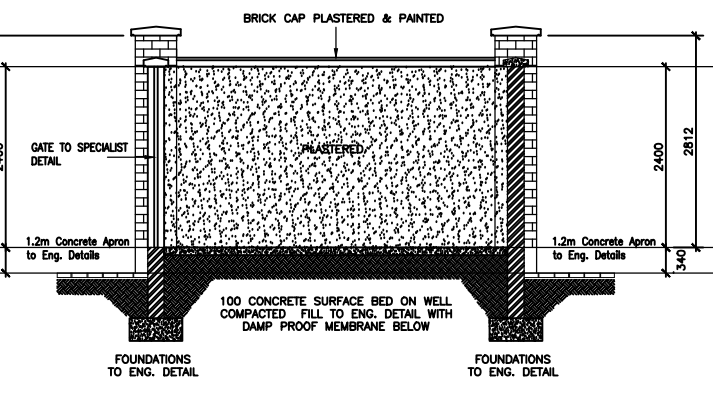
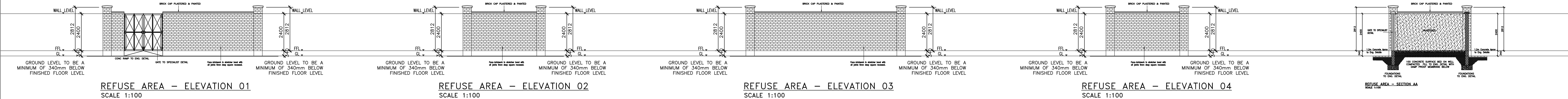


CEILING TYPE: AC
EMULSION (PVA) PAINT ON PLASTERED SLAB-NOT SKIMMED

2 no. coats PVA emulsion ceiling paint in matt finish to SABS 1586 applied on concrete slab surface primed with 1 no. undercoat, in accordance with manufacturer's instructions. All to be manufactured and installed in strict compliance to the latest SANS approved standards.

NOTE:

PROVIDE 50mm FIBREGASS INSULATION ON ALL CEILINGS.



ROOF NOTE :

Ribbed roof sheeting with coveceled fixings at 20 deg Pitch on 75 x 50 purlins at a max 1800mm centres. On trusses at 1' 200mm max centres (maximum) on 50 x 114 wall plate.

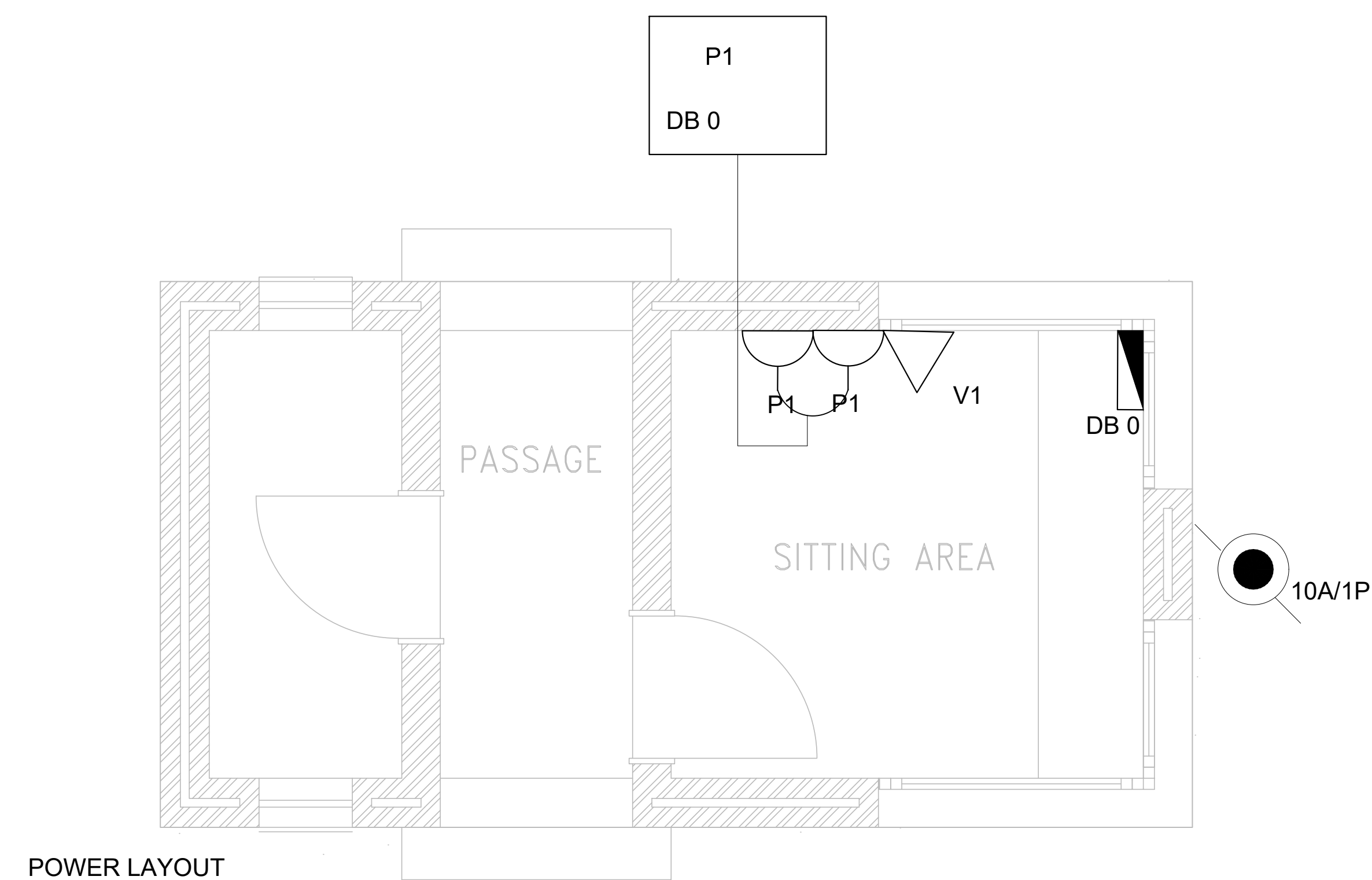
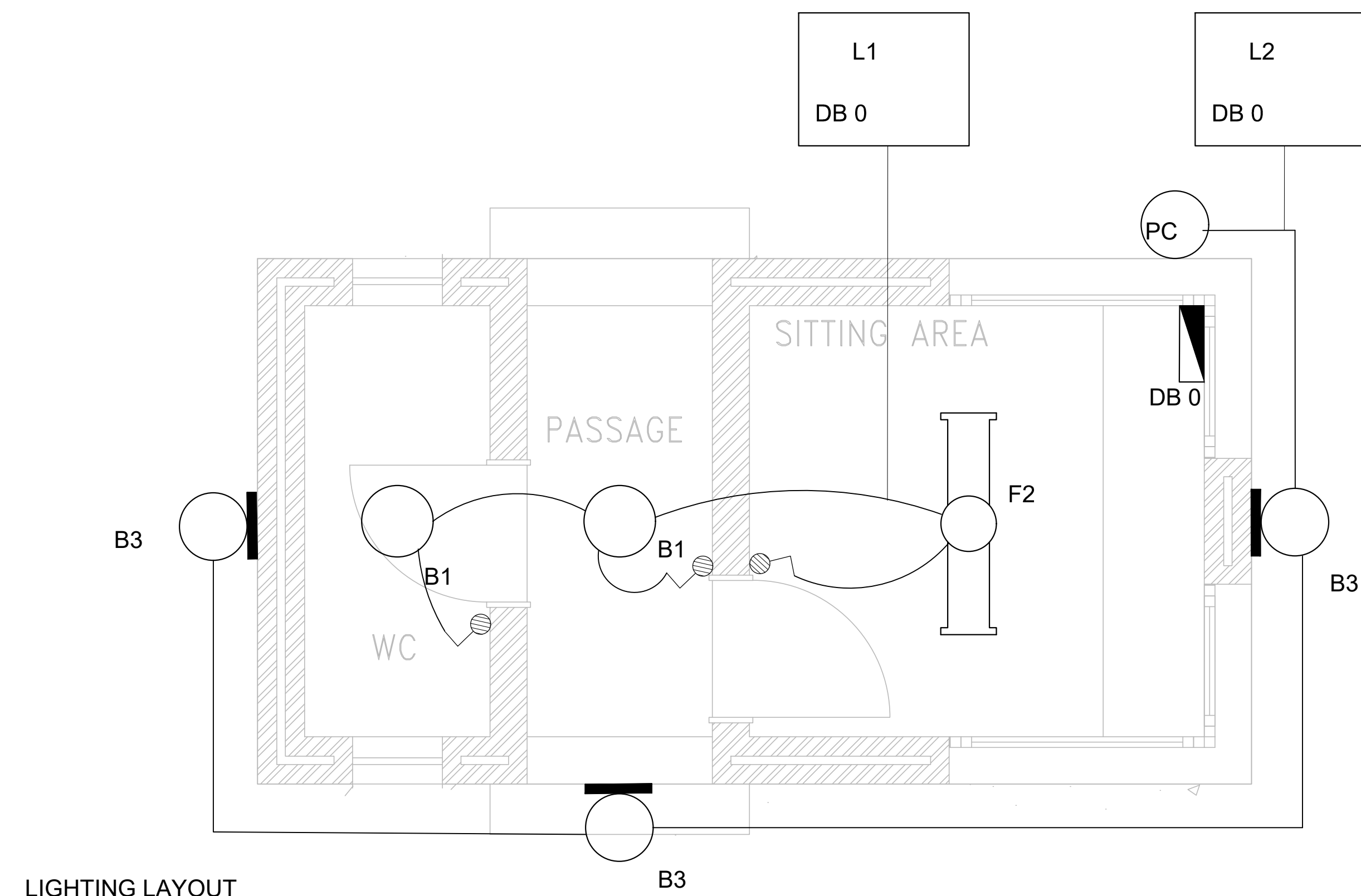
All bolt holes are to be drilled.

TRUSS NOTE:–





All internal walls to be built up to a minimum of 2 brick courses above ceiling height. NB: At truss tie beams, walls are to be kept clear of truss so that no wall to be kept clear of truss so that no wall or wall finish will touch any truss member.




NOTE:

- Vertical bracing (DT69) and tie beam and web runner to be continuous with splices as per details where necessary.
- Nails to be 3.50 x 75mm long and 4.00 x 100mm as shown
 - min. nail spacing = 10 x diameter
 - min. edge distance = 5 x diameter
 - min. end distance = 15 x diameter
 - projecting nail points to be clinched
- Trusses to be plumb with straight rafters before bracing is fixed.
- Joints to accurately cut and trusses securely made and so fitted that components are drawn together tightly.
- Adequate temporary bracing to be provided during erection until permanent bracing is installed.
- All roof timbers to comply with specifications.
- Truss construction and erection must be carried out to the approval of a professional engineer.
- The roof structure must be inspected and approved by a professional engineer before roof tiles may be laid.
- For details of STANDARD roof truss construction refer to DOG-1341/37 & 38
- For details of vertical bracing on roof trusses see DT69.



NOTES:	NOTAS:
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LIGHTING	
 B3	COMPLETE EXTERNAL WALL MOUNT 22W LED SQUARE BULKHEAD, AS SPECIFIED
 B4	COMPLETE INTERNAL CEILING MOUNT 22W LED ROUND BULKHEAD, AS SPECIFIED
 F2	COMPLETE 2X22W ENERGY SAVING DOUBLE OPEN CHANNEL LED LIGHT, AS SPECIFIED
 P2	DENOTES PHOTO CELL
<p>1'LEVER 1WAY LIGHT SWITCH MOUNT AT 1400mm</p> <p>AFEL UNLESS OTHERWISE SPECIFIED BY ARCHITECT</p> <p>ELECTRICAL DISTRIBUTION BOARD, IN ACCORDANCE WITH ELECTRICAL CONSULTANT NOTIFICATION - 30MS REGULATION.</p>	

	POWER
	16A DOUBLE POWER SOCKET OUTLET ON 100X100X50MM BACK BOX
	ELECTRICAL DISTRIBUTION BOARD, IN ACCORDANCE WITH ELECTRICAL CONSULTANT SPECIFICATION - SANS REGULATION.
	AC ISOLATOR FOR STOVE - GEYSER

CLIENT



ARCHITECTS



UNIT 20, OAKLAND Office Park
CNR TRICHARDS & GRIPPEN
ROAD
BARTLETT X91, BOKSBURG
PO BOX 717, BOKSBURG
1460

Tel : 011 894 7615
Cell : 073 232 8350
Fax : 086 733 6604
Email : ulunj@umarchitects.co.za

[illegible]

CONSTRUCTION OF JOHN
TAOLO GAETSEWE NEW
SCHOOL AND HOSTEL

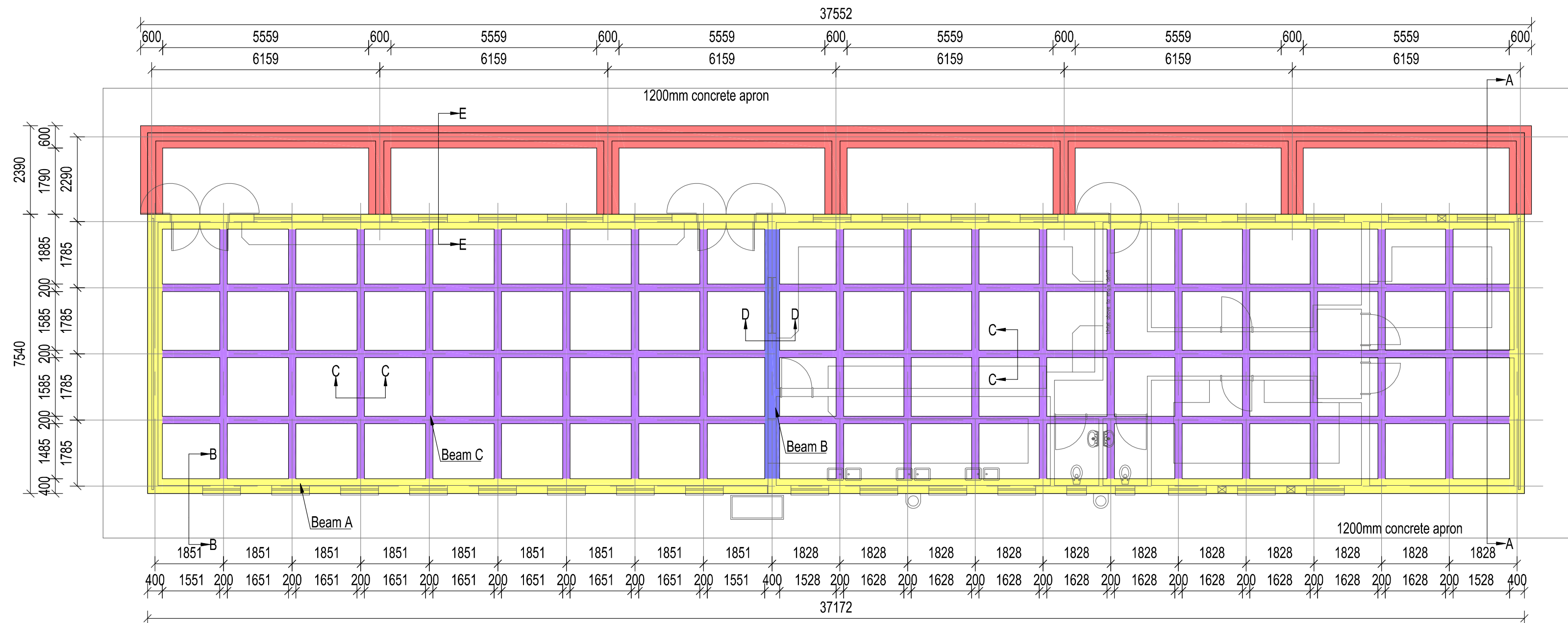
GATE HOUSE



drawn	design	approved	date
LT	C.S	LB	2016-06-17

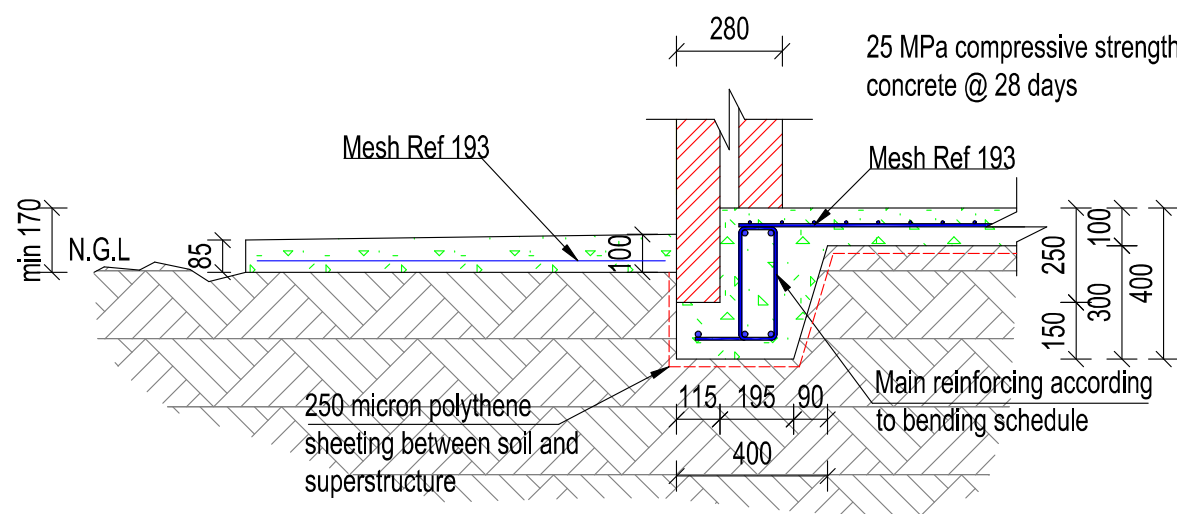
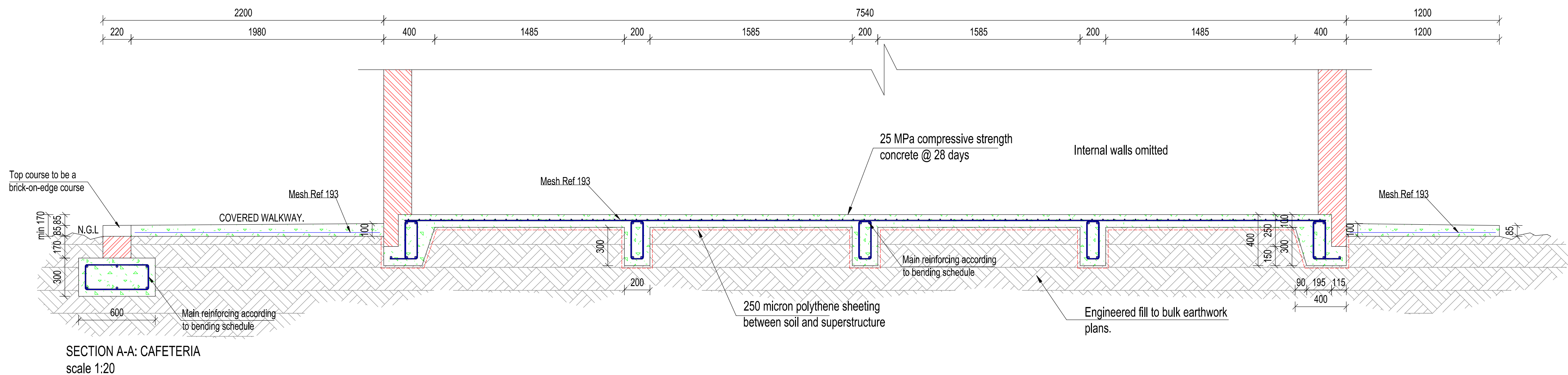
discipline	scale
ELECTRICAL	1:25
drawing no	rev.
K2040E-E-712	0

REFERRAL DRAWINGS			
DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE
FLOOR PLAN, CEILING PLAN & ROOF PLAN FOR GATE HOUSE	ARC_CON_RES_307	0	04/03/2016

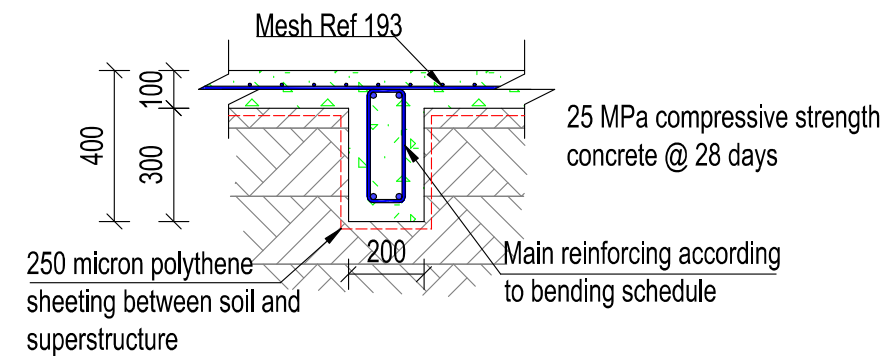


LAYOUT: CAFETERIA FOUNDATION
scale 1:100

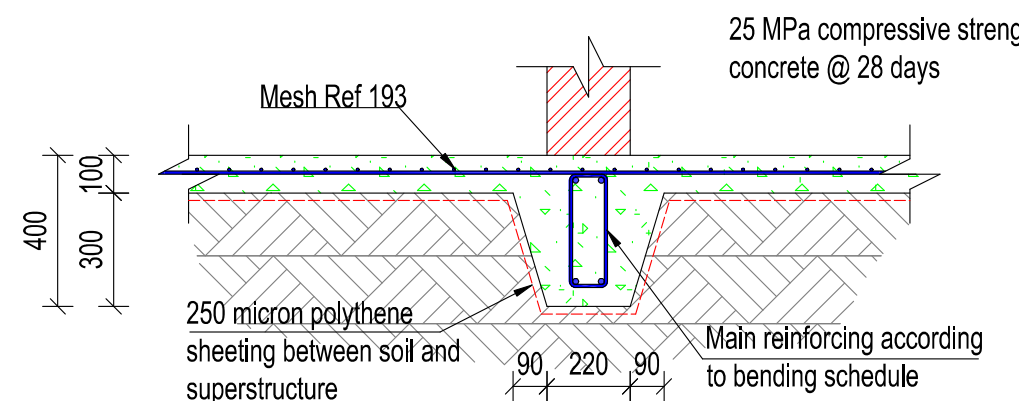
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									A	B	C	D	E/r
Beam A	1	75	Y12	6000	83	A	20	73	(6000) 300	100	200		
Beam B	1	6	Y12	6000	6	B	20	60	(6000) 300				
Beam C	1	184	Y12	6000	182	C	20	60	(6000) 300				
Strip 600	1	54	Y12	6000	60	D	20	60	(6000) 200	500			
	8	10	12	16	20	25	32	40	TOT				
R		1401							1401				
Y		1764							1764				
TOT		1401	1764						3165				



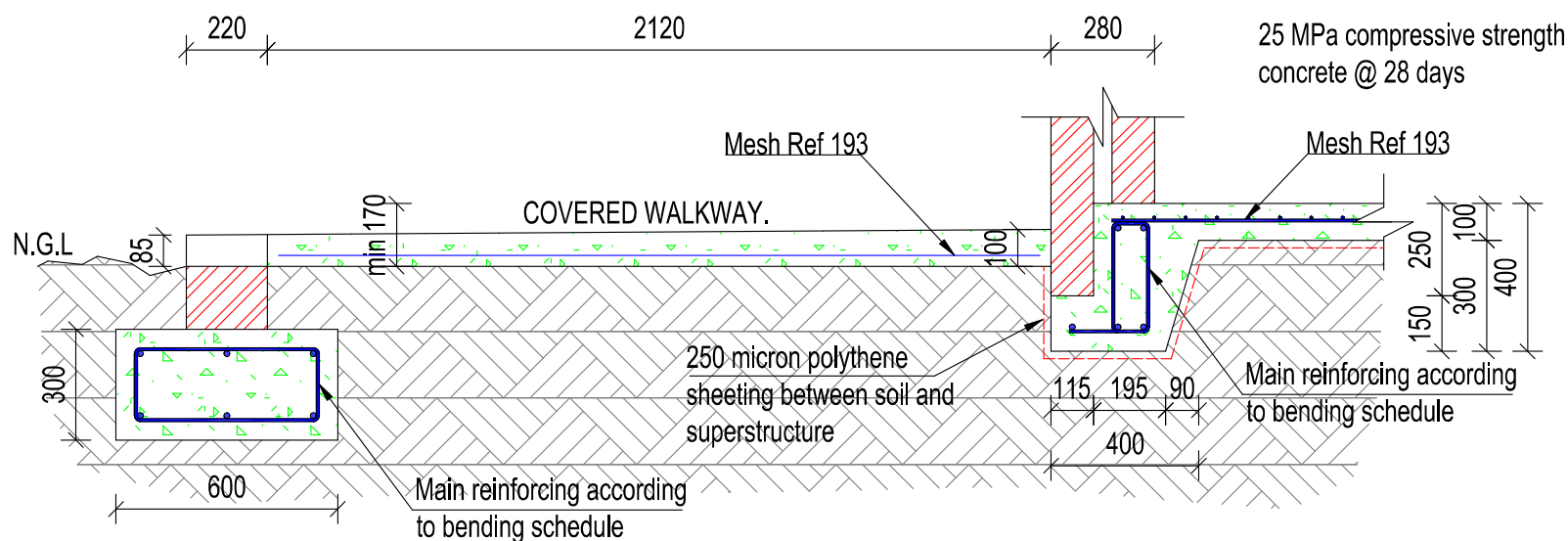
SECTION B-B: CAFETERIA
scale 1:20



SECTION C-C: CAFETERIA
scale 1:20



SECTION D-D: CAFETERIA
scale 1:20



SECTION E-E: CAFETERIA
scale 1:20

NOTES:

1. BUILDING ACCURACY:
- 1.1. ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
- 1.2. DIMENSIONS TO BE CONFIRMED ON SITE.
- 1.3. STRUCTURAL PLANS MUST BE READ IN CONJUNCTION WITH ARCHITECTS PLANS.
- 1.4. PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPANCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT

2. CONCRETE:
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- 2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.
- 2.3. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENG'R.
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- 3.2. 6mm FILLET WELDS MIN REQUIREMENT.
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- 3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

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- 4.2. - 2.5kN/m²

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- SANS 1200 MK 1983 Section MK: Hauling and channelling
- SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT: INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT: CONSTRUCTION OF JOHN TAOLLO GAETSEWE SCHOOL & HOSTEL

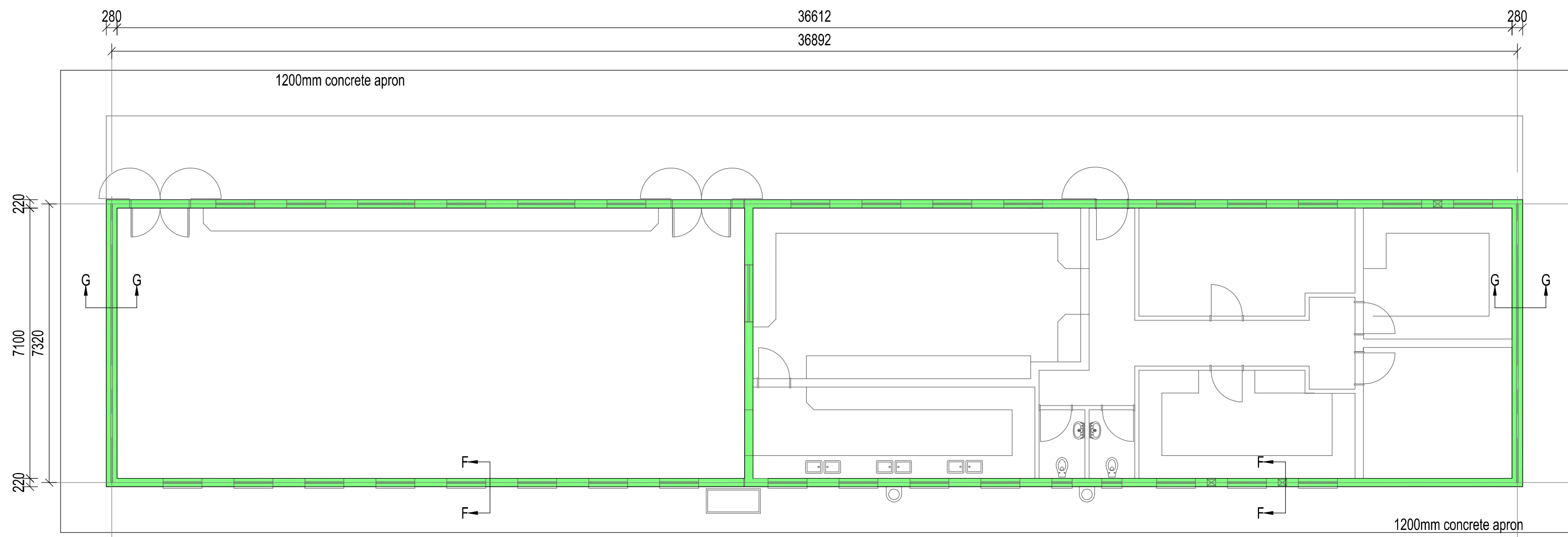
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Amendments

