NATIONAL DEPARTMENT OF PUBLIC WORKS

THE CONTRACT

FOR
MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)

TENDER NUMBER: MTH47/2022

COMPRISING:

TENDERING PROCEDURES (VOLUME 1) RETURNABLE	**(This document)**
RETURNABLE DOCUMENTS (VOLUME 2) RETURNABLE	(Separate document)
THE CONTRACT (VOLUME 3) RETURNABLE	(Separate document)

TENDERER : ……

CRS# :……

Compiled for :

Department of Public Works
Private Bag X5007
Mthatha
5100

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VOLUME 1

TENDERING PROCEDURES

T1.1

TENDER NOTICE AND INVITATION TO TENDER

public works & infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

PA 32: INVITATION TO BID
PART A

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (*NAME OF DEPARTMENT/ PUBLIC ENTITY*)					
BID NUMBER:	MTH47/2022	CLOSING DATE:	14 October 2022	CLOSING TIME:	11:00
DESCRIPTION					

THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (DPW04.1 GS or DPW04.2 GS).

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*

National Department of Public Works, 5th Floor PRD Building, Sutherland Street, Mthatha, 5099

OR POSTED TO:

National Department of Public Works, 5th Floor PRD Building, Sutherland Street, Mthatha, 5099

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				
	TCS PIN:		**OR** CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	☐ Yes ☐ No
IF YES, WHO WAS THE CERTIFICATE ISSUED BY?				

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA) AND NAME THE APPLICABLE IN THE TICK BOX	☐	AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA)
	☐	A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN ACCREDITATION SYSTEM (SANAS)
	☐	**A REGISTERED AUDITOR DETAILS:** NAME: REGISTRATION NUMBER: BUSINESS ADDRESS: …… …… …… …… TELEPHONE NUMBER:…… E-MAIL ADDRESS:……

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

[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?**	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES ANSWER PART B:3 BELOW]
SIGNATURE OF BIDDER	……	**DATE**	
CAPACITY UNDER WHICH THIS BID IS SIGNED (Attach proof of authority to sign this bid; e.g. resolution of directors, etc.)			

TOTAL NUMBER OF ITEMS OFFERED		**TOTAL BID PRICE ([1]ALL APPLICABLE TAXES)**	
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		**TECHNICAL INFORMATION MAY BE DIRECTED TO:**	
DEPARTMENT/ PUBLIC ENTITY		CONTACT PERSON	
CONTACT PERSON		TELEPHONE NUMBER	
TELEPHONE NUMBER		FACSIMILE NUMBER	
FACSIMILE NUMBER		E-MAIL ADDRESS	
E-MAIL ADDRESS			

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR ONLINE

1.3. BIDDERS MUST REGISTER ON THE CENTRAL SUPPLIER DATABASE (CSD) TO UPLOAD MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS; AND BANKING INFORMATION FOR VERIFICATION PURPOSES). B-BBEE CERTIFICATE OR SWORN AFFIDAVIT FOR B-BBEE MUST BE SUBMITTED TO BIDDING INSTITUTION.

1.4. WHERE A BIDDER IS NOT REGISTERED ON THE CSD, MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS MAY NOT BE SUBMITTED WITH THE BID DOCUMENTATION. B-BBEE CERTIFICATE OR SWORN AFFIDAVIT FOR B-BBEE MUST BE SUBMITTED TO BIDDING INSTITUTION.

1.5. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER LEGISLATION OR SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.

2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.

2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS TOGETHER WITH THE BID.

2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE PROOF OF TCS / PIN / CSD NUMBER.

2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS	
3.1. IS THE BIDDER A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
3.2. DOES THE BIDDER HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
3.3. DOES THE BIDDER HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
3.4. DOES THE BIDDER HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN, IT IS NOT A REQUIREMENT TO OBTAIN A TAX COMPLIANCE STATUS / TAX COMPLIANCE SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID. AN ORIGINAL OR CERTIFIED COPY OF THE B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE.

***Note Well*:**

a) In respect of non VAT vendors the bidders may not increase the bid price under Section 67(1) of the Value Added Tax Act of 1991 where the relevant transaction would become subject to VAT by reason of the turnover threshold being exceeded and the bidder becomes liable for VAT.
b) **All delivery costs must be included in the bid price, for delivery at the prescribed destination.**
c) The price that appears on this form is the one that will be considered for acceptance as ***a firm and final offer***.
d) The grand total in the pricing schedule(s), inclusive of VAT, attached to the bid offer must correlate and be transferred to this form (PA32).
e) Where there are inconsistencies between the grand total price offer in the pricing schedule(s) and the PA32 price offer, the price offer on the PA32 shall prevail and deemed to be firm and final. No further correspondence shall be entered into in this regard.

[1] All applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

PA-04 (EC): NOTICE AND INVITATION TO TENDER

THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE INVITES TENDERS FOR:

Project title:	MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)
Reference no:	19/2/4/2/2/6977/12

Tender no:	MTH47/2022		
Advertising date:	22 September 2022	**Closing date:**	14 October 2022
Closing time:	11:00	**Validity period:**	12 Weeks (84 calendar days)

It is estimated that tenderers should have a CIDB contractor grading designation of***5 GB*** *or*
5 GB* or higher.
** Delete "or select tender value range select class of construction works" where only one class of construction works is applicable*

It is estimated that potentially emerging enterprises should have a CIDB contractor grading designation of
5 GB*PEor*
5 GB*PE or higher.
** Delete "or select tender value range select class of construction works PE" where only one class of construction works is applicable*

Only tenderers who are responsive to the following responsiveness criteria are eligible to submit tenders. Failure to comply with the criteria stated hereunder shall result in the tender offer being disqualified from further consideration:

☒	Only those tenderers who satisfy the eligibility criteria stated in the Tender Data may submit tenders.
☒	Tender offer must be properly received on the tender closing date and time specified on the invitation, fully completed either electronically (if issued in electronic format), or by writing legibly in non-erasable ink. (All as per Standard Conditions of Tender).
☒	All parts of tender documents submitted must be fully completed in ink and signed where required. Use of correction fluid is prohibited. Corrections to be crossed out and initialled by the person authorised to sign the tender documentation as per PA 15.1 or PA 15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's .
☒	Submission of (DPW-07 EC): Form of Offer and Acceptance.
☒	Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.
☒	Submission of (PA-11): Declaration of Interest and Tenderer's Past Supply Chain Management Practices.
☒	Submission of (PA-16): Preference points claim form in terms of the Preferential Procurement Regulations 2017.
☒	Submission of (PA-29): Certificate of Independent Bid Determination.
☒	Submission of (PA – 36 and Annexure/s C): Declaration Certificate for Local Production and Content for designated sectors.
☒	Submission of (PA 40): Declaration of Designated Groups for Preferential Procurement.
☒	Submission of proof of Registration on National Treasury's Central Supplier Database (CSD).
☒	Submission of (DPW-09EC): Particulars of Tenderer's Projects.
☒	Submission of (DPW-21 EC): Record of Addenda to tender documents
☒	Submission of (DPW-16 EC): Site Inspection Meeting Certificate
☐	Submission of record of attending compulsory virtual bid clarification / site inspection meeting.

☒	The tenderer will be required to submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts) together with his tender.
☒	The tenderer will be required to submit his fully priced and completed sectional summary- and final summary pages with the tender.
☐	Submission of Proof of 30% Subcontracting participation and related documents in terms of the Preferential Procurement Regulations 2017.
☒	All parts of the tender documents submitted must be fully completed in ink and signed where required.
☒	Upon request, submission of fingerprints obtained from local SAPS including any other additional documentation and information required for vetting purpose.
☒	Upon request, submission of a fully completed security clearance application form with supporting documentation and information as required. The security clearance form will be provided by the Employer for projects requiring a security clearance.
☐	***Specify other responsiveness criteria***
☐	***Specify other responsiveness criteria***

Tenderer must comply with the Pre-qualification criteria for Preferential Procurement listed below

☐	A tenderer having stipulated minimum B-BBEE status level of contributor: ☒**Level 1** **or** ☒**Level 2** **or** ☐**Level 3**
☐	An EME or QSE
☐	A tenderer subcontracting a minimum of 30% to: ☐An EME or QSE which is at least 51% owned by black people ☐ An EME or QSE which is at least 51% owned by black people who are youth ☐An EME or QSE which is at least 51% owned by black people who are women ☐An EME or QSE which is at least 51% owned by black people with disabilities ☐An EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships ☐A co-operative which is at least 51% owned by black people ☐An EME or QSE which is at least 51% owned by black people who are Military veterans ☐An EME or QSE;

This bid will be evaluated according to the preferential procurement model in the PPPFA: *(Tick applicable preference point scoring system)*

☒ **80/20** Preference points scoring system	☐ **90/10** Preference points scoring system	☐**Either 80/20 or 90/10** Preference points scoring system

In case where below/above R 50 000 000 is selected, the lowest acceptable tender will be used to determine the applicable preference point system. (To be used in instances where the estimate cannot be reasonably determined or when one is unsure as to what the market price may be).

Note: *Functionality will be applied as a prequalification criterion. Such criteria are used to establish minimum requirements where after bids will be evaluated solely on the basis of price and preference.*

Minimum functionality score to qualify for further evaluation:	70
Functionality criteria:	**Weighting factor:**

1. Provision of an original or certified copy of Bank Rating Certificate SCORE POINTS Grade A = 5 20 Grade B = 4 16 Grade C = 3 12 Grade D = 2 8 Grade E = 1 4 Failure to porvide/submit an original or certified copy of bank rating certificate, the bidder will not earn points.	20
2. Provide detailed company organgram, CVs and qualifications of the key staff assigned to the project. (Key Staff examples : Contracts Manager / Site Agent, etc. Copies to be certified with certification date of not more than six months. SCORE POINTS Qualification: Honours and above (NQF 8) = 5 20 Qualification: Degree (NQF 7) = 4 18 Qualification: Diploma (NQF 6) = 3 12 Qualification: Certificate (NQF 5) = 2 8 Qualification: Senior Certificate (NQF 4) = 1 4	20
3. Provide/ Demonstrate the experience of Key Staff assigned to the project: EXPERIENCE: SITE AGENT SCORE POINTS Staff experience of 10 or more years = 5 10 Staff experience of 8 years = 4 8 Staff experience of 6 years = 3 6 Staff experience of 4 years = 2 4 Staff experrience of 2 years = 1 2 4. EXPERIENCE: FOREMAN SCORE POINTS Staff experience of 10 or more years = 5 10 Staff experience of 8 years = 4 8 Staff experience of 6 years = 3 6 Staff experience of 4 years = 2 4 Staff experrience of 2 years = 1 2	20
5. Previous experience based on the number of projects of similar nature currently engaged in and/ or successfully completed over the last (10) ten years, (DPW - 09: Particulars of tender's Projects should be fully completed) SCORE POINTS Projcet Value equal/ more than R20 million = 5 40 Project Value equal/ more to R15million but less R20million= 4 32 Projects Value equal/ more to R10million but less than R15million= 3 24 Projects Value equal/ more to R5million but less than R10million = 2 16 Projects Value equal/ more to R1million but less R5million = 1 8	40

Tender no: MTH47/2022

Price	80
BBBEE	20
Total	**100 Points**

Collection of tender documents

☒ Bid documents are available for free download on e-Tender portal www.etenders.gov.za

Any reference to words “Bid” or Bidder” herein and/or in any other documentation shall be construed to have the same meaning as the words “Tender” or “Tenderer”.

☒ Alternatively; Bid documents may be collected during working hours at the following address National Department of Public Works, 5th Floor PRD Building, Sutherland Street, Mthatha, 5099. A non-refundable bid deposit of R 300.00 is payable (cash only) on collection of the bid documents.

Site inspection meeting
A pre-tender site inspection meeting will ***be*** held in respect of this tender.
Attendance of said pre- tender site inspection meeting is ***compulsory***

The particulars for said pre- tender site inspection meeting or virtual bid clarification / site inspection meeting. are:
Venue: Mount Fletcher Magistrate
Zoom LInk: N/A
Date: 29 Septemebr 2022
Starting time: 11:00

Enquiries related to tender documents may be addressed to:

DPWI Project Manager:	Cinga Dlulane	**Telephone no:**	047 502 7102
Cell no:	079 514 8448	**Fax no:**	
E-mail:	cinga.dlulane@dpw.gov.za		

Deposit / return of tender documents

Telegraphic, telephonic, telex, facsimile, electronic and / or late tenders will not be accepted.

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

All tenders must be completed in non-erasable ink and submitted on the official forms – (forms not to be re-typed).

Tender documents may be posted to:		**Deposited in the tender box at:**
The Director-General Department of Public Works and Infrastructure Private Bag X 5007 Mthatha 5099 Attention: **Procurement section: Room** 5th Floor, PRD building	**OR**	National Department of Public Works 5th Floor PRD Building Sutherland street 5099

Compiled by:

Cinga Dlulane		20 September 2022
Name of Project Manager	Signature	Date

T1.2

TENDER DATA

DPW-03 (EC): TENDER DATA

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***
Reference no:	*19/2/4/2/2/6977/12*

Tender no:	***MTH47/2022***	**Closing date:**	*14 October 2022*
Closing time:	***11:00 AM***	**Validity period:**	*84* **days**

Clause number:	
	The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement as per Government Notice No. 423 published in Government Gazette No. 42622 of 8 August 2019 and as amended from time to time. (see www.cidb.org.za). 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 marked "C" in the above mentioned Standard Conditions of Tender.
C.1.1	The employer is the Government of the Republic of South Africa in its Department of Public Works and Infrastructure.
C.1.2	For this contract the three volume approach is adopted. This procurement document has been formatted and compiled under the headings as contained in the CIDB's "Standard for Uniformity in Construction Procurement." The three volume procurement document issued by the employer comprises the following: Volume 1: Tendering procedures T1.1 - Notice and invitation to tender (PA-04 EC) T1.2 - Tender data (DPW-03 EC) Volume 2: Returnable documents T2.1 - List of returnable documents (PA-09 EC) C1.1 - Form of offer and acceptance (DPW-07 EC) C1.2 – Contract Data T2.2 - Returnable schedules Volume 3: Contract Part C1: Agreement and contract data C1.2 - Contract data (Part 1: Data provided by employer) (DPW-04 EC or DPW-05 EC) C1.3 - Form of guarantee (DPW-10.1 EC / DPW-10.3EC or DPW-10.2 EC/DPW-10.4 EC) Part C2: Pricing data C2.1 - Pricing Assumptions (PG-02.2 EC or PG-02.1EC) C2.2 - Bills of Quantities / Lump sum document (if not a returnable document) Part C3: Scope of work C3 - Scope of work (PG-01.2 EC or PG-01.1EC) Part C4: Site information C4 - Site information (PG-03.2 EC or PG03.1EC)

Tender no: ***MTH47/2022***

C.1.4	The Employer's agent is:	
	Name:	***Om Moodley Architects***
	Capacity:	***Private Project Manager***
	Address:	***P.O Box 3055, Durban, 4000***
	Tel:	***031 202 5064***
	Fax:	***031 201 2347***
	E-mail:	***om@omarchitects.co.za***

C.2.1
C.3.11

A. ELIGIBILITY IN RESPECT OF CIDB REGISTRATION:

The following tenderers who are registered with the CIDB, or are *capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated (* tenderers who are capable of being so registered, or who have applied for registration but have not yet received confirmation of such registration, must provide, with this tender, acceptable documentary proof thereof):

a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a ***5 GB*** or ***5 GB**** class of construction work; and

b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above

Joint ventures are eligible to submit tenders provided that:

1. every member of the joint venture is registered with the CIDB;

2. the lead partner has a contractor grading designation in the ***5 GB*** or ***6GB**** class of construction work; and

3. 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 accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations for a ***5 GB*** or ***5 GB**** class of construction work

** *Delete "or select tender value range select class of construction works" where only one class of construction works is applicable*

A contract will be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff. - ***Not applicable***

Tender no: ***MTH47/2022***

B. INDICATE THE FUNCTIONALITY WEIGHTING APPLICABLE TO THIS BID:

Note: *Functionality will only be applied as a prequalification criterion. Such criteria are used to establish minimum requirements where after bids will be evaluated solely on the basis of price and preference.*

Functionality Criteria	***Weighting Factor***
1. Provision of an original or certified copy of Bank Rating Certificate **SCORE POINTS** **Grade A = 5 20** **Grade B = 4 16** **Grade C = 3 12** **Grade D = 2 8** **Grade E = 1 4** **Failure to porvide/submit an original or certified copy of bank rating certificate, the bidder will not earn points.**	**20**
2. Provide detailed company organgram, CVs and qualifications of the key staff assigned to the project. (Key Staff examples : Contracts Manager / Site Agent, etc. Copies to be certified with certification date of not more than six months. **SCORE POINTS** **Qualification: Honours and above (NQF 8) = 5 20** **Qualification: Degree (NQF 7) = 4 18** **Qualification: Diploma (NQF 6) = 3 12** **Qualification: Certificate (NQF 5) = 2 8** **Qualification: Senior Certificate (NQF 4) = 1 4**	**20**
3. Provide/ Demonstrate the experience of Key Staff assigned to the project: EXPERIENCE: SITE AGENT **SCORE POINTS** **Staff experience of 10 or more years = 5 10** **Staff experience of 8 years = 4 8** **Staff experience of 6 years = 3 6** **Staff experience of 4 years = 2 4** **Staff experrience of 2 years = 1 2** **4. EXPERIENCE: FOREMAN** **SCORE POINTS** **Staff experience of 10 or more years = 5 10** **Staff experience of 8 years = 4 8** **Staff experience of 6 years = 3 6** **Staff experience of 4 years = 2 4** **Staff experrience of 2 years = 1 2**	**20**
5. Previous experience based on the number of projects of similar nature currently engaged in and/ or successfully completed over the last (10) ten years, (DPW - 09: Particulars of tender's Projects should be fully completed) **SCORE POINTS** **Projcet Value equal/ more than R20 million = 5 40** **Project Value equal/ more to R15million but less R20million = , 4 32** **Projects Value equal/ more to R10million but less than R15million = 3 24** **Projects Value equal/ more to R5million but less than R10million = 2 16**	**40**

Projects Value equal/ more to R1million but less R5million = , 1 8	
Total	**100 Points**

(Weightings will be multiplied by the scores allocated during the evaluation process to arrive at the total functionality points)

Minimum functionality score to qualify for further evaluation:	**70**

(Total minimum qualifying score for functionality is 50 Percent).

C ELIGIBILITY IN RESPECT OF RISK TO EMPLOYER:

Provisions applicable to Evaluation Method 1 and 2:
Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Project Manager, failing which the tender offer will *mutatis mutandis* be declared non-responsive.

C.1. Technical risks:

C.1.1 Criterion 1: Quality of current and previous work

Quality of current and previous work performed by the Tenderer in the class of construction work stated above as per the evaluation report prepared by the Professional Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC).

C.1.2 Criterion 2: Contractual commitment

Adherence to contractual commitments, demonstrated by the Tenderer in the performance on current and previous work, evaluated in terms of:
a) the level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
b) the degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto; and
c) general contract administration, i.e. compliance with contractual aspects such as laws and regulations, insurances, security, written contract instructions, subcontractors, time delay claims, etc as can generally be expected in standard/normal conditions of contract.

C.2 Commercial risks:

The level to which agreement with the Tenderer is reached in respect of the adjustment of rates which are considered to be imbalanced or unreasonable and to eliminate errors or discrepancies, without changing the tendered total price, over and above the correction of arithmetical errors as provided for in C.3.9.

Tender no: ***MTH47/2022***

C.2.7	For particulars regarding a pre-tender site inspection meeting, see Notice and Invitation to Tender T1.1
C.2.12	If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements. A tenderer may submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of

	the tender documents, is also submitted. Provided that the tenderer's main tender offer is according to specification and would under normal circumstances be recommended for acceptance, his alternative tender offer may also be considered for the purpose of the award of the contract. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed. Alternative tender offer permitted: **Yes** ☐ **No** ☒
C.2.13.2	The list of Returnable Documents identifies which of the documents a tenderer must complete when submitting a tender offer. The tenderer must submit his tender offer by completing the Returnable Documents, signing the "Offer" section in the "Form of Offer and Acceptance" and delivering the Returnable Documents back to the Department.
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 as per Notice and Invitation to Tender T1.1.
C.2.13.6 **C.3.5**	A two-envelope procedure will not be followed.
C.2.15	The closing time for submission of tender offers is as per Notice and Invitation to Tender T1.1.
C.2.16	The tender offer validity period is as per Notice and Invitation to Tender T1.1.
C2.16.3	Omit the wording of the last sentence for those projects which are subject to CPAP
C.2.18	The tenderer will be required to submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts): ☒ Together with his tender; or ☐ Within fourteen (14) calendar days of the date on which he has been requested to do so prior to the award of the contract.
C.2.19	Access shall be provided for inspections, tests and analysis as may be required by the Employer.
C.3.4.1 **C.3.4.2**	The location for opening of the tender offers, immediately after the closing time thereof shall be at: ***NATIONAL DEPARTMENT PUBLIC WORKS, SUTHERLAND STREET, PRD Building, 5th Floor, MTHATHA***
C.3.8	The words "responsive tender" and "acceptable tender" shall be construed to have the same meaning.
C.3.9.3	Omit the wording and replace with the following: "Notify the tenderer of all errors, omissions and/or rate imbalances that are identified in the tender offer and request the tenderer to, within a stipulated time, accept the total of prices as corrected in accordance with C.3.9.4."

Tender no: ***MTH47/2022***

C.3.9.4	Omit the wording of the first sentence and replace with the following: "In cases where tender offers contain errors, omissions and/or rate imbalances, these are to be corrected as follows:"
C.3.9.4	Add sub paragraph c) to C.3.9.4, as follows: "c) If the tenderer does not accept the corrected tender offer, or cannot reach consensus with the Employer on a corrected tender offer, the tender is to be classified as not acceptable/non responsive and removed from further contention."
C.3.11.1	The procedure for the evaluation of responsive tenders is Method 2: Financial Offer and Preference.
C.3.13	Add the following to sub paragraph a), as follows: The tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004) as a person prohibited from doing business with the public sector;
C.3.17	Provide to the successful tenderer one copy of the signed contract document.

NATIONAL DEPARTMENT OF PUBLIC WORKS

THE CONTRACT

FOR
MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)

TENDER NUMBER: MTH47/2022

COMPRISING:

TENDERING PROCEDURES (VOLUME 1) RETURNABLE	(Separate document)
RETURNABLE DOCUMENTS (VOLUME 2) RETURNABLE	**(This document)**
THE CONTRACT (VOLUME 3) RETURNABLE	(Separate document)

TENDERER : ……

CRS# :……

Compiled for :

Department of Public Works
Private Bag X5007
Mthatha
5100

INDEX

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T.2.2b Certification of independent bid determination
T2.2c Resolution of board of directors
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T2.1

LIST OF RETURNABLE DOCUMENTS

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

PA-09 (EC): LIST OF RETURNABLE DOCUMENTS

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender / Quote no:	MTH47/2022	**Reference no:**	19/2/4/2/2/6977/12
Receipt Number:			

1. RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Note: Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration.

Tender document name	Number of pages issued	Returnable document
Form of Offer and Acceptance (DPW-07 EC)	4 Pages	Yes
Declaration of Interest and Tenderer's Past Supply Chain Management Practices (PA-11)	4 Pages	Yes
Resolution of Board of Directors (PA-15.1) *(if applicable)*	1 Page	Yes
Resolution of Board of Directors to enter into Consortia or JV's (PA-15.2) *(if applicable)*	2 Pages	Yes
Special Resolution of Consortia or JV's (PA-15.3) *(if applicable)*	3 Pages	Yes
Preference points claim form in terms of the Preferential Procurement Regulations 2017 (PA – 16)	5 Pages	Yes
Certificate of independent Bid Determination (PA - 29)	4 Pages	Yes
Declaration Certificate for Local Production and Content for designated sectors (PA – 36 and Annexure/s C)		Yes
Fully completed Declaration of Designated Groups for Preferential Procurement (PA 40)	2 Pages	Yes
Registration on National Treasury's Central Supplier Database (CSD).	-	Yes
Particulars of Tenderer's Projects (DPW-09 EC)	2 Pages	Yes
Site Inspection Meeting Certificate (DPW-16 EC) (*if applicable*).	1 Page	Yes
Record of attending compulsory virtual bid clarification / site inspection meeting (if applicable).	1 Page	N/A
Record of Addenda to tender documents (DPW-21 EC)	1 Page	Yes
Site Inspection Meeting Certificate (DPW-16 EC) *(if applicable)*	1 Page	Yes
Proof of 30% Subcontracting participation and related documents in terms of the Preferential Procurement Regulations 2017 (*if applicable).*		

* In compliance with the requirements of the CIDB SFU Annexure G

Tender no: ***MTH47/2022***

2. ADDITIONAL RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES
Note: Failure to submit the applicable documents will result in the Tenderer having to submit same upon request within a stipulated time and if not complied with, will result in the tender offer being disqualified from further consideration. [See also C.2.18 of the Standard Conditions of Tender]

Tender document name	Number of pages issued	Returnable document
Any additional information required to complete a risk assessment *(if applicable)*	-	Yes

3. RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT
Note: Failure to submit the applicable documents will result in the Tenderer having to submit same upon request within a stipulated time and if not complied with, will result in the tender offer being disqualified from further consideration. [See also C.2.18 of the Standard Conditions of Tender]

Tender document name	Number of pages issued	Returnable document
Schedule of proposed sub-contractors (DPW-15 EC) *(if applicable)*	1 Page	Yes
Particulars of Electrical Contractor (DPW-22 EC) *(if applicable)*	1 Page	Yes
Mechanical / Electrical / Security Work material and equipment schedules *(if applicable)*	6 Pages	Yes
Schedule for Imported Materials and Equipment (DPW-23 EC) *(if applicable)*	1 Page	Yes

4. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT
(Insert a tick in the "Returnable document" column to indicate which documents must be returned with the tender)

Note: Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration.

Tender document name	Number of pages issued	Returnable document
Priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts)	101 Pages	☒Yes ☐No
Fully priced and completed sectional summary- and final summary pages with the tender.	1 Pages	☒Yes ☐No
insert document name	Pages	☐Yes ☐No
insert document name	Pages	☐Yes ☐No
insert document name	Pages	☐Yes ☐No

Tender no: ***MTH47/2022***

5. ADDITIONAL INFORMATION THAT MAY BE REQUIRED FOR TENDER EVALUATION PURPOSES

Legal Status of Tendering Entity: **If the Tendering Entity is:**	**Documentation to be submitted with the tender, or which may be required during the tender evaluation:**
a. A close corporation, incorporated prior to 1 May 2011 under the Close Corporations Act, 1984 (Act 69 of 1984, as amended)	Copies of the Founding Statement – CK1
b. A profit company duly registered as a private company. [including a profit company that meets the criteria for a private company, whose Memorandum of Incorporation states that the company is a personal liability company in terms of Section 8(2)(c) of the Companies Act, 2008 (Act 71 of 2008, as amended)].	Copies of: i. Certificate of Incorporation – CM1; ii. Shareholding Certificates of all Shareholders of the company, plus a signed statement of the company's Auditor, certifying each Shareholder's ownership / shareholding percentage relative to the total; and/or iii. Memorandum of Incorporation in the case of a personal liability company.
c. A profit company duly registered as a private company in which any, or all, shares are held by one or more other close corporation(s) or company(ies) duly registered as profit or non-profit company(ies).	Copies of documents referred to in a. and/or b. above in respect of all such close corporation(s) and/or company(ies).
d. A profit company duly registered as a public company.	Copy of Certificate of Incorporation – CM1, and a signed statement of the company's Secretary or Auditor confirming that the company is a public company.
e. A non-profit company, incorporated in terms of Section 10 and Schedule 1 of the Companies Act, 2008 (Act 71 of 2008, as amended).	Copies of: I the Founding Statement – CK1; and ii the Memorandum of Incorporation setting out the object of the company, indicating the public benefit, cultural or social activity, or communal or group interest.
f. A natural person, sole proprietor or a Partnership	Copy(ies) of the Identity Document(s) of: i. such natural person/ sole proprietor, or each of the Partners to the Partnership.
g. A Trust	Deed of Trust duly indicating names of the Trustee(s) and Beneficiary (ies) as well as the purpose of the Trust and the mandate of the Trustees.

Signed by the Tenderer:

Name of representative	**Signature**	**Date**

T2

FORM OF OFFER AND ACCEPTANCE

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

DPW-07 (EC): FORM OF OFFER AND ACCEPTANCE

Project title:	MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)		
Tender no:	*MTH47/2022*	**Reference no:**	19/2/4/2/2/6977/12

OFFER

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:
Completion of works in Mount Fletcher magistrate offices which entails, removing existing waterproofing and installing new, replace sanitary fittings, replace tiles to floors, alterations to the building, etc

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 TOTAL OFFER INCLUSIVE OF ALL APPLICABLE TAXES (All applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies) IS:

Rand (in words):	
Rand in figures:	**R**

The award of the tender may be subjected to further price negotiation with the preferred tenderer(s). The negotiated and agreed price will be considered for acceptance as ***a firm and final offer***.

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.

THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY: (cross out block which is not applicable)

Company or Close Corporation: …… …… And: Whose Registration Number is: …….. And: Whose Income Tax Reference Number is: …… CSD supplier number:……....	**OR**	Natural Person or Partnership: …….. …….. Whose Identity Number(s) is/are: …….. Whose Income Tax Reference Number is/are: …….. CSD supplier number:……....

AND WHO IS (if applicable)**:**

Trading under the name and style of: ……

*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".
**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

Tender no:

AND WHO IS:

Represented herein, and who is duly authorised to do so, by: Mr/Mrs/Ms: …….. In his/her capacity as: ……	**Note:** **A Resolution / Power of Attorney, signed by all the Directors / Members / Partners of the Legal Entity must accompany this Offer, authorising the Representative to make this offer.**

SIGNED FOR THE TENDERER:

Name of representative	Signature	Date

WITNESSED BY:

Name of witness	Signature	Date

This Offer is in respect of: (Please indicate with an "X" in the appropriate block)

The official documents …… ☐
The official alternative ……... ☐
Own alternative (only if documentation makes provision therefore) …… ☐

(N.B.: Separate Offer and Acceptance forms are to be completed for the main and for each alternative offer)

SECURITY OFFERED:

(a) the Tenderer accepts that in respect of contracts up to R1 million, a payment reduction** of 5% of the contact value (excluding VAT) will be applicable and will be deducted by the Employer in terms of the applicable conditions of contract

(b) in respect of contracts above R1 million, the Tenderer offers to provide security as indicated below:

(1) cash deposit of 10 % of the Contract Sum (excluding VAT) **Yes** ☐ **No** ☐

(2) variable construction guarantee of 10 % of the Contract Sum (excluding VAT) **Yes** ☐ **No** ☐

(3) payment reduction of 10% of the value certified in the payment certificate (excluding VAT) **Yes** ☐ **No** ☐

(4) cash deposit of 5% of the Contract Sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) **Yes** ☐ **No** ☐

(5) fixed construction guarantee of 5% of the Contract Sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) **Yes** ☐ **No** ☐

NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 35 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

The Tenderer elects as its *domicilium citandi et executandi* in the Republic of South Africa, where any and all legal notices may be served, as (physical address):

……

*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".
**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

Tender no:

Other Contact Details of the Tenderer are:

Telephone No…… Cellular Phone No. ……

Fax No ……..

Postal address ……

Banker …… Branch……..

Registration No of Tenderer at Department of Labour ……

CIDB Registration Number: ……...

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

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the 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 securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five (5) working days of the date of such receipt notifies the employer in writing of any reason why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

For the Employer:

Name of signatory	Signature	Date

Name of Organisation:	Department of Public Works and Infrastructure
Address of Organisation:	

WITNESSED BY:

Name of witness	Signature	Date

*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

Tender no:

Schedule of Deviations

1.1.1.	**Subject:**
Detail:	

1.1.2.	**Subject:**
Detail:	

1.1.3.	**Subject:**
Detail:	

1.1.4.	**Subject:**
Detail:	

1.1.5.	**Subject:**
Detail:	

1.1.6.	**Subject:**
Detail:	

By the duly authorised 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.

*Any reference to words “Bid” or “Bidder” herein and/or in any other documentation shall be construed to have the same meaning as the words “Tender” or “Tenderer”.
**Any reference to the words “payment reduction” herein shall be construed to have the same meaning as the word “retention”

C2.2

BILLS OF QUANTITIES

SECTION NO. 1

PRELIMINARIES

Amount

SECTION NO. 1

PRELIMINARIES

SECTION 1

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".

BUILDING AGREEMENT AND PRELIMINARIES

The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described to be read in conjunction with the Contract Data issued with the tender.

The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities / lump sum document, amended as hereinafter described.

The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause.

The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only.

Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable".

Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents.

TENDERER'S SELECTIONS

Before submission of his tender the contractor is to complete the tenderer's selections in the contract data for organs of state and other public sector bodies.

STRUCTURE OF THIS PRELIMINARIES BILL

Section A : A recital of the headings of the individual clauses in the aforementioned JBCC Principal Building Agreement.

Section B : A recital of the headings of the individual clauses in the aforementioned JBCC General Preliminaries.

Section C : Any special clauses to meet the particular circumstances of the project.

Carried To Section Summary **R**

Amount

PRICING OF PRELIMINARIES

Should the contractor select Option A in the contract data for organs of state and other public sector bodies for the adjustment of preliminaries, the amounts entered against the relevant items in these preliminaries are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T).

PRICING OF BILLS OF QUANTITIES

The contractor is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this agreement.

Items left unpriced will be deemed to be covered in prices against other items throughout these bills of quantities and no claim for any extras arising out of the contractor's omission to price any item will be entertained.

Prices for all construction equipment, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary.

Should Option A, as set out in clause B10.3.1 hereinafter be used for the adjustment of preliminaries then each item priced is to be allocated to one or more of the three categories Fixed, Value Related or Time Related and the respective amounts entered in the spaces provided under each item.

Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities.

VALUE ADDED TAX

Provision is made in the summary page of these bills of quantities / lump sum document for the inclusion of Value Added Tax (VAT).

SECTION A: PRINCIPAL BUILDING AGREEMENT

INTERPRETATION

A1.0 DEFINITIONS AND INTERPRETATIONS

Clause 1.0

The following definitions replace corresponding definitions or are added to the definitions in the JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), whatever the case may be

ADVERSE WEATHER CONDITIONS: Adverse weather and inclement weather has the same meaning and used interchangeably and means any weather conditions i.e.: Rain, wind, snow, frost, temperature (cold or heat) that are not in the norm for the area where the construction takes place and during which no work is possible on site.

Carried To Section Summary **R**

			Amount
	AGREEMENT: The completed Form of Offer and Acceptance, the completed JBCC® Principal Building Agreement and contract data for organs of state and other public sector bodies, the contract drawings, the priced document and any other documents reduced to writing and signed by the authorised representative or representatives of the parties.		
	CONSTRUCTION PERIOD: The period commencing on the date of possession of the site by the contractor and ending on the date of practical completion.		
	CONTRACT PERIOD: The period commencing on the date of the letter of acceptance and ending on the date of final completion.		
	COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule.		
	DEFAULT INTEREST: No Clause		
	GUARANTEE FOR CONSTRUCTION: A security in terms of the DPWI's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD].		
	INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State.		
	LETTER OF ACCEPTANCE: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer.		
	PAYMENT CERTIFICATE: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of Clause 25.3.		
	PRINCIPAL AGENT: The person or entity appointed by the employer and named in the contract data for organs of state and other public sector bodies. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by the employer's representative as named in the contract data for organs of state and other public sector bodies.		
1	TARGETED SUBCONTRACTORS: Subcontractors that must be appointed to a total of 30% or more of the contract sum, by the contractor, projects with a contract sum of the amount determined by the Minister in terms of the latest Preferential Procurement regulations, as may be amended from time to time.	Item	
	F: ..... V: ..... T:		
	A2.0 LAW, REGULATIONS AND NOTICES		
2	Clause 2.0	Item	
	F: ..... V: ..... T:		
	Carried To Section Summary	**R**	

Section No. 1
Bill No. 1
Preliminaries

			Amount
	A3.0 OFFER AND ACCEPTANCE		
3	Replace Clause 3.3 with the following: This agreement shall come into force on the date of letter of acceptance and continue to be of force and effect until the end of the latent defects liability period [22.0] notwithstanding termination [29.0] or the certification of final completion [21.0] and final payment [25.0]	Item	
	F: ..... V: ..... T:		
	A4.0 CESSION AND ASSIGNMENT		
	Clause 4.0		
	Ref Clause 6.7 [CD] - Clause 4.2		
4	Replace Clause 4.3 with the following: Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained.	Item	
	F: ..... V: ..... T:		
	A5.0 DOCUMENTS		
	Clause 5.0		
	Replace last sentence of Clause 5.2 with the following: The original signed agreement shall be held by the Employer		
	Replace Clause 5.4 with the following: The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference.		
5	Replace Clause 5.5 with the following: The parties may publish or disclose on any platform only the contract scope and contract amount.	Item	
	F: ..... V: ..... T:		
	A6.0 EMPLOYER'S AGENTS		
	Clause 6.0		
	Replace Clause 6.5 with the following: Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer shall appoint another principal agent and/or an agent		
6	Add the following as Clause 6.7: In terms of the clauses listed hereunder, the employer has retained its authority and has not given a mandate to the principal agent, notwithstanding other provisions in the contract. The employer shall sign all documents in relation to clauses 4.2, 14.1.4, 14.4.1, 14.6, 15.1.4, , 15.4.1, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12	Item	
	F: ..... V: ..... T:		
	A7.0 DESIGN RESPONSIBILITY		
	Clause 7.0		
		Carried To Section Summary	**R**

			Amount
7	Replace first sentence of Clause 7.2 with the following: Any design responsibility undertaken by a subcontractor shall not devolve on the contractor except for items that require specific component design and or compatibility design and or shop drawings and or the assembly thereof F: ..... V: ..... T:	Item	
	INSURANCES AND SECURITIES		
	A8.0 WORKS RISK		
	Clause 8.0		
8	Replace Clause 8.4 with the following: The contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary. F: ..... V: ..... T:	Item	
	A9.0 INDEMNITIES		
	Clause 9.0 Add the following to the end of the first sentence of Clause 9.2.7: "…. due to no fault of the contractor 9.2.9 No Clause 9.2.10 No Clause		
9	Add the following as clause 9.3: The employer's rights to claim damages for the contractor's omissions and actions will not be affected. F: ..... V: ..... T:	Item	
	A10.0 INSURANCES		
	Clause 10.0 Replace Clause 10.1 with the following: The party responsible shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary , from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractors obligations after the date of practical completion [8.2.2]. Add the following as Clause 10.1.5.1: Hi Risk Insurance In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable sub-surface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply. Add the following as Clause 10.1.5.1.1 Damage to the works The contractor shall, from the date of possession of the site until the date of the certificate of practical completion, bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary.		
	Carried To Section Summary	**R**	

Amount

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

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

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

10.1.5.1.3 Replace Clause with the following: It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer proof of such insurance policy.

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

10.2 Replace Clause with the following: Where practical completion in sections is required [20.0), or where the works is for alterations and additions, the contractor shall effect and keep in force contract works insurance [10.1.1], supplementary insurance [10.1.2], public liability insurance [10.1.3] and where applicable, removal of lateral support insurance [10.1.4] and other insurances [10.1.5) in favour of the employer as beneficiary.

10.6 No Clause

10 Add the following as Clause 10.11 In the event that an insurer dispute the amount of the claim to be paid to the employer, the contractor shall be liable to the employer for the difference between the claim (as determined by the employers QS appointed on the project) made by the employer and the amount that the insurer is willing to pay.

Item

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

A11.0 SECURITIES

Add the following as to the relevant related Clauses as follows:

Carried To Section Summary **R**

Section No. 1

Bill No. 1

Preliminaries

Amount

Add the following to Clause 11.1: In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT).

In respect of contracts with a contract sum above R1 million, the contractor shall have the right to select the security to be provided in terms of C 1.0 Securities, as stated in the schedule. Such security shall be provided to the employer within fifteen (15) working days from commencement date. Should the contractor fail to select the security to be provided or should the contractor fail to provide the employer with the selected security within fifteen (15) working days from commencement date, the security in terms of C 1.0 Option C shall be deemed to have been selected.

The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.1 - 25.12.5

11.1.1 No Clause

11.1.2 No Clause

11.2.2 No Clause

11.3 No Clause

Replace Clause 11.4.1 with the following: Hand over the site to the contractor and withhold an amount equal to ten per cent (10%) of each interim payment certificate until practical completion is achieved. The value certified shall be subject to the adjustments in terms of 25.12.6 to 25.12.10.

11.5 No Clause

11.6 No Clause

11.7 No Clause

11.8 No Clause

11.9 No Clause

11.10 No Clause

Add the following as Clause 11.11: Where the security as a cash deposit of ten per cent (10%) of the contract sum (excluding VAT) has been selected:

Add the following as Clause 11.11.1: The contractor shall furnish the employer with a cash deposit equal in value to ten percent (10%) of the contract sum (excluding VAT) within fifteen (15) working days from commencement date. Failure to furnish the employer with a cash deposit within fifteen (15) working days Clause 11.4 will apply mutatis mutandis.

Add the following as Clause 11.11.2: The employer shall be entitled to recover expense and loss from the cash deposit in terms of Clause 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.

Add the following as Clause 11.11.3: Within fifteen (15) working days of the date of practical completion of the works the employer shall reduce the cash deposit to an amount equal to three per cent (3%) of the contract value (excluding VAT) and refund the balance to the contractor.

Carried To Section Summary **R**

Amount

Add the following as Clause 11.11.4: Within fifteen (15) working days of the date of final completion of the works the employer shall reduce the cash deposit to an amount equal to one per cent (1%) of the contract value (excluding VAT) and refund the balance to the contractor.

Add the following as Clause 11.11.5: On the date of payment of the amount in the final payment certificate, the employer shall refund the remainder of the cash deposit to the contractor.

Add the following as Clause 11.11.6: The parties expressly agree that neither the employer nor the contractor shall be entitled to cede the rights to the deposit to any third party.

Add the following as Clause 11.12: Where security as a variable construction guarantee of ten percent (10%) of the contract sum (excluding VAT) has been selected:

Add the following as Clause 11.12.1: The contractor shall furnish the employer with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the contract sum (excluding VAT) within fifteen (15) working days after issuance of the letter of acceptance. Failure to submit an acceptable variable construction guarantee within fifteen (15) working days Clause 11.4 will apply mutatis mutandis.

Add the following as Clause 11.12.2: The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender.

Add the following as Clause 11.12.3: The employer shall return the variable construction guarantee to the contractor within fourteen (14) calendar days of it expiring.

Add the following as Clause 11.12.4: Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall issue a written demand in terms of the variable construction guarantee.

Add the following as Clause 11.13: Where security as a fixed construction guarantee of five per cent (5%) of the contract sum (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:

Add the following as Clause 11.13.1: The contractor shall furnish a fixed construction guarantee to the employer equal in value to five per cent (5%) of the contract sum (excluding VAT).

Add the following as Clause 11.13.2: The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of the last certificate of practical completion.

Add the following as Clause 11.13.3: The employer shall return the fixed construction guarantee to the contractor within fourteen (14) calendar days of it expiring.

Add the following as Clause 11.13.4: The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.1 - 25.12.5.

Carried To Section Summary **R**

				Amount
	Add the following as Clause 11.13.5: Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or from both.			
	Add the following as Clause 11.14.1: Where security as a cash deposit of five per cent (5%) of the contract sum (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT) has been selected:			
	Add the following as Clause 11.14.2: The contractor shall furnish the employer with a cash deposit equal in value to five per cent (5%) of the contract sum (excluding VAT) within fifteen (15) working days from commencement date. Failure to submit a cash deposit within fifteen (15) working days Clause 11.4 will apply mutatis mutandis.			
	Add the following as Clause 11.14.3: Within fifteen (15) working days of the date of practical completion of the works the employer shall refund the cash deposit in total to the contractor.			
	Add the following as Clause 11.14.4: The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.1 - 25.12.5.			
	Add the following as Clause 11.14.5: Where the employer has a right of recovery against the contractor in terms of 27, the employer may recover from the payment reduction or cash deposit or from both.			
	Add the following as Clause 11.15: Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected.			
	Add the following as Clause 11.15.1: The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.6 to 25.12.10.			
	Add the following as Clause 11.15.2: The employer shall be entitled to recover expense and loss from the cash deposit in terms of 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.			
	Add the following as Clause 11.16: Payments made by the guarantor to the employer in terms of the fixed or variable construction guarantee shall not prejudice the rights of the employer or contractor in terms of this agreement.			
11	Add the following as Clause 11.17: Should the contractor fail to furnish the security in terms of 11.2 the employer, in his sole discretion, and without notification to the contractor, is entitled to change the contractor's selected form of security to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT).		Item	
	F: ..... V: ..... T:			
	EXECUTION			
	A12.0 OBLIGATIONS OF THE PARTIES			
	Clause 12.0			
	12.1.1 No Clause			
			Carried To Section Summary	**R**

Section No. 1
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Preliminaries

			Amount
	Replace Clause 12.1.5 with the following: Give possession of the site to the contractor within ten (10) working days after approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22		
	12.1.6 No Clause		
	12.1.8 No Clause		
	Replace Clause 12.2.2 with the following: The priced Bills must be submitted to the Employer within fourteen (14) calendar days from date of request. Where the priced document contains errors or discrepancies and/or prices considered by the employer or principal agent to be imbalanced or unreasonable the employer or principal agent and the contractor shall adjust such prices without any change to the contract sum.		
	Replace Clause 12.2.5 with the following : Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0) [CD]		
	Replace Clause 12.2.13 with the following: Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor.		
	Add the following as Clause 12.2.22: Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).		
	Add the following as Clause 12.2.23: The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0].		
12	Offices 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 [12.2.18].	Item	
	F: ..... V: ..... T:		
13	Main notice board The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m as type Drawing GEN 063, 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 [12.2.18].	Item	
	F: ..... V: ..... T:		
		Carried To Section Summary	**R**

			Amount
	A13.0 SETTING OUT		
14	Clause 13.0.	Item	
	F: ..... V: ..... T:		
	A14.0 NOMINATED SUBCONTRACTORS		
15	Clause 14.0 Ref Clause 6.7 [CD] - Clause 14.1.4 14.1.5 No Clause Replace “principal agent ” with “employer” [6.7 [CD]] in Clause 14.4.1 Ref Clause 6.7 [CD] - Clause 14.6	Item	
	F: ..... V: ..... T:		
	A15.0 SELECTED SUBCONTRACTORS		
	Clause 15.0 Ref Clause 6.7 [CD] - Clause 15.1.4 & Clause 15.5 15.1.5 No Clause		
	Replace Clause 15.1.2 with the following: The principal agent shall call for tenders from a list of tenderers agreed between the contractor and the employer		
16	Replace “principal agent ” with “employer” [6.7 [CD]] in Clause 15.4.1	Item	
	F: ..... V: ..... T:		
	A16.0 DIRECT CONTRACTORS		
17	Clause 16.0	Item	
	F: ..... V: ..... T:		
	A17.0 CONTRACT INSTRUCTIONS		
18	Clause 17.0 Replace Clause 17.4 with the following: The contractor shall comply with and duly execute all contract instructions except any contract instruction for additional work issued after the date of practical completion other than making good physical loss and repairing damage to the works in terms of 8.0 and 21 Add the following clause as Clause 17.6: Minutes of meetings shall not constitute a site instruction unless reduced to a written contract instruction issued by the principal agent in terms of this contract / agreement.	Item	
	F: ..... V: ..... T:		
	COMPLETION		
	A18.0 INTERIM COMPLETION		
19	Clause 18.0	Item	N/A
	F: ..... V: ..... T:		
	A19.0 PRACTICAL COMPLETION		
	Clause 19.0 Replace Clause 19.5 with the following: On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section		
	Carried To Section Summary	**R**	

			Amount
	Add the following as Clause 19.8: WORKS COMPLETION (1) Within seven (7) calendar days of the date of practical completion the principal agent shall issue to the contractor a works completion list defining the outstanding work and defects apparent at the date of practical completion to be completed or rectified to achieve works completion. (2) Where, in the opinion of the contractor, the works completion list has been completed the contractor shall notify the principal agent who shall inspect within seven (7) calendar days of receipt of such a notice. Where, in the opinion of the principal agent, the Works Completion list: (2)(a) Has been satisfactorily completed, the principal agent shall forthwith issue a certificate of Works Completion to the contractor with a copy to the employer (2)(b) Has not been satisfactorily completed, the principal agent shall forthwith identify the works completion list items that are not yet complete and inform the contractor thereof. The contractor shall repeat the procedure in terms of 19.8(2) (3) Should the principal agent not issue a works completion list, in terms of 19.8 (1) or 19.8 (2)(b), within seven (7) calendar days from the end of the inspection period, the contractor shall notify the employer and principal agent. Should the principal agent not issue such Works Completion list within seven (7) calendar days of receipt of such notice, the employer may within seven (7) calendar days issue to the contractor a Works Completion list. Should the employer: (3)(a) Not issue such works completion list within seven (7) calendar days, then the certificate of Works Completion shall be deemed to have been issued on the date of expiry of the initial notice period and works completion shall be deemed to have been achieved on such date.		
20	(3b) Issue a works completion list and the work on Works Completion list not have been completed or where further defects have become apparent, the employer shall forthwith identify such items on the updated works completion list and notify the contractor. The contractor shall repeat the procedure in terms of 19.8(2)(b) until such items have been completed to the satisfaction of the employer (4) Should the works completion list not be completed to the satisfaction of the employer within a period of twenty one (21) working days of the issue first works completion list the contractor shall be liable to a daily penalty as described in B12.0 (5) The defects liability period in terms of 21.1 shall commence with the issue or deemed issue of the certificate of Works Completion in terms of 19.8(2)(a) or 19.8(3).	Item	
	F: ..... V: ..... T:		
	A20.0 COMPLETION IN SECTIONS		
21	Clause 20.0 Add the following as Clause 20.2.1.A A certificate of Works Completion [19.8]	Item	
	F: ..... V: ..... T:		
	Carried To Section Summary	**R**	

				Amount
	A21.0 DEFECTS LIABILITY PERIOD AND FINAL COMPLETION			
	Clause 21.0 Replace Clause 21.1 with the following: The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6), whichever is the later (if we use works completion). Replace Clause 21.6 with the following: On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent. And/or On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall:			
22	(1) inspect the works And within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or (2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired. 21.6.1 Omit Clause 21.6.2 Omit Clause Add the following as Clause 21.13: The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14. Add the following as Clause 21.14: Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have being added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied.[B12.0].		Item	
	F: ..... V: ..... T:			
	A22.0 LATENT DEFECTS LIABILITY PERIOD			
23	Clause 22.0 22.3.2 No Clause		Item	
	F: ..... V: ..... T:			
	A23.0 REVISION OF THE DATE FOR PRACTICAL COMPLETION			
24	Clause 23.0 Ref Clause 6.7 [CD] – Clause 23.1 Ref Clause 6.7 [CD] – Clause 23.2 23.2.13 No Clause Replace Clause 23.3 with the following: Further circumstances that delays practical completion due to any other cause beyond the contractor's reasonable control that could not have reasonably been anticipated and provided for which the contractor may be entitled to a revision of the date for practical completion, with or without an adjustment of the contract value as determined by the Employer [6.7 CD] Ref Clause 6.7 [CD] - Clause 23.7 Ref Clause 6.7 [CD] - Clause 23.8		Item	
	F: ..... V: ..... T:			
		Carried To Section Summary	**R**	

				Amount
	A24.0 PENALTY FOR LATE OR NON-COMPLETION			
25	Clause 24.0 Replace Clause 24.1 with the following: Where the contractor fails to bring the works, or a section thereof, to practical-, works-, or final-completion by the applicable completion date [CD], or the revised applicable completion date, the contractor shall be liable to the employer for the penalty [CD] Replace Clause 24.2 with the following: Where the employer elects to levy such penalty the employer, or the principal agent on instruction from the employer, shall give notice thereof to the contractor. The principal agent shall determine the penalty due from the later of the date for practical- works-, or final- completion [CD], or the revised date for practical- works-, or final-completion, up to and including the earlier of: Replace Clause 24.2.1 with the following: The actual or deemed date of practical- works-, or final-completion, of the works, or a section thereof [23.7.1]	Item		
	F: ..... V: ..... T:			
	PAYMENT			
	A25.0 PAYMENT:			
	Replace Clause 25.2 with the following: The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount			
	Add the following to Clause 25.3: 25.3.12 Monthly Local content report, 25.3.13 EPWP / NYS payment register, labour reports and certified ID document of EPWP/ NYS beneficiaries, Contract between Contractor and EPWP/ NYS beneficiaries, attendance register. (if applicable)			
	25.3.14 Tax Invoice 25.3.15 Labour intensive report 25.3.16 Contract participation goal reports 25.5 No Clause Replace Clause 25.6 with the following: Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer.			
	25.7.5 No clause. Replace Clause 25.10 with the following: The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate, invoice and all other substantiating documentation for items certified in the payment certificate			
	Replace Clauses 25.12 to 25.12.3 with the following: The value certified shall be subject to the following percentage adjustments : (Clauses 25.12.1 to 25.12.5 shall be applicable to a contract sum up to R1 million. In the event of a contract sum more than R1 million for Options D & E (C 1.0 Securities [11.0]) Clauses 25.12.1 to 25.12.5 shall be applicable) 25.12.1 Where a security is selected in terms of C 1.0 Securities [11.0], the value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments:			
		Carried To Section Summary	**R**	

			Amount
	25.12.2 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion 25.12.3 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion 25.12.4 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26 25.12.5 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.		
	(Clauses 25.12.6 to 25.12.10 shall be applicable to a contract sum more than R1 million for Option C (C 1.0 Securities [11.0]) 25.12.6 Where security is a payment reduction in term of C 1.0 Option C, value of the works in terms of 25.1 and materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.7 Ninety per cent (90%) of such value in interim payment certificates issued up to the date of practical completion		
26	25.12.8 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion 25.12.9 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26 25.12.10 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except were the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate	Item	
	F: ..... V: ..... T:		
	A26.0 ADJUSTMENT OF THE CONTRACT VALUE AND FINAL ACCOUNT		
27	Clause 26.0 Ref Clause 6.7 [CD] – Clause 26.1 Omit Clause 26.4.3 Ref Clause 6.7 [CD] – Clause 26.7 Replace Clause 26.10 with the following: The principal agent shall prepare the final account in consultation with the employer and issue the final account, to the contractor within sixty (60) working days of the date of practical completion Ref Clause 6.7 [CD] – Clause 26.12	Item	
	F: ..... V: ..... T:		
		Carried To Section Summary	**R**

				Amount
	A27.0 RECOVERY OF EXPENSE AND/OR LOSS			
28	Clause 27.0 Replace Clause 27.1.2 with the following: Interest due to late payment only Replace Clause 27.1.4 with the following: Interest due to late payment only 27.1.5 No Clause Replace Clause 27.5 with the following: Where the employer decides to recover an amount due in terms of 27.2 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security Add the following as Clause 27.6: Where a provisional sequestration or provisional liquidation order has been granted or where an order has been granted which commences sequestration, liquidation, bankruptcy, receivership, winding-up or any similar effect, against the contractor or this agreement is cancelled in terms of 29, the employer may issue a demand to the guarantor in terms of the construction guarantee or advance payment guarantee held as security	Item		
	F: ..... V: ..... T:			
	SUSPENSION AND TERMINATION			
	A28.0 SUSPENSION BY THE CONTRACTOR			
29	Clause 28.0 28 No Clause 28.1 No Clause 28.1.1 No Clause 28.1.2 No Clause 28.1.3 No Clause 28.1.4 No Clause 28.1.5 No Clause 28.2 No Clause 28.3 No Clause 28.4 No Clause	Item		
	F: ..... V: ..... T:			
	A29.0 TERMINATION			
	Clause 29.0 Add the following as Clause 29.1.4: The contractor's estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa Add the following as Clause 29.1.5: The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract Add the following as Clause 29.1.6: Honour his obligations in terms of Clauses 10.1.5.1.3, 11.4.1 and 12.2. sub Clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22.			
	Replace Clause 29.7 with the following: The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3] Replace Clause 29.9 with the following: The employer has the right of recovery against the contractor, where applicable, [CD] from: The guarantee for construction (variable) until the final payment has been made; or The guarantee for construction (fixed) until the date of practical completion; or The payment reduction until the final payment is made; or The cash deposit made as security until the final payment is made			
30	29.14.1 No Clause 29.14.3 No Clause 29.14.4 No Clause 29.14.5 No Clause 29.14.6 No Clause 29.14.7 No Clause 29.15 No Clause 29.16 No Clause 29.17.3 No Clause 29.17.6 No Clause 29.21.5 No Clause 29.22 No Clause 29.23 No Clause 29.25.3 No Clause 29.25.4 No Clause 29.27 No Clause	Item		
	F: ..... V: ..... T:			
	Carried To Section Summary	**R**		

			Amount
	DISPUTE RESOLUTION		
	A30.0 DISPUTE RESOLUTION:		
31	Clause 30.0 Replace Clause 30.2 with the following: Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation 30.3 to 30.7.7 No Clauses Replace Clause 30.8 with the following: The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event: 30.8.1 No Clause Replace Clause 30.8.2 with the following: The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties Replace Clause 30.8.3 with the following: Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses Replace Clause 30.9 with the following: Institution of Litigation shall be commenced and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse 30.10 No Clause 30.12 No Clause	Item	
	F: ..... V: ..... T:		
	SECTION B: GENERAL PRELIMINARIES		
	DEFINITIONS AND INTERPRETATION		
32	B 1.1 Definitions	Item	
	F: ..... V: ..... T:		
33	B 1.2 Interpretation	Item	
	F: ..... V: ..... T:		
	B 2.0 DOCUMENTS		
34	B 2.1 Checking of documents	Item	
	F: ..... V: ..... T:		
35	B2.2 Provisional bills of quantities	Item	
	F: ..... V: ..... T:		
36	B 2.3 Availability of construction information	Item	
	F: ..... V: ..... T:		
37	B 2.4 Ordering of materials and goods	Item	
	F: ..... V: ..... T:		
	B 3.0 PREVIOUS WORK AND ADJOINING PROPERTIES		
38	B 3.1 Previous work - dimensional accuracy	Item	
	F: ..... V: ..... T:		
39	B 3.2 Previous work - defects	Item	
	F: ..... V: ..... T:		
40	B 3.3 Inspection of adjoining properties	Item	
	F: ..... V: ..... T:		
	Carried To Section Summary	**R**	

			Amount
	B 4.0 THE SITE		
41	B 4.1 Handover of site in stages	Item	
	F: ..... V: ..... T:		
42	B 4.2 Enclosure of the works	Item	
	F: ..... V: ..... T:		
43	B 4.3 Geotechnical and other investigations	Item	
	F: ..... V: ..... T:		
44	B 4.4 Encroachments	Item	
	F: ..... V: ..... T:		
45	B 4.5 Existing premises occupied	Item	
	F: ..... V: ..... T:		
46	B 4.5 Services - known	Item	
	F: ..... V: ..... T:		
	B 5.0 MANAGEMENT OF CONTRACT		
47	B 5.1 Management of the works	Item	
	F: ..... V: ..... T:		
48	B 5.2 Progress meetings	Item	
	F: ..... V: ..... T:		
49	B 5.3 Technical meetings	Item	
	F: ..... V: ..... T:		
	B 6.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURER'S INSTRUCTIONS		
50	B 6.1 Samples of materials	Item	
	F: ..... V: ..... T:		
51	B 6.2 Workmanship samples	Item	
	F: ..... V: ..... T:		
52	B 6.3 Shop drawings	Item	
	F: ..... V: ..... T:		
53	B 6.4 Compliance with manufacturer's instructions	Item	
	F: ..... V: ..... T:		
	B 7.0 DEPOSITS AND FEES		
54	B 7.1 Deposits and fees	Item	
	F: ..... V: ..... T:		
	B 8.0 TEMPORARY SERVICES		
55	B 8.1 Water	Item	
	F: ..... V: ..... T:		
56	B 8.2 Electricity	Item	
	F: ..... V: ..... T:		
57	B 8.3 Ablution and welfare facilities	Item	
	F: ..... V: ..... T:		
	Carried To Section Summary	**R**	

			Amount
58	B 8.4 Communication facilities F: ..... V: ..... T:	Item	
	B 9.0 PRIME COST AMOUNTS		
59	B 9.1 Responsibility for prime cost amounts F: ..... V: ..... T:	Item	
	B 10.0 ATTENDANCE ON SUBCONTRACTORS		
60	B 10.1 General attendance The contractor shall at his own expense provide the following general attendance on the subcontractors: Access to the site and places where the subcontract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the contractor The provision of water and lighting and single phase electric power to a position within 50 metres of the place where the subcontract work is to be carried out but excluding water, fuel and power for commissioning of any installation The provision of an area for the subcontractor to establish temporary office accommodation and workshops and for the storage of plant and materials The use of erected scaffolding belonging to the contractor, in common with others having the like right, while it remains erected on the site The use, at reasonable times by arrangement of the contractor's erected hoisting equipment F: ..... V: ..... T:	Item	
61	B 10.2 Special attendance F: ..... V: ..... T:	Item	
	B 11.0 GENERAL		
62	B 11.1 Protection of the works F: ..... V: ..... T:	Item	
63	B 11.2 Protection/isolation of existing works and works occupied in sections F: ..... V: ..... T:	Item	
64	B 11.3 Security of the works F: ..... V: ..... T:	Item	
65	B 11.4 Notice before covering work F: ..... V: ..... T:	Item	
66	B 11.5 Disturbance The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent. F: ..... V: ..... T:	Item	
67	B 11.6 Environmental disturbance F: ..... V: ..... T:	Item	
68	B 11.7 Works cleaning and clearing F: ..... V: ..... T:	Item	
69	B 11.8 Vermin F: ..... V: ..... T:	Item	
	Carried To Section Summary	**R**	

			Amount
70	B 11.9 Overhand work F: ..... V: ..... T:	Item	
71	B 11.10 Tenant installations F: ..... V: ..... T:	Item	
72	B 11.11 Advertising F: ..... V: ..... T:	Item	
	SECTION C: SPECIFIC PRELIMINARIES		
	Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item.		
	C1 CONTRACT DRAWINGS		
73	* Select relevant paragraph and delete whichever is not applicable depending on whether the contract is based on a bills of quantities or lump sum document * 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. N/A * A full set of drawings is issued with the tender documents indicating the full scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed . Should any part of the drawings not be clearly understood by the tenderer he shall , before submitting his tender, obtain clarificationcin writing from the Principal Agent. F: ..... V: ..... T:	Item	
	C2 GENERAL PREAMBLES		
74	The document "Specification of Materials and Methods to be used (PW371-A 2.1)" is obtainable on request from the head office and all regional offices of the Department, and shall be read in conjunction with the bills of quantities / lump sum document and be referred to for the full descriptions of work to be done and materials to be used F: ..... V: ..... T:	Item	
75	The document "Specification of Materials and Methods to be used (PW371-A 2.1)" is obtainable on request from the head office and all regional offices of the Department, and shall be read in conjunction with the bills of quantities / lump sum document and be referred to for the full descriptions of work to be done and materials to be used The document “Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2” is issued together with the drawings and shall be read in conjunction with the drawings and the bills of quantities / lump sum document. F: ..... V: ..... T:	Item	
	Carried To Section Summary	**R**	

			Amount
	C3 TRADE NAMES		
76	Wherever a trade name for any product has been described in the bills of quantities / lump sum document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders. If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for	Item	
	F: ..... V: ..... T:		
	C4 IMPORTED MATERIALS AND EQUIPMENT		
77	Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment (DPW-23 (EC)) to be completed by tenderer). Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)	Item	
	F: ..... V: ..... T:		
	C5 VIEWING THE SITE IN SECURITY AREAS		
78	The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes	Item	
	F: ..... V: ..... T:		
	C6 COMMENCEMENT OF WORK IN SECURITY AREAS		
79	As the works fall within a security area the contractor must give the unit commander or other responsible officer 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	Item	
	F: ..... V: ..... T:		
	C7 ENTRANCE PERMITS TO SECURITY AREAS		
80	As the works fall within a security area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Defence Force, Police or chief security officer	Item	
	F: ..... V: ..... T:		
	C8 SECURITY CHECK OF PERSONNEL		
81	The principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified. In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or any document or information relating to the works.	Item	
	F: ..... V: ..... T:		
	Carried To Section Summary	**R**	

			Amount
	C9 PROHIBITION OF TAKING PHOTOGRAPHS		
82	In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorised thereto by or on behalf of the Minister. The same prohibition is also applicable to all correctional institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959	Item	
	F: ..... V: ..... T:		
	C10 HIV/AIDS AWARENESS		
	It is required of the contractor to thoroughly study the HIV/AIDS Specification (PW1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities / lump sum document . Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.		
	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 1: Preliminaries (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.		
	C10.1 AWARENESS CHAMPION		
83	Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification	Item	
	F: ..... V: ..... T:		
	C10.2 AWARENESS WORKSHOPS		
84	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	Item	
	F: ..... V: ..... T:		
	C10.3 POSTERS, BOOKLETS, VIDEOS, ETC.		
85	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	Item	
	F: ..... V: ..... T:		
	Carried To Section Summary	**R**	

				Amount
	C10.4 ACCESS TO CONDOMS			
86	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		Item	
	F: ..... V: ..... T:			
	C10.5 MONITORING			
87	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.		Item	
	F: ..... V: ..... T:			
	OCCUPATIONAL HEALTH AND SAFETY ACT			
	The Contractor shall comply with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993). It is required of the contractor to thoroughly study Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document. The contractor must take note that compliance with the Occuoational Health and Safety Act, Construction Regulations and Health and Safety Specifications compulsory. In the ivent of partial or total non-compliance, the principoal agent, not withstanding the provisions of clause A 25.0 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.			
88	The contractor shall not be entiled to any compensation of whatsoever nature, including interest, due to such delay of payment. Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be intertained		Item	
	F: ..... V: ..... T:			
	C11.1 HEALTH AND SAFETY PLAN			
89	C11.1(a) Preparation of the contractor's site specific Health and Safety Plan		Item	
	F: ..... V: ..... T:			
90	C11.1(b) Principal Contractor's initial obligations in respect of the occupational Health and Safety Act and Construction Regulations.		Item	
	F: ..... V: ..... T:			
91	C11.1(c) Principal Contractor's time related obligation in respect of the Occupational Health and Safety Act and Construction Regulations		Item	
	F: ..... V: ..... T:			
	C11.2 PROVISION OF PERSONAL PROTECTIVE EQUIPMENT (PPE)			
92	C11.2(a) Reflective vests		Item	
	F: ..... V: ..... T:			
		Carried To Section Summary	**R**	

			Amount
93	C11.2(b) Hard hats F: ..... V: ..... T:	Item	
94	C11.2(c) Protective foot wear F: ..... V: ..... T:	Item	
95	C11.2(d) Earplugs. F: ..... V: ..... T:	Item	
96	C11.2(e) Dust masks F: ..... V: ..... T:	Item	
97	C11.2(f) Gloves F: ..... V: ..... T:	Item	
98	C11.2(g) High visibility overalls to SARTSM Chapter 13 Level 3. F: ..... V: ..... T:	Item	
99	C11.2(h) Ear Defenders SABS approved. F: ..... V: ..... T:	Item	
100	C11.3 Provision of a full construction Health and Safety Officer F: ..... V: ..... T:	Item	
101	C11.4 Cost of medical certificates and medical surveillance F: ..... V: ..... T:	Item	
102	C11.4(a) Initial (baseline) medical examinations F: ..... V: ..... T:	Item	
103	C11.4(b) Periodic and exit examinations F: ..... V: ..... T:	Item	
104	C11.4(c) Contractor's charges to allow for handling costs and profit in respect of subitems 13/X.06 (a) and (b). F: ..... V: ..... T:	Item	
105	C11.5 Induction training F: ..... V: ..... T:	Item	
106	C11.6 Provision of first aid boxes to GSR requirements F: ..... V: ..... T:	Item	
107	C11.7 Noise monitoring F: ..... V: ..... T:	Item	
108	C11.7(a) Establishment of noise zones (plant) F: ..... V: ..... T:	Item	
109	C11.7(b) Audiograms (personnel) F: ..... V: ..... T:	Item	
110	C11.8 Submission of a Health and Safety File F: ..... V: ..... T:	Item	
	Carried To Section Summary	**R**	

SECTION NO. 1

PRELIMINARIES

SECTION SUMMARY

		Page		Amount
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	Carried to Final Summary		**R**	

SECTION NO. 2

BUILDING WORKS

	Unit	Quantity	Rate	Amount

SECTION NO. 2

BUILDING WORKS

BILL NO. 1

ALTERATIONS

PREAMBLES

The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.

