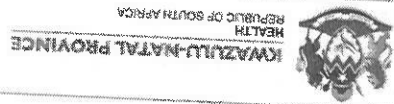


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Quotation Advert

INSTITUTION DETAILS

Opening Date: 2022-08-23

Closing Date: 2022-08-30

Closing Time: 11:00

Institution Name: Sundumbilli CHC

Province: Kwazulu-Natal

Department or Entity: Department of Health

Place where goods / services is required: Central Supply Chain Management

Date Submitted: 2022-08-23

Quotation Number: SUN 469/22/23

ITEM CATEGORY AND DETAILS

Item Description: CONSTRUCTION OF THE WAITING AREA SHELTER AT SUNDUMBILLI CHC (FLU CLINIC) AS PER SPECIFICATION ATTACHED

Item Category: Services

Quantity (if supplies):

COMPULSORY BRIEFING SESSION / SITE VISIT

QUOTES CAN BE COLLECTED FROM:

QUOTES SHOULD BE DELIVERED TO:

ENQUIRIES REGARDING THE ADVERT MAY BE DIRECTED TO:

Name: ANGEL

Email: nozipho.mthembu2@kznhealth.gov.za

Contact Number: 032 454 7566

Finance Manager Name: MBATHA N D (MRS)

Finance Manager Signature:

No late quotes will be considered

STANDARD QUOTE DOCUMENTATION OVER R30 000.00

YOU ARE HEREBY INVITED TO QUOTE FOR REQUIREMENTS AT: **SUNDBUMBILI CHC**

DATE ADVERTISED: **22 August 2022** CLOSING DATE: **30 August 2022** CLOSING TIME: **11:00**

FACSIMILE NUMBER: **n/a** E-MAIL ADDRESS: **nozpho.mthembu2@kznhealth.go.za**

PHYSICAL ADDRESS: **A682 Msonuhle Road, Mandini 4490**

QUOTE NUMBER: **ZNQ / SUN / 469 / 22 - 23**

DESCRIPTION: **CONSTRUCTION OF THE WAITING AREA SHELTER AT SUNDBUMBILI CHC (FLUE CLINIC) AS PER SPECIFICATIC**

CONTRACT PERIOD: **ONCE OFF** (if applicable)

VALIDITY PERIOD **60 Days**

SARS PIN:

CENTRAL SUPPLIER DATABASE REGISTRATION (CSD) NO. **M A A A**

UNIQUE REGISTRATION REFERENCE **[Grid with 13 empty cells]**

DEPOSITED IN THE QUOTE BOX SITUATED AT (STREET ADDRESS) **A682 UMSOMUHLE ROAD MANDINI 4490**

SUNDBUMBILI CHC

Bidders should ensure that quotes are delivered timely to the correct address. If the quote is late, it will not be accepted for consideration.

The quote box is open from 08:00 to 15:30.

QUOTATIONS MUST BE SUBMITTED ON THE OFFICIAL FORMS - (NOT TO BE RETYPED)

THIS QUOTE IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

THE FOLLOWING PARTICULARS MUST BE FURNISHED (FAILURE TO DO SO MAY RESULT IN YOUR QUOTE BEING DISQUALIFIED)

NAME OF BIDDER

POSTAL ADDRESS

STREET ADDRESS

TELEPHONE NUMBER CODE.....NUMBER..... FACSIMILE NUMBER CODE.....NUMBER.....

CELLPHONE NUMBER

E-MAIL ADDRESS

VAT REGISTRATION NUMBER (if VAT vendor)

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED? (SBD 6.1) **YES** **NO**

FOR PREFERENCE POINTS FOR B-BBEE] [A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/SWORN AFFIDAVIT (FOR EMER& GSES) MUST BE SUBMITTED TO QUALIFY

DESCRIPTION: CONSTRUCTION OF THE WAITING AREA SHELTER AT SUNDUMBILI CHC (FLUE CLINIC) AS PER SPECIFICATION 5

DATE

SIGNATURE OF BIDDER
[By signing this document, I hereby agree to all terms and conditions]

CAPACITY UNDER WHICH THIS QUOTE IS SIGNED.....

Item No	Quantity	Description	Brand & model	Country of manufacture	Price
		CONSTRUCTION OF THE WAITING AREA SHELTER			c
		AT SUNDUMBILI CHC (FLUE CLINIC)			
		AS PER SPECIFICATION ATTACHED			
		PLEASE ATTACH THE FOLLOWING DOCUMENTS:			
		COPY OF VALID TAX CLEARANCE CERTIFICATE /			
		SARS PIN			
		SWORN AFFIDAVIT / B-BBEE CERTIFICATE			
		ACCREDITED BY SANAS			
		COPY OF CSD REPORT REFLECTING COMPANIES CORE BUSINESS			
		CIDB REQUIRED: 1GB AND ABOVE			
		FAILURE TO MEET THE ABOVE REQUIREMENTS WILL RESULT IN YOUR QUOTE BEING DISQUALIFIED			
		VALUE ADDED TAX @ 15% (Only if VAT Vendor)			
		TOTAL QUOTATION PRICE (VALIDITY PERIOD 60 Days)			

Does This Offer Comply With The Specification?

Does The Article Conform To The S.A.N.S. / S.A.B.S. Specification?