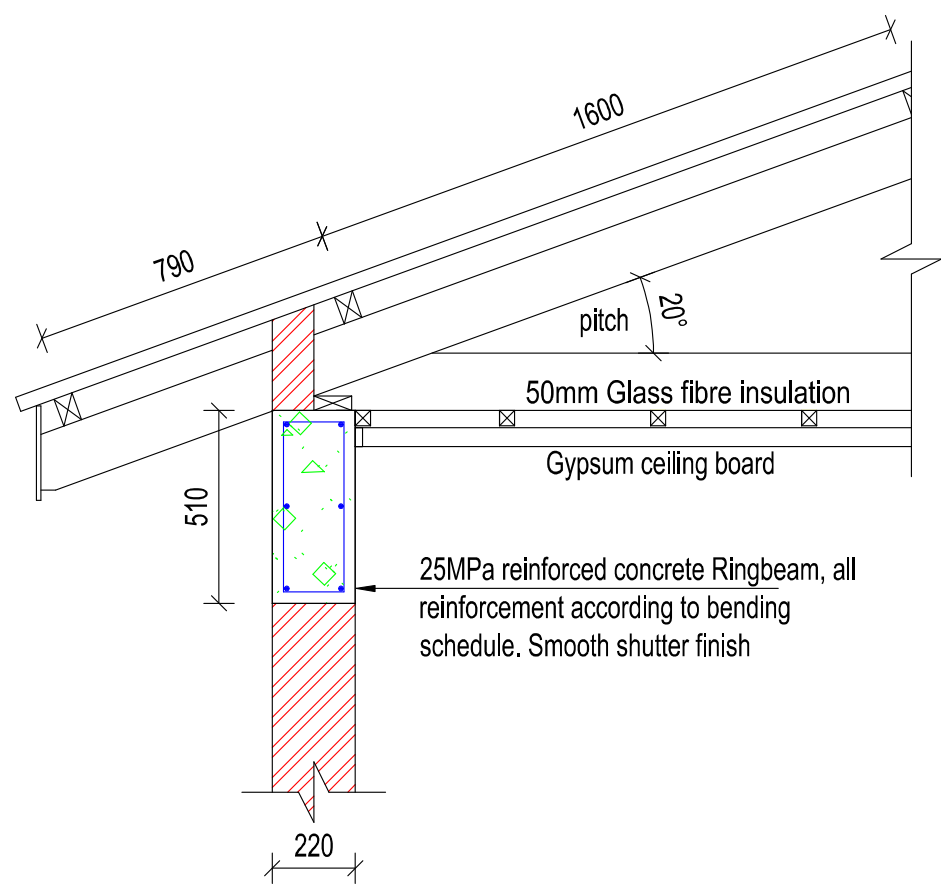


P.O. Box 1504
Klerkskop
2570
Tel: (018) 462-6651
Fax: (018) 462-7910
E-mail: office@dwpcoos.co.za

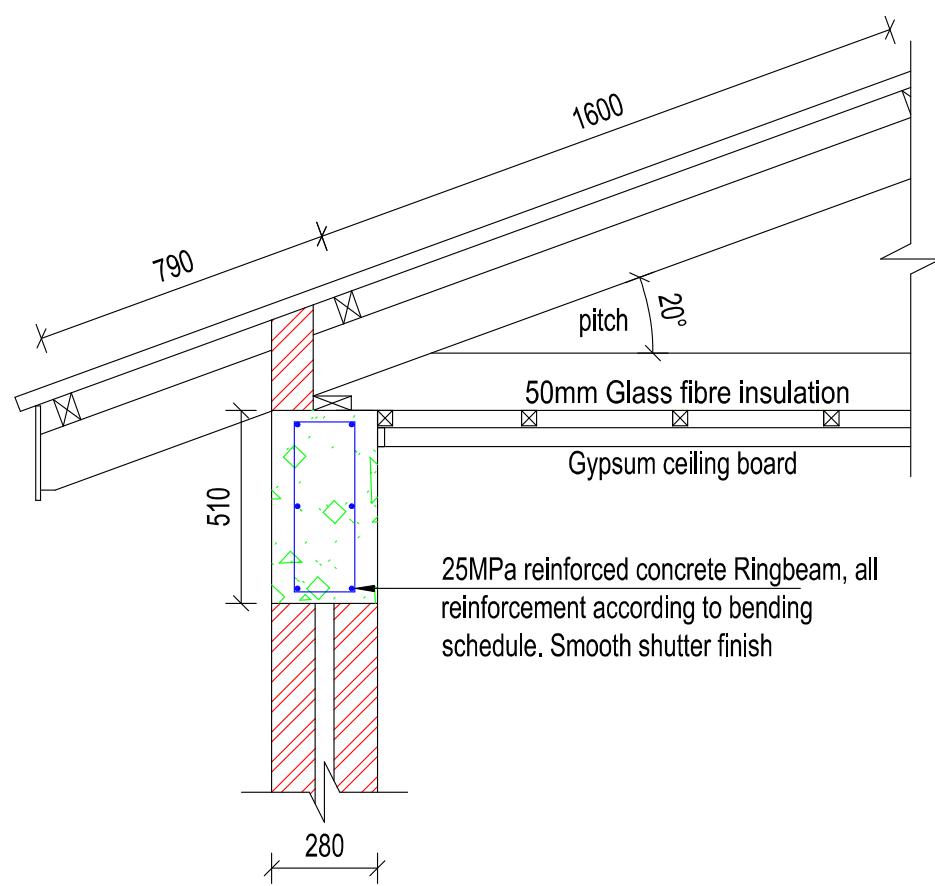
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SCALE: as shown
DRAWN BY: S. Laynes
CHECKED & APPROVED: M. Kromhout
DWG NR: 2016/001/1600
REFERENCE: dwg2016/001...



LAYOUT: LABORATORY RINGBEAM
scale 1:100



SECTION G-G: TYPICAL RINGBEAM SECTION
scale 1:20



SECTION F-F: TYPICAL RINGBEAM SECTION
scale 1:20

MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
Ring Beam A	1	42 42 42 402	Y12 Y12 Y12 R8	6000 6000 6000 1350	42 42 42 402	A B C SA	20 20 20 60	6000 6000 6000 410	160			

Min 220mm

510

A B C C A A

SECTION BEAM

	8	10	12	16	20	25	32	40	TOT	Concrete cover: Bottom to stirup 30mm Top to stirup 30mm Sides 30mm
R	200								200	
Y			627						627	
TOT	200		627						827	

NOTES:

1. BUILDING ACCURACY:
1.1. ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
1.2. DIMENSIONS TO BE CONFIRMED ON SITE.
1.3. STRUCTURAL PLANS MUST BE READ IN CONJUNCTION WITH ARCHITECTS PLANS.
1.4. PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPENCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT

2. CONCRETE:
2.1. 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.
2.3. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
2.4. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED;
2.5. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

3.1. STEEL MIN 350W;
3.2. 6mm FILLET WELDS MIN REQUIREMENT.
3.3. 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

4.1. STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
a. Structure self weight
b. Imposed loads

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162.
4.3. MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE L-1 OR SANS 10162 TABLE D1.
4.4. REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
4.5. SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.
4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
4.8. REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2.
4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:
ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:
-SABS 0155: Accuracy in buildings
-SABS 0145: Concrete Masonry construction
-SABS 0249: Masonry walling
-SABS 1215: Concrete masonry units
-SABS 227: Burnt clay masonry units
-SABS 1050: Aggregates from natural sources.
-SABS 0243: The manufacture and erection of timber trusses.
-SANS 1200 A 1986 Section A: General
-SANS 1200 AA 1986 Section AA: General (small works)
-SANS 1200 AB 1986 Section AB: Engineer's office
-SANS 1200 AD 1986 Section AD: General (Small dams)
-SANS 1200 AH 1986 Section AH: General (structural)
-SANS 1200 C 1980 Section C: Site clearance
-SANS 1200 D 1988 Section D: Earthworks

-SANS 1200 DA 1988 Section DA: Earthworks (small works)
-SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)
-SANS 1200 DK 1996 Section DK: Gabions and pitching
-SANS 1200 DM 1991 Section DM: Earthworks (roads, subgrade)
-SANS 1200 DN 1982 Section DN: Earthworks (railway sidings)
-SANS 1200 G 1982 Section G: Concrete (structural)
-SANS 1200 GA 1982 Section GA: Concrete (small works)
-SANS 1200 GB 1984 Section GB: Concrete (ordinary buildings)
-SANS 1200 GE 1984 Section GE: Precast concrete (structural)
-SANS 1200 GF 1984 Section GF: Prestressed concrete
-SANS 1200 H 1990 Section H: Structural steelwork
-SANS 1200 HA 1990 Section HA: Structural steelwork (sundry items)
-SANS 1200 HB 1985 Section HB: Cladding and sheeting
-SANS 1200 HC 1988 Section HC: Corrosion protection of structural steelwork
-SANS 1200 HE 1983 Section HE: Structural aluminiumwork
-SANS 1200 L 1983 Section L: Medium-pressure pipe lines
-SANS 1200 LB 1983 Section LB: Bedding (pipes)

-SANS 1200 LC 1981 Section LC: Cable ducts
-SANS 1200 LD 1982 Section LD: Sewers
-SANS 1200 LE 1982 Section LE: Stormwater drainage
-SANS 1200 LF 1983 Section LF: Eit connections (water)
-SANS 1200 M 1996 Section M: Roads (general)
-SANS 1200 ME 1981 Section ME: Subbase
-SANS 1200 MF 1981 Section MF: Base
-SANS 1200 MP 1996 Section MP: Base (right pavement structures)
-SANS 1200 MG 1996 Section MG: Bituminous surface treatment
-SANS 1200 MH 1996 Section MH: Asphalt base and surfacing
-SANS 1200 MJ 1984 Section MJ: Segmented paving
-SANS 1200 MK 1983 Section MK: Kerbing and channelling
-SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ENGINEER MANAGER:

PROJECT ENGINEER:

CONTRACTOR:

CLIENT INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT CONSTRUCTION OF JOHN TAOLO GAETSEWE SCHOOL & HOSTEL

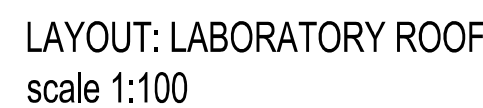
DRAWING CAFETERIA: RINGBEAM LAYOUT AND DETAILS

Amendments



P.O. Box 1504
Klerksdorp
2570
Tel: (018) 462-6651
Fax: (018) 462-7910
E-mail: office@dwpcoos.co.za

DATE 25/09/2016
SCALE as shown
DW NR 2016/001/1610
REFERENCE dwg2016/001...



NOTES:

1. BUILDING ACCURACY:

1.1. ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.

1.2. DIMENSIONS TO BE CONFIRMED ON SITE.

1.3. STRUCTURAL PLANS MUST BE NOTED IN CONJUNCTION WITH ARCHITECTS PLANS.

1.4. PRINCIPLE AGENT MUST BE HEARD OF DISCREPANCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT

2. CONCRETE:

2.1. 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.

2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.

2.3. NO ON-SITE BATCHING UNLESS APPROVED BY ENGINEER.

2.4. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED;

2.5. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

3.1. STEEL MIN 350W.

3.2. 6mm MIN WELD: 5 MIN REQUIREMENT.

3.3. 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.

3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. CONCRETE PARAMETERS:

4.1. STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):

a. Structure self weight

b. Imposed loads

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162.

4.3. MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE I-1 OR SANS 10162 TABLE D1.

4.4. REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.

4.5. SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0100.

4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.

4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.

4.8. REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SABS 0164-2.

4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:

-SANS 1200 DA 1988 Section DA: Earthworks (small works)

-SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)

-SABS 0105: Accuracy in buildings

-SANS 1200 DK 1986 Section DK: Gables and chimneys

-SABS 0104: Concrete Masonry construction

-SABS 0204: Masonry walling

-SABS 1215: Concrete masonry units

-SABS 227: Burnt clay masonry units

-SABS 1000: Aggregates from natural sources

-SABS 0243: The manufacture and erection of timber trusses.

-SANS 1200 A 1986 Section A: General

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-SANS 1200 AD 1986 Section AD: General (Small dams)

-SANS 1200 AH 1986 Section AH: General (structural)

-SANS 1200 C 1980 Section C: Site clearance

-SANS 1200 D 1989 Section D: Earthworks

-SANS 1200 DA 1988 Section DA: Earthworks (small works)

-SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)

-SANS 1200 DK 1986 Section DK: Gables and chimneys

-SANS 1200 DL 1982 Section DL: Earthworks (road LF: Edf connections)

-SANS 1200 DM 1982 Section DM: Earthworks (rallying stidings)

-SANS 1200 G 1982 Section G: Concrete (structural)

-SANS 1200 GA 1982 Section GA: Concrete (small works)

-SANS 1200 GB 1986 Section GB: Concrete (ordinary buildings)

-SANS 1200 GE 1984 Section GE: Precast concrete (structural)

-SANS 1200 GF 1984 Section GF: Prestressed concrete

-SANS 1200 H 1960 Section H: Structural steelwork

-SANS 1200 HA 1960 Section HA: Structural steelwork (sundry items)

-SANS 1200 HB 1968 Section HB: Cold formed and sheathing

-SANS 1200 HC 1988 Section HC: Corrosion protection of structural steelwork

-SANS 1200 HE 1983 Section HE: Structural aluminiumwork

-SANS 1200 I 1983 Section I: Medium-pressure pipe lines

-SANS 1200 LB 1983 Section LB: Bolting (pipes)

-SANS 1200 LC 1981 Section LC: Cable ducts

-SANS 1200 LD 1982 Section LD: Sewers

-SANS 1200 LE 1981 Section LE: Stormwater drainage

-SANS 1200 LF 1982 Section LF: Earthworks (water)

-SANS 1200 M 1996 Section M: Roads (general)

-SANS 1200 ME 1981 Section ME: Subbase

-SANS 1200 MF 1981 Section MF: Base

-SANS 1200 MH 1986 Section MH: Base (high pavement structures)

-SANS 1200 MG 1986 Section MG: Bituminous surface treatment

-SANS 1200 MH 1996 Section M-H: Asphalt base and surfacing

-SANS 1200 MU 1984 Section MU: Segmented paving

-SANS 1200 MB 1983 Section MB: Holding and channelling

-SANS 1200 MM 1984 Section MM: Ancillary networks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT

INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

DESIGN

M. Krenhout

PROJECT

CONSTRUCTION OF JOHN TAGO LA GAETSEWE SCHOOL & HOSTEL

DRAWN BY

S. Lynnes

DRAWING

CAFETERIA: ROOF LAYOUT AND DETAILS

CHECKED & APPROVED

Amendments

<

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	047	0



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PO BOX 717, BOKSBURG Cell : 073 232 9350
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SECTION NOTES

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- D.P.C. TO WINDOWS AND CILLS
- CONC. LINTELS OVER ALL WINDOWS
- OBSCURE GLASS TO ALL BATHROOMS

DRAINAGE NOTES

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- RE-SEAL TRAPS TO ALL WASTE FITTINGS
- W.P.'s TO BE FULLY ACCESSIBLE ALONG ENTIRE LENGTH
- WHERE W.P.'s PASS IN OR BELOW FLOOR SLAB THEY ARE TO BE SLEEVED WITH C.E.'s AT BOTH ENDS IN EASILY ACCESSIBLE POSITIONS
- WHEN SOIL PIPE DROP EXCEEDS 1,22m ADEQUATE ANTI-SIPHONAGE TO BE PROVIDED
- 38 WASTE PIPE TO BASIN / BATH
- 50 WASTE PIPE TO SINK, W.M. AND SHOWER
- BEGINNING OF DRAIN RUN TO HAVE INVERT LEVEL OF 450mm BELOW FGL MINIMUM.

SCHEDULE OF AREAS.

revisions	by	date	to

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CONSTRUCTION OF JOHN TAOLE
GAETSEWE NEW SCHOOL AND
HOSTELS



INDEPENDENT DEVELOPMENT
TRUST FOR
DEPARTMENT OF EDUCATION
NORTHERN CAPE

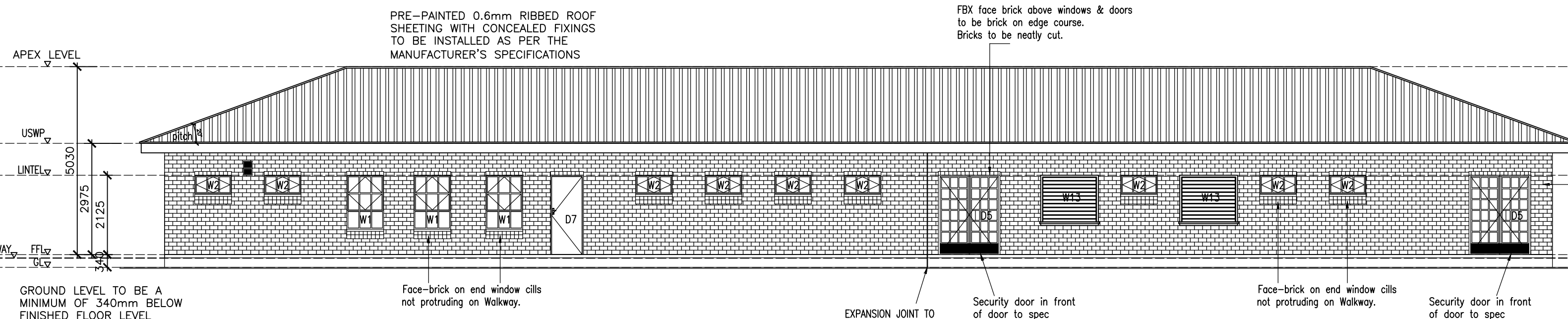
site PORTION 0 OF FARM MOTIITON 509
HM - DITHAKONG VILLAGE JMM
KURUMAN

drawing ELEVATIONS & SECTIONS
- CAFETERIA BLOCK

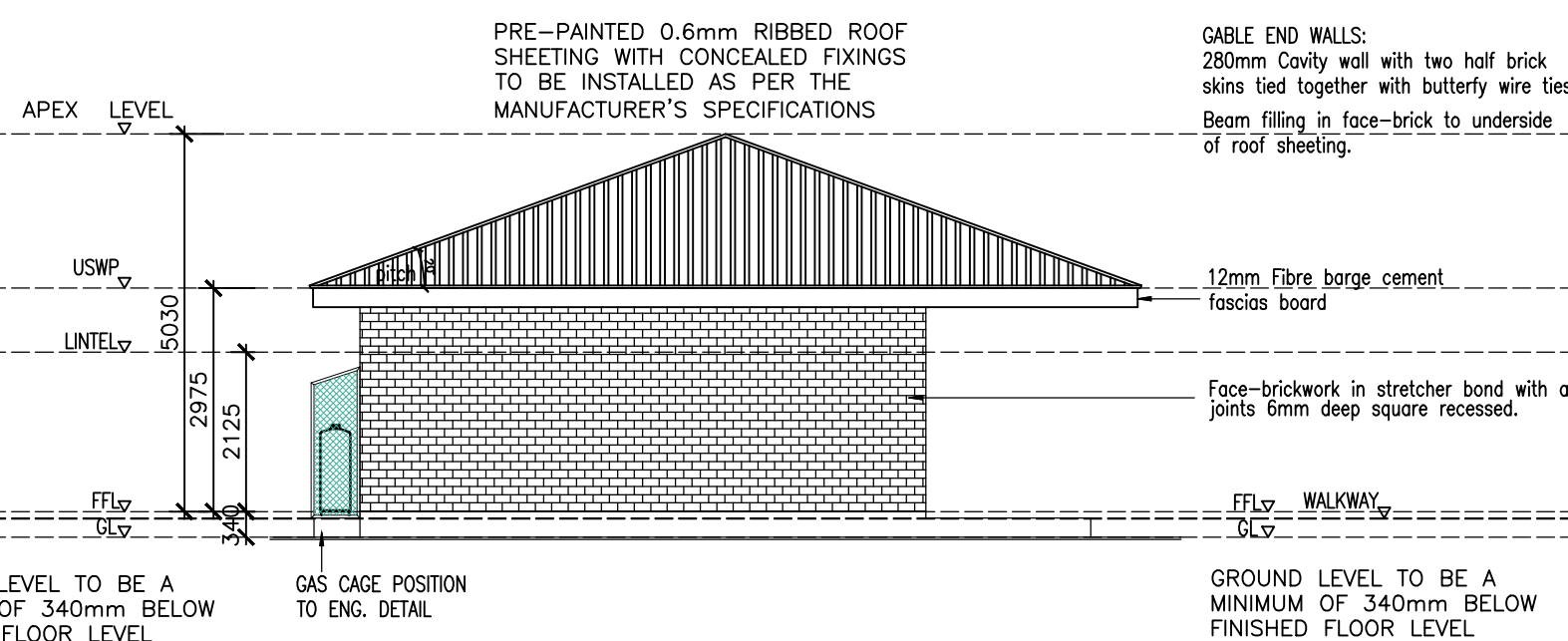
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A/S	04/03/2016	UM	AJ

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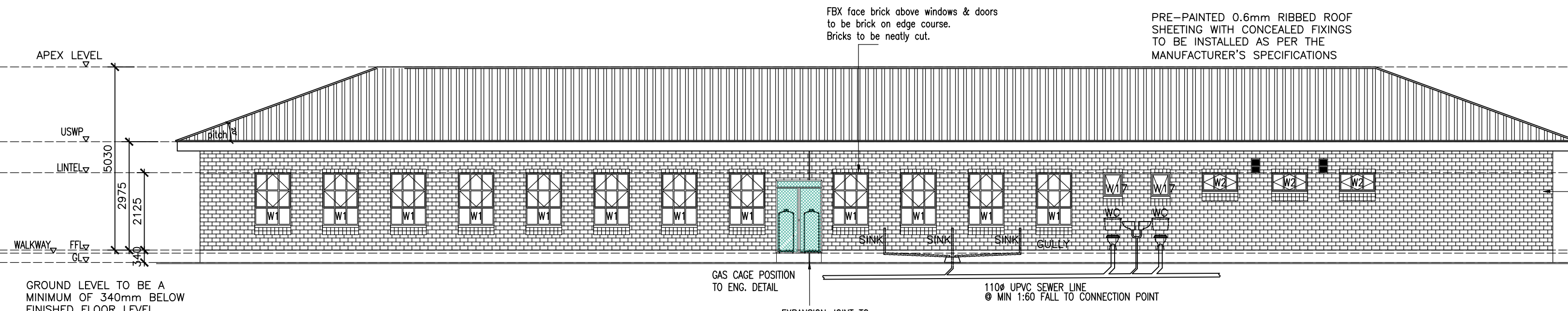
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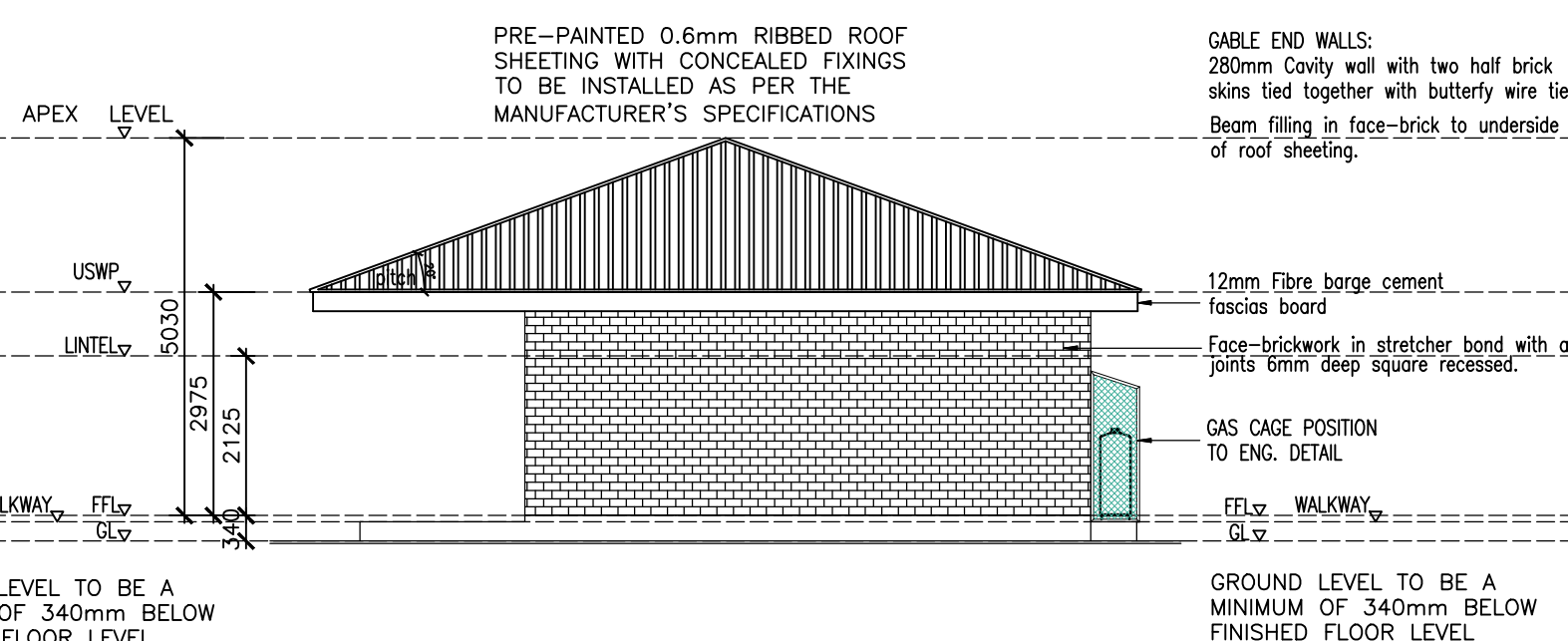
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SCALE 1:100



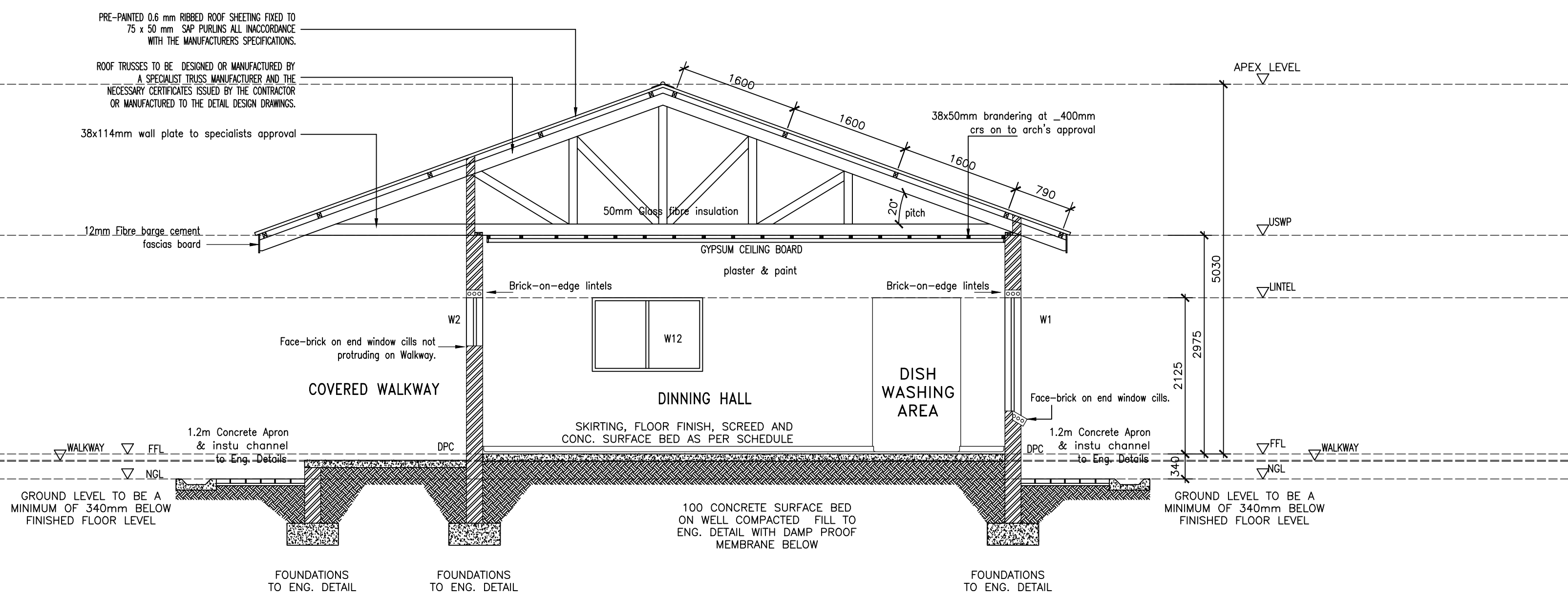
CAFETERIA BLOCK – ELEVATION 03
SCALE 1:100



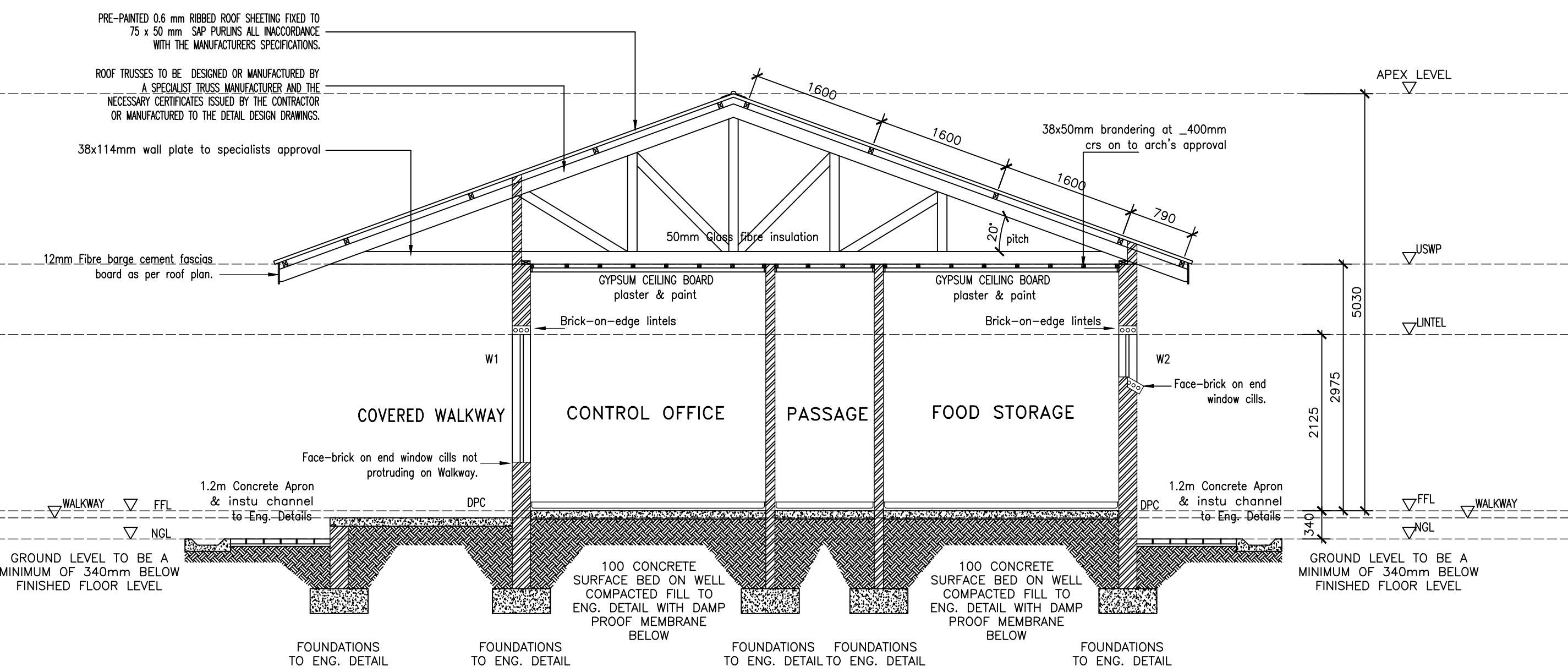
CAFETERIA BLOCK – ELEVATION 02
SCALE 1:100