SUPPLEMENTARY PREAMBLES

Tenderers are advised to visit the site and to inspect the works in conjuction with the drawings in order to ascertain the exact nature and extent of the work to be done. The work is to be carried out in sections in accordance with the Architect's instructions in such a manner as to cause the minimum of nuisance and delay and the various sections are to be handed over for occupation as soon as they are completed and Tenderers must allow accordingly for this in the pricing.

The contractor will be held solely responsible for checking all floor levels and dimensions in the existing building in order that the new repairs may be correctly line up. Should any discrepancies be found in the Architect's drawings he should be asked for a decision before continuing with the work.

The contractor will be held solely responsible for any damage to persons and property, for the safety of the existing structures throughout the whole of the contract and must make good at his own expense any damage that may occur The contractor will be hold solely responsible for any damage to persons and property, for the safety of the existing structures throughout the whole of the contract and must make good at his own expense any damage that may occur.

HANDING OVER OF MATERIALS

Old materials described as 'carefully take out, set aside for re-use and later refix in new position' are to be carefull removed, stored and protected from damage / injury, make good as required and if broken or damaged through taking out, removing, storage, etc, are to be replaced by the contractor at his/her own expense. Tenderers are advised to inspect these materials to ascertain their condition and allow accordingly for this in their pricing.

Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Old materials, if sound and suitable and approved by the Principal Agent subject to appropriate advice from the Structural engineer or Architect, whichever appropriate, may be re-usesd for joists, brandering, fittings, etc and broken bricks and other similar material which may used as filling and hardcore Wherever ald materials are used instead of new materials measured, an adjustment will be made by the Quantity Surveyor in the final settlement of accounts by deducting the net cost of the new materials and crediting the contractor with amount, if any, allowed by him for the old materials.				
	General				
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
	Where certain materials or articles from demolitions or articles are described as to handed over by the contractor to the Regional Representative / Principal Agent, such materials or articles shall be properly stored by the contractor, until handing over thereof. The contractor must obtain an official reciept listing the materials or articles and dates of handing over. If the contractor fails to submit the receipt when requested, it shall be deemed that materials or articles are still in his possession and he will be liable to the Department for full replacement value thereof, which amount will be deducted from any monies to the contractor.				
	Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc.				
	REMOVAL OF EXISTING WORK				
	Breaking up and removing mass concrete				
1	Steps	m^3	1		
2	Benches	m^3	10		
3	Surface bed slabs	m^3	5		
	Taking out and removing Tiles				
4	300 x 300 quarry tiles to treads, risers of steps and landings and prepare to receive new tiles	m^2	52		
5	Remove existing vinyl floor tiles and timber skirting and prepare floor to receive new carpet tiles and skirting and quadrant as per Architects specification.	m^2	14		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Breaking down and removing brickwork etc.				
6	Half brick walls	m²	22		
7	One brick walls	m²	11		
	Taking out and removing doors, windows, etc., including, ironmongery, etc and prepare frame to receive new doors.				
8	Timber single door 813 x 2032mm high.	No	2		
9	Aluminium purporse made entrance door size 5800 x 2700mm high	No	1		
10	Timber louvered windows 470 x 600mm high.	No	6		
11	Roller shutter door 2440 x 2100m high	No	5		
	Taking out and removing doors, windows, etc., including, ironmongery, etc. (set aside for re-use elsewhere)				
12	Timber single door 813 x 2032mm high	No	2		
13	Solid strong room door only, and prepare the frame to receive a new strong room door 989 x 1988 mm high	No	1		
	Curtain tracks including curtain blinds and close holes and prepare for new curtain track				
14	curtain track for door aluminium size 813 x 2032mm high	No	1		
	Taking out and removing doors, windows, etc., including thresholds, sills, etc. and building up openings in brick walls, including making good cement plaster on both sides (making good paintwork elsewhere)				
15	Timber single door and frame 900 x 2100m high overall from 110mm brick wall	No	2		
	Taking out and removing of Ironmongery.				
16	Mortice lockset and striking plate to timber doors and frames	No	60		
	Taking out/off and removing sundry metalwork				
17	Steel balustrades 1m high from concrete ramp, stairs and landings, including making good granolithic finish	m	46		
18	Remove old flag pole complete andmake good floor area.	No	1		
19	Remove flag pole rope,and service pulleys and supply and install a new flag rope and South African flag.	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
20	Remove existing steel double gate size 1800 x 1854mm high	No	1		
21	Remove existing double swing gate size 4000 x 2100mm high	No	1		
	Taking down and removing louvres				
22	Louvres on roof	m²	138		
	Taking out and removal of rainwater tanks				
23	Removal of 5000 litres rainwater tanks	No	3		
	Taking out and removing doors, windows etc and prepare openings to receive new doors,windows etc including making good to brickwork and cement plaster on both sides (making good paintwork elsewhere):				
24	Prisoner cell steel door size 9000 x 2100mm high overall from pre-cast concrete window surrounds and open the openning 300mm wide all around and prepare the opening to receive new window.	No	2		
25	Prisoner cell steel window size 850 x 950mm high overall from pre-cast concrete window surrounds and open the openning 300mm wide all around and prepare the opening to receive new window.	No	2		
	Taking out and removing piping, sanitary fittings, etc including disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere)and prepare the areas to receive new sanitary fittings				
26	110mm uPVC piping including fittings and brackets.	m	10		
27	15mm Copper piping including fittings and brackets.	m	10		
28	Stainless steel wash hand basin to to cells.	No	2		
29	Stainless steel WC pan with cistern.	No	2		
30	Vitreous fireclay wash hand basin.	No	10		
31	Vitreous fireclay WC pan with cistern.	No	16		
32	Vitreous fireclay urinal pan.	No	8		
	BUILDING UP OPENINGS				
	Brickwork in NFP bricks in class II mortar in building up openings				
33	One brick walls	m²	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	PREPARATORY WORK TO EXISTING SURFACES				
	Preparatory work				
34	Remove surface of existing plaster to reveal full depth of crack along the crack not exceeding 300mm wide and fill crack with with Mendal 90, allow dry for 2hrs and sand down to match existing plaster.	m	2		
	MAKING GOOD OF FINISHES, ETC				
	Making good defects in concrete slab				
35	Remove paint drip staining on slab	m²	8		
36	Make good finishes around window size 900 x 1720mm high	No	2		
	Making good damaged ClearVu fencing				
37	Remove existing reinforced clearvu steel sliding gate and set it aside for re-use, break up concrete encasing sliding gate rail, break up concrete around the rail to 5400mm long x 500mm on both sides of the gate. Scarify and recompact the sub-base material to 95% Mod AASTHO density. Relay railing and encase it in 25MPa concrete and concrete 300mm thick. Replace existing track with angle iron. Re-install the gate with automated remote control open close mechanism. Gate to stop at shorter length to allow for new pedestrian gate fitting including new steel pole to make provision for new smaller gate. Excavations, formwork etc to be included.	No	1		
	Apply maintenance tile cleaner in accordance with manufactureres instructions using microfibre pad, mop or rotary machine. Allow reaction time and clean surface using clean fresh water to prevent residue forming and allow to dry				
38	On slate tiles	m²	263		
	Mount existing key holding board and install secure lockable cabinet				
39	On wall	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Taking out waterproofing to flat roof				
40	Taking out and removing of existing waterproofing to flat screed roofs, check falls are sufficient to outlets; repair any blemishes, cracks and indentations with new screed to get even falls; screed over with 1:3 riversand mortar minimum pitch 1:200 degrees to fall in square 1.5m x 1.5m (Remove broken glass and dispose). Lay one layer waterproofing membrane with 75mm side laps and 100mm end laps sealed to primed surface falls and crossfall by torch fusion finished with two coats bituminous aluminium paint. All in accordance with manufacturers specification and to engineers' approval and provide a guarantee of not less that 10 years	m^2	958		
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 1

ALTERATIONS

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 2				
	EARTHWORKS				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUPPLEMENTARY PREAMBLES				
	Carting away of excavated material				
	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				
	Filling				
	Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material				
	Testing				
	Prices for filling are to include for all necessary density tests in accordance with SABS 1200D				
	EXCAVATION ETC				
	Excavation in earth not exceeding 2m deep				
1	Trenches	m^3	7		
	Extra over excavations for cart away				
2	Surplus material from excavations and or stockpile on site to a dumping site to be located by contractor	m^3	4		
	Risk of collapse of excavations				
3	Sides of trench and hole excavations not exceeding 1.5m deep	m^2	21		
	Keeping excavations free from water				
4	Keeping excavations free from all water other than subterranean water	Item			
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	FILLING ETC OTHER THAN BULK				
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
5	Backfilling to trenches, holes, etc.	m^3	3		
	Filling with approved material (G5) supplied and carted onto site by the contractor, compacted to a density of atleast 95% Mod AASHTO maximum density.				
6	Under steps and ramps.	m^3	5		
7	Under surface bed slabs.	m^3	4		
	SOIL POISONING				
	Weed killer (active ingredients Metalaclor 102,8 g/l, Terbitilasien 248,6 g/l and atrazine 248,6 g/l) mixed in the proportion of 100 ml weed killer to 100 l water and applied at a rate of 10 l/m^2				
8	Under paving concrete etc.	m^2	230		
	Carried to Collection			**R**	

			Amount
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BUILDING WORKS			
BILL NO. 2			
EARTHWORKS			
COLLECTION			
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	Unit	Quantity	Rate	Amount

SECTION NO. 2

BUILDING WORKS

BILL NO. 3

CONCRETE, FORMWORK AND REINFORCEMENT

PREAMBLES

The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.

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 Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).

Formwork:

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

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

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

Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	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.				
	UNREINFORCED CONCRETE				
	25MPa/19mm concrete				
1	Strip Footings	m^3	3		
2	Surface bed	m^3	1		
	REINFORCED CONCRETE				
3	Beams	m^3	1		
4	Steps	m^3	1		
5	Surface beds cast in panels to driveways, ramps, etc	m^3	97		
	TEST BLOCKS				
	Test cubes				
6	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	6		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete to an evenly ribbed non-slip surface				
7	Surface beds, slabs, etc.	m^2	1,101		
	ROUGH FORMWORK TO FLOORS (DEGREE OF ACCURACY II) (CPAP WORK GROUP NO. 111)				
	Rough formwork to sides				
8	Edges exceeding 300mm high	m^2	1		
	REINFORCEMENT (PROVISIONAL) (CPAP WORK GROUP NO 114)				
	High tensile steel reinforcement to structural concrete work				
9	Y 12mm Diameter bars	Tonnes	23.00		
	Fabric Reinforcement:				
10	Type 195 fabric Reinforcement in concrete surface beds (Provisional)	m^2	1,064		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
11	Type 395 fabric Reinforcement in concrete surface beds (Provisional)	m²	40		
	Carried to Collection			**R**	

		Amount
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BUILDING WORKS		
BILL NO. 3		
CONCRETE, FORMWORK AND REINFORCEMENT		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 4				
	MASONRY				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUPPLEMENTARY PREAMBLES				
	Supplementary Preambles and User Notes:				
	BRICKWORK				
	Sizes in descriptions:				
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
	Hollow walls etc:				
	Walls in two skins described as 'bagged and sealed' shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats 'Brixeal' bitumen emulsion waterproofing coating.				
	Walls in two skins (Hollow brick walls) described shall be deemed to include having 4 cavity ties every square metre of the wall				
	Face concrete bricks:				
	Bricks shall be ordered timeously to obtain uniformity in size and colour				
	Pointing:				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
	BRICKWORK				
	Concrete brickwork bricks in foundations (Provisional)				
1	230mm brick walls	m²	11		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	BRICKWORK SUNDRIES				
	Reinforcement to brickwork				
2	Approved high tensile steel brick reinforcement 155 mm wide well lapped at all angles and passings and built into brick walls(Provisional)	m	130		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFP bricks in class II mortar				
3	One brick walls	m²	25		
	BRICKWORK SUNDRIES				
	Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats bitumen emulsion waterproofing coating:				
4	To walls (Provisional)	m²	22		
	Cramps, ties, etc:				
5	30 x 2mm Galvenized door frame tie 1500mm long with one end fixed to timber and other end built into brickwork or concrete.	No	18		
	Brickwork reinforcement:				
6	Approved high tensile steel brick reinforcement 155 mm wide well lapped at all angles and passings and built into brick walls (Provisional).	m	130		
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 4

MASONRY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 5				
	CARPENTRY AND JOINERY				
	PREAMBLE				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	JOINERY FITTINGS (PROVISONAL)				
	Service all existing Joinery				
1	Carefully service all doors and and joinery fittings including sealing cracked surfaces and filling holes to damaged timber.	Item			
	DOORS ETC.				
	Approved Solid Laminated Flush doors with commercial veneer hung to timber frames				
2	40mm Door 813 x 2032mm high	No	2		
3	Extra over 40mm Door size 813 x 2032mm high for framed opening for metal louvre unit (louvre unit elsewhere measured)	No	1		
	FRAMED FRAMES ETC				
	Wrought meranti:				
4	70 x 108mm Rebated frames.	m	5		
	SKIRTINGS				
	Wrought meranti:				
5	70 x 19mm skirting plugged or fixed to walls including 19mm quadrand beads planted on	m	10		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 6				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLE				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUSPENDED CEILINGS				
	OWA acoustic A premium biologically absorbable mineral wool ceiling tiles, NRC - 0,9,0 size 600 x 600 x 15mm thick with square edge and white painted finish, laid on fire rated OWA construr S3 exposed demountable T24 suspension system, comprisingof galvanised main tees and cross tees with main teed suspended by means of galvanised hangers at centres not exceeding 1200mm and all installed to manufacturer's instructions T38 main tees at 600mm centres with T38 cross tees between each tiles, hold-down clip, etc. all suspended with galvanised 4mm daimeter suspension rod and hook with spring clip and T-suspension plate at centres not exceeding 1200mm in both direction. Suspension rods are to be attached with 25 x 25 25mm x 1.6mm angle cleate shot nailed to concrete or bolted to steel or screwed to timber purlings, etc.				
1	Ceilings suspended not exceeding 1200mm below concrete slab at 200mm centres.	m²	95		
2	Extra over ceiling for opening for 595 x 1195 mm light fitting.	No	16		
3	Extra over ceiling for 595 x 1195 mm opening for air conditioning diffuser.	No	2		
	Cornices to suspended ceilings.				
4	47 x 35mm Recessed shadowline cornice plugged.	m	59		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	PARTITIONS ETC (CPAP Work Group No 138)				
	'Gypsum Jumbo' fixed partition (1 hour fire rating) drywall partitioning system with an overall thickness of 112mm comperising internal framing at 64mm galvenised steel studs fixed at 600mm centres to galvenised steel track positioned at floor, head and wall: Internal steel framing to be dressed on both sides with two layers of 12,5mm tapered edge Jumbo plasterboard staggered fixed in single lengths to suite hieght, butt jointed and secured to steel studding with 25mm drywall screw at 220mm centres in first layer and 41mmdrywall screws in second layer, joints to be tapped andjointed with Jumbo jointing cmpound and prepared for decoration. Installation to be in accordance with SABISA installation guidelines:				
5	On walls.	m²	31		
	Doors:				
6	Extra over Drywall partition for 40mm solid core flush single door 872 x 2032mm high with commercial veneer suitable for both side and including standard pressed steel door frame with fixed plate welded to inside throat of frames stiles with two pairs of 100mm steel hinges including lockset and additional studding, strimming, etc.	No	2		
	Carried to Collection			**R**	

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BUILDING WORKS		
BILL NO. 6		
CEILINGS PARTITIONS AND ACCESS FLOORING		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 7				
	JOINERY FITTINGS				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUPPLEMENTARY PREAMBLES				
	Particle board:				
	Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
	Joinery:				
	Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
	Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
	All joinery fitting sides, divisions, tops, drawers, etc are deemed to include all assembling, housing, notching, glueing, blocking, planting on screwing with countersunk screws, angle connectors, edge strips unless otherwise stated.				
	Fixing:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
	Decorative laminate finish:				
	Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
	JOINERY FITTINGS (PROVISIONAL)				
	Suparwhite Bisonlam particle board:				
1	16mm Tops, shelves, sides, divisions, etc.	m²	2		
2	16 x 75mm Bearers fascia.	m	24		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	16mm MelaWood melamine faced board in African wenge peen, comprising single layre melamine impregnated decorative paper,fused under heat and pressure to both sides of a smooth surface particle board substrate laminated on both sides,manufactured in accordance with SANS 1763:1998 with PVC edging				
3	16mm Tops, shelves, sides, divisions, etc	m²	5		
4	16mm Cupboard door size 572 x 600mm high.	No	2		
5	16mm Cupboard door size 563 x 600mm high.	No	4		
6	16mm Cupboard door size 563 x 760mm high.	No	2		
7	16mm wide PVC impact edge strips.	m	22		
8	Drawer 572 x 560 x 150mm deep overall of 16mm edged and grooved front, sides and back; 540 x 130 x 16mm and 4.8mm tempered hardboard bottom complete with 2 wheel nylon adjustable drawer runners plugged.	No	2		
9	Drawer 563 x 560 x 150mm deep overall of 16mm edged and grooved front, sides and back; 540 x 130 x 16mm and 4.8mm tempered hardboard bottom complete with 2 wheel nylon adjustable drawer runners plugged.	No	3		
	Tempered hard board:				
10	3.2mm Backing masonite with a white faced surface.	m²	3		
	Wrought meranti				
11	19 x 75mm Cleats	m	4		
12	19 x 44mm Framing plugged.	m	11		
13	19 x 75mm Skirtings.	m	4		
14	19 x 50mm Framed framing plugged	m	5		
	SHELVING FITTINGS				
	30mm Thick high Eco-logic bamboo carbonised strand woven board in a law / smooth finish:				
15	30mm thick to tops size 600mm wide in lengths with bull nose along one edge.	m	0		
	Bamboo carbonised strand woven board for shelving in a raw / smooth finish				
16	16mm Tops, shelves, sides, divisions, etc.	m²	7		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
17	16 x 70mm Skirtings	m	9		
	32 mm Granite countertop with bull nose edge on the face in colour to Architect specification				
18	32mm Thick to tops size 600mm wide in lengths with bull nose along the front edge	m	4		
	SHELVING ETC (PROVISIONAL)				
	30mm Eco logic bamboo carbonised strand woven board in a raw/smooth finish:				
19	30mm woven board size 400mm wide in length with bull nose along edge fixed to and including steel bracket at 500mm centres with 30mm x no 6 self tapping countersunk woodscrews.	m	32		
20	400m wide to face and sides of shelving	m	20		
	Sawn South African Pine				
21	32 x 44mm SA Pine frames	m	60		
	Shelving sundries				
22	to backing of shelving	m^2	16		
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 7

JOINERY FITTINGS

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 8				
	FLOOR COVERINGS				
	PREAMBLE				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUPPLEMENTARY PREAMBLE				
	Cleaning				
	Rates for floor covering shall include for proper cleaning on completion				
	FLOOR COVERINGS				
	9mm Carpet Tiles 'Stainproof Miracle Fibre, multi level loop pile 'Softbac' non-woven polypropylene backed carpet broadloom tiling.				
1	On floors	m²	48		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 9				
	IRONMONGERY				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	HINGES, FLOOR SPRING BOLTS, PANIC, BOLTS ETC.				
1	100 x 75mm JH-BB-SS-STD 2BB Butt Hinge SSGR13	No	6		
	LOCKS				
	Lockset Complete				
2	L2241-78SS stainless steel oval cylinder lock	No	60		
3	M2V6AISCGMK Cylinder oval double lock	No	4		
	Handles				
4	SS6SG03-44-13SS Oval Cylinder Seagul SS Lever handle	No	60		
5	1321mm Y672 Fire door coordinator	No	1		
6	900mmm J-883-SIL Double P/Bolt P/Bar	No	1		
7	900m J-881-SIL Panic latch Push bar	No	1		
	Bathroom deadlocks				
8	Mortice WC indicator	No	2		
	Door Stop				
9	Union CZ8731SC satin chrome door stop	No	1		
10	99022SS 82mm wall projection door stop	No	2		
	PUSH PLATES AND KICK PLATES				
	Push plates etc.				
11	160 x 75 x 3mm polished brass Push plate 060/75	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	DOOR CLOSERS				
	Automatic Door Closer				
12	DCA154-EV1 parallel arm bracket	No	2		
13	DC300 R&P Closer EN3-6 SIL overhead door closer	No	2		
	LETTERS, NAMEPLATES, ETC.				
	Purpose made statutory sign plates constructed of steel plates, plugged to walls.				
14	600mm x 600mm x 10mm Thick South African Coat of Arms plate with engraved letters or numerals fixed to walls	No	1		
	PELMETS AND CURTAIN TRACKS				
	Single Curtain track plugged to soffit complete with aluminium venetain vertical blinds to doors and window				
15	Curtain track including aluminium venetain vertical blinds for window size 990 x 1720mm	No	2		
	BATHROOM FITTINGS				
	Shower Rail:				
16	19mm diameter starndard chrome plated rail, 600mm long, complete with 50 x 25 chrome plated brackets, plugged and screwed to wall at 1200mm high.	No	8		
	"Chairman Industries"				
17	DL2 Stainless steel wall mounted side grab rail size 32 x 320 x 320 x 320mm	No	3		
18	SR2 Stainless steel wall mounted rear grab rail around cistern	No	3		
19	Stainless steel wall mounted rear grab rail 350mm	No	3		
	Toilet tissue dispenser, Disposal bin, Etc:				
20	Professional MR2 satin finish stainless steel toilet tissue dispenser, overall size 130 x 135 256mm high lockable toilet roll holder plugged. (Ref. FT3 : Sanitary schedule)	No	15		
21	Professional disposer plus stainless steel wall mount waste bin, overall size 300 x 250 x 500mm high. (Ref. FT6 : Sanitary schedule)	No	8		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
22	STRX 611 Grade 304 1.2/1.5mm thick 18/10satin stainless steel sanitary towel disposal bin, overall size 304 x 250 x 134mm deep, capacity of 6 litres, plugged and screwedto the wall with stainless screws. (Ref. FT7 : Sanitary schedule)	No	3		
23	Hand Dry (HD) grade 304 1.2/1.5mm thick 18/10 stainless steel automatic hands free hand dryer, size 284 x 202 x 248mm deep with 2 vandal proof lock screws and key wrench, plugged and screwed to the wall with stainless steel screws, 200W motor connected to 230 / 240 volt power supply, with 5 year guarantee. (Ref. FT9 : Sanitary schedule)	No	8		
24	Glove box dispenser single with flexline spring, single flexible spring holds one box of gloves, two way keyholes for vertical or horizontal wall mounting, white powder-coated steel.	No	8		
25	0.8mm thick satin finished stainless steel paper towel dispenser code 359985, size 275 x 112 x 355mm high with a capacity of 500-800 towels, inspection windows on the side and franke standard key, plugged and screwed to the wall with stainless steel screws (manual operation)	No	8		
	"Sundries"				
26	DHC-SS-031B Hat and coat hook with rubber buffer (Stainless steel)	No	4		
27	DHC-SS-030A Hat and coat hook (Stainless steel)	No	2		
28	DDS-SS-017 Floor mounted door stop (Stainless steel)	No	10		
29	HALCAST 401SC door stop and holder	No	2		
30	DKP-SS-200 Door width kick plate WX200X1.2mm	No	2		
31	DKP-SS-100 Door width kick plate WX100X1.2mm	No	2		
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 9

IRONMONGERY

COLLECTION

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	BUILDING WORKS				
	BILL NO. 10				
	STRUCTURAL STEELWORK				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUPPLEMENTARY PREAMBLES.				
	User Note: In the event of there being only a limited number of different heights or lengths of colmuns or beams, the specific heights or lengths may be given seperately or may be suitably grouped together.				
	Descriptions				
	Descriptions of bolts shall be deemed to include nuts and washers				
	HOT DIPPED GALVANISED STEEL WATER TANK IN ACCORDANCE WITH SANS 763				
1	Supply and install 4000kl galvanised steel water tank panel, panel size 1220 x 1220 x 10mm thick walls joined by cross rubber, bolted with connection plates at corners, rubber seals with silicon sealer onto existing tank stand, The tanks to have internal stainless steel access ladder and galvanised mild steel external ladder for accessing the tanks. Steel tanks to fit existing elevated tank stand (see attached drawing); the tank to be partitioned to have 30000 litres back up and reserved 10000 litres for the fire line. The tank willhave two outlets. Tank to have 10 year warranty 10 years post construction and specialist contractor to supply shop front drawings and engineers' certificatefor approval.	Item			
	STEEL COLUMNS AND BEAMS				
	Welded Steel Beams butt welded to IPE 180 and C180				
2	200 x 100 x 22.36kg/m IPE welded steel beams and channels in single length 4.2m long steel beams.	Tonnes	0.19		
	BOLTS, FASTENERS, ETC				
3	Drill ofexisting steel plate and fastern 50mm M12 bolt and nut, close off the bolt with welding.	No	152.00		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
4	Carefully inspect and remove damaged welding; where there are gaps fill in gapts to all welding on steelwork existing member joints, welding to be done as per SANS requirements. (see attached drawing) to the approval of the Structural Engineer	Item			
	Carried to Collection			**R**	

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BILL NO. 10		
STRUCTURAL STEELWORK		
COLLECTION		
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	BUILDING WORKS				
	BILL NO. 11				
	METALWORK				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	SUPPEMENTARY PREAMBLES				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
	Metal described as holded for bolts and chemical anchors and bolts shall be deemed to exclude bolts unless it is stated to be measured "elsewhere"				
	GALVANISED STEEL BALUSTRADES TO FLOORS STAIRS ETC				
	Stainless steel balustrading to walkways:				
1	Balustrading to walkway of 50mm external daimeter continuous top rail, 50mm external continuous bottom rail, 50mm external diameter intermediate balusters at 500mm centres between top and bottom rails and 50mm external posts at approximately 500mm centres each with 200 x 200 x 10mnm flat section base plate bolted to concrete with M8 bolts embedded in concrete.	m	28		
	STAINLESS STEEL HANDRAILS, BALUSTRADES, ETC				
	Satin Polish brushed stainless steel with classic flat end caps Pre-assembled balustrades to walkways and stairs				
2	Raking balustrades 1100mm high, of 43mm external diameter handrail bolted at approximately 1000mm centres to concrete	m	29		
3	Extra over for raking 43mm diameter for angle bent joint of top and bottom balustrading.	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
4	Extra over 32-44mm for ramped intersection of baluster and raking balustrading	No	4		
	Welded and bolted patent balstustrading to stairs				
5	Raking balustrades 1100mm high, of 43mm diameter handrail bolted at approximately 1000mm centres to treads	m	30		
6	Extra over for 60 x 60 x10mm base plate welded on to baluster and bolted to thread.	No	6		
	WELDED STEEL GATES, SCREENS, ETC				
	Trellidoor or equal approved				
7	Trellidoor trojan T1000 or equal approved as per suppliers specification to 813 x 2032mm Timber door	No	10		
	Screens "buglar proofing" to windows				
8	20mm x 5mm Thick flat bars with intermediates at equal centres. Entire Frame to be hot dipped galvanised after manufacture	m	56		
9	900mm x 1720mm Aluminium windows	No	25		
10	470mm x 600mm Aluminium windows	No	25		
	SUNDRY GALVANIZED STEELWORK				
	Welded brackets, etc bolted to walls				
11	25 x 25 x 3mm thick square hollow section bracket 520 x 490 high overall with one 520mm long diagonal brace including closed ends, twice holed for screws and twice holed for bolts	No	20		
	Galvinised bolts				
12	Bolts (Provisional)	Kg	50		
	SAPS STEEL DOORS WITH FRAMING AND GATE				
	All frames, doors and gates have to be in accordance with POL2012/D1; D1a; D2; D3; D4; and D5.				
	Breezeblock openings can be built into the external wall, but Not directly opposite any doors to exercise yards, and Not in the wall between the yards and passage. Expanded metal screens (Annexure G and H) in angle iron frames, are to be bolted to the inside wall over the full area of the openings. Screens and breeze openings are to be installed as high as possible, and should not extend to below 1500mm from finished floor level				
	All hinges in accordance with the specifications as per drawing no POL2012/D4				
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	ALL cell type locks have to be ordered from SAPS: Project and Building Management Services (Tel: 012 841 7351). The cost of the locks have to be budgeted for in the contract amount, as SAPS Project and Building Management Services is only responsible for the ordering and co-ordinating. ALL CELLS LOCKS ARE TO BE ACCOUNTED FOR BY THE CONTRACTOR AT THE END OF THE CONTRACT. THE CONTRACTOR MAY NOT TAKE POSSESSION OF ANY CELL LOCKS. EXTRA CELL LOCKS TO BE RETURNED TO SAPS:PROJECT AND BUILDING MANAGEMENT SERVICES.				
	A total of two suites for the cell door and trellis door locks, have to be used in the entire cell complex. The locks are to be 4 lever, see drawing POL2012/D5. One suite has to be used for trellis THE and solid doors, to all cells and exercise yards, as well as the trellis gate in the passage, between the kitchen yard and the first exercise yard. The other suite has to be used for the trellis gate to the kitchen yard, the main entrance to the security passage, as well as any other trellis gates or solid doors. The Project Manager of Department of Public Works must confirm the number of different locks with the Commander of SAPS Project and Building Management Services in writing. A floor plan of cell block to be included. LOCKS HAVE TO BE ORDERED WELL IN ADVANCE, AS THE DELIVERY TIME CAN BE AS LONG AS TWO TO THREE MONTHS.				
	UNDER NO CIRCUMSTANCES may the contractor or any other party, except the Station Commissioner of the station or his nominated representative, take possession of the keys of the locks. The keys have to be provided to the Station Commissioner or representative, in a sealed envelope (signed for) and kept in the safe of the station, for safekeeping.				
	The door, gate and frame are delivered to site as a unit, welded closed. Under no circumstances may the doors be cut open until after it has been built in completely and ten (10) days settlement. For this reason, the doors have to be built in before the windows, or one window per cell is not to be built in, until after the door has been built in, to allow access to the cell. (See 2.3.6).				
13	Single leaf gate, comprising 54mm x 54mm x 4.00mm galvanised mild rectangular steel frame with 2mm thick sheet metal fixed with 6 x 16 mono bolts at maximum 120mm centres on both sides. Gate to suit indicated opening size. Doors and gates complete with hinges as per five star specification from SAPS.	No	2		
	Carried to Collection			**R**	

	Unit	Quantity	Rate	Amount
Cell windows and screens according to drawing no. POL2012/W1 to W4 has to be built in as high as possible from finished floor level Wire mesh- and expanded metal screens inside and outside windows, according to specifications, expanded metal, with a thickness of 3mm, web width 10mm and openings of 10mm x 40mm, of the approved type Flatex/345 (Pigmesh). Openings in screens, for opening windows, to be finished so that NO sharp extrusions exists. Screen openings only on the inside screens of windows, NO openings on outside screens. (POL2012) W3 Screen frames to be according to typical drawing POL2012/ W1, W2 and W3. The heavy-duty padlocks as specified on the drawings are to be included in the contract, on a master key system. The keys are to be handled in a similar fashion to the cell lock keys (see 2.4.7). Alternatively M10x30mm long bolt and nut can be used and tag welded instead of pad locks. Glazing in cell windows to be 6,5mm clear laminated glass. There must be a sufficient number of windows to ensure good ventilation of the cell Where windows and mesh are to be installed, all steel to be hot dipped galvanised. Galvanised steel work to be left unpainted and welding joints to be cold galvanised on site. The putty to galvanised windows to be painted with silver enamel paint. The windows in the external wall to be built in as high as possible. Note that at least 2 brick courses are to be left between underside of concrete ceiling and window soffit. The windows in the wall between the cell and the yard are to be built in at a standard soffit height of 2100mm from finished floor level.				
Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
14	External cell window built into wall, size 850 x 950mm high, constructed of Standard PFX7 window frames as supplied by manufacturer with view section constructed of 40 x 40 x 5 mm mildsteel angle iron Opening in Grill to open Window flatbar 40 x 5 mm mildsteel, with approved hot dipped Flatex 345 or similar 100x75x8 MS angle and cover plate seeDetail POL 2012/W3, Heavy duty hinge 100x75x8 MS angle & cover plate see Detail POL 2012/W3; 40 x 40 x 5 mm mildsteel angle iron 40 x 5 mm mildsteel flatbar welded to angle iron frame Flatex 345 or similar galvanised screening, 50 x 50 x 5 mm mildsteel angle iron 3 X bolted to wall with M6 expansion bolts 40x40x40x5 mm mild steel lug for padlock galvanised screening; window tied to brickwall on the top and bottomside with 30 x 16mm manganese grade SS14/7 or Creusabro 8000 (water lazer) and tied to the sides with 230 x 1,6mm mild steel lug built into wall, Heavy duty hinge 40x40x40x5 mm mildsteel lug for padlock	No	2		
	Gates				
15	Double gate size 1800x 2700mm high overall with opening section in two equal leaves each leaf of 60 x 40 x 2.5mm hollow section frame filled in with 20mm diameter solid bars welded at intersection verticals at 120mm centres , one leaf fitted with narrow stile lock box and backing plate and both leaves each with 254x 40 x 5mm lock annd band hinges built into brickwork and welded on. Gate to open outwards	No	1		
	STEEL RECORDROOM AND STRONGROOM DOORS, VENTILATORS, ETC				
	Record room doors etc. suitable for 230mm walls fixed to brickwork or concrete				
16	Supply and install strong roomdoor 749 x 1854mm high SAFE SABS 949, Category 1 strongroom door with 0mm steel plate locking 1x 7 security key lock; door to installed on existing frame.	Item			
	POWDER COATED ALUMINIUM GARAGE DOORS (CPAP WORK GROUP NO. 140)				
	Powder coated sliding panel doors fixed to brickwork or concrete				
17	'Slideover' electrically operated panel door for 2400 x 2500mm high opening, including electrical connection, industrial motor and commissioning (electrical isolator elsewhere)	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	ALUMINIUM WINDOWS, DOORS, ETC				
	Aluminium series 36 casement top hung windows with opening sections as per attached schedule; complete with subframes, ironmongery, glass 6.38mm laminated safety glass, sealing, all hinges to be double strength, stainless steel, extension type, etc and fixing to brickwork or concrete				
18	Window type W04, 900 x 900mm high	No	1		
	Aluminium series 36 windows with fixed sections as per attached schedule; complete with subframes, ironmongery, glass 6.38mm laminated safety glass, sealing, all hinges to be double strength, stainless steel, extension type, etc and fixing to brickwork or concrete				
19	Fixed window screen size 1350 x 2100mm	No	2		
	ALUMINIUM DOORS. (CPAP Work Group No 140)				
	Grade AA epoxy powder coated (100% epoxy) powder coated polyester powder coated to a minimum thickness of 6mm microns aluminium hinged doors and fixed sidelights plugged to brickwork or concrete:				
20	Purporse made aluminium wired glass fire door with fanlight and sidelight size 5800 x 2765mm, with two equal sized double doors manufactured from 2mm mild steel sections with intumescent fire, smoke and acoustic seals on the bottoms of door leaves. Fitted as per manufacturer's specifications fitted with 6.38mm laminated wire plate base glass- 60 minutes fire resistant glass (D09)	No	1		
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 11

METALWORK

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 12				
	PLASTERING				
	PREAMBLE				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	INTERNAL PLASTER				
	Cement plaster on brickwork				
1	On walls	m²	45		
2	On narrow widths	m²	1		
	EXTERNAL PLASTER				
	Rough-cast plaster, on brickwork				
3	On walls	m²	10		
4	On narrow widths	m²	1		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 13				
	TILING				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	WALL TILING				
	200 x 200 x 5mm White matt ceramic tiles fixed with adhesive to plaster (plaster elsewhere)				
1	On walls	m²	2		
	FLOOR TILING				
	330 x 330mm quarry field tiles fixed with adhesive to power floated concrete and flush pointed with waterproof grout				
2	On floors and landings	m²	52		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 2

BUILDING WORKS

BILL NO. 14

PLUMBING AND DRAINAGE

PREAMBLES

The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.

Chasing:

Chasing pipes into new walls shall be regarded as 'building in' and is not measured separately. The cost of chasing, wrapping in suitable bown paper and making good shall be included in the rates for pipes.

Holes for pipes through new walls:

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.

No allowance for holes and drilling for pipes through new walls has been made in these bills of quantities, the price for all holes and making good shall be deemed to be included in the description of pipes.

Carried to Collection **R**

	Unit	Quantity	Rate	Amount

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.

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.

Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor.

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.

Stainless steel basins, sinks, wash troughs, urinals, etc:

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

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

Descriptions of wall mounted, floor standing, drop-in, etc type sanitary fittings shall be deemed to include fixing in position and all fixing accessories.

Fixing:

Descriptions of proprietary items shall include fixing in position and all fixing accessories as specified by the manufacturer.

Carried to Collection **R**

Section No. 2

Bill No. 14

Plumbing And Drainage

		Unit	Quantity	Rate	Amount
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	Sleeve pipes:				
	Electrical sleeve pipes to be Class 34 and are to include for draw wires.				
	RAINWATER DISPOSAL				
	Fullbore leaf gratings				
1	Supply and install fullbore leaf grating outlets complete with flexible plastic inlet closed with wire balloon grating.	No	6		
	SOIL DRAINAGE (CPAP WORK GROUP NO. 146)				
	Vitrified clay gulleys				
2	Gulley not exceeding 500mm deep, complete with PVC trap and grid closure.	No	1		
	Septic tanks				
3	Desludging of 30m3 tripple compartment septic tank on monthly basis until practical completion is achieved.	Item			
	STAINLESS STEEL KITCHEN EQUIPMENT				
	Stainless steel double centre bowl catering sink:				
4	Model NFKNVN611M Grade 304 18/10 Polished stainless steel right hand insert sink (Code: 310370) size 860 x 435mm wide, with one 370 x 340x 162mmdeep bowl, fitted onto cupboard (elsewhere specified) complete with silicone sealing to cupboard work top. (Ref. SNK1 : Sanitary schedule)	No	1		
	SANITARY FITTINGS				
	Ceramic fireclay wash hand basins:				
5	Wall hung suite (product code NLAWHLB20642PM) with concealed wall mounted cistern (product code NGEBA004M); with wall stainless steel cistern flush cover plate (product code NGEMB001M) including lid fitments and flushpipe elbow complete with white toilet seat and lid (product code NLAWHPR93952M) mounted to pan. (Ref. WC2 : Sanitary schedule) (complete including chasing walls and making good finishes)	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
6	Wall hung and floor mounted suite (product code NLAWHPR20950M) with 80mm concealed wall mounted cistern (product code NGEAP002M); with wall stainless steel cistern flush cover plate (product code NGEAP005M) complete including lid fitments and flushpipe elbow and with white toilet seat and lid (product code NLAWHPR93952M) mounted to pan. (Ref. WC2 : Sanitary schedule) (complete including chasing walls and making good finishes)	No	12		
7	Wall mounted wash hand basin 600 x 465 x 175mm white A Tap hole ceramic fireclay heavy duty vanity wash hand basin with one taphole, mounted into wall with basin fixations (product code NBEZB2904M) and brackets (product code NSKMBR001M)complete with overflow attachments. (Ref. WHB4 : Sanitary schedule) (complete including chasing walls and making good finishes)	No	10		
	Vitreous china urinals :				
8	Caprino siphonic urinal wall mounted urinal (code: NTVAC1408/CHM) including 38mm chromium plated domical grating (code: 8787Z0) and concealed siphonic trap (code:NGEUS0002M) and chromium plated top inlet spreader (code: 8127Z0) complete with Idral concealed self closing urinal flush plate, pipe and rubber (code: NTVIDITT08125M)	No	8		
	Stainless steel fittings for Cells				
9	1.2mm Grade 304 18/10 stainless steel wall and floor mounted shrounded pan, size 550 x 360 x 450mm high with internal flange, exposed back entry flush valve with 60mm flush pipe and integral stainless steel 100 "P" trap and back entry 60mm flush pipe inlet, boltedto wall and floor with anchor bolts, compliant with SABS 1733:2002 (Ref. WC1 : Sanitary schedule) (complete including chasing walls and making good finishes)	No	2		
10	1.2mm Grade 304 18/10 stainless steel heavy duty wall hung pan for disabled persons, size 360 x 700 x 350mm high with concealed flushing (elsewhere specified) and back entry 38mm flush pipe inlet fixed to wall bracket and galvanised mild steel threaded rods, compliant with SABS 1733:2002 (Ref. WC4 : Sanitary schedule) (complete including chasing walls and making good finishes)	No	2		
11	1.2mm Grade 304 18/10 stainless steel SAPSDF combination wash hand basin and drinking fountain (Code: 356158), size 370 x 125 x 490mm high, with 40mm concealed waste outlet, unit recessed125mm into wall (Ref. WHB 2 : Sanitary schedule)	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
12	Wash basin for wall mounting, stainless, surface satin finished, material thickness 1.2mm seamless welded bowl with dimension 360 x 272 x 135mm, made of one piece for high risk vandalism areas due to seamless closed trap cover and semicircular shape, rounded edges, bowl with revolving channel, 40mm tap ledge, without overflow, 1 ½" flat perforated waste, drainage centric, including trap DN32, with pressed soap dish, including mounting plate conform to EN32 including stainless steel screwsand dowels. (Ref. WHB 1 : Sanitary schedule)	No	2		
	WASTE UNIONS, ETC				
	"Cobra Watertech" or equal approved wate unions, etc				
13	32mm Pop up waste union with overflows	No	11		
14	32mm Basket strainer waste union with overflows	No	1		
	TRAPS, ETC				
	"Marley"				
15	40mm Spazi waste plumbing kit for sink trap	No	1		
	"Cobra Watertech"				
16	32mm 340 CP Wirquin bottle trap or equal approved	No	10		
	TAPS, VALVES, ETC				
	Brass / Chrome				
17	35mm Non-return valve	No	2		
18	15 x 15 mm Angle valve	No	23		
19	42mm Non-return valve	No	1		
20	75mm Non-return valve	No	2		
	Cobra Watertech				
21	15mm Artic clinical lever sink mixer (product code NTVAA3948/CHM)	No	3		
22	15mm Eco basin mixer (product code NTVPE4946/CHM)	No	6		
23	15mm Chrome pillar type sink mixer (product code NTVPE4931/CHM)	No	3		
24	25mm 1080-25RB fullway isolating ball valve with lever handle	No	1		
25	35mm 1003/125-22RB fullway gate valve	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
26	42mm 1003/125-22RB fullway gate valve	No	2		
27	75mm 1003/125-22RB fullway gate valve	No	2		
	SANITARY PLUMBING (CPAP Work Group No 148)				
	uPVC (SABS 967) pipes				
	uPVC (SABS 967) pipes:				
28	110mm Pipes.	m	10		
29	110mm Pipes chased into brick walls.	m	10		
30	110mm Pipes chased into concrete surface bed.	m	10		
31	110mm Pipes laid in and including trenches not exceeding 1m deep.	m	10		
	Fixing of pipes				
	Extra over uPVC pipes for fittings:				
32	110mm End cap.	No	3		
33	110mm Bush.	No	2		
34	50 X 110mm BSP adaptor.	No	2		
35	110 x 160mm BSP adaptor.	No	2		
36	110mm Reducer.	No	2		
37	110mm Taper pipe.	No	2		
38	110mm ABC cleaning eye in end of pipe.	No	2		
39	110mm Expansion connection.	No	2		
40	110mm Bend.	No	2		
41	110mm Junction.	No	2		
42	110mm Reducing junction.	No	2		
43	110 x 110 x 75mm Reducing junction.	No	2		
44	110 x 110 x 150mm inverted reducing junction.	No	2		
45	110mm Double junction.	No	2		
46	110 x 110 x 50mm Reducing double junction.	No	2		
47	110mm Pan connector.	No	16		
48	110mm Bent pan connector.	No	4		
49	110mm Access bent pan connectoin with anti-syphon.	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
50	110mm Access pipe.	No	2		
51	110mm Access bend.	No	4		
52	110mm 'Gl Two-way' vent valve.	No	4		
	Sundries:				
53	Testing waste pipe system.	Item			
54	32mm 700-32RB high pressure float valve including ball	No	1		
	WATER SUPPLIES				
	Class O copper pipes				
55	15mm Pipes	m	30		
56	22mm Pipes	m	20		
	Extra over class O copper pipes for capillary fittings				
57	15mm Fittings	No	10		
58	22mm Fittings	No	10		
	Extra over class O copper pipes for conex compression fittings				
59	15mm Fittings	No	12		
60	22mm Fittings	No	10		
	Copper overflow and service pipes				
61	15mm Service pipes 350 mm girth	No	15		
	HDPE Class 6 water pipes				
62	32mm Pipes laid in and including trenches 900mm deep	m	20		
	Extra over HDPE pipes for "Plasson" or other approved fittings				
63	32mm Nipple	No	1		
64	32mm Bend	No	1		
65	32mm Tee	No	1		
66	32mm Reducing Tee	No	1		
	Brass Fittings				
	Class 2 copper pipes				
67	35mm Pipes fixed to walls with and including holderbats	m	80		
68	42mm Pipes fixed to steel tank with steel clamps	m	7		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
69	75mm Pipes fixed to steel tank with steel clamps	m	14		
70	75mm Pipes fixed to wall with and including holderbats	m	20		
	Class 3 copper water pipes, including class B bedding according to SABS 1200 LB and compacting backfilling to 93% modified AASHTO				
71	75mm pipe complete with all the excavations, risk of collapse, backfilling,etc not exceeding 2 metre deep for excavations.	m	30		
	Extra over class O copper pipes for capillary fittings				
72	35mm Adaptor coupling	No	4		
73	42mm Adaptor coupling	No	2		
74	35mm Elbow	No	8		
75	42mm Elbow	No	2		
76	75mm to 35mm Reducer	No	2		
77	75mm Elbow	No	8		
78	35mm Tee	No	6		
79	42mm Tee	No	2		
80	75mm Tee	No	4		
	Extra over class O copper pipes for conex compression fittings				
81	35mm Fittings	No	10		
82	42mm Fittings	No	2		
83	75mm Fittings	No	6		
	Testing				
84	Testing, and preparing as-built drawings for water supply, drawings to be approved the Principal Agent / Architect.	Item			
	TANKS ETC				
	Water Tanks etc:				
85	2500 Litre polyprypolene rotomoulded rainwater tanks	No	1		
86	10000 Litre polyprypolene rotomoulded rainwater tanks	No	2		
87	32mm Stopcock with joint to steel as "Cobra 121"	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Valve box chambers, etc.				
88	Type 11B cast iron stopcock box hinged cover and frame, including 220 x 220 x 600mm deep brick chamber below, finished 50mm above ground level	No	1		
	PIPE INSULATION				
	20mm Thick rubber pipe insulation				
89	Insulation to 35mm pipes including couplings	m	80		
90	Insulation to 42mm pipes including couplings	m	14		
91	Insulation to 75mm pipes including couplings	m	20		
	HOLES ETC				
	Core drilling hole not exceeding 50mm diameter				
92	270mm Thick reinforced concrete slab, beam, wall, etc.	No	4		
	Core drilling hole exceeding 50mm and not exceeding 100mm diameter				
93	270mm Thick einforced concrete slab, beam, wall, etc.	No	4		
	Carried to Collection			**R**	

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BUILDING WORKS		
BILL NO. 14		
PLUMBING AND DRAINAGE		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 15				
	ELECTRICAL WORK				
	PREAMBLE				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	BASIC ELECTRICAL ENGINEERING SERVICES				
	SECURITY INSTALLATION.				
	The contractor shall re-commission, test and provide training to the following security equipments (Refer to operational manuals for the equipments)				
1	Test and recommisioning of existing turnstile incorporating card readers	Item			
2	Onsite training of personnel for turnstile	Item			
3	Repair test and re-commissioning existing parcel and baggage X-ray scanner including a video monitor, keypad and exit run off roller conveyor and stand	Item			
4	On site training for personnel X-ray Machine	Item			
5	Test and recommissioning of existing multizone walk through metal detector	Item			
6	On site tarining of personnel for multizone walkthrough metal detector	Item			
7	Supply, install and commission gate motor	Item			
	CCTV SYSTEM INSTALLATION				
	The contracror shall re-commission, test and provide CCTV security system training (Refer to operational manual for CCTV)				
8	Test and recommissioning of existing CCTV	Item			
9	On site training of personnel for CCTV	Item			
	MOTORISED GATES COMMISSIONING				
10	Commisioning of front and back gates motors	Item			
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	ELECTRICAL DISTRIBUTION SYSTEM				
	LOW VOLTAGE CABLE				
	Provide install, test and commission the following 1000v PVC/SWA/PVC copper cables. Prices shall allow for the installation of cables in cable ducts, through sleeves, conduit or installation against vertical and horizontal levels. (Cable from Eskom metering panel to th emain LV panel)				
11	120mm2 x 4 core ECC cable	m	180		
12	4mm2 x 4 core ECC cable	m	220		
	TERMINATIONS				
	Terminate and make off the following 100V PVC/SWA/PVC copper cable gland according to the manufacturers instructions. Provide the cores with lugs and bolt onto terminals. The cable gland and marking off the cable shall also be allowed for				
13	120m2 x 4 Core ECC Cable	No	4		
14	4m2 x 4 Core ECC Cable	No	220		
	CABLE SLEEVES				
	Supply and installation of the following PVC sleeves in the ground complete with mild-steel draw wire				
15	110mm Diameter PVC sleeves	m	60		
16	Extra-over for 110mm diameter PVC sleeve bends	No	4		
17	Electrical manhole size 800 x 800 x 450mm constructed complete including excavations, formwork,concrete, one brick wall, concrete, formwork, etc complete with manhole cover to SANS standards	Item			
	PROVISIONAL ALLOWANCES				
18	Attendance and liason with the supply authority for the power supply (Eskom)	Item			
19	Service existing 100kVA indoor standby generator complete with change over panel (refer to Generator O&M)	Item			
20	Supply of Diesel Fuel	Litres	1,500		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	EXCAVATIONS				
	All prices below shall include the excavation of trenches and holes, seperating of stones, ground and rock, levelling of trench bed, refill, compacting and reparationg of all surfaces to their original finish				
21	Excavate in soft and medium ground	m^3	80		
22	Supply cable marker tape and install 400mm below finished ground level	m	400		
23	Testing and commisioning as per SANS 10142	Item			
24	Removeand re-instate required existing electrical installations to allow for suspended ceiling on the front façade on the main building	Item			
	ELECTRICAL INSTALLATION IN BUILDING				
	LIGHT FITTINGS				
	Repair existing light fittings (not working due to roof leakages). Globes need to be accessed and replaced.				
25	ENTRANCE LOBBY- 2 x 58W Prismatic surface mounted light fittings.	No	2		
26	PASSAGE- 2 x 58W Prismatic surface mounted light fittings.	No	6		
27	ESTATE OFFICE - 2 x 58W low Brightness surface mounted light fittings.	No	3		
28	CASH HALL - 3 x18W Reccessed 600 x 600mm recessed low brightness light fittings	No	11		
29	WAITING AREA- 2 x 58W Corrosion proof surface mounted light fittings	No	1		
30	CIVIL COURT - 3 x 18W recessed 600 x 600mm recessed low brightness light fittings	No	1		
31	CRIMINAL COURT - 3 x 18W recessed 600 x 600mm recessed low brightness light fittings	No	15		
32	CHILDREN WAITING AREA, ADDITIONAL MAGISTRATE, LANGUAGE SERVICES AND ESTATE - 2 x 58W low brightness surface mounted light fittings	No	3		
33	Evaluate and repair electrical connections to the affected light fitting circuits	Item			
34	Supply and install 50mm PVC round box covers for exterior fittings	Item			
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	NEW LIGHTS FITTINGS FOR SUSPENDED CEILING				
	Type A1:2 x 28 W Low brightness recessed clip-in light fitting				
35	Type A1: 2 x 28 W Low brightness recessed clip-in light fitting.	No	16		
	CONDUIT INSTALLATION				
36	Supply and install 20mm Diameter PVC conduit	m	200		
	The supply and installation in conduit of stranded copper PVC insulated conductors in groups				
37	2 x 2.5mm2 and 2.5mm2 earth wire	m	680		
38	Draw wire	m	200		
	SMALL POWER				
	Supply and installation complete with all covers and fixing				
39	20A DP Isolator in weatherproof enclosure	No	2		
	POWER SKIRTING AND ACCESSORIES				
40	Supply and install RJ45 data Outlet plugs	No	120		
41	Supply and install RJ11 Telephone Outlet plugs	No	108		
42	Repair existing 3 compartment PVC power skirting	Item			
43	Testing and commisioning as per SANS 10142 complete with the issue of a certificate of compliance.	Item			
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 15

ELECTRICAL WORK

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 16				
	MECHANICAL WORK				
	PREAMBLE				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	FIRE PROTECTION INSTALLATION				
	STRONG ROOM GAS SUPPRESSION				
	Install piped inergen gas suppression system, 300 Bar: Gas suppression is already supplied on site, installation is outstanding				
1	Room protection 3.9m x 2.77mx 2.8m: 80litre (24m3) inergen cylinder, including BACKUP cylinder, complete with brackets, solenoids, actuators, nozzles, manifold, piping, clamps etc.	No	1		
2	Gas release panel (conventional) complete with manual call point (for manual gas release), 2 off input units, low voltage relay, battery backup, etc. Panel to provide output signal to building fire detection control panel.	No	1		
	GENERAL FIRE PROTECTION EQUIPMENT				
3	Remove plastic covers from optical smoke detectors	Item			
4	PARAPLEGIC / FIRE EXIT DOOR (front entrance)- supply and install acceptable and approved quick release mechanism.	Item			
5	Escape Signage to be installed as per Fire protection Drawing	Item			
6	Supply and install push bar mechanism in the Boardroom	Item			
7	Install A3 map diagram indicating aall installed devices for ease of identification and quick manual guide for the FACP	Item			
8	Test and commissioning of existing Fire Protection and Fire detection system	Item			
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
9	Provide 3 sets operating and maintenance manual as per DPW specification	Item			
10	On site training of personnel for Fire protection and detection	Item			
11	Provide compliance certificate for fire protection and detection system	Item			
	HEATING, VENTILATION AND AIR CONDITIONING INSTALLATION				
12	Modify external discharge pipes positioned below 500mm above ground level to bend 45 degrees	Item			
13	Assesment and repairing of existing ducting installation for FT1, FT2, FT3,FT4 and FA1 as indicated on the drawing. Ducting to be complete with hangers, brackets, flexible connections, insulation etc. Ducting to be flushed to the louvres.	Item			
14	Test and recommissioning of existing HVAC	Item			
15	On site training of personnel for HVAC	Item			
	PUMPS				
	Pumps				
16	Twin vertical CRI (E,) or equvalent, maximum inlet pressure 8 bars	No	2		
	Carried to Collection			**R**	

			Amount
SECTION NO. 2			
BUILDING WORKS			
BILL NO. 16			
MECHANICAL WORK			
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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	BUILDING WORKS				
	BILL NO. 17				
	GLAZING				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	The term 'float glass' is used for monolithic annealed glass				
	GLAZING TO ALUMINIUM WITH SCREWED-ON BEADS (BEADS ELSEWHERE)				
	6mm Obscure safety glass				
1	Panes exceeding 0,5m² and not exceeding 2m²	m²	8		
	TOPS, SHELVES, DOORS, MIRRORS, ETC				
	6mm Silvered float glass copper backed mirrors with 10mm bevelled and polished edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete				
2	Mirror 600 x 900mm high with screws	No	5		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 2

BUILDING WORKS

BILL NO. 18

PAINTWORK

PREAMBLES

The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.

SUPPLEMENTARY PREAMBLES

User Note The following four items, given as examples, have been set up to comply with the Munsell system (the 'extra over' option) as prescribed in the Standard System of Measuring Building Work and should be inserted at the end of each type of paint where applicable:

Extra over paintwork to all areas, for paintwork in colours which have a value of 7 or less based on the Munsell system m² Extra over paintwork to gates, grilles, burglar screens, balustrades, etc., for paintwork in colours which have a value of 7 or less based on the Munsell system (both sides measured over the full flat area) m² Extra over paintwork to rails, bars, pipes, etc. not exceeding 300mm girth, for paintwork in colours which have a value of 7 or less based on the Munsell system m Extra over paintwork to skirtings, rails, etc. not exceeding 300mm girth for paintwork in colours which have a value of 7 or less based on the Munsell system m

PREPARATORY WORK TO EXISTING WORK

Previously painted plastered surfaces

Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth

Previously painted metal surfaces

Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal

Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Previously painted wood surfaces				
	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth				
	ON PREVIOUSLY PAINTED SURFACES				
	Prepare surfaces and remove all loose material, apply one coat primer and two coats "Double velvet Pure Acrylic" paint:				
1	On new Plastered walls	m²	10		
2	On Previously painted interior Walls	m²	1,858		
3	On Previously painted exterior Walls	m²	1,475		
	ON FIBRE CEMENT ETC				
	Prepare surfaces and remove all loose material, apply one coat primer and two coats "double velvet pure Acrylic" paint:				
4	On previously painted ceilings	m²	380		
	Prepare surfaces and remove all loose material, apply two coats "textured Acrylic" paint:				
5	On external Fascias and barge boards	m²	119		
	ON METAL				
	Remove any loose and flaking residue by means of wire brushing, sand down, wash with "polycell sugar Soap or weak spirits of salts, rinse, spot priming with "synthetic metal primer" and apply one coat "Universal Undercoat" and two coats "Super Universal Enamel' paint on existing steel				
6	Gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area)	m²	150		
7	On roof Sheeting	m²	42		
	Remove any loose and flaking residue by means of wire brushing, sand down, wash with "polycell sugar Soap or weak spirits of salts, rinse, spot priming with "synthetic metal primer" and apply one coat "Universal Undercoat" and two coats "Galvanising' paint on existing steel as per SANS 10064:2011 and SABS 1200 standards.				
8	On elevated tank stand, etc.	m²	358		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	ON WOOD SURFACES				
	Remove any loose and flaking residue, rinse and apply three coats "Woodcare Sunproof" coloured high gloss varnish on existing varnished surfaces				
9	On soffits of boarded panelling wide	m²	160		
	ON FLOORS				
	Clean down and shot blast existing grano screed to a firm substrate, apply self leveling epoxy (F3) toweled to a true even and level finish to the general floor level.				
10	On grano floors	m²	35		
	ON SMOOTH CONCRETE:				
	Remove any loose and flaking residue by means of wire brushing, wash with 'Polycell Sugar Soap' or weak spirits of salts, open up cracks and make good with 'Polyfilla Exterior' filler sanded smooth apply one coat 'Masonry Paint' and two coats 'Plastis Textureed Acrylic' paint on existing water based paint surfaces:				
11	On ceilings and beams	m²	220		
12	On cills.	m²	45		
	Carried to Collection			**R**	

SECTION NO. 2

BUILDING WORKS

BILL NO. 18

PAINTWORK

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SECTION NO. 2

BUILDING WORKS

SECTION SUMMARY

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SECTION SUMMARY

SECTION NO. 3

EXTERNAL WORKS

		Unit	Quantity	Rate	Amount
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	EXTERNAL WORKS				
	BILL NO. 1				
	EXTERNAL WORKS				
	PREAMBLES				
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2014; 2.1 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.				
	LANDSCAPING				
	Refer to the landscape architect's specification annexed to these bills of quantities which is supplementary to and shall take precedence over the Model Preambles for Trades				
	Excavate in earth and dispose on site				
1	To remove humps, form shallow ditches, etc.	m²	107		
	Ground preparation				
2	Cultivation and preparation of areas to be planted	m²	107		
	Topsoil supplied by the contractor, including spreading and levelling				
3	In plant beds, grassed areas and holes for trees, shrubs, etc.	m³	10		
	Compost, lime and fertilizer				
4	Compost in plant beds, holes for trees, shrubs, etc.	m³	27		
5	Agricultural lime for trees, shrubs, ground covers, etc.	Kg	100		
6	Super phosphate granular commercial fertilizer for trees, shrubs, ground covers, etc.	Kg	100		
	Shrubs, bulbs and plants				
7	Aloe Arborescens 600mm high	No	8		
8	Mutaia Spinosa 600mm high	No	24		
9	Chlorophytum Saundersiae 600mm high	No	33		
10	Strelitizia 600mm high	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Maintenance				
11	Allow for maintaining landscaping for a period of 6months, including watering, weeding, cutting, replacing dead plants, etc.	Item			
	PRECAST CONCRETE KERBS				
	Precast concrete kerbing (complying with SABS 927) in 1m lengths, wet pressed, placed in position, bedded and jointed in (3:1) mortar and flush pointed on exposed surfaces,including 15Mpa/19mm unreinforced concrete haunching at back of each joint, excavation, backfilling, ramming, etc.:				
12	Figure 1 barrier Kerb	m	90		
13	Figure 1 barrier Kerb circular on plan exceeding 4m radius	m	25		
	Sundries				
14	Finishing top of surface bed with broom swept finish non slip.	m^2	490		
	CONCRETE STORMWATER CHANNELS				
	Precast or insitu concrete (15MPa) open stormwater channels having V-shaped waterway formed in top , finished smooth on all exposed surfaces in untinted cement plaster (1:3) trowelled smooth and with angles rounded, cast in suitable lengths, including all formwork, moulds, shallow excavation, filling and compacting, laying to falls, bedding and pointing in cement mortar (1:3)				
15	Channel size 600 x 150 mm overall with 560 x 60mm deep V-shaped waterway	m	157		
16	Extra over for fair end	No	18		
17	Extra over for angle	No	18		
18	Precast SW2 water channel	m	100		
19	Extra for fair end	m	8		
20	Extra for angle	m	8		
	Drainage				
21	Cut out existing concrete for 75mm diameter uPVC pipe laid across ramp. Reinstate concrete ramp with 25MPa Concrete; 75mm dia uPVC pipe laid across ramp.	m	6		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
22	Cut out existing concrete driveway for 110mm diameter uPVC pipe, pipe laid and backfilled according to SANS standards and reinstate concrete driveway surface bed with 25MPa Concrete.	m	7		
	REINFORCED FENCING				
	PALISADE FENCING				
	Supplementary preambles				
	Galvanised security fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc. including galvanised steel bolts, straining eye bolts, etc., site clearance and preparation of ground				
	Erection and installation shall be carried out by approved sub contractors, in accordance with manufacturers specifications				
23	Palisade fence 2000mm high comprising of 1,2mm thick zincalume G300 palisades spaced at 120mm centres in nominal panel size 2400mm wide secured to three 60 x 60 x 5mm equal angle iron dip galvanized horizontal struts; struts secured to 100 x 100 x 4mm wall thickness square tubing stanchions with cast iron or pressed steel caps to match style, cross members secured to posts with m8 electroplated bolt and shear nut system, posts are planted in a minimum of 15MPa 20mm aggregate concrete block 450 x 450 x 650mm deep	m	48		
24	Palisade swing gate size 1100mm wide x 2100mmhigh minimum in increments of 100mm comprising of 1,2mm thick zincalume g300 palisades spaced at 143mm centres secured to no 2 rails with clip assembly with rails secured to gate frame with m8 electroplated bolt and shear nut system,gate frame comprising of horizontal bottom member and stiles of 76 x 76 x1.6mm SHS hot dip galvanised steel with welded joints, the gate hung to swing to fence side post, with hunges one side and securing bolt other side	No	1		
	Padlock etc				
25	"Union 3122" heavy duty padlock	No	2		
	ANTI-CLIMBING FENCING				
	Erection and installation shall be carried out by approved sub contractors, in accordance with manufacturers specifications.				
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Site clearance				
26	Allow for clearing site for the width of 1 000 mm where fencing runs are to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling.	m	65		
	Welded galvanised screens and gates				
27	Reinforced high density anti-climbing and anti-cut pressed mesh panel fencing 2.4m high, formed of 3mm diameter horizontal and 4mm diameter vertical high tensile wires galvanised with marine fusion bond coating colour dark grey with aperture size 76,2mm x 12,7mm and reinforced with fibre composite filled vertical square tubes at 152,4mm centres and horizontal flatbar with 2 x 75mm 70 degree flanges along sides and 2 x 30 degrees flanges along top and toe, all bolted with vandal resistant bolts and clamping plates to 85 - 45mm taper locking post 3.0mm high including locking recess mechanism at 2534mm centres with sealed end caps and 30 x 3mm x 250mm long angle section base anchors with posts bedded in 20MPa concrete bases size 400 x 400 x 600mm deep	m	65		
28	87 x 85mm with 45mm narrow end standard steel post by Cochrane steel for chearvu II system (or equal approved); post 2900mm long with PVC top end capping and fitted with 150 x 150 x 5mm galvanised mild steel baseplate welded on and embedded in and including 400 x 400 x 600mm 20MPa mass concrete base	No	3		
29	2mm Thick x 100mm high toughened steel hot dipped galvanised spikes with marine fusion bond coated finish	m	65		
	Anti-climb reinforced security fencing gates				
30	1200 x 2400mm high Hot dipped galvanised security swing gate made up of 75mm x 75mm x 3mm square steel frame with high density anti-climbing and anti-cut pressed mesh panel, plugged and screwed to face at maximum 300mm centres to concrete or brickwork. Top of gate fitted with 100mm high galvanised 'shark tooth' type spike. (Gate schedule G02)	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
31	4050 x 3000mm high hot dipped galvanised automated sliding gate made up of 100mm x 50mm x 3mm rectangular steel frame with 2mm thick steel plate, welded between 12 x 12mm solid square bars, Flatex 345 mesh welded between 12 x 12mm solid bars as top panels, operated with heavy duty operator running on 50 x 50mm mild steel angle track guide portal, latch portal, guide rollers and machined wheels with double sealed roller bearings, top of gate fitted with 100mm high galvanised 'shark tooth' type spike (refer to SAPS project five star 2012, complete with a caged industrial gate motor (code: D10 or equal approved)	No	1		
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SECTION NO. 3

EXTERNAL WORKS

BILL NO. 1

EXTERNAL WORKS

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EXTERNAL WORKS

SECTION SUMMARY

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SECTION SUMMARY

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	ADD VAT @ 15%:			
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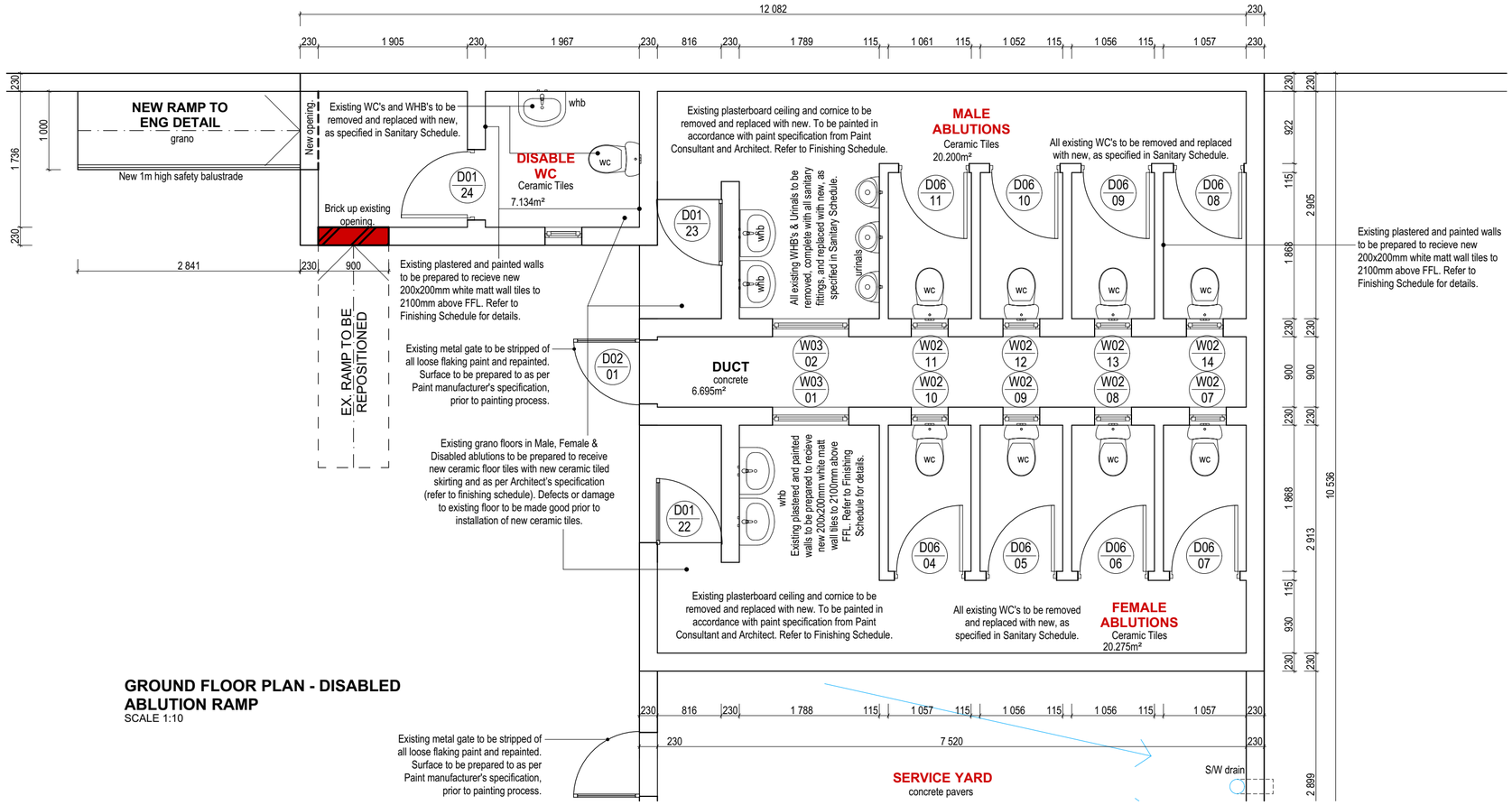
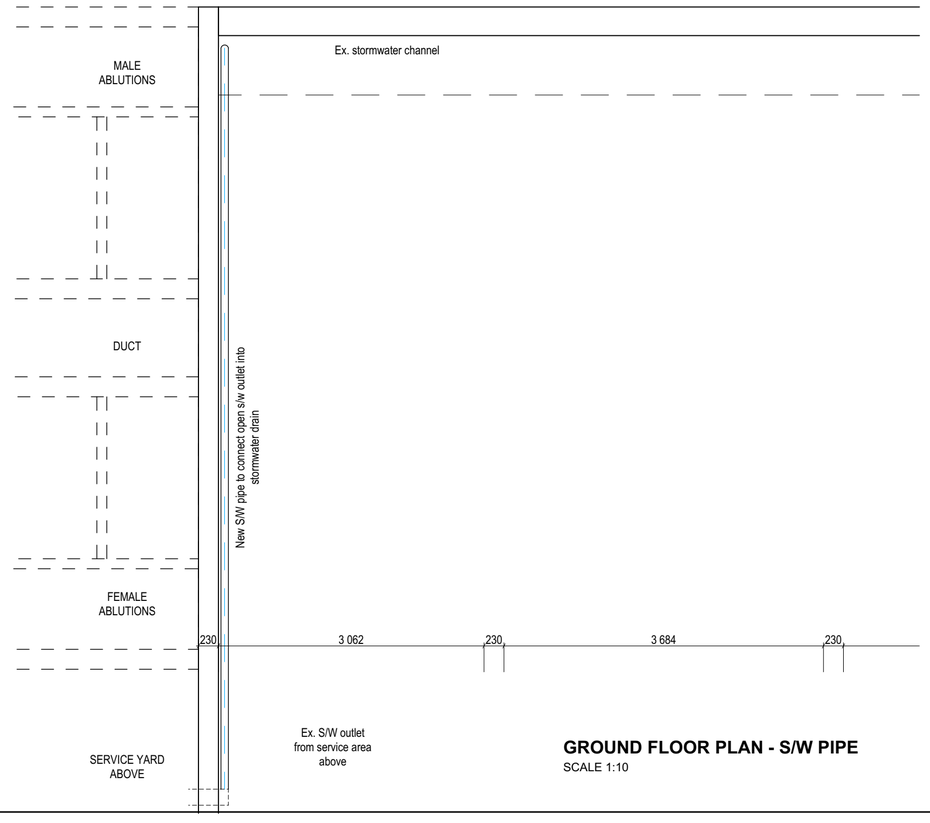
FINAL SUMMARY

DRAWINGS



GROUND FLOOR PLAN - DISABLED ABLUTION RAMP
SCALE 1:10



GROUND FLOOR PLAN - S/W PIPE
SCALE 1:10

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public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline
ARCHITECT

service
MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number
046 758

drawing title

ref.no.

designed O. MOODLEY

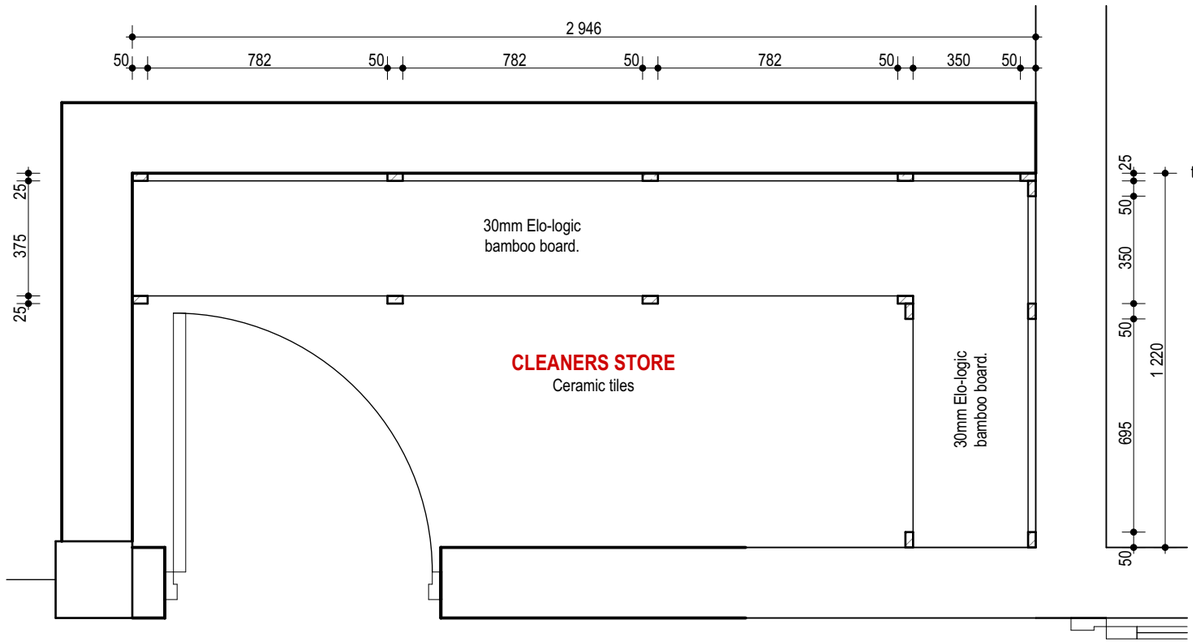
scale AS SHOWN

drawn BM

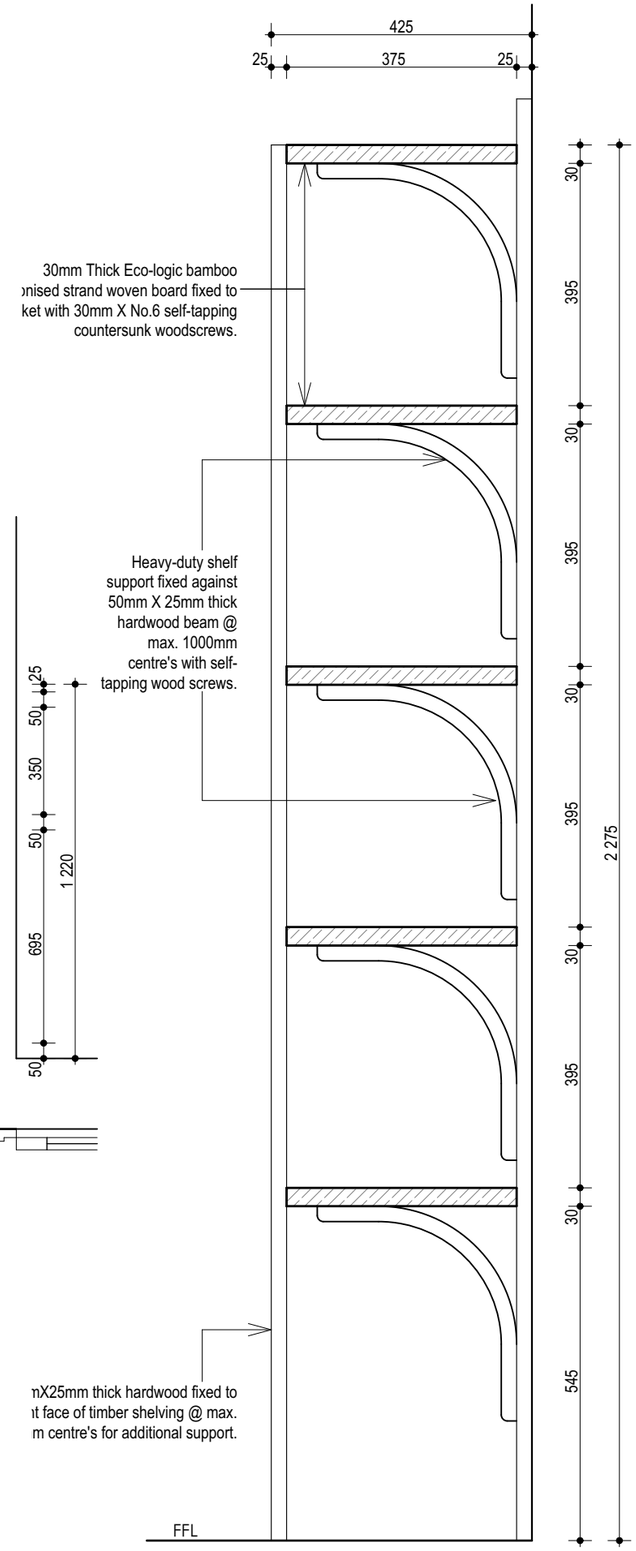
date 07-01-2022

checked BM

DPW drawing number



PLAN OF CLEANERS STORE
SHOWING NEW TIMBER SHELVING.
SCALE 1:20



DETAILS OF TIMBER SHELVING
SCALE 1:10

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page type
A 3

public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
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Tel: 031 202 5064

discipline
ARCHITECT

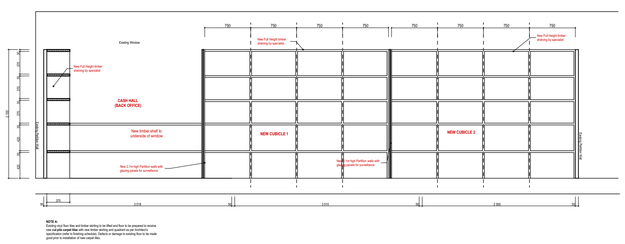
service
MOUNT FLETCHER MAGISTRATE OFFICES:
CONDITION BASED MAINTENANCE.

WCS number
046 758

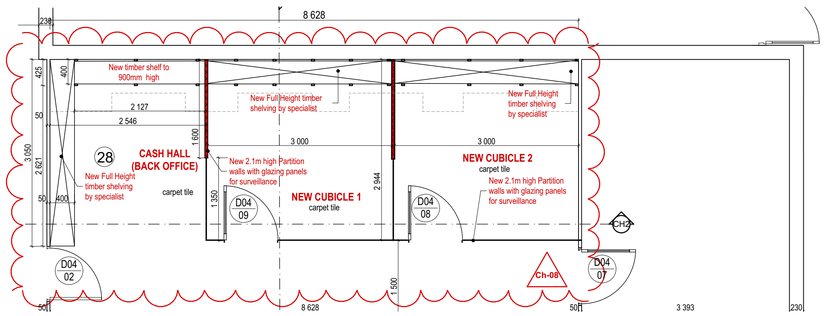
drawing title
TIMBER SHELVING TO
CLEANERS STORE

ref.no.		designed	O. MOODLEY
scale	AS SHOWN	drawn	BM
date	07-01-2022	checked	BM

DPW drawing number
046 758 - 603



Cash Hall Section 1:50



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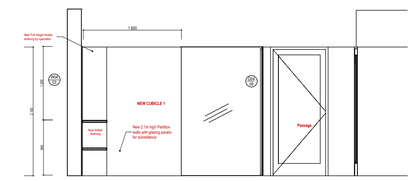
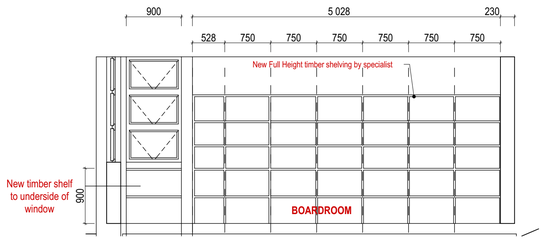
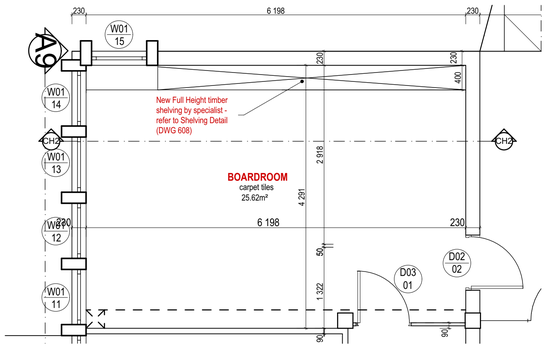


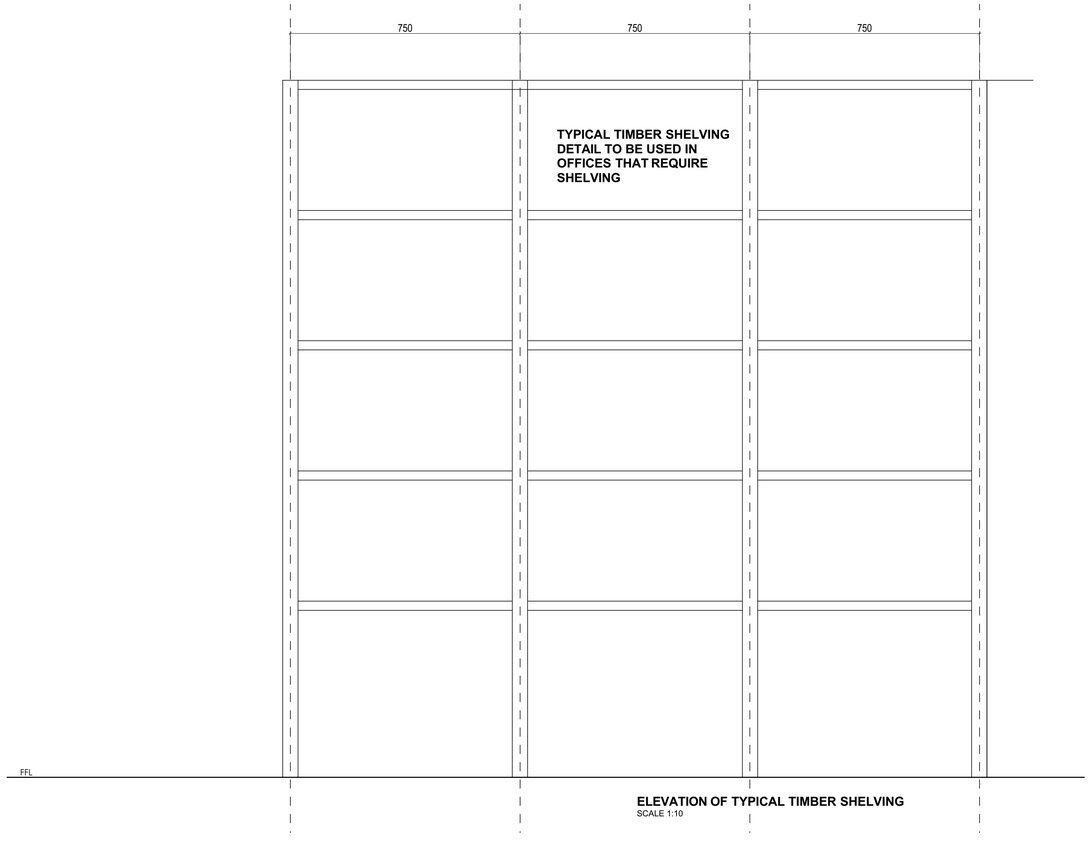
CH1 Cash Hall Section 1:50



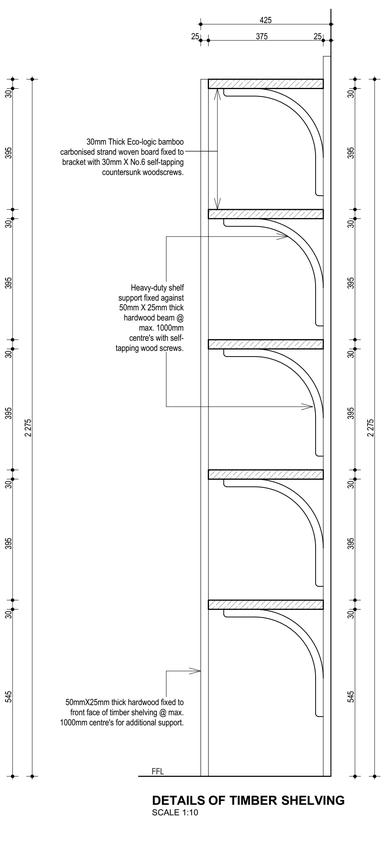
BOARDROOM SECTION 1:50



0. Ground Floor 1:50



ELEVATION OF TYPICAL TIMBER SHELVING
SCALE 1:10



DETAILS OF TIMBER SHELVING
SCALE 1:10

No.	DATE	AMENDMENT	D.P.W.
CH-04	02.06.22	2 X new Cubicles in the Cash hall, New Shelving configuration	
CH-08	07.06.22	Cash Hall Cubicles reconfigured with larger offices, Shelving adjusted along window wall	

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as-built drawings

certified as-built drawings as per Centralised Drawing Archive AS-BUILT DRAWING REQUIREMENTS

name:

date:

professional registration no.:

cad file name

page type A 2

public works

Department: Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline: ARCHITECT

service: MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number: 046 758

drawing title: **CASH HALL AND BOARDROOM SHELVING**

ref.no.

designed: O. MOODLEY

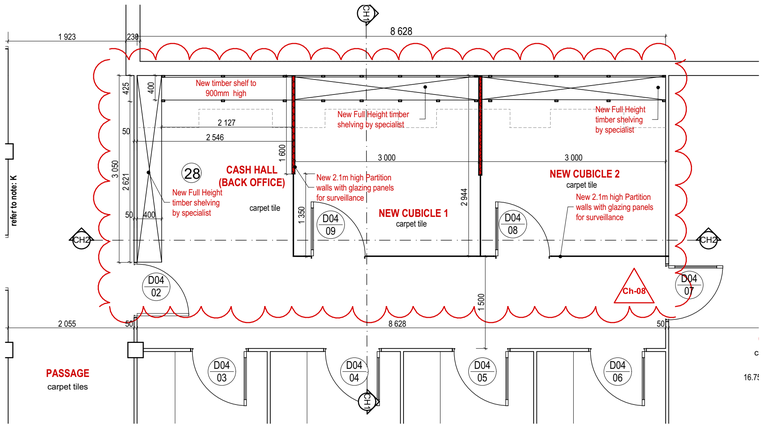
scale: AS SHOWN

drawn: M. RAJU

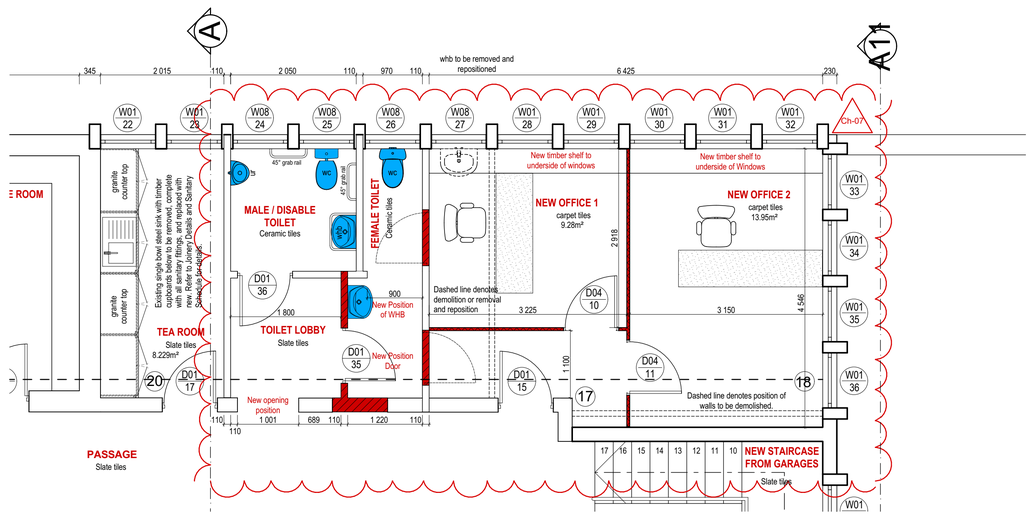
date: **15/06/2022**

checked

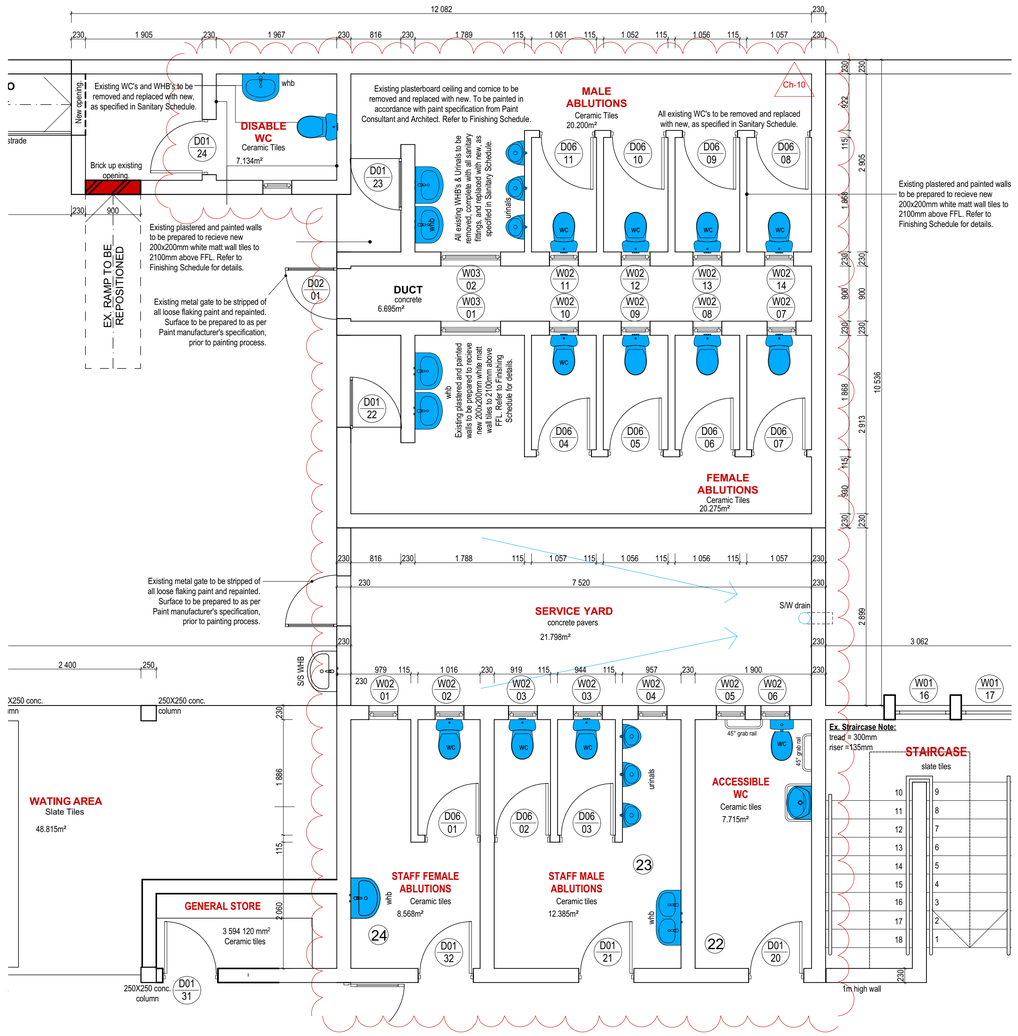
DPW drawing number: 046 758 - 608



CASH HALL
Scale 1:50



ABLUTIONS AND NEW OFFICES
Scale 1:50



ABLUTIONS LAYOUT
Scale 1:50

No.	DATE	AMENDMENT	D.P.W.
CH-07	07.06.22	Boardroom reconfigured to include 2 x NEW Offices, 2 x W01 Added in Office 01, 2 x D04 added to access offices	
CH-08	07.06.22	Cash Hall reconfigured with larger cubicles and shelving adjusted along window wall	

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name:

date:

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cad file name

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public works

Department: Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
MR. S VUKELA

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Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline
ARCHITECT

service
MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number
046 758

drawing title
CASH HALL, NEW OFFICE AND ABLUTION LAYOUTS

ref.no.

designed O. MOODLEY

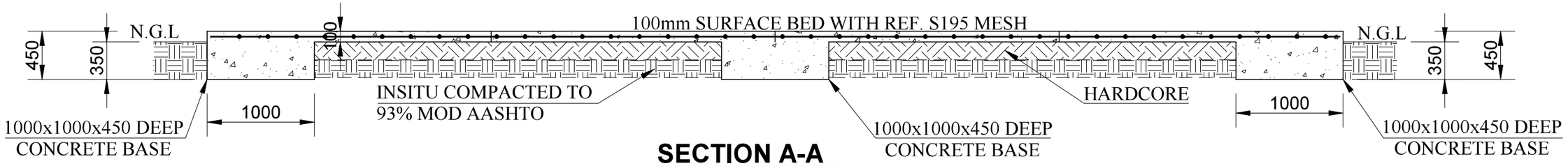
scale AS SHOWN

drawn M. RAJU

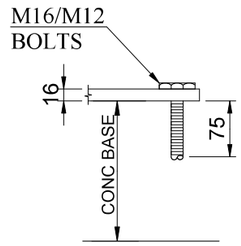
date **15/06/2022**

checked

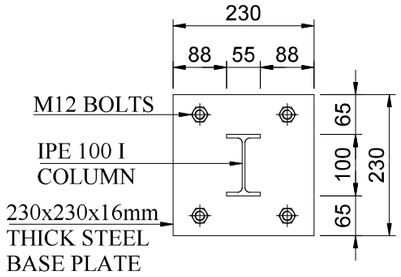
DPW drawing number
046 758 - 609



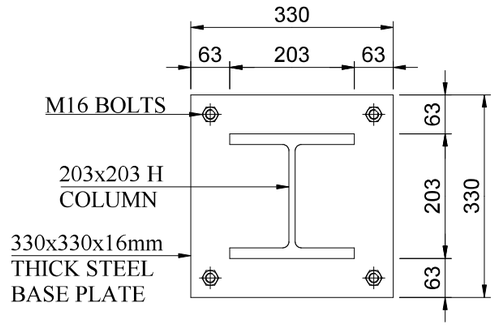
SECTION A-A
N.T.S



BOLT DEPTH DETAIL
N.T.S

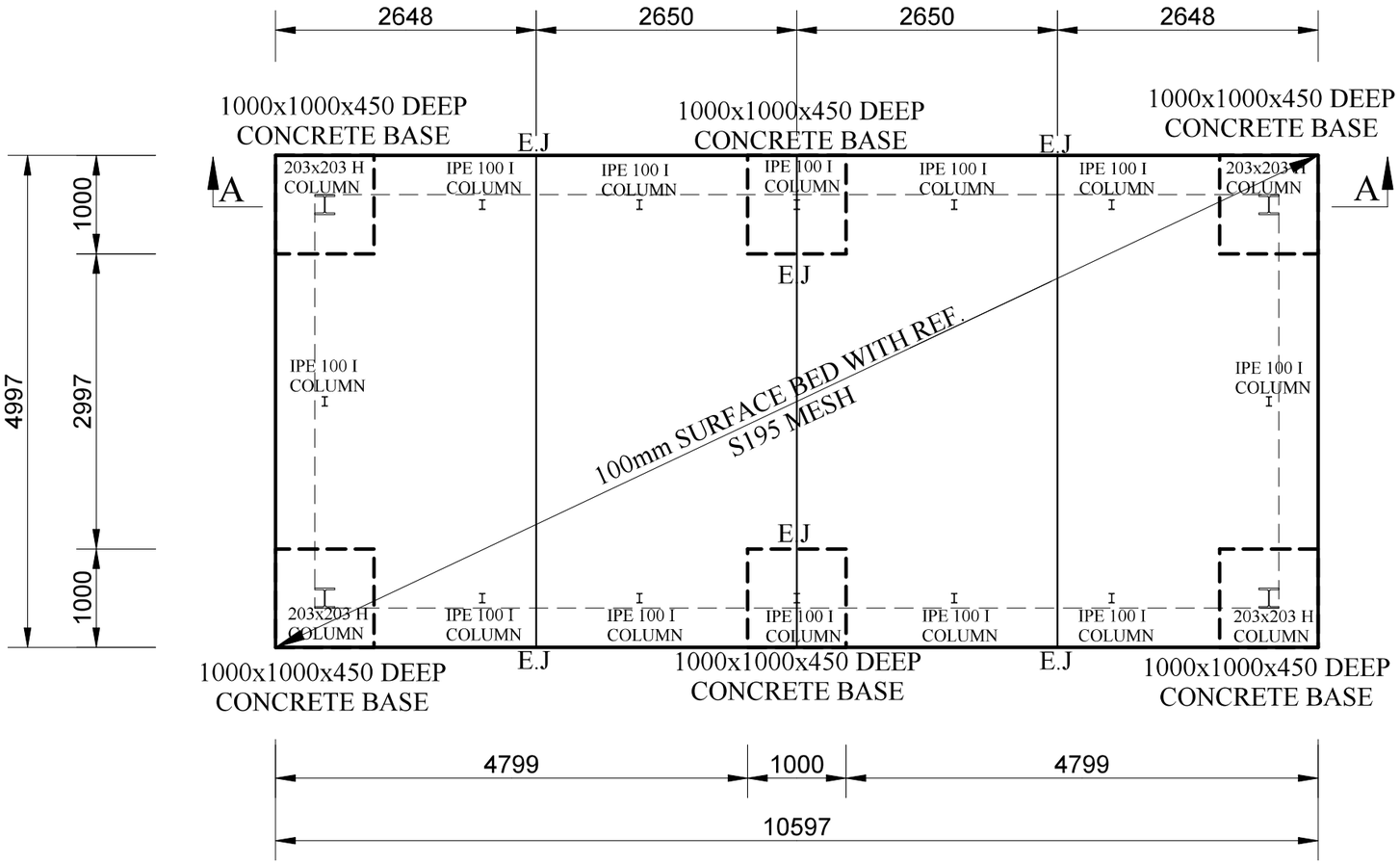


BASE PLATE DETAIL FOR IPE 100 COLUMN
N.T.S



BASE PLATE DETAIL FOR 203x203 H COLUMN
N.T.S

E.J = 10mm EXPANSION JOINT FILLED WITH POLYSULPHIDE SEALANT ON SURFACE BED.



BASES FOR ELEVATED WATER STORAGE TANKS
SCALE 1:60

NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE RELAVENT ARCHITECTS AND ENGINEERS DRAWINGS.

2. APPLICABLE STANDARDS

   A) DESIGN: SABS 0160 - LOADING
   SABS PART 2 CONCRETE
   B) CONSTRUCTION: NATIONAL BUILDING REGULATIONS AS AMMENDED.

3. ALL EXCAVATIONS AND REINFORCEMENT TO BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO CONCRETE CASTING.

4. CONCRETE GRADES:

   A) BLINDING UNDER BASES- 15MPa AT 28 DAYS.
   B) FOOTINGS, BASES AND SURFACE BED- 30MPa AT 28 DAYS
   C) SLABS AND STAIRCASES- 30MPa AT 28 DAYS
   D) EAVES BEAMS- 25MPa AT 28 DAYS

5) COVER TO REINFORCEMENT:

   A) FOOTING - 30MM
   B) COLUMNS - 25MM
   C) SLABS - 30MM
   D) BEAMS AND STAIRCASES - 25MM

6) ALL CONCRETE TO BE CURED FOR 6 DAYS

   A) TOPS OF SLABS- WET CURING (ALTERNATIVE- USE CURING COMPOUND)
   B) SIDES AND SOFFITS OF SLABS AND BEAMS- LEAVE SHUTTER IN PLACE
   C) COLUMNS- CURING COMPOUND (RESIN BASED CURING COMPOUND APPLIED AT A RATE OF 0.45 LITRES PER SQUARE METER- REFER CSRA 7114)

NO.	DATE	AMENDMENT	D.P.W.
1	2/03/19	ADDITION OF BASE PLATE DETAILS	
2	25/11/21	AS-BUILT	

AS-BUILT

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cad file name
MT. FLETCHER WATER TANK BASES

public works
Department: Public Works
REPUBLIC OF SOUTH AFRICA
DIRECTOR-GENERAL

consultant/departmental
DG NAIDOO AND ASSOCIATES CC
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FAX: 031-2056447
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discipline STRUCTURAL

service
MOUNT FLETCHER
MAGISTRATES COURT

WCS number 046758

drawing title
BASES FOR ELEVATED
WATER STORAGE TANKS

ref.no		designed	D.G.N.
scale	REFER TO L/O	drawn	D.N
date	24-06-2019	checked	D.G.N.

type number

drawing number 046758CS-02C REV. 2AS

NOTES
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE RELAVENT ARCHITECTS AND ENGINEERS DRAWINGS.

2. APPLICABLE STANDARDS

A) DESIGN: SABS 0160 - LOADING
SABS PART 2 CONCRETE
B) CONSTRUCTION: NATIONAL BUILDING REGULATIONS AS AMMENDED.
3. ALL EXCAVATIONS AND REINFORCEMENT TO BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO CONCRETE CASTING.

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A) BLINDING UNDER BASES- 15MPa
AT 28 DAYS.
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C) SLABS AND STAIRCASES- 30MPa AT 28 DAYS
D) EAVES BEAMS- 25MPa AT 28 DAYS

5) COVER TO REINFORCEMENT:

A) FOOTING - 50MM
B) COLUMNS - 25MM
C) SLABS - 15MM TOP AND 20 MM BOTTOM
D) BEAMS AND STAIRCASES - 20MM

6) ALL CONCRETE TO BE CURED FOR 6 DAYS

A) TOPS OF SLABS- WET CURING (ALTERNATIVE- USE CURING COMPOUND)
B) SIDES AND SOFFITS OF SLABS AND BEAMS- LEAVE SHUTTER IN PLACE
C) COLUMNS- CURING COMPOUND (RESIN BASED CURING COMPOUND APPLIED AT A RATE OF 0.45 LITRES PER SQUARE METER- REFER CSRA 7114)

NORTH

ELEVATED STEEL TOWER & TANKS SEE DRG. 046758CS-03

PALISADE FENCE STRUCTURE SEE DRG. 046758CS-03

PALISADE FENCE STRUCTURE SEE DRG. 046758CS-03

MODULAR PANEL TANK

GENERATOR ROOM

TIE IN WATER PIPE FROM ELEVATED TANK TO EX. WATER LINE

8. 57m LENGTH, 50mm dia. CLASS 9 UPVC WATER MAIN

4.1m LENGTH, 50mm dia. CLASS 9 UPVC WATER MAIN

3.532 mm, 75 dia. CLASS 9 UPVC WATER MAIN

75mm DIA UPVC SW PIPE CROSSING

EX SW MH

EX. SW MH. CL= 1445.61 IL= 1444.61

NEW 30.2m, 160 dia. STORMWATER LAID NEXT TO EXISTING

NEW 11.7m 160 dia. STORMWATER LAID NEXT TO EXISTING

RWHT

POSITION OF STORMWATER HARNEST 2500L TANKS SEE HARVEST TANK DETAIL

38.6m LENGTH, 160mm dia. UPVC SEWER GRADE 1:77

SEE SOAK AWAY DETAIL

EX T10@SW

EX. WATER

EX. SEWER MH. CL= 1445.5 IL= 1444.2

3m

ATTENUATION TANK

10m

COV: 1445.08 INV: 1444.78

NEW SEWER MH. CL= 1445.08 IL= 1444.73

160mm dia. UPVC SEWER

EX 150ø UPVC SEWER

NEW 38.7m SEWER 160 dia. LAID NEXT TO EXISTING

OVERFLOW SEWERAGE TO BE EMPTIED FROM CONSERVANCY TANK

EX. CONSERVANCY TANK

EX. SEWER MH, CL= 1445.86 IL= 1444.86

EX. SEWER MH CL= 1445.06 IL= 1444.06

EX. SEWER MH CL= 1445.07 IL= 1444.97

NEW 9.4m SEWER 150 dia. LAID NEXT TO EXISTING

NEW 3.7m SEWER 160 dia. LAID NEXT TO EXISTING

TOILETS

NOTE FOR ROOF SLAB:
1. REMOVE WATERPROOFING THROUGH.
2. SCARIFY CONCRETE SURFACE.
3. APPLY 2 COATS OF CEMENT SLASH.
4. ADD SCREED TO SLOPE TO FULL BORE OUTLETS
5. WATERPROOF ENTIRE CONCRETE ROOF.

20.6 m LENGTH NEW STORMWATER 160 dia. LAID NEXT TO EXISTING

3.27 m LENGTH NEW STORMWATER 160 dia. LAID NEXT TO EXISTING

46.9m LENGTH, 160mm dia. UPVC SEWER GRADE 1:106

EX SW

EX CANOPY

COV: 1446.13 INV: 1445.26

NEW WATER PIPE 35.45m LENGTH, 75mm dia. CLASS 9 UPVC WATER PIPE

WM

RE

EX. WATER

DISCONNECT SECTION OF WATER PIPE

NEW SEWER MH. CL= 1446.74 IL= 1445.74

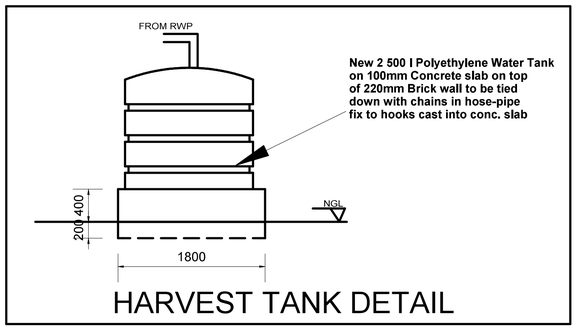
MAIN ENTRY

FL : 1448.40 COURT HOSE

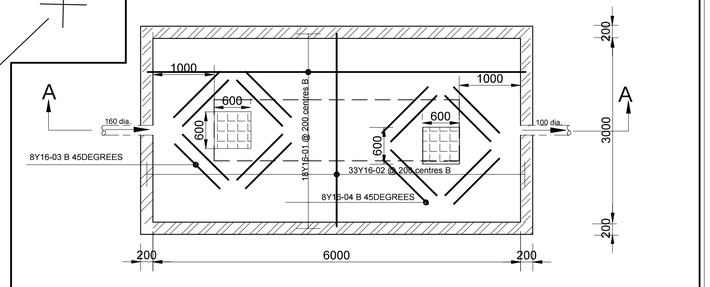
COV: 1447.08 INV: 1446.11

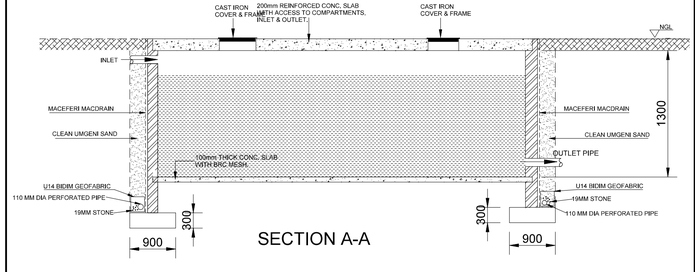
1445 1446 1447 1448

LEDGEND
- EX. STORMWATER
- EX. WATER RET
- EX, SEWER MUNICIPAL
- EX. SEWER INTERNAL
- WATER METER
- SW RAINWATER HARVESTING TANK (RWHT)
- EX. SW SOAK AWAY
- NEW STORMWATER (SW)
- NEW WATER RET (W)
- NEW SEWER (S)



HARVEST TANK DETAIL





SECTION A-A

ATTENUATION TANK DETAIL

NO.	DATE	AMENDMENT	D.P.W.
1.	JAN 2014	COMMENTS AS PER DPW CONSULTANT ADDED	
2.	FEB 2014	COMMENTS AS PER DPW CONSULTANT ADDED	
3.	FEB 2014	COMMENTS AS PER DPW CONSULTANT ADDED	
4.	01-11-2019	SEWER LINE RELOCATION	
5.	28-09-2020	ATTENUATION TANK AMMENDMENT	
6.	16-10-2020	ATTENUATION TANK AMMENDMENT	
7.	25/11/21	PARTIAL AS-BUILT	

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MT. FLETCHER SERVICE LAYOUT

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

DIRECTOR-GENERAL

consultant/departmental
DG NAIDOO AND ASSOCIATES CC
CONSULTING ENGINEERS AND PROJECT MANAGERS
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E-MAIL: deesdgn@mweb.co.za

discipline CIVIL

service
MOUNT FLETCHER MAGISTRATES COURT

WCS number
046758

drawing title
WATER, SEWER AND STORMWATER LAYOUT

ref.no		designed	D.G.N.
scale	1 : 150	drawn	R,R,G
date	12 FEB. 2014	checked	D.G.N.
type number			
drawing number	046758CS-02	REV 7	

NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE RELAVENT ARCHITECTS AND ENGINEERS DRAWINGS.

2. APPLICABLE STANDARDS

   A) DESIGN: SABS 0160 - LOADING
   SABS PART 2 CONCRETE
   B) CONSTRUCTION: NATIONAL BUILDING REGULATIONS AS AMMENDED.

3. ALL EXCAVATIONS AND REINFORCEMENT TO BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO CONCRETE CASTING.

4. CONCRETE GRADES:

   A) BLINDING UNDER BASES- 15MPa AT 28 DAYS.
   B) FOOTINGS- 30MPa AT 28 DAYS
   C) SLABS AND STAIRCASES- 30MPa AT 28 DAYS
   D) EAVES BEAMS- 25MPa AT 28 DAYS

5) COVER TO REINFORCEMENT:

   A) FOOTING - 50MM
   B) COLUMNS - 25MM
   C) SLABS - 15MM TOP AND 20 MM BOTTOM
   D) BEAMS AND STAIRCASES - 20MM

6) ALL CONCRETE TO BE CURED FOR 6 DAYS

   A) TOPS OF SLABS- WET CURING (ALTERNATIVE- USE CURING COMPOUND)
   B) SIDES AND SOFFITS OF SLABS AND BEAMS- LEAVE SHUTTER IN PLACE
   C) COLUMNS- CURING COMPOUND (RESIN BASED CURING COMPOUND APPLIED AT A RATE OF 0.45 LITRES PER SQUARE METER- REFER CSRA 7114)

LEGEND

X ----- BALL - O- STOPS

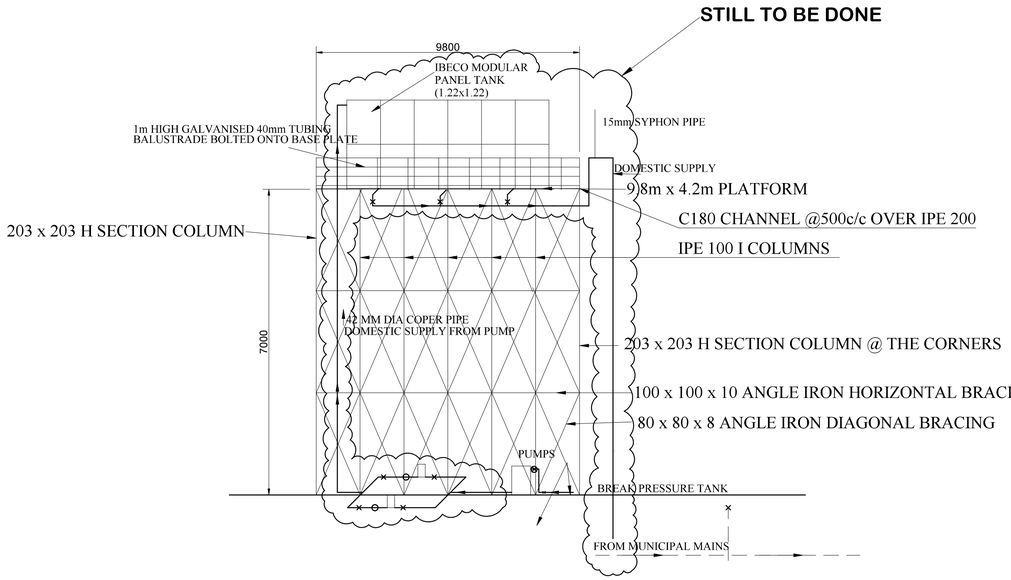
O ----- NON RETURN VALVE

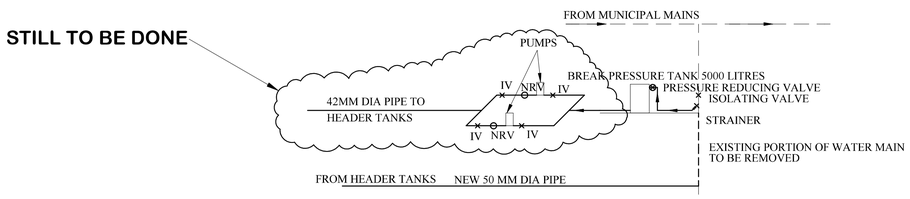
⊗ ---- PRESSURE REDUCING VALVE

⊠ ---- STRAINER

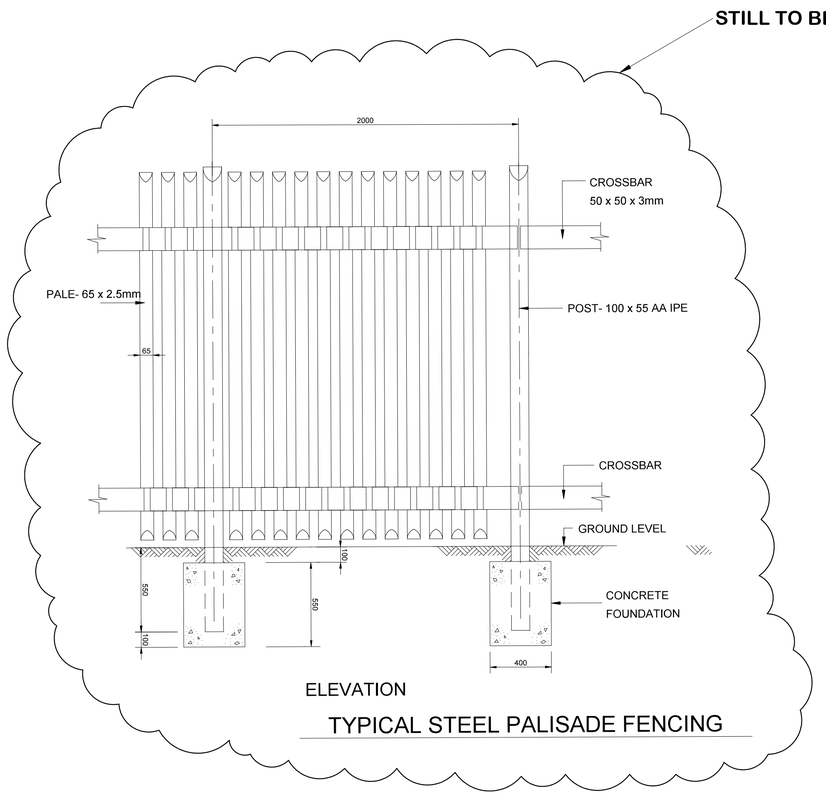
- - - - DOMESTIC SUPPLY

_____ FIRE SUPPLY





SCHEMATIC LAYOUT AT BREAK PRESSURE TANKS AND PUMPS



ELEVATION

TYPICAL STEEL PALISADE FENCING

NO.	DATE	AMENDMENT	D.P.W.
1	27-05-2015	TANK DIMENSION AMENDED	
2	25/11/21	PARTIAL AS-BUILT	

Copyright vests in the Department of Public Works

cad file name
MOUNT MALUTI WATER TANK

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

DIRECTOR-GENERAL

consultant/departmental

DG NAIDOO AND ASSOCIATES CC
CONSULTING ENGINEERS AND PROJECT MANAGERS

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GLENWOOD
DURBAN

PH: 031-2056710
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E-MAIL: deesdgn@mweb.co.za

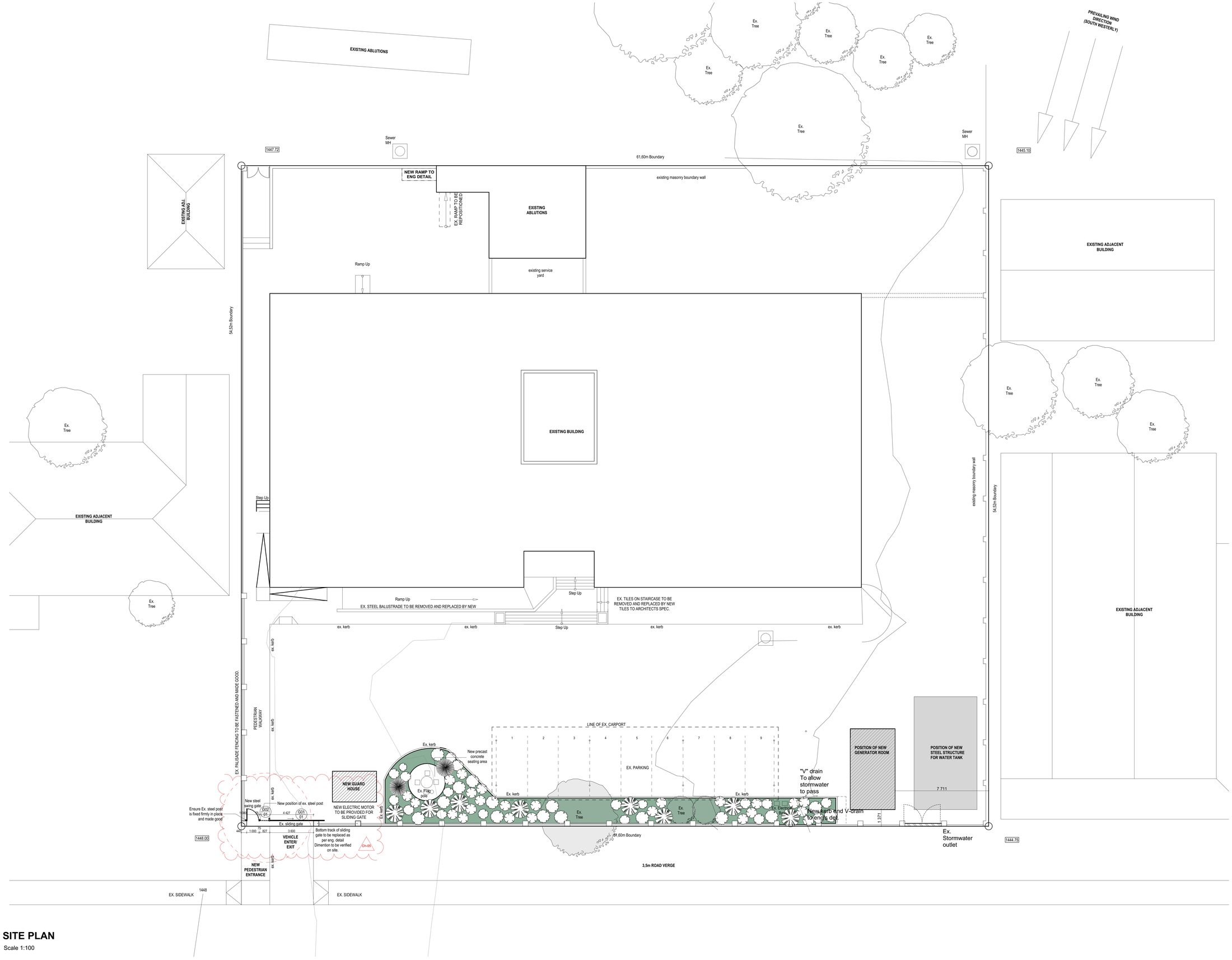
discipline CIVILS

service
MOUNT FLETCHER
MAGISTRATES COURT

WCS number
046758

drawing title
WATER TANK/ STRUCTURE AND FENCING

ref.no	designed D.G.N
scale 1 : 100	drawn R.R.G.
date 24 JAN 2014	checked
type number	
drawing number 046758CS-03	rev. 2



SITE PLAN

Scale 1:100

No.	DATE	AMENDMENT	D.P.W.

Copyright vests in the
Department of Public Works

as-built drawings

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date:

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cad file name

page type
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public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

OM MOODLEY ARCHITECTS

**Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051**

Tel: 031 202 5064

discipline
ARCHITECT

service
MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number
046 758

drawing title
SITE PLAN

ref.no.		designed	O. MOODLEY
scale	AS SHOWN	drawn	B.M
date	07-01-2022	checked	O.M

DPW drawing number
046 758 - 100

NOTE A:
Existing vinyl floor tiles and timber skirting to be lifted and floor to be prepared to receive new **cut pile carpet tiles** with new timber skirting and quadrant as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new carpet tiles.

NOTE B:
Existing plastered wall surface to be stripped of all loose and flaking paint and surface to be prepared to take paint finish. All surface preparation and paintwork to be carried out as specified as in Finishing Schedule.

NOTE C:
Existing dry wall to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in finishing schedule

NOTE D:
Existing wall to be stripped of vinyl sheeting and wall surface to be prepared to take paint finish. . Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE F:
Existing metal windows with built-in burglar bars and panels with quarry tiled cills below to be removed. Part opening to be bricked up accomodate new aluminium window with factory-fitted burglar bars as per Window schedule. New brickwork below to take plaster & paint finish both internally and externally, as specified in Finishing Schedule. New window cills to be fibre cement internally and angled quarry tiles externally. Refer to Finishing Schedule for full specifications.

NOTE G:
Existing timber door and ironmongery to be removed and replaced with new semi hollow-core painted timber door fitted complete with new ironmongery as per Door and Ironmongery Schedule. Existing timber door frame to be sanded down and repainted.

NOTE H:
Existing pin board to be removed and replaced with new. Refer to Detail.

Existing Reception Desk to be removed and replaced with new. Refer to Joinery Details. .

Existing timber shelf to be removed and replaced with new. Refer to Joinery details.

Existing timber counter to be removed and replaced with new. Refer to Joinery details.

NOTE I:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new slate floor tiles with new slate tile skirting as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new slate tiles.

NOTE J:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new **Slate tiles** with **Slate tile skirting** as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new Slate tiles.

NOTE K:
Existing dry wall with fixed glazing to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE: ELECTRICAL
Electrical Engineer to inspect condition of electrical services. All electrical faults to be established and repaired.

NOTE: GLAZED VERTICAL LOUVRE HEADLIGHTS ABOVE INTERNAL DOORS
Existing glazed vertical louvres above internal timber doors to be inspected and broken/missing glass panes to be replaced.

NOTE: DOORS
All existing doors that are not to be replaced, are to be sanded down and repainted as per Architect and Paint Consultant's specification and ironmongery to be inspected and serviced by specialist.

NOTE: EXISTING INTERNAL WALLS
All existing internal walls to be stripped of loose flaking paint and wall surface to be prepared to be repainted as per specification from Paint Consultant and Architect. Refer to Finishing Schedule.

No.	DATE	AMENDMENT	D.P.W.
1	18/12/2013	Cleaners store repositioned to external waiting area	
2	08/07/2014	Registry converted to male and female ablutions for judges.	
03	02.06.22	New Shelving configuration to be full length along Boardroom wall - detail as per joinery dwg	
04	02.06.22	2 X new Cubicles in the Cash hall, New Shelving configuration	
CH-07	07.06.22	Boardroom reconfigured to include 2 x NEW Offices, 2 x W01 Added in Office 01, 2 x D04 added to access offices.	
CH-08	07.06.22	Cash Hall reconfigured with larger cubicles and shelving adjusted along window wall	

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public works

Department: Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

OM MOODLEY ARCHITECTS

Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline
ARCHITECT

service
MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number
046 758

drawing title
GROUND FLOOR PLAN

ref no.

designed O. MOODLEY

scale AS SHOWN

drawn B.M

date **07/06/2022**

checked O.M

DPW drawing number
046 758 - 200 / WD - 200

GROUND FLOOR PLAN
SCALE 1:50

NOTE A:
Existing vinyl floor tiles and timber skirting to be lifted and floor to be prepared to receive new **cut pile carpet tiles** with new timber skirting and quadrant as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new carpet tiles.

NOTE B:
Existing plastered wall surface to be stripped of all loose and flaking paint and surface to be prepared to take paint finish. All surface preparation and paintwork to be carried out as specified as in Finishing Schedule.

NOTE C:
Existing dry wall to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in finishing schedule

NOTE D:
Existing wall to be stripped of vinyl sheeting and wall surface to be prepared to take paint finish. . Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE F:
Existing metal windows with built-in burglar bars and fibre cement panels below to be removed and replaced with new aluminium window with factory-fitted burglar bars as per Window schedule. Existing window cills to be repainted. Refer to Finishing Schedule for full specifications.