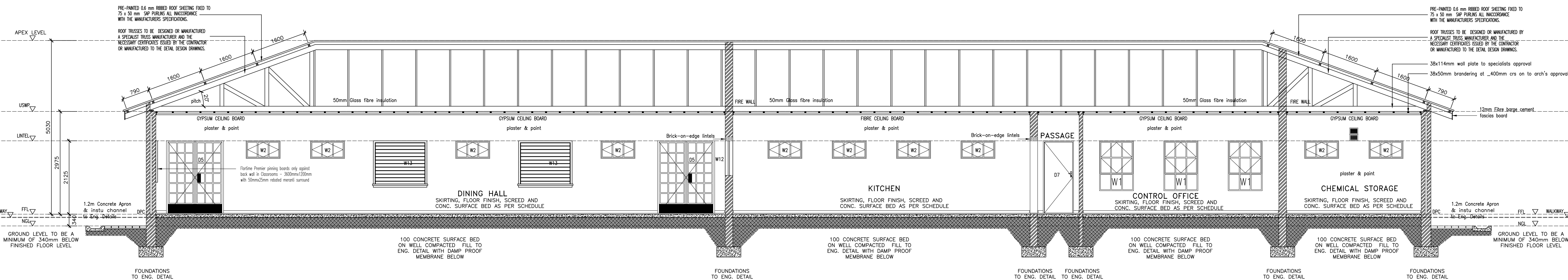
CAFETERIA BLOCK – ELEVATION 04
SCALE 1:100



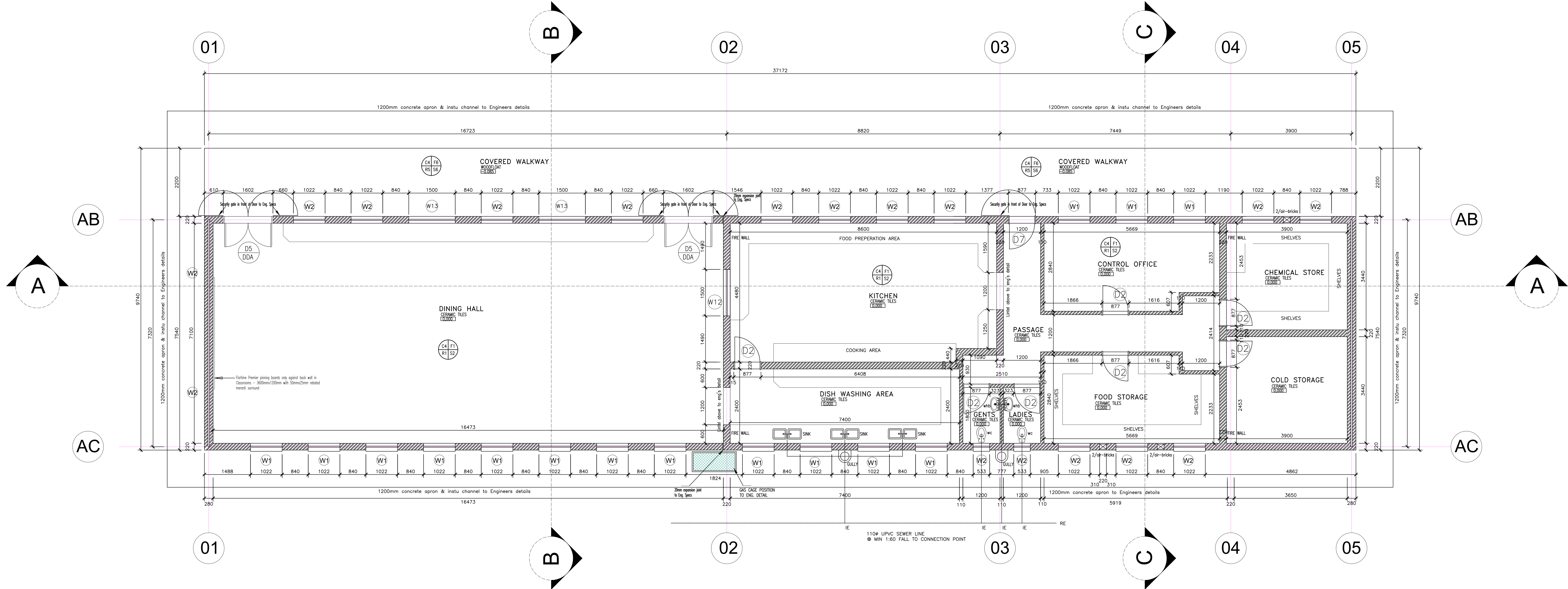
CAFETERIA BLOCK – SECTION BB
SCALE 1:50



CAFETERIA BLOCK – SECTION CC
SCALE 1:50



CAFETERIA – SECTION AA
SCALE 1:50



CAFETERIA BLOCK – FLOOR PLAN
SCALE 1:50

F1	2.0mm thick x 2m wide x 20m fully flexible, non-directional heavy duty vinyl sheeting manufactured to specification EN 649 laid in approved adhesive and joints hot seam welded with approved welding rod in compliance to SABS 070. (Spread with a notched trowel to manufacturers installation specifications), on cement screed. Colour and pattern to architects approval.	S2	Ex 75mm x 20mm moulded hardwood skirting to comply with SABS 1099, fixed to walls in long lengths with splayed heading joints and mitred corners with screws and plugs at centres not exceeding 600mm, and fitted with a 19mm x 19mm quadrant beading. The skirting to be varnished with 3 no. Coats of egg shell clear varnish to comply to SABS 381 type 1.
F5	600mm x 600mm x 9mm thick porcelain tiles in matt finish laid to approved pattern using approved adhesive and grout. All to be manufactured and installed in strict compliance to the latest SANS approved standards. Colour and end finish to architects approval.	S5	600mm x 100mm high x 9mm thick porcelain tile skirting with cove base and straight top, and complete with A4 and S4 corner trims, manufactured to SABS 1449 and laid using approved adhesive and grout in strict accordance to manufacturer's recommendations.
F6	22 mm thick unglazed Granolithic finish composed of one part cement, one part fine sand, two parts coarse sand and one part granite that would pass through a 5mm mesh sieve; laid by specialist in panels not exceeding 10 sq.m. divided with approved brass dividing strips. All to be manufactured and installed in strict compliance to the latest SABS approved standards. Colour, pattern and aggregate size to architects approval.	S6	75mm high x 20mm thick unglazed Granolithic skirting covered at 25mm dia. Radius to form a continuous skirting adjoining the floor finish. All to be manufactured and installed in strict compliance to the latest SABS approved standards.
C4	6mm thick fibre cement ceiling boards nailed on EX 38mm x 50mm timber branderding fixed with all necessary accessories, finished with 3 No. coats of super PVA external quality paint colour to PA's approval. All to be manufactured and installed in strict compliance to the latest SABS approved standards.	R3	2 no. coats of double velvet PVA matt finish emulsion paint to SABS 1586 applied on plastered surface primed and with 1 no. coat undercoat to SABS 681 grade1, in accordance to manufacturer's instructions.
R1	FBX face brick in stretcher bond to comply with SABS 227 and forming part of the structural work to bottom of window, from this level, apply 2 no. coats of double velvet PVA matt finish emulsion paint to SABS 1586 applied on plastered rhinolite skimmed surface primed with 1 no. coat undercoat to SABS 681 grade1, in accordance to manufacturer's instructions to wall plate level.	R5	FBX face brick in stretcher bond to comply with SABS 227 and forming part of the structural work.

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	046	0



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CNR TRICHARDS & GRIPPE
ROAD Tel : 011 894 7615
BARTLETT X91, BOKSBURG Cell : 073 232 9350
PO BOX 717, BOKSBURG Fax : 086 733 6604
1460 Email : ulunj@umarchitects.co.za

GENERAL NOTES

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SECTION NOTES

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- D.P.C. TO WINDOWS AND CILLS
- CONC. LINTELS OVER ALL WINDOWS
- OPSCURE GLASS TO ALL BATHROOMS

DRAINAGE NOTES

- I.E.'s TO ALL BENDS AND JUNCTIONS IN DRAIN WITH MARKED COVERS AT GROUND LEVEL
- RE-SEAL TRAPS TO ALL WASTE FITTINGS
- W.P.'s TO BE FULLY ACCESSIBLE ALONG ENTIRE LENGTH
- WHERE W.P.'s PASS IN OR BELOW FLOOR SLAB THEY ARE TO BE SLEEVED WITH C.E.'s AT BOTH ENDS IN EASILY ACCESSIBLE POSITIONS
- WHEN SOIL PIPE DROP EXCEEDS 1.22m ADEQUATE ANTI-SIPHONAGE TO BE PROVIDED
- 38 WASTE PIPE TO BASIN / BATH
- 50 WASTE PIPE TO SINK, W.M. AND SHOWER
- BEGINNING OF DRAIN RUN TO HAVE INVERT LEVEL OF 450mm BELOW FGL MINIMUM.

SCHEDULE OF AREAS.

revisions	by	date	no

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job
**CONSTRUCTION OF JOHN TAOLE
GAETSEWE NEW SCHOOL AND
HOSTELS**



**INDEPENDENT DEVELOPMENT
TRUST FOR
DEPARTMENT OF EDUCATION
NORTHERN CAPE**

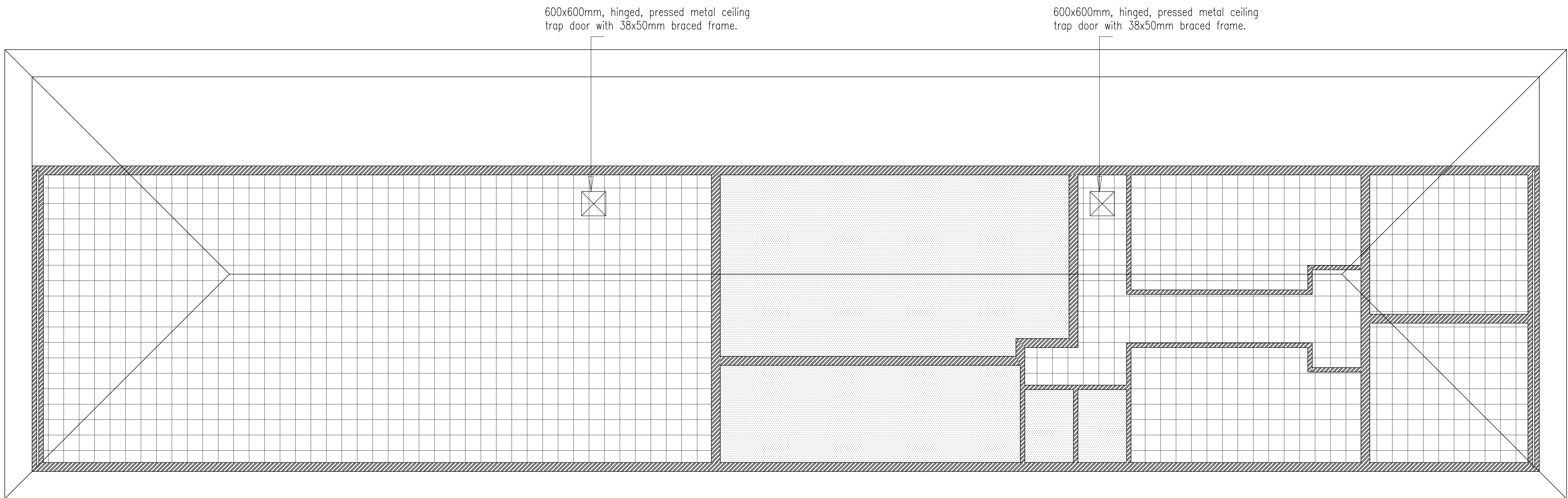
site
**PORTION 0 OF FARM MOTIITON 509
HM - DITHAKONG VILLAGE JMM
KURUMAN**

drawing
**FLOOR PLAN -
CAFETERIA BLOCK**

scale	date started	designed by	drawn by
A/S	04/03/2016	UM	AJ

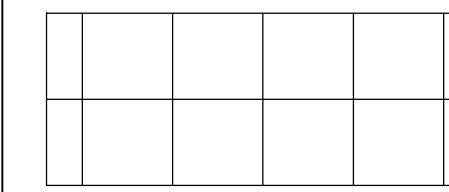
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consult	dwg stage	location	sheet no	rev	

cad file



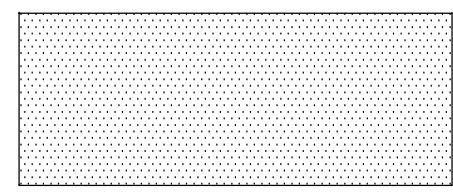
CAFETERIA BLOCK – CEILING PLAN
SCALE 1:50

LEGEND



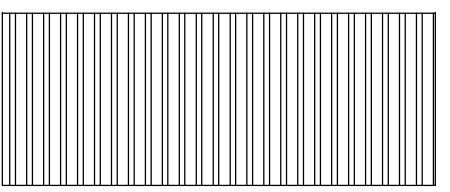
CEILING TYPE: AA
GYPSUM CEILING BOARD:
1200x6.4mm thick gypsum board complete with "H" profile junction strips and 50x19mm SA pine cornice. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.



CEILING TYPE: AB
FIBRE CEMENT BOARD:
1200X6mm Thick pressed fibre cement ceiling boards complete with mild steel "H" profile junction strips and 50x19mm S.A.pine cornices. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

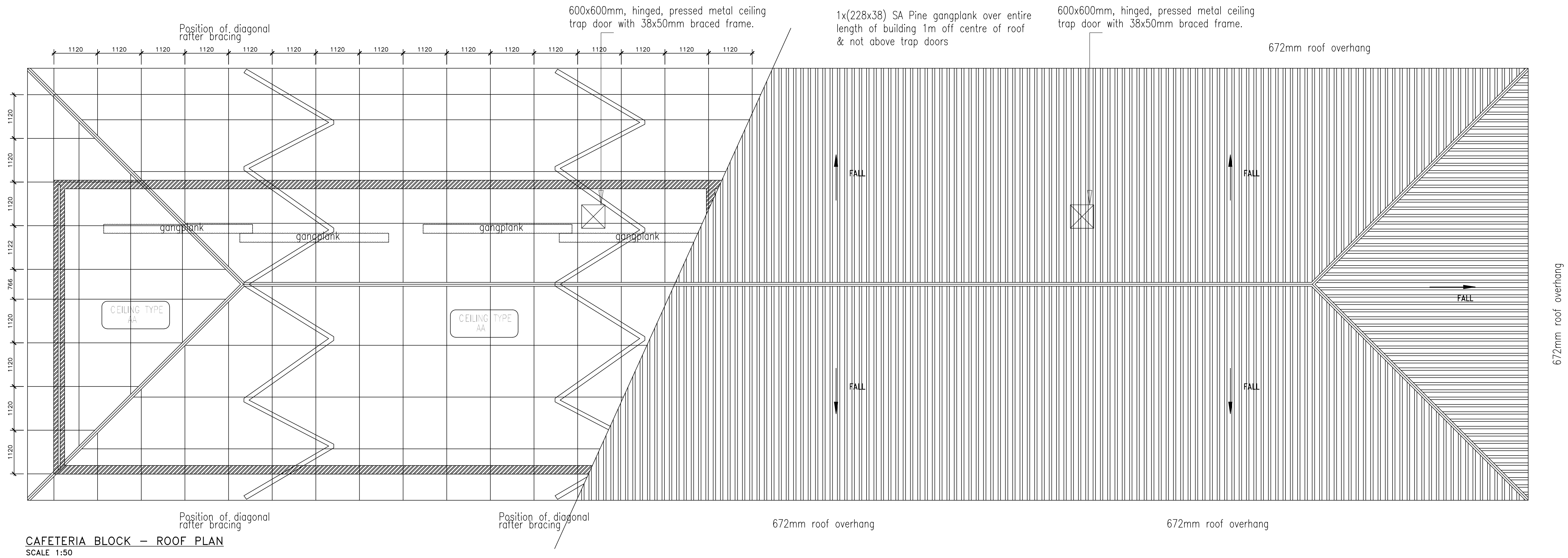
NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.



CEILING TYPE: AC
EMULSION (PVA) PAINT ON PLASTERED SLAB–NOT SKIMMED

2 no. coats PVA emulsion ceiling paint in matt finish to SABS 1586 applied on concrete slab surface primed with 1 no. undercoat, in accordance with manufacturer's instructions. All to be manufactured and installed in strict compliance to the latest SANS approved standards.

NOTE:
PROVIDE 50mm FIBREGLASS INSULATION ON ALL CEILINGS.



CAFETERIA BLOCK – ROOF PLAN
SCALE 1:50

ROOF NOTE :
Ribbed roof sheeting with cocealed fixings at 20 deg Pitch on 75 x 50 purlins at a max 1600mm centres. On trusses at 1 200mm max centres (maximum) on 50 x 114 wall plate.

All bolt holes are to be drilled.

TRUSS NOTE:–
All internal walls to be built up to a minimum of 2 brick coarss above ceiling height. NB. At truss tie beams, walls are to be kept clear of truss so that no wall to be kept clear of truss so that no wall or wall finish will touch any truss member.

NOTE:

1. Vertical bracing (DT69) and tie beam and web runner to be continous with splices as per details where necessary.

2. Nails to be 3.5Ø x 75mm long and 4.0Ø x 100mm as shown

min. nail spacing = 10 x diameter
min. edge distance = 5 x diameter
min. end distance = 15 x diameter
projecting nail points to be clinched

3. Trusses to be plumb with straight rafters before bracing is fixed.

4. Joints to accurately cut and trusses securely made and so fitted that components are drawn together tightly.

5. Adequate temporary bracing to be provided during erection untill permanent bracing is installed.

6. All roof timbers to comply with specifications.

7. Truss construction and erection must be carried out to the approval of a professional engineer.

8. The roof structure must be inspected and approved by a professional engineer before roof tiles may be laid.

9. For details of STANDARD roof truss construction refer to 00G–1341/37 & 38

10. For details of vertical bracing on roof trusses see DT69.

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	048	0



UM CONSULTANTS
MULTI DISCIPLINARY CONSULTANTS

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CNR TRICHARDS & GRIPPEW
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BARTLETT X91, BOKSBURG Cell : 073 232 9350
PO BOX 717, BOKSBURG Fax : 086 733 6604
1460 Email : ulunj@umarchitects.co.za

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SCHEDULE OF AREAS.

revisions	by	date	to

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job **CONSTRUCTION OF JOHN TAOLE GAETSEWE NEW SCHOOL AND HOSTELS**

client 

INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

site **PORTION 0 OF FARM MOTIITON 509 HM - DITHAKONG VILLAGE JMM KURUMAN**

drawing **ROOF AND CEILING PLAN - CAFETERIA BLOCK**

scale	date started	designed by	drawn by
A/S	04/03/2016	UM	AJ






dwg.no

ARC CON RES 048 0

consult dwg stage location sheet no rev

cad file



LIGHTING	
	COMPLETE EXTERNAL WALL MOUNT 22W LED SQUARE BULKHEAD, AS SPECIFIED
	COMPLETE 12X2W ENERGY SAVING SINGLE OPEN CHANNEL LIGHT, AS SPECIFIED
	COMPLETE 2X22W ENERGY SAVING DOUBLE OPEN CHANNEL LED LIGHT, AS SPECIFIED
	COMPLETE 2X22W ENERGY SAVING DOUBLE CHANNEL LED LIGHT, WITH POLYCARBONATE DIFFUSER AS SPECIFIED
	DENOTES PHOTO CELL
11EYER 1WAY LIGHT SWITCH MOUNT AT 1400mm	
APFL UNLESS OTHERWISE INDICATED BY ARCHITECT	
ELECTRICAL DISTRIBUTION BOARD, IN ACCORDANCE WITH ELECTRICAL CONSULTANT SPECIFICATION - SANS REGULATION.	

[illegible]

project

description

drawn	design	approved	date
L.T	C.S	I.B	2016-06-17

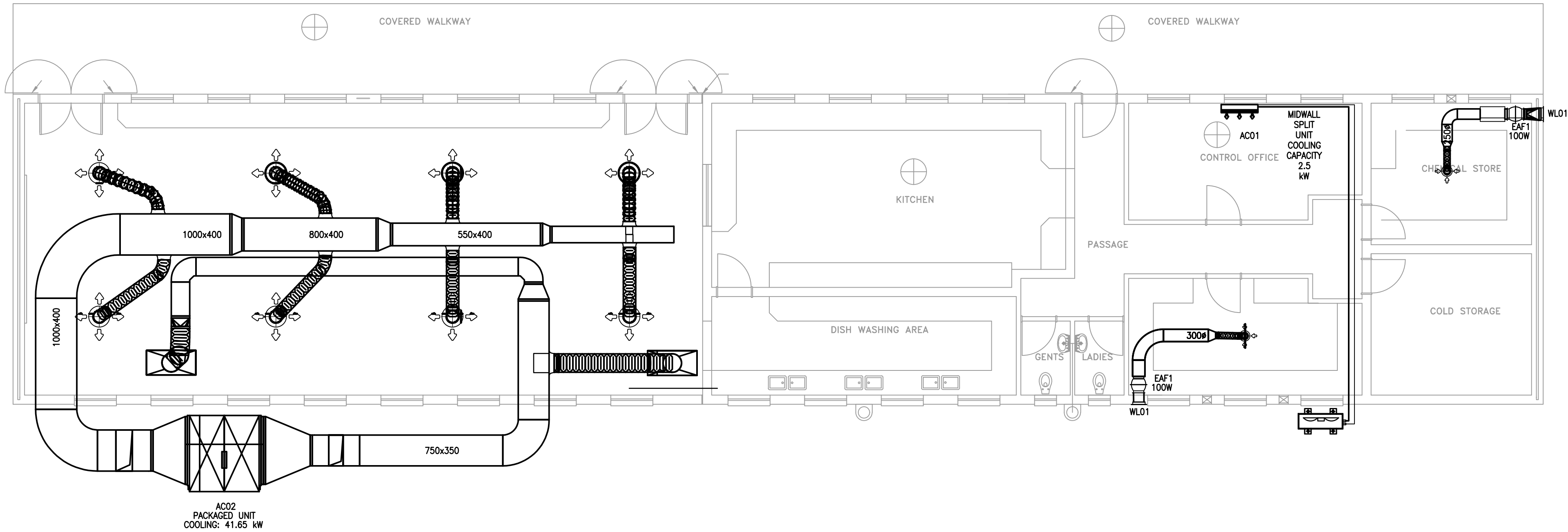
discipline	scale
ELECTRICAL	1:100
drawing no	rev.
K2040E-E-719	0

REFERRAL DRAWINGS			
DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE
FLOOR PLAN, CEILING PLAN & ROOF PLAN FOR NUTRITION BLOCK	ARC_CON_RES_307	11	04/03/201



ELECTRICAL	1:100
drawing no	rev.
K2040E-E-719	0

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DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE
FLOOR PLAN, CEILING PLAN & ROOF PLAN FOR NUTRITION BLOCK	ARC_CON_RES_307	11	04/03/201



CAFETERIA BLOCK – FLOOR PLAN
SCALE 1:50

EQUIPMENT SCHEDULE					
ITEM	DESCRIPTION	COOLING CAPACITY(kw)	POWER INPUT(kw)	POWER SUPPLY(V/PH/HZ)	Quantity
1	AC01 MIDWALL SPLIT UNIT	2.5	0.21	220/1/50	1
2	AC02 PACKAGED UNIT	41.65	18	380/3/50	1

MECHANICAL AIR TERMINAL DEVICES SCHEDULE				
TAG	DESCRIPTION	Flow (l/s)	CONN. SIZE (mm)	Quantity
DV01	DISC VALVE	100	ø150	2
RAG01	RETURN AIR GRILLE	735	1200x600	2
SAD01	SUPPLY AIR GRILLE	302	ø300	8
WL01	WEATHER LOUVRE	100	300 X 300	2

FAN SCHEDULE					
ITEM	DESCRIPTION	Flow (l/s)	STATIC PRESSURE (Pa)	POWER INPUT (kW)	POWER SUPPLY(V/PH/HZ)
1	EAF01 –EXTRACTOR FAN	100	350	0.67	220/1/50

NOTES:

- Ducting to be manufactured in accordance to SMACNA Standards
- All duct dimensions including dimensions for insulated ducts refers to the sheet metal size.
- All duct passing through concrete or brick from the walls by means of a high density glass fibre collar of at least 25mm in thickness.
- Galvanised steel shall be used for all air-conditioning and ventilation ducting
- All ducting shall be Mezz flanged
- All supply and return air ducting exposed to outdoors shall be double clad and insulated against direct solar heat gains
- All supply air ducting shall be insulated as indicated on the drawing
- Duct Hangers

LONGEST DUCT DIMENSION (mm)	ROUND HANGER (mm)	GALVANISED STRIP HANGERS (mm)	SHELF ANGLES	HANGER SPACING (m)
UP TO 760	6	25x16	25x25x3	3.0
761 TO 1000	10	25x16	38x38x3	3.0
1000 TO 2100	10	25x16	50x50x3	2.4
2100 TO 2400	10	25x16	50x50x6	2.4
2401 TO ABOVE	12	25x16	50x50x6	2.4

- ALL DIFFUSER SUPPLY FLEXIBLE TO COME ON JUBILEE CLAMPS AND SEALED WITH DUCT TAPE ON FINAL INSTALLATION.
- ALL SUPPLY AIR DUCTING TO BE INSULATED EXTERNALLY WITH 25mm FOIL FACED FIBREGLASS TYPE FRK - ONLY AC DUCT
- ALL FLEXIBLES TO BE THERMALLY INSULATED - ONLY AC DUCT

- LEGEND
- WALL MOUNTED THERMOSTAT MOUNTED @ 1450mm A.F.F.L
 - ABOVE CEILING CONTROL THERMOSTAT LINKED @ DIFFUSER.
 - CEILING MOUNTED TEMPERATURE SENSOR LINKED TO BMS. (ALL SCREEN CONTROL CABLES TO RUN IN P8000 UNISTRUT).
 - STATIC PRESSURE SENSOR MOUNTED IN DUCT
 - ZONE TEMPERATURE SENSOR @ RETURN AIR DUCT
 - PRESSURE DISPLAY UNIT ABOVE DOOR
 - DOOR UNDERCUT - 25mm
 - CONDENSATE DRAIN PUMP

- ELECTRICAL LEGEND
- 1 PHASE ELECTRICAL EQUIPMENT
 - 3 PHASE ELECTRICAL EQUIPMENT
 - SA PLUG COMPLETE WITH SHAVED EARTH PINS
 - AC-DB
 - P 8000 UNISTRUT 2 OFF
 - REFRIGERANT PIPING - GAS
 - REFRIGERANT PIPING - LIQUID
 - COIL CONDENSATE RUN OFF



Revisions			
REV.	DATE	BY	DESCRIPTION
0	15.07.2016	L M	Issued For Tender

CONSTRUCTION OF JOHN
TAOLO GAETSEWE NEW
SCHOOL AND HOSTEL

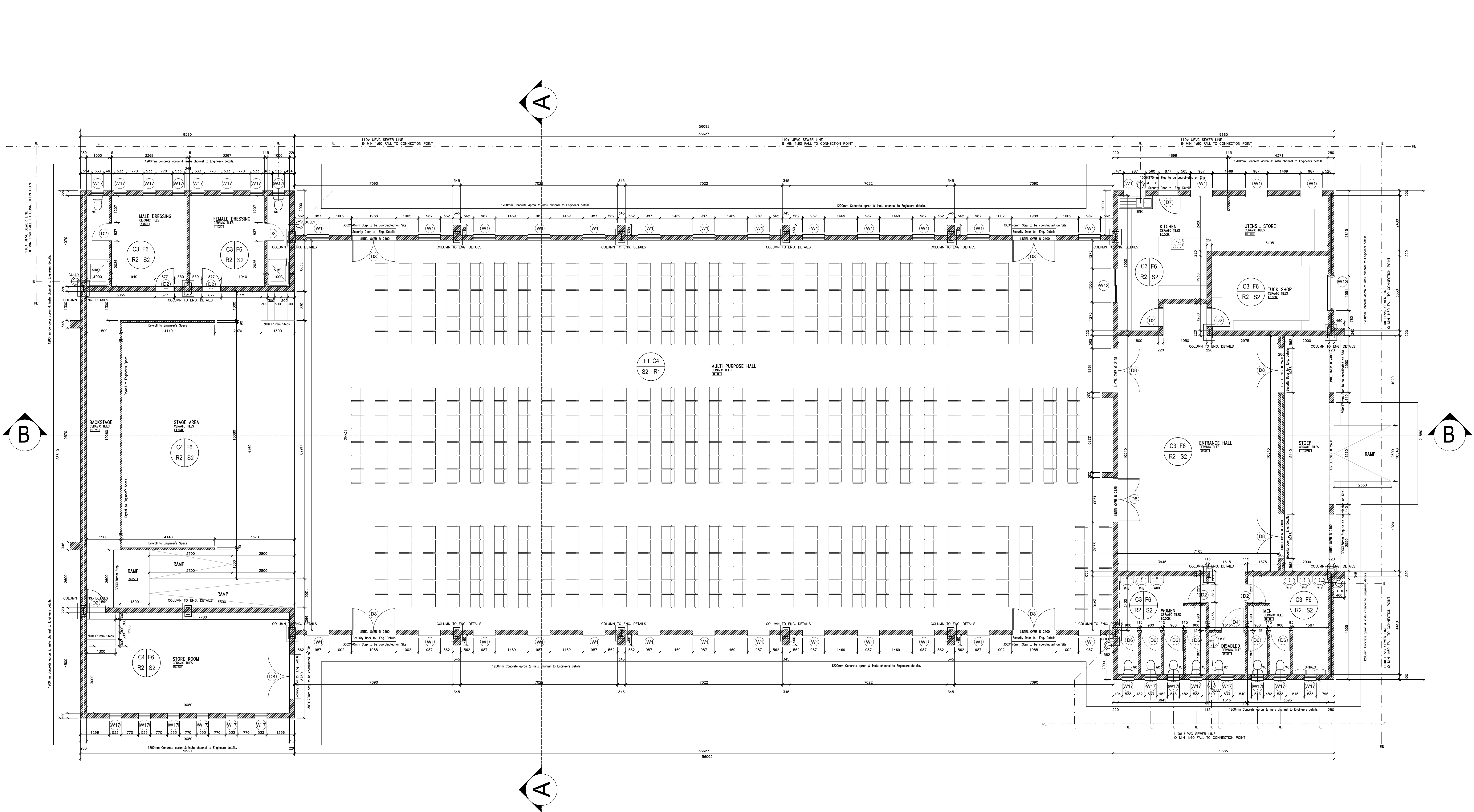
CAFETERIA BLOCK
HVAC LAYOUT



drawn	design	approved	date
KD	M.K	RH	2016-06-18

discipline	scale
MECHANICAL	1:50
drawing no	rev.
K2040MV-09	0

REFERAL DRAWINGS			
DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE



MULTIPURPOSE HALL – GROUND FLOOR PLAN

job no.

consult.

stage

location

sheet no.

rev.