NOTE F:
Existing metal windows with built-in burglar bars and panels with quarry tiled cills below to be removed. Part opening to be bricked up accomodate new aluminium window with factory-fitted burglar bars as per Window schedule. New brickwork below to take plaster & paint finish both internally and externally, as specified in Finishing Schedule. New window cills to be fibre cement internally and angled quarry tiles externally. Refer to Finishing Schedule for full specifications.

NOTE G:
Existing timber door and ironmongery to be removed and replaced with new semi hollow-core painted timber door fitted complete with new ironmongery as per Door and Ironmongery Schedule. Existing timber door frame to be sanded down and repainted.

NOTE H:
Existing pin board to be removed and replaced with new. Refer to Detail.

Existing Reception Desk to be removed and replaced with new. Refer to Joinery Details.

Existing timber shelf to be removed and replaced with new. Refer to Joinery details.

Existing timber counter to be removed and replaced with new. Refer to Joinery details.

NOTE I:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new slate floor tiles with new slate tile skirting as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new slate tiles.

NOTE J:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new **Slate tiles** with **Slate tile skirting** as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new Slate tiles.

NOTE K:
Existing dry wall with fixed glazing to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE: ELECTRICAL
Electrical Engineer to inspect condition of electrical services. All electrical faults to be established and repaired.

NOTE: GLAZED VERTICAL LOUVRE HEADLIGHTS ABOVE INTERNAL DOORS
Existing glazed vertical louvres above internal timber doors to be inspected and broken/missing glass panes to be replaced.

NOTE: DOORS
All existing doors that are not to be replaced, are to be sanded down and repainted as per Architect and Paint Consultant's specification and ironmongery to be inspected and serviced by specialist.

NOTE: EXISTING INTERNAL WALLS
All existing internal walls to be stripped of loose flaking paint and wall surface to be prepared to be repainted as per specification from Paint Consultant and Architect. Refer to Finishing Schedule.

NEW RAMP TO ENG DETAIL
grano
New 1m high safety balustrade
New concrete
Brick up existing opening
EX. RAMP TO BE REPOSITIONED
Existing WC's and WHB to be removed and replaced with new, as specified in Sanitary Schedule
DISABLE WC
Ceramic Tiles
7.134m²
whb
D01 24
Existing plasterboard ceiling and cornice to be removed and replaced with new. To be painted in accordance with paint specification from Paint Consultant and Architect. Refer to Finishing Schedule.
MALE ABLUTIONS
Ceramic Tiles
20.202m²
All existing WC's to be removed and replaced with new, as specified in Sanitary Schedule
Ch-10
All existing WHBs & Urinals to be removed and replaced with new as specified in Sanitary Schedule
Existing plastered and painted walls to be prepared to receive new 200x200mm white matt wall tiles to 2100mm above FFL. Refer to Finishing Schedule for details.
Existing metal gate to be stripped of all loose flaking paint and repainted. Surface to be prepared to as per Paint manufacturer's specification, prior to painting process.
DUCT
concrete
6.605m²
FEMALE ABLUTIONS
Ceramic Tiles
20.275m²
Existing plastered walls to be prepared to receive new 200x200mm white matt wall tiles to 2100mm above FFL. Refer to Finishing Schedule for details.
SECURE YARD BELOW
concrete
298.378m²
SERVICE YARD
concrete pavers
21.798m²
S/W drain
Existing metal gate to be stripped of all loose flaking paint and repainted. Surface to be prepared to as per Paint manufacturer's specification, prior to painting process.
S/S WHB
Ex. Staircase Note:
tread = 300mm
riser =135mm
STAIRCASE
slate tiles
CHILDRENS WAITING ROOM
carpet tiles
16.839m²
CCTV AND STORE ROOM
Carpet tiles
9.856m²
granite counter top
Existing kitchen units are all to be removed, complete cupboards below to be removed, complete with plumbing and electrical fittings and new. Refer to Joinery Details and Sanitary Schedule
MALE / DISABLE TOILET
Ceramic tiles
FEMALE TOILET
Ceramic tiles
who to be removed and repositioned
New timber shelf to underside of Windows
NEW OFFICE 1
carpet tiles
9.28m²
NEW OFFICE 2
carpet tiles
13.95m²
Dashed line denotes demolition or removal and reposition
Dashed line denotes position of walls to be demolished
New Position of WHB
TOILET LOBBY
Slate tiles
TEA ROOM
Slate tiles
8.229m²
New Position Door
New opening position
PASSAGE
Slate tiles
NEW STAIRCASE FROM GARAGES
Slate tiles
Ex. Staircase Note:
tread = 300mm
riser =170mm
STENOGRAPHER OFFICE
carpet tile
9.867m²
PROSECUTOR
carpet tile
8.467m²
CONTROL PROSECUTOR
carpet tile
12.883m²
LANGUAGE SERVICES AND ESTATE
carpet tile
12.860m²
ACCESSIBLE WC
Ceramic tiles
7.715m²
STAFF FEMALE ABLUTIONS
Ceramic tiles
8.568m²
STAFF MALE ABLUTIONS
Ceramic tiles
12.385m²
GENERAL STORE
3 594 120 mm²
Ceramic tiles
WATING AREA
Slate Tiles
48.815m²
PASSAGE 01
Slate Tiles
250x250 conc. column
concrete bench
granite counter top
1m high wall
Access controlled Point
ex. conc. ramp
Existing plastered and painted walls to be prepared to receive new 200x200mm white matt wall tiles to 2100mm above FFL. Refer to Finishing Schedule for details.

NOTE A:
Existing vinyl floor tiles and timber skirting to be lifted and floor to be prepared to receive new **cut pile carpet tiles** with new timber skirting and quadrant as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new carpet tiles.

NOTE B:
Existing plastered wall surface to be stripped of all loose and flaking paint and surface to be prepared to take paint finish. All surface preparation and paintwork to be carried out as specified as in Finishing Schedule.

NOTE C:
Existing dry wall to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in finishing schedule

NOTE D:
Existing wall to be stripped of vinyl sheeting and wall surface to be prepared to take paint finish. . Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE F:
Existing metal windows with built-in burglar bars and fibre cement panels below to be removed and replaced with new aluminium window with factory-fitted burglar bars as per Window schedule. Existing window cills to be repainted. Refer to Finishing Schedule for full specifications.

NOTE F:
Existing metal windows with built-in burglar bars and panels with quarry tiled cills below to be removed. Part opening to be bricked up accomodate new aluminium window with factory-fitted burglar bars as per Window schedule. New brickwork below to take plaster & paint finish both internally and externally, as specified in Finishing Schedule. New window cills to be fibre cement internally and angled quarry tiles externally. Refer to Finishing Schedule for full specifications.

NOTE G:
Existing timber door and ironmongery to be removed and replaced with new semi hollow-core painted timber door fitted complete with new ironmongery as per Door and Ironmongery Schedule. Existing timber door frame to be sanded down and repainted.

NOTE H:
Existing pin board to be removed and replaced with new. Refer to Detail.

Existing Reception Desk to be removed and replaced with new. Refer to Joinery Details.

Existing timber shelf to be removed and replaced with new. Refer to Joinery details.

Existing timber counter to be removed and replaced with new. Refer to Joinery details.

NOTE I:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new slate floor tiles with new slate tile skirting as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new slate tiles.

NOTE J:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new **Slate tiles** with **Slate tile skirting** as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new Slate tiles.

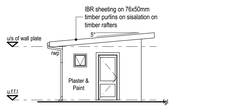
NOTE K:
Existing dry wall with fixed glazing to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE: ELECTRICAL
Electrical Engineer to inspect condition of electrical services. All electrical faults to be established and repaired.

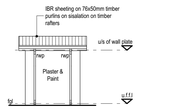
NOTE: GLAZED VERTICAL LOUVRE HEADLIGHTS ABOVE INTERNAL DOORS
Existing glazed vertical louvres above internal timber doors to be inspected and broken/missing glass panes to be replaced.

NOTE: DOORS
All existing doors that are not to be replaced, are to be sanded down and repainted as per Architect and Paint Consultant's specification and ironmongery to be inspected and serviced by specialist.

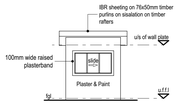
NOTE: EXISTING INTERNAL WALLS
All existing internal walls to be stripped of loose flaking paint and wall surface to be prepared to be repainted as per specification from Paint Consultant and Architect. Refer to Finishing Schedule.



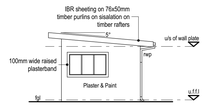
SOUTH WEST ELEVATION
GUARD HOUSE
Scale 1:100



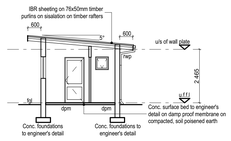
NORTH WEST ELEVATION
GUARD HOUSE
Scale 1:100



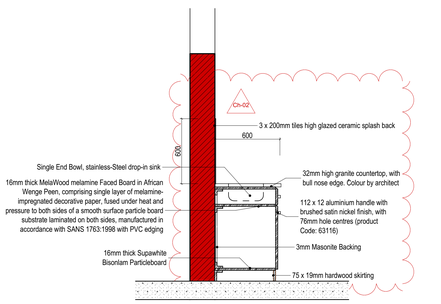
SOUTH EAST ELEVATION
GUARD HOUSE
Scale 1:100



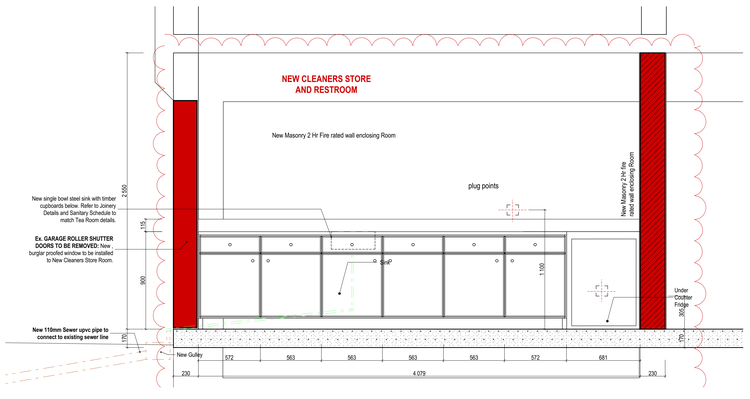
NORTH EAST ELEVATION
GUARD HOUSE
Scale 1:100



SECTION C-C
GUARD HOUSE
Scale 1:100

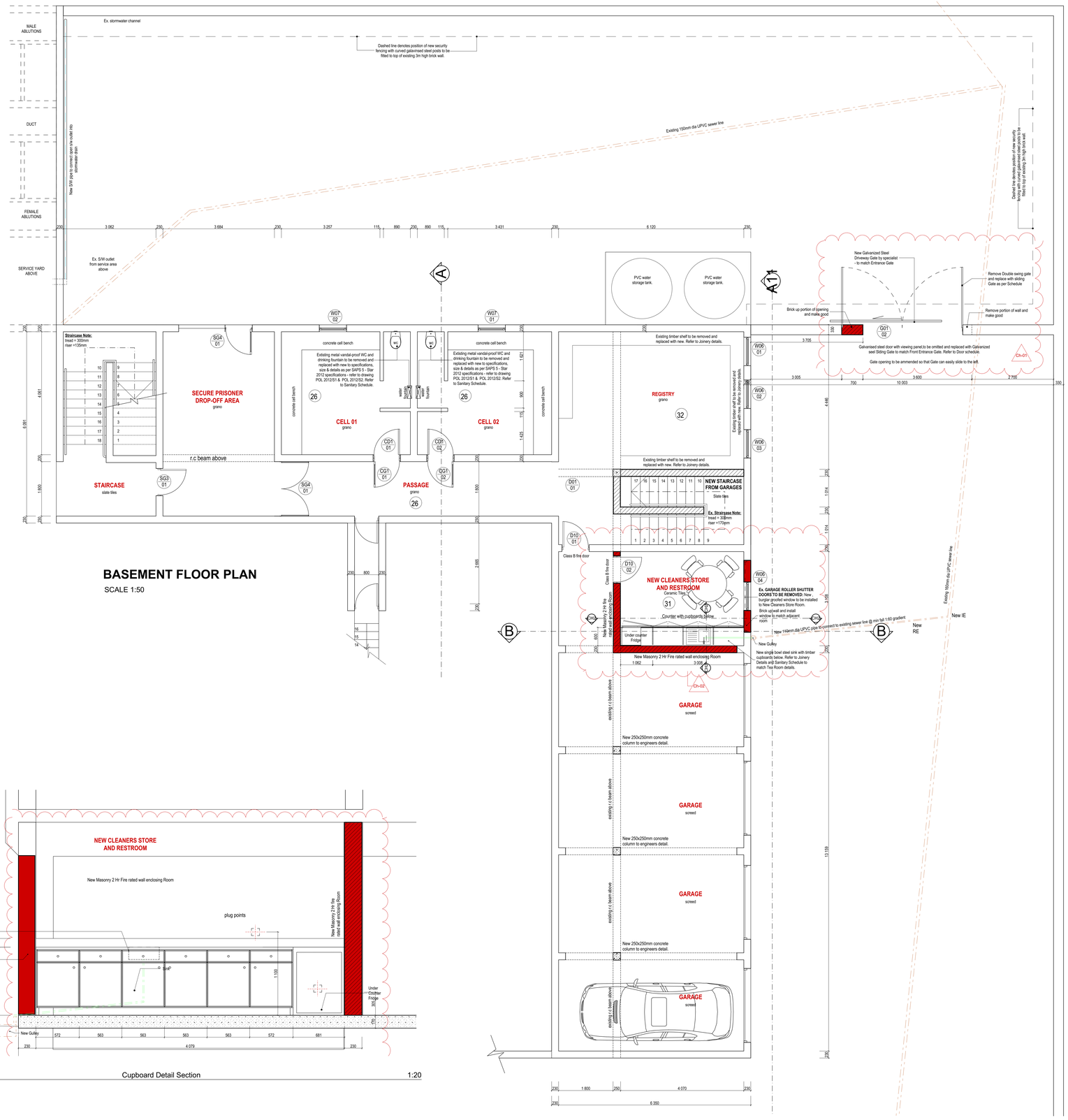


Cleaners Restroom Cupboard Detail 1:20



B Cupboard Detail Section 1:20

BASEMENT FLOOR PLAN
SCALE 1:50



No.	DATE	AMENDMENT	D.P.W.
1	08/07/2014	Store room converted into registry.	
CH-01	02.06.22	New Galvanised Steel Driveway Gate to replace Ex. Double Swing Gate	
CH-02	08.06.22	Enclose Garage and convert to New Cleaners Room and Restroom, Add door, Remove RSD and add New window to match - New Cupboards indicated	

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ACTING DIRECTOR-GENERAL
MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

OM MOODLEY ARCHITECTS

Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline
ARCHITECT

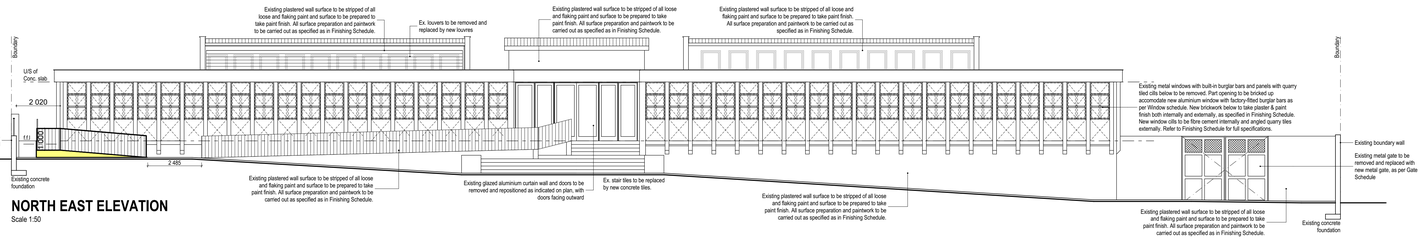
service
MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number
046 758

drawing title
BASEMENT FLOOR PLAN; GUARD HOUSE PLAN, SECTION & ELEVATIONS AND SECTION THROUGH COVERED PARKING BAYS

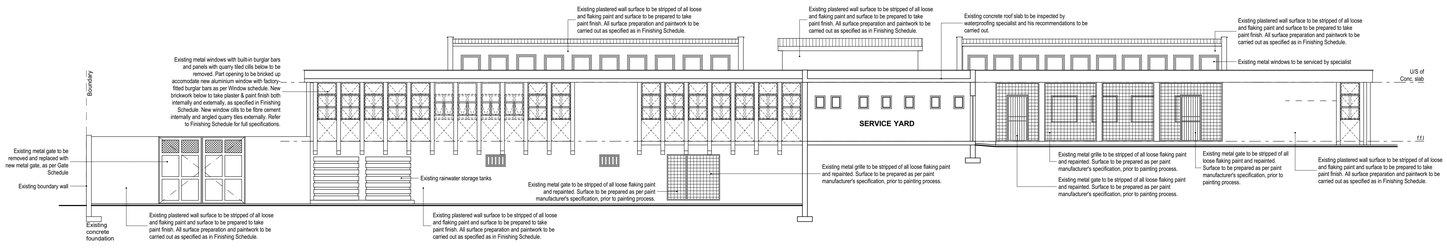
ref.no.
designed O. MOODLEY
scale AS SHOWN
drawn B.M
date **08/06/2022**
checked O.M

DPW drawing number
046 758 - 201



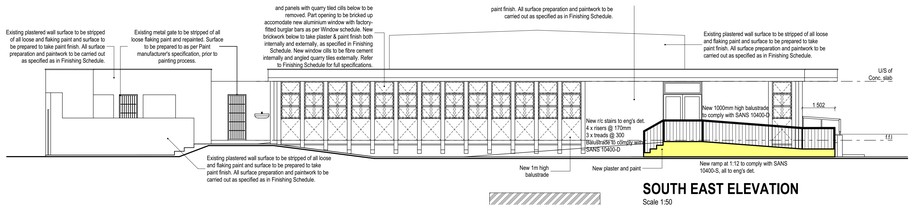
NORTH EAST ELEVATION

Scale 1:50



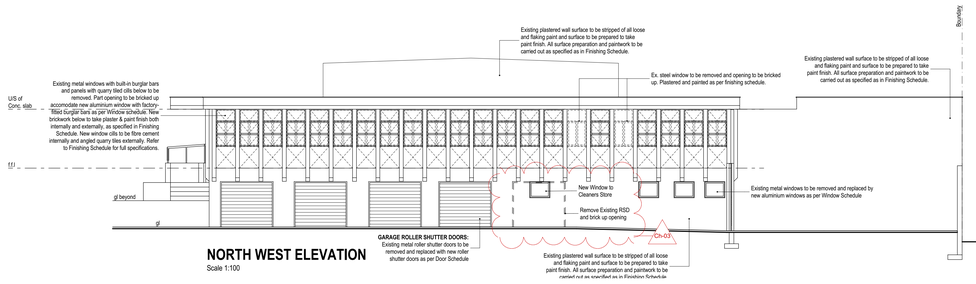
SOUTH WEST ELEVATION

Scale 1:100



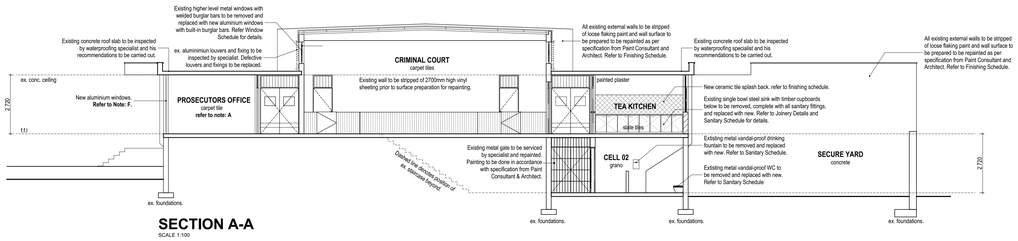
SOUTH EAST ELEVATION

Scale 1:50



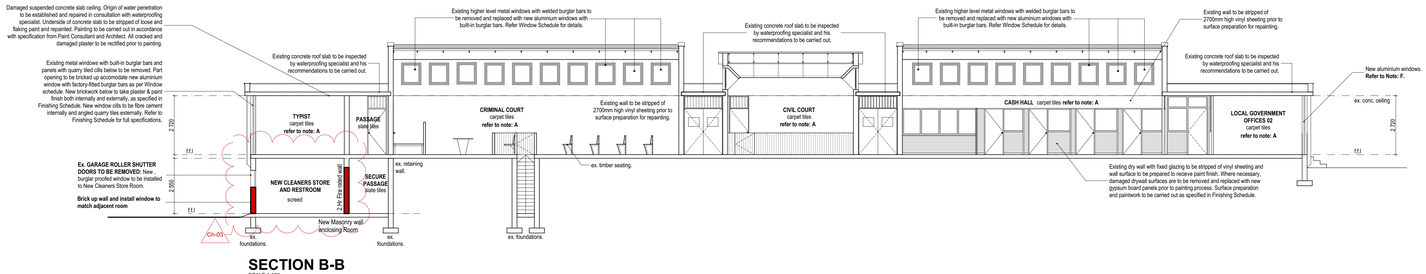
NORTH WEST ELEVATION

Scale 1:100



SECTION A-A

SCALE 1:100



SECTION B-B

SCALE 1:100

NOTE: ELECTRICAL
Electrical Engineer to inspect condition of electrical services. All electrical faults to be established and repaired.

NOTE: GLAZED VERTICAL LOUVRE HEADLIGHTS ABOVE INTERNAL DOORS
Existing glazed vertical louvres above internal timber doors to be inspected and broken/missing glass panes to be replaced.

NOTE: DOORS
All existing doors that are not to be replaced, are to be sanded down and repainted as per Architect and Paint Consultant's specification and ironmongery to be inspected and serviced by specialist.

NOTE: EXISTING INTERNAL WALLS
All existing internal walls to be stripped of loose flaking paint and wall surface to be prepared to be repainted as per specification from Paint Consultant and Architect. Refer to Finishing Schedule.

NOTE A:
Existing vinyl floor tiles and timber skirting to be lifted and floor to be prepared to receive new **cut pile carpet tiles** with new timber skirting and quadrant as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new carpet tiles.

NOTE B:
Existing plastered wall surface to be stripped of all loose and flaking paint and surface to be prepared to take paint finish. All surface preparation and paintwork to be carried out as specified as in Finishing Schedule.

NOTE C:
Existing dry wall to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in finishing schedule

NOTE D:
Existing wall to be stripped of vinyl sheeting and wall surface to be prepared to take paint finish. . Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

NOTE F:
Existing metal windows with built-in burglar bars and fibre cement panels below to be removed and replaced with new aluminium window with factory-fitted burglar bars as per Window schedule. Existing window cills to be repainted. Refer to Finishing Schedule for full specifications.

NOTE F:
Existing metal windows with built-in burglar bars and panels with quarry tiled cills below to be removed. Part opening to be bricked up accomodate new aluminium window with factory-fitted burglar bars as per Window schedule. New brickwork below to take plaster & paint finish both internally and externally, as specified in Finishing Schedule. New window cills to be fibre cement internally and angled quarry tiles externally. Refer to Finishing Schedule for full specifications.

NOTE G:
Existing timber door and ironmongery to be removed and replaced with new semi hollow-core painted timber door fitted complete with new ironmongery as per Door and Ironmongery Schedule. Existing timber door frame to be sanded down and repainted.

NOTE H:
Existing pin board to be removed and replaced with new. Refer to Detail.

Existing Reception Desk to be removed and replaced with new. Refer to Joinery Details.

Existing timber shelf to be removed and replaced with new. Refer to Joinery details.

Existing timber counter to be removed and replaced with new. Refer to Joinery details.

NOTE I:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new slate floor tiles with new slate tile skirting as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new slate tiles.

NOTE J:
Existing quarry floor tiles and skirting to be lifted and floor to be prepared to receive new **Slate tiles** with **Slate tile skirting** as per Architect's specification (refer to finishing schedule). Defects or damage to existing floor to be made good prior to installation of new Slate tiles.

NOTE K:
Existing dry wall with fixed glazing to be removed and replaced with new drywall system. Surface preparation and paintwork to be carried out as specified in Finishing Schedule.

No.	DATE	AMENDMENT	D.P.W.
1	08/07/2014	4x Windows changed from W01 to W08 on the South West Elevation.	
CH-02	02.06.22	Enclose Garage and convert to New Cleaners Room and Restroom, Add door, Remove RSD and add New window to match	

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MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline: ARCHITECT

service

MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number: 046 758

drawing title

SECTIONS AND ELEVATIONS

ref.no.

designed: O. MOODLEY

scale: AS SHOWN

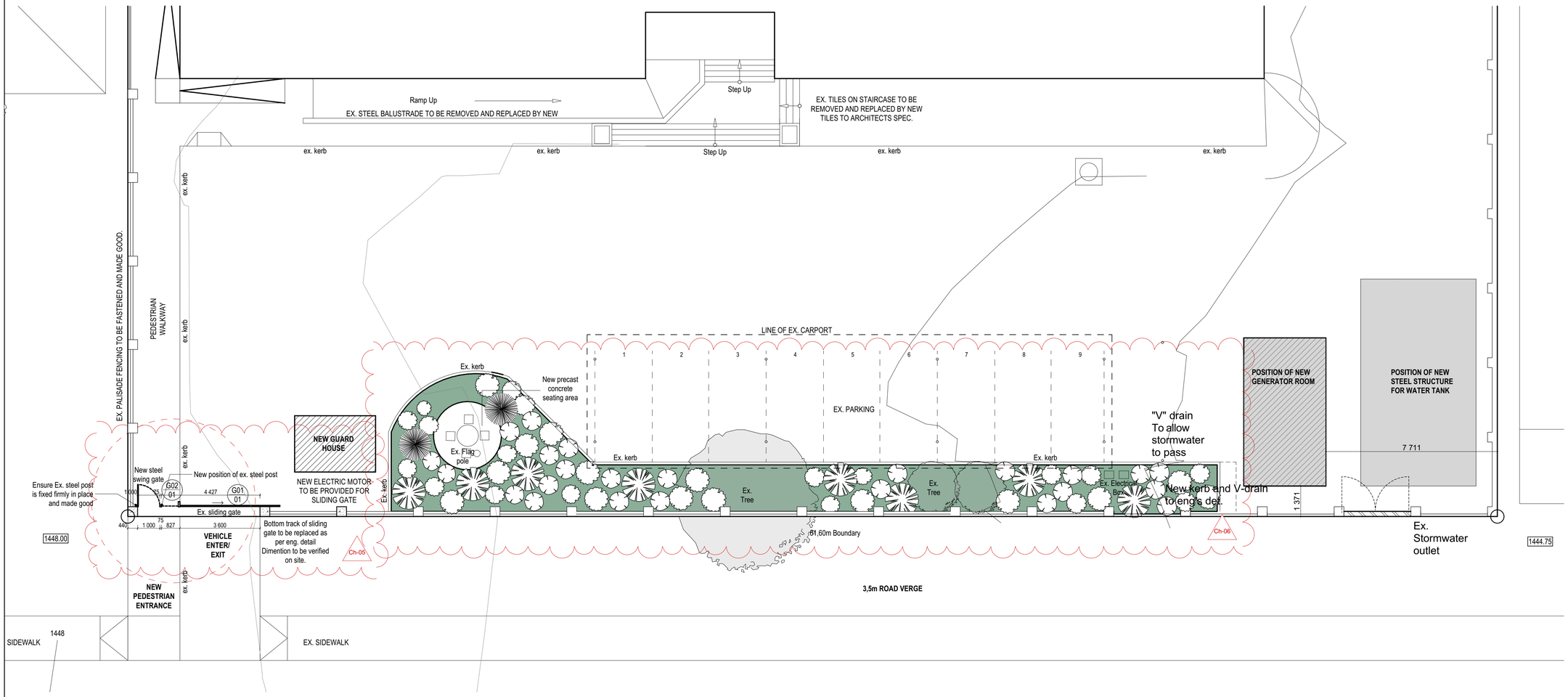
drawn: B.M

date: **07/06/2022**

checked: O.M

DPW drawing number

046 758 - 202



PLANT LEGEND	
SYMBOL	NAME
	ALOE ARBORESCENS
	MURALTIA SPINOSA
	CHLOROPHYTUM SAUNDERSIAE
	STRELITIZIA
	INSTANT LAWN (CYNODON DACTYLON)

NOTES

1. All quantities and measurements to be checked on site.

2. All building rubble to be removed by building contarctor prior to landscape installation.

3. A minimum od 30dm of high quality, well decomposed compost to be mixed into every 1sqm of soil to a depth of 20cm. Additional compost must be added to each shrub and tree hole.

4. Fertilizer (2:3:2 or 2:3:5 as well as organic fertilizer) must be applied at recommended rate in all areas.

No.	DATE	AMENDMENT	D.P.W.
CH-05	02.06.22	New Pedestrian Gate with fixed Fence portion and Sliding gate by Specialist	
CH-06	02.06.22	New Landscaping Layout,and Addition of Strelitzia Planting	

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11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline: ARCHITECT

service: MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number: 046 758

drawing title: **LANDSCAPE PLAN**

ref.no.

designed: O. MOODLEY

scale: AS SHOWN

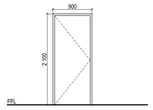
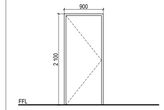
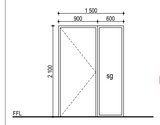
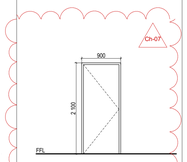
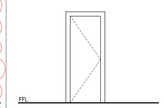
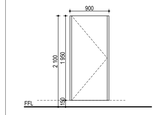
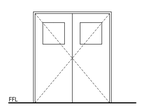
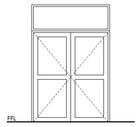
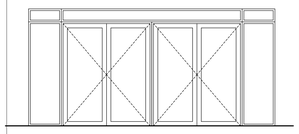
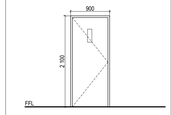
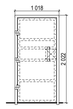
drawn: M. RAJU

date: **02/06/2022**

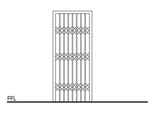
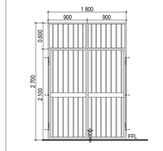
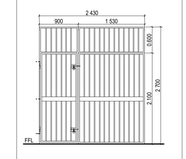
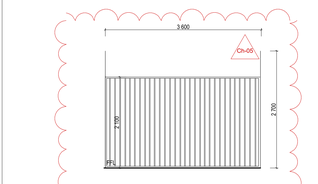
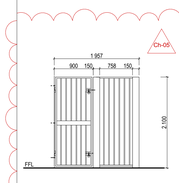
checked

DPW drawing number

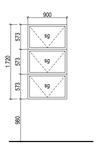
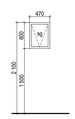
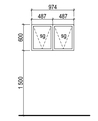
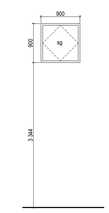
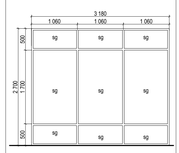
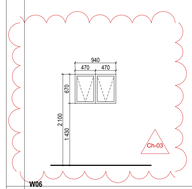
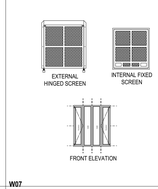
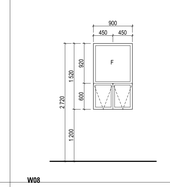
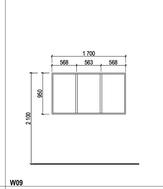
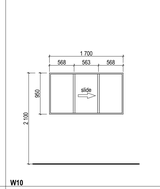
Door Schedule

	D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	CD1	CG1
	NOTE: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect
												
No. of	36	3	4	11	1	12	8	1	1	1	2	2
Door	44mm Semi solid okoume wood door to receive finish - note 1	44mm Solid okoume wood door to receive finish - note 1	44mm Semi solid okoume wood door to receive finish - note 1	44mm Semi solid okoume wood door to receive finish - note 1	Category 1 monitor strong room door as supplied by chubb or equal and approved	44mm Semi solid okoume wood WC partition door to receive finish - note 1	44mm Semi solid okoume wood door with glazed viewing panel to receive finish - note 1	Aluminium door with glazing by specialist	Aluminium door with glazing by specialist	"Bilcom" or equal and approved 'class B' fire door with 100mm X 300mm double glazed viewing panel	Purpose made solid steel cell door to specifications, size & details as per SAPS 5 -Star 2012 Specifications - refer to drawing POL 2012/D1	Purpose made solid steel grille gate to specifications, size & details as per SAPS 5 -Star 2012 Specifications - refer to drawing POL 2012/D1
Frame	70x90mm Okoume hardwood frame to receive finish - note 1	70x90mm Okoume hardwood frame to receive finish - note 1	Aluminium frame on drywall to suit okoume wood door by specialist	Aluminium frame on drywall to suit okoume wood door by specialist	As per door supplier	70x90mm Okoume hardwood frame to receive finish - note 1	70x90mm Okoume hardwood frame to receive finish - note 1	Aluminium frame on brick wall to suit aluminium door	Aluminium frame on brick wall to suit aluminium door	"Bilcom" or equal and approved 1.6mm thick galvanised steel door frame with single rebate profile with 52mm x 52mm rebate	Purpose made door frame to specifications, size & details as per SAPS 5 -Star 2012 Specifications - refer to drawing POL 2012/D1	Purpose made steel grille gate frame to specifications, size & details as per SAPS 5 -Star 2012 Specifications - refer to drawing POL 2012/D1
Glazing	N/A	N/A	6mm Laminated safety glass	N/A	N/A	N/A	6mm Laminated safety glass	6mm Laminated safety glass	6mm Laminated safety glass	Double glazed Georgian Wired Glass	N/A	N/A
Glazing Area	N/A	N/A	1.05m²	N/A	N/A	N/A	0.50m²	3.21m²	11.278m²	0.030m²	N/A	N/A
Ironmongery	Set 5 - Unless stated otherwise 21,23 - Set 15 20,24 - Set 17 32,23 - Set 16 31 - Set 22	Set 5	Set 1	Set 2	As per door supplier	Set 8	Set 11	Set 30	Set 30 x 2	Set 14	As per SAPS 5 - Star 2012 document- refer to drawing POL 2012/D1	As per SAPS 5 - Star 2012 document- refer to drawing POL 2012/D1

Door Schedule

	SG1	SG2	SG3	SG4	G01	G02
	NOTE: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: Window schedule to be read in conjunction with plans numbered 046 758 - 200 & 046 758 - 201 **NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect
						
No. of	2	2	1	7	2	1
	Trellidor Trojan T1000 or equal and approved as per suppliers specification	All welded intersections between round/square/rectangular tubes to have 100mm holes internally, mitred corners and 10mm hole above & below each corner, this is to allow for hot dip galvanising to flow through. Gates to be hot dipped galvanised on completion. Overall size of single gate is : 1800mm X 2700mm. 60mm X 60mm X 2mm Mild steel tube surround with 20mm DIA X 2mm mild steel bars and 2 no. 50mm X 30mm X 2mm mild steel section welded together at centre of gate.	All welded intersections between round/square/rectangular tubes to have 100mm holes internally, mitred corners and 10mm hole above & below each corner, this is to allow for hot dip galvanising to flow through. Gates to be hot dipped galvanised on completion. Overall size of single gate is : 900mm X 2700mm. 60mm X 60mm X 2mm Mild steel tube surround with 20mm DIA X 2mm mild steel bars and 2 no. 50mm X 30mm X 2mm mild steel section welded together at centre of gate.	All welded intersections between round/square/rectangular tubes to have 100mm holes internally, mitred corners and 10mm hole above & below each corner, this is to allow for hot dip galvanising to flow through. Gates to be hot dipped galvanised on completion. Overall size of single gate is : 2430mm X 2700mm. 60mm X 60mm X 2mm Mild steel tube surround with 20mm DIA X 2mm mild steel bars and 2 no. 50mm X 30mm X 2mm mild steel section welded together at centre of gate.	3600mm X 2100mm Driveway Sliding Galvanised steel gate by specialist All welded intersections between round/square/rectangular tubes to have 100mm holes internally, mitred corners and 10mm hole above & below each corner, this is to allow for hot dip galvanising to flow through. Gates to be hot dipped galvanised on completion. Overall size of single gate is : 2430mm X 2700mm. 60mm X 60mm X 2mm Mild steel tube surround with 20mm DIA X 2mm mild steel bars and 2 no. 50mm X 30mm X 2mm mild steel section welded together at centre of gate.	1000 x 2100mm Galvanised steel Pedestrian gate and Fixed Fence panel by specialist All welded intersections between round/square/rectangular tubes to have 100mm holes internally, mitred corners and 10mm hole above & below each corner, this is to allow for hot dip galvanising to flow through. Gates to be hot dipped galvanised on completion. Overall size of single gate is : 2430mm X 2700mm. 60mm X 60mm X 2mm Mild steel tube surround with 20mm DIA X 2mm mild steel bars and 2 no. 50mm X 30mm X 2mm mild steel section welded together at centre of gate.

Window Schedule

	W01	W02	W03	W04	W05
	NOTE: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect
					
No. of	91	15	2	32	1
Frame	Powder coated aluminium frame - colour to architects choice	Powder coated aluminium frame - colour to architects choice	Powder coated aluminium frame - colour to architects choice	Powder coated aluminium frame - colour to architects choice	Powder coated aluminium curtain wall - colour to architects choice
Glazing	6mm laminated safety glass	6mm Obscure safety glass	6mm obscure safety glass	6mm laminated safety glass	6mm laminated safety glass
	NOTE: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect	**NOTE**: All dimensions to be checked on site prior to manufacturing. Any discrepancies to be reported to the architect
					
W06	**W07**	**W08**	**W09**	**W10**	
4	2	4	1	1	
Powder coated aluminium curtain wall - colour to architects choice	Purpose made window to specifications, size & details as per SAPS 5 - Star 2012 specifications. Refer to drawing numbers POL 2012/W1, POL 2012/W2 & POL 2012/W3	Powder coated aluminium frame - colour to architects choice	Powder coated aluminium frame - colour to architects choice	Powder coated aluminium frame - colour to architects choice	
6mm laminated safety glass	6mm laminated safety glass	6mm obscure safety glass	6mm laminated safety glass	6mm laminated safety glass	

DOOR SCHEDULE

SCALE 1:50

Ironmongery Set SET01

	Product	Qty Unit
	8352-100FLSS FLUSH BALL BEARING HINGE SS304	3 Each
No image available	CB612-13CH PROTEA FURNITURE OVAL	1 PR
	CZ8731CH DOOR STOP	1 EA
	L-2241-78SS UNION OVAL CYL LOCK SS	1 EA
	M2X6AISCGMK CYL OVAL DOUBLE INTERACTIVE GM	1 EA

Ironmongery Set SET08

	Product	Qty Unit
	JH-BB-STD-2-SS SS 2BB BUTT HINGE EN1935GRD13	2 EA
	21314-76/8SS UNION WC 8MM DEADLOCK SS	1 Each
No image available	PHD-BB-150-22SS 150MM CENTRES 22MM DIAMETER	1 Each
	SS5004-73SS ESCUTCHEON ON ROSE BATHROOM	1 PR
	SS8025SS HAT & COAT HOOK WITH BUFFER	1 EA

Ironmongery Set SET04 Single Fire Escape Route Door

	Product	Qty Unit
	DC700 CAM ACTION CLOSER EN3-6 SIL	1 EA
No image available	Hinges by Frame Manu Hinges by Frame Manufacturer	3 Each
	SS5066-06SS PUSH PLATE BLANK	1 EA
	SS5066-06SSE16 ESCAPE ROUTE SIGN RH	1 EA
	SS5D66-06SS 88*/G190/66 DELTA P/HANDLE PULL HANDLE ON BACK PLATE; DOVE; 152 X 152mm; BLANK; S/STEEL	1 EA

Ironmongery Set SET02

	Product	Qty Unit
	8352-100FLSS FLUSH BALL BEARING HINGE SS304	3 Each
	5206BBSS 400MM PULL HANDLE BACK TO BACK	1 PR
	DC500 CAM ACTION CLOSER EN1-4 SIL	1 EA
	DCA130-EV1 MOUNTING PLATE FOR GUIDE RAIL	1 EA
	L-2141-78SS UNION OVAL CYL DEADLOCK SS	1 EA
	M2X6AISCGMK CYL OVAL DOUBLE INTERACTIVE GM	1 EA
	SS584-13SS 841G190 ESCUTCHEON OVAL	2 EA
	M2X6AISCGMK CYL OVAL DOUBLE INTERACTIVE GM	1 EA

Ironmongery Set SET11 Double Timber Door,Self Closing

	Product	Qty Unit
	JH-BB-STD-2-SS SS 2BB BUTT HINGE EN1935GRD13	6 EA
		1 EA
	5206BBSS 400MM PULL HANDLE BACK TO BACK	2 PR
	8052-200NP FLUSH BOLT 200MM NICKEL PLATED	2 EA
	88S2SC DUST PROOF STRIKE	1 EA
	DC152/0005000 HO DEVICE A152	2 EA
	DC500 CAM ACTION CLOSER EN1-4 SIL	2 EA
	L-2141-78SS UNION OVAL CYL DEADLOCK SS	1 EA

Ironmongery Set SET05 Single Timber Door ,Timber Frame ,SELF CLOSING

	Product	Qty Unit
	JH-BB-STD-2-SS SS 2BB BUTT HINGE EN1935GRD13	3 EA
	5206BBSS 400MM PULL HANDLE BACK TO BACK	1 PR
	DC500 CAM ACTION CLOSER EN1-4 SIL	1 EA
	L-2141-78SS UNION OVAL CYL DEADLOCK SS	1 EA
	M2X6AISCGMK CYL OVAL DOUBLE INTERACTIVE GM	1 EA
	SS584-13SS 841G190 ESCUTCHEON OVAL	

Ironmongery Set SET13

	Product	Qty Unit
	JH-BB-STD-2-SS SS 2BB BUTT HINGE EN1935GRD13	2 EA
No image available	PHD-BT-225-22SS DOVE PULL HANDLE BOLT THROUGH 225MM	1 Each
	ARC1182SS ADJUSTABLE ROLLER CATCHES	2 Each
	SS5066-06SSSE0S FIRE HOSE SIGN SOLID	1 EA

WINDOW SCHEDULE

SCALE 1:50

No.	DATE	AMENDMENT	D.P.W.
1	08/07/2014	Window W08 added to schedule.	
CH-03	02.06.22	Enclose Garage and convert to New Cleaners Room and Restroom, Add door. Remove RSD and add New window to match	
CH-05	02.06.22	New Pedestrian Gate with fixed Fence portion and Sliding gate by Specialist	
CH-07	07.06.22	Boardroom reconfigured to include 2 x NEW Offices, 2 x W01 Added in Office 01, 2 x D04 added to access offices	

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Department: Public Works
REPUBLIC OF SOUTH AFRICA

ACTING DIRECTOR-GENERAL
MR. S VUKELA

consultant
OM MOODLEY ARCHITECTS

Unit 8;
Corporate Park;
Sinembe Park;
11 Sinembe Crescent;
Umhlanga; 4051

Tel: 031 202 5064

discipline: ARCHITECT

service:

MOUNT FLETCHER MAGISTRATE OFFICES: CONDITION BASED MAINTENANCE.

WCS number: 046 758

drawing title:

WINDOW SCHEDULE
DOOR SCHEDULE
IRONMONGERY SCHEDULE

ref.no.

designed: O. MOODLEY

scale: AS SHOWN

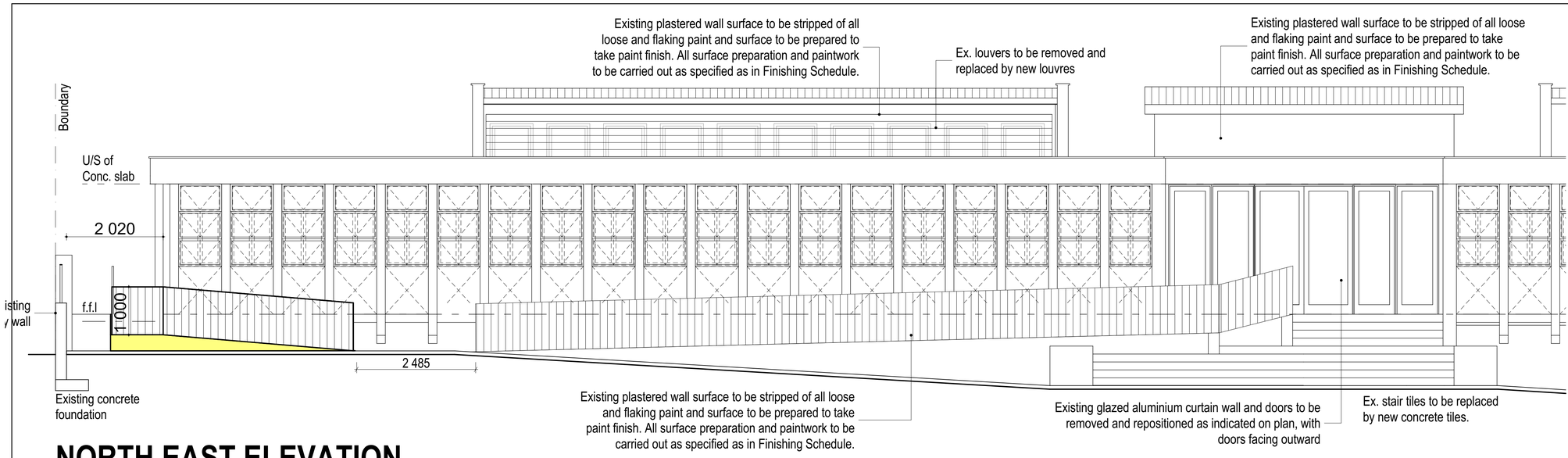
drawn: B.M

date: **07/06/2022**

checked: O.M

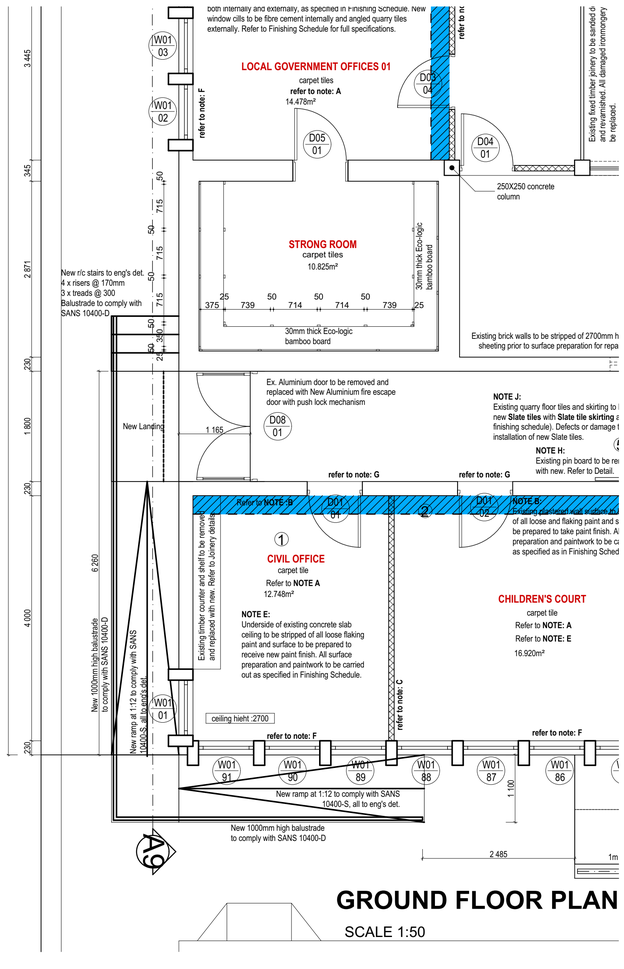
DPW drawing number:

046 758 - 501



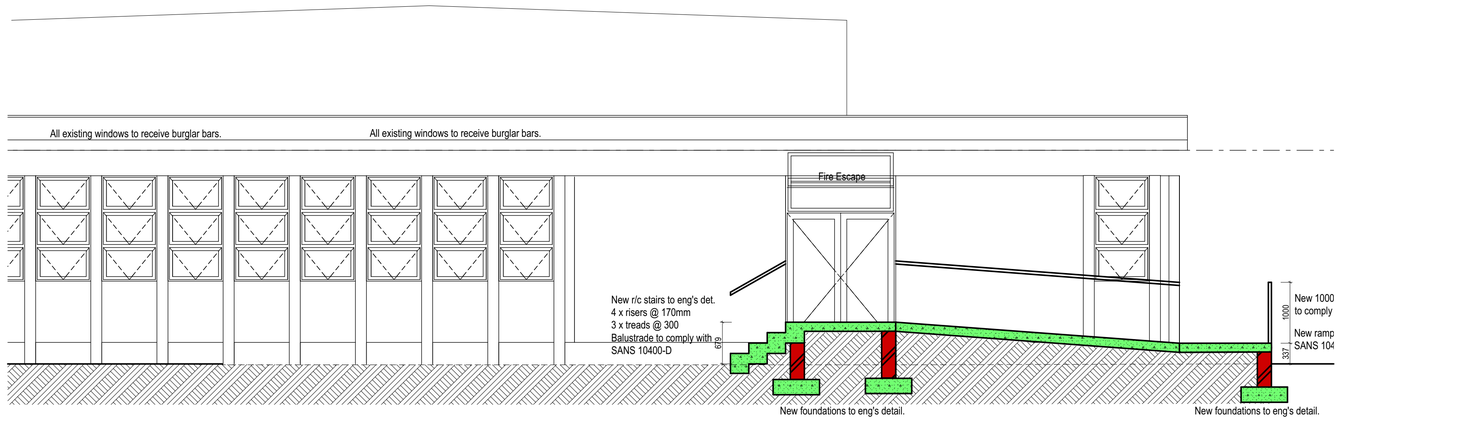
NORTH EAST ELEVATION

Scale 1:50



GROUND FLOOR PLAN

SCALE 1:50



RAMP SECTION

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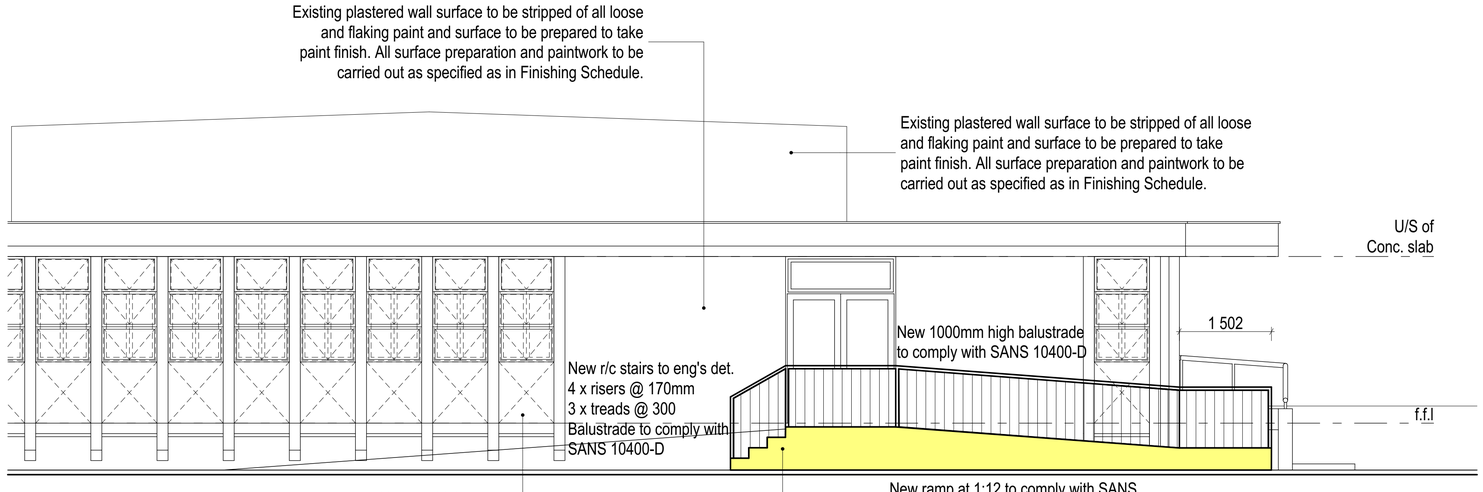

SOUTH EAST ELEVATION

Scale 1:50

No.	DATE	AMENDMENT	D.P.W.

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Department:
Public Works
REPUBLIC OF SOUTH AFRICA

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WCS number
046 758

drawing title
NEW RAMP

ref.no.

designed O. MOODLEY

scale AS SHOWN

drawn M. RAJU

date 07.01.2022

checked

DPW drawing number
046 758 - 601 / WD - 601

SPECIFICATIONS

public works & infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

CONDITION BASED MAINTENANCE DEPARTMENT OF JUSTICE: - MT FLETCHER MAGISTRATE

ELECTRICAL AND MECHANICAL SCOPE OF WORK FOR REMEDIAL WORKS

September 2022

Prepared By:
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EYETHU ENGINEERS
Consulting Engineers & Project Managers

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LIST OF ANNEXURES

Schedule of Luminaires

General Electrical Specification: Part A and Part B

1. INTRODUCTION

The appointed contractor will be required to inspect the existing Electrical, Mechanical and Security installation. The existing installation include but not limited to the following items;

- Mechanical Installation
- Fire Protection Installation
- Fire Detection Installation
- Security Installation (CCTV and Access Control System)
- Electrical Distribution System
- UPS Installation
- Generator Installation
- Electrical Installation in buildings
- Lightning Protection Installation

The contractor will be required to re-test, re-commission and provide certificate / COC for the above listed items. The Contractor will be required to conduct training for the Client as detailed in Electrical and Mechanical BOQ.

The scope of works for the remedial works is as follows;

2. ELECTRICAL WORKS

2.1. Incoming Bulk Power Supply

Eskom incoming bulk power supply is outstanding. The Contractor will be required to liaise with Eskom for the supply and install of 200kVA incoming power supply. The Contractor to co-ordinate with the Eskom and user Client for any outages that might affect the Court proceedings during construction.

2.2. Lighting

There are light fittings that are not functional, this may be due to the leaking roof. These are listed below: Light fittings globes needs to be access and replaced. The Contractor will be required to access, trace, and repair any faulty circuits for lighting, plugs or any other Electrical installation.

- Entrance Lobby – (2x58W Prismatic Surface Mount) light fittings are not functional
- Passages – (2x58W Prismatic Surface Mount) light fittings are not functional
- Estate Office – (2x58W Low Brightness Surface Mount) light fittings are not functional

- Cash Hall – (3x18W Recessed 600x600mm Recessed Low Brightness) light fittings are not functional
- Waiting Area – (2x58W Corrosion Proof Surface mount) light fitting is not functional
- Civil Court – (3x18W Recessed 600x600mm Recessed Low Brightness) light fitting is not functional
- Criminal Court – (3x18W Recessed 600x600mm Recessed Low Brightness) light fittings are not functional
- Children Waiting Room – (2x58W Low Brightness Surface Mount) light fitting is not functional
- Additional Magistrate - (2x58W Low Brightness Surface Mount) light fitting is not functional
- Language Services and Estate - (2x58W Low Brightness Surface Mount) light fitting is not functional
- Light switch in the entrance lobby is obstructed by a steel cabinet.

Install new 2x28W Low Brightness Recessed Clip-in light fitting as per Electrical BOQ.

2.3. Telephone and Data points

90% of the telephone and data points are damaged and have been dislodged from the power skirting. The contractor will be required to replace damaged power skirting, data, and telephone points. The quantities are per as Electrical BOQ.

2.4. Access control

The Contractor to repair, test and re-commissioning existing parcel & baggage X-Ray scanner including a video monitor, keypad and exit run off roller conveyor and stand. The Contractor will also be required to provide training to the user Client.

- X-ray machine is not functional this is due to power surges, re-testing and inspection is required.
- All manual call points not labelled.
- In the security control room, the door magnetic lock is loose. Repair is required.

2.5. CCTV

- CCTV was commissioned by the previous contractor and the training was done on site. However, the CCTV is not in use on site. The Contractor will be required to re-test, commissioning and provide training to the user Client.

2.6. Fire Protection Installation

The Contractor will be required to carry out the following repairs and as per details in Mechanical BOQ.

- The main exit door in the front façade of the building should be made into Paraplegic/Fire exit door which is fully functional coupled with an acceptable and approved quick release Mechanism.
- Fire Escape signage is not installed.
- The push-bar mechanism in the Boardroom is damaged.
- Fire Equipment and Escape signage to be installed as per the Fire Protection Drawing

2.7. Fire Detection Installation

- The Fire Alarm Control Panel (FACP) has two (2) identified faults which need to be addressed, recommissioning of Fire Detection system is required.
- Remove all plastic caps covering the Smoke Detectors.
- Installation of A3 map diagram indicating all installed devices for ease identification and quick manual guide for the FACP is outstanding.

2.8. Gas Suppression Installation

- The Gas suppression installation is not completed, Gas cylinder is not interfaced with the Gas FACP.
- Gas FACP had power supply fault and that need to be addressed during re-commissioning.

2.9. Generator Installation

The Contractor will be required to service existing 100kVA indoor standby generator complete with changeover panel.

3. MECHANICAL INSTALLATION

The Contractor will be required to do assessment and repairing of existing ducting installation for FT1, FT2, FT3, FT4 and FA1 as indicated on the Mechanical drawing. Ducting to be complete with hangers, brackets, flexible connections, insulation etc. Ducting to be flushed to the louvres.

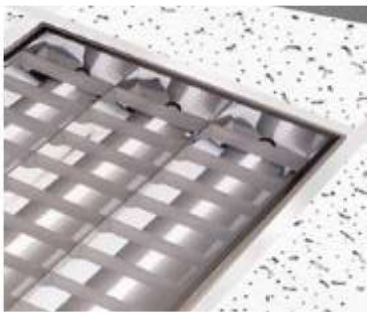
- The existing ducting is not correctly installed. The ducting mounting brackets are not drilled into the concrete for rigidity.
- The ducting is also not flush mounted to the louvres creating openings for rain to seep in.
- In the criminal court a window was removed, and a louvre installed but no ducting installed leading to rain seeping in. According to the construction drawings this window was not supposed to be removed since no ducting required through removed window.

The Contractor will be required to test and re-commissioning of existing HVAC. Onsite training for the User Client will be required.

ELECTRICAL INSTALLATION TO MT FLETCHER MAGISTRATE'S COURT
FOR
DEPARTMENT OF PUBLIC WORKS.

SECHEDULE OF LUMINAIRES

The Client reserves the right to change or omit any or all the light fittings specified. The luminaires supplied complete with lamps and are to be SABS approved. Any alternatives proposed must be approved by the Engineer on submission of all technical information. Any rate quoted in the provisional bill of quantities will be deemed to include for lamps and mounting accessories.

TYPE	PICTURE	DESCRIPTION	MAKE OR TRADE NAME
A1		600mm x 600mm Low brightness recessed clip-in mounted fluorescent luminaire with 2 x 28W lamps. The rate must include all electronic control gear and lamps.	……

T2.2

RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

T2.2a

DECLARATION OF INTEREST AND TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

PA-11: 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 interest (1) 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.
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

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.

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

This form has been aligned with SBD4

T2.2b

CERTIFICATION OF INDEPENDENT BID DETERMINATION

PA- 29: CERTIFICATION OF INDEPENDENT BID DETERMINATION

Project title:	MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)		
Bid no:	MTH47/2022	**Reference no:**	19/2/4/2/2/6977/12

INTRODUCTION

1. This PA-29 [Certificate of Independent Bid Determination] must form part of all bids[1] invited.

2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).[2] Collusive bidding is a *per se* prohibition meaning that it cannot be justified under any grounds.

3. Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:

    a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.

    b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.

4. This form (PA-29) serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5. In order to give effect to the above, the attached Certificate of Bid Determination (PA-29) must be completed and submitted with the bid:

---

[1] Includes price quotations, advertised competitive bids, limited bids and proposals.

[2] Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_____

(Bid Number and Description)

in response to the invitation for the bid made by:

_____

(Name of Institution)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate.

2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.

3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder.

4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder.

5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

    (a) has been requested to submit a bid in response to this bid invitation;
    (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
    (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.

6. 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 consortium[3] will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
   (a) prices;
   (b) geographical area where product or service will be rendered (market allocation)
   (c) methods, factors or formulas used to calculate prices;
   (d) the intention or decision to submit or not to submit, a bid;
   (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
   (f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. 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.

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.

Name of Bidder	Signature	Date	Position

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

T2.2c

RESOLUTION OF BOARD OF DIRECTORS

PA-15.1: RESOLUTION OF BOARD OF DIRECTORS

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

_____

(*Legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

on _____ *(date)*

RESOLVED that:

1. The Enterprise submits a Bid / Tender to the Department of Public Works in respect of the following project:

   _____

   (*Project description as per Bid / Tender Document)*

   Bid / Tender Number: _____ *(Bid / Tender Number as per Bid / Tender Document)*

2. *Mr/Mrs/Ms: _____

   in *his/her Capacity as: _____ *(Position in the Enterprise)*

   and who will sign as follows: _____

   be, and is hereby, authorised to sign the Bid / Tender, and any and all other documents and/or correspondence in connection with and relating to the Bid / Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid / Tender to the Enterprise mentioned above.

	Name	Capacity	Signature
1			
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16			

17			
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19			
20			

The bidding enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed.

Note:

1. ** Delete which is not applicable.*
2. ***NB:** This resolution must, where possible, be signed by <u>all</u> the Directors / Members / Partners of the Bidding Enterprise.*
3. *In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).*
4. *Directors / Members / Partners of the Bidding Enterprise may alternatively appoint a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).*
5. *Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.*

ENTERPRISE STAMP

T2.2d

RESOLUTION OF BOARD DIRCTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

PA-15.2: RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

_____

_____

(*Legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

on _____ *(date)*

RESOLVED that:

1. The Enterprise submits a Bid /Tender, in consortium/Joint Venture with the following Enterprises:

   _____

   _____

   (List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Consortium/Joint Venture)

   to the Department of Public Works in respect of the following project:

   _____

   _____

   (*Project description as per Bid /Tender Document)*

   Bid / Tender Number: _____ (*Bid / Tender Number as per Bid / Tender Document)*

2. *Mr/Mrs/Ms: _____

   in *his/her Capacity as: _____ *(Position in the Enterprise)*

   and who will sign as follows: _____

   be, and is hereby, authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the project described under item 1 above.

3. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Department in respect of the project described under item 1 above.

4. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Department in respect of the project under item 1 above:

   Physical address: _____

   _____

   _____

   _____ (code)

Postal Address: _____

_____

_____

_____ (code)

Telephone number: _____

Fax number: _____

	Name	Capacity	Signature
1			
2			
3			
4			
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15			

The bidding enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed

Note:

1. ** Delete which is not applicable.*
2. ***NB:** This resolution must, where possible, be signed by <u>all</u> the Directors / Members / Partners of the Bidding Enterprise.*
3. *In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).*
4. *Directors / Members / Partners of the Bidding Enterprise may alternatively appoint a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).*
5. *Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.*

ENTERPRISE STAMP

Any reference to words “Bid” or Bidder” herein and/or in any other documentation shall be construed to have the same meaning as the words “Tender” or “Tenderer”.

T2.2e

SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES

PA-15.3: SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the duly authorised representatives of the following legal entities who have entered into a consortium/joint venture to jointly bid for the project mentioned below: (*legally correct full names and registration numbers, if applicable, of the Enterprises forming a Consortium/Joint Venture)*

1. _____

   _____

2. _____

   _____

3. _____

   _____

4. _____

   _____

5. _____

   _____

6. _____

   _____

7. _____

   _____

8. _____

   _____

Held at _____ (*place)*

on _____ *(date)*

RESOLVED that:

RESOLVED that:

A. The above-mentioned Enterprises submit a Bid in Consortium/Joint Venture to the Department of Public Works in respect of the following project:

   _____

   _____

   (*Project description as per Bid /Tender Document)*

   Bid / Tender Number: _____ (*Bid / Tender Number as per Bid /Tender Document)*

B. *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____*(Position in the Enterprise)*

and who will sign as follows: _____

be, and is hereby, authorised to sign the Bid, and any and all other documents and/or correspondence in connection with and relating to the Bid, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid to the Enterprises in Consortium/Joint Venture mentioned above.

C. The Enterprises constituting the Consortium/Joint Venture, notwithstanding its composition, shall conduct all business under the name and style of:

_____

D. The Enterprises to the Consortium/Joint Venture accept joint and several liability for the due fulfilment of the obligations of the Consortium/Joint Venture deriving from, and in any way connected with, the Contract entered into with the Department in respect of the project described under item A above.