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SCHEDULE OF AREAS.

revisions	by	date	no

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job

CONSTRUCTION OF JOHN TAOLE GAETSEWE NEW SCHOOL AND HOSTELS

client

idt

independent development trust

INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

site

PORTION 0 OF FARM MOTIITON 509 HM - DITHAKONG VILLAGE JMM KURUMAN

drawing

FLOOR PLAN - MULTI PURPOSE HALL

scale

date started

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04/03/2016

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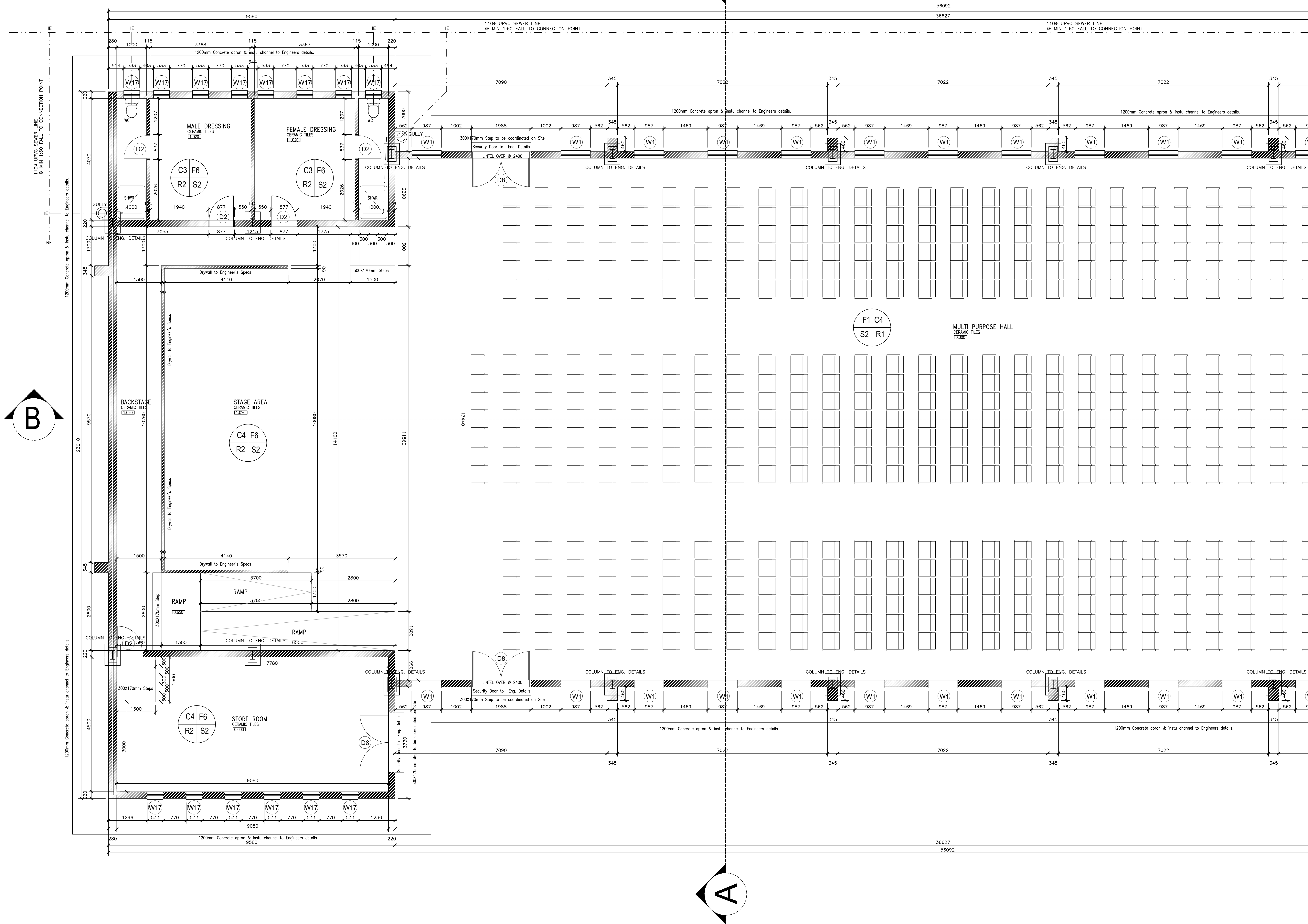
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location

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rev

cod file



MULTIPURPOSE HALL – GROUND FLOOR PLAN
SCALE 1:50

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	003	0

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revisions	by	date	no

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client **INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE**

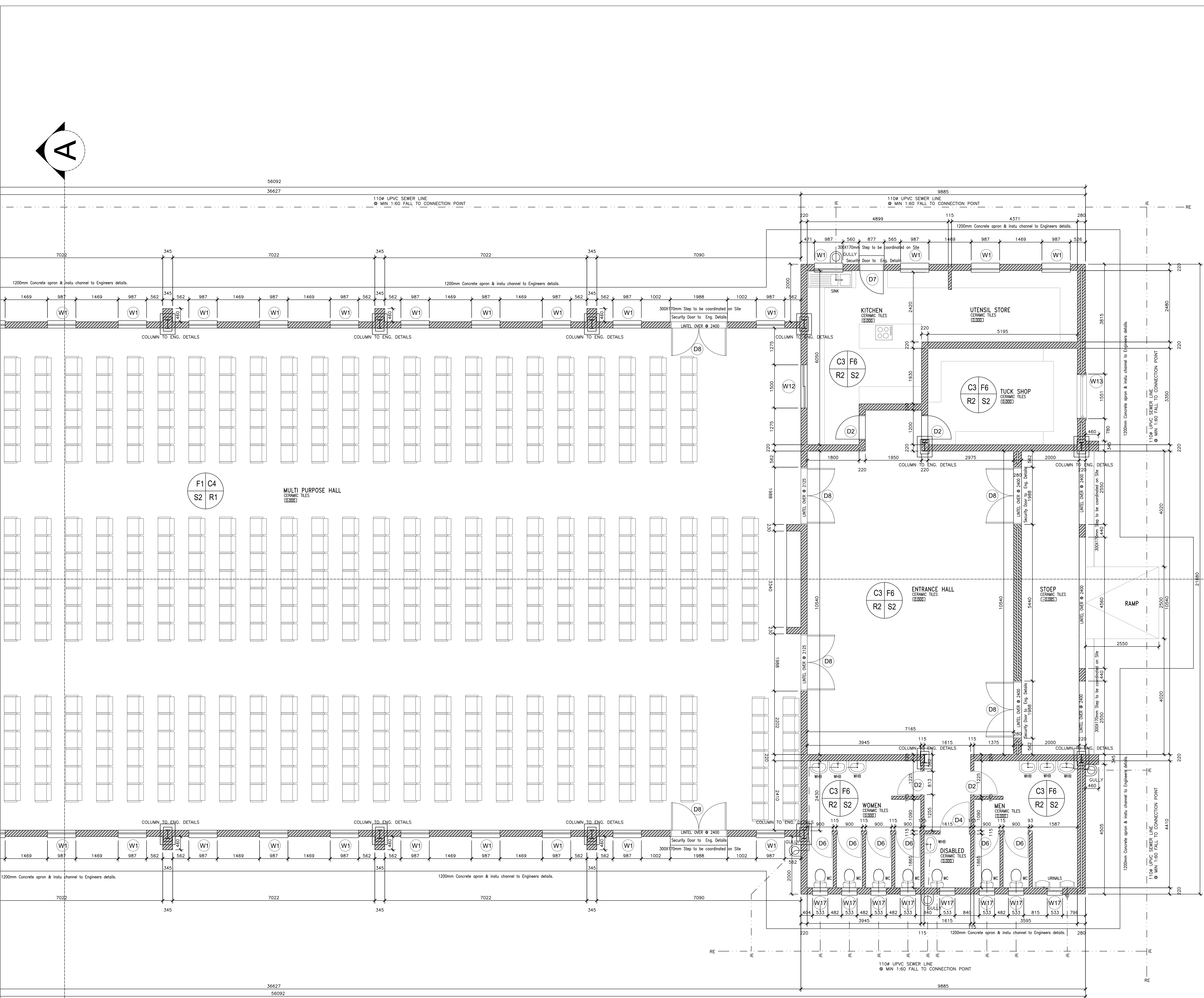
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drawing **PART FLOOR PLAN - MULTI PURPOSE HALL**

scale	date started	designed by	drawn by
	04/03/2016	UM	AJ


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ARC	CON	RES	003	0	

cad file



MULTIPURPOSE HALL – GROUND FLOOR PLAN
SCALE 1:50

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	004	0



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revisions	by	date	no


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client 
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drawing **PART FLOOR PLAN - MULTI PURPOSE HALL**

scale	date started	designed by	drawn by
	04/03/2016	UM	AJ

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ARC	CON	RES	004	0	0

cad file



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CONSTRUCTION OF JOHN TAOLE
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HOSTELS



site PORTION 0 OF FARM MOTIITON 509
HM - DITHAKONG VILLAGE JMM
KURUMAN

scale [REDACTED]	date started 04/03/2016	designed by UM	drawn by AJ	
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job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	007	0



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SCHEDULE OF AREAS.

revisions	by	date	no

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job **CONSTRUCTION OF JOHN TAOLE GAETSEWE NEW SCHOOL AND HOSTELS**



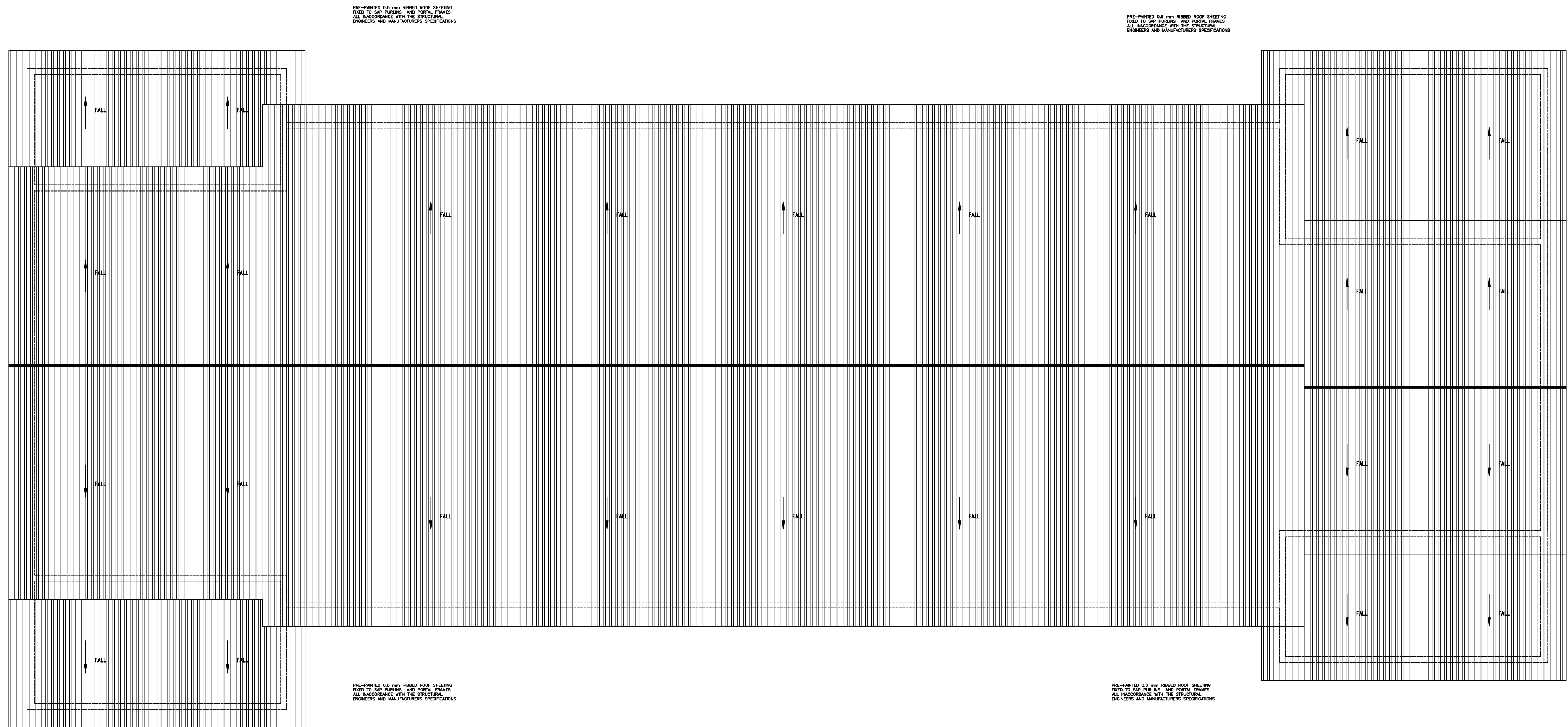
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site **PORTION 0 OF FARM MOTIITON 509 HM - DITHAKONG VILLAGE JMM KURUMAN**

drawing **ROOF AND CEILING PLAN - MULTI PURPOSE HALL**

scale	date started	designed by	drawn by
	04/03/2016	UM	AJ

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consult	dwg	stage	location	sheet	no
cad	file				

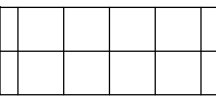


MULTIPURPOSE HALL – ROOF PLAN
SCALE 1:100



MULTIPURPOSE HALL – CEILING PLAN
SCALE 1:100

LEGEND

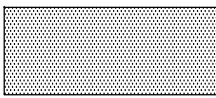


CEILING TYPE: AA
GYPSUM CEILING BOARD:
1200x64mm thick gypsum board complete with 74" profile junction strips and 50x10mm SA pine cornice. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.

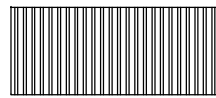
NOTE:

PROVIDE 50mm THERMOBONDED POLYESTER FIBRE INSULATION.
ACOUSTIC CEILING BOARDS WILL RUN WITH THE SLOPE OF ROOF IN THE HALL AND STAGE.
GYPSUM AND FIBRE CEMENT CEILING BOARDS WILL BE SUSPENDED AT LOWP LEVEL.



CEILING TYPE: AB
FIBRE CEMENT BOARD:
1200x6mm Thick pressed fibre cement ceiling boards complete with mild steel 74" profile junction strips and 50x10mm SA pine cornice. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.



CEILING TYPE: AC
EMULSION (PVA) PAINT ON PLASTERED SLAB-NOT SKIMMED
2 no. coats PVA emulsion ceiling paint in matt finish to SABS 1586 applied on concrete slab surface primed with 1 no. undercoat, in accordance with manufacturer's instructions. All to be manufactured and installed in strict compliance to the latest SANS approved standards.

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	006	0



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SECTION NOTES

- WATERPROOFING TO SPEC. DETAIL
- D.P.C. TO WINDOWS AND CILLS
- CONC. LINTELS OVER ALL WINDOWS
- OBSCURE GLASS TO ALL BATHROOMS

DRAINAGE NOTES

- I.E.'s TO ALL BENDS AND JUNCTIONS IN DRAIN WITH MARKED COVERS AT GROUND LEVEL
- RE-SEAL TRAPS TO ALL WASTE FITTINGS
- W.P.'s TO BE FULLY ACCESSIBLE ALONG ENTIRE LENGTH
- WHERE W.P.'s PASS IN OR BELOW FLOOR SLAB THEY ARE TO BE SLEEVED WITH C.E.'s AT BOTH ENDS IN EASILY ACCESSIBLE POSITIONS
- WHEN SOIL PIPE DROP EXCEEDS 1,22m ADEQUATE ANTI-SIPHONAGE TO BE PROVIDED
- 38 WASTE PIPE TO BASIN / BATH
- 50 WASTE PIPE TO SINK, W.M. AND SHOWER
- BEGINNING OF DRAIN RUN TO HAVE INVERT LEVEL OF 450mm BELOW FGL MINIMUM.

SCHEDULE OF AREAS.

revisions	by	date	no

THIS DRAWING IS COPYRIGHT

CONSTRUCTION OF JOHN TAOLE
GAETSEWE NEW SCHOOL AND
HOSTELS

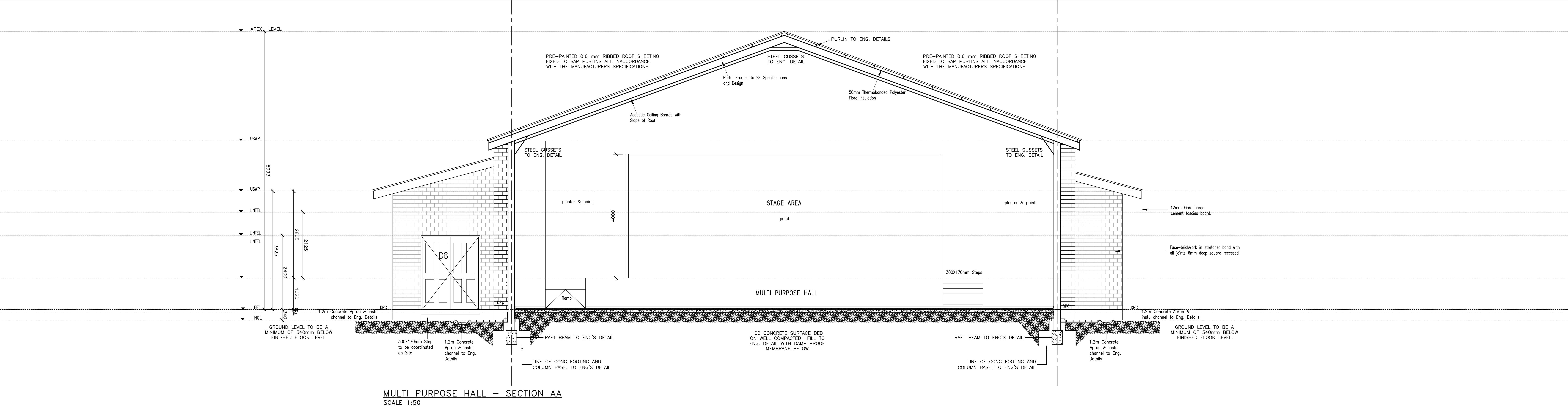


INDEPENDENT DEVELOPMENT
TRUST FOR
DEPARTMENT OF EDUCATION
NORTHERN CAPE

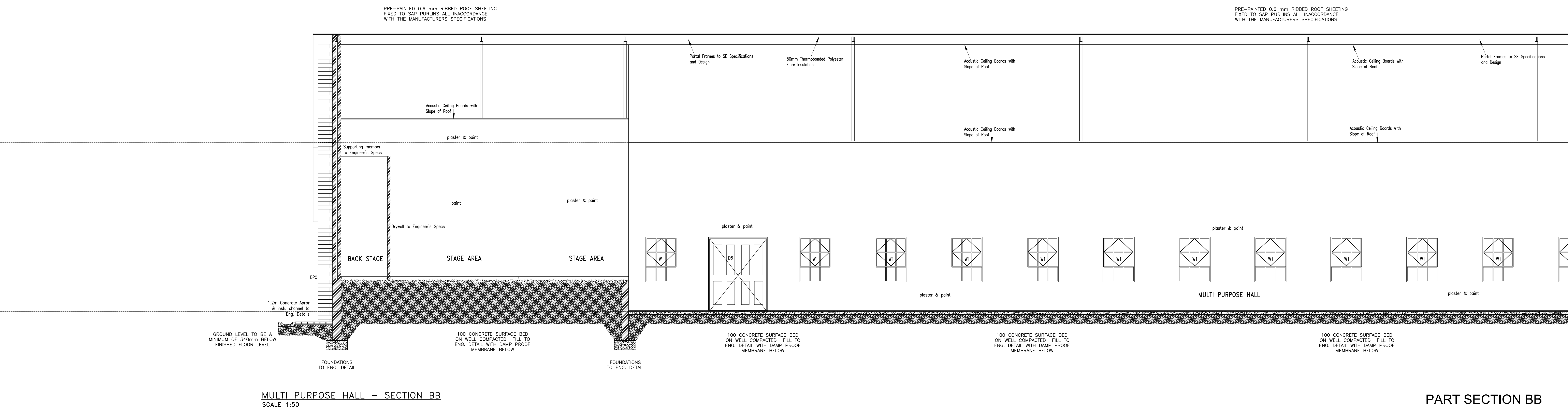
site PORTION 0 OF FARM MOTIITON 509
HM - DITHAKONG VILLAGE JMM
KURUMAN

drawing SECTIONS AA □ BB -
MULTI PURPOSE HALL

scale	date started	designed by	drawn by
ARC	04/03/2016	UM	AJ
dwg.no			
ARC			
consult	dwg stage	location	sheet no. rev
cad file			

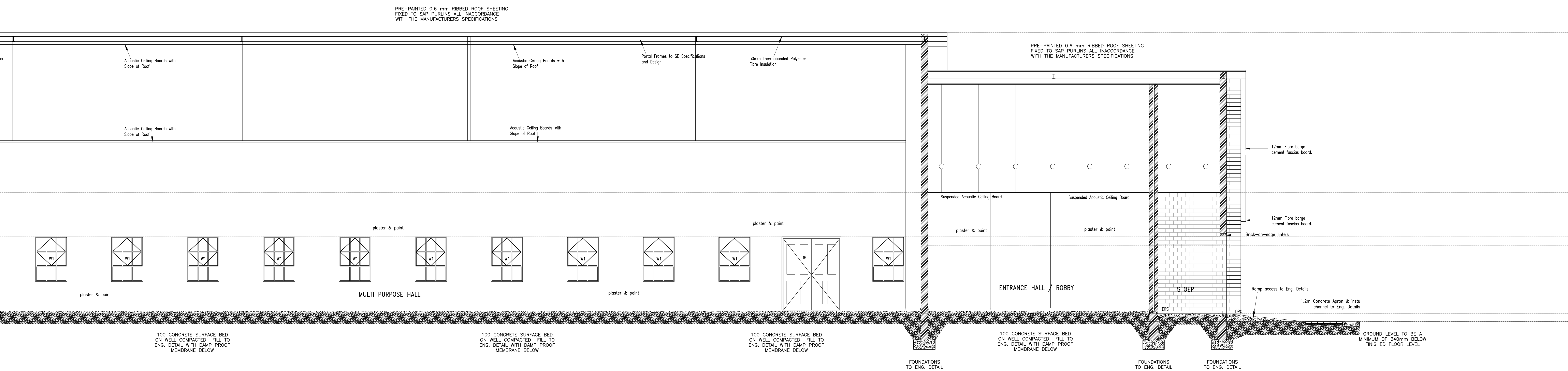


MULTI PURPOSE HALL – SECTION AA
SCALE 1:50



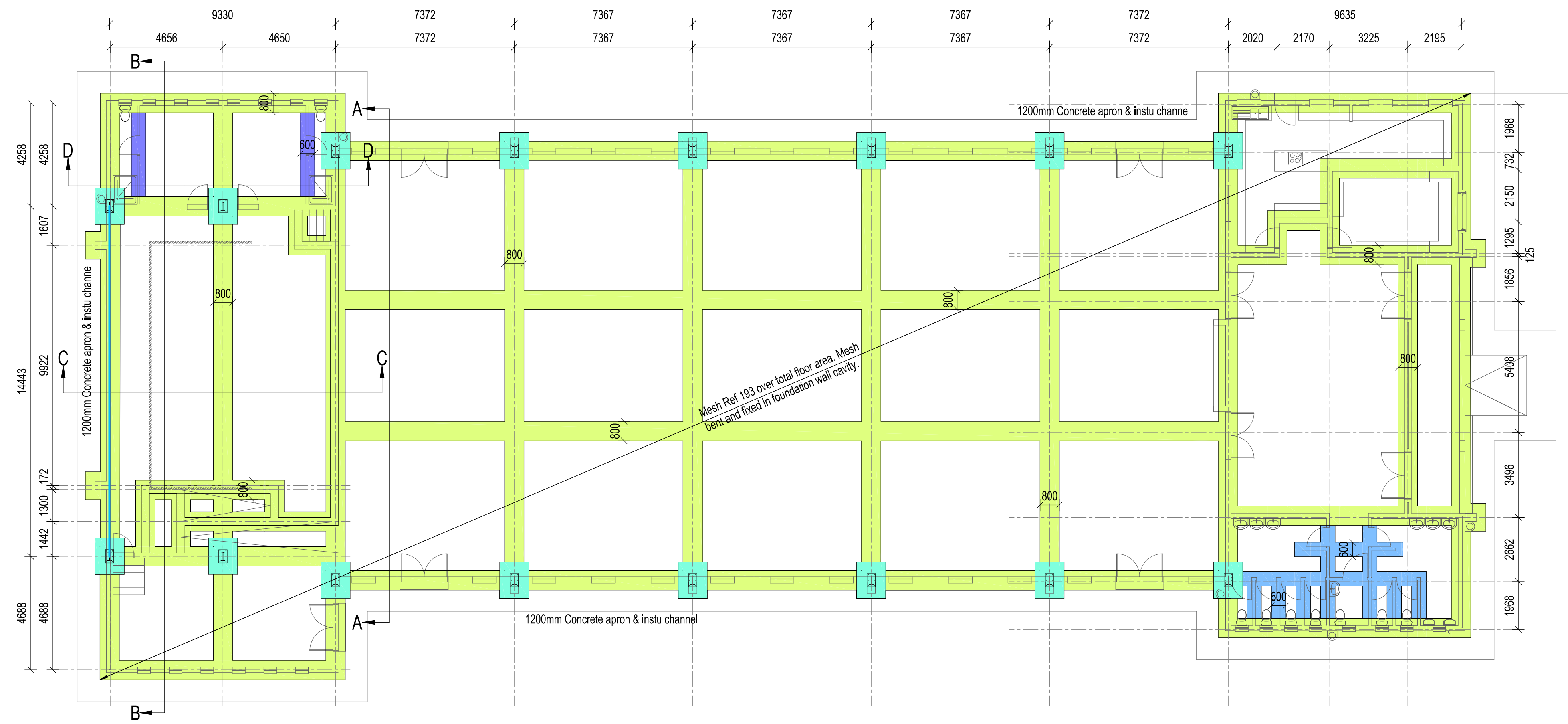
MULTI PURPOSE HALL – SECTION BB
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PART SECTION BB

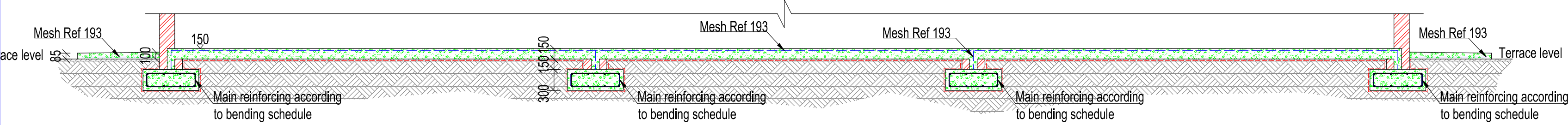


MULTI PURPOSE HALL – SECTION BB
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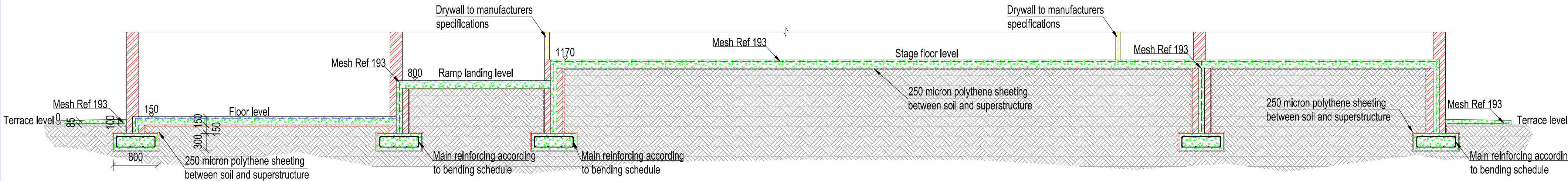
PART SECTION BB



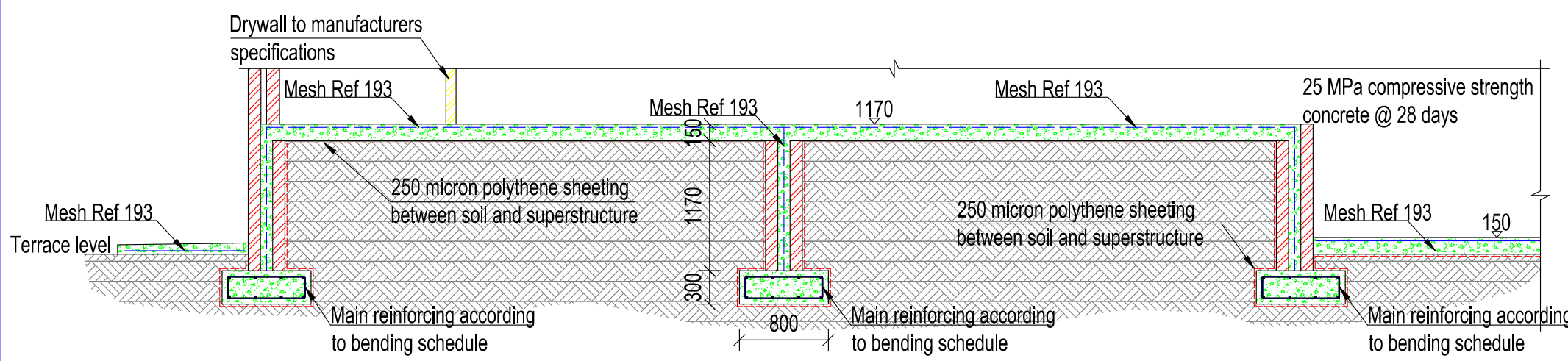
LAYOUT: HALL FOUNDATION
scale 1:125



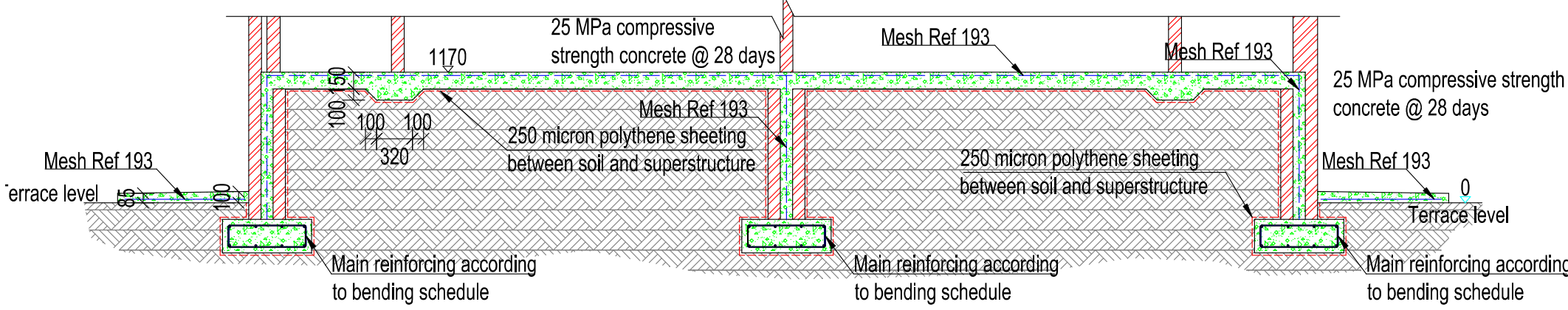
SECTION A-A: HALL FOUNDATION
scale 1:50



SECTION B-B: HALL FOUNDATION
scale 1:50



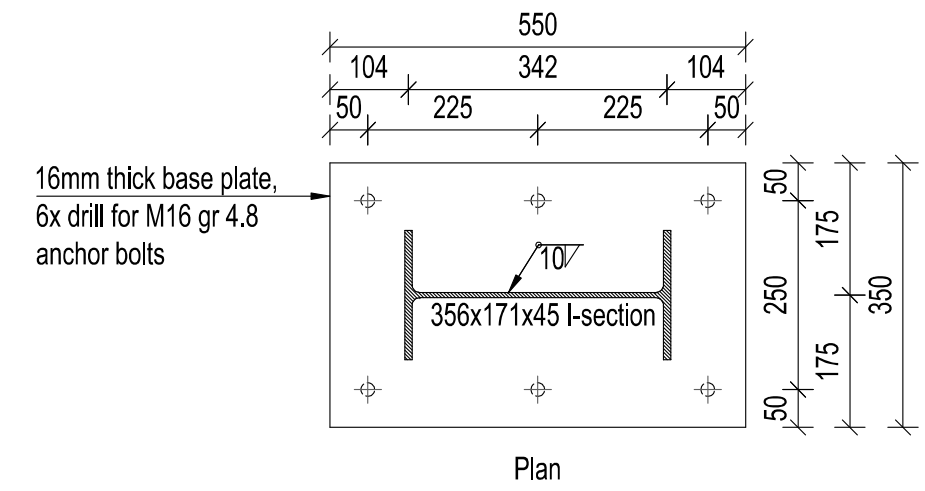
SECTION C-C: HALL FOUNDATION
scale 1:50



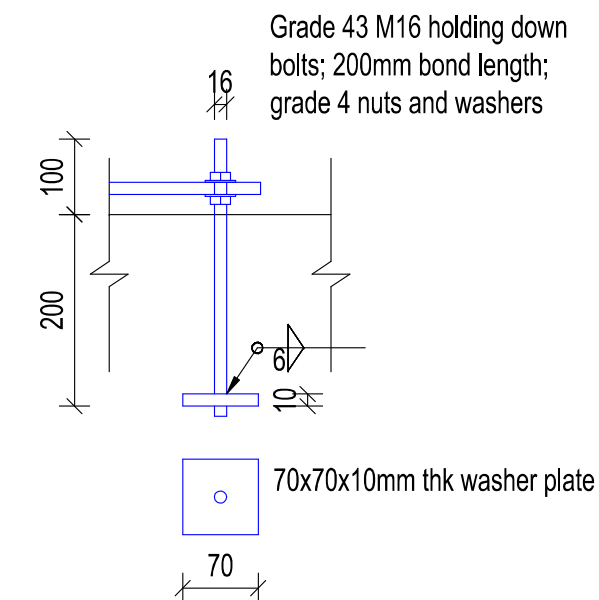
SECTION D-D: HALL FOUNDATION
scale 1:50

MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
Base	14	8 7	Y12 Y12	1300 1600	112 98	A B	35 35	1100 1400				
	8	10	12	16	20	25	32	40	TOT	Cover: Bot:50 mm Sides:50 mm Top:50 mm		
R										268		
Y			268							268		
TOT			268							268		

MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
Strip 800	1	708 965	Y12 R10	6000 2400	708 965	C SC	20 60	(6000) 200	700			
Strip 600	1	42 77	Y12 R10	6000 2000	42 77	D SD	20 60	(6000) 200	500			
	8	10	12	16	20	25	32	40	TOT			
R										1524		
Y		1524	3996							3996		
TOT		1524	3996							5520		



LAYOUT: BASEPLATE
scale 1:10



DETAIL: HD BOLT
scale 1:10

NOTE:

MAXIMUM HEIGHT FOR RETAINING
WALLS WILL BE 1200mm.

NOTES:

- BUILDING ACCURACY:
 - ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE 1.
 - DIMENSIONS TO BE CONFIRMED ON SITE.
 - STRUCTURAL PLANS MUST BE READ IN CONJUNCTION WITH ARCHITECTS PLANS.
 - PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPANCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT.

- CONCRETE:
 - 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
 - CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER;
 - NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
 - MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED.
 - ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- STEEL MIN 350W;
 - 6mm FILLET WELDS MIN REQUIREMENT,
 - 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.

- DESIGN PARAMETERS:
 - STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
 - Structure self weight
 - Imposed loads
 - 2.5kN/m²
 - 0.3kN/m²

- STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162;
 - MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE I-1 OR SANS 10162 TABLE D1.
 - REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
 - SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
 - STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-12.
 - UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
 - REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2.
 - BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

- ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:
- SABS 0155: Accuracy in buildings
 - SABS 0145: Concrete Masonry construction
 - SABS 0249: Masonry walling
 - SABS 1215: Concrete masonry units
 - SABS 227: Burnt clay masonry units
 - SABS 1090: Aggregates from natural sources.
 - SABS 0243: The manufacture and erection of timber trusses.
 - SANS 1200 A 1988 Section A: General
 - SANS 1200 AA 1988 Section AA: General (small works)
 - SANS 1200 AB 1988 Section AB: Engineer's office
 - SANS 1200 AD 1988 Section AD: General (small dams)
 - SANS 1200 AH 1988 Section AH: General (structural)
 - SANS 1200 C 1980 Section C: Site clearance
 - SANS 1200 D 1988 Section D: Earthworks

- SANS 1200 DA 1988 Section DA: Earthworks (small works)
- SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)
- SANS 1200 DK 1986 Section DK: Gabions and piling
- SANS 1200 DM 1981 Section DM: Earthworks (roads, subgrade)
- SANS 1200 DN 1982 Section DN: Earthworks (railway sidings)
- SANS 1200 O 1982 Section O: Concrete (structural)
- SANS 1200 GA 1982 Section GA: Concrete (small works)
- SANS 1200 GB 1984 Section GB: Concrete (ordinary buildings)
- SANS 1200 GE 1984 Section GE: Precast concrete (structural)
- SANS 1200 GF 1984 Section GF: Prestressed concrete
- SANS 1200 H 1990 Section H: Structural steelwork
- SANS 1200 HA 1990 Section HA: Structural steelwork (sundry items)
- SANS 1200 HB 1985 Section HB: Cladding and sheathing
- SANS 1200 HC 1988 Section HC: Corrosion protection of structural steelwork
- SANS 1200 HE 1983 Section HE: Structural aluminiumwork
- SANS 1200 L 1983 Section L: Medium-pressure pipe lines
- SANS 1200 LB 1983 Section LB: Bedding (pipes)

- SANS 1200 LC 1981 Section LC: Cable ducts
- SANS 1200 LD 1982 Section LD: Sewers
- SANS 1200 LE 1982 Section LE: Stormwater drainage
- SANS 1200 LF 1983 Section LF: Eff connections (water)
- SANS 1200 M 1998 Section M: Roads (general)
- SANS 1200 ME 1981 Section ME: Subbase
- SANS 1200 MF 1981 Section MF: Base
- SANS 1200 MFL 1996 Section MFL: Base (light pavement structures)
- SANS 1200 MG 1998 Section MG: Bituminous surface treatment
- SANS 1200 MH 1998 Section MH: Asphalt base and surfacing
- SANS 1200 MJ 1983 Section MJ: Segmented paving
- SANS 1200 MK 1983 Section MK: Kerbing and channelling
- SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT: INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT: CONSTRUCTION OF JOHN TAOLO GAETSEWE SCHOOL & HOSTEL

DRAWING: HALL: FOUNDATION LAYOUT & DETAILS

Amendments

DATE: 21/11/2016

SCALE: as shown

REFERENCE: dwp2016/001...

DATE: 21/11/2016

SCALE: as shown

REFERENCE: dwp2016/001...

DESIGN: M. Kromhout

DRAWN BY: S. Laynes

CHECKED & APPROVED

DATE: 21/11/2016

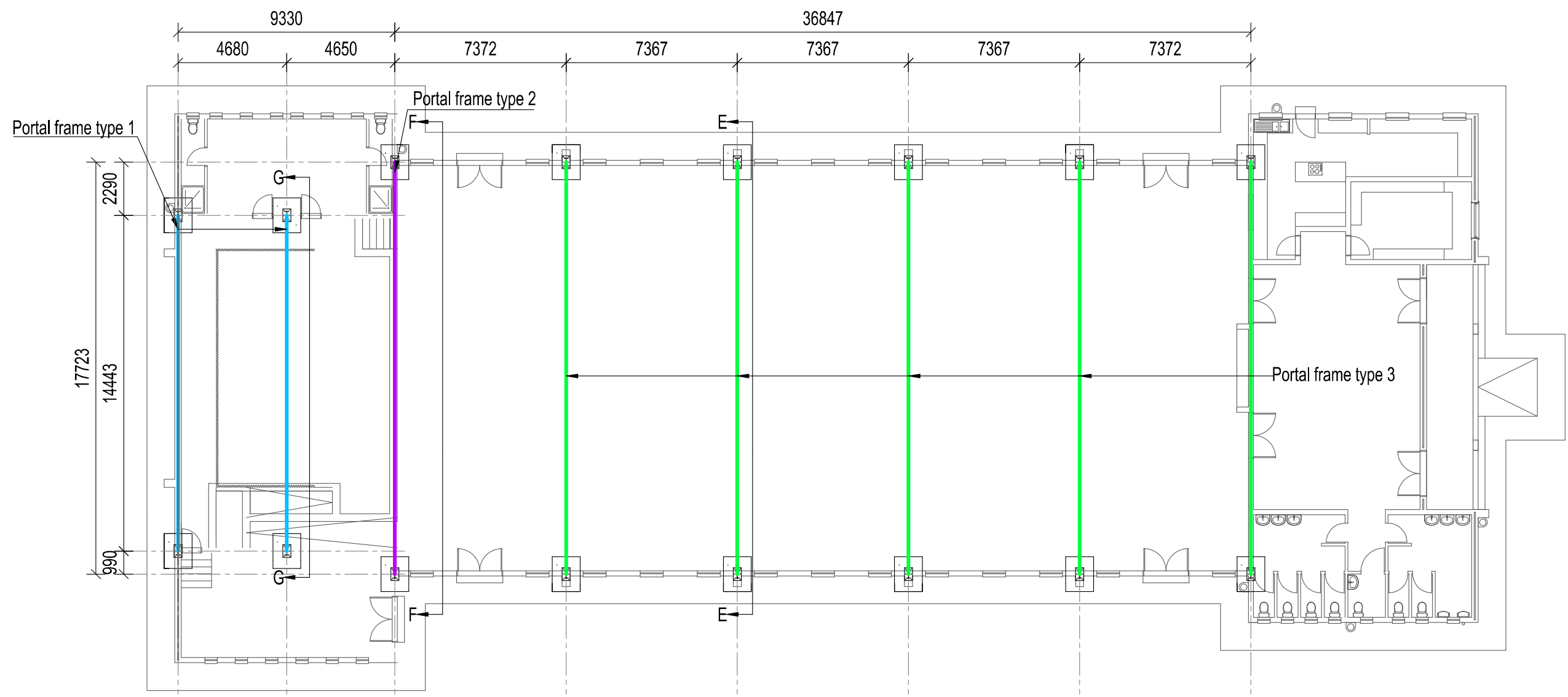
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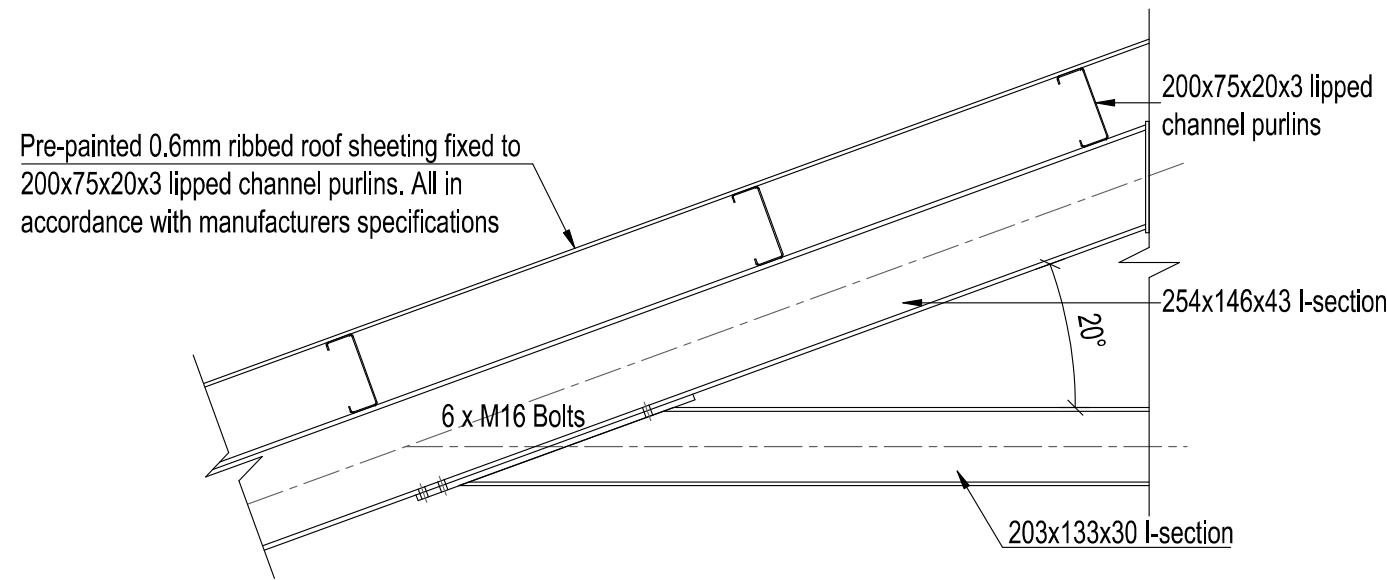
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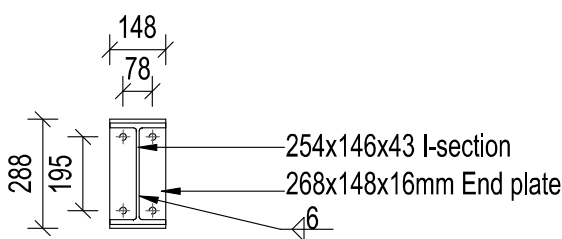
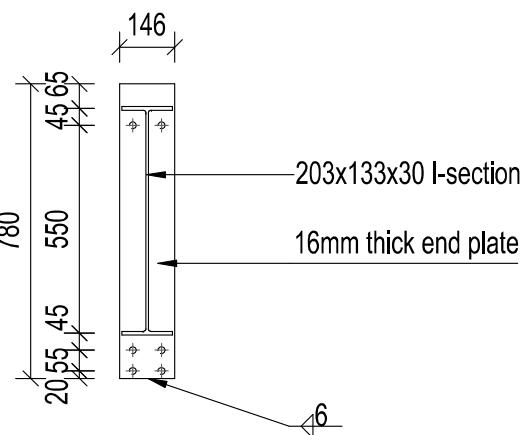


LAYOUT: PORTAL FRAME
scale 1:200



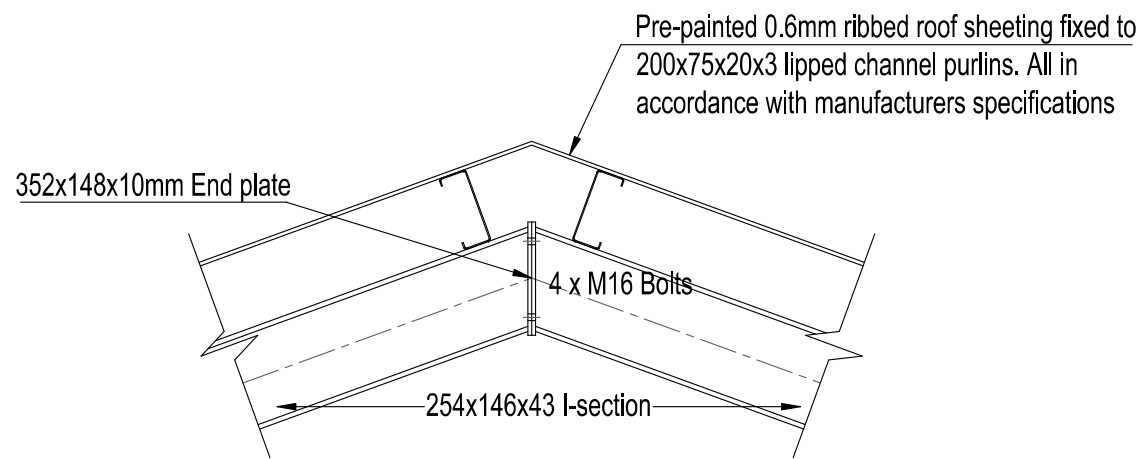
DETAIL A
scale 1:20

All welds are Both Sides unless otherwise indicated
All bolts are of Grade 4.8
All bolt diameters are 16 mm

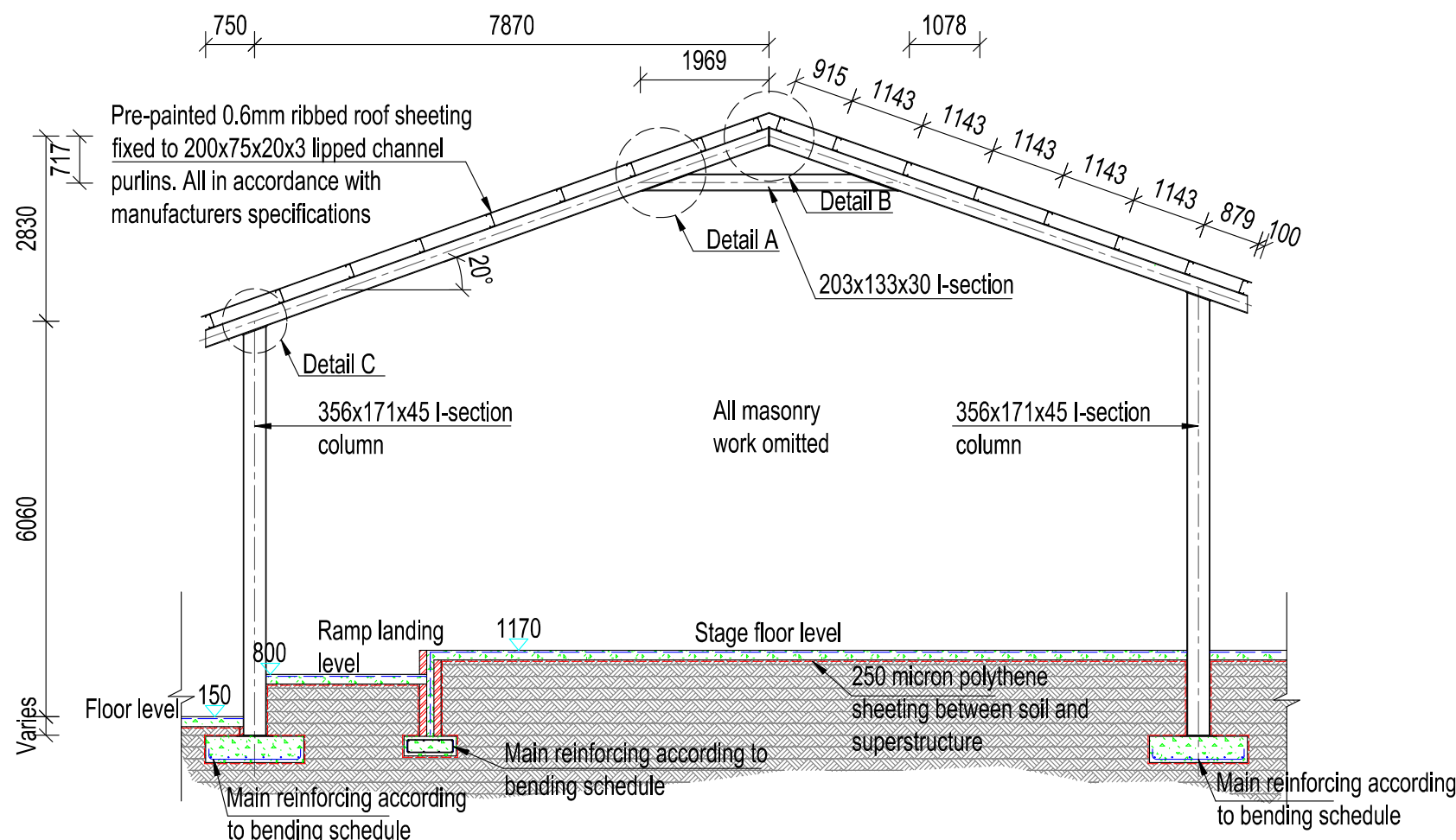


All welds are Both Sides unless otherwise indicated
All bolts are of Grade 4.8
All bolt diameters are 16 mm

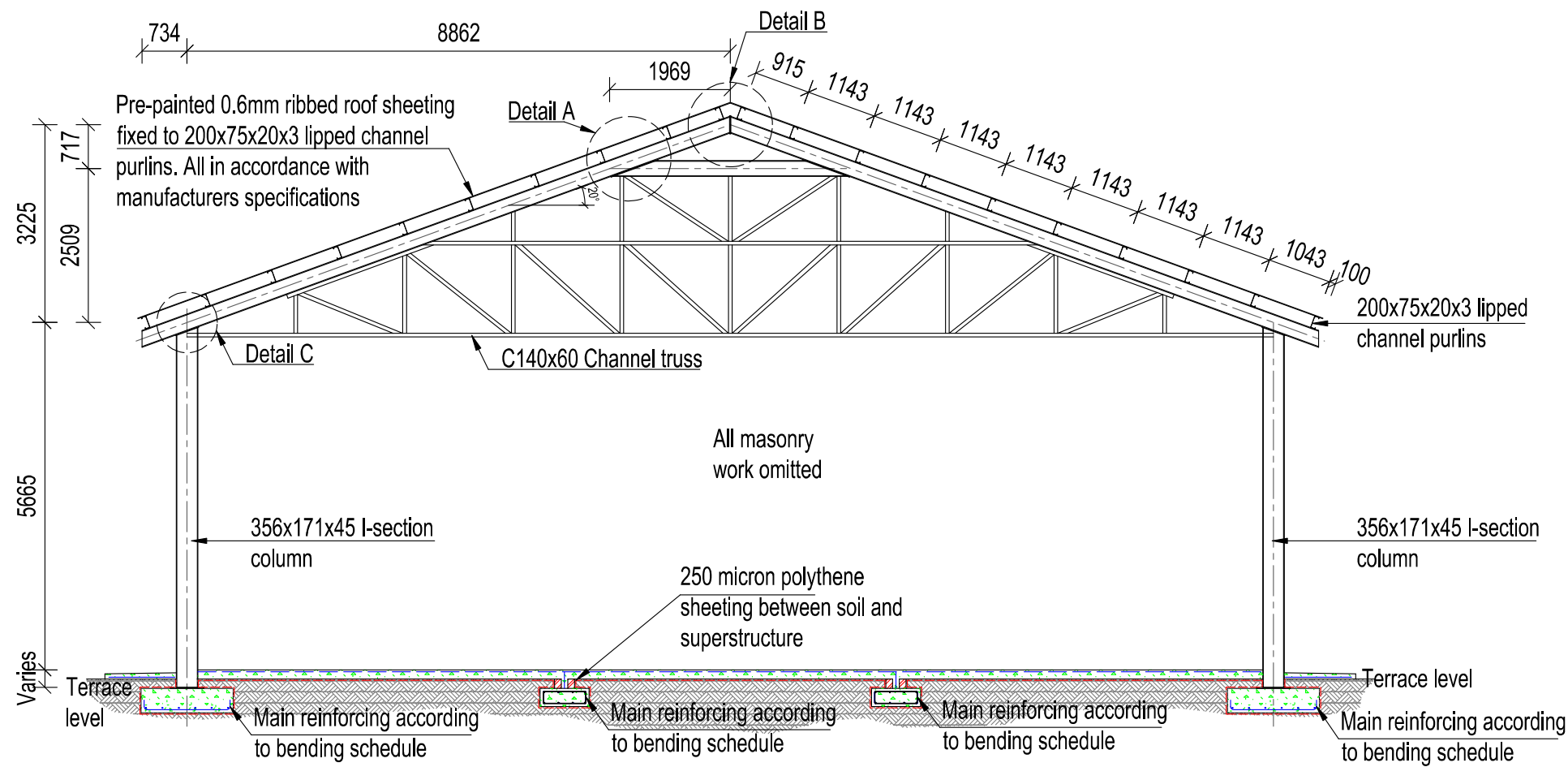
DETAIL B
scale 1:20



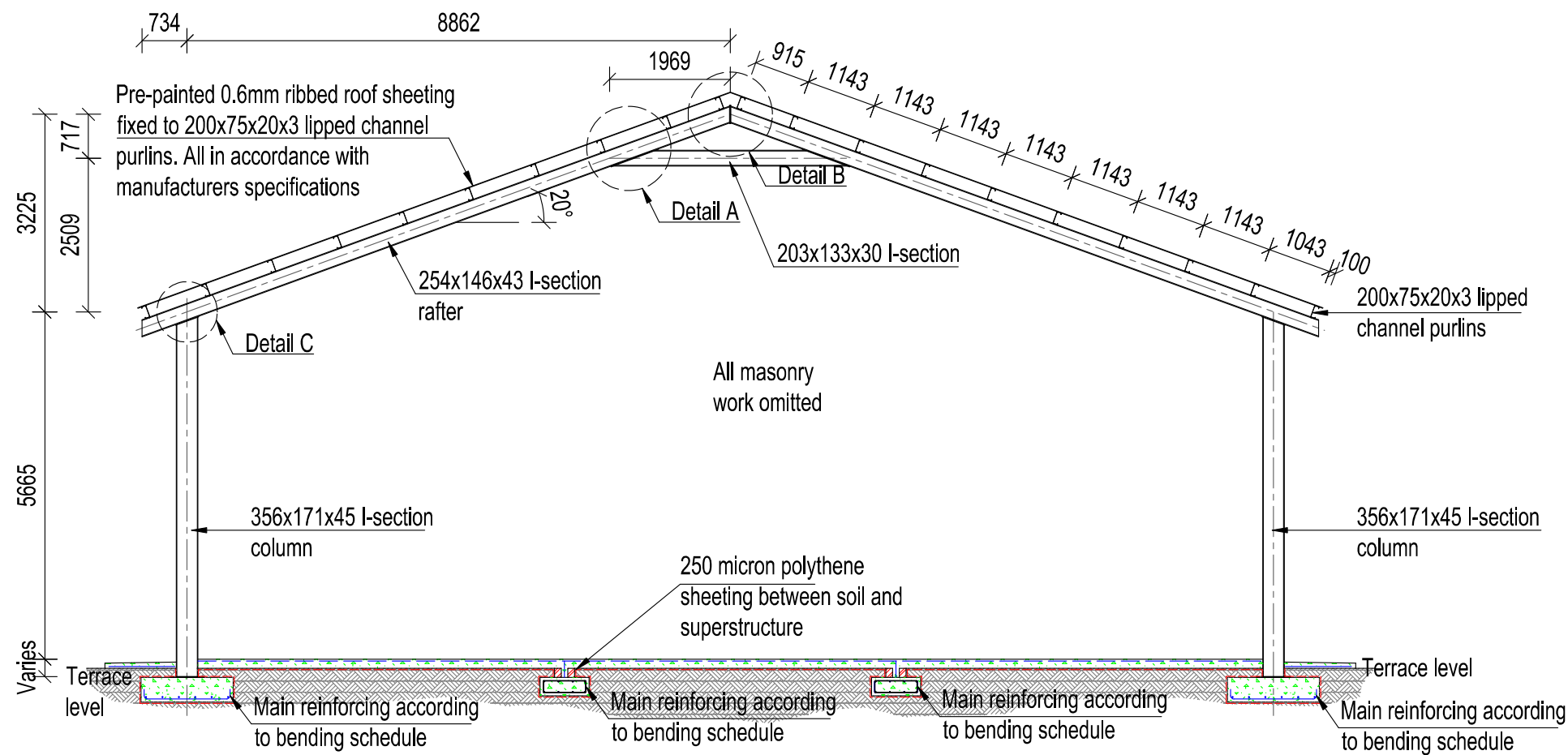
DETAIL C
scale 1:20



TYPICAL SECTION: PORTAL FRAME TYPE 1
scale 1:100



TYPICAL SECTION: PORTAL FRAME TYPE 2
scale 1:100



TYPICAL SECTION: PORTAL FRAME TYPE 3
scale 1:100

NOTE:

1. SHOP DRAWINGS OF ALL CONNECTIONS MUST BE SUPPLIED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
2. ALL CEILINGS AND ROOF ISOLATION ACCORDING TO ARCHITECTS DRAWINGS.
3. ALL CHANNEL CONNECTIONS WILL BE 6mm WELDED CONNECTIONS.
4. CHANNEL TRUSS WILL BE BOLTED TO THE PORTAL FRAME WITH 72 M16 BOLTS, GRADE 4.8.