E. Any of the Enterprises to the Consortium/Joint Venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Department 30 days written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the Department for the due fulfilment of the obligations of the Consortium/Joint Venture as mentioned under item D above.

F. No Enterprise to the Consortium/Joint Venture shall, without the prior written consent of the other Enterprises to the Consortium/Joint Venture and of the Department, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the Contract with the Department referred to herein.

G. The Enterprises choose as the *domicilium citandi et executandi* of the Consortium/Joint Venture for all purposes arising from the consortium/joint venture agreement and the Contract with the Department in respect of the project under item A above:

Physical address: _____

_____

_____

_____ (Postal code)_____

Postal Address: _____

_____

_____

_____(Postal code)_____

Telephone number: _____

Fax number: _____

PA-15.3: Special Resolution of Consortia or Joint Ventures

	Name	Capacity	Signature
1			
2			
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The bidding enterprise hereby absolves the Department of Public Works & Infrastructure from any liability whatsoever that may arise as a result of this document being signed.

Note:

1. ** Delete which is not applicable.*
2. ***NB:** This resolution must be signed by <u>all</u> the Duly Authorised Representatives of the Legal Entities to the consortium/joint venture submitting this tender, as named in item 2 of Resolution PA-15.2.*
3. *Should the number of the Duly Authorised Representatives of the Legal Entities joining forces in this tender exceed the space available above, additional names, capacity and signatures must be supplied on a separate page.*
4. *Resolution PA-15.2, duly completed and signed, from the separate Enterprises who participate in this consortium/joint venture, must be attached to this Special Resolution (PA-15.3).*

T2.2f

SITE INSPECTION MEETING CERTIFICATE

DPW-16 (EC): SITE INSPECTION MEETING CERTIFICATE

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender no:	*MTH47/2022*	**Reference no:**	*19/2/4/2/2/6977/12*
Closing date:	*14 October 2022*		

This is to certify that I, _____representing _____in the company of _____ visited the site on: ***29 September 2022***

I have made myself familiar with all local conditions likely to influence the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the site inspection meeting and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

Name of Tenderer	Signature	Date

Name of DPW Representative	Signature	Date

T2.2g

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2011

PA16: 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 AND THE AMENDED B-BBEE CODES.

---

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. The value of this bid is estimated to ***Select*** R50 000 000 (all applicable taxes included) and therefore the…***80/20***……system shall be applicable.

1.3. Preference points for this bid shall be awarded for:

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

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

		POINTS
1.3.1.1	**PRICE**	***80***
1.3.1.2	**B-BBEE STATUS LEVEL OF CONTRIBUTION**	***20***
	Total points for Price and B-BBEE must not exceed	**100**

1.4. Failure on the part of a bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5. An Exempted Micro Enterprise (EME) is only required to obtain a sworn affidavit or a certificate issued by Companies and intellectual property Commission (CIPC) confirming their annual turnover of R10 Million or less and level of black ownership to claim points.

1.6. Qualifying Small Enterprise (QSE) is only required to obtain a sworn affidavit or a certificate issued by Companies and intellectual property Commission (CIPC) confirming their annual turnover of R10 Million or less and level of black ownership to claim points.

1.7 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.

1.8 CERTIFICATES ISSUED BY IRBA AND ACCOUNTING OFFICER HAVE BEEN DISCONTINUED; HOWEVER VALID CERTIFICATES ALREADY ISSUED BEFORE 01 JANUARY 2017 MAY BE USED UNTIL THEY PHASE OUT COMPLETELY BY DECEMBER 2017

2. DEFINITIONS

(a) **"all applicable taxes"** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;

(b) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

(c) "**B-BBEE status level of contributor"** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

(d) **"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 services, works or goods, through price quotations, advertised competitive bidding processes or proposals;

(e) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

(f) **"comparative price"** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;

(g) "consortium or joint venture" 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;

(h) **"contract"** means the agreement that results from the acceptance of a bid by an organ of state;

(i) "EME" means an Exempted Micro Enterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

(j) **"Firm price"** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;

(k) **"functionality"** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

(l) **"non-firm prices"** means all prices other than "firm" prices;

(m) **"person"** includes a juristic person;

(n) **"QSE"** means a Qualifying Small Enterprise as defines by Codes of Good Practice under

section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

(o) **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

(p) ***"sub-contract"*** *means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;*

(q) **"total revenue"** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;

(r) **"trust"** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and

(s) **"trustee"** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

3.1 The bidder obtaining the highest number of total points will be awarded the contract.

3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;.

3.3 Points scored must be rounded off to the nearest 2 decimal places.

3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 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**

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right) \quad \text{or} \quad Ps = 90\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Where

Ps = Points scored for comparative price of bid under consideration

Pt = Comparative price of bid under consideration

Pmin = Comparative price of lowest acceptable bid

5. Points awarded for B-BBEE Status Level of Contribution

5.1 In terms of Regulation 6(2) and /or 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

5.2 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

5.3 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

5.4 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

5.5 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

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

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

7.1 B-BBEE Status Level of Contribution: …… = ……(maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or Sworn Affidavit for EME's and QSE's.

8 SUB-CONTRACTING (relates to 5.5)

8.1 Will any portion of the contract be sub-contracted? YES / NO (delete which is not applicable)

8.1.1 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/ a QSE YES / NO (delete which is not applicable)

Designated Group: An EME or QSE which is at last 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		

9 DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm ....

9.2 VAT registration number ……..

9.3 Company registration number ……
:

9.4 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

…….. .....

…… .....

……..... ….

9.6 COMPANY CLASSIFICATION

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

[TICK APPLICABLE BOX]

9.7 Total number of years the company/firm has been in business? ……

9.8 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 contribution indicated in paragraph 7 of the foregoing certificate/ Sworn Affidavit, 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 paragraph 7, 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 contribution 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) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, 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 BIDDER(S)

DATE:…….. ADDRESS:……..

……..……..…..

T2.2h

MEDICAL CERTIFICATE FOR THE CONFIRMATION OF PERMANENT DISABLED STATUS

PA-14: MEDICAL CERTIFICATE FOR THE CONFIRMATION OF PERMANENT DISABLED STATUS

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender / Bid no:		**Reference no:**	*19/2/4/2/2/6977/12*

I, _____ (*surname and name*), identity number,_____ do hereby declare that I am a registered medical practitioner, with my practice number being _____, practising at _____ _____(*Physical or postal addresses*) declare that I have examined Mr. / Ms. _____, identity number _____ and have found the said person to be permanently disabled or having a recurring disability.

"Disability" means, in respect of a person, a permanent impairment of a physical, intellectual, or sensory function, which results in restricted, or lack of, ability to perform an activity in the manner, or within the range, considered normal for a human being." –

The nature of the disability is as follows:

_____

_____

_____

Thus signed at _____ on this _____ day of _____ 20____

_____ _____

Signature Date

OFFICIAL STAMP OF MEDICAL PRACTITIONER

T2.2i

PARTICULARS OF TENDERER'S PROJECTS

DPW-09 (EC): PARTICULARS OF TENDERER'S PROJECTS

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender / quotation no:	MTH47/2022	**Closing date:**	14 October 2022
Advertising date:	22 September 2022	**Validity period:**	84 days

1. PARTICULARS OF THE TENDERER'S CURRENT AND PREVIOUS COMMITMENTS

1.1. Current projects

	Projects currently engaged in	**Name of Employer or Representative of Employer**	**Contact tel. no.**	**Contract sum**	**Contractual commence-ment date**	**Contractual completion date**	**Current percentage progress**
1							
2							
3							
4							
5							
6							
7							
8							

Tender no: ***MTH47/2022***

1.2. Completed projects

Projects completed in the previous 5 (five) years		**Name of Employer or Representative of Employer**	**Contact tel. no.**	**Contract sum**	**Contractual commence-ment date**	**Contractual completion date**	**Date of Certificate of Practical Completion**
1							
2							
3							
4							
5							
6							
7							
8							
9							

Name of Tenderer	Signature	Date

T2.2 j

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

PA-36: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Standard Bidding Document (SBD) 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 at no cost.

1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

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:

Description of services, works or goods	Stipulated minimum threshold
_____	_____%
_____	_____%
_____	_____%

3. Does any portion of the goods or services 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 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.resbank.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.thedti.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

(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 3.1 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 3.1 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:_____

WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

	ANNEXURE D SBD 6.2 LOCAL CONTENT & Applicable Annexures C, D & E	

SATS 1286.2011

Annex C

Local Content Declaration - Summary Schedule

(C1)	**Tender No.**					
(C2)	**Tender description:**					
(C3)	**Designated product(s)**					
(C4)	**Tender Authority:**					
(C5)	**Tendering Entity name:**					
(C6)	**Tender Exchange Rate:**	Pula		EU		GBP
(C7)	**Specified local content %**					

Note: VAT to be excluded from all calculations

Calculation of local content								Tender summary			
Tender item no's	**List of items**	**Tender price - each (excl VAT)**	**Exempted imported value**	**Tender value net of exempted imported content**	**Imported value**	**Local value**	**Local content % (per item)**	**Tender Qty**	**Total tender value**	**Total exempted imported content**	**Total Imported content**
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*

(C20) **Total tender value**	**R 0**	
(C21) **Total Exempt imported content**		**R 0**
(C22) Total **Tender value net of exempt imported content**		**R 0**
(C23) **Total Imported content**		**R 0**
(C24) **Total local content**		**R 0**
(C25) **Average local content % of tender**		

Signature of tenderer from Annex B

Date:

	ANNEXURE D SBD 6.2 LOCAL CONTENT & Applicable Annexures C, D & E	

SATS 1286.2011

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	**Tender No.**						**Note: VAT to be excluded from all calculations**
(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

A. Exempted imported content

				Calculation of imported content						Summary	
Tender item no's	**Description of imported content**	**Local supplier**	**Overseas Supplier**	**Forign currency value as per Commercial Invoice**	**Tender Exchange Rate**	**Local value of imports**	**Freight costs to port of entry**	**All locally incurred landing costs & duties**	**Total landed cost excl VAT**	**Tender Qty**	**Exempted imported value**
(D7)	*(D8)*	*(D9)*	*(D10)*	*(D11)*	*(D12)*	*(D13)*	*(D14)*	*(D15)*	*(D16)*	*(D17)*	*(D18)*

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

This total must correspond with Annex C - C 21

B. Imported directly by the Tenderer

				Calculation of imported content						Summary	
Tender item no's	**Description of imported content**	**Unit of measure**	**Overseas Supplier**	**Forign currency value as per Commercial Invoice**	**Tender Rate of Exchange**	**Local value of imports**	**Freight costs to port of entry**	**All locally incurred landing costs & duties**	**Total landed cost excl VAT**	**Tender Qty**	**Total imported value**
(D20)	*(D21)*	*(D22)*	*(D23)*	*(D24)*	*(D25)*	*(D26)*	*(D27)*	*(D28)*	*(D29)*	*(D30)*	*(D31)*
	`										

(D32) **Total imported value by tenderer** R 0

	ANNEXURE D SBD 6.2 LOCAL CONTENT & Applicable Annexures C, D & E	

SATS 1286.2011

Annex D - Continued

Imported Content Declaration - Supporting Schedule to Annex C

C. Imported by a 3rd party and supplied to the Tenderer

				Calculation of imported content						Summary	
Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	*(D34)*	*(D35)*	*(D36)*	*(D37)*	*(D38)*	*(D39)*	*(D40)*	*(D41)*	*(D42)*	*(D43)*	*(D44)*
`											

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

D. Other foreign currency payments

			Calculation of foreign currency payments		Summary of payments
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Local value of payments
(D46)	*(D47)*	*(D48)*	*(D49)*	*(D50)*	*(D51)*

(D52) **Total of foreign currency payments declared by tenderer and/or 3rd party**

Signature of tenderer from Annex B

(D53) **Total of imported content & foreign currency payments -** ***(D32), (D45) & (D52)*** **above** #REF!

Date:

This total must correspond with Annex C - C 23

	ANNEXURE D SBD 6.2 LOCAL CONTENT & Applicable Annexures C, D & E	

SATS 1286.2011

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	
(E2)	**Tender description:**	
(E3)	**Designated products:**	
(E4)	**Tender Authority:**	
(E5)	**Tendering Entity name:**	

Note: VAT to be excluded from all calculations

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	*(E7)*	*(E8)*

(E9) **Total local products (Goods, Services and Works)** R 0

(E10)	**Manpower costs**	(Tenderer's manpower cost)	R 0
(E11)	**Factory overheads**	(Rental, depreciation & amortisation, utility costs, consumables etc.)	R 0
(E12)	**Administration overheads and mark-up**	(Marketing, insurance, financing, interest etc.)	R 0

(E13) **Total local content** R 0

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date:

T2.2k

DECLARATION OF DESIGNATED GROUPS FOR PREFERENTIAL PROCUREMENT

PA- 40: DECLARATION OF DESIGNATED GROUPS FOR PREFERENTIAL PROCUREMENT

Tender no: MTH47/2022

Name of Tenderer …… ☐ **EME**[1] ☐ **QSE**[2] ☐ **Non EME/QSE (tick applicable box)**

1. **LIST ALL PROPRIETORS, MEMBERS OR SHAREHOLDERS BY NAME, IDENTITY NUMBER, CITIZENSHIP AND DESIGNATED GROUPS.**

Name and Surname #	Identity/ Passport number and Citizenship##	Percentage owned	Black	Indicate if youth	Indicate if woman	Indicate if person with disability	Indicate if living in Rural (R) / Under Developed Area (UD) / Township (T) / Urban (U).	Indicate if military veteran
1.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
2.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
3.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
4.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
5.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
6.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
7.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
8.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
9.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
10.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
11.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
12.		%	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No

\# Where Owners are themselves a Company, Close Corporation, Partnership etc, identify the ownership of the Holding Company, together with Registration number
\## State date of South African citizenship obtained (not applicable to persons born in South Africa)

[1] EME: Exempted Micro Enterprise
[2] QSE: Qualifying Small Business Enterprise

PA- 40: DECLARATION OF DESIGNATED GROUPS FOR PREFERENTIAL PROCUREMENT

Tender no: MTH47/2022

2. DECLARATION:

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

1 The information and particulars contained in this Affidavit are true and correct in all respects;
2 The Broad-based Black Economic Empowerment Act, 2003 (Act 53 of 2003), Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000), the Preferential Procurement Regulations, 2017, National Small Business Act 102 of 1996 as amended and all documents pertaining to this Tender were studied and understood and that the above form was completed according to the definitions and information contained in said documents;
3 The Tenderer understands that any intentional misrepresentation or fraudulent information provided herein shall disqualify the Tenderer's offer herein, as well as any other tender offer(s) of the Tenderer simultaneously being evaluated, or will entitle the Employer to cancel any Contract resulting from the Tenderer's offer herein;
4 The Tenderer accepts that the Employer may exercise any other remedy it may have in law and in the Contract, including a claim for damages for having to accept a less favourable tender as a result of any such disqualification due to misrepresentation or fraudulent information provided herein;
5 Any further documentary proof required by the Employer regarding the information provided herein, will be submitted to the Employer within the time period as may be set by the latter;

Signed by the Tenderer

Name of representative	**Signature**	**Date**

T2.2I

RECORD OF ADDENDA TO TENDER DOCUMENTS

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

DPW-21 (EC): RECORD OF ADDENDA TO TENDER DOCUMENTS

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)Insert project description***		
Tender no:		**Reference no:**	*19/2/4/2/2/6977/12*

1. I / We confirm that the following communications received from the Department of Public Works and Infrastructure before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer: *(Attach additional pages if more space is required)*

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Name of Tenderer	Signature	Date

2. I / We confirm that no communications were received from the Department of Public Works and Infrastructure before the submission of this tender offer, amending the tender documents.

Name of Tenderer	Signature	Date

T2.2m

SCHEDULE OF PROPOSED SUB-CONTRACTORS

DPW-15 (EC): SCHEDULE OF PROPOSED SUBCONTRACTORS

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender no:		**Reference no:**	*19/2/4/2/2/6977/12*

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

We confirm that all subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	Name and address of proposed Subcontractor	**Nature and extent of work**	**Previous experience with Subcontractor**
1			
2			
3			
4			
5			

Name of representative	**Signature**	**Capacity**	**Date**

Name of organisation:	

T2.2n

PARTICULARS OF ELECTRICAL CONTRACTOR

DPW-22 (EC): PARTICULARS OF ELECTRICAL CONTRACTOR

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender no:	MTH47/2022	**Reference no:**	**19/2/4/2/2/6977/12**

Name of Electrical Contractor:	
Address:	
Electrical Contractor registration number at the Department of Labour	

Name of Tenderer	Signature	Date

T2.2o

MECHANICAL/ELECTRICAL/SECURITY WORK MATERIAL AND EQUIPMENT SCHEDULES

PW 354

public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA

STANDARD

ELECTRICAL SPECIFICATIONS

SECTION A: PREAMBLE TO STANDARD SPECIFICATIONS

SECTION B: INSTALLATION SPECIFICATIONS

AUGUST 2004

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SECTION A

A.1 PRE-AMBLE TO STANDARD SPECIFICATION FOR ELECTRICAL INSTALLATIONS

GENERAL

1. INTRODUCTION

(a) These Standard Specifications cover the general technical requirements for the equipment, materials, installation, testing, commissioning and maintenance of electrical installations for the Department. These requirements shall be read in conjunction with the Documents as specified below.

(b) "Document" shall mean the complete set of contract documents, including the Department's Tender Conditions, Tender Qualifications, the Standard Specification and the Detail Technical Specification including all drawings and variation orders issued in terms of the contract.

(c) "Contractor" shall mean the person, partnership, company or firm appointed for the supply, installation, testing, commissioning and maintenance of the Electrical Installation. In the case of the Electrical Installation being a sub-contract, nominated in terms of the Main Contract or otherwise, the word "Contractor" shall also mean "Sub-Contractor" in terms of the Sub-Contract Conditions for the specific installation. Where applicable the Builder or Principal Contractor shall be referred to as "Main Contractor".

2. INSTALLATION WORK

(a) The complete installation shall comply with the requirements of this Specification. Should any discrepancies or contradictions exist between this specification and the Detail Technical Specification for the specific installation, then the latter shall take precedence.

In the event of discrepancies between the drawings, specifications and bill of quantities the Department shall decide whether the work as executed shall be remeasured on site or whether remeasurement shall be effected from the working drawings only.

(b) The Department's authorised representative will inspect the installation from time to time during the progress of the work. Discrepancies will be pointed out to the Contractor and these shall be remedied at the Contractor's expense. Under no circumstances shall these inspections relieve the Contractor of his obligations in terms of the Documents.

(c) The Contractor shall notify the Department timeously when the installation reaches important stages of completion (e.g. before closing cable trenches, before casting concrete, etc.) so that the Department's authorised representative may schedule his inspections in the best interest of all parties concerned.

3. REGULATIONS

(a) The installation shall be erected and tested in accordance with the Acts and Regulations as indicated in PW 379 or PW 379 (Civil) – “Standard Conditions in respect of the Supply-, Delivery and Installation of Electrical-, Mechanical-, Pneumatic- and Vacuum Operated Equipment, Control Systems, Plant and Materials”.

(b) The Contractor shall issue all notices and pay all of the required fees in respect of the installation to the authorities, and shall exempt the Department from all losses, claims, costs or expenditures which may arise as a result of the Contractor's negligence in complying with the requirements of the regulations.

(c) It shall be assumed that the Contractor is conversant with the above-mentioned requirements. Should any requirement, by-law or regulation, which contradicts the requirements of this Document, apply or become applicable during erection of the Installation, such requirement, by-law or regulation shall overrule this Document and the Contractor shall immediately inform the Department of such a contradiction. Under no circumstances shall the Contractor carry out any variations to the installation in terms of such contradictions without obtaining the written permission to do so from the Department.

4. SITE CONDITIONS

Tenderers are advised to visit the site and acquaint themselves with all local conditions pertaining to the execution of the installation before tender closing date. No claims from the Contractor which may arise from insufficient knowledge of site access, type of site, labour conditions, establishment space, transport and loading/unloading facilities, power and water supply, etc. will be considered after submission of tenders.

For services where prior permission is required before contractors can visit the site, a visit will be arranged for all interested parties.

5. ARRANGEMENTS WITH THE SUPPLY AUTHORITY

(a) The contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority unless specified to the contrary.

(b) It shall be the responsibility of the Contractor to make the necessary arrangements with the local Supply Authority at his own cost and to supply the labour, equipment and means to inspect, test and commission the installation to the satisfaction of the Local and Supply Authorities.

(c) The Contractor shall supply and install all notices and warning signs that are required by the relevant laws, regulations and/or the Documents.

6. MATERIAL AND EQUIPMENT

(a) All material and equipment shall conform in respect of quality, manufacture, tests and performance, with the requirements of the South African Bureau of Standards or where no such standards exist, with the relevant current Specification of the British Standards Institution.

(b) All material and equipment shall be of high quality and suitable for the conditions on site. These conditions shall include weather conditions as well as conditions under which materials are installed, stored and used. Should the materials not be suitable for use under temporary site conditions then the Contractor shall at his own cost provide suitable protection until these unfavourable site conditions cease to exist.

(c) The Contractor shall, where requested to do so, submit samples of equipment and material to the Department for approval prior to installation. Samples may be retained in the Department's possession until the contract is completed after which they will be returned.

7. CONNECTIONS INVOLVING ALUMINIUM (CABLES AND TRANSFORMERS)

As a result of the fact that aluminium flows when subjected to pressure and electrical connections based on this principle thus loses proper contact during the course of time, it should be noted that bolted connections between aluminium and copper or any other metal is not acceptable to this Department.

8. CODES OF PRACTICE OR STANDARD SPECIFICATION

Where reference is made to any Code of Practice or Standard Specification in this document the latest edition or amendment shall be applicable, except where specified to the contrary.

SECTION B.1

B.1 INSTALLATION AND TERMINATION OF CONDUITS AND CONDUIT ACCESSORIES

1. GENERAL

1.1 SCOPE

1.1.1 This section covers the installation of conduits and conduit accessories in buildings and other structures under normal environmental conditions and for system voltages up to 600 V.

1.1.2 The following types of conduit installations are included:

(a) Screwed metallic conduit - black enamelled and galvanised.

(b) Plain-end metallic conduit - black enamelled and galvanised.

(c) Non-metallic conduit.

(d) Flexible conduit.

1.1.3 Conduits may be installed as follows:

(a) In open roof spaces.

(b) Cast in concrete.

(c) Surface mounted against walls, concrete slabs, etc.

(d) In wall chases.

1.1.4 Where conduits are to be installed in concrete, this shall be undertaken while the building work is still in progress. Conduits may only be surface mounted where specified or where the Department has given its written consent.

1.1.5 Under no circumstances will conduit having a wall thickness of less than 1,6mm be allowed in screeding laid on top of concrete slabs.

1.1.6 Bending and setting of conduit must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems. Damage to conduit resulting from the use of incorrect bending apparatus or methods applied must on indication by the Department's inspectorate staff, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the contractor's expense.

1.1.7 Tenderers must ensure that general approval of the proposed conduit system to be used is obtained from the local electricity supply authority prior to the submission of their tender. Under no circumstances will consideration be given by the Department to any claim submitted by the contractor, which may result from a lack of knowledge in regard to the supply authority's requirements.

1.1.8 For light and socket outlet circuits, the conduit used shall have an external diameter of 20mm. In all other instances the sizes of conduit shall be in accordance with the "Wiring Code" for the specified number and size of conductors, unless otherwise directed in part 2 of this specification or indicated on the drawings.

1.2 OTHER SERVICES

Conduits may not be installed closer than 150 mm to pipes containing gas, steam, hot water or other materials, which may damage the conduits or conductors. Conduits may not touch pipes of other service

installations in order to prevent electrolytic corrosion. Where this is unavoidable, cathodic protection shall be provided.

Conduit and conduit accessories used for flame-proof or explosion proof installations and for the suspension of luminaries as well as all load bearing conduit shall in all instances be of the metallic screwed type.

2. SCREWED METALLIC CONDUIT

2.1 GENERAL

2.1.1 In general, screwed steel conduit shall be used in the wiring of buildings.

2.1.2 The installation shall comply with SANS 10142.

2.2 GALVANISED CONDUIT

Galvanised conduit and accessories shall be used in the following:

(a) In damp areas.
(b) In areas exposed to the weather.
(c) For all installations within 50 km of the coast.
(d) In plenum chambers containing humidifying equipment.
(e) For surface mounted conduit installations in kitchens and boiler rooms.
(f) In screeds resting directly on soil.
(g) For connection points to future installations.
(h) For underground conduit containing earthing conductors.
(I) In buildings where animals are housed such as cattle, sheep, dogs, etc.

2.3 TERMINATIONS

2.3.1 Spouted Connections.

Conduits shall be connected directly to draw-boxes with spouted connections. Conduits shall be screwed tightly home and no threads shall be visible.

2.3.2 Switchboards, Power skirting, etc.

Conduits shall be terminated by means of a brass female bush and two locknuts in pressed steel switchboards and distribution boxes, cable ducts, power skirting, etc. The conduit end shall only project far enough through the entry hole to accommodate the bush and locknut. Alternatively the method detailed in 2.3.3 may be used.

2.3.3 Draw-boxes.

A female bush and two locknuts shall be used to terminate conduits at draw-boxes and outlet boxes without spouts, should there be sufficient room in the box. Where there is insufficient room, a coupling, brass male bush and locknut may be used with sufficient allowance for the reduction of the internal diameter by the male bush.

2.3.4 Holes.

Holes to accommodate brass bushes shall be large enough to accommodate the bush with a minimum of clearance.

2.3.5 Bush-nuts.

Bush-nuts for the connection of earth conductors to conduits are not acceptable.

2.4 SCREWS, BOLTS AND NUTS

Steel locknuts of thick gauge steel with milled sides shall be used in all cases. Cadmium-plated bolts and nuts shall be used except where the installation is exposed to the weather in which case brass bolts and

nuts shall be used. Screws shall be installed in all tapped holes in fittings and accessories to prevent damage to the screw thread by concrete or plaster. The screws shall be screwed completely down to prevent damage to the thread on the screw.

2.5 CONDUIT ENDS

Conduit ends shall be cut at right angles to ensure that ends butt squarely at joints. Threads shall not be visible at joints and connections except at running joints. The total length of the thread on the two conduit ends shall not exceed the length of the coupling.

2.6 JOINTS

All conduit ends shall be reamed and all joints tightly screwed. Only approved couplings shall be used. Running joints with long threads shall be kept to a minimum and locknuts shall be provided to ensure a strong mechanical and a continuous electrical joint. Running joints in screwed conduit are to be avoided as far as possible and all conduit systems shall be set or bent to the required angles. The use of normal bends must be kept to a minimum with exception of larger diameter conduits where the use of such bends is essential.

2.7 FINISH

All joints shall be painted with red lead to prevent them from rusting in damp areas, areas within 50 km of the coast and in cases where the installation is exposed to the weather for any length of time. Where the galvanising or black paint has been damaged, the area shall first be cleaned and a coat of zinc base paint applied subsequently. Additional coats of paint shall only be applied after the undercoat has completely dried. All surface mounted non-galvanised metallic conduit must be painted. (Refer to par. 8.8 of Section B1).

2.8 CONTINUITY

Mechanical and electrical continuity shall be maintained throughout the conduit installation.

3. PLAIN-END METALLIC CONDUIT

As an alternative to the screwed conduit, plain-end conduit complying with the Department's standard specification for "CONDUITS AND CONDUIT ACCESSORIES", par. 7 of Section CI, may be installed subject to the following additional conditions:

3.1 Bending and setting of plain-end conduit must be done with special benders and apparatus manufactured for this purpose and which are obtainable from the suppliers of the system. Damaged conduit resulting from the use of incorrect bending apparatus shall be completely removed and any wiring already drawn into such damaged conduits shall be completely renewed at the Contractor's expense.

3.2 Screwed conduit must be used in the following instances:

(a) In flameproof installations.
(b) Load bearing conduit.
(c) For the suspension of luminaries.
(d) Surface mounted conduit.

3.3 Plain-end conduit and associated accessories shall be manufactured of mild steel having a minimum thickness of 1,2 mm and shall comply with SANS 1065. Conduit manufactured of lighter gauge material, i.e. 0,97 mm, will not be permitted.

3.4 All conduit and accessories used in areas within 50 km of the coast shall be hot-dip galvanised to SANS 32 & 121. In inland areas Electro-galvanised or cadmium-plated accessories will be accepted.

4. NON-METALLIC CONDUIT

4.1 INSTALLATION CONDITIONS

Where specified for a particular service, non-metallic conduit may be installed under the following conditions:

4.1.1 All non-metallic conduit shall comply fully with SANS 950 and shall be installed in accordance with Appendix C of the same specification as well as SANS 10142.

4.1.2 Insulated heat-resistant boxes shall be used for outlets of totally enclosed luminaries and other fittings where excessive temperatures are likely to occur.

4.1.3 Luminaries and other fittings shall not be supported by non-metallic conduit or conduit boxes. These fittings shall be secured to the surrounding structure in a way that is acceptable to the Department. Refer to the Department's standard specification for "INSTALLATION OF LUMINAIRES", Section B9.

4.1.4 The conduit shall be supported and fixed with saddles with a maximum spacing of 1 m, even in roof spaces. (Refer to SANS 10142.) The Contractor shall supply and install all additional supporting timbers required.

4.1.5 It shall be possible to rewire the completed installation in the future without undue difficulty.

4.1.6 Non-metallic conduit and fittings shall not be used under the following conditions:

(a) Outside a building (unless protected, or sheltered under eaves).

(b) For mechanical load bearing.

(c) Where they may be subjected to temperatures below -10°C or above 70°C for prolonged periods.

(d) As primary electrical insulation.

(e) In areas where they may be subject to mechanical damage.

(f) For applications other than those for which they are designed.

(g) In concrete slab unless specified to the contrary.

4.2 PAINTING OF CONDUITS

Exposed conduit may be painted with normal oil or PVA paints, but care must be taken to ensure that the paint used does not contain any component that will soften or have any other detrimental effect on the materials from which the conduit and fittings are manufactured.

4.3 CONNECTING OF CONDUIT TO METAL EQUIPMENT/COMPONENTS

When any part of a non-metallic conduit system has to be connected to metal equipment or components (e.g. switchboard, surface socket-outlet or switch box, existing metallic conduit system, etc.) fittings and joints manufactured specifically for this purpose must be used. Non-metallic conduit must not be threaded to fit metallic connectors.

4.4 BENDS

In conduit of nominal size not exceeding 25 mm, bends may be made in accordance with par. 4.5. In all other cases bends must be achieved by the use of accessories that are introduced into the conduit run. Bends shall comply with SANS 10142.

4.5 BENDING

Conduit of nominal size up to and including 25mm may be cold bent by hand provided that the radius of the bend is greater than six times the nominal size of the conduit, and that the external angle of the bend does not exceed 90°. The procedure (which involves the use of a bending spring) should be as follows:

(a) Determine the angle through which the conduit is to be bent.

(b) Warm the cold conduit over the length to be bent by rubbing with hands.

(c) Select a bending spring which matches the conduit size and insert in to the conduit at the point where the bend is required.

(d) Bend the conduit slowly with one motion (either with the hands alone approximately 1 m apart, or across the knee) to double the required angle, release the conduit and, when its position is stable, withdraw the bending spring (turning it in an anti-clockwise direction to reduce its diameter) and gently correct the angle.

(e) Install and secure the conduit immediately following bending.

4.6 ADHESIVE JOINTS

All adhesive joints must be made in a clean dry area. The surfaces of all components to be bonded must be dry and clean.

The insertion depth should be marked on the conduit end and the adhesive applied (by means of a soft clean brush) as quickly as possible to the surfaces to be bonded by brushing lengthwise along the conduit, ensuring that a thin coating of uniform thickness is formed. The joint must be made immediately after the application of the adhesive by pushing the prepared parts squarely together with a twisting motion to the full insertion depth. Care must be taken to avoid squeezing adhesive into the cableway and all excess adhesive must be wiped off.

NOTE: Solvent adhesives contain highly volatile liquids and their containers should not be left open.

4.7 Cutting

A fine-tooth hacksaw should be used to cut conduit to the required length. Each cut end should be square and free from swarf, burrs and loose material. When determining the length of conduit to be cut, allowance must be made for the length of couplings or accessories attached to the conduit. Incorrect determination will cause bulging of the conduit or insufficient joint length.

5. FLEXIBLE CONDUIT

5.1 In installations where the equipment has to be moved frequently to enable adjustment during normal operation, for the connection of motors or any other vibrating equipment, for the connection of thermostats and sensors on equipment, for stove connections and where otherwise required by the Department, flexible conduit shall be used for the final connection to the equipment.

5.2 The installation shall comply with SANS 10142.

5.3 Flexible conduit shall preferably be connected to the remainder of the installation by means of a draw-box. The flexible conduit may be connected directly to the end of a conduit if an existing draw-box is available within 2 m of the junction and if the flexible conduit can easily be rewired.

5.4 Flexible conduit shall consist of metal-reinforced plastic conduit or PVC-covered metal conduit with an internal diameter of at least 15mm, unless approved to the contrary. In false ceiling voids, flexible conduit of galvanised steel construction may be used. connectors for coupling to the flexible conduit shall be of the gland or screw-in type, manufactured of either brass or mild steel plated with either zinc or cadmium.

6. INSTALLATION REQUIREMENTS

6.1 POSITIONS OF OUTLETS

All accessories such as boxes for socket-outlets, switches, lights, etc. shall be accurately positioned. It is the responsibility of the Contractor to ensure that all outlets are installed level and square, at the correct height from the floor, ceiling or roof level and in the correct position relative to building lines and equipment

positions as specified. It shall be the responsibility of the Contractor to determine the correct final floor, ceiling and roof levels in conjunction with the Main Contractor. Draw-boxes shall not be installed in positions where they will be inaccessible after completion of the installation. Draw-boxes shall be installed in inconspicuous positions to the approval of the Department's representative and shall be indicated on the "as built" drawings.

6.2 COVER PLATES

All draw-boxes and outlets shall be fitted with cover plates, either as part of the switch or socket assembly or with blank cover plates if unused. Blank cover plates shall match other cover plates in the same area. Flush mounted cover plates in both ceilings and walls shall overlap the draw-box and edges of the recess. If the fixing lugs are substantially deeper than the finished wall surfaces, suitable coiled steel wire or tubes shall be used as spacers.

6.3 DRAW-WIRES

Galvanised steel draw-wires shall be installed in all unwired conduits e.g. conduits for future extensions, telephone installations and other services.

6.4 BENDS

A maximum of two 90 bends or the equivalent displacement will be allowed between outlets and/or boxes.

Draw-boxes shall be installed at maximum intervals of 15 m in straight runs. All bends shall be made without heating the conduit or without reducing the diameter of the conduit. The inside radius of a bend shall not be less than five times the outside diameter of the conduit. (Refer to SANS 10142,

6.5 WALL SOCKET-OUTLETS

Where more than one socket-outlet is connected to the same circuit, the conduit shall be looped from one outlet box to the following on the same circuit. Where a metal channel is used, the conduit may be installed from the channel directly to the outlet box on condition that the conductors can be looped from one outlet to the next without making any joints in the wires.

6.6 LUMINAIRES

Where the conduit end is used to support luminaries, a ball-and socket type lid shall be fitted to the pendant box in all cases where the conduit is longer than 500 mm. In all other cases a dome lid may be used. Where luminaries are specified which are fixed directly to the pendant box, the pendant box shall be fixed independently of the conduit installation except where the pendant box is cast into concrete.

6.7 FLUSH MOUNTED OUTLET BOXES

The edges of flush mounted outlet boxes shall not be deeper than 10 mm from the final surface. Spacer springs shall be used under screws where necessary.

6.8 EXCESS HOLES

All excess holes in draw-boxes or other conduit accessories shall be securely blanked off by means of brass plugs to render the installation vermin proof.

6.9 DEBRIS

Care shall be taken to prevent debris or moisture from entering conduits during and after installation. Conduit ends shall be sealed by means of a solid plug which shall be screwed to the conduit end. Conduits shall be cleaned and swabbed to remove oil, moisture or other debris that may be present before conductors are installed. Swabs shall not be attached to the conductors.

6.10 Defects

Each length of conduit shall be inspected for defects and all burrs shall be removed. All conduits that are split, dented or otherwise damaged or any conduits with sharp internal edges shall be removed from site. The Contractor shall ensure that conduits are not blocked.

6.11 WITHDRAWAL OF CONDUCTORS

To ensure that all electrical conductors are easily withdrawable from conduits and to ensure that there are no joints in the conductors, the Department's representative will have the right to have the conductors of any circuit removed at his discretion. If the conductors are found to be in a satisfactory condition after having been withdrawn, the Department shall bear the cost of withdrawing and re-installing such conductors. If the conductors are found to have been damaged during installation or removal or if joints are found, they shall be replaced and the cost shall be borne by the Contractor.

7. INSTALLATION IN CONCRETE

7.1 TIMEOUS INSTALLATION

In order not to delay building operations, the Contractor shall ensure that all conduits and accessories which are to be cast in concrete are placed in position in good time. The Contractor or his representative shall be in attendance when the concrete is cast.

7.2 DRAW-BOXES

Draw-boxes, expansion joints and round ceiling boxes shall be installed where required and shall be neatly finished to match the finished slab and wall surfaces. Ceiling draw-boxes shall be of the deep type. In hollow block slabs, rear-entry draw-boxes shall be used. In columns where flush mounted draw-boxes are installed, the conduits shall be offset from the surface of the column immediately after leaving the draw-box.

7.3 ELBOWS

Elbows for conduits of 32mm dia. and smaller and sharp bends will not be allowed in concrete slabs.

7.4 COVER PLATES

Draw-boxes and/or inspection boxes shall, where possible, be grouped together under a common approved cover plate, and must preferably installed in passages or male toilets. The cover plate shall be secured by means of screws.

7.5 NEUTRAL AXIS

All conduits shall be installed as close as possible to the neutral axis of concrete beams, slabs and columns. The conduits shall be rigidly secured to the reinforcing to prevent movement towards the surface of the concrete.

7.6 FIXING TO THE SHUTTERING

All conduits, draw-boxes etc. shall be securely fixed to the shuttering to prevent displacement when concrete is cast. Draw-boxes and outlet boxes shall preferably be secured by means of a bolt and nut installed from the back of the box through the shuttering. Fixing lugs may also be used to screw the boxes to the shuttering. Wire will not be accepted for securing boxes to the shuttering where off-shutter finishes are required. Where fibreglass shuttering is used by the Builder, the equipment shall be fixed to the steel only and no holes shall be drilled or made in shuttering. All draw-boxes and outlet boxes shall be plugged with wet paper before they are secured to the shuttering.

Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.

7.7 CONCRETE FLOOR SLABS

Conduits will not be allowed in concrete floor slabs of boiler rooms (or boiler houses), laundries or other damp areas. All socket outlets and three phase outlets in damp areas shall be supplied from above with galvanised conduit and accessories.

7.8 EXPANSION JOINTS

As far as possible, conduits shall not be installed across expansion joints. Where this is unavoidable a conduit expansion joint shall be provided. (Refer to par. 10)

7.9 SCREEDS

The installation of conduits in floor screeds shall be kept to a minimum. Where conduits are installed in screeds, the top of the conduit shall be at least 20 mm below the surface of the screed. Where the screed is laid directly on the ground, galvanised conduits shall be used. This ruling will always be applicable to the lowest floor of a building. A minimum distance of twice the outside diameter of the conduit shall be left free between adjoining conduits. Conduits shall be secured to the concrete slab at intervals not exceeding 2 m. The Contractor shall ensure that conduits are not visible above the screed where the conduits leave the screed.

7.10 INSPECTION

All draw-boxes, conduits, etc. which are installed in concrete shall be cleaned with compressed air and provided with draw-wires two days after removal of the shuttering. Errors that occurred during the installation of the conduits, or any lost draw-boxes, or blocked conduits shall be immediately reported to the Department by telephone and confirmed in writing in order that an alternative route can be planned and approved by the Department before the additional concrete is cast. Any additional cost shall be for the Contractor's account.

8. SURFACE INSTALLATIONS AND INSTALLATIONS IN ROOF SPACES

Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.

8.1 APPEARANCE

(a) All conduits shall be installed horizontally or vertically as determined by the route and the Contractor shall take all measures to ensure a neat installation.

(b) Where conduits are to be installed directly alongside door frames, beams, etc. that are not true, conduits shall be installed parallel to the frames, beams, etc.

(c) All labels shall be removed from surface mounted conduit.

8.2 SADDLES

Conduits shall be firmly secured by means of saddles and screws and in accordance with SANS 10142. Where saddles are used to secure vertical lengths of conduit connected to surface mounted switch boxes or socket outlet boxes, the saddles shall be spaced so that the intervals between the box and the first saddle, between any two successive saddles and between the last saddle and the ceiling or roof are equidistant. Conduits shall be secured within 150 mm before and after each 90° bend and within 100mm of each outlet box.

8.3 JOINTS

Joints will only be allowed in surface conduit lengths exceeding 3,5 m. Threads shall not be visible at joints of completed installations, except where running joints are used. Running joints will be allowed only when absolutely necessary. All running joints shall be provided with locknuts and shall be painted with red lead immediately after installation.

8.4 ACCESSORIES

Inspection bends or tee pieces shall not be used. Non-inspection type bends may be used in the case of 32mm or 50 mm diameter conduits. All draw-boxes supporting luminaries or other equipment shall be fixed independently of the conduit installation.

8.5 OFFSETS

Where an offset is required at conduit terminations or crossovers, the conduit shall be saddled at the offset.

8.6 CROSS-OVER

Conduit routes shall be carefully planned to avoid crossovers. Where a crossover is inevitable, one conduit only shall be offset to cross the other. Crossovers shall be as short as possible and shall be uniform. Alternatively, crossovers shall be installed in purpose-made boxes. This method shall be employed on face brick walls and in other circumstances where required by the Department.

8.7 PARALLEL CONDUIT

Parallel conduit runs shall be equidistant and saddles shall be installed in line. Alternatively, a special clamp may be used to secure all conduits in unison. In the case of conduits of different diameters, the latter method shall only be used if a purpose-made clamp designed to accommodate the various conduit sizes, is provided.

8.8 PAINTING OF CONDUIT

All surface mounted conduits and accessories shall be painted with two coats of a high quality enamel paint or as otherwise specified. The colour shall comply with the colour code specified for the installation or where no code has been specified, shall match the colour of the surrounding finishes.

8.9 CONDUIT IN ROOF SPACES

8.9.1 In open roof spaces (no ceiling) conduits shall run along the wall plates and the rafters. The installation of conduits suspended between the rafters is not acceptable.

8.9.2 Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1,5 m by means of saddles screwed to the roof timbers for metallic conduit and 1m for non-metallic conduit.

8.9.3 Nails or crampets will not be allowed.

8.9.4 Under flat roofs in false ceilings or where there is less than 900 mm clearance, or in instances where the ceilings are insulated with glass-wool or other insulating material impeding access, the conduit shall be installed in a manner which allows for wiring from below the ceilings.

8.9.5 Conduit runs from switchboards shall terminate in fabricated sheet steel draw-boxes installed directly above or in close proximity to the boards. Refer to the Department's standard specification for "CONNECTIONS TO SWITCHBOARDS", par. 2 of Section B10.

8.9.6 Spare conduits covering the total number of spare ways on switchboards, shall be provided between the boards and the roof draw-box.

8.9.7 Where non metallic conduit has been specified for a particular service, the conduit shall be supported and fixed with saddles with a maximum spacing of 450mm throughout the installation. The contractor shall supply and install all additional supporting timbers in the roof space as required.

8.10 FIXING TO WALLS

Only approved plugging materials such as aluminium inserts, fibre plugs or plastic plugs, etc., and round-head screws shall be used when fixing saddles, switches, plugs etc. to walls. Wood plugs are not acceptable nor should plugs be installed in joints in brick walls.

9. FUTURE EXTENSIONS

9.1 OPEN ROOF SPACES

Conduits intended for future switches and socket outlets, shall terminate 40 mm above the tie beams in roof spaces with more than 900 mm free space. The conduit ends shall be threaded and fitted with a coupling and brass plug.

9.2 CONCRETE SLABS

Conduit ends shall protrude 150 mm from the concrete to facilitate the installation of future extensions above, below or to the side of the concrete slabs. All these conduits shall be connected to a draw-box, which is cast into the concrete within 2 m of the end of the concrete. Conduit ends shall be threaded and fitted with a coupling and brass plug. In cases where holes cannot be drilled through the shuttering to accommodate the conduit end, a deep draw-box with rear entry may be placed over the conduit end.

9.3 COVER PLATES

Unused boxes for switches and socket-outlets shall be covered with metal cover plates. Unused boxes for luminaries shall be covered with round galvanised metal cover plates, which fit tightly against the finished surface. The cover plate shall overlap the outlet box and recess.

9.4 GALVANISED CONDUIT

Galvanised conduit shall be installed at all free ends intended for future extensions. The conduit shall be treated with a paint, which will prevent corrosion and white rust.

10. EXPANSION JOINTS

10.1 Where conduits cross expansion joints in the structure, approved draw-boxes which provide a flexible connection in the conduit installation shall be installed. Refer to the Department's standard drawing No EE3/136/139.

10.2 The draw-box shall be installed adjacent to the expansion joint of the structure and a conduit sleeve, one size larger than that specified for the circuit, shall be provided on the side of the draw-box nearest the joint. The one end of the sleeve shall terminate at the edge of the joint and the other shall be secured to the draw-box by means of locknuts.

10.3 The circuit conduit passing through the sleeve shall be terminated 40 mm inside the draw-box and in the case of metallic conduit, the conduit end shall be fitted with a brass bush. The gap between the sleeve and the conduit at the joint shall be sealed with 'Pratley Tic-Tac' or equal sealing compound, to prevent the ingress of wet cement. In the case of metallic conduit, an earth clip shall be fitted to the conduit projection inside the draw-box and the conduit bonded to the box by means of 2,5mm2 bare copper earth wire and a brass bolt and nut.

10.4 The end of the other circuit conduit shall be secured to the draw-box by means of locknuts and a brass bush in the case of screwed metallic conduit or a standard bushed adaptor for other conduit types.

10.5 In the case of metallic conduit, a 2,5mm^2 bare copper wire shall be installed between the first conduit boxes on either side of the joint, in addition to an earth wire, which may be specified for the circuit. The conduit boxes shall be drilled and tapped and the earth wire shall be bonded to the boxes by means of lugs and brass screws.

10.6 Suitable steel cover plates shall be screwed to draw-boxes installed along the expansion joint. The cover plates shall be installed before the ceilings are painted.

10.7 Where a number of conduits are installed in parallel they shall cross the expansion joint of the structure via a single draw-box. A number of draw-boxes adjacent to each other will not be allowed.

11. CHASES AND BUILDER'S WORK

11.1 Except where otherwise specified the Builder or Main Contractor shall be responsible for the builder's work related to the installation of conduits, outlet boxes, switchboard trays, bonding trays and other wall outlet boxes and will undertake the necessary chasing and cutting of walls and the provision of openings in ceilings and floors for luminaries and other electrical outlets. The Contractor shall notify the Builder or Main Contractor of his requirements and the responsibility lies with the Contractor to ensure that all builder's work is clearly indicated or marked in accordance with his requirements.

11.2 Electrical materials to be built in must be supplied, placed and fixed in position by the Contractor when required to do so by the Builder or Main Contractor. The Contractor shall also ensure that these materials are installed in the correct positions.

11.3 Where no Builder or Main Contractor is available, the Contractor must provide all chases and is required to cover conduits installed in chases by a layer of 4:1 mixture of coarse sand and cement, finished 6 mm below the face of the plaster and roughened. Chases shall be deep enough to ensure that the top of conduits are at least 12 mm below the finished surface of the plaster.

11.4 Where the Contractor is responsible for the cutting of chases or the building in of conduits and other equipment, he will be held responsible for all damage as a result of this work and will be required to make good to the satisfaction of the Department.

This ruling is particularly applicable but not exclusively to the rewiring and renewal of existing installations. Chases shall be made by means of a cutting machine.

11.5 Under no circumstances shall face brick walls or finished surfaces be chased or cut without the written permission of the Department. Where it is necessary to cut or drill holes in the concrete structure, the prior permission of the Department shall be obtained.

SECTION B2

B2. INSTALLATION OF WIRING CHANNELS, UNDERFLOOR DUCTING AND POWER SKIRTING

1. RESPONSIBILITY OF THE CONTRACTOR

The Contractor shall supply and install all wiring channels, underfloor ducting and power skirting as specified or as required for the cable, socket outlet and wiring installation including the necessary supports, hangers, fixing materials, bends, angles, junctions, T-pieces, etc. He shall further liaise with the Main contractor to verify the position of holes and access routes through the structure and finishes.

(Refer to the Department's quality specification for "WIRING CHANNELS, UNDERFLOOR DUCTING AND POWER SKIRTING", Section C2 to determine which types are acceptable).

2. WIRING CHANNELS

2.1 FIXING

The Contractor shall supply and install all hangers, supports or fixings for the channels. Channels up to and including 76 x 76 mm shall be supported at maximum intervals of 600 mm and larger channels at maximum intervals of 1 m. Channel runs shall be carefully planned to avoid clashes with other services and to ensure that all covers can be removed after completion of the entire installation. Purpose made clamps, hangers, etc. shall be used as required. Where it is not possible to support the channels at the specified intervals, they shall be supported in a sound manner to the satisfaction of the Department.

2.2 INSTALLATION IN CONCRETE

Where channels are cast into concrete, the insert type shall be used. Additional spacer blocks shall be used where necessary to prevent ducts from being deformed while the concrete is cast. Channels shall be filled with polystyrene or other suitable fillers to prevent the ingress of concrete and shall be securely fixed in position to the shuttering.

2.3 COVER PLATES

All channels up to and including 127mm width shall have snap-in cover plates of metal or PVC. Cover plates for wider channels shall be of metal and shall be fixed by means of screws at suitable intervals to prevent warping. Cover plates shall be installed over the full length of the channels. Flush mounted wiring channels shall be fitted with overlapping metal cover plates with plastic edge trim to cover irregularities in the wall recess.

2.4 JOINTS

Adjoining lengths shall be aligned and securely joined by means of fishplates fixed by mushroom bolts, washers and nuts or connection pieces that are pop-riveted to both adjoining sections. All adjoining sections shall be rectangular and shall butt tightly. Covers shall fit tightly across the joints.

Where channels cross expansion joints in the structure, suitable expansion joints shall be provided in the channels by means of fishplates pop-riveted or screwed to the channel on one side of the expansion joint and floating freely in the channel on the other side of the expansion joint.

2.5 SUPPORT FOR CONDUCTORS

All conductors in inverted cable channels shall be retained by means of metal clips or metal spacer bars at not more than 1m centres. Where vertical duct lengths exceed 5m, conductors installed in the channels shall be secured at intervals not exceeding 5m to support the weight of the conductors. Clamps shall be provided in suitable draw-boxes for this purpose.

2.6 CONDUIT CONNECTIONS

Conduit connections shall be terminated by means of two locknuts and a brass female bush. Where the channel is wide enough, conduit connections may be made by means of a conduit box and hole through the back or side of the channel. All holes through which conductors pass shall be fitted with bushes or grommets or shall be sleeved.

2.7 INTERNAL FINISHES

Bends and T-joints shall be constructed to ensure compliance with the allowable bending radii specified in SANS 10142, Appendix D in the case of PVC-insulated cables and conductors and shall comply with the relevant specification in the case of other cables. Burrs and sharp edges shall be removed and the inside edges of the joints shall be lined with rubber cement or other suitable rubberised or plastic compound to prevent laceration of the conductor insulation.

2.8 VERMIN PROOFING

All cable channels shall be vermin proofed after installation. Holes shall be covered by means of screwed metal plugs or by means of metal strips, which are bolted, or pop-riveted to the channel. Wooden or other plugs which are driven into holes or other temporary plugs or covers are not acceptable.

2.9 SERVICES

Multiple duct runs or internal metal partitions shall be used where conductors for power, control, communication and other services are present.

3. UNDERFLOOR DUCTING

3.1 GENERAL

3.1.1 Two or three compartment underfloor ducting as specified shall be supplied and installed in the positions and according to the layouts indicated on the drawings.

3.1.2 Three compartment ducting shall have a cross-section of approximately 200 x 32mm, subdivided into three approximately equal compartments, of which the centre compartment shall be used for electrical power distribution with the two outer compartments for telephone and other light current services respectively.

3.1.3 Unless specified to the contrary in the Detail Technical Specification or on the drawings, each compartment shall be provided with openings (occurring in line) at 1,5 m centres to permit installation of pedestals or recessed outlets in accordance with the design of the system. The openings shall have removable, flush, cover plates and shall have prepared fixing holes for future installation of pedestals or recessed outlets. The centre of the openings shall be offset a distance of 200 mm from the building nodule lines.

3.2 JUNCTIONS

The underfloor ducting installation shall be provided with flush cross-over, T-junction and right angle bend draw-boxes installed in the runs of ducting, generally as indicated on the drawings. The junction boxes shall be complete with cross-over of services. The junction boxes shall have nominal 300 x 300mm removable cover plates secured by means of four countersunk screws.

3.3 PEDESTAL UNITS

Where the system accommodates floor pedestal units, these shall consist of pressed steel or die cast aluminium units, suitable for either two or three services, as specified in the Detail Technical Specification. Where the pedestals are installed on vinyl tiled or similar floors which will be subject to washing, a matching waterproofing gasket shall be supplied below each pedestal to render the junction waterproof.

3.4 INSTALLATION

The underfloor ducting, junction boxes, pedestals, outlets and other accessories shall be installed strictly in accordance with the manufacturer's instructions and according to the following procedure:

a) The underfloor ducting shall be installed on a mortar bed, provided by the Plasterer for purposes of levelling the channel to the final floor screed level. The Contractor shall assist the Plasterer in marking out the layout of the ducting to enable the mortar bed to be laid. Final height of the underfloor ducting shall be determined in close liaison with the Builder.

b) After installation of the mortar bed, the components of the underfloor ducting shall be assembled and installed by the Contractor, following which the screeding will be completed.

3.5 TERMINATIONS

Up bends manufactured by the supplier of the underfloor ducting shall be supplied and installed wherever the ducting is terminated at a switchboard, telephone duct or telephone distribution box or where the ducting terminates behind power skirting.

3.6 WIRING

3.6.1 Power circuit wiring shall be installed in the centre compartment of the underfloor ducting. Sufficient slack shall be provided to allow for the installation of a floor pedestal outlet at each opening in the ducting, whether an outlet is specified at that position or not. This provision shall take the form of loops in the wiring, including the earth wire, wherever the openings occur. The loops shall be pushed back into the channel and the cover plates replaced. In the instances where pedestals/outlets are not installed, these provisions shall of necessity only be made for the area covered by the circuit and not for the run from the switchboard.

3.6.2 The entire underfloor ducting installation shall be effectively earthed and bonded together.

3.6.3 Galvanised draw-wires shall be supplied and installed along the entire length of the telephone and light current service compartments of the underfloor ducting. The draw-wires shall be interrupted at the junction boxes, with enough slack left coiled up to facilitate the drawing in of cables by others.

3.7 EXPANSION JOINTS

Where expansion joints in the buildings are crossed by underfloor ducting, expansion joints shall be provided as detailed in par. 2.4 of this section.

4. POWER SKIRTING

4.1 GENERAL

4.1.1 Two or three compartment power skirting as specified shall be supplied and installed in the positions and according to the layouts indicated on the drawings.

4.1.2 The top compartment shall be used for power wiring and switched socket outlets, whilst the bottom compartments shall be for telephone and other light current services.

4.2 MODULE

4.2.1 The power skirting shall be manufactured from 1mm (minimum) thick sheet steel or aluminium (as specified) in approximately 2,5m lengths.

4.2.2 The covers shall be manufactured in modular lengths, as specified in the Detail Technical Specification or otherwise in 1 m lengths and shall be secured to the wall channel by means of toggle or swivel nuts. Snap-in covers are also acceptable.

4.2.3 At the building module lines, covers of specified length or otherwise in 250 mm lengths shall be installed, against which partition walls may be installed, thereby trapping these covers. The removable modular covers shall be installed between these "fixed" covers.

4.2.4 Each modular cover associated with the power compartment shall be punched and prepared for the installation of either a 13A or a 16A, 3-pin standard flush switched socket outlet, whether any is specified or indicated for that module or not. Where socket outlets are not installed, the punched holes shall be blanked off with a metal blanking plate, painted the same colour as the power skirting and installed at the back of the covers. These blanking plates shall be easily removable to permit future installation of socket outlets.

4.2.5 Unless otherwise specified, no provision shall be made on the covers of the telephone or light current services compartments for the installation of sockets.

4.2.6 Factory-made end covers shall be installed at the ends of all runs of power skirting. All internal and external bends or offsets shall be factory-made and shall be installed to provide a neat and workmanlike appearance.

4.3 PAINTING

The power skirting shall be painted in a colour as specified in the Detail Technical Specification. The painting of steel power skirting shall comply with the Department's "STANDARD PAINT SPECIFICATION", Section C39. Aluminium power skirting shall be anodised. The power skirting channels and covers shall be individually wrapped or packed to protect them against damage in transit and before installation.

4.4 SOCKET-OUTLETS

4.4.1 Standard 13 A or 16 A, 3-pin flush switched socket outlets (100 x 50 mm nominal size) shall be supplied and installed in the positions indicated on the drawings and as specified in the Detail Technical Specification.

4.4.2 The switched socket outlets shall be secured to the channel by means of suitable brackets.

4.4.3 After installation of the modular front covers, they shall be screwed to the socket outlets to ensure proper alignment between the two components. Separate standard covers need not be provided for the socket outlets.

4.5 CONDUIT FEEDERS

4.5.1 Conduits for the circuit wiring to the power skirting shall be installed in the floor slab and shall terminate in flush conduit or boxes, behind the power skirting and installed to match the height of the power, telephone and light current services compartments of the skirting.

4.5.2 The wiring/cables shall pass through large diameter holes cut in the rear of the power skirting. The holes shall be suitably bushed or trimmed to prevent damage to the wiring or cables.

4.5.3 Alternatively conduits feeding to the telephone compartment may be terminated in boxes facing upwards in the floor slab immediately below the power skirting, with suitable bushed or trimmed openings being provided through the bottom of the power skirting duct for the cables to pass through. (Applicable only where the power skirting occurs at floor level).

4.6 POWER SKIRTING AT DOORWAYS

Where a section of power skirting is interrupted by a doorway, bridging conduits shall be installed to interconnect the power skirting sections. Where conduits are not specifically indicated, a minimum of 1 x 32mm bridging conduit shall be installed for each of the power, light current and telephone compartments.

4.7 CLEANING

Prior to fitting front covers, the power skirting shall be thoroughly cleaned to remove all dust and rubble and damage to paintwork where this has occurred, shall be repaired.

SECTION B3

B.3 INSTALLATION OF CABLE TRAYS AND LADDERS

1. GENERAL

Cable trays and cable ladders complying with the Department's standard specification for "CABLE TRAYS AND LADDERS", Section C3 shall be supplied and installed where specified and/or where generally suitable for cable distribution.

2. RESPONSIBILITY OF THE CONTRACTOR

The Contractor shall supply and install all cable trays and/or ladders as specified or as required by the cable routes including the necessary supports, clamps, hangers, fixing materials, bends, angles, junctions, reducers, T-pieces etc. He shall further liaise with the Main Contractor for the provision of holes and access through the structure and finishes.

3. SUPPORTS

Cable tray supports shall consist of two steel hangar rods, at least 8mm in diameter, on both sides of the tray with a substantial steel cross-member on the underside of the tray and bolted to the rods. Alternatively, cable trays may be cantilevered from walls on suitable brackets.

4. SPACING OF HORIZONTAL SUPPORTS

4.1 Horizontal trays shall be supported at the following maximum intervals:

(a) 1,2 mm to 1,6 mm thick metal with 12mm to 19 mm return trays. 1m maximum spacing

(b) 2,5 mm thick metal trays with 76 mm return 1,5m spacing.

(c) Cable ladders with 76mm side rail of 2mm thickness and with crossrungs. 1,5m spacing

(d) Metal cable ladders other than c) above, including site manufactured angle iron types 1m spacing

(e) 3 mm thick PVC trays with 40mm return. 1m maximum spacing

(f) 4 mm thick PVC trays with 60mm return 1,5m maximum spacing

4.2 In addition to the above spacing on the longitudinal run, trays and ladders shall be supported at each bend, offset and T-junction.

5. JOINTS

5.1 Joints shall be smooth and without projections or rough edges that may damage the cables. The Contractor will be required to cover joints with rubber cement or other non-hardening rubberised or plastic compounds if in the opinion of the Department joints may damage cables.

5.2 Joints shall as far as possible be arranged to fall on supports. Where joints do not coincide with supports, joints shall be made by means of wrap-around splices of the same material as the tray and at least 450mm long. The two cable tray ends shall butt tightly at the centre of the splice and the splice shall be bolted to each cable tray be means of at least 8 round head bolts, nuts and washers. Splices shall have the same finish as the rest of the tray.

5.3 Splices as described above shall be provided at joints, which do coincide with supports if the loaded tray sags adjacent to the joint due to the interruption of the bending moment in the tray.

6. FIXING TO SUPPORTS

Trays shall be bolted to supports by at least two round head bolts per support. Bolts shall be securely tightened against the tray surface to avoid projections which might damage cables during installation.

7. FIXING TO THE STRUCTURE

7.1 Where installed on concrete or brick, the supports for cable trays and ladders shall be securely fixed by means of at least 2 heavy duty, expansion type anchor bolts. Cantilevered trays shall be supported by a minimum of two 6mm diameter expansion bolts per support.

7.2 It is the responsibility of the Contractor to ensure that adequate fixing is provided since cable trays and ladders that work loose shall be rectified at his expense. The fixing shall take into account site conditions that prevail during installation.

7.3 Where installed on vertical steelwork, cable trays and ladders shall be fixed by means of 6mm diameter bolts and nuts.

7.4 On horizontal steelwork, use may alternatively be made of "CADDY" type fasteners.

7.5 Horizontal trays and ladders shall in general be installed 450 mm below slabs, ceilings, etc. to facilitate access during installation of cables.

7.6 Multiple runs shall be spaced at least 300 mm apart unless a different spacing is specified in the Detail Technical Specification.

8. INSTALLATION OF CABLES

Cables shall be installed adjacent and parallel to each other on the trays with spacings as specified in the Department's standard specification for "INSTALLATION OF CABLES", Section B6, and snaked slightly to allow for expansion. Cables shall present a neat appearance and shall under no circumstances be bunched. Cables shall be clamped at maximum intervals of 3 m when installed on horizontal trays and at maximum intervals of 600 mm when installed on vertical trays.

9. EARTHING

Metal trays and ladders shall be bonded to the earth bar of the switchboard to which the cables are connected. Additional bare copper stranded conductors or copper tape shall be bolted to the tray or ladder where the electrical continuity cannot be guaranteed. These additional conductors or tapes shall always be installed in outdoor applications and in coastal regions.

10. CORROSION

PVC trays shall be used in corrosive atmospheres. All supports shall be adequately protected against corrosion, preferably with a powder coated paint finish in accordance with the Department's "STANDARD PAINT SPECIFICATION", Section C39.

SECTION B4

B.4 FIXING MATERIALS

1. RESPONSIBILITY

It is the responsibility of the Contractor to position and securely fix conduits, ducts, cables and cable channels, switchboards, fittings and all other equipment or accessories as required for the Installation. The Contractor shall provide and fix all supports, clamps, brackets, hangers and other fixing materials.

2. FINISHING

All unpainted supporting steelwork installed by the Contractor shall be wire brushed and given one coat of rust-resisting primer, followed by one coat of high quality enamel paint before any other equipment is fixed.

3. STRUCTURAL STEEL

Supports, brackets, hangers, etc. may only be welded to structural steel members where prior permission of the Department has been obtained. "CADDY" or similar fasteners may be used to fix equipment to structural steel members.

4. SCREWS AND BOLTS

Where holes exist in equipment to be fixed, bolts and fixing screws as specified shall be used. Where sizes are not specified, the largest bolt or screw that will fit into the hole shall be used.

5. WALL PLUGS

Where the fixing holes in brick or concrete walls are smaller than 10mm dia. and where the mass of the equipment is less than 10kg, wall plugs may be used to fix conduits, cables and other equipment. Fibre or plastic plugs shall be used. Wooden Plugs are not acceptable. Aluminium plugs may be used in face bricks. Plugs installed in joints between bricks are not acceptable. A masonry drill of the correct size shall be used to drill holes for plugs. Round-headed screws of the correct diameter to match the specific plug shall be used throughout.

6. ANCHOR BOLTS

Where the fixing holes are 10mm and larger or where the mass of the equipment is 10kg, equipment shall be fixed by means of expanding anchor bolts or by means of bolts cast into the concrete or built into walls.