NOTES:

1. BUILDING ACCURACY:
 - 1.1. ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE B.
 - 1.2. DIMENSIONS TO BE CONFIRMED ON SITE.
2. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
3. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED.
4. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

2. CONCRETE:
 - 2.1. 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
 - 2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.
 - 2.3. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
 - 2.4. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED.
 - 2.5. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- 3.1. STEEL MIN 350W.
- 3.2. 6mm FILLET WELDS MIN REQUIREMENT.
- 3.3. 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
- 3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- 4.1. STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
 - a. Structure self weight
 - b. Imposed loads

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162.

- 4.3. MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE I-1 OR SANS 10162 TABLE D1.
- 4.4. REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
- 4.5. SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
- 4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.
- 4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
- 4.8. REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2.
- 4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

- ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:
- SABS 0155: Accuracy in buildings
 - SABS 0145: Concrete Masonry construction
 - SABS 0249: Masonry walling
 - SABS 1215: Concrete masonry units
 - SABS 227: Burnt clay masonry units
 - SABS 1090: Aggregates from natural sources.
 - SABS 0243: The manufacture and erection of timber trusses.
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 - SANS 1200 AB 1986 Section AB: Engineer's office
 - SANS 1200 AD 1986 Section AD: General (small dams)
 - SANS 1200 AH 1986 Section AH: General (structural)
 - SANS 1200 C 1980 Section C: Site clearance
 - SANS 1200 D 1988 Section D: Earthworks

- SANS 1200 DA 1988 Section DA: Earthworks (small works)
- SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)
- SANS 1200 DK 1986 Section DK: Gabions and piling
- SANS 1200 DM 1981 Section DM: Earthworks (roads, subgrade)
- SANS 1200 DN 1982 Section DN: Earthworks (railway sidings)
- SANS 1200 G 1982 Section G: Concrete (structural)
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- SANS 1200 GB 1984 Section GB: Concrete (ordinary buildings)
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- SANS 1200 HA 1990 Section HA: Structural steelwork (sundry items)
- SANS 1200 HB 1985 Section HB: Cladding and sheeting
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- SANS 1200 HE 1983 Section HE: Structural aluminiumwork
- SANS 1200 LE 1983 Section LE: Medium-pressure pipe lines
- SANS 1200 LB 1983 Section LB: Bedding (pipes)

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- SANS 1200 LD 1982 Section LD: Sewers
- SANS 1200 LE 1982 Section LE: Stormwater drainage
- SANS 1200 LF 1983 Section LF: Eff connections (water)
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- SANS 1200 ME 1981 Section ME: Subbase
- SANS 1200 MF 1981 Section MF: Base
- SANS 1200 MFL 1996 Section MFL: Base (light pavement structures)
- SANS 1200 MG 1996 Section MG: Bituminous surface treatment
- SANS 1200 MH 1996 Section MH: Asphalt base and surfacing
- SANS 1200 MJ 1984 Section MJ: Segmented paving
- SANS 1200 MK 1983 Section MK: Kerbing and channelling
- SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

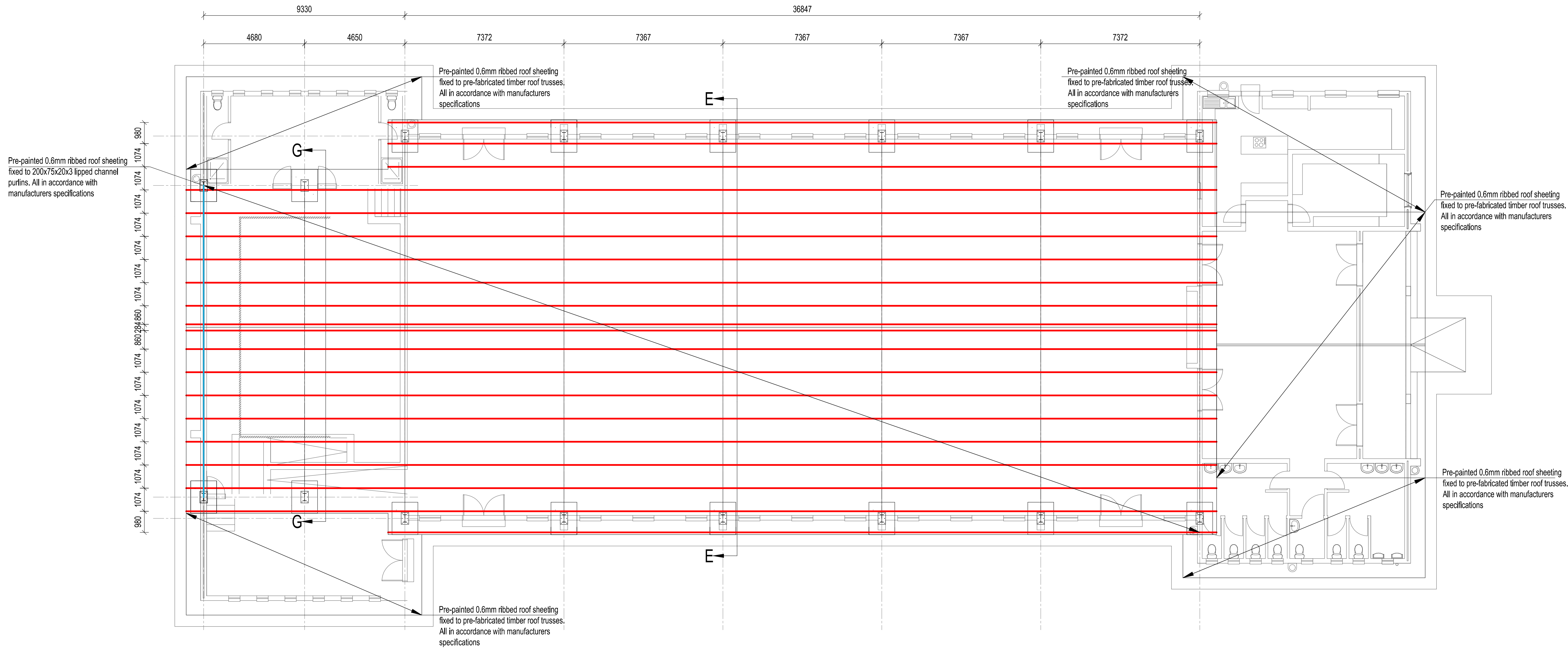
SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT	INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE	DESIGN	M. Kromhout
PROJECT	CONSTRUCTION OF JOHN TAOLO GAETSEWE SCHOOL & HOSTEL	DRAWN BY	S. Laynes
DRAWING	HALL: STRUCTURAL STEEL LAYOUT & DETAILS	CHECKED & APPROVED	
Amendments		DATE	21/11/2016
		SCALE	as shown
		DRW NR	2016/001/2210
		REFERENCE	dwp/2016/001...



LAYOUT: ROOF
scale 1:100

NOTES:

1. BUILDING ACCURACY:
1.1. ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
1.2. DIMENSIONS TO BE CONFIRMED ON SITE.
1.3. STRUCTURAL PLANS MUST BE READ IN CONJUNCTION WITH ARCHITECTS PLANS.
1.4. PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPANCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT.

2. CONCRETE:
2.1. 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER;
2.3. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
2.4. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED;
2.5. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- 3.1. STEEL MIN 350W;
3.2. 6mm FILLET WELDS MIN REQUIREMENT,
3.3. 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION;
3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- 4.1. STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
a. Structure self weight
b. Imposed loads
- 2.5kN/m²
- 0.3kN/m²

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162.

- 4.3. MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE I-1 OR SANS 10162 TABLE D1.
4.4. REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
4.5. SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.
4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
4.8. REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2.
4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

- ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:
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-SABS 227: Burnt clay masonry units
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-SANS 1200 DK 1986 Section DK: Gabions and piling
-SANS 1200 DM 1981 Section DM: Earthworks (roads, subgrade)
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-SANS 1200 GA 1982 Section GA: Concrete (small works)
-SANS 1200 GB 1984 Section GB: Concrete (ordinary buildings)
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-SANS 1200 GF 1984 Section GF: Prestressed concrete
-SANS 1200 H 1990 Section H: Structural steelwork
-SANS 1200 HA 1990 Section HA: Structural steelwork (sundry items)
-SANS 1200 HB 1985 Section HB: Cladding and sheeting
-SANS 1200 HC 1985 Section HC: Corrosion protection of structural steelwork
-SANS 1200 HE 1983 Section HE: Structural aluminiumwork
-SANS 1200 L 1983 Section L: Medium-pressure pipe lines
-SANS 1200 LB 1983 Section LB: Bedding (pipes)

- SANS 1200 LC 1981 Section LC: Cable ducts
-SANS 1200 LD 1982 Section LD: Sewers
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-SANS 1200 MG 1996 Section MG: Bituminous surface treatment
-SANS 1200 MH 1996 Section MH: Asphalt base and surfacing
-SANS 1200 MJ 1984 Section MJ: Segmented paving
-SANS 1200 MK 1983 Section MK: Kerbing and channelling
-SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT CONSTRUCTION OF JOHN TAOLO GAETSEWE SCHOOL & HOSTEL

DRAWING HALL: ROOF LAYOUT & DETAILS

Amendments



DESIGN M. Kromhout

DRAWN BY S. Laynes

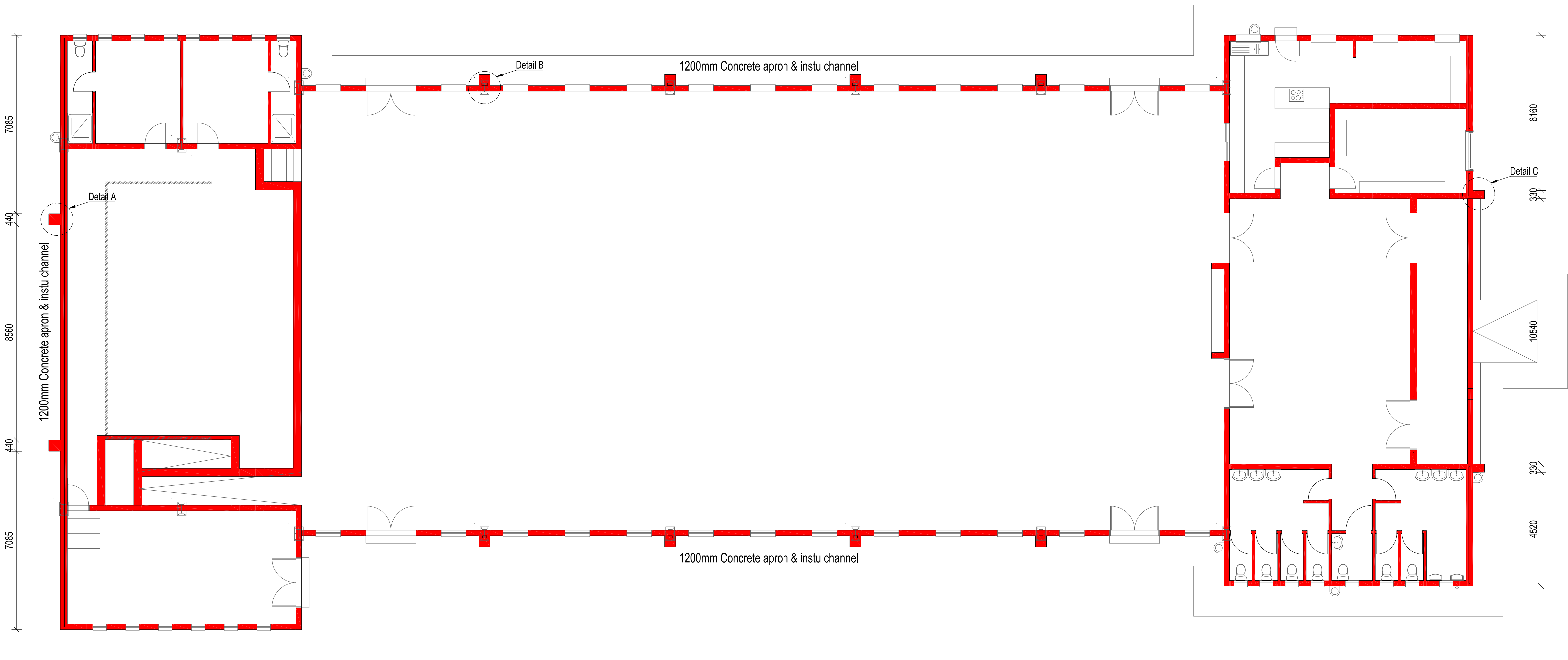
CHECKED & APPROVED

DATE 25/11/2016

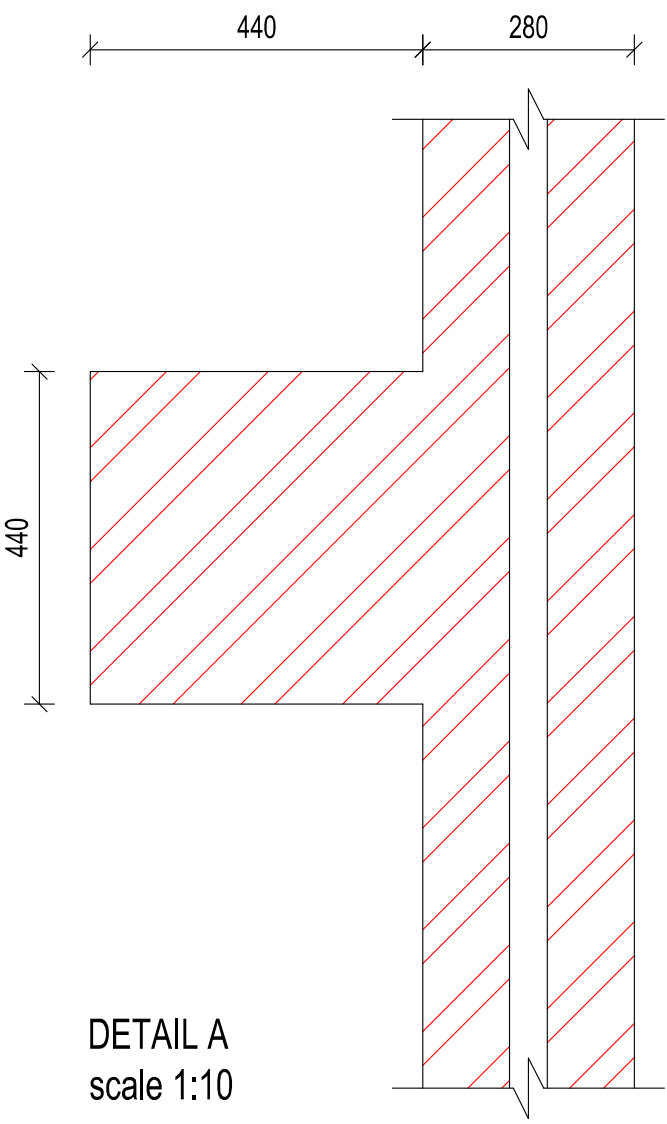
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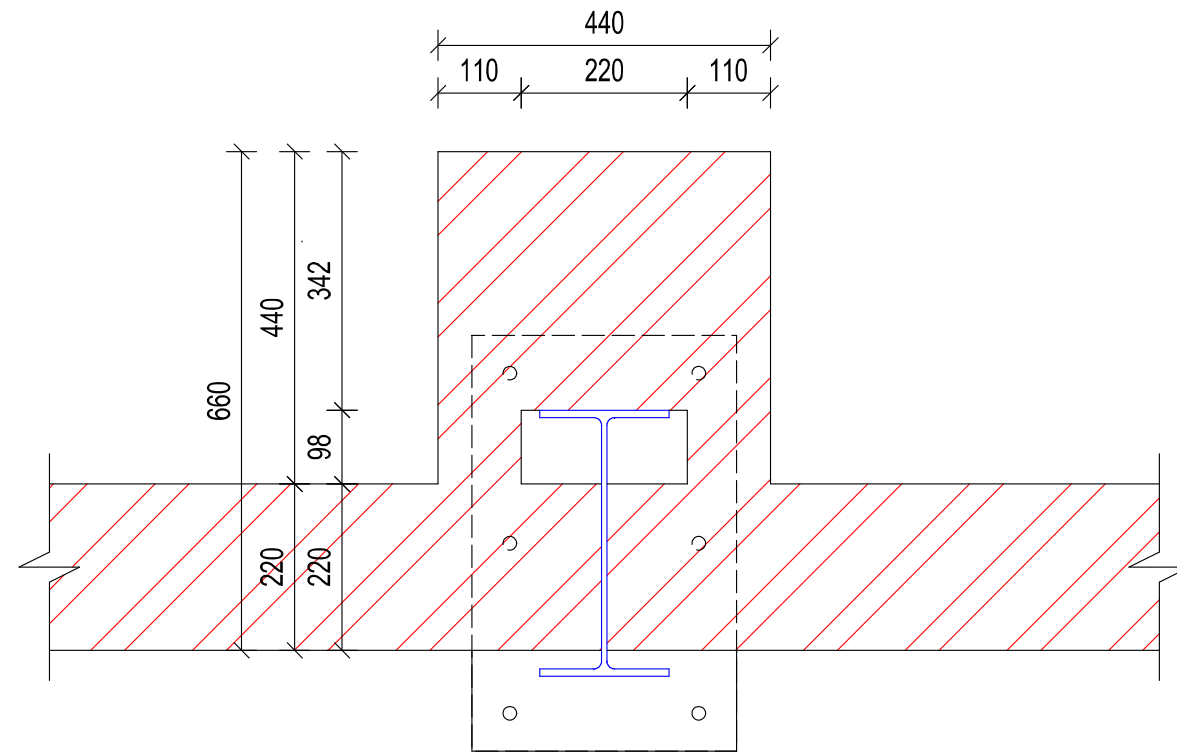
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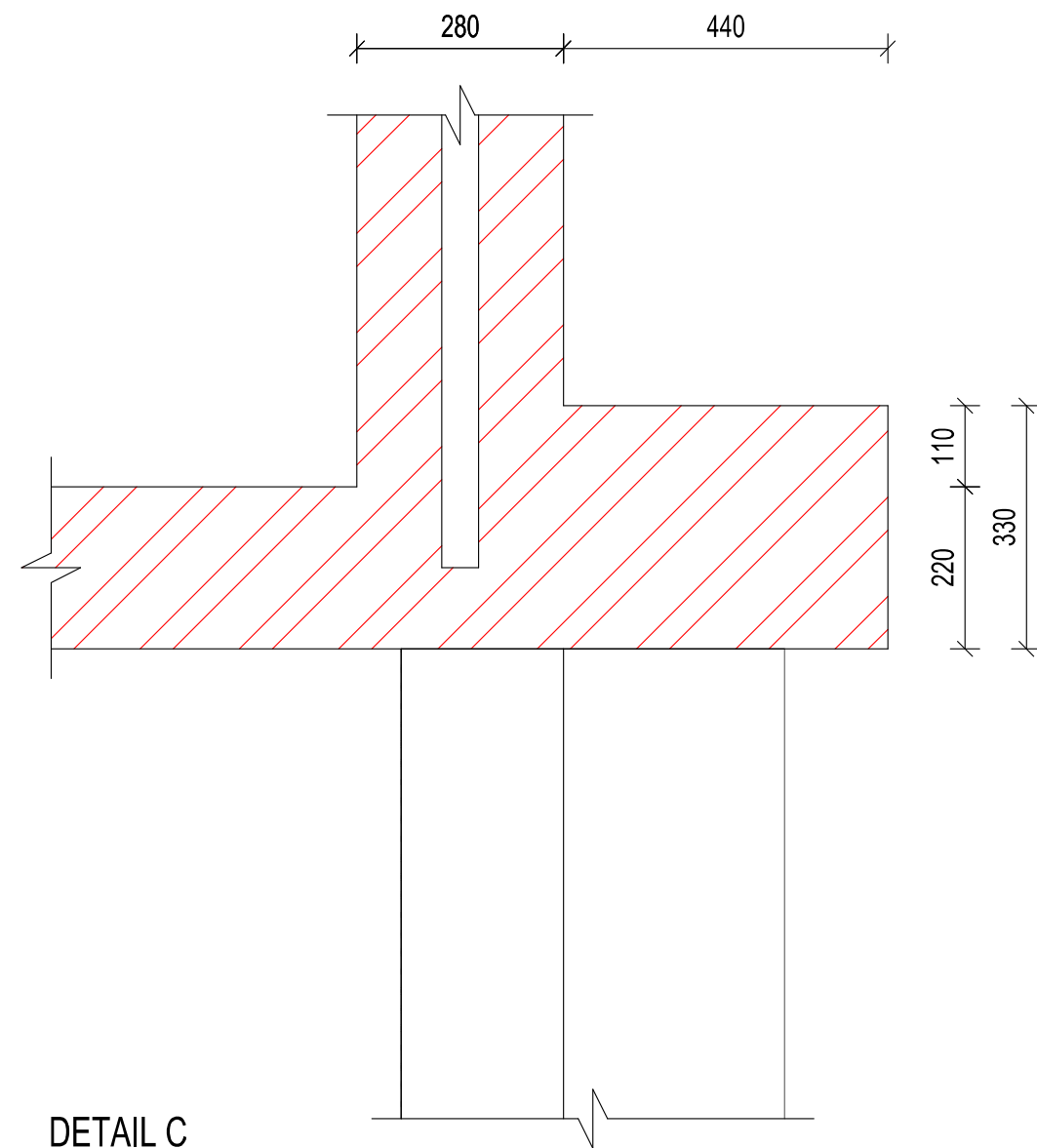
LAYOUT: HALL
scale 1:100



DETAIL A
scale 1:10



DETAIL B
scale 1:10



DETAIL C
scale 1:10

NOTES:

1. BUILDING ACCURACY:
1.1. ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
1.2. DIMENSIONS TO BE CONFIRMED ON SITE.
1.3. STRUCTURAL PLANS MUST BE READ IN CONJUNCTION WITH ARCHITECTS PLANS.
1.4. PRINCIPLE AGENT TO BE NOTIFIED OF DISCREPANCIES IN WRITING OR IT WILL BE ASSUMED & ACCEPTED AS CORRECT.

2. CONCRETE:
2.1. 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
2.2. CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER;
2.3. NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
2.4. MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED.
2.5. ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- 3.1. STEEL MIN 350W;
3.3. 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
3.4. CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- 4.1. STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
a. Structure self weight
b. Imposed loads
- 2.5kN/m²
- 0.3kN/m²

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162.

- 4.3. MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE I-1 OR SANS 10162 TABLE D1.
4.4. REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
4.5. SUSPENDED CONCRETE FLOOR DEFLECTION COMPLY WITH SABS 0160.
4.6. STRUCTURAL TIMBER DESIGNED TO COMPLY WITH SABS 0163-1/2.
4.7. UNREINFORCED MASONRY WALLING DESIGNED TO COMPLY WITH SABS 0164-1.
4.8. REINFORCED & PRESTRESSED MASONRY DESIGNED TO COMPLY WITH SANS 10164-2.
4.9. BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

WORKMANSHIP, PROCEDURES AND MATERIALS:

- ALL WORK SHALL COMPLY WITH THE FOLLOWING NATIONAL STANDARDS:
-SABS 0155: Accuracy in buildings
-SABS 0145 Concrete Masonry construction
-SABS 0249 Masonry walling
-SABS 1215 Concrete masonry units
-SABS 227 Burnt clay masonry units
-SABS 1090 Aggregates from natural sources.
-SABS 0243 The manufacture and erection of timber trusses.
-SANS 1200 A 1986 Section A: General
-SANS 1200 AA 1986 Section AA: General (small works)
-SANS 1200 AB 1986 Section AB: Engineer's office
-SANS 1200 AD 1986 Section AD: General (small dams)
-SANS 1200 AH 1986 Section AH: General (structural)
-SANS 1200 C 1980 Section C: Site clearance
-SANS 1200 D 1988 Section D: Earthworks

- SANS 1200 DA 1988 Section DA: Earthworks (small works)
-SANS 1200 DB 1989 Section DB: Earthworks (pipe trenches)
-SANS 1000 DK 1986 Section DK: Gabions and piling
-SANS 1200 DM 1981 Section DM: Earthworks (roads, subgrade)
-SANS 1200 DN 1982 Section DN: Earthworks (railway sidings)
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-SANS 1200 GE 1984 Section GE: Precast concrete (structural)
-SANS 1200 GF 1984 Section GF: Prestressed concrete
-SANS 1200 H 1990 Section H: Structural steelwork
-SANS 1200 HA 1990 Section HA: Structural steelwork (sundry items)
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-SANS 1200 HC 1985 Section HC: Corrosion protection of structural steelwork
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-SANS 1200 LE 1982 Section LE: Stormwater drainage
-SANS 1200 LF 1983 Section LF: Eff connections (water)
-SANS 1200 M 1996 Section M: Roads (general)
-SANS 1200 ME 1981 Section ME: Subbase
-SANS 1200 MF 1981 Section MF: Base
-SANS 1200 MFL 1996 Section MFL: Base (light pavement structures)
-SANS 1200 MG 1996 Section MG: Bituminous surface treatment
-SANS 1200 MH 1996 Section MH: Asphalt base and surfacing
-SANS 1200 MJ 1984 Section MJ: Segmented paving
-SANS 1200 MK 1983 Section MK: Kerbing and channelling
-SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT: INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

PROJECT: CONSTRUCTION OF JOHN TAOLO GAETSEWE SCHOOL & HOSTEL

DRAWING: HALL: MASONRY LAYOUT & DETAILS

Amendments

DATE: 01/12/2016

SCALE: as shown

REFERENCE: dwp2016/001...

DRW NR: 2016/001/230

DATE: 01/12/2016

SCALE: as shown



[illegible]

MULTI PURPOSE HALL:
DB SCHEMATIC

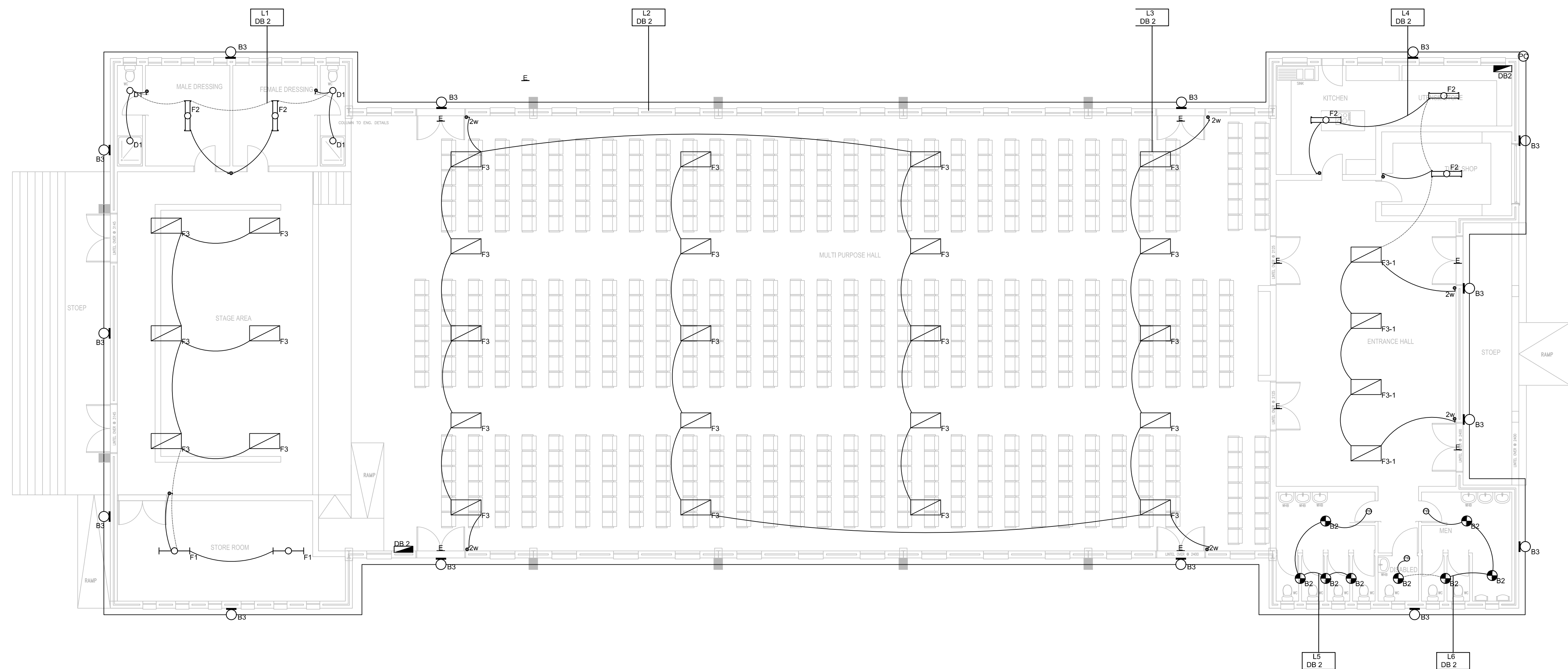
Mekan
engineering
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cc

13 Constantia Street
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8301













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drawn	design	approved	date
L.T	C.S	I.B	2016-06-17
discipline			scale
ELECTRICAL			N.T.S
drawing no			rev.
K2040E-E-707-SK1			0



NOTES: _____ NOTAS: _____

LIGHTING	
	COMPLETE EXTERNAL WALL MOUNT 2X18W CFL SQUARE BULKHEAD, AS SPECIFIED
	COMPLETE 1X20W ENERGY SAVING SINGLE OPEN CHANNEL LED LIGHT, AS SPECIFIED
	COMPLETE 2X22W ENERGY SAVING DOUBLE OPEN CHANNEL LED LIGHT, AS SPECIFIED
	COMPLETE CEILING AND SURFACED MOUNTED 4X32W ENERGY SAVING OPEN CHANNEL LED LIGHT WITH PRISMATIC DIFFUSER, AS SPECIFIED
	COMPLETE CEILING RECESSED MOUNTED 4X32W ENERGY SAVING OPEN CHANNEL LED LIGHT WITH PRISMATIC DIFFUSER, AS SPECIFIED
	CEILING CENTER DOWN LIGHTING EQUIVALENT COMPLETE WITH 1X4W LED LAMP, CONTROL, GRATE, SIMILAR OR EQUAL, AND APPROVED
	DENOTES PHOTO CELL
	1 LEVER 2WAY LIGHT SWITCH MOUNT AT 1400mm ALF, UNLESS OTHERWISE INDICATED BY ARCHITECT
	1 LEVER 1WAY LIGHT SWITCH MOUNT AT 1400mm ALF, UNLESS OTHERWISE INDICATED BY ARCHITECT.
	PASSIVE INFRARED MOTION DETECTOR LIGHT SWITCH MOUNTED ON CEILING
	EMERGENCY EXIT LIGHT
	ELECTRICAL DISTRIBUTION BOARD, FLUSH MOUNTED, AS SPECIFIED

CLIENT



ARCHITECTS:



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[illegible]

CONSTRUCTION OF JOHN TAOLO GAETSEWE NEW SCHOOL AND HOSTEL

MULTI PURPOSE HALL: LIGHTING LAYOUT







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drawn	design	approved	date
L.T	C.S	I.B	2016-06-17

ELECTRICAL	1:100
drawing no K2040E-E-707	rev. 0

REFERRAL DRAWINGS			
DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE
FLOOR PLAN MULTI PURPOSE HALL	ARC_CON_RES_004	0	04/03/2016



	POWER
	16A SINGLE POWER SOCKET OUTLET
	16A DOUBLE POWER SOCKET OUTLET ON 100X100X50MM BACK BOX
	ELECTRICAL DISTRIBUTION BOARD, FLUSH MOUNTED, AS SPECIFIED
	AC ISOLATOR MOUNTED AT HIGH LEVEL BELOW CEILING LEVEL



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CONSTRUCTION OF JOHN
TAOLO GAETSEWE NEW
SCHOOL AND HOSTEL

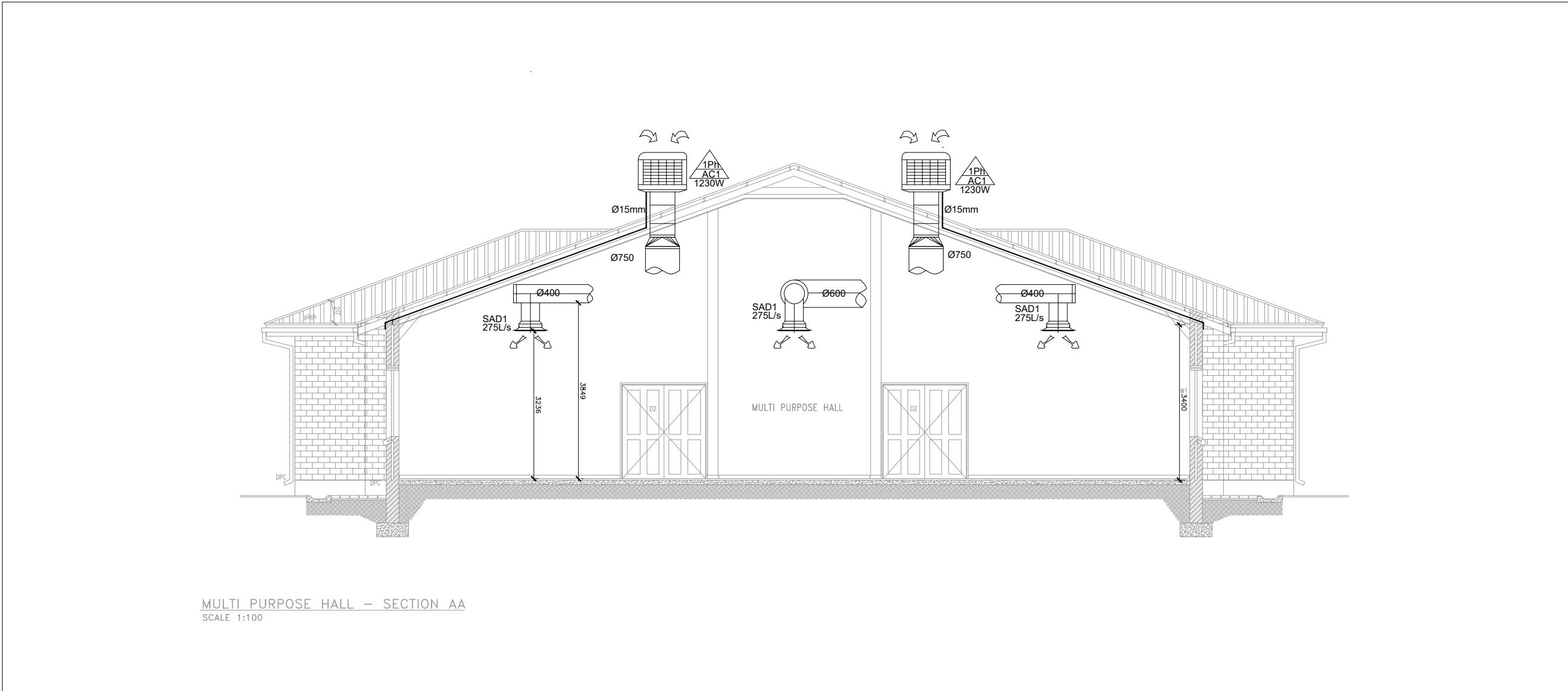
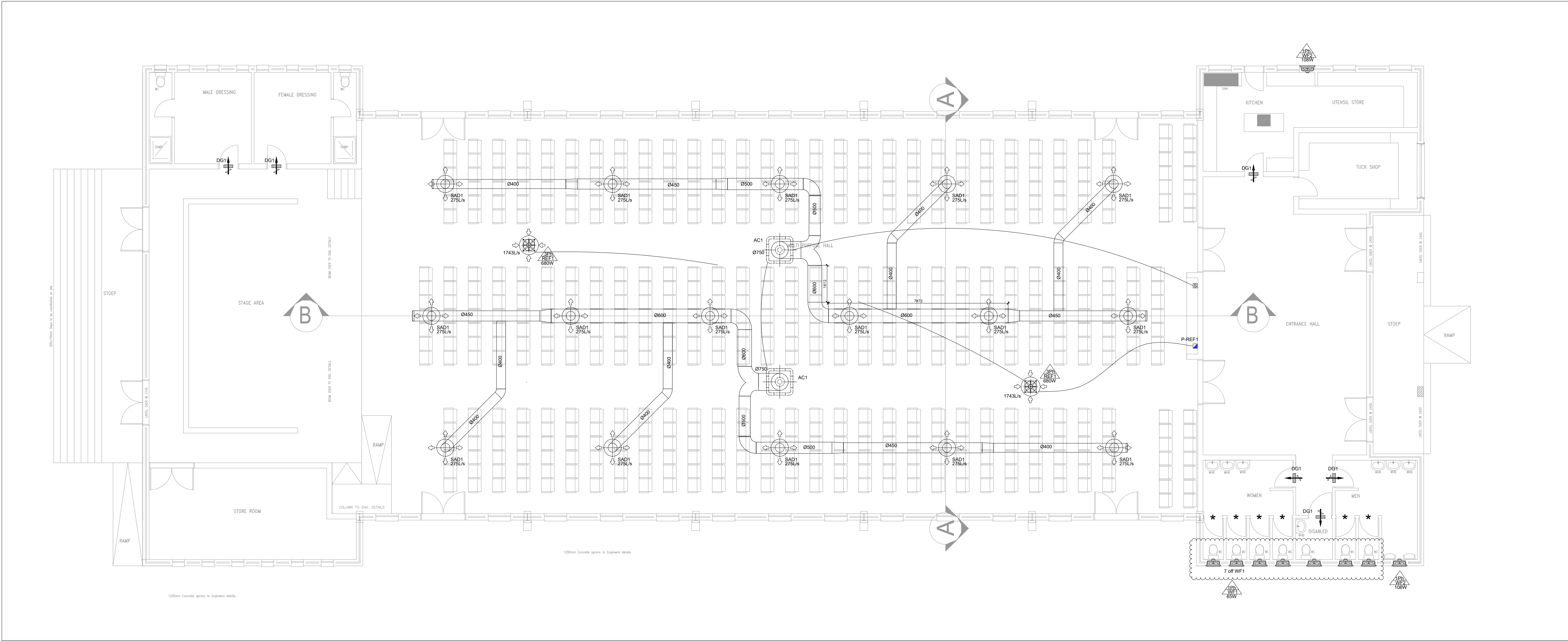
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REFERRAL DRAWINGS			
DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE
FLOOR PLAN MULTI PURPOSE HALL	ARC_CON_RES_004	0	04/03/20



GRILLE & LOUVRE SCHEDULE					
Ref No:	Type	Width	Height	Colour	Qty
SAD1	Ø400mm Neck Swift Air Diffuser	-	-	Aluminium	16
DG1	Door Grille	400	300	Natural Anodised	6

FANS SCHEDULE		
Ref No:	Description	Qty
REF1	Roof Extraction Fan DHS660DS/Similar @1743L/s, 100Pa,680Watt 3 phase.	2
WF1	Wall Extraction Fan KV100/Similar @30L/s, 100Pa,68Watt Single phase.	7
WF2	Wall Extraction Fan KV150/Similar @80L/s, 100Pa,108Watt Single phase.	1

AC-EQUIPMENT					
Ref No:	Description	Colour	Input Power	Power Supply	Qty
AC 1	Roof Evaporative Cooler with 2200L/s	-	1.23kW	1Phase/50Hz/220v	2

- General Notes:**
- 1) Ducting to be manufactured in accordance to SMACNA Standards
 - 2) All duct dimensions including dimensions for insulated ducts refers to the sheet metal size.
 - 3) All duct passing through concrete or brick from the walls by means of a high density glass fibre collar of at least 25mm in thickness.
 - 4) Galvanised steel shall be used for all air-conditioning and ventilation ducting
 - 5) All ducting shall be Mezz flanged
 - 6) All supply and return air ducting exposed to outdoors shall be double clad and insulated against direct solar heat gains
 - 7) All supply air ducting shall be insulated as indicated on the drawing
 - 8) Duct Hangers
- | LONGEST DUCT DIMENSION (mm) | ROUND HANGER (mm) | GALVANISED STRIP HANGERS (mm) | SHELF ANGLES | HANGER SPACING (m) |
|-----------------------------|-------------------|-------------------------------|--------------|--------------------|
| UP TO 760 | 6 | 25x16 | 25x25x3 | 3.0 |
| 761 TO 1000 | 10 | 25x16 | 38x38x3 | 3.0 |
| 1000 TO 2100 | 10 | 25x16 | 50x50x3 | 2.4 |
| 2100 TO 2400 | 10 | 25x16 | 50x50x6 | 2.4 |
| 2401 TO ABOVE | 12 | 25x16 | 50x50x6 | 2.4 |
9. ALL DIFFUSER SUPPLY FLEXIBLE TO COME c/w JUBILEE CLAMPS AND SEALED WITH DUCT TAPE ON FINAL INSTALLATION.
 10. ALL SUPPLY AIR DUCTING TO BE INSULATED EXTERNALLY WITH 25mm FOIL FACED FIBREGLASS TYPE FRK - ONLY AC DUCT
 11. ALL FLEXIBLES TO BE THERMALLY INSULATED - ONLY AC DUCT

- LEGEND**
- T WALL MOUNTED THERMOSTAT MOUNTED @ 1450mm A.F.F.L
 - CT ABOVE CEILING CONTROL THERMOSTAT LINKED @ DIFFUSER.
 - S CEILING MOUNTED TEMPERATURE SENSOR LINKED TO BMS. (ALL SCREEN/CONTROL CABLES TO RUN IN P8000 UNISTRUT).
 - SS STATIC PRESSURE SENSOR MOUNTED IN DUCT
 - BTS ZONE TEMPERATURE SENSOR @ RETURN AIR DUCT
 - P PRESSURE DISPLAY UNIT ABOVE DOOR
 - * DOOR UNDERCUT - 25mm
 - DP CONDENSATE DRAIN PUMP
- ELECTRICAL LEGEND**
- 1P 1 PHASE ELECTRICAL EQUIPMENT
 - 3P 3 PHASE ELECTRICAL EQUIPMENT
 - SA PLUG COMPLETE WITH SHAVED EARTH PINS
 - AC-DB
 - P 8000 UNISTRUT 2 OFF
 - REFRIGERANT PIPING - GAS
 - REFRIGERANT PIPING - LIQUID
 - COIL CONDENSATE RUN OFF

CLIENT:

idt
INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE

Architect:

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NO:	DATE:	DESCRIPTION	BY	APPD
REVISIONS				
0	15-07-16	Issued for Tender	R. H	

CONSULTANT:

Mekan
CONSULTANTS

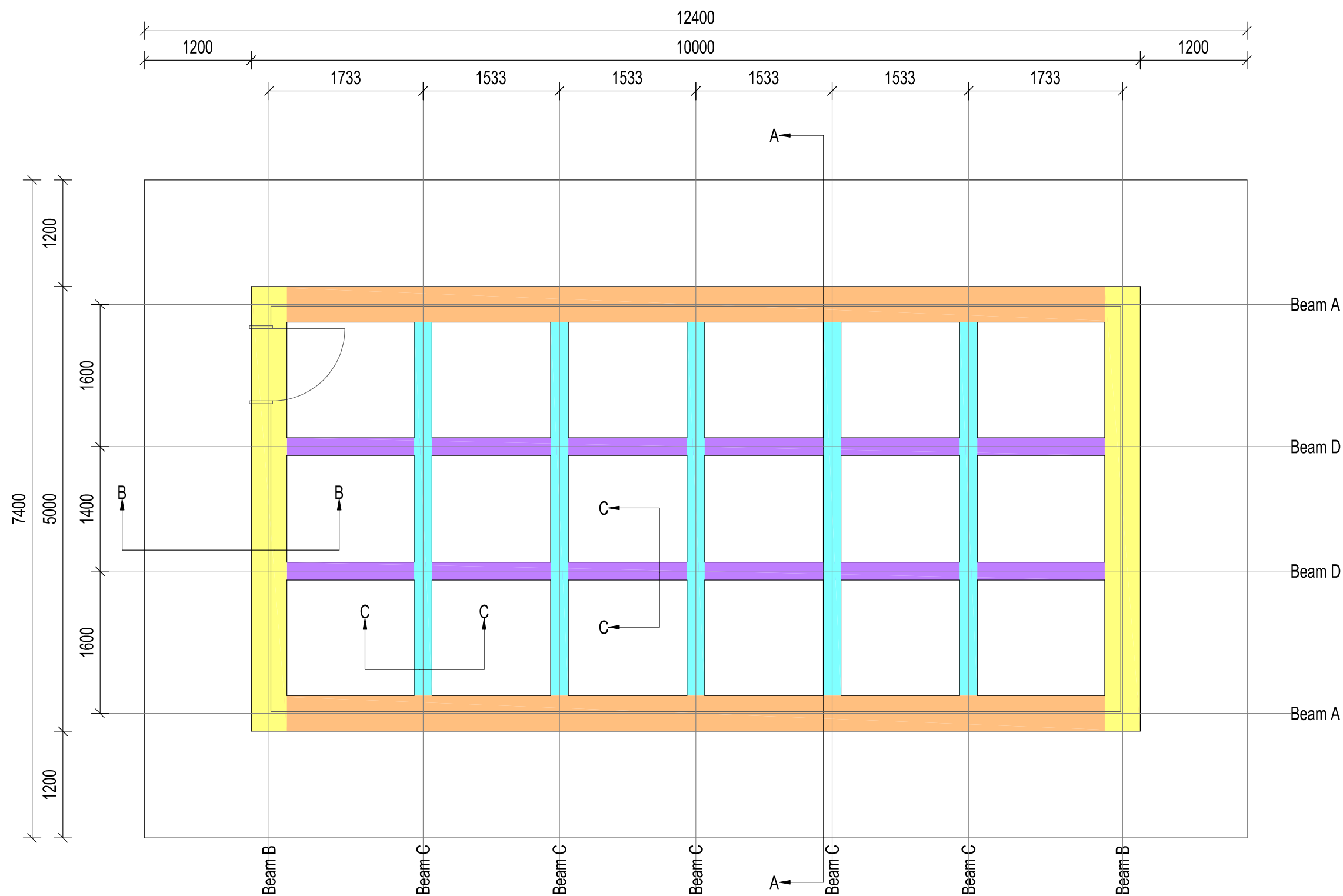
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e-mail info@mekan.co.za
Reg no 9924034/07

PROJECT:

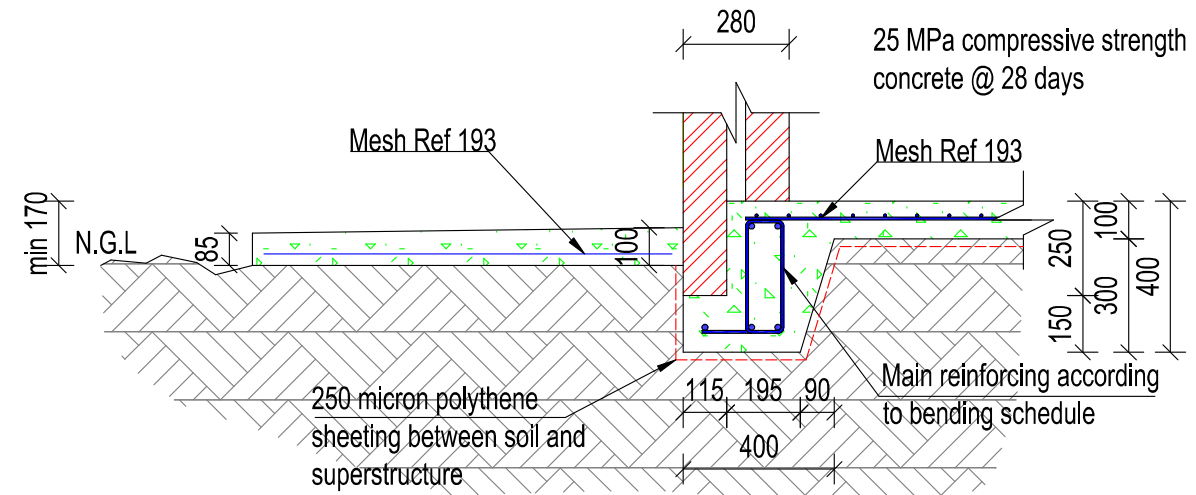
Construction of new JTG school

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		date 10-07-2016		
discipline		scale		
		1:100		
MECHANICAL				
drawing no		rev.		
K2040MV - 04		0		

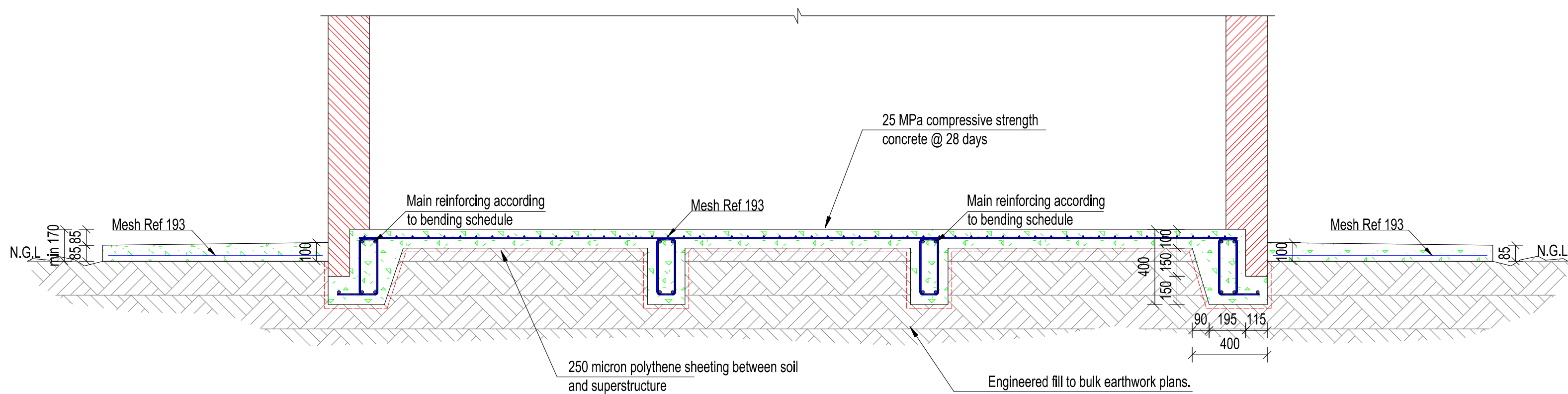


LAYOUT: REFUSE AREA FOUNDATION
scale 1:50

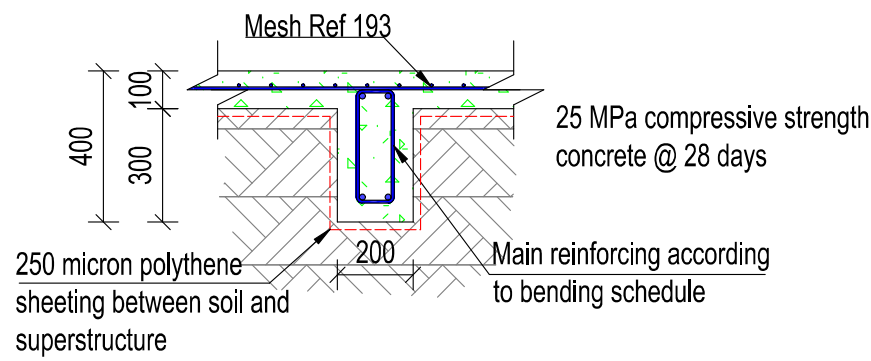
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									A	B	C	D	E/r
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Beam B	2	8 21	Y12 R10	4900 1000	16 42	B SB	20 60		(4900) 300		100		
Beam C	5	4 42	Y12 R10	4900 1000	20 180	C SC	20 73		(4900) 300		100	200	
Beam D	2	8 42	Y12 R10	6000 1000	16 84	D SD	20 73		(6000) 300	100	200		
	8	10	12	16	20	25	32	40	TOT				
R		78							78				
Y			130						130				
TOT		78	130						208				



SECTION B-B: REINFORCED CONCRETE BEAM A
scale 1:20



SECTION A-A: REFUSE AREA FOUNDATION
scale 1:20



SECTION C-C: REINFORCED CONCRETE BEAM C
scale 1:20

NOTES:

- BUILDING ACCURACY:
 - ALL WORK SHALL COMPLY TO A PERMISSIBLE DEVIATION OF GRADE II.
 - DIMENSIONS TO BE CONFIRMED ON SITE.
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CONCRETE:

- 25 MPa CONCRETE FROM ACCREDITED READY-MIX SUPPLIER.
- CERTIFICATE OF COMPLIANCE TO BE SUBMITTED BY READY-MIX SUPPLIER.
- NO ON-SITE BATCHING AND MIXING ALLOWED, UNLESS APPROVED BY ENGR.
- MIN CONCRETE COVER 50mm FOUNDATIONS, 25mm STRUCTURAL ELEMENTS OR AS INDICATED.
- ALL REINFORCING TO BE INSPECTED BY THE ENGINEER BEFORE CONCRETE IS PLACED.

3. STRUCTURAL STEEL:

- STEEL MIN 350W.
- 6mm FILLET WELDS MIN REQUIREMENT.
- 2 LAYERS RED OXIDE & 2 LAYERS ENAMEL PAINT TO CLIENT'S SPECIFICATION.
- CONNECTION & FIXING DETAILS TO BE APPROVED BY DWP CONSULTANTS INC.

4. DESIGN PARAMETERS:

- STRUCTURE DESIGNED TO RESIST THE FOLLOWING LOADS (SABS 0160):
 - Structure self weight
 - Imposed loads

4.2. STRUCTURAL STEEL DESIGNED TO COMPLY WITH SABS 0162 / SANS 10162.

- MAX PERMISSIBLE DEFLECTIONS FOR STEEL ELEMENTS COMPLY WITH SABS 0162 TABLE L-1 OR SANS 10162 TABLE D1.
- REINFORCED CONCRETE DESIGNED TO COMPLY WITH SABS 0100.
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- BUILDINGS DESIGNED TO COMPLY WITH SABS 0400: NBR.

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 - SABS 0145 Concrete Masonry construction
 - SABS 0249 Masonry walling
 - SABS 1215 Concrete masonry units
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- SANS 1200 MP 1986 Section MP: Base (right pavement structures)
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- SANS 1200 MJ 1984 Section MJ: Segmented paving
- SANS 1200 MK 1983 Section MK: Kerbing and channelling
- SANS 1200 MM 1984 Section MM: Ancillary roadworks

VENTILATION DEPARTMENT:

ROCK MECHANICS:

ENGINEER MANAGER:

SHAFT ENGINEER:

PROJECT ENGINEER:

PRODUCTION MANAGER:

CONTRACTOR:

CLIENT	INDEPENDENT DEVELOPMENT TRUST FOR DEPARTMENT OF EDUCATION NORTHERN CAPE	DESIGN	M. Kromhout
PROJECT	CONSTRUCTION OF JOHN TAOLOA GAETSEWE SCHOOL & HOSTEL	DRAWN BY	S. Laynes
DRAWING	LAYOUT & DETAILS: REFUSE AREA FOUNDATION	CHECKED & APPROVED	
Amendments		DATE	DRW NR:
		15/09/2016	2016/001/2400
		SCALE	as shown
		REFERENCE	Aug2016/001...

job no.	consult.	stage	location	sheet no.	rev.
2000	ARC	CON	RES	056	0



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GENERAL NOTES

- THIS DRAWING IS NOT TO BE SCALED, USE FIGURED DIMENSIONS ONLY.
- ALL LEVELS & DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK COMMENCES.
- THE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR DIMENSIONAL ERRORS IF NOT NOTIFIED AT THE TIME OF COMMENCING WORK ON SITE.
- BUILDER TO CO-ORDINATE ALL DIMENSIONS LEVELS/B/LD., LINES/B/LD. RESTRICTION LINES
- FINISHES & SPECIFICATIONS TO BE CHECKED AND CO-ORDINATED BY BUILDER BEFORE ORDERING OR PUTTING ANY WORK TO HAND
- ALL SETTING OUT TO BE BUILDERS ENTIRE RESPONSIBILITY
- ALL SERVICES TO BE CO-ORDINATED BY THE BUILDER BEFORE COMMENCING ANY WORK
- ALL WORK TO BE IN ACCORDANCE TO THE NATIONAL BUILDING REGULATIONS & TO THE ENTIRE SATISFACTION OF ALL LOCAL AUTHORITIES

SECTION NOTES

- WATERPROOFING TO SPEC. DETAIL
- D.P.C. TO WINDOWS AND CILLS
- CONC. LINTELS OVER ALL WINDOWS
- OBSCURE GLASS TO ALL BATHROOMS

DRAINAGE NOTES

- I.E.'s TO ALL BENDS AND JUNCTIONS IN DRAIN WITH MARKED COVERS AT GROUND LEVEL
- RE-SEAL TRAPS TO ALL WASTE FITTINGS
- W.P.'s TO BE FULLY ACCESSIBLE ALONG ENTIRE LENGTH
- WHERE W.P.'s PASS IN OR BELOW FLOOR SLAB THEY ARE TO BE SLEEVED WITH C.E.'s AT BOTH ENDS IN EASILY ACCESSIBLE POSITIONS
- WHEN SOIL PIPE DROP EXCEEDS 1,22m ADEQUATE ANTI-SIPHONAGE TO BE PROVIDED
- 38 WASTE PIPE TO BASIN / BATH
- 50 WASTE PIPE TO SINK, W.M. AND SHOWER
- BEGINNING OF DRAIN RUN TO HAVE INVERT LEVEL OF 450mm BELOW FGL MINIMUM.