7. GALVANISED EQUIPMENT

Brass screws bolts and nuts shall be used to fix galvanised equipment.

8. SHOT-FIRED FIXING

8.1 Materials such as metal cable ducts or channels may be fixed against walls and concrete slabs by means of the shot-fired fixings.

8.2 The Contractor shall ascertain whether this method of fixing will carry the weight of the material including conductors, cables and other items of equipment to be installed later. Should it be found that the method of fixing is inadequate and supports tend to loosen, the Contractor will be required to fix the material by an alternative method to the satisfaction of the Department.

8.3 Where the shot-fired method is used, warning signs shall be placed at all entrances leading to the area where this work is in progress. The Contractor shall take all reasonable precautions to prevent accidents. Refer also to The Occupational Health and Safety Act.

8.4 Nails and explosive charges recommended by the manufacturer shall be used throughout.

9. CLAMPS AND BRACKETS

Clamps and brackets used to fix or support equipment such as cable trays, ducts, etc. shall be of a purpose-made type suitable for the specific application. Refer also to the Department's standard specification for "CABLE TRAYS AND LADDERS", Section B3 and "INSTALLATION OF WIRING CHANNELS", Section B2.

SECTION B5

B.5 WIRING

This section covers wiring in approved wire-ways for electrical installations in buildings or other structures under normal environmental conditions for 50 Hz systems not exceeding 600 V.

1. TYPE OF CONDUCTORS

PVC-insulated or equivalent, stranded copper conductors and bare stranded or green PVC-insulated copper earth conductors complying with the Department's quality specification for "PVC-INSULATED CABLES", Section C4, shall be used exclusively. Only where cables are specified or in instances where the exceptions stipulated in SANS 10142 are applicable, may the Contractor deviate from this requirement.

2. WIRE-WAYS

2.1 All unarmoured conductors shall be installed in conduits, cable channels (trunking) or power skirting and shall under no circumstances be exposed. Cable channels and power skirting shall be of metal construction unless specifically approved to the contrary.

2.2 Tenderers must note that common wire-ways will only be permitted for relatively light current-carrying conductors such as lighting and socket-outlet circuits. Refer also to par. 4 below. Heavy current-carrying conductors such as feeders to distribution boards and large power points, must be installed in separate conduits or wire-ways.

3. ORDER OF WORK

Wiring shall only be carried out after the wire-way installation has been completed, but before painting has commenced. Debris and moisture shall be removed from the wireways prior to the installation of the conductors.

4. CIRCUITS

Conductors that are connected to different switchboards, shall not be installed in the same wireway. The wiring of one circuit only will be allowed in a 20 mm dia. conduit with the exception of the wiring from switchboards to fabricated sheet metal boxes close to switchboards in which case more than one circuit will be allowed. For larger conduit sizes the requirements of SANS 10142, shall be met.

5. LOOPING AND JOINTS

A loop-in wiring system where conductors are looped from outlet to outlet, shall be employed. Joints in conductors shall be avoided as far as possible but where it becomes unavoidable, joints will be accepted in cable channels only and not in conduits. Joints shall be soldered or shall alternatively consist of approved ferruling, properly covered with heat-shrink sleeves. The use of PVC insulation tape is not acceptable.

6. GROUPING OF CONDUCTORS

In cases where the conductors of more than one circuit are installed in the same wireway, the conductors of each separate circuit (including earth conductor) shall be taped at intervals of 1m with PVC insulation tape. The conductors of different circuits shall however remain separate in order that any given circuit can be withdrawn. Conductors entering switchboards or control boards shall be grouped and bound by means of plastic or metal bands (not tape).

7. CABLE TRAYS

Conductors may only be installed directly on cable trays if specifically approved by the Department. In these cases cable trays shall be at least 2m above walkways or working areas. Conductors of the same circuit shall be grouped in the same manner as described in the previous paragraph. All the conductors on the

cable tray shall then be tied down securely to the cable tray at intervals of 2m or less by means of plastic or metal bands (not tape).

8. DRAWING-IN OF CONDUCTORS

When conductors are drawn through conduit, care shall be taken that they are not kinked or twisted. Care shall also be taken that the conductors do not come into contact with materials or surfaces that may damage or otherwise adversely affect the durability of the conductor.

9. THREE-PHASE OUTLETS

9.1 With the exception of three-phase outlets, circuits connected to different phases shall not normally be present at lighting, switch or socket outlet boxes. Where this is unavoidable, barriers shall be provided between terminals or connections of the various phases and the box shall be suitably labelled internally to indicate the presence of three phase voltages.

9.2 A neutral conductor shall be installed to all three phase outlets intended for equipment connection, whether sockets or isolators, irrespective of whether the particular equipment normally requires a neutral or not.

10. VERTICAL CONDUIT INSTALLATION

Conductors installed in vertical wire-ways shall be secured at intervals not exceeding 5m to support the weight of the conductors. Clamps shall be provided in suitable drawboxes for this purpose.

11. CONNECTIONS

The insulation of conductors shall only be removed over the portion of the conductors that enter the terminals of switches, socket outlets or other equipment. When more than one conductor enters a terminal, the strands shall be securely twisted together. Under no circumstances shall strands be cut off.

12. EARTHING CONDUCTORS

12.1 When earth continuity conductors are looped between terminals of equipment, the looped conductor ends shall be twisted together and then soldered or ferruled to ensure that earth continuity is maintained when the conductors are removed from a terminal.

12.2 The installation shall be earthed to comply with SANS 10142.

12.3 The installation shall be bonded to comply with SANS 10142.

13. COLOURS

The colours of conductor insulation shall comply with SANS 10142. The colours of conductors for sub-circuits shall as far as possible correspond with the colour of the supply phase. The colours of conductors for wiring to two-way and intermediate switches shall preferably differ from the colour of phase conductors.

14. SINGLE-POLE SWITCHES

Single-pole switches shall be connected to the phase conductor and not to the neutral conductor.

15. SIZE OF CONDUCTORS

Where conductor sizes are not specified, the following <u>minimum</u> conductor sizes shall be used:

Lighting circuits: 1,5mm² and 2.5mm² copper earth conductor

Socket-outlet circuits: 2,5mm² and 2,5mm² copper earth conductor.

Bell circuits: 1,5mm²

Stove circuits: 10mm² and 6mm² copper earth conductor

Clock circuits: 1,5mm²

16. PARTITIONS

16.1 When wiring is installed in removable partitions, the vertical and/or horizontal metal supports of the walls may be utilised for wiring on condition that:

(a) the conductors are not exposed,

(b) the metal supports are properly earthed,

(c) a separate bare earth continuity conductor is drawn in together with the current carrying conductors and is earthed to the metal parts of the switches and/or the socket-outlets, and

(d) conductors are installed in the metal and non-inflammable sections of the partitions.

16.2 Conductors enclosed in a copper braiding (harness wiring) may be installed in removable partitions. The braiding can be used as earth continuity conductor. The wiring shall be joined to the conduit (or cable) installation by interconnecting the conductor and the earth conductors in a draw-box using suitable ferrules and heat-shrink sleeves or screwed terminals.

SECTION B6

B.6 INSTALLATION OF CABLES

This section covers the installation of cables for the distribution of power in buildings, other structures and in ground for system voltages up to 11 kV, 50 Hz.

1. GENERAL

1.1 CABLE TYPES

(a) All cables and jointing and termination accessories used for power distribution shall comply with the Department's Quality Specifications, Section C.

(b) Cables with copper conductors shall be used throughout unless otherwise specified or approved.

(c) All unarmoured cables shall be installed in metal trunking, sleeves or conduit unless clearly specified to the contrary.

(d) XLPE Cables shall only be used in exceptional circumstances with the written permission of the Department.

1.2. COMPETENCE OF PERSONNEL

It is a definite requirement that the Contractor shall only employ personnel fully conversant with cable manufacturer's recommendations for joining and terminating cables.

2. IDENTIFICATION OF CABLES

2.1 Cables shall be identified at all terminations by means of punched metallic bands or marked with labels or tags. (Refer also to SANS 10142).

2.2 The use of PVC tape with punched characters is not acceptable.

2.3 The identification numbers of cables shall be shown on "as built" drawings of the Installation.

3. TRENCHING

3.1 GENERAL

3.1.1 The Contractor shall be responsible for all trenching excavations unless specified to the contrary.

3.1.2 The Contractor shall, before trenching commences, familiarise himself with the routes and site conditions and the procedure and order of doing the work shall be planned in conjunction with the general construction programme for other services and building requirements.

3.1.3 The Contractor shall acquaint himself with the position of all the existing services such as stormwater pipes, water mains, sewer mains, gas pipes, telephone cables, etc. before any excavations are commenced. For this purpose he shall approach this Department's representative, the local municipal authority and any other authority which may be involved, in writing.

3.1.4 The Contractor will be held responsible for damage to any existing services brought to his attention by the relevant authorities and shall be responsible for the cost of repairs.

3.1.5 The Contractor shall take all the necessary precautions and provide the necessary warning signs and/or lights to ensure that the public and/or employees on site are not endangered.

3.1.6 The Contractor shall ensure that the excavations will not endanger existing structures, roads, railways, other site constructions or other property.

3.2 MECHANICAL EXCAVATORS

3.2.1 Power driven mechanical excavators may be used for trenching operations provided that they are not used in close proximity to other plant, services or other installations likely to be damaged by the use of such machinery.

3.2.2

3.2.2 The use of power driven mechanical excavators shall be subject to the approval of the Department. Should the excavator produce trenches that exceed the required dimensions, payment based on volumetric excavation rates will be calculated on the required dimensions only.

3.3 BLASTING

3.3.1 No guarantee is given or implied that blasting will not be required.

3.3.2 Should blasting be necessary and approved by the Department, the Contractor shall obtain the necessary authority from the relevant Government Departments and Local Authorities. The Contractor shall take full responsibility and observe all conditions and regulations set forth by the above authorities.

3.4 ROUTES

3.4.1 Trenches shall connect the points shown on the drawings in a straight line. Any deviations due to obstructions or existing services shall be approved by the Department beforehand. Refer also to par. 10.4.

3.4.2 The Department reserves the right to alter any cable route or portion thereof in advance of cable laying. Payment in respect of any additional or wasted work involved shall be at the documented rates.

3.4.3 The removal of obstructions along the cable routes shall be subject to the approval of the Department.

3.5 SHORING AND WATERLOGGING

3.5.1 The Contractor shall provide shoring for use in locations where there is a danger of the sides of the trench collapsing due to waterlogging or other ground conditions. Refer to the The Occupational Health and Safety Act.

3.5.2 The strength of shoring must be adequate for site conditions prevailing and the shoring must be braced across the trench.

3.5.3 The Contractor shall provide all pumps and equipment required to remove accumulated water from trenches. Water or any other liquid removed shall be disposed of without any nuisance or hazard.

3.6 TRENCHING

3.6.1 Trenching shall be programmed in advance and the approved programme shall not be departed from except with the consent of the Department.

3.6.2 Trenches shall be as straight as possible and shall be excavated to the dimensions indicated in this specification.

3.6.3 The bottom of the trench shall be of smooth contour, and shall have no sharp dips or rises which may cause tensile forces in the cable during backfilling.

3.6.4 The excavated material shall be placed adjacent to each trench in such a manner as to prevent nuisance, interference or damage to adjacent drains, gateways, trenches, water furrows, other works, properties or traffic. Where this is not possible the excavated materials shall be removed from site and returned for backfilling on completion of cable laying.

3.6.5 Surplus material shall be removed from site and disposed of at the cost of the Contractor.

3.6.6 Trenches across roads, access ways or footpaths shall not be left open. If cables cannot be laid immediately the Contractor shall install temporary "bridges" or cover plates of sufficient strength to accommodate the traffic concerned.

3.6.7 In the event of damage to other services or structures during trenching operations the Contractor shall immediately notify the Department and institute repairs. (Refer to par. 3.1.3 and 3.1.4)

3.6.8 Prior to cable laying the trench shall be inspected thoroughly and all objects likely to cause damage to the cables either during or after laying shall be removed.

3.6.9 Where ground conditions are likely to reduce maximum current carrying capacities of cables or where the cables are likely to be subjected to chemical or other damage or electrolytic action, the Department shall be notified before installing the cables. The Department will advise on the course of action to be taken.

3.6.10 Extreme care shall be taken not to disturb surveyor's pegs. These pegs shall not be covered with excavated material. If the surveyor's pegs are disturbed, they shall be replaced by a person qualified to do so.

3.7 DIMENSIONS OF TRENCHES

3.7.1 Cable trenches for one or two cables shall not be less than 300 mm wide and need not be more than 450 mm wide. This dimension shall be valid for the total trench depth.

3.7.2 The width shall be increased where more cables are installed to allow for the spacings stipulated in par. 4.2.

3.7.3 Where trenches change direction or where cable slack is to be accommodated, the Contractor shall ensure that the requirements of the relevant SANS Specification regarding the bending radii of cables are met when determining trench widths.

3.7.4 Trench depths shall be determined in accordance with cable laying depths and bedding thickness.

3.7.5 Payment will be made on a volumetric excavation rate calculated on the basis of the given maximum dimensions or the actual dimensions, whichever is the lesser. Refer also to par. 3.2.2 and 3.7.1 above.

3.8 JOINT HOLES

Where cable joints are required to be made in the course of a cable run, a joint hole shall be excavated of sufficient size to enable the cable jointer to work efficiently and unimpeded.

3.9 BEDDING

3.9.1 The bottom of the trench shall be filled across the full width with a 75mm layer of suitable soil sifted through a 6mm mesh and levelled off.

3.9.2 Only sandy clay or loam soil with a satisfactory thermal resistivity (not exceeding 1,5°C m/W) may be used for this purpose. Sea or river sand, ash, chalk, peat, clinker or clayey soil shall not be used. The use of crusher sand is acceptable.

3.9.3 Where no suitable soil is available on site, the Contractor shall import fill from elsewhere and make all the necessary arrangements to do so. The cost of importing soil for bedding purposes shall be included in the unit rates for excavations.

3.9.4 After cable laying a further layer of bedding shall be provided to extend to 75 mm above the cables.

3.9.5 The bedding under joints shall be fully consolidated to prevent subsequent settling.

3.10 CABLE SLEEVES

3.10.1 Where cables cross under roads, railway tracks, other service areas, etc. and where cables enter buildings, the cables shall be installed in Polyethylene (6mm thickness), asbestos cement pipes or earthenware pipes. Pitch fibre and PVC pipes are not acceptable because of the adhesion that occurs after a period of time between the pipe and the sheathing or outer serving of the cables.

3.10.2 Pipes shall be joined in accordance with the manufacturer's instructions.

3.10.3 Sleeves shall cross roads and railway tracks at right angles.

3.10.4 Sleeves shall have a minimum diameter of 100mm. They shall extend at least 2m beyond the tracks of a railway line or of the outermost tracks where there is more than one line. In the case of roads, the sleeves shall extend at least 1m beyond the road edge or kerb on both sides of the road.

3.10.5 All sleeves shall be graded 1:400 for water drainage.

3.10.6 Cable sleeves shall be installed to the spacings and depths stated in paragraph 4 below.

3.10.7 Galvanised metallic sleeves up to and including 76mm dia. shall be supplied and installed by the contractor.

3.10.8 The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

3.11 BACKFILLING

3.11.1 The Contractor shall not commence with the backfilling of trenches without prior notification to the Department so that the cable installation may be inspected. Should the Contractor fail to give a timeous notification, the trenches shall be re-opened at the Contractor's cost. Such an inspection will not be unreasonably delayed.

3.11.2 For high voltage cables (1 kV to 11 kV) a coloured plastic marking tape shall be installed 400 mm above the cable. The tape shall be yellow, marked with the words "ELECTRIC CABLE/ELEKTRIESE KABEL" in red. These markings shall not be more than 1m apart from centre to centre.

3.11.3 Backfilling shall be undertaken with soil suitable to ensure settling without voids. The maximum allowable diameter of stones present in the backfill material, is 75mm.

3.11.4 The Contractor shall have allowed in his tender for the importation of suitable backfill material if required.

3.11.5 The backfill shall be compacted in layers of 150mm and sufficient allowance shall be made for final settlement. The Contractor shall maintain the refilled trench at his expense for the duration of the contract. Surplus material shall be removed from site and suitably disposed of.

3.11.6 On completion, the surface shall be made good to match the surrounding area.

3.11.7 In the case of roadways or paved areas the excavations shall be consolidated to the original density of the surrounding material and the surface finish reinstated.

3.12 CABLE MARKERS (FOR HV CABLES ONLY, EXCEPT WHERE OTHERWISE SPECIFIED)

3.12.1 Cable markers shall be provided along all HV cable routes but need only be provided along LV cable routes where specified.

3.12.2 Cable markers shall consist of concrete blocks in the shape of truncated pyramids, approx. 300mm high, 150 x 150mm at the top and 250 x 250mm at the bottom.

3.12.3 Brass plates shall be cast into the tops of the blocks in such a manner that they cannot be prised loose. The wording "ELECTRIC CABLE/ELEKTRIESE KABEL" shall be stamped on the brass plates as well as direction arrows and the cable voltage rating.

3.12.4 Cable markers shall be installed on the surface along all the underground routes and shall project 35 mm above normal ground level unless the projected markers could be a hazard to pedestrian or other traffic in which case they shall be installed flush with the surface.

3.12.5 Cable markers shall be installed at the beginning and end of a cable run (e.g. where a cable enters a substation or building), at all changes of direction, above all joints, above cable pipe entries and exits and at intervals not exceeding 50 m along the cable route.

3.12.6 The position of cable markers shall be indicated on the "as built" drawings.

3.13 TRANSNET, PROVINCIAL ADMINISTRATION OR NATIONAL ROAD CROSSINGS

3.13.1 The Contractor shall not trench beneath any railway tracks without the TRANSNET Administration's supervision. The Contractor shall request the Department timeously to arrange for the necessary supervision. The cost of such supervision will be paid for by the Department.

3.13.2 The Department will arrange for the necessary wayleave and permission to cross TRANSNET property and railway tracks, or Provincial or National road reserves and TELKOM Authority approval of proposed cable routes.

3.13.3 The Contractor shall carry out the crossing installation in strict accordance with the TRANSNET and Provincial Administration's requirements and stipulations. Where these requirements are in contradiction with this specification, the Department's ruling shall be sought.

3.13.4 The Contractor shall ensure that he will comply with the various Administration's requirements regarding crossing of Provincial and National roads, especially with regard to the safeguarding of the public. The Contractor shall also provide proof of adequate insurance cover against any claim from any accident as a result of work done by the Contractor during the crossing operation. The Department shall also be indemnified from all liability in this regard.

3.13.5 The Contractor shall liaise with the various Administrations well in advance regarding the intended dates, times and expected duration of the crossing operations and obtain their approval of the programme and method of operation before commencing with the work.

4. INSTALLATION OF UNDERGROUND CABLES

4.1 INSTALLATION DEPTHS

4.1.1 Cables shall be installed at the following minimum depths below final ground level :

Up to 11kV : 8OOmm

4.1.2 All cable depth measurements shall be made to the top of the cable when laid directly in ground or to the top of the duct or sleeve where these are provided.

4.1.3 The above depths shall apply to the top layer where cables are installed in layers.

4.1.4 The Contractor may only deviate from the above depths provided prior authority in writing has been obtained from the Department. In this event the cables shall be protected with a suitable concrete covering.

4.1.5 The depth of cable pipes or ducts beneath railway lines or roads shall be not less than 1,1 m below the formation level.

4.2 CABLE SPACINGS

4.2.1 Cables installed in the same trench shall be laid parallel to each other with the following spacings between cables (LV: up to 1 kV; HV: 1 kV to 11 kV):

LV/LV	:	2 cable diameters
LV/HV	:	150mm minimum

HV/HV : 150mm minimum
LV/HV/PILOT : 1 cable diameter

4.2.2 Where HV and LV cables have to be installed in the same trench, both shall be laid at a depth of 800 mm and then covered with 200mm of soil. The soil shall then be compacted, and then backfilled layer by layer and compacted until the trench is completely backfilled.

4.2.3 Cables for telephones, communication systems and other low voltage systems (less than 50 V) shall be separated from power cables by at least 1m. All control or pilot cables without a lead sheath and steel armouring shall be laid at least 300mm from power cables.

4.2.4 Cables shall not be buried on top of each other unless layers are specified. The minimum spacing between layers shall be 200mm.

4.3 CABLE LAYING

4.3.1 Except where ducts, tunnels or pipes are provided, cables shall be laid directly in the ground.

4.3.2 The cable shall be removed from the drum in such a manner that the cable is not subjected to twisting or tension exceeding that stipulated by the cable manufacturer.

4.3.3 Cable rollers shall be used as far as possible to run out cables. Rollers shall be spaced so that the length of cable in the trench will be totally suspended during the laying operation and sufficiently close to prevent undue sagging and the cable from touching the ground. Rollers shall also be placed in the trench in such a manner that they will not readily capsize.

4.3.4 Cable rollers shall have no sharp projecting parts liable to damage the cables.

4.3.5 Where cables have to be drawn around corners, well-lubricated skid plates shall be used. The skid plates shall be securely fixed between rollers and shall constantly be examined during cable laying operations.

4.3.6 Where cables have to be drawn through pipes or ducts, a suitable cable sock shall be used and particular care shall be exercised to avoid abrasion, elongation or distortion of any kind. In the case of oil filled cables, a cable sock may never be used. Special eyes giving access to the interior of the cable, must be utilised.

4.3.7 The maximum allowable tension when pulling a cable, is 70 N/mm2 of conductor area.

4.3.8 It will be assumed that the price or rates contained in the tender includes for the installation of cables in pipes and ducts or below existing or newly installed services.

4.3.9 The Department shall be informed timeously of the intention to carry out all cable laying operations to allow an inspection of the works by the Department if so required.

5. INSTALLATION OF CABLES IN CONCRETE TRENCHES

5.1 GENERAL

This paragraph covers the installation of cables in building trenches, service ducts, etc. The trenches, ducts, etc. inside buildings will be constructed and installed by others.

5.2 INSTALLATION

Cables shall be installed in one of the following ways:

(a) On horizontal cable trays.

(b) On horizontal metal supports with suitable clamps.

(c) On vertical cable trays or metal. supports fixed to the side of the trench. The cables shall be clamped in position.

Cables shall not be bunched and laid on the floor of the building trenches.

5.3 COVERS

5.3.1 The covering of concrete trenches shall as a rule fall outside the scope of the electrical installation. The Contractor shall however be responsible for the cutting or drilling and smoothing of holes for cables through chequer plates, concrete or other coverings as required.

5.3.2 Cables shall enter and exit the trench through sleeves protruding 300mm beyond the covering. The sleeves shall be permanently secured in position and the open space between the cable and sleeves shall be sealed with a non-hardening, watertight compound.

5.4 FILLED TRENCHES

5.4.1 Where specified, floor trenches shall be filled with fine crusher sand (no river or see sand).

5.4.2 If a sand filling is specified, the cables shall be fixed to non-corroding supports.

5.4.3 Sand-filled trenches other than in substations shall be covered in one of the following ways:

(a) Reinforced concrete covers.

(b) Sand and cement screed.

(c) Removable chequer plates.

5.4.4 Method (a) above shall be used where vehicular traffic may be encountered over trenches. Unless otherwise specified allowance for a mass of 2 tons shall be made.

5.4.5 Cable trenches in substations, switch rooms and generator rooms shall be covered in accordance with the Department's standard specification for "COVERING AND SEALING OF CABLE TRENCHES", Par. 9 of Section B13.

6. FIXING OF CABLES TO TRAYS OR STRUCTURES

6.1 INSTALLATION

Cables may be installed in one of the following ways:

(a) On horizontal cable trays.
(b) Against vertical cable trays with suitable clamps.
(c) Against horizontal or vertical metal supports or brackets with suitable clamps.
(d) On clamps which are fixed to the structure.

6.2 CLAMPS

Suitable clamps (cleats) which will secure cables without damage shall be used. Metal clamps or drilled hard wood blocks shall be used. Clamps shall consist of adjustable metal wings which clamp to a metal support, or consist of two halves that are bolted together. The correct clamp size to fit the cable shall be used. Cables of different sizes nay only be fixed by a common clamp when the clamp is specially made to accommodate the various cables.

6.3 SPACING OF SUPPORTS

Two methods of supporting cables are found in practice. The most generally known method is the restrained installation where the distance between supports is small enough to prevent any noticeable sag in the cable. The alternative method is the unrestrained installation where the distance between supports should be great enough to ensure that there will be obvious sag in each span between supports.

6.4 SPACING OF SUPPORTS OF UNRESTRAINED CABLES

Large single core cables shall always be installed according to this method. Generally, single core cables with conductors exceeding a cross sectional area of 185mm² should be supported at spacings in excess of 2m since the sag between supports will safely accommodate any thermal expansion.

Reducing the spacing between the supports to 1,5m or less shall be avoided at all costs, as expansion cannot be taken up by a change of sag and chances of sheath failure become considerable.

6.5 SPACING OF SUPPORTS OF RESTRAINED CABLES

Additional cleats shall be installed at each bend or offset in the cable run. The maximum distance between supports or cleats for multi-core control cables shall be 20 times the outside diameter of the cable with a maximum spacing of 550mm for unarmoured cables and 30 times the outside diameter of the cable with a maximum spacing of 900mm for armoured cables. Spacing of supports for cables for high voltage lighting shall be in accordance with Table 8 of SANS 10142. A minimum of 20mm ventilation clearance shall be maintained between cables and the wall to which they are cleated.

7. GROUPING AND SPACING OF CABLES IN BUILDINGS AND STRUCTURES

7.1 SPACING CORRECTION FACTORS

Cables shall as a rule be spaced two cable diameters apart, for which no grouping correction factor need be applied.

7.2 CABLES ON DIFFERENT LEVELS

Where parallel cable runs are installed at different levels (e.g. on parallel cable trays) and where the spacing of the layers is not specified, a minimum spacing of 300mm shall be maintained.

7.3 SINGLE CORE CABLES

Where single core cables are installed along a three-phase circuit, the cables shall be installed in trefoil formation and bound together at 300mm intervals.

7.4 HIGH VOLTAGE CABLES

High voltage cables shall be separated from other cables and services throughout the installation and shall as far as possible be installed in separate floor trenches, pipes or metal channels. Where this is not feasible a minimum spacing of 500 mm shall be maintained.

7.5 CABLES FOR OTHER SERVICES

Cables for telephones, communication systems and other low voltage systems (less than 50 V) shall be separated from power cables. In building ducts a physical barrier shall be provided between power cables and cables for other services. Where armoured cables are used for such other services, they shall be installed on separate cable trays or shall otherwise be at least 1m away from power cables. Where unarmoured cables are used for these other services, they shall be installed in separate conduits or metal channels.

TABLE B6.1

Cross-Sectional Area of Cable Conductors (mm^2)	MAXIMUM SPACING OF SUPPORTS (CLEATS) (mm) FOR RESTRAINED CABLES			
	Wire Armoured Cables		Other than Wire Armoured Cables and Unarmoured Cables	
	Horizontal Cable Routes	Vertical Cable Routes	Horizontal Cable Routes	Vertical Cable Routes
1,5	450	750	300	400
2,5	450	750	300	400
4,0	600	750	300	400
6,0	600	750	300	400
10,0	750	900	400	450
16,0	750	1000	400	550
25,0	900	1000	450	550
35,0	900	1000	450	550
Bigger than 35,0	900	1000	450	550

For larger cables the spacing shall be 10 x outside diameter of the cable.

8. TERMINATION AND JOINTING OF CABLES

8.1 GENERAL

8.1.1 Cable ends shall be terminated with glands or in cable boxes with the associated accessories such as clamps, shrouds, etc. complying in all respects with the Department's quality specifications, Section C.

8.1.2 Connection of cables to switchgear shall always be effected in such a way that the various phases, seen from the front of the switchgear will be in the following positions:

No. 1 conductor : left (red) (A)
No. 2 conductor : centre (white) (B)
No. 3 conductor : right (blue) (C)

8.1.3 Exposed armouring shall be covered with bitumen-base paint.

8.1.4 All cable ends shall be supplied with the necessary earth connection.

8.1.5 A channel or other approved means of support shall be provided to remove mechanical stress from the glands.

8.1.6 Cable cores shall be marked with heat-shrunk sleeves where necessary to identify the phases. Refer to SANS 10142.

8.1.7 The current-carrying capacity and breakdown voltage of the cable end shall be the same as for the complete cable.

8.1.8 Cables shall be terminated in accordance with the recommendations laid down by the manufacturers of the cables and glands employed.

8.2 TERMINATION OF PAPER-INSULATED CABLES

8.2.1 The ends shall be terminated in cable end boxes filled with bituminous, cold filling or resin oil semi-fluid compound or heat-shrinkable terminations in accordance with the Department's standard specification for "CABLE END BOXES AND COMPOUND", Section C8 or "CABLE TERMINATIONS AND JOINTS", Section C6.

8.2.2 Heat-shrinkable materials shall only be used in exceptional circumstances with the written permission of the Department.

8.2.3 Before terminating or jointing paper-insulated cables, a test to establish the presence of moisture must be carried out.

The following procedure may be followed:

(a) Place an adequate quantity of cable impregnating oil in a suitable container and heat up to 130 C ± 5 C.

(b) Cut a small length (± 300mm) of the cable concerned and remove the armouring and sheath, taking care not to handle the dielectric in any way.

(c) Dip a section of the outer insulating impregnated paper (belt paper) in the heated oil, taking care not to contaminate the tapes with moisture from the hands. If frothing appears on the surface of the oil, this is a clear indication of the presence of moisture in the paper.

(d) The same procedure should then be repeated on the insulating impregnated paper around the conductors (especially those layers closest to the conductors). Frothing will also indicate the presence of moisture.

(e) Should only a small number of bubbles appear on the surface of the oil, this is an indication of air bubbles on the paper and not moisture since the presence of moisture will result in a series of bubbles rising to the surface of the oil for a number of seconds, until all moisture has been removed.

8.2.4 The armouring shall be bonded to the main earth bar of the switchgear or transformer, but the bond shall be easily removable for testing purposes.

8.2.5 The lead sheath shall be wiped against the conical wiping gland.

8.2.6 All cut cable ends which will be exposed to the atmosphere for more than two hours shall be sealed and wiped to prevent penetration of moisture.

8.3 TERMINATION OF XLPE CABLES

8.3.1 These cables shall only be used in exceptional circumstances and only with the written permission of the Department.

8.3.2 Cross-linked polyethylene cables (XLPE) shall be terminated in accordance with the Department's standard specification for "CABLE TERMINATIONS AND JOINTS", Section C6 unless a pre-fabricated system based on pre-moulded slip-on EPR stress cones is used.

8.3.3 The copper tapes of the earth screen on the cable shall be bonded to the main earth bar of the switchgear or transformer, but the bond shall be easily removable for testing purposes.

8.3.4 The cable shall be firmly secured on the switchgear by means of a clamp to prevent mechanical stress on the cable and terminations.

8.4 TERMINATION OF PVC-INSULATED CABLES

8.4.1 Cable ends shall be terminated by means of adjustable glands in accordance with the Department's standard specification for "GLANDS FOR PVC-INSULATED CABLES", Section C5.

8.4.2 The glands shall be fitted in accordance with the cable and gland manufacturers instructions.

8.4.3 The correct size and type of gland shall be used for the particular cable and application.

8.5 CONNECTION OF CABLE CONDUCTORS

8.5.1 Suitable lugs shall be used, preferably solidly sweated to the cable conductor ends. Lugs may be crimped, using mechanical or pneumatic tools designed for this purpose, on condition that evidence is submitted that the method used complies with the performance requirements of BS 4579, Part 1 : "COMPRESSION JOINTS IN COPPER".

8.5.2 Contact surfaces shall be thoroughly cleaned and smoothed and fixing bolts shall match the hole size of the lug.

8.5.3 Cables that are connected to clamp type terminals where the clamping screws are not in direct contact with the conductor, need not be lugged but the correct terminal size shall be used.

8.5.4 Ferrules shall be used as far as possible where cable conductors are connected directly to equipment with screws against the conductor strands.

8.5.5 When cutting away insulation from cable conductors to fit into lugs, care shall be taken that no strands are left exposed. Under no circumstances may any of the conductor strands be cut away to fit into lugs.

8.6 JOINTS

8.6.1 Joints in cable runs will not be allowed unless specified in the Detail Technical Specification or authorised by the Department.

8.6.2 Jointing shall be carried out strictly in accordance with the manufacturer's instructions and by personnel competent in jointing the types of cables used.

8.6.3 During outdoor jointing operations, the joint bays shall be adequately covered by tents of waterproof material suitably supported. Where necessary a trench shall be excavated around the bay to prevent the ingress of moisture. The sides of the hole shall be draped with small tarpaulin or plastic sheeting to prevent loose earth from falling in during jointing operations.

8.6.4 The joint shall not impair the anti-electrolysis characteristics of the cable.

8.6.5 The Contractor shall notify the Department timeously of the day on which jointing is to be carried out in order than an inspection may be arranged if so required. Any cable joint not inspected by the Department because of insufficient notice being given, shall be opened for inspection and redone at the discretion of the Department at the cost of the contractor.

8.6.6 HV cable joints on paper insulated cables shall be of the compound cast type and the compound used shall comply with the Department's standard specification for "CABLE END BOX FILLING COMPOUND", par. 2 of Section C8.

8.6.7 HV cable joints on XLPE-insulated cables shall be of the heat shrinkable type and shall comply with the Department's standard specification for "CABLE TERMINATIONS AND JOINTS" Section C6, or shall be based on a prefabricated system utilising pre-moulded slip-on stress cones.

8.6.8 LV cable joints shall be of the epoxy-resin type.

8.6.9 Joints shall be fully water and air tight and shall be free of voids and air pockets.

8.6.10 The crossing of cores in joints will not be permitted under any circumstances.

9. TESTING

9.1 Each cable shall be tested after installation in accordance SANS 1507 (up to 1 kV) and SANS 97 (up to 11 kV) as well as the requirements of the Local and Supply Authorities.

9.2 LV Cables shall be tested by means of a suitable megger at 1 kV and the insulation resistance shall be tabulated and certified.

TABLE B6.2

Cable Rating (kV)	TEST VOLTAGE (Applied for 15 minutes) (kV)				
	Paper-insulated cables				XLPE-insulated cables
6,6 11	Between conductors		Conductors to sheath		Conductors to screen
	AC (r.m.s)	DC	AC (r.m.s)	DC	DC
	12 20	18 30	12 20	18 30	11 18

* High Voltage test with DC to 2kV for 1 minute only. Discharge cable slowly via discharge stick (1 minute). Clamp all conductors to earth for 24 hours.

9.3 HV Cables shall be high voltage tested in accordance with Table B6.2 and the exact leakage current shall be tabulated and certified.

9.4 The Contractor shall make all arrangements, pay all fees and provide all equipment for these tests. The cost of testing shall have been included in the tender price.

9.5 The Contractor shall notify the Department timeously so that a representative of the Department may witness the tests.

9.6 On completion of the tests on any cable, the Contractor shall without delay, submit three copies of the certified Test Reports to the Department.

10. MEASUREMENTS

10.1 All measurements for payments shall be made jointly by the representatives of the Department and the Contractor and the Contractor shall obtain the signature of the Department's representative including approval of such measurements.

10.2 No allowance shall be made for the breaking away of the trench sides, other earth movements or for trenches excavated in excess of the stipulated dimensions. Refer also to par. 3.7.5 above.

10.3 The classification shall be as follows:

Very hard rock shall mean rock that can only be excavated by means of explosives.

Hard rock shall mean granite, quartzitic sandstone, slate and rock of similar or greater hardness, solid shale and boulders in general requiring the use of jack hammers and other mechanical means of excavations.

Soft rock and earth shall mean rock and earth that can be loosened and removed by hand-pick and shovel.

10.4 Where very hard rock and hard rock are encountered, the prior approval of the Department shall be obtained before proceeding with the excavation. This requirement is stipulated in order to afford the Department the opportunity to determine whether an alternative cable route is justified.

10.5 All cable lengths indicated in the Detail Technical Specification and/or shown in the cable route drawings shall be regarded as estimates and are given for tendering purposes only. The successful tenderer shall measure actual cable lengths on site before ordering.

10.6 The final price for the supply and installation of all cables will be adjusted, on the basis of the actual lengths of installed cables, in accordance with the unit rates quoted at the time of tendering. Cable lengths shall be measured on site to the nearest 500mm for this purpose and surplus cable will not be paid for.

11. COMPLETION

11.1 The Department reserves the right to inspect the installation at any stage during the course of construction. Such inspections will however not deem the portions inspected as being complete or accepted and the Contractor shall remain responsible for completing the installation fully in accordance with the Contract Documents.

11.2 The Contractor shall carry out a final "as built" survey of the cable routes and present to the Department "as built" route plans of the complete installation. The following information shall be reflected on the plans or submitted as separate schedules with the plans :

(a) Overall length of each cable.

(b) Locations of all joints (if any) in relation to permanent reference points. Dimensions shall be shown and the method of triangulation i.e. two dimensions to each joint, shall be used.

(c) Identification of each cable.

11.3 The works will be deemed to be incomplete until all tests have been conducted successfully and all "as built" drawings and schedules have been handed to the Department.

SECTION B7

B.7 INSTALLATION OF LIGHT SWITCHES AND SOCKET-OUTLETS

1. GENERAL

1.1 STANDARDS

Light switches and socket-outlets shall comply with the Department's quality specification for "LIGHT SWITCHES", Section C10 and UNSWITCHED AND SWITCHED SOCKET-OUTLETS", Section C11. Surface or flush mounted boxes and cover plates, complying with the Department's quality specification for "CONDUIT AND CONDUIT ACCESSORIES", Section C1, shall be provided.

1.2 POSITION OF OUTLETS

Switches and socket-outlets shall be accurately positioned in accordance with the drawings. It is the Contractor's responsibility to ensure that all outlets are installed level and square, at the correct height from the floor and at the correct position relative to building lines and equipment positions as specified. It is the Contractor's responsibility to determine the correct final floor level and ceiling level in conjunction with the Main Contractor.

1.3 COVER PLATES

All switches and socket-outlets shall be fitted with standard metal cover plates. The colour of cover plates shall be as specified or shall otherwise match the surrounding finishes as closely as possible. Unless specified to the contrary, ivory cover plates shall be installed on painted walls. Cover plates in the same area shall have the same colour. Flush mounted cover plates shall overlap the draw-box and edges of the recess. Cover plates shall under no circumstances be cut unless authorised by the Department.

1.4 ESCUTCHEON PLATES

Where flush mounted switches or socket-outlets are installed in special wall finishes e.g. wood or board panels, acoustic tiles or other cladding, etc. and where the wall finishes must be cut to accommodate the switch, it may be necessary to fix an escutcheon plate to the wall to cover the cut-outs. The escutcheon plate shall fit closely around the outlet boxes and shall be fixed independently of the boxes and cover plates. Bevelled cover plates shall be fixed to the outlet boxes and shall fit firmly against the escutcheon plate.

1.5 APPEARANCE

The sides of adjacent switches, plugs, push-buttons etc. shall be parallel or perpendicular to each other and uniformly spaced. A common escutcheon plate shall be placed around flush mounted outlets and accessories where the standard cover plates do not cover the cut-outs in the finishes.

1.6 DEEP BOXES

Where switch or socket-outlet boxes have been set deep, spiral type steel wire spacers shall be used to fix the yoke of the switch or socket.

2. INSTALLATION OF SOCKET-OUTLETS

2.1 MOUNTING HEIGHT

Unless specified to the contrary, socket-outlets shall be installed at the following heights above finished floor level, measured to the centre of the outlet:

Flush mounted in general:	300mm
Showrooms, shops, servants quarters:	1,4m
Domestic kitchens, tea kitchens:	1,05m
Commercial kitchens:	1,4m
Factories, workshops, garages:	1,4m

2.2 WALLS

In cases where socket-outlets must be mounted at a nominal height of 300mm and where the lower portion of the wall consists of face bricks and the upper portion is plastered, the outlets shall be installed in the plastered portion of the wall. If however the plastered portion of the wall commences 500mm or more above floor level the outlets shall be installed in the face bricks. Where a wall has different surface finishes the outlets shall be installed within the same finish and not in the dividing lines between the different wall finishes. All outlets shall be installed at least 150mm away from door frames.

3. INSTALLATION OF LIGHT SWITCHES

3.1 MOUNTING

Light switches shall be installed 1,4m above finished floor level unless specified to the contrary. Mounting heights given shall be measured from the finished floor level to the centre of the switch. All single switches shall be installed with the long side of the toggle vertical.

3.2 DOORS

Unless specified to the contrary, switches adjacent to doors shall be installed on the side containing the lock. If the position of the lock is not shown on the drawings, the position shall be verified before the switch-box is installed. Switch boxes in brick or concrete walls shall be installed 150mm from the door frame. Light switches installed in partitions or door frames shall be of the type designed for that purpose.

3.3 WALLS

Where the lower portion of a wall is face brick and the upper portion plastered, light switches shall be installed wholly in the plaster provided that the lower edge of the plaster is not higher than 1,6m above the finished floor level. In general where different wall finishes are used in the same area. Switches shall be installed within the same finish and not on the dividing lines between finishes.

3.4 PARTITIONS

Light switches installed in partitions shall preferably be of the type designed to be accommodated in the partition construction. Switches installed in the metal supports do not require switch boxes. Switches may not be flush mounted in partition walls without switch boxes.

3.5 WATERTIGHT SWITCHES

Switches that are exposed to the weather or are installed in damp areas, shall be of the watertight type complying with the Department's quality specification for "WATERTIGHT SWITCHES", par. 3 of Section C1O.

3.6 MULTIPLE SWITCHES

Where several switches are required in one position, multi-lever switches in a common switch box shall be provided wherever possible. All circuits wired into this box shall be on the same phase in order that voltages in excess of 250 V are not present in the box. Where it is not possible or practical to do this, barriers shall be installed and a label shall be prominently displayed within the box stating that voltages in excess of 250 V are present.

SECTION B8

B.8 PHOTO-ELECTRIC DAYLIGHT SENSITIVE SWITCH FOR OUTSIDE LIGHTING

1. INSTALLATION

1.1 The outside lighting of each individual building i.e. light circuits marked "T" on the drawings, shall be controlled by photo-electric daylight sensitive switches.

1.2 The positions of the switches as indicated on the drawings are provisional and the exact positions shall be confirmed with the representative of the Department on site.

1.3 Individual outside lighting circuits on a building may be connected directly to the daylight sensitive switch.

1.4 Where two or more lighting circuits are to be controlled by a single daylight sensitive switch, a contactor actuated by the unit shall be provided in the switchboard.

1.5 A by-pass switch enabling the lights to be turned on at any time, shall be provided.

1.6 Standard control circuits are indicated in fig. B8.1 and B8.2.

2. CONSTRUCTION

2.1 The unit shall comprise a photo cell, thermal actuator and change-over switch. The cover of the unit shall be manufactured from a tough, durable material providing protection against tampering. The cover shall have good weathering properties. It shall be ultraviolet-resistant and shall not deteriorate when exposed to sunlight for prolonged periods.

2.2 The unit shall be of the wall mounting type and shall be supplied complete with a suitable bracket.

2.3 The operational level shall be factory preset for "ON" at a light level of approximately 54 lux and "OFF" at approximately 108 lux. Voltage variations shall not materially affect the operational levels.

2.4 A time delay of not less than 15 seconds shall be provided to prevent the unit from functioning due to short period changes in illumination.

2.5 The unit shall be effectively safeguarded against voltage surges by means of a suitable surge protector which shall preferably form an integral part of the unit.

SECTION B9

B.9 INSTALLATION OF LUMINAIRES

1. POSITIONS

The mounting positions of luminaries shall be verified on site. All luminaries shall be placed symmetrically with respect to ceiling panels, battens, beams, columns or other architectural features of the space unless otherwise indicated. The layout as shown in the Documents shall generally be adhered to but any discrepancies or clashes with structural or other features must be referred to the Department, before commencing erection of the installation.

2. COVER PLATES

Cover plates shall be fitted over all draw-boxes and outlets intended for luminaries that are not covered by the luminaries canopy, lamp-holder, ceiling rose or similar accessories.

3. FIXING TO DRAW-BOXES

Where an outlet box or draw-box provides the necessary support for a luminaries, all luminaries with the exception of fluorescent luminaries mounted against ceilings, shall be fixed directly to the box. Fluorescent luminaries and luminaries with a mass in excess of 10kg shall however be suspended independently of the outlet box.

4. HANGERS AND SUPPORTS

Where provision has not been made for the fixing of luminaries, the Contractor shall supply the necessary supports, hangers, conduit extensions, angle brackets or any other fixing method approved by the Department.

5. SUSPENDED LUMINAIRES

The necessary hangers shall be provided where luminaries which are of the non-suspension type have to be fixed below false ceilings or roof slabs. The use of 20mm conduits fixed to the roof slab or ceiling is preferred. Provision shall be made for adjustments to enable the levelling of luminaries. Suspended conduits shall be fixed to the ceiling by means of screwed dome lids, bolts and nuts. Ball-and-spigot type domelids shall be used where conduit lengths exceed 600mm. Wiring shall be installed in the conduit hangers.

6. SUSPENDED WIRING CHANNELS

Luminaries (especially fluorescent luminaries) may also be suspended from ceilings by means of suspended metal channels. The metal channel may be supported by conduits or threaded rods. Should metal rods be utilised, these shall be screwed to anchor bolts fixed in the roof slab. Wiring shall either be installed in conduits fixed to the metal channel or in the metal channels and covered with a suitable cover plate. Purpose-made clamps shall be used to fix the luminaries to the cable channel.

7. CEILING BATTENS

Where wooden blocks are used to suspend luminaries, ceiling battens shall not be cut. The wooden blocks shall be cut to fit around battens and shall be screwed to the ceiling. Battens may however be cut where fluorescent or incandescent luminaries with metal canopies have to be installed against a false ceiling.

8. GLASS-BOWL LUMINAIRES

Unless specified to the contrary, suspended glass-bowl luminaries shall be installed with the underside at least 2,1 m above finished floor level.

9. FLUORESCENT LUMINAIRES FIXED TO CONCRETE SLABS

Fluorescent luminaries to be installed directly against concrete slabs or walls shall be securely fixed to the outlet box and at two additional points. Shot-fired fixings are not acceptable. Where approved, fluorescent luminaries may be installed against metal wiring channels in which the wiring is housed. The channel fixing may in this case be shot-fired. Purpose-made fluorescent fixing adaptors shall be used to fix luminaries to cable channels.

10. FLUORESCENT LUMINAIRES FIXED TO CEILINGS

10.1 In all cases where luminaries are fixed to false ceilings, the Contractor shall ensure that the ceiling is capable of carrying the weight of the luminaries before commencing installation. Should any doubt exist in this regard, the matter shall be referred to the Department.

10.2 In cases where the weight of the luminaire is not carried by the ceiling but by a support or other suspension method, provision shall be made to prevent relative movement between the ceiling and luminaire, ceiling rose or connection point.

10.3 Surface mounted fluorescent luminaries shall fit firmly against the ceiling brandering without leaving gaps between luminaire and ceiling. The luminaire shall be fixed directly to the ceiling by means of brass plated round-head wood screws and washers.

10.4 In the case of tiled ceilings with exposed or concealed T-section supports, surface mounted luminaries shall be fixed only to the tiles by means of butterfly screws or bolts with nuts and washers. The tiles shall be suitably reinforced.

10.5 Luminaries may alternatively be fixed to metal cross-pieces resting in the ceiling tees.

10.6 Drilling of holes in ceiling tees to support luminaries will not be allowed.

10.7 Luminaries shall be fixed in neat relation to the ceiling lay-out.

11. CONTINUOUS ROWS OF LUMINAIRES

In cases where fluorescent luminaries are installed in tandem, only one connection outlet need be supplied per circuit. All luminaries shall be coupled to one another by means of nipples or brass bushes and locknuts to ensure that wiring is not exposed and that earth continuity is maintained. Luminaries on the same circuit may be wired through the channel formed by the luminaire bodies. In this case silicon-rubber insulated conductors shall be used and internal connections shall be made at porcelain terminal blocks. "SCREW-IT" or similar connectors may only be used if prior permission is obtained from the Department. The wiring for any other circuits or outlets, even though these may be in the same row, may not be installed through the luminaire bodies. The Contractor shall ensure that continuous rows are straight and parallel to the relevant building lines.

12. RECESSED LUMINAIRES

12.1 Where recessed luminaries are specified, the Contractor shall maintain close liaison with the ceiling Contractor. In the case of tiled ceilings, the luminaries shall preferably be installed while the metal supports are being installed and before the tiles are placed in position. The Electrical Contractor shall be responsible for the co-ordination of the cutting of ceiling tiles with the other contractors concerned.

12.2 All mounting rings and other accessories shall fit closely into cut-outs to ensure a proper finish.

12.3 In all false ceilings where wiring channels are used, recessed luminaries shall be connected to the wiring channels by means of unswitched 5 A socket-outlets.

12.4 The following requirements shall be adhered to:

(a) Socket-outlets used shall comply with the Department's quality specification for "UNSWITCHED AND SWITCHED SOCKET-OUTLETS", par. 4 of Section 11 and shall be of 5 A minimum rating.

(b) The connector cord attached to the luminaire may not exceed 3m in length and shall consist of 1,5mm² minimum, 3-core, PVC-insulated flexible cord.

(c) The 5A socket-outlets shall be positioned such that they are not more than 600mm above the false ceiling.

13. SPECIAL CEILINGS

In cases where special ceilings e.g. aluminium strips, decorative glass, metal leaves, etc. are to be installed, the Contractor and the Manufacturer of the ceiling shall agree upon the method of fixing of luminaries in the ceiling.

14. BULKHEAD LUMINAIRES

Surface mounted bulkhead luminaries shall not be screwed directly to conduit ends. The conduit shall terminate in a round draw-box at the top or rear of the luminaire. The PVC-insulated conductors shall terminate in a porcelain terminal strip in the draw-box. Silicon-rubber-insulated conductors shall be installed from the terminal strip to the luminaire lamp-holder. "SCREW-IT" or similar connectors may only be used if prior permission is obtained from the Department.

15. TYPE OF CONDUCTOR

PVC-insulated conductors, unless protected by an approved heat-resistant sheathing, shall not be used where the temperature of the insulation is likely to exceed 70°C. In unventilated luminaries or luminaries capable of housing incandescent lamps over 60W, the interconnecting wiring from the lamp-holder to the circuit wiring shall consist of silicon-rubber insulated conductors. Silicon-rubber insulated conductors shall be used exclusively in the case of high bay fittings. Refer also to the provisions of SANS 10142.

16. WIRING OF LAMPHOLDERS

The central terminal of Edison Screw (E.S.-type) LAMP-HOLDERS shall be connected to the phase conductor and the screwed housing to the neutral conductor.

17. HIGH BAY LUMINAIRES

17.1 High bay luminaries shall be securely suspended from the roof structure.

17.2 The luminaries nay be fixed to suspended wiring channels containing the wiring on condition that:

(a) rigid channels with a maximum width of 42 mm be used,

(b) the channels are supported at intervals that will prevent sag or warp and

(c) the channels are large enough to accommodate the wiring.

17.3 Luminaries may be suspended from metal roof trusses with the aid of "CADDY" or similar fasteners.

17.4 Luminaries shall preferably be connected to unswithed 5A socket outlets. Silicon-rubber insulated flexible cord shall be used exclusively to connect the luminaire to the outlet.

17.5 A safety chain to keep the luminaire from falling when loosened shall be provided.

SECTION B10

B.10 CONNECTIONS TO EQUIPMENT

1. GENERAL

This section covers the final electrical connections to switchboards and various equipment in general electrical installations under normal environmental conditions for system voltages up to 600 V. Refer also to the Department's standard specifications for "WIRING", Section B5 and "INSTALLATION OF CABLES", Section B6.

2. CONNECTIONS TO SWITCHBOARDS

2.1 CONDUIT ENTRIES

2.1.1 Where sufficient space for conduit entries as well as adequate space for future conduit entries is available, conduits may be terminated directly on the switchboard.

2.1.2 Alternatively, conduits connected to switchboards shall terminate in a common fabricated sheet steel draw-box installed in the vicinity of the switchboard. In open roof spaces this draw-box shall be placed in a roof space of not less than 900mm clearance.

2.1.3 Lighting and socket-outlet circuits may be separately grouped in common conduits or metal ducts (trunking) from the distribution board to the draw-box. The drawbox shall be of sheet steel with a minimum thickness of 1,6mm and shall be fitted with a removable cover plate.

2.2 FLUSH MOUNTED SWITCHBOARDS

Where flush mounted switchboards are required, the recessed switchboard tray shall be built into the brick or concrete wall. All conduits from the floor or roof shall be fully recessed and shall be bonded directly to the tray by means of locknuts on both sides and the ends of the conduits fitted with a brass bush.

2.3 SURFACE MOUNTED SWITCHBOARDS

Where surface mounted switchboards are specified but where the conduits can be fully recessed, the conduit shall be connected to a recessed connection box installed behind the switchboard. An opening with the same dimensions as the connection box shall be cut in the back of the switchboard and fitted with a suitable grommet.

2.4 SPARE CONDUITS

Where conduits from a switchboard run into a false ceiling space above the board, a minimum of two 25mm and two 20mm spare conduits shall be installed into the ceiling space immediately above the board.

2.5 CABLE CONNECTIONS

2.5.1 Where underground cables are to be connected to switchboards, it shall be the responsibility of the Contractor to ensure that metal, earthenware, asbestos-cement or other approved sleeves are built in correctly to enable installation and connection of the cable to the switchboard.

2.5.2 PVC or pitch fibre sleeves are not acceptable - refer to par. 3.10 of the Department's standard specification for "INSTALLATION OF CABLES", Section B6.

2.5.3 Sleeves shall tie installed with a fall from inside to outside of the building to facilitate drainage. The sleeves shall be sealed with a non-hardening compound after installation of the cables to render the installation vermin proof and waterproof.

2.5.4 A metal cable channel with removable metal cover plate shall be installed by the Contractor and shall extend from the switchboard to the floor or into the ceiling void as required. The channel shall

coincide with the position of sleeves. The channel shall be flush mounted except in the case of surface mounted switchboards and then only with the permission of the Department's representative.

2.5.5 The cable channel shall be large enough to permit the installation of cable glands and future cables, particularly where spare sleeves have been provided.

2.5.6 The colour of the channel cover shall match that of the associated switchboard.

2.6 CABLE TRENCHES

Where cables in floor trenches have to be connected to wall mounted switchboards, approved sleeves or conduits shall be installed from the side of the trench to the bottom of the switchboard. These sleeves shall be positioned and fixed before the concrete is cast.

3. CONNECTIONS TO MOTOR DRIVEN EQUIPMENT.

3.1 An isolator or starter containing an isolator shall be installed within 2m of motor driven equipment. The requirements of SANS 10142 shall be met. If this isolator cannot be installed on a wall, switchboard or other suitable place, an approved free-standing pedestal shall be provided. The pedestal shall be 1m high and outside normal walkways, access routes, etc.

3.2 The connection to the equipment shall be carried out as follows:

(a) Metal reinforced plastic or PVC-covered flexible metal conduits with individual conductors or a multi-core PVC insulated cable and separate bare earth conductor installed inside the conduit may be used. The flexible conduit shall not exceed 600mm. Screwed conduit shall be used from the end of the flexible conduit to the isolator and/or starter. Refer to the department's standard specification for "FLEXIBLE CONDUIT", Section B1, par. 5.

(b) Multi-core armoured PVC- or rubber-insulated cable and earth conductor. The installation and termination of the cables shall comply with the Department's specification for "INSTALLATION OF CABLES, Section B6.

(c) Cables and flexible conduits shall be provided with sufficient slack to allow positional adjustment of the equipment.

3.3 Supply cables to equipment may not be installed across floors which are for general use.

4. CONNECTIONS TO WATER HEATERS

4.1 Each water heater shall be connected to a separate circuit with a separate earth conductor.

4.2 The conduit from the switchboard to the water heater shall terminate in a draw-box within 1 m of the water heater terminals. The connection from the draw-box shall be conductors in conduit or PVC-insulated cable. Only in instances where heaters are mounted out of normal reach may flexible conduit and round boxes with dome lids be used for the final connection.

4.3 Three-phase supplies to fixed storage water heaters shall be in accordance with the wiring diagram, Fig. B10.1.

4.4 The mounting of the water heater and the provision of the water connections will be undertaken by others. The Contractor shall ensure that the elements and thermostats can easily be replaced.

4.5 Before testing a water heater, the Contractor shall confirm with the Plumbing Contractor that the unit is filled with water.

4.6 Unless otherwise specified in the Detail Technical Specification, the wiring of hot water heater circuits not exceeding 4 kW shall consist of 4mm² conductors and 2,5mm² earth conductor.

4.7 Unless it is specified that isolators for water heaters shall be provided in the switchboard, a local isolator shall be provided for each water heater. In the case of water heaters not exceeding 4 kW, a 30 A double-pole metal-clad isolator shall be surface mounted over the flush conduit outlet box.

5. CONNECTIONS TO HEATERS, FANS AND AIRCONDITIONING UNITS

5.1 ISOLATORS

A flush mounted suitably rated double-pole isolator shall be provided within 1m of the unit. Where the equipment is mounted out of reach, the isolator shall be installed at 1,5m above floor level. Only where units are mounted in easily accessible positions and where an isolating switch is incorporated in the unit, may this isolator be omitted. Where flush isolators are used, flush conduit shall be installed to link with the equipment outlet point. Flexible cords of sufficient rating may be used for the final connection to the equipment.

5.2 WIRING

The minimum conductor size to be used shall be 4 mm^2. Each fan, heater or air-conditioning unit shall be on a separate circuit.

5.3 FLUSH MOUNTED CONVECTION HEATERS

The heater frame or tray shall be built or cast into the wall at a height such that the underside of the heater is at 250mm above floor level. Conduits shall terminate on the frame near the terminals.

5.4 SURFACE MOUNTED EQUIPMENT

5.4.1 Connections to surface mounted equipment shall consist of a draw-box located in the vicinity of the terminals of the unit. In workshops and industrial areas the connections shall be made by means of flexible conduit connected to dome lids on the draw-box. Conductors shall be connected directly to the unit.

5.4.2 In non-industrial applications PVC-insulated 3-core flexible cables may be used for the connection.

5.4.3 Where flexible cables are used, a bush shall be provided at the rear of the unit for cable entry and a bush and clamp (or gripper gland) at the draw-box. The clamp shall tightly grip the outer insulation of the cable to prevent tension on the connections between cable and conductors in the draw-box.

5.4.4 Where heaters or air-conditioning units are situated above power skirting, the isolator shall be installed in the power skirting and the flexible cable or cord to the unit shall be installed in the power skirting through a gripper or compression gland. The cable shall be made as short as practical and shall be neatly saddled to the surface of the wall.

5.5 RADIANT HEATERS

The installation of radiant heaters and asbestos heaters, where specified, shall comply with the requirements of paragraph 5.4, with the exception that they shall be mounted on spacers, 25mm away from the mounting surface.

5.6 FAN HEATERS

5.6.1 The contractor shall allow for the supply, installation and electrical connection of the fan heaters as indicated on the drawings. The fan heaters shall be rated at 3 kW and shall be complete with control units.

5.6.2 The heaters shall be secured by means of approved expansion bolts at 2,4m above floor level in positions as shown, with the control units at 1,5m above floor level, directly below the unit.

5.6.3 The fan heater shall be installed on a box directly behind the unit.

5.6.4 Each connection shall be protected by means of a single-pole circuit-breaker on the associated switchboard.

5.6.5 Brass bushes shall be provided to protect the wiring at the rear cable entries to the control unit and fan connection box.

6. CONNECTIONS TO UNDERFLOOR HEATING

6.1 Where underfloor heating cable is specified, the Contractor shall supply the cable and thermostats which shall be purchased from a specialist supplier. The cable shall be laid by the specialist supplier and connected by the Contractor. The Contractor shall also be responsible for testing of the cables prior to their being covered by the screed and immediately thereafter. Details of circuit wiring and control of underfloor heating will be specified in the Detail Technical Specification.

6.2 PVC-insulated heating cable with a rating of not higher than 13 W per linear metre shall be used. Thermal insulation will be provided by the Builder.

6.3 The capacity of the heating cable shall he sufficient to give a 20°C temperature rise with an outside ambient temperature of 5°C.

6.4 The total heating load shall, however, not he more than 135 W/m².

7. CONNECTIONS TO INCINERATORS

7.1 GENERAL

This section covers connections to incinerators used for domestic purposes in buildings. Unless specified to the contrary, the supply and installation of incinerators will form part of the electrical installation and shall comply with the Department's quality specification, "INCINERATORS", SECTION C14.

7.2 FLUSH MOUNTED INCINERATORS

Where flush mounted incinerators have been specified, the Contractor shall supply the mounting tray to the Builder in good time for it to be built into the structure.

7.3 MOUNTING HEIGHT

Unless specified to the contrary, incinerators shall be installed with the bottom 1m above finished floor level.

7.4 ISOLATOR

A flush mounted 30 A double-pole isolator shall be installed approximately 1,5m above the finished floor level adjacent to each incinerator. The isolator cover plate shall wholly fall within either the tiled or plastered surface of the wall. Unless specified to the contrary, the cover plate shall be finished in white baked enamel. An engraved label shall be provided at each isolator marked as follows:

"SWITCH OFF TO CLEAN AND REMOVE ASH"
"SKAKEL AF VIR SKOONMAAK EN ASVERWYDERING"

7.5 FLUES

The Contractor shall supply flue pipes to the Builder for installation. Two bends and an "H" piece exhaust canopy shall be allowed for each flue pipe.

7.6 EXHAUST FANS

Where more than 5 incinerators are connected to the same flue or where more than two 90° bends are used in the flue, an exhaust fan shall be installed at the flue outlet. In addition a small fan must be provided at each incinerator.

7.7 WIRING

Single incinerators shall be connected by means of 2 x 4mm² PVC insulated conductors and a 2,5mm² bare copper earth conductor in a 20mm conduit. Each incinerator shall be connected to a separate circuit where a common exhaust fan is not used. Where a common exhaust fan is needed, the following applies:

(a) All fans and incinerators connected to the same flue shall be on the same circuit.

(b) The current rating of the circuit-breaker shall be sufficient to allow the simultaneous operation of all the fans and 50 % of the incinerators.

(c) A 30 A double-pole isolator shall be flush mounted adjacent to each incinerator as described in paragraph 7.4. However if the current rating of the circuit-breaker protecting the circuit is larger than 15A, a 15A fuse and fuse holder shall be installed at each incinerator in addition to the isolator. The draw-box and cover plate for the isolator shall be large enough to accommodate the isolator and fuse. Alternatively, a 15A circuit-breaker may be installed adjacent to each incinerator in lieu of the isolator and fuse.

(d) The circuitry shall be arranged to ensure that all the fans will operate when any one of the incinerators is switched on.

(e) Earth leakage protection shall be installed on all incinerator circuits.

8. CONNECTIONS TO COOKING APPLIANCES

8.1 Unless specified to the contrary, the circuit connection to each cooking appliance shall consist of:

(a) 2 x 10mm² PVC-insulated conductors and 6mm² bare copper earth conductor for single phase connections, or

(b) 4 x 4mm² PVC-insulated conductors and 2,5mm² bare copper earth conductor for three phase connections.

8.2 A 60A double pole or 30A triple pole micro-gap isolator flush mounted in a wall outlet box, shall be installed 1,5m above floor level to the left or right of the appliance in accordance with SANS 10142. A white baked enamel cover plate shall be provided, situated wholly on the tiled or plastered surface as applicable.

8.3 The conduit shall terminate 450mm above floor level behind the appliance position. The conduit end shall be approximately 75mm long and shall face downwards. Connections from the conduit end to the appliance shall be installed in accordance with SANS 10142. Sufficient slack shall be provided in the flexible connection to move the appliance 600mm away from its normal position for cleaning or maintenance.

8.4 Alternatively a 45A, 3-pin socket-outlet may be mounted on a round draw-box 450mm above floor level. The connection to the appliance shall consist of a plug and 10mm², rubber-insulated and sheathed cable in accordance with SANS 1520. The cable shall be long enough to enable the appliance to be moved 600mm from its normal position for cleaning or maintenance.

8.5 Crimped or soldered lugs shall be provided on all conductors intended for connection to cooking appliances.

8.6 Each appliance shall be connected to a separate circuit. A separate earth wire shall be provided for each appliance.

SECTION B11

B.11 EARTHING

This section covers the earthing of electrical installations in buildings or other structures. The total earthing system of any electrical installation shall be in complete accordance with SANS 10142.

1. GENERAL RECOMMENDATIONS ON THE PRACTICAL INSTALLATION OF EARTH ELECTRODES

1.1 REQUIREMENTS OF AN EFFECTIVE EARTH

1.1.1 An effective earth must prevent dangerous over voltages arising between metallic structures, frames, supports or enclosures of electrical equipment and the ground during fault conditions.

1.1.2 An effective earth must be able to permit fault currents of sufficient magnitude to flow so as to operate protective devices to isolate the fault before damage can occur.

1.1.3 The ohmic resistance of an effective earth must be low enough to ensure that the step potential on the ground in the vicinity of the earthing point is within safe limits under fault conditions i.e. a voltage gradient not exceeding 40 V/m for fault durations exceeding 1s.

1.2 TYPES OF EARTH ELECTRODES

Three types of earth electrodes are suitable:

1.2.1 Trench Earths

Trench earths comprise a bare copper or galvanised iron conductor laid at a minimum of 800mm below ground level, usually when underground cables are installed. This type of earth electrode provides a relatively large contact area between electrode and surrounding ground, makes contact with a variety of types of soil and soils of varying moisture content en route and is economical to install.

1.2.2 Spike Earths

Spike earths comprise rods of bare copper, copper-coated steel, stainless steel or galvanised steel designed for the purpose of penetrating ground to depths of up to several metres. A low resistance earth may sometimes be obtained by driving multiple spikes at some distance from each other in order to provide parallel paths.

In hard or rocky ground, it is usually necessary to drill holes into which earth spikes are inserted and then packed with soft soil.

1.2.3 Foundation Earths

Foundation earths comprise bare copper or galvanised iron conductors laid under the foundations of buildings, miniature substations, distribution pillars, bases of wooden, concrete or steel poles and structures. Because soil under foundations usually retains moisture, foundation earths are located to take advantage of this favourable condition. Furthermore, they are economical to install.

1.3 MATERIALS FOR EARTH ELECTRODES

1.3.1 Bare copper, either in stranded, strip or rod form, is considered the most suitable general purpose material for earth electrodes. Its main disadvantage is its cost and susceptibility to theft.

1.3.2 Bare galvanised iron and steel, either in stranded, strip or rod form, has a satisfactory record of survival in non-aggressive soils and is more economical than copper.

1.3.3 Bare aluminium is unsuitable as electrode material.

1.4 CORROSION

Because galvanised ferrous metals corrode sacrificially to copper, galvanised iron and steel electrodes should not be buried in close proximity to bare copper.

2. TECHNICAL REQUIREMENTS OF NEUTRAL EARTHING

The following relevant aspects have been extracted from the "AMEU CODE OF PRACTICE FOR THE APPLICATION OF NEUTRAL EARTHING ON LOW VOLTAGE DISTRIBUTION SYSTEMS."

2.1 DISTRIBUTION SYSTEMS

Multiple Earthed Neutral (MEN) and Protective Multiple Earthing (PME) systems.

Distribution equipment associated with transformer substations that are either ground mounted or pole mounted and fed by underground cable or overhead line, with or without an earth continuity conductor, (ECC), should be installed, connected and earthed in accordance with the following requirements:

(a) Where the resistance to earth of the HV equipment earth is 1 ohm or less, it is permissible to earth the LV neutral to the HV earth electrode.

(b) Where the HV equipment earth exceeds 1 ohm the LV neutral shall be earthed at a minimum distance of 6m from the HV equipment earth (i.e. 6m from the HV electrode/s and also from any earthed metalwork connected thereto).

(c) Notwithstanding the requirements of (a) above, where transformers are associated with HV overhead lines, it is considered good practice to separate the HV and LV earth electrodes. The minimum earth separation should be 6m or one LV span.

(d) The overall resistance to earth of the neutral of an LV distributor or distribution system must not exceed 10 ohms.

(e) The LV neutral may be connected to other supply neutrals, earth electrodes, cable sheaths and armouring and these connections used to obtain the required earthing value of 10 ohms or less specified in par. (d). above.

(f) The neutral of underground and overhead LV distributors must be earthed at the remote ends of each distributor.

(g) Where the overall resistance to earth of the neutral of the distribution system exceeds 10 OHMS, the neutral shall be earthed at intermediate positions on the distributor/s to reduce its resistance to earth to below this limit.

(h) The cross-sectional area of the neutral of all LV distributors must not be less than that of a phase conductor.

(i) No circuit-breakers, isolators, fuses, switches or removable links shall be installed in the neutral between the transformer star point and the remote end of any LV distributor or service connection.

(j) All metallic sheathing and armouring of cables and all metalwork associated with meter cabinets, fuse pillars, etc., supporting or enclosing LV cables shall be bonded to the distributor neutral conductor.

(k) Where a Separate Neutral Earth (SNE) cable is part of an MEN or PME system, the armouring and/or metallic sheath and any ECC shall be bonded to the neutral at the supply end of the cable.

(l) To ensure the integrity of the neutral, it is recommended that all connections and joints on or to overhead line conductors be made by compression fittings or, alternatively double bolted connectors.

(m) MEN or PME may be applied to any single LV distributor without alterations to other LV distributors supplied from the same transformer.

2.2 PROTECTIVE NEUTRAL BONDING (PNB) SYSTEM

Since the neutral is earthed at one point only, the question of multiple earthing does not arise and there is therefore no necessity to meet the MEN/PME technical requirements.

2.3 SERVICE CONNECTIONS

2.3.1 MEN System

The following conditions apply to consumers' service connections as well as service connections to traffic signals, road signs, street lighting and other power-consuming equipment installed in public places:

(a) All service connections must be by means of cable with an insulated phase, an insulated neutral conductor and an ECC.

(b) A single phase service connection comprises a live, a neutral and an ECC.

(c) A polyphase service connection comprises two or three phase conductors, a neutral and an ECC.

(d) The service neutral and ECC must be solidly and separately connected to the distributor neutral at the tee-off point.

(e) The consumer's earthing lead is connected to the Supply Authority's earth terminal which is in turn connected to the ECC in the service cable at the consumer's supply point.

(f) The neutral must not be connected to earth at the consumer's supply point.

(g) If required by the Supply Authority, and earth electrode must be installed at the consumer's supply point.

(h) In a service connection to traffic signals, street light and other power-consuming equipment installed in public places, such equipment is earthed to the ECC of the service connection.

2.3.2 PME System

(a) All service connections must be by means of a cable with an insulated phase and an insulated neutral conductor.

(b) A single phase service comprises a live conductor and a neutral.

(c) A polyphase service connection comprises two or three phase conductors and a neutral.

(d) The consumer’s earthing lead is connected to the supplier's neutral and to a mandatory earth electrode at the consumer's supply point.

(e) A label must be attached at the consumers supply point on his premises indicating that the installation is part of a PME system.

Note: It is not recommended that the PME system be applied to supply traffic signals, street signs or other power-consuming equipment installed in public places, because the PME system is inherently unsafe under "broken-neutral" conditions.

3. SUBSTATION EARTHING

In order to comply with the requirements of par. 1 and 2 above, an earth resistivity measurement shall be undertaken at the site of a new substation or miniature substation, preferably be a specialist firm. The contractor shall then submit to the Department details of a proposed substation earth indicating whether a trench earth, spike earth or foundation earth is intended and the proposed interconnections with the installation.

4. FENCES OF OUTDOOR SUBSTATIONS

In cases where substations contain transformers or switchgear installed outdoors, the compulsory fence shall be earthed as follows, if no other method is specified :

(a) A 70mm² earth wire shall be installed 400mm below ground level and 500mm from the fence on the outside of the sub-station along the entire length of the fence. This earth wire shall be earthed at each corner by means of a 1,8m earth rod and the rod and earth wire bonded to the fence. The earth wire shall also be bonded, at least at two points, to the main earthing system.

(b) A 70mm² earth wire shall also be buried at a depth of 400mm around each transformer and switch and bonded to the main earthing system.

5. EARTHING OF A GENERAL ELECTRICAL INSTALLATION

5.1 GENERAL

All earth conductors shall be stranded copper with or without green PVC insulation. The conductors shall comply with the Department's quality specification for "PVC-INSULATED CABLES", Section C4. All earth conductor sizes shall be determined in accordance with SANS 10142, par. 4.6 where the earth does not form an integral part of the cable.

5.2 SWITCHBOARDS

A separate earth connection shall be supplied between the earth busbar of the main switchboard and the earth busbar of every sub-switchboard. These connections shall consist of bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised.

5.3 SUB-CIRCUITS

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

5.4 RING MAINS

Common earth conductors may be used where various circuits are installed in the same wiring channel in accordance with SANS 10142. In such instances the sizes of earth conductors shall be specifically approved by the Department. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered. The common earth shall not be broken.

5.5 CONNECTIONS

Under no circumstances shall connection points, bolts, screws, etc. used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided. Unless earth conductors are connected to proper terminals, the ends shall be tinned and lugged. Lugs may be crimped, using mechanical or pneumatic tools designed for this purpose, on condition that evidence is submitted that the method used complies with the performance requirements of BS 4579, Part 1: "COMPRESSION JOINTS IN COPPER."

5.6 NON-METALLIC CONDUIT

Where non-metallic conduit is specified or allowed, stranded copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaries, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

5.7 FLEXIBLE CONDUIT

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

5.8 WATER PIPES

Metal cold water mains shall be bonded to the earth busbar in the Main Switchboard by solid 15 x 2mm copper strapping. All other hot and cold water pipes shall be connected by 12 x 0,8mm perforated or solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipe work by brass nuts and bolts and against walls be brass screws at 150mm centres. In all cases where metal water pipes, down pipes, flues, etc. are positioned within 1,6 m of switchboards, an earth connection consisting of copper strapping shall be installed between the pipe work and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each switchboard.

5.9 ROOFS

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10mm² copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor of each switchboard. The roof and gutters shall be connected at 15m intervals to this conductor by means of 12 x 0,8mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

SECTION B12

B.12 PROVISION FOR TELEPHONE INSTALLATION

1. CONTRACTOR'S RESPONSIBILITY

The Contractor shall only supply and install outlet points, wiring channels and/or conduits for telephones. The telephone installation will be carried out by others.

2. REGULATIONS

All provisions for telephones in buildings shall comply with the latest issue of "FACILITIES FOR TELECOMMUNICATION SERVICES IN BUILDINGS" as issued by the Department of Posts and Telecommunications.

3. SEPARATION OF SERVICES

3.1 Cables or conductors for telephone services shall be separated from all other services by:

(a) providing separate metal channels or conduits, or

(b) installing power cables, conductors and accessories at a minimum distance of 300mm from routes reserved for telephone cables, or

(c) an earthed metal barrier installed in such a manner to ensure that the minimum distance through free air space between the telephone cables and other services is at least 300mm.

3.2 In cases where high voltage cable runs are parallel to telephone cable runs for more than 50m, the correct spacing shall be determined by conferring with the Department of Posts and Telecommunications.

3.3 Conduits or wiring channels provided for telephone services may not be used for any other purpose. Where non-metallic channels are used, the separation stated in par. 3.1 (b) shall he maintained throughout the installation.

4. MAIN TELEPHONE DISTRIBUTION BOARD

4.1 The size and position of the Main Telephone Distribution Board, where required, shall be in accordance with the requirements of the Detail Technical Specification.

4.2 The board shall consist of a metal tray, architrave frame and hinged doors and shall be flush mounted in the position shown on the drawing(s).

4.3 A 20mm thick soft wooden panel (fine grade pine to SANS 1359, without knots) shall be installed in the main telephone distribution board and shall cover the entire back of the board. Chipboard or similar materials are not acceptable.

4.4 All conduits and sleeves to telephone outlets or sub-distribution boards in the buildings or on the site as well as the main incoming sleeves, shall terminate at the main telephone distribution board as indicated on the drawing(s).

4.5 Where 100 x 100 x 50mm draw-boxes are specified as main or sub-distribution boards, the boxes shall be flush mounted and provided with a cover plate. A wooden panel need not be provided in these cases.

5. VERTICAL BUILDING (SERVICE) DUCTS

5.1 If the telephone cables are to be installed in the same duct as power cables the separation of services described in par. 3 shall be maintained.

5.2 Conduits and metal channels to and from building duct(s) shall be installed from the section containing the telephone cables to obviate telephone cables crossing power cables or other services in the duct.

5.3 Where more than one vertical building duct is provided in the structure, the ducts shall be interconnected by at least 2 x 32mm dia. conduits at each floor level unless otherwise specified or indicated on the drawings.

6. TELEPHONE OUTLETS

6.1 Blank cover plates shall be fitted to all telephone outlets.

6.2 Telephone outlets in walls shall consist of flush mounted 100 x 100 x 50mm draw-boxes.

6.3 Telephone outlets in floors shall be of the same type as floor outlets for power socket-outlets. These provisions also apply to underfloor ducting. If the type of floor outlet is not specified, 100 x 100 x 50mm flush mounted draw-boxes shall be provided in the floor at the positions indicated on the drawings. The cover plates for these draw-boxes shall be of the diecast type.

6.4 Where twin underfloor ducts are provided and where the one duct is intended for telephone cables, the separation between the ducts shall be maintained throughout the underfloor ducting installation.

6.5 Where power skirting is specified for telephone installations, the Contractor need only install the skirting with covers since the telephone socket will be fixed directly to the cover. Where multiple power skirting is provided containing other services, no other cables may be installed in the section intended for telephone cables and the separation between the sections shall be maintained throughout the installation.

6.6 Refer also to the Department's standard specification for the "INSTALLATION OF WIRING CHANNELS, UNDERFLOOR DUCTING AND POWER SKIRTING", Section B2.

7. CONNECTION OF TELEPHONE OUTLETS

7.1 Telephone outlets shall be inter-connected and connected to the telephone distribution boards as shown on the drawings.

7.2 If the inter-connecting conduits are not specified, conduit sizes shall be determined as follows:

Inter-connection of 10 outlets maximum - 25mm dia. conduit.

Inter-connection of 20 outlets maximum - 32mm dia. conduit.

7.3 Metal channels or power skirting installed on the same floor level on opposite walls of the same area as well as parallel runs of underfloor ducting intended for the installation of telephone cables, shall be interconnected at intervals of 6m. Conduit may be used for these inter-connections.

7.4 All conduits and all ducts or channels which do not have removable covers, shall be provided with galvanised steel draw-wires.

7.5 Conduit connections to power skirting or surface mounted metal channels, shall consist of a 100 x 100 x 50mm draw-box which is flush mounted immediately behind the duct or channel in which the telephone cables are to be installed. A hole shall be cut in the back of the duct or channel, immediately opposite the draw-box. The edges of the hole shall be grommeted. The draw-box shall be accessible from the front when the cover is removed.

7.6 Purpose-made accessories for the connection of conduits to underfloor ducts shall be used. Where these are not available, a 100 x 100 x 50mm draw-box shall be installed below the underfloor duct opposite a floor telephone outlet. Inter-connecting conduits shall terminate at the draw-box. The edges of the hole shall be grommeted. The draw-box shall be accessible from the top via the floor outlet.

7.7 Exposed conduit ends intended for future extensions shall be terminated by means of a coupling and screwed brass plug. Only galvanised conduit shall be used in these instances.

SECTION B13

B.13 SUBSTATIONS SWITCH ROOMS AND GENERATOR ROOMS

This section covers the general building arrangement and special requirements for high and low voltage switch rooms, transformer rooms and generator rooms.

1. STANDARD BUILDINGS

The following list indicates the standard substation designs and corresponding standard departmental drawing number which are available.

1.1 High voltage room, transformer room for one transformer up to 800kVA, low voltage room and a generator room for one emergency generator set from 200 to 500kVA ..... EE/136/131A.

1.2 High voltage room, transformer room for one transformer up to 800kVA, low voltage room and a generator room for one emergency generator set from 80 to 200kVA ..... EE3/136/131B.

1.3 High voltage room, transformer room for one transformer up to 800kVA, low voltage room and a generator room for one emergency generator set up to 30kVA ..... EE3/136/131C.

1.4 High voltage room, transformer room for one transformer up to 800kVA and low voltage room ..... EE3/136/131D.

1.5 High voltage room, transformer room for one transformer up to 800kVA, low voltage room and a generator room for two emergency generators up to 200kVA each ..... EE3/136/131E.

1.6 Large high voltage room, transformer room for one transformer up to 800kVA and low voltage room..... EE3/136/131F.

1.7 High voltage room, transformer room for two transformers of up to 800kVA each, large low voltage room and a store room ..... EE3/136/131G.

1.8 Emergency generator buildings..... EE3/136/118.

2. OTHER BUILDINGS

If the standard buildings cannot accommodate the equipment required, suitable substation rooms complying with the following constructional details shall be provided:

2.1 The rooms shall have a ceiling height of at least 2,8 m above finished floor level.

2.2 A concrete roof slab shall be provided or alternatively a roof consisting of corrugated iron, or clay or cement tiles with an asbestos ceiling.

2.3 The rooms shall be waterproof, vermin proof and fireproof.

2.4 Door openings shall be 1,85 m wide by 2,5 m high with steel louvered ventilation openings over at least 60 % of the door area. Doors shall open outwards and it shall be possible to readily open them from the inside. Provision shall be made for a night latch and a padlock.

2.5 The floor and transformer base shall be on the same level. Each transformer base shall be able to support a mass of 5 tons on castors.

2.6 Vermin proof steel louvered ventilation openings shall be provided with an area of at least 20 % of the total floor area for transformer and generator rooms and 10 % for switch rooms if not specified to the contrary. 50 % of the ventilation openings shall be installed in the lower part of the walls, not more than 300 mm above floor level and the other 50 % of the ventilation openings shall be installed in the upper part of the walls, not more than 300 mm below ceiling level to achieve good cross and

convection ventilation. Louver's contained in the doors can normally be considered to provide the 50 % required in one of the walls.

2.7 Where possible, windows with an area equal to 5 % of the floor area shall be included to provide natural lighting. It shall not be possible to open these windows. The windows shall be in the upper portion of the walls, as high as possible.

2.8 Corners of transformer bases and cable ducts shall be cut off at an angle of 45° with the splay at least 100mm wide.

2.9 Cable entrance openings shall be at least 600mm wide x 500mm deep and level with the bottom of the cable trenches. Alternatively a separate sleeve for each cable and at least one spare sleeve, shall be provided.

2.10 Cable trenches shall be 600mm wide and 800mm deep unless specified to the contrary.

2.11 The floors of cable trenches shall have a fall of 1:100 to make provision for the natural draining of water.

2.12 At least one light with a switch adjacent to the entrance and one standard 16A 3-pin earth leakage protected socket outlet shall be provided in each room. The illumination level in the substations shall not be less than 200 lux. If a battery supply is available one incandescent light per substation room shall be connected to this supply and the switch in the circuit marked "EMERGENCY LIGHT"/"NOODLIG".

2.13 The floors shall be floated to a smooth finish with a steel trowel.

2.14 Any one of the following interior wall finishes is acceptable:

(a) Plastered and painted white.

(b) Unpainted face brick (preferably light colour brick).

(c) Off-shutter concrete painted white.

3. NOTICES

The following notices in both official languages shall be exhibited at all entrances to and suitable places within premises in which are situated generating plant and transforming, switching or linking apparatus:

A notice showing the "Lightning" sign with the wording: Danger-Ingozi-Gevaar.

3.1 A notice prohibiting unauthorised persons from entering such premises.

3.2 A notice prohibiting any unauthorised persons from handling or interfering with electrical apparatus.

3.3 A notice detailing procedure in case of fire.

3.4 A notice containing directions for resuscitation of persons suffering from the effects of electric shock.

4. HIGH VOLTAGE SWITCH ROOMS (ABOVE 1 KV)

4.1 The equipment shall be installed and secured to the floor in accordance with the manufacturer's specification.

4.2 Sufficient space shall be provided between the switchboard and the walls of the switch room to allow for the installation, maintenance and operation of the switchboard.

4.3 In the case of switchboards with uninsulated conductors accessible from the back, a clear space of at least 1,2 m shall be provided between the back and sides of the board and the wall.

4.4 In the case of switchboards which are of a totally enclosed construction the minimum clear space between the back and sides of the board and the wall shall be at least 900mm.

4.5 A space of at least 1,2 m shall be provided in front of a switchboard for operating and maintenance personnel. If the circuit breakers are of the withdrawable carriage type this space shall be at least 900 mm when the breaker carriages are in the fully withdrawn position.

4.6 The access door into the room shall be in front of the switchboard.

4.7 The tools and earthing and operating devices for the switchgear shall be contained in a purpose-made sheet metal cupboard secured to the wall of the substation.

4.8 A reticulation diagram displaying sufficient detail to be able to assess problems and trace faults (both on the HV and LV sides of the system) shall be mounted against a wall in the HV switch room behind clear plastic.

5. LOW VOLTAGE SWITCH ROOMS (BELOW 1 KV)

5.1 The equipment shall be installed and secured firmly to the floor or wall of the switch room.

5.2 Sufficient space shall be provided between the switchboard and the walls of the switch room to allow for the installation, maintenance and operation of the switchgear. In general this space shall be 900mm at the back and sides of the board and 1,2 m in front of the switchboard.

5.3 In the case of switchboards with uninsulated conductors which are exposed and accessible from the back a clear space of at least 1,2 m shall be provided at the back.

5.4 A LV reticulation diagram displaying sufficient detail of at least the main LV reticulation in order to be able to assess problems shall be mounted against a wall in the LV switch room behind clear plastic.

6. TRANSFORMER ROOMS OTHER THAN IN STANDARD BUILDINGS

6.1 Transformer rooms shall be large enough to accommodate the transformer with a 900mm clear space between the walls and the transformer. The minimum dimensions of a transformer room shall in any case be not less than 3,5m wide and 4,0m long.

6.2 The dimensions of the room shall be determined by using the transformer dimensions of TABLE 2 of SANS 780.

6.3 Where natural cross ventilation of the transformer room is not possible, adequate forced ventilation shall be provided to dispose of the transformer's losses and to prevent the air temperature in the transformer room from exceeding 40 C.

6.4 The cable entrances to the transformer room shall be sealed off after the cables have been installed.

7. GENERATOR ROOMS OTHER THAN IN STANDARD BUILDINGS

7.1 The ventilation of generator rooms shall be sufficient to dispose of the heat radiated from the engine while delivering full power.

7.2 The heat from the radiator shall be released outside the building via a ventilation duct or an external heat exchanger.

7.3 The exhaust emission shall be released outside the building and shall comply with the local environmental control regulations.

7.4 The fuel storage tank shall be installed in compliance with SANS 10131 and the position shall be approved by the local Fire Department. When the storage tank must be located outdoors, it should be underground to insulate the fuel from severe temperature variations which may impede fuel flow.

7.5 An electrical schematic diagram indicating mains supply and change-over arrangement as well as all standby plant electrical control circuitry, shall be mounted on a wall behind clear plastic.

7.6 An emergency light with automatically rechargeable Nickel-Cadmium batteries shall be installed above the generator set to facilitate manual starting or fault tracing in the event that the set does not start during a power failure.

8. CABLES

8.1 Cables shall be installed in cable trenches which shall be provided for this purpose. The installation shall comply with the Department's standard specification for "INSTALLATION OF CABLES", par. 5 of Section B6.

8.2 Under normal circumstances cables shall not be installed directly on the floor.

9. COVERING AND SEALING OF CABLE TRENCHES

9.1 All the cable trenches shall be covered with steel chequer plate or a compound wood, bound with a water resistant binder, or an approved fibreglass grating. The following types of compound wood coverings are acceptable:

(a) Five ply marine ply, 12 mm thick.

(b) Exterior grade particle board, 22mm thick.

(c) Tempered hardboard, 12,7mm thick.

9.2 The trench coverings shall be ridged and shall not sag more than 5 mm with two normal persons standing on one section.

9.3 The trench covering shall be in sections not exceeding 1,25 m.

9.4 The trench coverings shall be provided with holes or recessed handles to make it possible to remove and replace the covers easily.

9.5 The trench coverings shall be neatly cut where necessary to accommodate cables.

9.6 The covers shall overlap the trench on both sides and shall be recessed to fit flush with the surface of the floor.

9.7 The cable entrances in the trenches of the switch rooms, transformer rooms and generator rooms shall be closed and sealed after the cables have been installed to prevent the backfill material and water from entering the trenches in the building.

9.8 The cable entrances shall be closed with bricks, without mortar, in such a way as to prevent the weight of the bricks from resting on the cables. These bricks shall be plastered on the inside with a 10:1 ratio of sand and cement.

9.9 If the cables enter the trenches via sleeves, these sleeves shall be plugged on both sides with weak mortar, an asbestos and cement mixture or a non-hardening compound.

SECTION B14

B.14 OVERHEAD ELECTRICAL TRANSMISSION LINES

1 GENERAL

1.1 This section covers the supply, delivery, erection and commissioning of overhead transmission lines up to 22 kV on wooden poles.

1.2 An overhead line shall comprise the wooden poles, cross-arms, stays, conductors, insulators, isolators, fuse-links, transformers, lightning arrestors and any other auxiliary equipment specified.

1.3 All materials and fittings used shall be new and of high quality.

1.4 Overhead lines shall be erected in accordance with the "CODE OF PRACTICE FOR OVERHEAD POWER LINES FOR CONDITIONS PREVAILING IN SOUTH AFRICA", issued by the S.A. Institute of Electrical Engineers.

2. STATUTORY REQUIREMENTS

2.1 Occupational Health and Safety act. (1993) Act 85 of 1993 and subsequent amendments and regulations issued thereunder.

2.2 The Post Office Act, No. 44 of 1958 and the Postmaster General's Requirements issued in terms of that Act.

2.3 The Mines and Works Act, No. 27 of 1956 and subsequent amendments and regulations issued thereunder.

2.4 The Electricity Act, (1994) Act 41 of 1984.

2.5 The Fencing Act, No. 31 of 1963.

2.6 The Forest Act, Article 34 of Act No. 72 of 1968.

2.7 The Advertising on Roads and Ribbon Development Act, No. 21 of 1940 and No. 16 of 1962.

2.8 The Air Navigation Regulations promulgated in terms of the Aviation Act, No. 74 of 1962.

2.9 Explosives Act, No. 26 of 1956.

2.10 The South African Transport Services Safety Regulations.

3. RELEVANT SANS SPECIFICATIONS

3.1 SANS 182 : Conductors for overhead electrical transmission lines.

PART3 : Aluminium Conductors, Steel Reinforced.

3.2 SANS 60383 : Ceramic and glass insulators for overhead lines of nominal voltage greater than 1000V.

3.3 SANS 61284 : Non-current-carrying line fittings for overhead power lines.

3.4 SANS 753 : Wooden power transmission poles and cross-arms.

3.5 SANS 470 : Concrete poles for telegraph, telephone, power and lighting purposes (reinforced and prestressed types).

3.6 SANS 61643 : Low voltage lightning arresters.

4. STANDARD DEPARTMENTAL SPECIFICATIONS

4.1 INSULATORS AND FITTINGS FOR OVERHEAD LINES, Section C38.

4.2 DISTRIBUTION TRANSFORMERS, Section C36.

4.3 INSTALLATION OF CABLES, par.3.13, Section B6.

4.4 EARTHING, Section B11.

5. NOTICES AND PRECAUTIONS

5.1 The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, the Postmaster-General (TELKOM), Transnet, S.A. Transport Services, Provincial or National Road Authorities and other authorities as may be required with respect to the installation of overhead lines.

5.2 The Contractor shall take all the necessary precautions and provide the necessary warning signs and/or lights to ensure that the public and/or employees are not endangered.

5.3 The Contractor shall acquaint himself with the position of all existing services and infrastructure prior to commencing the installation.

5.4 The Contractor will be held responsible for damage to any existing services brought to his attention by the relevant authorities and will be responsible for the cost of repairs.

6. PEGGING THE ROUTE

6.1 The Contractor shall peg out the route for the overhead line but shall maintain close liaison with the Department's representative.

6.2 Should the proposed position of poles appear unsatisfactory due to obstructions, poor soil conditions, rock, etc., the Department's representative shall be consulted and a ruling obtained.

6.3 The Department reserves the right to alter the line route at any time prior to the installation of the overhead wires. Payment in respect of any additional or wasted work involved shall be at the documented rates.

6.4 The removal of obstructions along the route shall be subject to the approval of the Department.

7. LINE IMPULSE LEVEL

The line Basic Impulse Level (B.I.L.) shall be maintained at the full voltage, namely:

Line Voltage (kV)	Impulse Voltage withstand level (kV)
Up to 6,6	75
11	95
22	150

8. LINE CONFIGURATION

8.1 Lines shall generally be configured as indicated in the drawings included in this specification, Fig. B14.1 - B14.7.

8.2 Alternate arrangements shall be submitted to the Department for approval.

9. POLES

9.1 The line configuration and support structure shall be suitable for the proposed route. Refer also to the Occupational Health and Safety Act.

9.2 Wooden poles shall normally be used and shall comply with SANS 753, Group strength "A" and shall bear the SANS mark of approval.

9.3 Preservatives of the poles shall comply with the requirements for Type Al of SANS 1290 and the impregnation shall be carried out in accordance with SANS 10005 using the empty-cell pressure process.

9.4 Poles shall be LOOP TENSION banded at both ends.

9.5 Concrete poles where specified shall comply with SANS 470 and the Detail Technical Specification.

9.6 If the spacing of poles is not more than 80m specified in the Detail Technical Specification, poles for 11 kV and 22 kV lines shall be spaced not more than 80m apart and poles for LV lines shall be spaced not more than 45m apart. The spacing of LV lines in suburban areas shall be arranged to suite the requirements of city blocks and street lighting.

9.7 All the poles shall be installed with the marking tags facing the roadside where applicable or shall face in the same direction where a road does not exist alongside the overhead line.

9.8 The pole minimum dimensions listed in the table below shall be used. Poles not complying with these dimensions shall be removed from site.

Length (m)	Minimum top dia (mm)
9,0	160
10,2	160
12,0	180
13,0	180
16,0	200

9.9 Templates shall be used for drilling holes required to fix cross-arms, brackets, insulators, etc. to the poles. After drilling, the holes shall be coated with a mixture of creosote and tar.

9.10 The poles shall be planted at the following minimum depths :

Length	Planting depth (m)
9,0	1,7
10,0	1,8
12,0	2,0
13,0	2,2
16,0	2,6

9.11 Kicking blocks shall be provided where ground with poor bearing qualities is encountered.

9.12 Poles shall be planted vertically plumb and in line and sufficiently stayed to maintain that position.

10. CROSS-ARMS

10.1 Cross-arms shall be of wood. Steel cross-arms shall only be used when clearly specified in the Detail Technical Specification. Wooden cross-arms are preferred due to their higher electrical resistance and better lightning performance of the line.

10.2 Steel cross-arms where specified shall be manufactured from standard steel sections complying with BS 4360.

10.3 Wooden cross-arms shall comply with SANS 753, Group Strength "A" and shall be straight in grain. Preservatives shall comply with par. 9.2. above. The minimum diameter of cross-arms shall be as follows:

Length (m)	Diameter (mm)	
	min.	Max.
2,4	140	160
3,0	140	160
3,6	160	185
4,5	160	185

10.4 Cross-arms shall be LOOP TENSION banded at both ends.

10.5 Tie straps shall be manufactured of mild steel to Grade 43 of BS 4360.

10.6 Cross-arms shall be long enough to accommodate the insulator spacing specified below.

10.7 Cross-arms and tie straps shall be bolted to poles using galvanised bolts, nuts and washers. Curved wood pole washers shall be fitted between bolt heads and the poles and between cross-arms and the poles. Back straps and U-bolts may be used to attach wooden cross-arms to the poles.

10.8 Curved wood pole washers shall be galvanised malleable cast iron or mild steel with a minimum thickness of 6 mm and shall have a minimum square outside dimension of 63 mm.

11. INSULATORS AND FITTINGS

11.1 Insulators shall be chosen to provide the mechanical strength and insulation level required by the line at every point in accordance with the Department's standard specification for "INSULATORS AND FITTINGS FOR OVERHEAD LINES", Section C38.

11.2 Insulators shall be spaced to provide the conductor clearance required.

11.3 Pin insulators and their pins complying with SANS 60383 shall be used in straight line intermediate positions only.

11.4 Disc insulators shall be used in all strain, tension or angle positions, Clevis-and-tongue or ball-and-socket type insulators complying with SANS 60383 shall be used. Disc insulators may be of glass or porcelain.

11.5 Curved wood pole washers shall be fitted between the collars of insulator pins and the cross-arm or pole and between the pin nut and the cross-arm or the pole, The washers shall comply with par. 10.8 above.

11.6 Insulator hooks shall be of an approved pattern and shall be manufactured from BS 4360 grade 43 mild steel or forged.

11.7 Terminating and yoke straps shall be manufactured from BS 4360 grade 43 steel or forged to a design approved by the Department.

11.8 All steel or ironwork i.e., fittings, cross-arms, bolts, nuts, washers, etc., shall be hot dip galvanised to SANS 32 & 121.

12. CONDUCTORS

12.1 Steel reinforced aluminium conductors to SANS 182, Part 3 shall be used for overhead lines. Should copper conductors be specified, they shall comply with SANS 182, Part 1. The cross-sectional area shall comply with the Detail Technical Specification.

12.2 The spacing between phase conductors shall be increased by 20 % over the spacing determined according to the formula in par. 4.7.5 of the "Code of Practice for Overhead Power times" to compensate for stay movement and other factors and to maintain the B.I.L. of par. 7 above.

The minimum conductor spacing are :

Pole Spacing (m)	SUPPLY VOLTAGE		
	Up to 6,6 kV	11 kV	22 kV
	CONDUCTOR SPACING (mm)		
60	575	635	790
70	635	700	850
80	700	750	910
90	750	810	975

12.3 Manufacturer's stringing and tensioning charts shall be used to erect conductors. Conductors shall not be tensioned to more than 25 % of the breaking strength of the conductor at -5,5"C with no wind.

12.4 Conductor running blocks shall be installed on all pole positions to run out the conductors. Conductors shall not be dragged along the ground. The three conductors shall be tensioned simultaneously using suitably rated chain-ratchet pullers and "come along" specially designed for the particular conductor.

12.5 The minimum conductor to ground clearances as stipulated in Occupational Health and Safety Act shall be closely observed. Allowance shall be made for conductor creepage and subsequent increased sag after a period.

12.6 Conductors shall be prestressed for not less than one hour before binding in.

12.7 Mid span joints shall be kept to a minimum and where unavoidable, shall be made with approved full tension line splices.

12.8 Conductor joints at non-tension points shall be made with two bolt parallel groove clamps of a type approved by the Department. The current carrying capacity of the clamps shall be at least equal to that of the conductor.

Non-oxidising conducting paste shall be liberally applied to the inside of these clamps.

12.9 Where aluminium to copper connections are made, suitable bimetal clamps shall be used.

13. CONDUCTOR TERMINATIONS

13.1 Cold compression, bolted snail clamps or preformed terminations shall be used. Suitable thimble clamps shall be used with the preformed terminations.

13.2 The conductor shall be bound in at pin insulators by a single stirrup and binding. A chafer tape of soft aluminium shall be wrapped around the conductor at the insulator contact area. The conductor shall be bound to the stirrup for a distance of 50mm on either side of the insulator. 5mm diameter hard drawn aluminium wire shall be used for binding.

13.3 Suitably sized preformed wrap lock ties with pads may be used as an alternative method to par. 13.2 above.

13.4 Trails and bridge wires must be neatly disposed and connected with clamps or line taps with a minimum of two per connection or by means of other approved mechanical connectors.

14. STAYS

14.1 The position of stays may or may not be indicated in the instructions for the service, but it is the responsibility of the Contractor to provide staying adequate to maintain correct tension of the line and the verticality of every pole in the line, with or without the additional use of kicking blocks as he may decide.

14.2 Wind stays must also be provided for straight lines in exposed positions. Struts shall not be used if this can be avoided by the use of aerial stays and pillar stays.

14.3 Stay wires shall be spliced and bound in, in the accepted manner. Approved preformed materials may also be used.

14.4 The angle between the stay and the pole must be between 35° and 45°. The stay must be made off on the pole, as near as practicable to the point of resultant stress, with one and a half complete turns around the pole, supported by a suitable clamp.

14.5 For terminal poles of vertical line arrangements, at least two stays shall be used to prevent deformation of the pole, with the stay plates buried at least 1,8 m apart.

14.6 Stay holes shall be vertical, not less than 1,5 m deep and no wider than necessary to accommodate the baseplate, with a narrow side channel cut to embed the rod at the correct angle.

The baseplate and portion of rod within the stay pole shall be firmly packed with hard material or concrete where necessary.

14.7 Stay pillars shall be concreted into the ground with top and bottom kicking blocks where required by the nature of the soil.

14.8 Porcelain stay insulators shall be installed in one stay wire as high as possible above ground level but far enough away from the structure to ensure that the portion of the stay below the insulator does not become alive.

14.9 Stay wire shall be of galvanised steel and the individual steel strands shall have a breaking stress of not less than 695 MPA and shall comply with BS 183 or SANS 182, Part 5. Stay wire make-offs shall be painted with bitumastic paint on completion.

14.10 Stay rods shall comply with BS Pattern 2 and shall be of circular section with tubular type turn buckles. Heavy duty construction, deep contoured type thimbles shall be used.

14.11 Galvanised steel stay plates shall be used.

14.12 Stay guards are required in the vicinity of public paths and roadways.

15. EARTHING OF STRUCTURES

15.1 Earthing requirements for service connections are specified in the Department's standard specification for "EARTHING", Section B11.

15.2 Protective overhead earth wires shall only be provided where specified in the Detail Technical Specification. In cases where overhead earth wires are specified, a low impedance earth as determined by the Basic Impulse Level of the line shall be provided at every pole along the line.

15.3 An earth connection is not required at every pole along a line with wooden poles and without overhead earth wires. Lines with metal poles shall be earthed at every pole.

15.4 Steelwork on wooden poles shall generally not be earthed except at structures for transformers, isolators, fuse-links, cable boxes, lightning arresters or other equipment which impairs the impulse flashover value of the insulation provided by the wooden structure.

15.5 All metalwork to be earthed, shall be bonded together with 1 mm² bare copper conductors. These common bonds shall be connected to a 35mm² bare stranded or solid copper earth down lead conductor.

15.6 The connection between the overhead conductors and lightning arrestors and between the arrestors and the earth down lead shall consist of bare copper conductors of not less than 25mm². The connecting leads shall have smooth bends and shall follow the shortest possible route.

15.7 The earth down lead conductor shall be stapled to the pole at intervals not exceeding 1m. Where atmospheric conditions are likely to cause galvanic action, staples shall be of non-ferrous metal and an earth clip used where possible.

15.8 The earth conductor shall be threaded through a black polyethylene sleeve for at least 2m above the ground.

15.9 The earth conductor shall not be installed in steel conduit nor shall the conductor be wrapped around the pole at any point since this will increase the reactance of the down lead.

15.10 A trench earth shall be installed at earthed structures carrying equipment such as transformers, fuse-links, lightning arresters, etc. extending 10 m on four sides of the structure in the form of a cross. The ends of the earth wires shall be bonded to four earth electrodes of at least 1,8m in length driven into the ground.

15.11 Intermediate earthing for overhead earth wires may consist of wrapping the earth wire 5 - 6 times around the pole below ground level.

15.12 The earth resistance shall be determined following the installation of the trench earth. Earth resistance values specified or required by protective devices shall be checked. The earth resistance values required to maintain the B.I.L. of the line as specified in par. 7 (assuming an average lightning current value of 25 kA), are as follows:

	Impulse Level (kV)	Earth Resistance (ohm)
Up to 6,6	75	3,0
11	95	3,8
22	150	6,0

15.13 Should the earth resistance be higher than specified or required, additional earthing shall be provided. Trench earths shall not exceed 50m. Proprietary clays may be used for soil treatment to improve the earth resistance.

16. EARTH WIRE ON LV SYSTEMS

16.1 Where specified, a continuous earth wire shall be installed along LV (up to 660 V) overhead lines in order to provide earth continuity between installations served by the line (ECC).

16.2 The earth wire shall be connected to every earth along the route in addition to the substation earth. Refer also to par. 4 of the Department's standard specification for "EARTHING", Section B11.

16.3 All metalwork and the top positions of stay wires shall be bonded to the earth wire.

16.4 The earth wire shall be above the conductors.

17. LIGHTNING ARRESTERS

17.1 Lightning arresters shall be of a type approved by the Department.

17.2 Lightning arresters shall be installed at all points where the steelwork has to be earthed and where specified.

17.3 The arresters shall be connected to the overhead conductors by 25mm² (minimum) copper conductors minimum and suitable parallel groove clamps.

17.4 Lightning arresters shall be placed on all the phase conductors at the following points in addition to those specified in the Detail Technical Specification :

(a) As near as possible to the transformer terminals on the transformer side of the fused protection where applicable.

(b) At each termination of a cable on the overhead line.

(c) At every line sectionaliser or recloser.

(d) At each connection point to secondary lines.

17.5 Lightning arresters shall be mounted below the overhead conductors in order to reduce the length of the discharge path.

17.6 An earth shall be supplied and installed at each point where lightning arresters are installed in accordance with par. 15 above.

18. FUSE-LINKS

18.1 Fuse-links shall be of a type approved by the Department.

18.2 Details of fixing methods and mounting shall be submitted to the Department for approval.

18.3 Fuse-links shall be installed at all transformers and where specified.

19. TRANSFORMER MOUNTINGS

19.1 Transformers shall comply with the Department's standard specification for "DISTRIBUTION TRANSFORMERS", Section C36.

19.2 Transformers with a maximum power rating of 25kVA may be mounted on a single pole with the mounting brackets as specified in SANS 780.

19.3 Transformers with a power rating in excess of 25kVA and with a maximum of 200kVA shall be mounted on a platform between two poles.

19.4 The transformer platform for pole mounting shall consist of galvanised steel channels bolted to the two poles. The platforms shall be manufactured and installed in accordance with fig. B14.5 and B14.6.

19.5 All steelwork as well as the bolts, nuts and washers shall be galvanised to SANS 32 & 121.

19.6 An earth wire shall be installed against each pole of the structure and must extend for at least 500mm above the poles. These earth wires shall be bonded across at the top of the poles to shield the transformer.

19.7 Earthing in accordance with par. 15 shall be provided.

20. SUBSTATION EARTH

Substation earths and earths at transformers along the route intended for earth continuity connections to installations served by the line, shall be provided in accordance with the Department's standard specification for "EARTHING", Section B11.

21. ANTI-CLIMBING DEVICES

21.1 Anti-climbing devices shall be fitted to all poles carrying transformers or mechanically operated fuses or switchgear.

21.2 Galvanised barbed wire wound around the poles for at least 1m at a height of 2m above ground may be employed for this purpose.

22. CRADLES

Where HV overhead lines cross roadways, railways and other supply lines, important communication lines and where an HV line is run above an LV line, an earthed cradle shall be installed. The longitudinal wires of the cradle shall not be less than 7,2mm² and the cross-lacing not less than 4mm².

23. DANGER NOTICES (LIGHTNING SIGN)

Danger notices with the wording "DANGER-GEVAAR-INGOZI" shall be fitted to all structures with transformers, mechanically operated switchgear and fuses.

24. EXCAVATIONS

24.1 Excavations for poles, stays and trench earths shall remain open for as short a period as possible. The Contractor shall erect and maintain guards, warning notices and lights at open excavations and soil heaps.

24.2 Excavations shall be classified as follows:-

Very hard rock shall mean rock that can only be excavated by means of explosives.

Hard rock shall mean granite, quartzitic sandstone, slate and rock of similar or greater hardness, solid shale and boulders in general requiring the use of jack hammers and other mechanical means of excavation.

Soft rock and earth shall mean rock and earth that can be loosened and removed by hand-pick and shovel.

24.3 After poles and stays have been planted, the holes shall be backfilled and well compacted. Compaction shall be executed in layers of not more than 300mm to obtain a high compaction density.

24.4 The following dimensions shall be used when calculating the cubic capacity of excavations:

(a) Pole holes: 1,2m x 0,6m x depth

(b) Stay holes: 1,2m x 0,6m x 1,8m

(c) Trench earths: 0,5m x 0,6m x length

24.5 Poles shall be installed in accordance with the Detail Technical Specification of the installation.

24.6 Poles shall not be installed in clayey soil or in swampy conditions without the necessary precautions to stabilise the installation.

24.7 If unsatisfactory conditions for the installation of poles and stays are encountered during the excavations, the Department shall be informed without delay in order to facilitate alteration of the foundation design or alteration of the route of the line.

24.8 Poles and stays shall be installed in undisturbed soil.

24.9 If wooden poles are installed in a concrete or other water retaining foundation, the pole shall protrude through the concrete to ensure adequate natural drainage to prevent rotting of the wooden pole in the foundation due to the accumulation of water between the pole and the foundation.

25. SAMPLES

Samples of equipment, materials and SANS Test Reports proposed for the installation shall be submitted to the Department on request.

SECTION B15

B.15 INSPECTIONS, TESTING, COMMISSIONING AND HANDING OVER

1. PHYSICAL INSPECTION PROCEDURE

1.1 Once the Contractor has completed the installation, written notice shall be given to the Department in order that a mutually acceptable date can be arranged for a joint inspection.

1.2 During the course of the inspection, the representative of the Department will compile a list of items (if any) requiring further attention. A copy of this list will be provided to the Contractor who will have a period of 7 days in which to rectify the offending items of the installation.

1.3 The Contractor shall then provide written notice that he is ready for an inspection of the remedial work to the offending items.

1.4 This procedure will continue until the entire installation has been correctly completed to the satisfaction of the Department.

2. TESTING AND OPERATIONAL INSPECTION PROCEDURE

2.1 In addition to the above the Contractor shall have the complete installation tested and approved by the local authorities where applicable.

2.2 Subsequent to the above testing and approval, the Contractor shall in the presence of the representative of the Department test all circuits with respect to:

(a) Phase balance.

(b) Insulation level.

(c) Polarity.

2.3 Upon completion of the installation and within 3 months of the handover date, the Contractor shall provide and make available a recording voltmeter to record the voltage at three locations in the complex over a period of 48 hours each. These locations will be nominated by the Department.

3. "AS BUILT" DRAWINGS

3.1 As each portion of the work is completed, the Contractor shall provide the Department with as-built drawings showing the exact location measured from fixed points of all cables, transmission lines, each outlet point, etc.

3.2 In addition a complete reticulation diagram showing all supply cables and switchboards shall be provided behind a plastic cover in the substation or adjacent to the Main Switchboard if not located in a substation.

3.3 The installation will not be regarded as complete until all of the above requirements listed in 1, 2 and 3 above have been met.

T2.2p

SCHEDULE FOR IMPORTED MATERIALS AND EQUIPMENT

DPW-23 (EC): SCHEDULE FOR IMPORTED MATERIALS AND EQUIPMENT

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender no:	*MTH47/2022*	**Reference no:**	*19/2/4/2/2/6977/12*

This schedule should be completed by the tenderer. *(Attach additional pages if more space is required)*

Item	Material / Equipment	Rand (R) (Excluding VAT)
1.		**R**
2.		**R**
3.		**R**
4.		**R**
5.		**R**
6.		**R**

The Contractor shall list imported items, materials and/or equipment which shall be excluded from the Contract Price Adjustment Provisions (if applicable) and shall be adjusted in terms of currency fluctuations only. Copies of the supplier's quotations for the items, materials or equipment (provided that such costs shall not be higher than the relevant contract rate as listed above) should be lodged with the Principal Agent / Engineer of the Department of Public Works and Infrastructure within 60 (sixty) days from the date of acceptance of the tender. No adjustment of the local VAT amount, nor the contractor's profit, discount, mark-up, handling costs, etc. shall be allowed.

These net amounts will be adjusted as follows:

FORMULA:

The net amount to be added to or deducted from the contract sum:

$$A = V\left(\frac{Z}{Y} - 1\right)$$

A = the amount (R) of adjustment

V = the net amount (supplier's quotation) (R) of the imported item

Y = exchange rate at the closing date of tender submission

Z = exchange rate on the date of payment.

Name of Tenderer	Signature	Date

NATIONAL DEPARTMENT OF PUBLIC WORKS

RETURNABLE DOCUMENTS

FOR
MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)

TENDER NUMBER: MTH47/2022

COMPRISING:

TENDERING PROCEDURES (VOLUME 1) RETURNABLE	(Separate document)
RETURNABLE DOCUMENTS (VOLUME 2) RETURNABLE	(Separate document)
THE CONTRACT (VOLUME 3) RETURNABLE	**(This document)**

TENDERER : ……

CRS# :……

Compiled for :

Department of Public Works
Private Bag X5007
Mthatha
5100

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VOLUME 3 – THE CONTRACT

PART C1: AGREEMENT AND CONTRACT DATA

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CONTRACT DATA

DPW-04 (EC): CONTRACT DATA: JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***				
Tender no:	**MTH47/2022**	**WCS no:**	**046758**	**Reference no**:	**19/2/4/2/2/6977/12**

	The Conditions of Contract are clauses 1 to 30 of the **JBCC** Principal Building Agreement (Edition 6.2 of May 2018) prepared by the Joint Building Contracts Committee. **Contractors are cautioned to read the JBCC PBA and Contract Data (DPW-04 (EC)) together as some clauses in the JBCC PBA have been amended in the Contract Data (DPW-04 (EC))** Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI. Copies of these conditions of contract may be obtained through most regional offices of the Association of South African Quantity Surveyors, Master Builders Association, South African Association of Consulting Engineers, South African Institute of Architects, Association of Construction Project Managers, Building Industries Federation South Africa, South African Property Owners Association or Specialist Engineering Contractors Committee.
	CONTRACT VARIABLES **THE SCHEDULE** The **schedule** is the listed variables in this agreement and contains all variables referred to in this document including specific changes made to JBCC® documentation. It is divided into part 1: contract data completed by the **employer** and part 2: contract data completed by the **contractor**. Part 1 must be completed in full and included in the tender documents. Both the part 1 and part 2 form part of this **agreement** **Spaces requiring information must be filled in, shown as 'not applicable' or deleted but not left blank.** Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the **schedule**. Key cross reference clauses are italicised in *[ ]* brackets

PART 1: CONTRACT DATA COMPLETED BY THE EMPLOYER:

A PROJECT INFORMATION

A 1.0 Works [1.1]

Project name	**MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)**
WCS number	**046758**
Works description	Refer to document C3 – Scope of Work **Completion of the works in Mt Fletcher magistrate court which entail replacement of plumbing fittings, installation of light fittings, replacement of garage doors, construction of cleaner store area, construction of ramp, etc**

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A 2.0 Site [1.1]

Erf / stand number	
Township / Suburb	MT FLETCHER
Site address	MT FLETCHER MAGISTRATE OFFICES
Local authority	ELUNDINI LOCAL MUNICIPALITY

A 3.0 EMPLOYER AND ITS AGENTS

	Employer: **Government of the Republic of South Africa in its Department of Public Works** Postal address: ***Private Bag X 5007*** ***Mthatha*** ***5099*** Tel: ***047 502 7000*** E-mail: ***Cinga.Dlulane@dpw.gov.za*** Physical address: ***Fifth Floor, PRD Building*** ***Mthatha*** ***5099***
	Representative of the Employer: ***Cinga Dlulane*** Postal address: ***Fifth Floor, PRD Building*** ***Mthatha*** ***5099*** Tel: ***047 502 7000*** E-mail: ***Cinga.Dlulane@dpw.gov.za***
	Principal Agent: ***OM Moodley Architects*** Postal address: ***P.O.Box 3055*** ***Durban*** ***4000***

	Tel: ***031 202 5064*** E-mail: ***om@omarchitects.co.za***

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	Agent (1) **Principal agent** **AS INDICATED ABOVE.**
	Agent (2) ***Insert Discipline*** ***OM Moodley Architects*** **Agent's** service: ***Architects and Principal Agents*** Postal address: ***P.O.Box 3055*** ***Durban*** ***4000*** Tel: ***031 202 5064*** E-mail: ***om@omarchitects.co.za***
	Agent (3) ***Insert Discipline*** ***DG Naidoo and Associates*** **Agent's** service: ***Civil and Structural Engineers*** Postal address: ***P.O. Box 70420*** ***Overport, Durban*** ***4067*** Tel: ***031 205 6710*** E-mail: ***deesdgn@mweb.co.za***
	Agent (4) ***Insert Discipline*** ***Eyethu Engineers*** **Agent's** service: ***Electrical and Mechanical Engineers*** Postal address: ***P.O. Box 70358*** ***Overport, Durban*** ***4067*** Tel: ***031 303 7630*** E-mail: ***NomkhosiD@eyethu.co.za***

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	Agent (5) ***Insert Discipline*** ***Lwandle Consultants*** **Agent's** service: ***Quantity Surveying*** Postal address: ***P.O. Box 44028*** ***Kokstad*** ***4700*** Tel: ***039 727 2540*** E-mail: ***lwandlec@telkomsa.net***
	Agent (6) ***Insert Discipline*** ***insert name*** **Agent's** service: ***insert service*** Postal address: ***insert postal address*** ***insert town*** ***insert postal code*** Tel: ***insert tel no*** E-mail: ***insert e-mail***
	Agent (7) ***Insert Discipline*** ***insert name*** **Agent's** service: ***insert service*** Postal address: ***insert postal address*** ***insert town*** ***insert postal code*** Tel: ***insert tel no*** E-mail: ***insert e-mail***

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B CONTRACT INFORMATION

B 1.0 Definitions [1.1]

Bills of quantities: System/Method of measurement	Standard system of measurement of building works 7th edition

B 2.0 Law, regulations and notices [2.0]

Law applicable to the works, state country [2.1]	Law of the Republic of South Africa

B 3.0 Offer and acceptance [3.0]

Currency applicable to this agreement [3.2]	South African Rand

B 4.0 Documents [5.0]

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

Documents comprising the agreement	Page numbers
The JBCC® Principal Building Agreement, Edition 6.2 May 2018	1 to 30
DPW-04 (EC): CONTRACT DATA: JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)	1 to 28
The JBCC® General Preliminaries for use with the JBCC® Principal Building Agreement, Edition 6.2 May 2018	1 to 26
Bills of quantities	27 to 102

B 5.0 Employer's agents [6.0]

Authority is delegated to the following agents to issue contract instructions and perform duties for specific aspects of the works [6.2] [6.7 [CD]]
Principal Agent

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

B 6.0 Insurances [10.0]

Insurances by contractor NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted Yes/No? Yes			Amount including tax
	New works [10.1.1] (contract sum or amount)		*No*
Or	Works with practical completion in sections [10.2] (contract sum or amount)		*No*
Or	Works with alterations and additions [10.3] (reinstatement value of existing structures with or including new works)		*Yes*
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance		*Yes*
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance		*Yes*
	Escalation, professional fees and reinstatement costs if not included above		Not Applicable
Total of the above contract works insurance amount			
Supplementary insurance [10.1.2] as applicable			*Yes*
Public liability insurance [10.1.3]			*Yes*
Removal of lateral support insurance [10.1.4]			*Yes*
Other insurances [10.1.5]: Refer B17.0			
Yes/No?	No	If yes, description 1	*Not Applicable*
Hi Risk Insurance [10.1.5.1]			
Yes/No?	Yes	If yes, description 2 *Buiding is a multi-storey building*	*Yes*

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B 7.0 Obligations of the employer [12.1]

Existing premises will be in use and occupied [12.1.2]		Yes/No?	**Yes**
If yes, description	The building is a magistrate court build that is going to be use during the construction of the works.		
Restriction of working hours [12.1.2]		Yes/No?	**Yes**
If yes, description	Loud noise from grinder, drills, etc will not be used during the court operating hours from 08:00 to 16:30		
Natural features and known services to be preserved by the contractor [12.1.3]		Yes/No?	**No**
If yes, description			
Restrictions to the site or areas that the contractor may not occupy [12.1.4]		Yes/No?	**Yes**
If yes, description	Buildings, garages are in going to be in full use		
Supply of free issue [12.1.10]		Yes/No?	**No**
If yes, description			

B 8.0 Nominated subcontractors [14.0]

Yes/No?	No	If yes, description of specialisation

Specialisation 1	
Specialisation 2	
Specialisation 3	
Specialisation 4	
Specialisation 5	

B 9.0 Selected subcontractors [15.0]

Yes/No?	No	If yes, description of specialisation

Specialisation 1	
Specialisation 2	
Specialisation 3	

Specialisation 4	
Specialisation 5	

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B 10.0 Direct contractors [16.0]

Yes/No?	Yes	If yes, description of extent of work

Extent of work [12.1.11]	Eskom uprades to the supply of power to the building
Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	

B 11.0 Description of sections [20.1]

Section 1		
Section 2		
Section 3		
Section 4		
Section 5		
Section 6		
Section		**Remainder of the works.**

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

Practical completion for the works as a whole		
Period for inspection by the principal agent [19.3]	Working days	**240 Days**
The date for practical completion shall be the period as indicated, starting from the date of possession of the site by the contractor. The period is inclusive of all builders holidays	Period in months	**08 Months**

[12.2.7; 24.1]		
Penalty for late completion [24.1]	Penalty amount per calendar day (excl. tax)	**4c per 100c**

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Penalty for late works completion Refer B18 [19.8] 30% of penalty / calendar day	**Not Applicable**
Penalty for late final completion [21] 15% of penalty / calendar day	**Not Applicable**

Practical completion for portions of the works						
Portions of the works in sections:	1	2	3	4	5	6
Period for inspection by the principal agent in **Working days** [19.3]:						
The date for practical completion shall be the period as indicated from the date of possession of the site by the contractor [12.2.7; 24.1] **Period in months:**						
Penalty for late completion [24.1] **Penalty amount per calendar day (excl. tax):**						

B 13.0

Criteria to achieve practical completion not covered in the definition of practical completion
1. *Obtain Occupation Certificate from the relevant authority prior to issuing the Practical Completion certificate* 2. *All relevant CoCs* 3. *All guarantees* 4. *Training on electrical, security and mechanical installations if contractually required* 5. *Maintenance / operating manuals* 6. *Concrete test cube results* 7. *Plumbing installation certificate of compliance* 8. *Electrical installation certificate of compliance* 9. *Elevated tank certificate including galvanising certificate* **10.** *Painting certificate of compliance*

B 14.0 Defects liability period [21.0]

Extended defects liability period: Refer B18.0 [21.13]	**Yes/No?**	**Yes**
If yes, description of applicable elements	14.1Electrical equipment 14.2Landscaping 14.3Paintwork 14.4Elevated tank and water pumps 14.5Fire hose reels 14.6Plumbing fittings	

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B 15.0 Payment [25.0]

Date of month for issue of regular payment certificates Refer B18.0 [25.2]	30		
Contract price adjustment / Cost fluctuations [25.3.4; 26.9.5]	Yes/No?	No	
If yes, method to calculate	CPAP		
Employer shall pay the contractor within: Refer B18.0 [25.10]	Thirty (30) calendar days		

B 16.0 Dispute resolution [30.0]

Mediation	Yes
Name of nominating body	Association of Arbitrators (Southern Africa)
Appointment of Mediator	State Attorney
Litigation	Court with Jurisdiction

B 17.0 JBCC® General Preliminaries - selections

Provisional bills of quantities [P2.2]		Yes/No?	Yes	
Availability of construction information [P2.3]		Yes/No?	Yes	
Previous work - dimensional accuracy - details of previous contract(s) [P3.1]		Yes		
Previous work - defects - details of previous contract(s) [P3.2]		Yes		
Inspection of adjoining properties - details [P3.3]		Yes		
Handover of site in stages - specific requirements [P4.1]		No		
Enclosure of the works - specific requirements [P4.2]		Yes		
Geotechnical and other investigations - specific requirements [P4.3]		No		
Existing premises occupied - details [P4.5]		Yes		
Services - known - specific requirements [P4.6]		No		
Water [P8.1]	By contractor	Yes/No?	Yes	
	By employer	Yes/No?	No	
	By employer – metered	Yes/No?	No	
Electricity [P8.2]	By contractor	Yes/No?	Yes	
	By employer	Yes/No?	No	
	By employer – metered	Yes/No?	No	

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Ablution and welfare facilities [P8.3]	By contractor	Yes/No?	Yes	
	By employer	Yes/No?	No	
Communication facilities - specific requirements [P8.4]		Yes		
Protection of the works - specific requirements [P11.1]		Yes		
Protection / isolation of existing works and works occupied in sections - specific requirements [P11.2]		Yes		
Disturbance - specific requirements [P11.5]		Yes		
Environmental disturbance - specific requirements [P11.6]		No		

B 18.0 SPECIFIC CHANGES MADE TO JBCC® DOCUMENTATION

[Details of changes made to the provisions of **JBCC** standard documentation]

1.2	**Definitions** **The following definitions replace corresponding definitions or are added to the definitions in the JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), whatever the case may be.** **ADVERSE WEATHER CONDITIONS:** Adverse weather and inclement weather has the same meaning and used interchangeably and means any weather conditions i.e.: Rain, wind, snow, frost, temperature (cold or heat) that are not in the norm for the area where the construction takes place and during which no work is possible on site. **AGREEMENT:** The completed Form of Offer and Acceptance, the completed JBCC® Principal Building Agreement and contract data for organs of state and other public sector bodies, the contract drawings, the priced document and any other documents reduced to writing and signed by the authorised representative or representatives of the parties. **CONSTRUCTION PERIOD:** The period commencing on the date of possession of the **site** by the **contractor** and ending on the date of **practical completion.** **CONTRACT PERIOD:** The period commencing on the date of the letter of acceptance and ending on the date of final completion.

	COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule. **DEFAULT INTEREST**: No clause. **GUARANTEE FOR CONSTRUCTION**: A security in terms of the DPWI's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD]. **INTEREST:** The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State. **LETTER OF ACCEPTANCE**: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer. **PAYMENT CERTIFICATE**: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of clause 25.3. **PRINCIPAL AGENT:** The person or entity appointed by the **employer** and named in the **contract data for organs of state and other public sector bodies.** In the event of a **principal agent** not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by the employer's representative as named in the **contract data for organs of state and other public sector bodies.** **TARGETED SUBCONTRACTORS:** Subcontractors that must be appointed to a total of 30% or more of the contract sum, by the contractor, projects with a contract sum of the amount determined by the Minister in terms of the latest Preferential Procurement regulations, as may be amended from time to time.

B 19.0 SPECIFIC CHANGES MADE TO JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)

CONTRACT SPECIFIC DATA
The following contract specific data, referring to the General Conditions of Contract for Construction Works, JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), are applicable to this Contract:

3.3	Replace clause with the following: This agreement shall come into force on the date of letter of acceptance and continue to be of force and effect until the end of the latent defects liability period [22.0] notwithstanding termination [29.0] or the certification of final completion [21.0] and final payment [25.0].
4.2	Refer to clause 6.7 [CD].

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4.3	Replace clause with the following: Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained.
5.2	Replace last sentence with the following: The original signed agreement shall be held by the Employer.
5.4	Replace clause with the following: The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference.
5.5	Replace clause with the following: The parties may publish or disclose on any platform only the contract scope and contract amount.
6.5	Replace clause with the following: Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer may appoint another principal agent and/or an agent, be it temporary or permanently.
6.7	Add the following as clause 6.7: In terms of the clauses listed hereunder, the employer has retained its authority and has not given a mandate to the principal agent, notwithstanding other provisions in the contract. The employer shall sign all documents in relation to clauses 4.2, 14.1.4, 14.4.1, 14.6, 15.1.4, , 15.4.1, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12.
7.2	Replace first sentence with the following: Any design responsibility undertaken by a subcontractor shall not devolve on the contractor except for items that require specific component design and or compatibility design and or shop drawings and or the assembly thereof.
8.4	Replace clause with the following: The contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary.
9.2.7	Add the following to the end of the first sentence: "…. due to no fault of the contractor".
9.2.9	No clause.
9.2.10	No clause.
9.3	Add the following as clause 9.3: The employer's rights to claim damages for the contractor's omissions and actions will not be affected.
10.1	Replace clause with the following: The party responsible shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary , from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractors obligations after the date of practical completion [8.2.2].

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10.1.5.1	Add the following as clause 10.1.5.1: Hi Risk Insurance In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable sub-surface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:
10.1.5.1.1	Add the following as clause 10.1.5.1.1: Damage to the works The contractor shall, from the date of possession of the site until the date of the certificate of practical completion, bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary. When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor's own costs.
10.1.5.1.2	Add the following as clause 10.1.5.1.2: Injury to persons or loss of or damage to property The contractor shall be liable for and hereby indemnifies and holds harmless the employer against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above. The contractor shall be liable for and hereby indemnifies the employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property, or personal property, or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract.
10.1.5.1.3	Add the following as clause 10.1.5.1.3: It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer proof of such insurance policy.
10.1.5.1.4	Add the following as clause 10.1.5.1.4: The employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the contractor's default of his obligations as set out in 10.1.5.1.1; 10.1.5.1.2 and 10.1.5.1.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole.
10.2	Replace clause with the following: Where practical completion in sections is required [20.0), or where the works is for alterations and additions, the contractor shall effect and keep in force contract works insurance [10.1.1], supplementary insurance [10.1.2], public liability insurance [10.1.3] and where applicable, removal of lateral support insurance [10.1.4] and other insurances [10.1.5) in favour of the employer as beneficiary.