SCHEDULE OF AREAS.

revisions	by	date	no

THIS DRAWING IS COPYRIGHT

job
**CONSTRUCTION OF JOHN TAOLE
GAETSEWE NEW SCHOOL AND
HOSTELS**



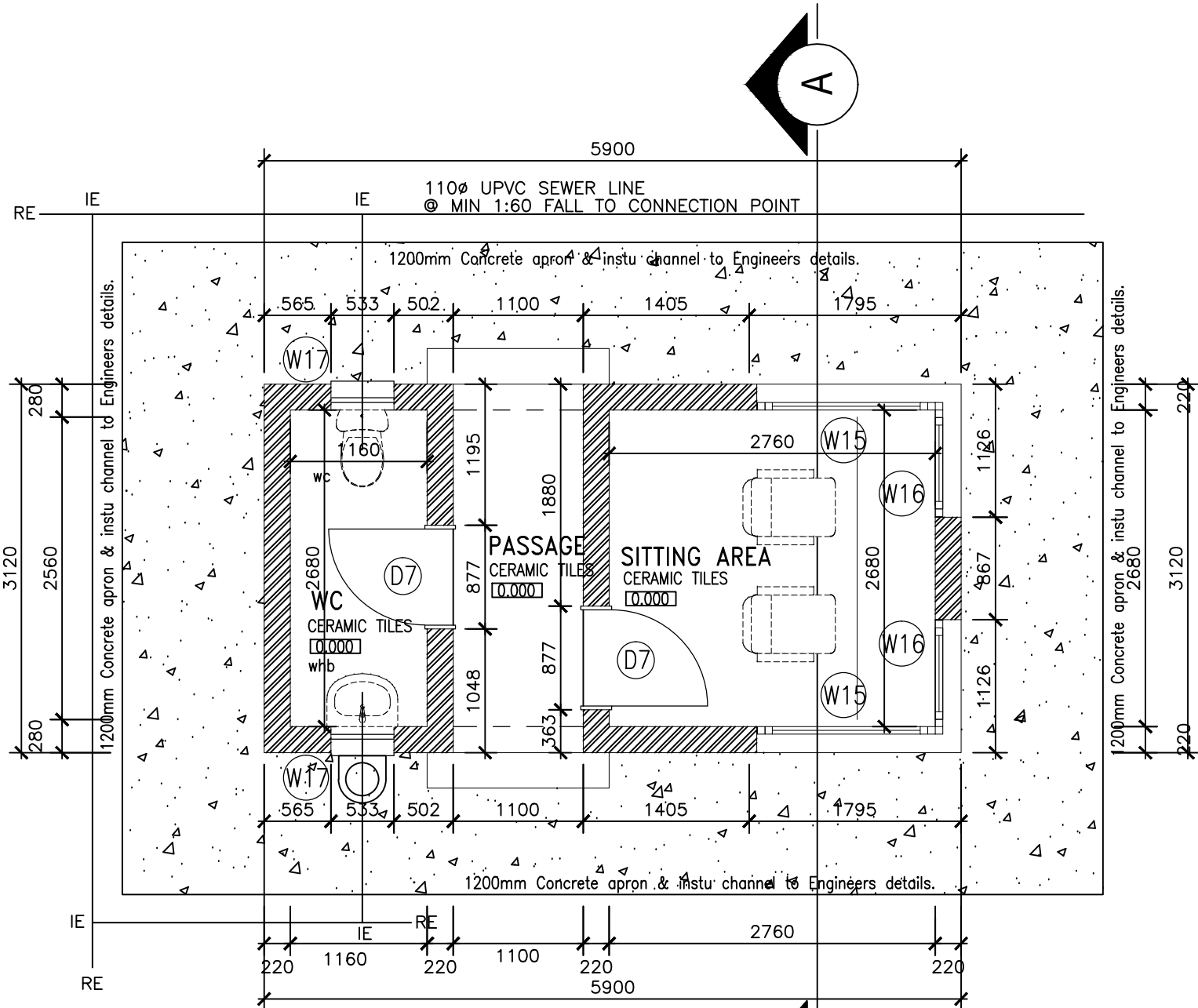
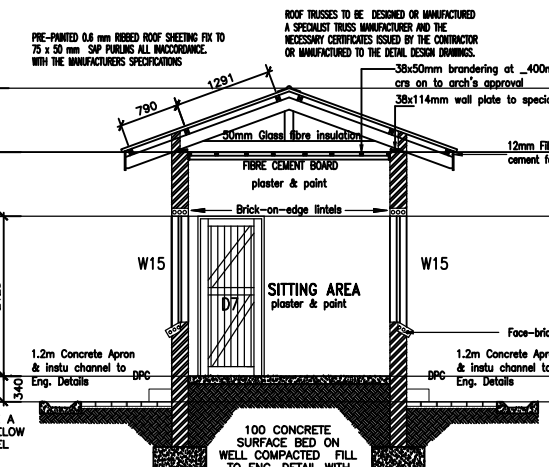
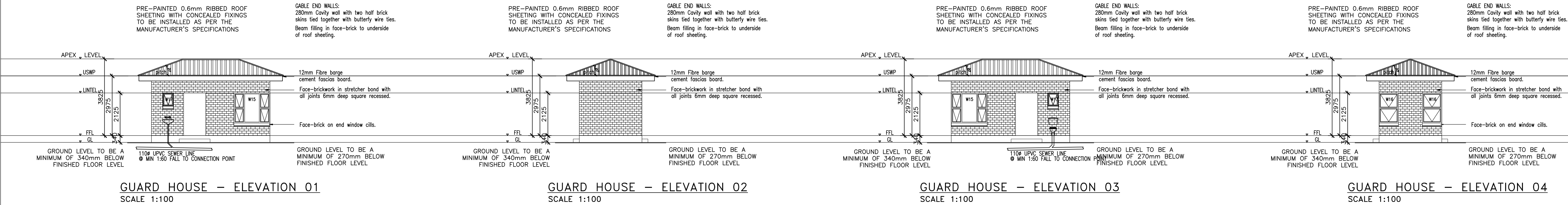
**INDEPENDENT DEVELOPMENT
TRUST FOR
DEPARTMENT OF EDUCATION
NORTHERN CAPE**

site **PORTION 0 OF FARM MOTIITON 509
HM - DITHAKONG VILLAGE JMM
KURUMAN**

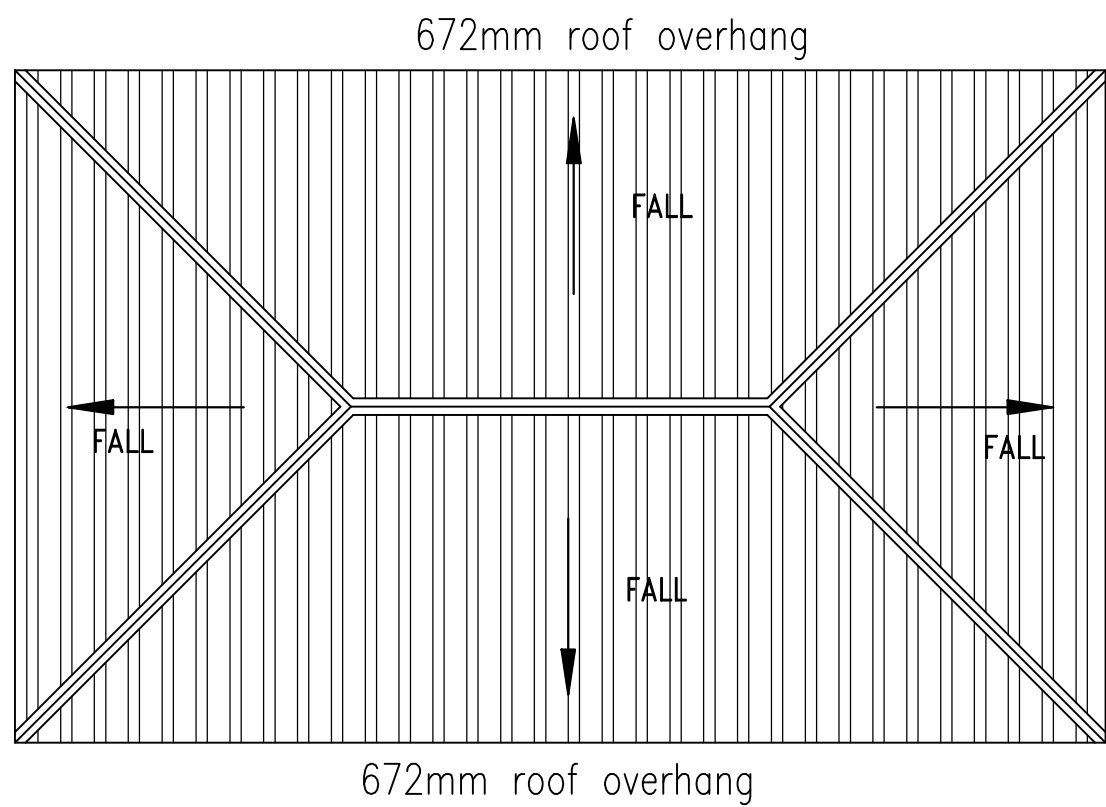
drawing
**FLOOR, ROOF & CEILING PLANS, ELEVATIONS &
SECTION - GUARD HOUSE & REFUSE AREA**

scale	date started	designed by	drawn by
A/S	04/03/2016	UM	AJ

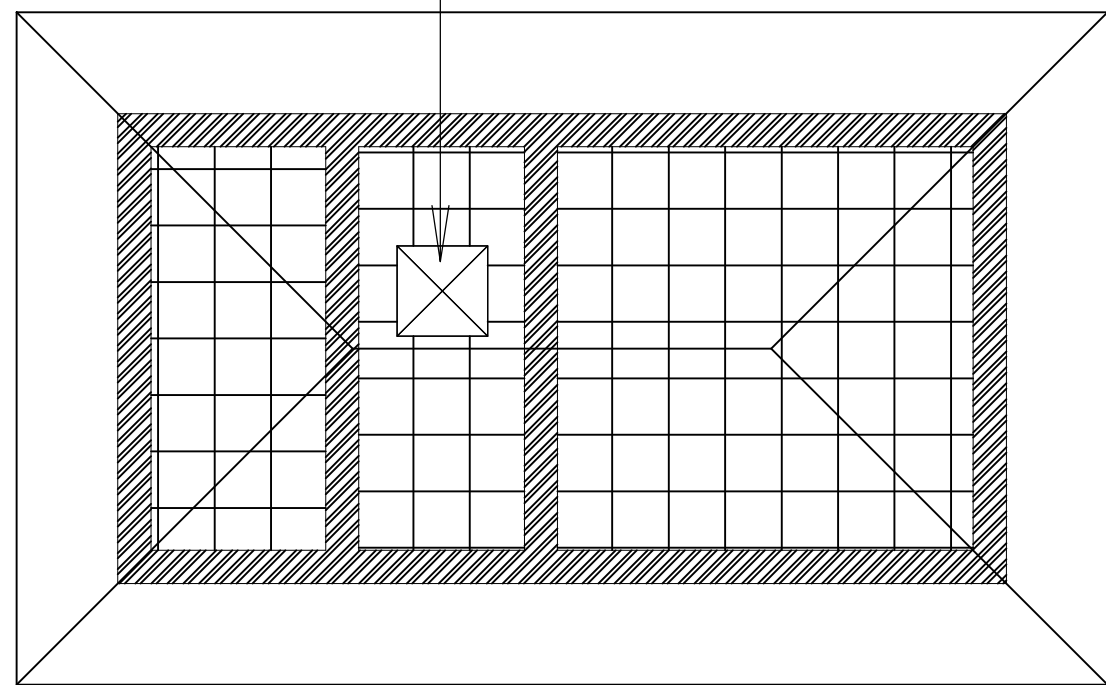
dwg.no	ARC	CON	RES	056	0
consult	dwg stage	location	sheet no.	rev	
cad file					



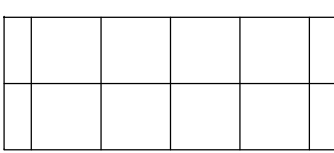
1x(228x38) SA Pine gangplank over entire length of building 1m off centre of roof & not above trap doors



600x600mm, hinged, pressed metal ceiling trap door with 38x50mm braced frame.



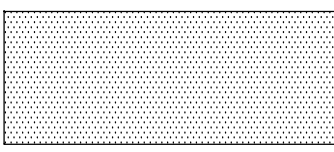
LEGEND



CEILING TYPE: AA
GYPSUM CEILING BOARD:

1200x6.4mm thick gypsum board complete with "h" profile junction strips and 50x19mm SA pine cornice. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

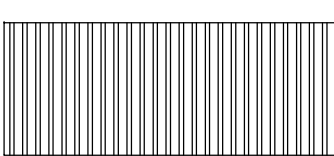
NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.



CEILING TYPE: AB
FIBRE CEMENT BOARD:

1200x6mm Thick pressed fibre cement ceiling boards complete with mild steel "h" profile junction strips and 50x19mm S.A.pine cornices. Fix with 32mm galvanised nails to 50x38mm ceiling battens fixed at right angles to trusses at a max. of 400mm c/c. Treat nails and metal joiners with a metal primer.

NB: Ceiling sheet lengths to lie in direction of trusses and to be nailed across width to manufacturers specifications.

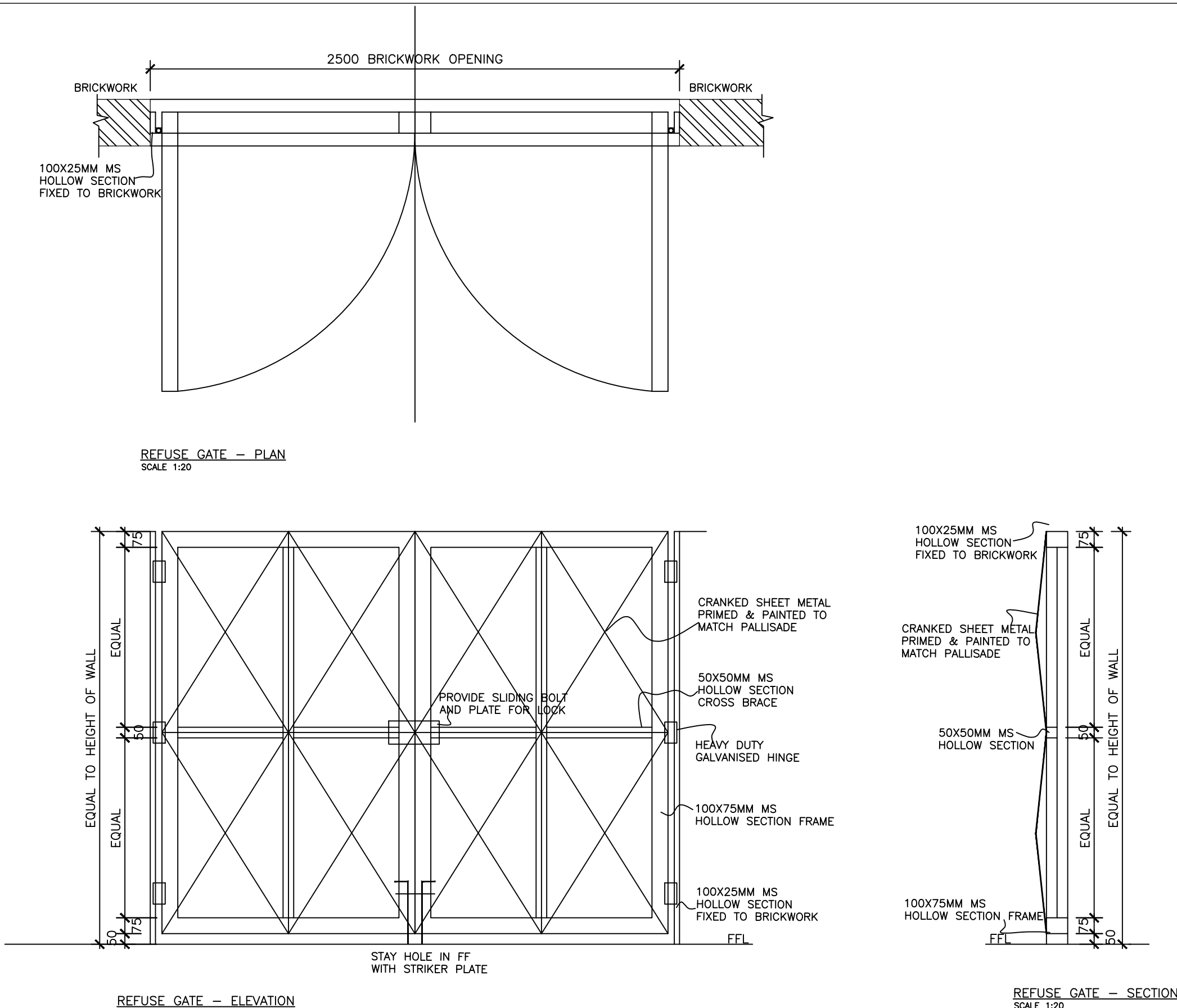
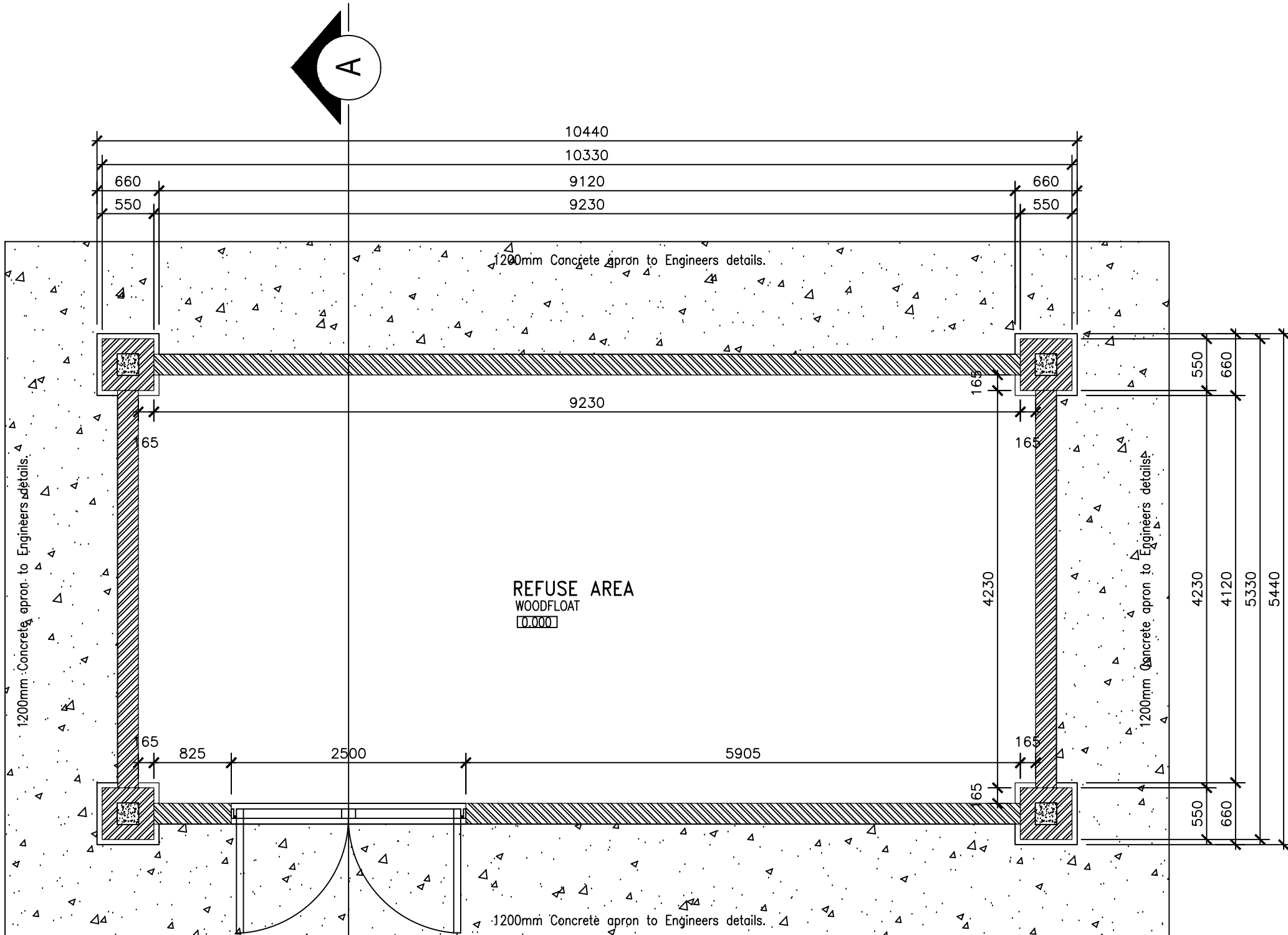
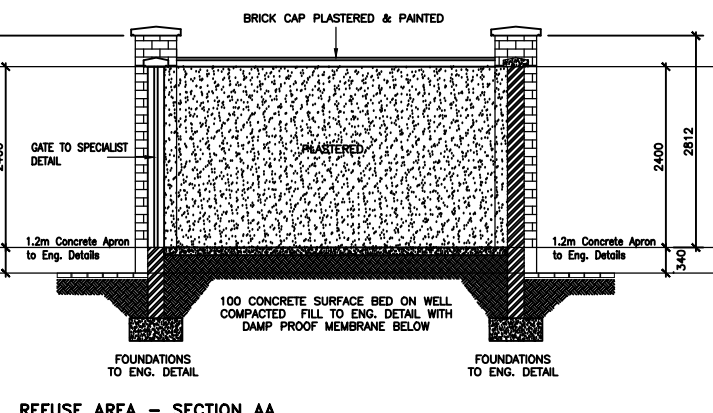
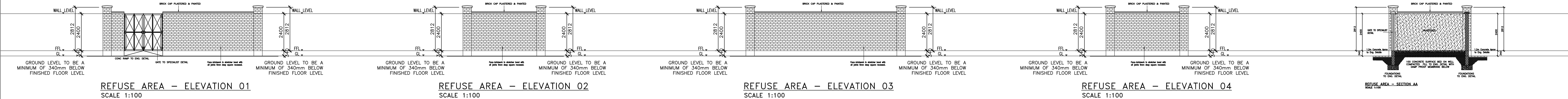


CEILING TYPE: AC
EMULSION (PVA) PAINT ON PLASTERED SLAB-NOT SKIMMED

2 no. coats PVA emulsion ceiling paint in matt finish to SABS 1586 applied on concrete slab surface primed with 1 no. undercoat, in accordance with manufacturer's instructions. All to be manufactured and installed in strict compliance to the latest SANS approved standards.

NOTE:

PROVIDE 50mm FIBREGASS INSULATION ON ALL CEILINGS.



ROOF NOTE :

Ribbed roof sheeting with coveceled fixings at 20 deg Pitch on 75 x 50 purlins at a max 1800mm centres. On trusses at 1' 200mm max centres (maximum) on 50 x 114 wall plate.

All bolt holes are to be drilled.

TRUSS NOTE:–

All internal walls to be built up to a minimum of 2 brick courses above ceiling height. NB: At truss tie beams, walls are to be kept clear of truss so that no wall to be kept clear of truss so that no wall or wall finish will touch any truss member.

NOTE:

- Vertical bracing (DT69) and tie beam and web runner to be continuous with splices as per details where necessary.
- Nails to be 3.50 x 75mm long and 4.00 x 100mm as shown
 - min. nail spacing = 10 x diameter
 - min. edge distance = 5 x diameter
 - min. end distance = 15 x diameter
 - projecting nail points to be clinched
- Trusses to be plumb with straight rafters before bracing is fixed.
- Joints to accurately cut and trusses securely made and so fitted that components are drawn together tightly.
- Adequate temporary bracing to be provided during erection until permanent bracing is installed.
- All roof timbers to comply with specifications.
- Truss construction and erection must be carried out to the approval of a professional engineer.
- The roof structure must be inspected and approved by a professional engineer before roof tiles may be laid.
- For details of STANDARD roof truss construction refer to DOG-1341/37 & 38
- For details of vertical bracing on roof trusses see DT69.

Addendum J

ADDENDUM J

IDT Addendum to the JBCC



ADDENDUM

To the

THE JBCC PRINCIPAL BUILDING AGREEMENT

NAME OF PROJECT: _____

INTRODUCTION

WHEREAS, the Independent Development Trust (“IDT”) made an Offer of Appointment and the Contractor has accepted such appointment subject to the conditions stipulated in the aforesaid Offer of Appointment Letter, which conditions include signing of the JBCC Agreement, Edition (hereinafter referred to as “Main Agreement”).

AND WHEREAS, this addendum shall form part of the Main Agreement between the Employer and the Contractor.

1. ADDENDUM TO THE MAIN AGREEMENT

- 1.1 This Agreement will constitute an Addendum to the Main Agreement as contemplated herein;
- 1.2 The Terms of Reference, Accepted Proposal or Tender, Standard Conditions of Tender, Special Conditions of Tender and adjusted Priced Bills of Quantities shall form part of the agreement between the Contractor and the Employer;
- 1.3 This Addendum will be deemed to incorporate, with or without variation, all the provisions of the Main Agreement, unless the context clearly requires otherwise;
- 1.4 All words and phrases used in this Addendum which are defined in the Main Agreement, will bear the same meaning assigned to them in the Main Agreement; and
- 1.5 All references in the Main Agreement to “the/this Agreement” itself, will be deemed to be references also to the Main Agreement duly amended by this Addendum.

1.6 Interpretations and Definition

1.6.01 **Financial Implications** shall mean the variation amount over and above the awarded contract sum.

2. SPECIAL CONDITION

If there is any conflict between the contents or any part of this Addendum and the contents or any part of the Main Agreement and other annexures, the content of this Addendum shall prevail.

3. WAIVER OF CONTRACTOR'S LIEN

- 3.1 The Contractor hereby waives, in favour of the Employer, any lien or right of retention that is or may be held in respect of the Works to be executed on the Site.
- 3.2 The Employer, as an Organ of State, shall not be required to provide payment guarantees.

4. ASSIGNMENT OF RIGHTS OR OBLIGATIONS

- 4.1 Neither **party** shall assign or cede rights or obligations without the written consent of the other **party**, which consent shall not be unreasonable withheld.
- 4.2 Where the Contractor intend to cede any right to monies due or to become due under this agreement as security in favour of a financial institution, a written consent in accordance with clause 4.1 above, shall be obtained from the Employer prior to entering into such cession.
- 4.3 Any cession entered into without the necessary written consent from the either party, shall be null and void.
- 4.4 The Employer shall not consent to a cession of monies due or to become due under this agreement as security in favour of a financial institution, unless such financial institution submitted to the IDT a Valid Tax Clearance Certificate, is registered as a credit provider in terms of the National Credit Act and as a vendor in the IDT's Vendor Management System.

5 INTERIM PAYMENT

- 5.1 The **Employer** shall, in accordance with clause 8.2.3 of the treasury regulation of March 2005, pay to the **Contractor** the amount certified in an interim **payment certificate** within **thirty (30) calendar days** of the date of submission of the **payment certificate**".
- 5.2 Default interest, where applicable, shall only be effective after the 30 calendar days of the date of receipt of the interim **payment certificate from the Principal Agent**.
- 5.3 The Employer shall be entitled to apply a set-off against a legitimate and liquid claim against the Contractor from which a valid invoice has been received.

6 TAX COMPLIANCE MEASURES

- 6.1 The Contractor hereby grant confirmation that SARS may, on on-going basis during the contract term, disclose the Contractor's tax compliance status to the employer.
- 6.2 Should the Contractor appoint a sub-contractor to execute a portion of a work in excess of the threshold (currently 25%) prescribed by the National Treasury, the Contractor must ensure that a sub-contractor is tax compliant and remains tax compliant for the full duration of the contract. The contractor shall obtain a written consent from its sub-contractors confirming that SARS may on on-going basis during the contract term, disclose the sub-contractor's tax compliance status to the employer.
- 6.3 The Contractor shall submit a valid tax clearance certificate within 10 working days from the date of expiry of the tax clearance certificate. The Employer reserve the right to demand a valid Tax Clearance Certificate prior to making any

payment to the Contractor, should it become aware that the tax clearance corticated has expired.

- 6.4 Unless the Employer receive a written confirmation that the Contractor has challenged its tax compliance status with SARS, the Employer shall not process any payment to the Contractor, if 30 days has lapsed since the written notice by the Employer and the Contractor has failed to remedy its tax compliance status.
- 6.5 Employer's non-payment of the Contractor's invoice in accordance with clause 6.4 above shall not absolve the contractor from performing its obligation in terms of the contract.
- 6.6 Unless the Employer receives a written confirmation that the Contractor or sub-Contractor has challenged its tax compliance status with SARS, the Employer shall be entitled to cancel the contract with the Contractor or instruct the Contractor to cancel its contract with the Sub-Contractor.
- 6.7 Where a Contractor is a JV, each party to a JV must be tax complaint and remains tax compliant for the full duration of the contract, failing which, the Employer shall invoke paragraph 6.4 or 6.6 above.

7. APPROVAL OF VARIATION ORDERS

- 7.1 Upon receipt of the Variation Order (VO), the Principal Agent must professionally consider the merits of the Variation Order and make a recommendation to the Employer.
- 7.2 The Principal Agent shall not have the power to approve any deviation or variation which has financial implications on the Employer without the necessary written approval of the Employer, except under emergency circumstances wherein failure to undertake the work may result in loss of life.
- 7.3 The Employer must communicate the approval of a Variation Order in writing to the Principal Agent and the Principal Agent shall, upon receipt of confirmation of the approval of the VO, issue the necessary Contract Instruction to the contractor to undertake the works.

- 7.4 The Contractor shall not commence with any Variation Order Works without the written approval of the Variation Order from the Employer, except under circumstances mentioned in paragraph 7.2 above.
- 7.5 Should the Contractor undertakes the Variation Order Works without the necessary written approval of the Variation Order from the Employer, the Contractor shall be entirely liable for any financial and any related implications and hereby indemnify and hold harmless the Employer from and against any and all claims, actions, damages, liabilities, injuries, costs, fees, expenses, or losses, including and without limitation, reasonable attorney's fees and costs of investigation and litigation, whatsoever which may be incurred by, or for which liability may be asserted against, the Employer arising out of the Contractor's performance or non-performance of unauthorized works, but only to the extent caused by the negligent acts, errors or omissions of the Contractor.
- 7.6 The Contractor shall not accept any instructions from any party, including beneficiary Department, other than the Principal Agent.

8. JOINT VENTURE AGREEMENT

- 8.1 Should the Joint Venture Agreement be dissolved or any of the JV partner pull out the JV Agreement for any reasons whatsoever, the Employer hereby reserve its right to terminate the contract with immediate effect.
- 8.2 Should the Employer decide not to terminate the contract upon the dissolution of the JV Agreement and the replacement JV partner does not meet the BBBEE threshold stipulated in the tender document, the IDT shall be entitled to cancel the contract with immediate effect.

- 8.3 Should the BBBEE status of the Joint Venture be changed to a lower rate than the bidding rate, based on legislation applicable at the closing date of the
- 8.4 tender, the IDT shall be entitled to cancel the contract.

9. BREACH

9.1 In the event that the contractor: -

9.1.1 commits an act of insolvency; or

9.1.2 is placed under a provisional or final winding-up or judicial management order; or

9.1.3 is placed under or applied for business rescue; or

9.1.4 makes an assignment of more than 25% of either its right and/or its obligation for the benefit of the third party without the written consent of the employer; or

9.1.5 the Contractor is registered or fails to renew his registration with the CIDB or changes directorship during the course of the project, resulting in the contravention of BBBEE statutory requirement; or

9.1.6 fails to satisfy or take steps to have set aside any judgment taken against it within 14 (Fourteen) business days after such judgment has come to its notice,

then the other Employer will be entitled to terminate the Agreement on written notice.

Signed at on this the day of**2022**

AS WITNESSES:

1. _____

For and on behalf of the **Employer:**
(.....), in his/her
capacity as the -----

2. _____

For and on behalf of the **Employer:**
(.....), in his/her
capacity as the -----
-----.

Signed at on this the day of**2022**

AS WITNESSES:

3. _____

4. _____

For and on behalf of the **Contractor:**
.....in
his/her capacity as
....., who
hereby confirm that he/she is duly
authorized.