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10.6	No clause.
10.11	Add the following as clause 10.11 In the event that an insurer dispute the amount of the claim to be paid to the employer, the contractor shall be liable to the employer for the difference between the claim (as determined by the employers QS appointed on the project) made by the employer and the amount that the insurer is willing to pay.
11.1	Add to clause 11.1. In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT). In respect of contracts with a contract sum above R1 million, the contractor shall have the right to select the security to be provided in terms of C 1.0 Securities, as stated in the schedule. Such security shall be provided to the employer within fifteen (15) working days from commencement date. Should the contractor fail to select the security to be provided or should the contractor fail to provide the employer with the selected security within fifteen (15) working days from commencement date, the security in terms of C 1.0 Option C shall be deemed to have been selected. The payment reduction of the value certified in a payment certificate shall be *mutatis mutandis* in terms of 25.12.1 - 25.12.5.
11.1.1	No clause.
11.1.2	No clause.
11.2.2	No clause.
11.3	No clause.
11.4.1	Replace clause 11.4.1 with the following: Hand over the site to the contractor and withhold an amount equal to ten per cent (10%) of each interim payment certificate until practical completion is achieved. The value certified shall be subject to the adjustments in terms of 25.12.6 to 25.12.10.
11.5	No clause.
11.6	No clause.
11.7	No clause.
11.8	No clause.
11.9	No clause.
11.10	No clause.
11.11	Add the following as clause 11.11 Where the security as a cash deposit of ten per cent (10%) of the contract sum (excluding VAT) has been selected:

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11.11.1	Add the following as clause 11.11.1 The contractor shall furnish the employer with a cash deposit equal in value to ten percent (10%) of the contract sum (excluding VAT) within fifteen (15) working days from commencement date. Failure to furnish the employer with a cash deposit within fifteen (15) working days clause 11.4 will apply *mutatis mutandis*.
11.11.2	Add the following as clause 11.11.2 The employer shall be entitled to recover expense and loss from the cash deposit in terms of 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.
11.11.3.	Add the following as clause 11.11.3 Within fifteen (15) working days of the date of practical completion of the works the employer shall reduce the cash deposit to an amount equal to three per cent (3%) of the contract value (excluding VAT).
11.11.4	Add the following as clause 11.11.4 Within fifteen (15) working days of the date of final completion of the works the employer shall reduce the cash deposit to an amount equal to one per cent (1%) of the contract value (excluding VAT).
11.11.5	Add the following as clause 11.11.5 On the date of payment of the amount in the final payment certificate, the employer shall refund the remainder of the cash deposit to the contractor.
11.11.6	Add the following as clause 11.11.6 The parties expressly agree that neither the employer nor the contractor shall be entitled to cede the rights to the deposit to any third party.
11.12	Add the following as clause 11.12 Where security as a variable construction guarantee of ten percent (10%) of the contract sum (excluding VAT) has been selected:
11.12.1	Add the following as clause 11.12.1 The contractor shall furnish the employer with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the contract sum (excluding VAT) within fifteen (15) working days after issuance of the letter of acceptance. Failure to submit an acceptable variable construction guarantee within fifteen (15) working days clause 11.4 will apply *mutatis mutandis*.
11.12.2	Add the following as clause 11.12.2 The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender.
11.12.3	Add the following as clause 11.12.3 The employer shall return the variable construction guarantee to the contractor within fourteen (14) calendar days of it expiring.
11.12.4	Add the following as clause 11.12.4 Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall issue a written demand in terms of the variable construction guarantee.

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11.13	Add the following as clause 11.13 Where security is a fixed construction guarantee of five per cent (5%) of the contract sum (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:
11.13.1	Add the following as clause 11.13.1 The contractor shall furnish a fixed construction guarantee to the employer equal in value to five per cent (5%) of the contract sum (excluding VAT).
11.13.2	Add the following as clause 11.13.2 The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of the last certificate of practical completion.
11.13.3	Add the following as clause 11.13.3 The employer shall return the fixed construction guarantee to the contractor within fourteen (14) calendar days of it expiring.
11.13.4	Add the following as clause 11.13.4 The payment reduction of the value certified in a payment certificate shall be *mutatis mutandis* in terms of 25.12.1 - 25.12.5.
11.13.5	Add the following as clause 11.13.5 Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or from both.
11.14.1	Add the following as clause 11.14.1 Where security as a cash deposit of five per cent (5%) of the contract sum (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT) has been selected:
11.14.2	Add the following as clause 11.14.2 The contractor shall furnish the employer with a cash deposit equal in value to five per cent (5%) of the contract sum (excluding VAT) within fifteen (15) working days from commencement date. Failure to submit a cash deposit within fifteen (15) working days clause 11.4 will apply *mutatis mutandis*.
11.14.3	Add the following as clause 11.14.3 Within fifteen (15) working days of the date of practical completion of the works the employer shall refund the cash deposit in total to the contractor.
11.14.4	Add the following as clause 11.14.4 The payment reduction of the value certified in a payment certificate shall be *mutatis mutandis* in terms of 25.12.1 - 25.12.5.
11.14.5	Add the following as clause 11.14.5 Where the employer has a right of recovery against the contractor in terms of 27, the employer may recover from the payment reduction or cash deposit or from both.
11.15	Add the following as clause 11.15 Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected:
11.15.1	Add the following as clause 11.15.1 The payment reduction of the value certified in a payment certificate shall be *mutatis mutandis* in terms of 25.12.6 to 25.12.10.

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11.15.2	Add the following as clause 11.15.2 The employer shall be entitled to recover expense and loss from the cash deposit in terms of 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.
11.16	Add the following as clause 11.16 Payments made by the guarantor to the employer in terms of the fixed or variable construction guarantee shall not prejudice the rights of the employer or contractor in terms of this agreement.
11.17	Add the following as clause 11.17 Should the contractor fail to furnish the security in terms of 11.2 the employer, in his sole discretion, and without notification to the contractor, is entitled to change the contractor's selected form of security to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT).
12.1.1	No Clause.
12.1.5	Replace clause with: Give possession of the site to the contractor within ten (10) working days after approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22.
12.1.6	No clause.
12.1.8	No clause.
12.2.2	Replace clause with: The priced Bills must be submitted to the Employer within fourteen (14) calendar days from date of request. Where the **priced document** contains errors or discrepancies and/or prices considered by the employer or **principal agent** to be imbalanced or unreasonable the employer or **principal agent** and the **contractor** shall adjust such prices without any change to the **contract sum.**
12.2.5	Replace clause with: Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0) [CD].
12.2.13	Replace clause with: Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor.
12.2.22	Insert the following clause as 12.2.22: Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).
12.2.23	Insert the following clause as 12.2.23: The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0].
14.1.4	Refer to clause 6.7 [CD].

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14.1.5	No clause.
14.4.1	Replace “principal agent ” with “employer” [6.7 [CD]].
14.6	Refer to clause 6.7 [CD].
15.0	See clause 6.7 above for clauses, 15.5.
15.1.2	Replace clause with following: The principal agent shall call for tenders from a list of tenderers agreed between the contractor and the employer.
15.1.4	Refer to clause 6.7 [CD].
15.1.5	No clause.
15.4.1	Replace “principal agent” with “employer” [6.7 [CD]].
17.4	Replace clause with: The contractor shall comply with and duly execute all contract instructions except any contract instruction for additional work issued after the date of practical completion other than making good physical loss and repairing damage to the works in terms of 8.0 and 21.
17.6	Add the following as clause 17.6: Minutes of meetings shall not constitute a site instruction unless reduced to a written contract instruction issued by the principal agent in terms of this contract / agreement.
19.5	Replace clause with: On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section.
19.8	Add the following as: 19.8 **WORKS COMPLETION** (1) Within seven (7) working days of the date of practical completion the principal agent shall issue to the contractor a works completion list defining the outstanding work and defects apparent at the date of practical completion to be completed or rectified to achieve works completion. (2) Where, in the opinion of the contractor, the works completion list has been completed the contractor shall notify the principal agent who shall inspect within seven (7) working days of receipt of such a notice. Where, in the opinion of the principal agent, the works completion list: (2)(a) Has been satisfactorily completed, the principal agent shall forthwith issue a certificate of works completion to the contractor with a copy to the employer. (2)(b) Has not been satisfactorily completed, the principal agent shall forthwith identify the works completion list items that are not yet complete and inform the contractor thereof. The contractor shall repeat the procedure in terms of 19.8.2.

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19.8 Continued	(3) Should the principal agent not issue a works completion list, in terms of 19.8.1 or 19.8.2.(b), within seven (7) working days of the end of the inspection period, the contractor shall notify the employer and principal agent. Should the principal agent not issue such works completion list within seven (7) calendar days of receipt of such a notice, the certificate of works completion shall be deemed to have been issued on the date of expiry of the initial notice period and works completion shall be deemed to have been achieved on such date. (4) Should the works completion list not be completed within a period of twenty (20) working days of the issue thereof the contractor shall be liable to a daily penalty as described in B13. (5) The defects liability period in terms of 21.1 shall commence with the issue or deemed issue of the certificate of works completion. in terms of 19.8.2.(a) or 19.8.3.
21.1	Replace clause 21.1 with the following: The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6), whichever is the later (if we use works completion).
21.6	Replace clause 21.6 with the following: On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent. And/or On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall: (1) inspect the works And within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or (2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired.
21.6.1.	Omit clause.
21.6.2	Omit clause.
21.13	Add the following as clause 21.13 The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14.
21.14	Add the following as clause 21.14 Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have being added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied.[B13.0].
22.3.2	No clause.

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23.1	Refer to clause 6.7 [CD].
23.2	Refer to clause 6.7 [CD].
23.2.13	No clause.
23.3	Replace 23.3 with: Further circumstances that delays practical completion due to any other cause beyond the contractor's reasonable control that could not have reasonably been anticipated and provided for which the contractor may be entitled to a revision of the date for practical completion, with or without an adjustment of the contract value as determined by the Employer [6.7 CD].
23.7	Refer to clause 6.7 [CD].
23.8	Refer to clause 6.7 [CD].
24.1	Replace clause 24.1 with: Where the **contractor** fails to bring the **works,** or a **section** thereof, to **practical-, works-, or final- completion** by the applicable completion date [CD], or the revised applicable completion date**,** the **contractor** shall be liable to the **employer** for the **penalty** [CD].
24.2	Replace clause 24.2 with: Where the **employer** elects to levy such **penalty** the **employer,** or the **principal agent** on instruction from the **employer,** shall give **notice** thereof to the **contractor.** The **principal agent** shall determine the **penalty** due from the later of the date for **practical- works-, or final- completion** [CD], or the revised date for **practical- works-, or final- completion,** up to and including the earlier of:
24.2.1	Replace clause 24.2.1 with: The actual or deemed date of **practical-, works- or final- completion** of the **works,** or a **section** thereof [23.7.1].
25.2	Replace clause 25.2 with: The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount.
25.3	Add the following to clause 25.3: 25.3.12 Monthly Local content report. 25.3.13 EPWP / NYS payment register, labour reports and certified ID document of EPWP/ NYS beneficiaries, Contract between Contractor and EPWP/ NYS beneficiaries, attendance register (if applicable). 25.3.14 Tax Invoice. 25.3.15 Labour intensive report. 25.3.16 Contract participation goal reports.

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25.5	No Clause.
25.6	Replace clause 25.6 with the following: Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer.
25.7.5	No clause.
25.10	Replace clause 25.10 with the following: The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate and invoice including all other substantiating documentation for items certified in the payment certificate.
25.12	Replace clauses 25.12 to 25.12.3 with the following: The value certified shall be subject to the following percentage adjustments: (Clauses 25.12.1 to 25.12.5 shall be applicable to a contract sum up to R1 million. In the event of a contract sum more than R1 million for Options D & E (C 1.0 Securities [11.0]) Clauses 25.12.1 to 25.12.5 shall be applicable) 25.12.1 Where a **security** is selected in terms of C 1.0 Securities [11.0] the value of the **works** in terms of 25.1 and of the **materials and goods** in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.2 Ninety-five per cent (95%) of such value in interim **payment certificates** issued up to the date of **practical completion.** 25.12.3 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **works completion** and up to but excluding the date of **final completion.** 25.12.4 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 26. 25.12.5 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 26 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**. (Clauses 25.12.6 to 25.12.10 shall be applicable to a contract sum more than R1 million for Option C (C 1.0 Securities [11.0]) 25.12.6 Where security is a payment reduction in term of Option C, the value of the **works** in terms of 25.1 and **materials and goods** in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.7 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion.** 25.12.8 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion.**

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25.12 Continued	25.12.9 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 26. 25.12.10 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 26 except were the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate.**
26.1	Refer to clause 6.7 [CD].
26.4.3	Omit clause.
26.7	Refer to clause 6.7 [CD].
26.10	Replace 26.10 with the following: The **principal agent** shall prepare the final account in consultation with the employer and issue the **final account,** to the **contractor** within sixty (60) **working days** of the date of **practical completion.**
26.12	Refer to clause 6.7 [CD].
27.1. 2	Replace 27.1.2 with the following: Interest due to late payment only.
27.1.4	Replace 27.1.4 with the following: Interest due to late payment only.
27.1.5	No clause.
27.5	Replace clause 27.5 with the following: Where the employer decides to recover an amount due in terms of 33.3 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security.
7.6	Add the following as clause 27.6: Where a provisional sequestration or provisional liquidation order has been granted or where an order has been granted which commences sequestration, liquidation, bankruptcy, receivership, winding-up or any similar effect, against the contractor or this agreement is cancelled in terms of 29, the employer may issue a demand to the guarantor in terms of the construction guarantee or advance payment guarantee held as security.
28.0	No clause.
28.1	No clause.
28.1.1	No clause.
28.1.2	No clause.
28.1.3	No clause.

28.1.4	No clause.
28.1.5	No clause.
28.2	No clause.
28.3	No clause.
28.4	No clause.
29.1.4	Add the following as clause 29.1.4: The **contractor**'s estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
29.1.5	Add the following as clause 29.1.5: The **contractor** has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
29.1.6	Add the following as clause 29.1.6: Honour his obligations in terms of clauses 10.1.5.1.3, 11.4.1 and 12.2. sub clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22.
29.7	Replace clause 29.7 with the following: The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3].
29.9	Replace clause 29.9 with the following: The **employer** has the right of recovery against the **contractor,** where applicable, [CD] from: The **guarantee for construction** (variable) until the final payment has been made; or The **guarantee for construction** (fixed) until the date of **practical completion;** or The payment reduction until the final payment is made; or The cash deposit made as security until the final payment is made
29.14.1	No clause.
29.14.3	No clause.
29.14.4	No clause.
29.14.5	No clause.
29.14.6	No clause.
29.14.7	No clause.
29.15	No clause.
29.16	No clause.
29.17.3	No clause.
29.17.6	No clause.
29.21.5	No clause.

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29.22	No clause.
29.23	No clause.
29.25.3	No clause.
29.25.4	No clause.
29.27	No clause.
30.2	Replace clause 30.2 with the following: Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation.
30.3 to 30.7.7	No clauses.
30.8	Replace clause 30.8 with the following: The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:
30.8.1	No clause.
30.8.2	Replace clause 30.8.2 with the following: The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties.
30.8.3	Replace clause 30.8.3 with the following: Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses.
30.9	Replace clause 30.9 with the following: Institution of Litigation shall be commenced and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse.
30.10	No clause.
30.12	No clause.

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C TENDERER'S SELECTIONS

C 1.0 Securities [11.0]

In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT).

In respect of contracts with a contract sum more than R1 million, the security to be provided by the contractor to the employer will be selected by the Contractor as indicated below:

Guarantee for construction: Select Option A, B, C, D or E ☐

Option A	cash deposit of 10 % of the contract sum (excluding VAT)
Option B	variable construction guarantee of 10 % of the contract sum (excluding VAT) (DPW-10.3 EC)
Option C	payment reduction of 10% of the value certified in the payment certificate (excluding VAT)
Option D	cash deposit of 5% of the contract sum (excluding. VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding. VAT)
Option E	fixed construction guarantee of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) (DPW-10.1 EC)]

NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

Guarantee for payment by **employer** [11.5.1; 11.10]	Not applicable
Advance payment, subject to a **guarantee for advance payment** [11.2.2; 11.3]	Not applicable

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

Year 1 **contractor**'s annual holiday period	start date	16 December 2022	end date	02 January 2023
Year 2 **contractor**'s annual holiday period	start date	16 December 2023	end date	02 January 2024
Year 3 **contractor**'s annual holiday period	start date		end date	
Year 4 **contractor**'s annual holiday period	start date		end date	
Year 5 **contractor**'s annual holiday period	start date		end date	

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C 3.0 Payment of preliminaries [25.0]

Contractor's selection

Select Option A or B ☐

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

Payment methods

Option A	The **preliminaries** shall be paid in accordance with an amount prorated to the value of the **works** executed in the same ratio as the amount of the **preliminaries** to the **contract sum**, which **contract sum** shall exclude the amount of **preliminaries**. Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio

Option B	The **preliminaries** shall be paid in accordance with an amount agreed by the **principal agent** and the **contractor** in terms of the **priced document** to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the **principal agent** and adjusted from time to time as may be necessary to take into account the rate of progress of the **works**

Lump sum contract

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

C 4.0 Adjustment of preliminaries [26.9.4]

Contractor's selection

Select Option A or B ☐

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

Provision of particulars

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

Option A	An allocation of the **preliminaries** amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) **working days** of the date of acceptance of the tender

Option B	A detailed breakdown of the **preliminaries** amounts within fifteen (15) **working days** of possession of the **site**. Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of **construction equipment**, establishment and dis-establishment charges, insurances and guarantees, all in terms of the **programme**

Adjustment methods

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

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Option A	The **preliminaries** shall be adjusted in accordance with the allocation of **preliminaries** amounts provided by the **contractor,** apportioned to **sections** where completion in **sections** is required Fixed - An amount which shall not be varied Value-related - An amount varied in proportion to the **contract value** as compared to the **contract sum**. Both the **contract sum** and the **contract value** shall exclude the amount of **preliminaries**, contingency sum(s) and any provision for cost fluctuations Time-related - An amount varied in proportion to the number of **calendar days** extension to the date of **practical completion** to which the **contractor** is entitled with an adjustment of the **contract value** [23.2; 23.3] as compared to the number of **calendar days** in the initial **construction period** [26.9.4]

Option B	The adjustment of **preliminaries** shall be based on the number of **calendar days** extension to the date of **practical completion** to which the **contractor** is entitled with an adjustment of the **contract value** [23.2; 23.3] as compared to the number of **calendar days** in the initial **construction period** [26.9.4] The adjustment shall take into account the resources as set out in the detailed breakdown of the **preliminaries** for the period of construction during which the delay occurred

Failure to provide particulars within the period stated

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

Option B	Where the detailed breakdown of **preliminaries** amounts for Option B is not provided, Option A shall apply

Lump sum contract

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

C1.3

FORM OF GUARANTEE

DPW-10.1 (EC): FIXED CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Director-General
Department of Public Works
Government of the Republic of South Africa

To: DEPARTMENT OF PUBLIC WORKS
Private Bag X5007
MTHATHA
5099

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (4.1 EDITION MARCH 2005)

1. With reference to the contract between _____

_____ _____(hereinafter referred to as the "**contractor**") and the Government of the Republic of South Africa in its Department of Public Works (hereinafter referred to as the "**employer**"), Contract/Tender No: 046758Q, for the Condition based Maintenance in Mount Frere (hereinafter referred to as the "contract") in the amount of R ……**, (**…….

……***),*** (hereinafter referred to as the **contract sum**)**,**

I / We, _____

in my/our capacity as _____and hereby

representing _____ (hereinafter referred to as the "**guarantor**") advise that the **guarantor** holds at the **employer's** disposal the sum of R ……**,**
(…….

……**)** being 5**%** of the **contract sum** (excluding VAT), for the due fulfillment of the contract.

2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed, on receipt of a written demand from the **employer** to do so, stating that the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.

3. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **employer**, at any stage prior to the expiry of this guarantee.

4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last final **payment certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

5. 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 on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the

aforegoing, any compromise, extension of the **construction period**, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.

6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the guarantor's liability ceases.

7. This guarantee is neither negotiable nor transferable, and

   (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
   (b) shall lapse on the date of the last **certificate of practical completion**.

8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

SIGNED AT _____ON THIS _____ DAY OF

_____ 200__

AS WITNESS

1. _____

2. _____

_____

By and on behalf of

_____

_____

_____

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked Annexure A)

DATE: _____

A. No alterations and/or additions of the wording of this form will be accepted.

B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi,* for all purposes arising from this guarantee.

C. This GUARANTEE must be returned to: _____

_____

DPW-10.3 (EC): VARIABLE CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Director-General
Department of Public Works
Government of the Republic of South Africa

To: ***DEPARTMENT OF PUBLIC WORK***
Private Bag ***X5007***
MTHATHA
5099

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (4.1 EDITION MARCH 2005)

1. With reference to the contract between _____

_____ _____(hereinafter referred to as the "**contractor"**) and the Government of the Republic of South Africa, in its Department of Public Works, (hereinafter referred to as the "**employer**"), Contract/Tender No: **……**, for the **……** (hereinafter referred to as the **"contract"** in the amount of R **……, (……**

……) (hereinafter referred as the **contract sum),**

I / We, _____

in my/our capacity as _____and hereby

representing _____ (hereinafter referred to as the "**guarantor**") advise that the **guarantor** holds at the **employer's** disposal the sum of R **……,**
(
……)
being 10**%** of the **contract sum** (excluding VAT), for the due fulfillment of the contract.

2. I / We advise that the **guarantor's** liability in terms of this guarantee shall be as follows:

   (a) From and including the date on which this guarantee is issued and up to and including the date of payment of the amount in the last final **payment certificate**, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);

   (b) The **guarantor's** liability shall reduce to 3 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of practical completion**, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT).

   (c) The **guarantor's** liability shall reduce to 1 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of final completion**, subject to such amount not exceeding 10 % of the **contract sum** (excluding VAT).

   (d) This guarantee shall expire on the date of the last **final payment certificate**.

   (e) The **practical completion certificate** and the **final completion certificate** referred to in this guarantee shall mean the certificates issued in terms of the contract.

3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on

receipt of a written demand from the **employer** to do so, stating that the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.

4. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.

5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final payment certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

6. 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 on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the aforegoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.

7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the amount guaranteed with the **employer**, whereupon the **guarantor's** liability ceases.

8. This guarantee is neither negotiable nor transferable, and

   (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or

   (b) shall lapse in accordance with clause 2(d) above.

9. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than the payment of the amount guaranteed.

SIGNED AT _____ **ON THIS** _____ **DAY OF**

_____ **200**__

AS WITNESS

1. _____

2. _____

_____

By and on behalf of

_____

_____

_____

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked Annexure A)

DATE: _____

A. **No alterations and/or additions of the wording of this form will be accepted.**

B. **The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi,* for all purposes arising from this guarantee.**

C. **This guarantee must be returned to:** _____

_____

PART C2:

PRICING DATA

PART C2:

PRICING DATA

PG-02.1 (EC) PRICING INSTRUCTIONS – (GCC (2010) 2nd EDITION: 2010)

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender no:	*MTH47/2022*	**Reference no:**	*19/2/4/2/2/6977/12*

C2.1 Pricing Instructions

1. GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Standard, Project and Particular Specifications) and the Drawings.

2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

3. QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Standard, Project and Particular Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

4. PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract 2010. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

5. PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Tender no: ***046758Q***

Each item shall be priced and extended to the "Total' column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Tenderer omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only' appear in the "Total" column. "Rate Only" items have been included where:

(a) an alternative item or material is contemplated;

(b) variations of specified components in the make-up of a pay item may be expected; and

(c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For 'Rate Only" items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

All rates and amounts quoted in the Bill of Quantities shall be in rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

The Tenderer shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

(a) the form and nature of the Site and its surroundings, including subsurface conditions,

(b) the hydrological and climatic conditions,

(c) the extent and nature of work and materials necessary for the execution and completion of the Works,

(d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender.

6. CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

7. ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

Tender no: 046758Q

8. UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
$m^3.km$	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
$m^2.pass$	=	square metre – pass

C2.2

BILLS OF QUANTITIES FINAL SUMMARY PAGE

Section No.	**FINAL SUMMARY**	Page		
1	PRELIMINARIES	26		
2	BUILDING WORKS	93		
3	EXTERNAL WORKS	101		
	SubTotal excluding Value Added Tax			
	ADD VAT @ 15%:			
	Carried to Tender		**R**	

FINAL SUMMARY

PART C3: SCOPE OF WORKS

C3.

SCOPE OF WORKS

PG-01.2 (EC) SCOPE OF WORKS – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender / Quotation no:	*MTH47/2022*	**Reference no:**	19/2/4/2/2/6977/12

C3. Scope of Works

C3.1 EXTENT OF THE WORKS

Completion of works to buildings, the scope involves but not limited to the following: completion of tank stand and other water supply related works, painting of walls, installation of suspended ceiling, repairs damaged windows and doors, remedial works to plumbing, etc.

C3.2 ORDER OF THE WORKS

Order of works will be discussed and agreed after site hand over and the work will be done in phases.

C3.3 BUILDINGS OCCUPIED

Government personnel are currently occupying these buildings, however the department of Justice will make arrangements with the contractor as to when and how to avail the working areas during construction. There will be loud noise allowed during working hours from 08:00 to 16:00 , because the court room sittings.

C3.4 ACCESS

The site is located in town in Mount Fletcher along R56 road, access to site is via tarred road in good condition.

Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, Government Gazette No. 42021 of 9 November 2018.

C3.5 STANDARD MINIMUM REQUIREMENTS

In terms of section 5(2) of the Construction Industry Development Board Act, 2000 (Act no. 38 of 2000) (the Act), the Construction Industry Development Board is empowered to establish and promote best practice standards, Standard Requirements and Guidelines which includes the following but not limited to:

C3.5.1 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011

C3.5.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013

C3.5.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013

C3.5.4 Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017, No. 40553 Government Gazette, 20 January 2017

C3.5.5 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette,10 November 2017

C3.5.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017

C3.5.7 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018

C3.5.8 cidb Standard for Developing Skills through Infrastructure Contracts, No. 43495 Government Gazette, 3 July 2020

C3.B

HIV/AIDS SPECIFICATION AND SCHEDULES

SECTION

HIV/AIDS SPECIFICATION

HIV/AIDS REQUIREMENTS

1 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers

- Informing Workers of their rights with regard to HIV/AIDS in the workplace

- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices

2 DEFINITIONS AND ABBREVIATIONS

2.1 **Definitions**

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all

2.2 **Abbreviations**

HIV : Human Immunodeficiency Virus
AIDS : Acquired Immune Deficiency Syndrome
STI : Sexually Transmitted Infection

3 BASIC METHOD REQUIREMENT

The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site
- When new Workers or Sub-contractors will join the construction project
- Duration of Workers and Sub-contractors on site
- How the maximum number of Workers can be targeted with workshops
- How the Contractor prefers workshops to be scheduled, *e.g.* three hourly sessions per Worker, or one 2.5 hour workshop per Worker
- Profile of Workers, including educational level, age and gender (if available)
- Preferred time of day or month to conduct workshops
- A Gantt chart reflecting the construction programme, for scheduling of workshops
- Suitable venues for workshops

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training

The Service Provider Workshop Plan shall address, but will not be limited to the following:

3.1 The nature of the disease;
3.2 How it is transmitted;
3.3 Safe sexual behaviour;
3.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
3.5 Attitudes towards other people with HIV/AIDS;
3.6 Rights of the Worker in the workplace;
3.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
3.8 How the Service Provider will support the Awareness Champion;
3.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
3.10 How the workshops will be presented, including frequency and duration;
3.11 How the workshops will fit in with the construction programme;
3.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
3.13 How the video will be used;
3.14 How the Service Provider will elicit maximum participation from the Workers;
3.15 A questions and answers slot (interactive session)

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated

4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING

4.1 **Workshops**

The Contractor shall ensure that all Workers attend the workshops

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops

4.2 **Recommended practice**

4.2.1 Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session

4.2.2 Service Providers

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works

4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met

4.2.3.1 UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS Assessment Criteria:

1. Define and describe HIV and AIDS
2. List and describe the progression of HIV/AIDS

4.2.3.2 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found
2. Describe how HIV/AIDS can be transmitted
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS

4.2.3.3 UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream

Assessment Criteria:

1. Report on how to minimise the risk of HIV/AIDS infection
2. Report on precautions that can be taken to prevent HIV/AIDS infection
3. Explain or demonstrate how to use a male and female condom

4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS transmission

4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counselling

Assessment Criteria:

1. Describe methods of testing for HIV/AIDS infection
2. Report on why voluntary testing is important
3. Report on why pre- and post-test counselling is important

4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS
2. Describe nutritional needs of people living with HIV/AIDS
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS
4. Explain the need for counselling and support to people living with HIV/AIDS

4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people

Assessment Criteria:

1. Discuss anti-retroviral therapy
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS
4. Describe post exposure prophylactics

4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way

Assessment Criteria:

1. Discuss the rights of a person living with HIV/AIDS in the workplace
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important

4.3 **Displaying of plastic laminated posters and distribution of information booklets**

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets, which are available from all Regional Offices of the Department of Public Works

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds

The posters on display must always be intact, clear and readable
Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site

5 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds

6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers

7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner

The Awareness Champion shall be responsible for:

7.1 Liasing with the Service Provider on organising awareness workshops;

7.2 Filling condom dispensers and monitoring condom distribution;
7.3 Handing out information booklets;
7.4 Placing and maintaining posters

8 MONITORING

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract

SCHEDULE A

HIV/AIDS PROGRAMME : SITE CHECKLIST

When did construction commence _____

Name of Departmental Project Manager _____

Please refer to HIV/AIDS Programme activities during the reporting period

Tick the block if Contractor satisfactorily complied with specifications																												
DATE	**PI**				**PI**				**PI**				**PI**				**PI**				**PI**				**PI**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												
Support service poster/s in a good condition																												

Please indicate the applicable number for the reporting period							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							
_____ Representative/Agent							
_____ Contractor							

Date of progress inspection (dd/mm/yy) _____

Reporting period: (dd/mm/yy)_____ to (dd/mm/yy) _____

Deviations from HIV/AIDS awareness programme plan:

Corrective actions

_____ _____

Representative/Agent Departmental Project Manager

_____ _____

Date Date

SCHEDULE B

HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT

Reporting period: (dd/mm/yy)_____ to (dd/mm/yy) _____

Number of workshops conducted in reporting period _____

Number of scheduled workshops according to approved workshop plan _____

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

_____ _____

Service Provider Contractor

_____ _____

Date Date

HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED

Fill in the applicable information with regard to each workshop conducted																												
DATE	**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Content of workshop: *(Mark the content included)*																												
SLO1																												
SLO2																												
SLO3																												
SLO4																												
SLO5																												
SLO6																												
SLO7																												
HIV/AIDS in construction video																												
Indicate the duration of the workshop in hours																												
Total number of Workers																												
Indicate workshop venue																												

HIV/AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

Fill in your name and indicate attendance by ticking the appropriate date																											
DATE		**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
		D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
No	**NAMES**																												

SCHEDULE C

CONTRACTOR HIV/AIDS PROGRAMME REPORT

Project name _____

Project Location _____

Contract value of project (R) _____

Department of Public Works Project Manager _____

HIV/AIDS Programme duration: (dd/mm/yy) _____ to (dd/mm/yy) _____

AWARENESS MATERIAL

Describe location of posters displayed during the programme _____

_____

Comments on posters _____

_____

_____

Indicate total number of booklets distributed _____

Comments on booklets _____

_____

_____

CONDOMS

Indicate total number of male condoms distributed _____

Indicate total number of female condoms distributed _____

Describe where male condom dispenser was placed _____

Describe where female condom dispenser was placed _____

HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted _____

Indicate the duration of workshops _____

Indicate the total number of Workers that participated in the HIV/AIDS workshops _____

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry

_____

Comments on HIV/AIDS workshops on site _____

_____

GENERAL

Briefly describe programme activities and satisfaction with outcome _____

_____

_____

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site

_____

_____

_____

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers	Yes	No	Currently developing one

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss	Coughing or chest pain	Vomiting
Reactive TB	Pain when swallowing	Meningitis
Hair loss	Persistent fever	Memory loss
Severe tiredness	Diarrhoea	Pneumonia

Number of HIV/AIDS-related deaths _____

_____ _____

Contractor **Date**

_____ _____

Departmental Project Manager **Date**

C3.C

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

Black Knight

Safety Consultants

P.O. Box 210, Hillcrest, 3650, Kwa-Zulu Natal.
078-339 3195 / 072-737 0922 (Mobile)
blackknight.safety@gmail.com

O.M. MOODLEY ARCHITECTS

Mt. Fletcher Magistrates Court,

Mt. Fletcher

HEALTH & SAFETY SPECIFICATIONS

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1. GENERAL

1.1 Tender Document

This document is the pre-contract Health and Safety Specification that must be used by the Principal Contractor and Sub-Contractors appointed by the Principal Contractor to compile Health and Safety Plans for this project and forms part of the tender documentation.

The Principal Contractor and Sub Contractor's particular attention is drawn to Section 1.2 of this specification whereby

"Upon award of the contract, the contractor is to assume and adopt the function and duties of the Principal Contractor as set out in the Construction Regulations 2003 No. R. 1010 promulgated 18 July 2003."

The Health and Safety Specifications outlined herein must be taken into account and due allowance made within the pricing of appropriate items contained within the specification. Where the tenderer is of the opinion that a requirement is missing or is not adequately specified, then this shall be drawn to the Client/Client Agent's attention during the tender period. In the absence of any direction to the contrary, the tenderer shall as part of the tender submission set out the details of such discrepancy together with the costs associated therewith, separately identified and included within the tender figure.

1.2 Principal Contractor

The successful tenderer will, on signing of the "Mt. Fletcher Magistrates Court**"** contract be required to fulfill the function and duties of the Principal Contractor as set out in the Construction regulations 2003 No. R. 1010 promulgated 18 July 2003.

1.3 Start of Construction Phase

The construction phase shall not commence until written permission is received from the Client / Client's Agent and Design Team. The Client / Client's Agent shall discuss and negotiate with the Principal Contractor the contents of the Health and Safety Plan submitted by the Principal Contractor before finally approving it for implementation.

1.4 Sub-Contractors, Suppliers & Designers

The Principal Contractor shall ensure that all direct appointments in connection with this project include provisions for the compliance of his sub-contractors, suppliers and designers etc. with the relevant provision of the Occupational Health and Safety Act (Act 85 of 1993) and its Regulations 2003 No R. 1010 promulgated 18 July 2003.

1.5 Liaison

The Principal Contractor shall together with all his appointees, liaise with the Client / Client's Agent as required under the Regulations and agree on procedures for the transfer of relevant information in respect of designs and in connection with the preparation of the health and Safety File.

1.6 Advice

The tenderer shall as part of the tender submission indicate where advice will or may be required of the Client / Client's Agent in respect of the competence of the tenderer's designers and the adequacy of resources allocated or to be allocated by them.

1.7 Undertaking by Principal Contractor and Sub-Contractors appointed by the Principal Contractor

The Principal Contractor as well as Sub-Contractors appointed by him / her shall undertake in writing to ensure that the provisions of the Occupational health and Safety Act (Act 85 of 1993) and its Regulations, in particular the Construction Regulations 2003 No. R. 1010 and any amendments or re-enactments thereto are complied with. The attached Occupational health and Safety provisions undertaking from for the Principal Contractor in Appendix 1 shall be completed and signed by the Managing Director of the company/firm awarded the tender.

2. PROJECT DESCRIPTION

Client

Department of Public Works

7th Floor PRD Building

Sutherland Street

Mthatha

5100

Site Address

Mt. Fletcher Magistrates Court

Mt. Fletcher

Estimated Duration of Construction is eight (08) months

Client's Agent

O.M. Moodley Architects

15 Botanic Avenue

Musgrave

4001

Occupational Health & Safety Consulting Firm

Black Knight Safety Consultants

P.O. Box 210

Hillcrest

3650

Mobile: 078-339 3195

3. INFORMATION REQUIREMENTS

The Contractor must provide the following information:

General

- The Principal Contractor / Sub-Contractor shall have an OHS Policy in accordance with the Occupational Health and Safety Act, Act NO. 85 of 1993 and include a copy of the Policy in the Health and Safety Plan to be submitted by the Principal Contractor / Sub-Contractor.

- The Principal Contractor / Sub-Contractor shall promptly display a copy of the Company's OHS Policy on the OHS Notice Board for the duration of the contract and include it into information provided to persons at the contract OHS induction.

- The Principal Contractor shall develop a Contract specific OHS Management Commitment Statement based on the Company's OHS Policy.

- The Principal Contractor's Managing Director shall sign the Commitment Statement and prominently display a copy on the OHS Notice Board for the duration of the contract. A copy of the Commitment Statement shall be included in information provided to persons at the contract OHS induction and a copy shall also be supplied to each sub-contractor.

Management

- Details of the personnel and management systems to be put in place to prepare, manage, implement, conduct and monitor the Health and Safety Plan for the project. Broadly speaking your:

  - Organisation's internal structure that establishes SHE (Safety, Health and Environmental) ROLES, RESPONSIBILITIES, ACCOUNTIBILITIES and REPORTING RELATIONSHIPS,

  - SHE (Safety, Health and Environmental) PLANS, POLICIES, PROCEDURES, DIRECTIVES and STANDARDS that provide instructions as to how activities and functions are to be carried out,

  - SHE (Safety, Health and Environmental) CONTROLS, INSPECTIONS, REVIEWS, etc. built into construction operations to ensure that performance is consistent with SHE (Safety, Health and Environmental) objectives and requirements,

  - SHE (Safety, Health and Environmental) COMMUNICATION MECHANISMS for collecting, handling and reporting information.

In other words Management Systems that specify WHO is going to do WHAT, WHERE, WHEN WHY and HOW.

- Details of relevant qualifications and experience held by the persons nominated above, including recent Health and Safety education and training undertaken.

- Procedures for determining the competence of contractors engaged on the project, whether employed by the contractor directly or by others, to fulfill their duties under the Construction Regulations 2003 (No. R. 1010 Promulgated 18 July 2003).

Program

A time estimate required by the contractor to set up the Health and Safety Plan sufficiently for works to commence onsite.

Cost

A detailed breakdown of costs allowed in the contractor's tender for preparing, managing, implementing and monitoring the Health and Safety Plan, and for complying with the requirements imposed on the Principal Contractor under the Construction Regulations 2003 (No. R. 1010 Promulgated 18 July 2003).

Health & Safety Training

The Principal Contractor shall detail the OHS competencies and training received by its contract management personnel.

The Principal Contractor's Health and Safety Plan shall have a detailed register of the skills and competencies for all personnel for the activities that the personnel will undertake the contract (e.g. Mobile Plant Operators, Crane Operators etc.)

The Principal Contractor shall demonstrate and maintain documentary evidence of competencies on site for the duration of the contract.

4. SITE CONDITIONS

Existing Services

Water, electricity and drainage are to be connected to the property. Due care must be taken of these services. A Certificate of Compliance is to be obtained.

5. DRAWINGS

To be obtained from the Client's Agent.

6. CONSTRUCTION MATERIALS

The following construction materials and substances to be used in the works have been identified as potentially hazardous, posing special health and/or safety hazards during the project.

- **Adhesives/solvents:** may cause illness by breathing in vapours, irritation if in contact with the skin and eyes or can be highly flammable.

- **Cement:** can cause illness by

✓ Skin contact – cement burns and dermatitis

✓ Eye contact – irritation and inflammation

✓ Inhalation of dust – irritation to nose and throat which can hamper breathing

- **Oil based paint:** can cause illness by breathing in vapours

- **Silicone sealant with fungicide:** can cause skin irritation

- **Timber preservative flame retardant:** can cause irritation to the skin, eyes, nose and throat and is harmful if ingested

- **Paving slabs which may contain silica:** when cut, create dust which may affect the lungs

- **Building blocks over 20kg in weight:** may lead to excessive stress and strain causing injury to muscles and tendons

- **Chemical cleaners:** can cause illness by

✓ Skin contact – acids and alkalis are highly corrosive and destructive to body tissue, causing burns

✓ Inhalation of fumes or mist – concentrated solutions of acids and alkalis emit toxic and corrosive fumes

- **All materials contained within aerosol containers that are pressurised**

Contractors are required to take appropriate measure to manage the risks arising and to provide details of their proposed measures within their tenders and to incorporate adequate method statements within the Health and Safety Plan.

This is not a definitive list of all potentially harmful products. Other materials and substances commonly used during construction may also present health and safety hazards, however, it is deemed that these should be familiar to the average competent Contractor as part of routine risk and Occupational Health, Safety and Hygiene assessments and are therefore not included here.

Adopt all precautionary measures provided by manufacturers for storage, use and application of specified materials.

The Contractor's attention is drawn to the following materials which may present health and/or safety hazards:

- Preservative treated timber

- Cement

- Sand

- Lime

- Epoxy mortars

- Glass
- Iron pipe work and jointing materials
- Zinc coverings
- Paint with a Fibreglass membrane
- Gypsum Plasters
- Silicone and polysulphide sealants
- Cleaning solutions
- Disinfectants

Date sheets for these, and any other hazardous materials that will be used for the works, are to be obtained by the contractor from the manufacturers.

7. SITE WIDE ELEMENTS

Site Access and Egress

- Access to the site will be obtained by a private entrance road.
- Store materials and plant away from means of access for the general public
- Remove any waste generated during construction regularly
- Maintain free access through designated means of escape at all time
- Agree with the Client / Client's Agent on delivery points for materials before commencing works.

Deliveries and Emergency Services

Access will be from

Location of Unloading and Storage of Materials

Materials are to be unloaded and stored in locations that will not in any way affect access or egress to neither the site nor the works. All necessary signage and barriers will be put in place to protect entrants at the site access and egress points.

Hygiene

Provision of site hygiene facilities:

- Adequate toilets
- Adequate washing facilities
- Drying sheds, huts, rooms or other accommodation for sheltering during bad weather, storing clothes and taking meals. Facilities should include tables and chairs, suitable means for boiling water and a supply of wholesome drinking water
- Adequate first aid arrangements including stocked First Aid Box, a trained First Aider, and information for workers on site about First Aid arrangements, the location of the nearest telephone and hospital with an accident and emergency department.
- A Site Safety Officer shall be named for the site

Environment

Noise and vibration:

- Protect against noise and vibration by controlling it at source by fitting silencers and dampers where possible. Do not keep machinery running unnecessarily.
- Do not carry out noisy work outside of normal working hours

Pollution:

- Take precautions to protect against pollution of watercourses and the air.
- Damp down the ground to ensure that dust is not generated during excavation work
- Provide Personal Protective Equipment including head protection, ear protectors for all operatives involved in noisy working, eye and face protection, respiratory protective equipment, general and specialist clothing, gloves, safety footwear.

Waste disposal:

- Any toxic or hazardous material encountered shall be reported to the Client / Client's Agent immediately, and prior to its removal from site.

- Any toxic or hazardous material must be disposed of strictly in accordance with the National Environmental Management Act of 1998 as well as the Hazardous Substance Regulations at a properly licensed site suitable to receive such waste.

Security

- Maintain a daily log of all site operatives and visitors to record time of arrival to site and departure from site

- Issue all operatives with suitable identification badges to be worn and displayed at all times whilst on site

- Lock away in secure storage all flammable or dangerous substances

- Immobilise plant at the end of each work period

Safety

- Ensure that all employees are aware of the Health and Safety Policy and put into place arrangements to ensure that all visitors and workers new to the site are aware of the site safety provisions

- Portable electric tools and equipment are to be supplied from 220V outlets protected by an earth leakage unit or have special measures taken to protect them from mechanical damage and wet conditions

- Locate underground electricity cables if any, mark and take precautions to avoid.

- Ensure that cartridge operated tools are operated by trained personnel and in accordance with the manufacturer's instructions. Also ensure that the gun is cleaned regularly and kept in a secure place when not in use.

- Ensure that there are chutes for waste to avoid materials being thrown down.

- Ensure waste material is removed regularly and that the site is kept tidy and materials stacked and stored safely

- Ensure that all personnel can reach their place of work safely and that there are adequate barriers to stop falls from open edges to and on the building.

- Ensure that ladders are in good condition and that they are secured either at the top or bottom to prevent slipping. The ladders are to rise by at least one metre above their landing place.

- Provide adequate scaffolding to carry out the works ensuring that there is proper access, all uprights provided with base plates, it is secured to the building, full board working platforms, provide adequate guard rails and toe boards to every side which a person can fall more than two metres. Where loaded with materials, ensure they are evenly distributed. Where the scaffold is near the boundary then debris netting shall be incorporated. Ensure the scaffold is inspected on a weekly basis and after bad weather and that the results of the inspection are recorded and signed by the person who has adequate experience in the erection and maintenance of scaffolds in a register or report book.

- Provide the right number and type of fire extinguishers in positions where they may be needed. Ensure all fire extinguishers are properly maintained and inspected and a record of inspection is certified on the appliance.

- Ensure that there are adequate escape routes and that they are kept clear at all times.

- Protect people who may be exposed to health risks arising from hazardous substances.

- Comply with the Environmental Regulations for Workplaces 1987.

8. TEMPORARY WORKS

Scaffolding

The erection of a fully independent scaffold to all elevations is envisaged.

Access Generally

- Provide safe access for operatives in the form of ladders/stairs/hoists on the scaffold.

- Provide temporary barrier rails to all open roof edges and gutters.

9. SITE RULES

Permit to Work Requirements

- Institute a “hot work” permit system in respect of

    a) Metalwork flame cutting

    b) Site welding

- Where work is to be carried out in any confined space as defined in the OHS Act and its Regulations, the Principal Contractor / Sub-Contractor shall appoint a competent person / Approved Inspection Authority to carry out gas checking, testing, monitoring and to certify that the confined space is safe to work in. A copy of the Permit-to-Work Certificate shall be submitted to the Client / Client’s Agent.

Injury Incident Reporting, Corrective and/or Preventative Action

- Establish and implement a First Aid program to provide emergency treatment to victims of accidents, chemical substances or excessive exposure to toxic substances.

- The program shall include:

    a) Proper First Aid facilities administered by qualified personnel

    b) First Aid Boxes

    c) First Aid room where there are 500 or more workers on site

    d) Training and re-training of First Aiders

    e) First Aid treatment procedures

    f) Standard procedures

    g) Special procedures e.g. for poisoning

    h) Maintenance or First Aid facilities

- All First Aid provisions shall comply with the OHS Act (Act 85 of 1993)

- Make arrangements for all Sub-Contractors to report accidents, ill health and dangerous occurrences notifiable to the Department of Labour under Section 24 of the OHS Act (Occupational Health and Safety Act, Act 85 of 1993) (Reporting to Department of Labour Inspector regarding certain incidents).

- All lost time incidents associated with the contract works or reportable as defined by Section 24 of the OHS Act shall be immediately reported to the Client / Client's Agent.

- The Principal Contractor /Sub-Contractor shall provide a detailed report of all accidents / incidents, including events that could have become lost time incidents were it not for fortuitous circumstances to the Client / Client's Agent within 5 days of the incident occurring. The Principal Contractor / Sub-Contractor shall provide copies of all reports and information associated with the incidents to the Client / Client's Agent. Copies of reports must be placed on the Health and Safety File.

- Where the Principal Contractor / Sub-Contractor has been:

    a) Served with a prohibition, contravention or improvement notice under the OHS Act, or

    b) Required to comply with any order issued by an Inspector for the Department of Labour

    The Principal Contractor / Sub-Contractor shall immediately supply a copy of that notice, order or notification to the Client / Client's Agent.

- Where the Principal Contractor / Sub-Contractor has been served with a summons or is convicted of any offence in relation to Occupational Health and Safety, the Principal Contractor / Sub-Contractor shall immediately supply a copy of that summons to the Client / Client's Agent.

- The Principal Contractor / Sub-Contractor shall detail the reporting and investigation procedures for incident investigation. The procedures shall include the investigation officer responsible and the time limits imposed for reporting and investigating the incident and to implement corrective action in a timely manner so as to prevent a recurrence.

- The Client / Client's Agent may participate in or undertake an investigation into the incident, injury or illness at its discretion and the Principal Contractor / Sub-Contractor shall co-operate with and provide assistance to the investigation organized and undertaken by the Client / Client's Agent.

Lock-out

Institute a "Lock-out" procedure in respect of controlling energy so as to prevent unexpected operation or activation of machinery or equipment. This procedure must include a written policy, specific

procedures, rules and supervisory follow-up, covering the positive locking of switches and valves to ensure that alterations, maintenance, set-up and/or other work can be performed safely.

Monthly Health & Safety Audits

- The Principal Contractor shall carry out monthly Health and Safety Audits on the measures contained within his/her Health and Safety Plan submitted to the Client / Client's Agent as well as Health and Safety Plans submitted by Sub-Contractors appointed by the Principal Contractor to demonstrate that the required levels of health and safety are being achieved and maintained and compile a full report to the Client / Client's Agent on such audit.

- The Client / Client's Agent will audit the Principal Contractor as well as his/her Sub-Contractors' Health and Safety Plans from time to time and will advise the Principal Contractor of any matter with which he/she is not satisfied and the Principal Contractor shall take such steps as are necessary to satisfy the Client / Client's Agent.

- The Client / Client's Agent will carry out such audits as he/she considers necessary but not less than monthly.

- The Principal Contractor shall make available specialist personnel as the Client / Client's Agent may consider necessary for the performance of such audits.

- The Principal Contractor shall develop and maintain an Audit Schedule that details the audits planned to be undertaken by the Principal Contractor of the work under contract, including Sub-Contractors, for the duration of the contract. The Audit Schedule shall form part of the Health and Safety Plan that needs to be submitted by the Principal Contractor.

- Audit reports shall detail the scope of the audit, the audit questions and the audit findings.

- The Client / Client's Agent shall be promptly provided with copies of all audit reports together with other documentation to show that all matters have been appropriately addressed.

- Unless otherwise directed by the Client / Client's agent, the Principal Contractor / Sub-Contractor shall under its initial OHS Audit within four weeks of commencement of work. The Principal Contractor shall undertake subsequent OHS Audits as a frequency of not less than once every three months.

- All Principal Contractor's OHS Audits shall include an assessment of Sub-Contractor compliance with the approved OHS Plan.

Management Review

The Principal Contractor shall undertake an independent review of the Health and Safety Plan for the contract in accordance with the requirements of the OHS Act, relevant Regulations and in particular the Construction Regulations 2003.

A review shall be undertaken three months after commencement of the contract and every six months thereafter for the duration of the contract.

Following the completion of the review, the Principal Contractor shall submit a written report that details the suitability, adequacy and effectiveness of the OHS Plan and to certify that the Site procedures, practices and operations are in accordance with the contract.

Provision of Information

- Provide Sub-Contractors appointed by him/her with the relevant sections of the Health and Safety Specifications pertaining to the construction work that has to be performed.

- Where changes are brought to the design and construction, provide sufficient information and appropriate resources to the Sub-Contractor to execute work safely.

- Discuss and negotiate with Sub-Contractors the contents of the health and Safety Plan / Plans submitted by them and finally approve such plans for implementation.

- Ensure that copies of Health and Safety Plans compiled by the Principal contractor and his/her Sub-Contractors are available on request to an employee, DOL Inspector, Contractor, Client / Client's Agent.

- The Principal Contractor / Sub-Contractor shall detail procedures that will ensure that personnel are suitably consulted and communicated with during the planning and application of work activities associated with the contract.

- The Principal Contractor / Sub-Contractor shall detail the procedures for the identification, assessment and control of hazards associated with the day-to-day work activities. These procedures shall include requirements for consultation with personnel involved in the work activity.

- The Principal Contractor / Sub-Contractor shall have procedures for ensuring that OHS information is communicated to and from its personnel. The Principal Contractor / Sub-Contractor shall hold OHS meetings with all personnel or their representatives at the site on a weekly basis.

- Minutes shall be recorded for all OHS meetings and posted on OHS notice boards within 48 hours of the meeting.

- The Principal Contractor / Sub-Contractor shall maintain at the Site an OHS Notice Board located in a prominent position and accessible to all personnel, for the distribution of OHS information.

- The Principal Contractor / Sub-Contractor shall as a minimum, establish and implement procedures for reporting relevant and timely information with regard to OHS Performance and incidents.

- The Principal Contractor / Sub-Contractor shall establish, implement and maintain a controlled copy of all Contract OHS documentation on Site.

- Where the Principal Contractor / Sub-Contractor's Health and Safety Plan references other documentation including the contract, the Principal Contractor / Sub-Contractor shall ensure that section and clause numbers are clearly denoted in its Health and Safety Plan. All documentation referenced in the Health and Safety Plan shall be available on the Site for the duration of the contract.

- Ensure that Health and Safety Files kept by Sub-Contractors appointed by the Principal Contractor is kept on site and made available to an inspector, Client / Client's Agent.

- Hand over a consolidated Health and Safety File to the Client / Client's Agent upon completion of construction work, including all drawings, designs, materials used and other similar information concerning the completed structure.

- In addition to the Health and Safety File compile a comprehensive and updated list of all contractors on site accountable to the Principal Contractor as well as the agreements between the parties and the type of work done by them.

Stop the Execution of Construction Work

Stop any construction / construction related work conducted by any person on the construction site, which is not in accordance with the Principal Contractor's Health and Safety Plan and/or the Health and Safety Plans of Sub-Contractors which poses a threat to the health and/or safety of persons.

Handing over of Project Health & Safety File

- Hand over a consolidated Health and Safety File to the Client / Client's Agent upon completion of construction work, including all drawings, designs, materials used and other similar information concerning the completed structure.

- In addition to the Health and Safety File, compile and hand over a comprehensive and updated list of all contractors on site accountable to the Principal Contractor as well as the agreements between the parties and the type of work done by them.

Visitors on Site

- All visitors to report to the Principal Contractor's reception area for OHS Induction training.
- All visitors to sign the visitor's registration document.
- All visitors to be provided with a Visitors Permit to enable them to access the construction site.
- All un-inducted visitors must be accompanied on the construction site by an inducted person.
- No visitors shall be allowed to access the construction site without wearing the necessary PPE.

General Health & Safety Induction for Work before Commencing

The Principal Contractor / Sub-Contractor shall develop and detail a Site Induction Training Program as part of the Occupational Health and Safety Plan to be submitted to the Client / Client's Agent prior to commencement of construction that includes as a minimum:

- Training related to hazards likely to be encountered on site and control measures that have been developed in response to these hazards;
- Roles and responsibilities
- The requirements of the Health and Safety Plan submitted land approved;
- Address the identified issues in the Fire Safety, Emergency, Evacuation and Rescue Plan to ensure that all Site personnel are aware of procedures in the event of an incident or emergency occurrence;

The Principal Contractor / Sub-Contractor shall evaluate all persons undertaking the Site Induction Training through a written test to ensure that inductees have an understanding of the OHS (Occupational Health and Safety) requirements for the contract. The written test shall be signed and dated by the person undertaking the induction training to attest to their understanding and be retained by the Principal Contractor / Sub-Contractor as a document shall be signed by them as proof that the contents of the Induction Training has been explained to them and that they fully comprehend the contents thereof.

Site Specific Health & Safety Induction for Specified Work Required

The Principal Contractor / Sub-Contractor shall conduct Site Specific Occupational Health and Safety Induction Training for all personnel, the Client / Client's Agent and all visitors not escorted on site by inducted persons.

The Principal Contractor / Sub-Contractor shall evaluate all persons undertaking the Site Induction Training through a written test to ensure that inductees have an understanding of the OHS requirements for the contract. The written tests shall be signed and dated by the person undertaking the induction training to attest to their understanding and be retained by the Principal Contractor / Sub-Contractor as a record that the training has been completed.

Wearing of Personal Protective Equipment/Clothing

The Principal Contractor / Sub-Contractor shall evaluate the risk attached to any condition or situation which may arise from the activities of all personnel in the course of their duties, and shall take steps to make such conditions or situations safe.

Where it is not practicable to safeguard the condition or situation, the Principal Contractor / Sub-Contractor shall provide such safety equipment and facilities as may be necessary to ensure safety, and also ensure that employees make use of protective clothing/equipment.

Issuing of and training in the correct usage of Personal Protective Clothing shall be registered and kept available for auditing purposes by the Client / Client's Agent.

Hazard Identification, Risk Assessment and Control

The Principal Contractor / Sub-Contractor shall, before commencement of construction work and during construction work, cause a Risk Assessment to be performed by a competent, appointed person and the Risk Assessment shall form part of the Health and Safety Plan and shall include at least:

- The identification of the risks and hazards to which persons may be exposed
- The analysis and evaluation of the risks and hazards identified
- A documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified
- A Monitoring Plan
- A Review Plan

The Principal Contractor / Sub-Contractor shall ensure that a copy of the Risk Assessment is available on site for inspection by the Client / Client's Agent, contractor, employee, Trade Union Representative, Health and Safety Representative or any member of the Health and Safety Committee.

The Principal Contractor / Sub-Contractor shall consult with the Health and Safety Committee on the development, monitoring and review of the Risk Assessment.

The Principal Contractor / Sub-Contractor shall ensure that all personnel are informed, instructed and trained regarding any hazards and the related work procedures before work commences.

Site Emergency Procedures

The Principal Contractor / Sub-Contractor shall establish a Fire Safety, Emergency Evacuation and Rescue Plan to ensure that the work on site is undertaken to the highest standard of fire and other aspects of safety. This plan is to be submitted to the Client / Client's agent for approval. The plan shall include the following detail:

- The role and responsibilities of every individual in the work area on fire safety, emergency, evacuation and rescue.
- General work area precautions, fire prevention, detection, protection and warning alarm systems
- Fire fighting and rescue equipment including types of fire extinguishers
- Fire safety measures for site accommodation
- Escape and communication
- Fire brigade access, facilities and co-ordination
- Fire drills and training including the use of fire fighting equipment
- Material storage including flammable liquids, gasses and waste

The Principal Contractor / Sub-Contractor shall ensure that all procedures, precautionary measures and safety standards stipulated in the Plan are communicated, implemented and complied with by all workers including other interfacing contractors on site.

The Principal Contractor / Sub-Contractor shall practice their emergency preparedness within six weeks of the commencement of work and at least at four monthly intervals thereafter.

The Principal Contractor / Sub-Contractor shall conduct weekly checks on fire fighting equipment and test alarms and detection devices installed on site and document findings in a register which shall be on site at all times for inspection.

The Principal Contractor / Sub-Contractor shall conduct weekly inspections of escape routes, fire brigade access, fire fighting facilities and working areas to ensure that the requirements stipulated in the Fire Safety, Emergency, evacuation and Rescue Plan are complied with. All inspection records shall be documented in registers and kept in the Health and Safety File for inspection at any time.

Records and Record Management

- The control or records shall be in accordance with the Principal Contractor's / Sub-Contractor's approved Health and Safety Plan for the contract.

- Records shall be registered, ordered and retained on site in the Health and Safety File for the duration of the contract.

10. METHOD STATEMENT

Scaffolding

The following are to be offered to the Client / Client's Agent for comment before implementation of the associated works:

- Provide general arrangement drawings for scaffolding to all elevations detailing bridging and protection over means of ingress and ingress, roof lights and the like; ties into existing structure and hoist arrangements.

- Information on protection during works to roof lights

- Disposal of rubbish and waste materials from site.

11. CONTINUING LIAISON (CONTRACTOR DESIGNED WORKS)

The procedures for consideration and evaluation of the Health and Safety implications of Contractor-designed elements of the works must follow the recognized principles of prevention and protection and account of the issues highlighted in this OHS Specification.

The following information is to be submitted by the Contractor to the Client / Client's agent and, where appropriate, the design team, and the provision of relevant information to those persons affected by the works, prior to the commencement of the relevant works;

- Suitable and sufficient information to demonstrate that health or safety issues have been adequately considered

- Risk Assessments

- A list of health and/or safety hazards identified which cannot be designed out.

- A list of any materials or substances which are specified or inherent in the design which is potentially hazardous to health and/or safety.

11.1 Unforeseen Eventualities

The following action is to be taken in the event of unforeseen eventualities arising during the construction stage of the project, which require significant design changes, or affect the resources required to carry out the work without risk to health and/or safety, or have other health or safety implications.

The Client / Client's Agent and, where possible, the Principal Contractor are to be advised as soon as possible.

Full details of the relevant health and safety issues involved are to be reviewed with the Client / Client's agent and Principal Contractor as soon as possible.

Full details of any revised designs, Risk Assessments and identified hazards and/or hazardous materials and substances are to be issued to the Client / Client's Agent and Principal Contractor in sufficient time to allow for the revision of the Health and Safety plan and notification of all persons affected by the health and/or safety implications of the changes prior to the commencement of the affected works.

11.2 Health & Safety Plan

Develop a Health and Safety Plan to reflect variations in the design or changes in site conditions and liaise with the Client / Client's Agent. The Principal Contractor shall develop this Health and Safety Plan so that it:

- Incorporates the contractor's approach to managing the construction work to ensure the health and safety of all persons carrying out the construction work and all persons who may be affected by their work.

- Includes the Risk Assessments prepared by all Contractors under their duties set out in the Construction Regulations 2003 and any other relevant legislation (i.e. the OHS Act and Regulations etc.)

- Includes the arrangements for ensuring that, where appropriate or specifically requested, all Contractors / Sub-Contractors prepare suitable and sufficient method statements for their construction works which incorporate adequate measures for ensuring the health and safety of all persons who may be affected by these works.

- Incorporates the common arrangements for site safety, statutory notices and registers etc.
- Includes the site rules to be adopted for controlling the risks to health and safety during the construction phase(s) or the project.
- Includes reasonable arrangements for monitoring compliance with health and safety legislation and site rules.
- Includes reasonable measures to ensure co-operation between all Contractors and Sub-Contractors in respect of health and safety provisions and prohibitions.
- Includes the steps to be taken to ensure that only authorized persons are allowed onto any premises or parts of the site / premises where construction work is being carried out.
- Includes arrangements for emergency procedures.
- Includes arrangements for ensuring that, so far as is reasonably practicable, that the employees or other persons under the control of any Contractor / Sub-Contractor, and any visitors to the site, receive adequate information about the risks to their health and safety arising out of the construction works and, where necessary, adequate training to carry out their work in a safe and healthy manner.
- Includes arrangements for providing all persons at work on the site and visitors to the site with the opportunity and means of discussing and offering advice on health and safety issues relating to the construction works.
- Includes arrangements for the reporting of any accidents, injuries or dangerous occurrences, including conforming to the statutory requirements.
- Can be modified as the work proceeds to take account of any information received from Contractors / Sub-Contractors, any experience gained during the course of the project or any changes necessary as a result of unforeseen circumstances or alterations to the design.

11.3 Site Liaison

Liaise with all other contractors and implement any agreed changes to the Health and Safety Plan arising from such liaison. Set up regular training for all operatives including induction training for all staff upon arrival to site.

11.4 Health & Safety File

Provide the Planning Supervisor with any relevant information that the contractor believes should be incorporated into the Health and Safety File.

11.5 Design Development

Provide the Client / Client's Agent with all design information prepared by Sub-Contractors.

Arrange liaison meetings with sub-contractors to discuss and review health and safety issues arising from the sub-contractors' designs.

PART C4: SITE INFORMATION

C4 SITE INFORMATION

PG-03.2 (EC) SITE INFORMATION – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (edition 4.1 of March 2005)

Project title:	***MT FLETCHER MAGISTRATES COURT; CONDITION BASED MAINTENANCE. (Contract 2)***		
Tender no:	***MTH47/2022***	**Reference no:**	19/2/4/2/2/6977/12

C4 Site Information

1. *GENERAL*

   (a) The Standard for Uniformity in Construction Procurement published in terms of the Construction Industry Development Board (CIDB) Act, 2000 (Act no. 38 of 2000), the Standardized Construction Procurement Documents for Engineering and Construction Works as issued by the CIDB and any other relevant documentation pertaining thereto must be studied and all principles in this regard must be applied to all procurement documentation, practices and procedures.

   (b) The consultant(s)/project manager must acquaint themselves fully with all relevant matters pertaining to this section in order to enable prospective tenderers to price for all eventualities.

2. *The following serves as a guideline only with regard to the type of items to be included in the Site Information.*

   a) Completion of Building works to courts and adjacent offices. The scope involves but not limited to the following: completion of tank stand and other water supply related works, painting of walls, installation of suspended ceiling, repairs damaged windows and doors, remedial works to plumbing etc.

   (b) Government personnel are currently occupying these buildings, however the department of Justice will make arrangements with the contractor as to when and how to avail the working areas during construction.

   (c) Access to site is via tarred road in good condition