State Delivery Period, e.g., 1day, 1week

Enquiries regarding the quote may be directed to:

Enquiries regarding technical information may be directed to:

Contact Person: ANGEL
Tel: 0324547566

Contact Person: Mr. M. Mfedi
Tel: 0324547504

E-Mail Address: nozipho.mthembu2@kznhealthn.gov.za

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 persons 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 / partners / members / partners or any person having a controlling interest 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 / partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State Institution

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

2.2.1 If so, furnish particulars:

2.3. Does the bidder or any of its directors / trustees / shareholders / 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. 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.
- 3.5. 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.
- 3.6. 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.
- 3.7. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
 I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

Name of Bidder
 Signature
 Position
 Date

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

GENERAL CONDITIONS OF CONTRACT

- 1. AMENDMENT OF CONTRACT
 - 1.1 Any amendment to or renunciation of the provisions of the contract shall at all times be done in writing and shall be signed by both parties.

2. CHANGE OF ADDRESS

- 2.1 Bidders must advise the Department of Health (institution where the offer was submitted) should their address (*domicilium citandi et executandi*) details change from the time of bidding to the expiry of the contract.

3. GENERAL CONDITIONS ATTACHED TO THIS QUOTATION

- 3.1 The Department is under no obligation to accept the lowest or any quote.
- 3.2 The Department reserves the right to communicate in writing with vendors in cases where information is incomplete or where there are obscurities regarding technical aspects of the offer, to obtain confirmation of prices or preference claims in cases where it is evident that a typing, written, transfer or unit error has been made, to investigate the vendor's standing and ability to complete the supply/service satisfactorily.
- 3.3 ALL DECISIONS TAKEN BY THE DEPARTMENT ARE FINAL, INCLUDING THE AWARD OR CANCELLATION OF THIS QUOTATION.

- 3.4 The price quoted must include VAT (if VAT vendor).
- 3.5 Should a bidder become a VAT vendor after award or during the implementation of a contract, they may not request the VAT percentage from the Department as the service provider made an offer during the period they were not registered as a VAT vendor. The Department is only liable for any VAT from registered VAT vendors as originally stated on the quotation document.

- 3.6 The bidder must ensure the correctness & validity of the quotation:
 - (i) that the price(s), rate(s) & preference quoted cover all for the work/item (s) & accept that any mistakes regarding the price (s) & calculations will be at the bidder's risk
 - (ii) it is the responsibility of the bidder to confirm receipt of their quotation and to keep proof thereof.

- 3.7 The bidder must accept full responsibility for the proper execution & fulfillment of all obligations conditions devolving on under this agreement, as the Principal (s) liable for the due fulfillment of this contract.

- 3.8 This quotation will be evaluated based on the 80/20 points system, specification, correctness of information and/or functionality criteria. All required documentation must be completed in full and submitted.

- 3.9 Offers must comply strictly with the specification.
- 3.10 Only offers that meet or are greater than the specification will be considered.
- 3.11 Late offers will not be considered.
- 3.12 Expired products will not be accepted. All products supplied must be valid for a minimum period of six months.
- 3.13 Used/ second-hand products will not be accepted.
- 3.14 A bidder not registered on the Central Suppliers Database or whose verification has failed will not be considered.
- 3.15 All delivery costs must be included in the quoted price for delivery at the prescribed destination.
- 3.16 Only firm prices will be accepted. Such prices must remain firm for the contract period. Non-firm prices (including rates of exchange variations) will not be considered.

- 3.17 In cases where different delivery points influence the pricing, a separate pricing schedule must be submitted for each delivery point.
- 3.18 In the event of a bidder having multiple quotes, only the cheapest according to specification will be considered.
- 3.19 Verification will be conducted to identify if bidders have multiple companies and are cover-quoting for this bid.
- 3.20 In such instances, the Department reserves the right to immediately disqualify such bidders as cover-quoting is an offence that represents both corruption and acquisition fraud.

4. SPECIAL INSTRUCTIONS AND NOTICES TO BIDDERS REGARDING THE COMPLETION OF THIS QUOTATION.

- 4.1 Unless inconsistent with or expressly indicated otherwise by the context, the singular shall include the plural and vice versa and with words importing the masculine gender shall include the feminine and the neuter.
- 4.2 Under no circumstances whatsoever may the quotation/bid forms be retyped or redrafted. Photocopies of the original bid documentation may be used, but an original signature must appear on such photocopies.
- 4.3 The bidder is advised to check the number of pages and to satisfy himself that none are missing or duplicated.
- 4.4 Quotations submitted must be complete in all respects. However, where it is identified that information in a bidder's response, which does not affect the preference points or price, is incomplete in any respect, the said supplier meets all specification requirements and scores the highest points in terms of preference points and price, the Department reserves the right to request the bidder to complete/submit such information.
- 4.5 Any alteration made by the bidder must be initialed; failure to do so may render the response invalid.
- 4.6 Use of correcting fluid is prohibited and may render the response invalid.
- 4.7 Quotations will be opened in public as practicable after the closing time of quotation.
- 4.8 Where practical, prices are made public at the time of opening quotations.
- 4.9 If it is desired to make more than one offer against any individual item, such offers should be given on a photocopy of the page in question. Clear indication thereof must be stated on the schedules attached.

10.2. In the event that the institution cannot validate the suppliers' tax clearance on SARS as well as the Central Suppliers Database, the quote will not be considered and passed over as non-compliant according to National Treasury Instruction Note 4 (a) 2016/17.

10.1. In the event that the tax compliance status has failed on CSD, it is the suppliers' responsibility to provide a SARS pin in order for the institution to validate the tax compliance status of the supplier.

10. TAX COMPLIANCE REQUIREMENTS

9.1. Should a bidder wish to qualify for preference points they must complete a SBD 6.1 document. Failure by a bidder to provide all relevant information required, will result in such a bidder not being considered for preference points allocation. The preferences applicable on the closing date will be utilized. Any changes after the closing date will not be considered for that particular quote.

9. SUBMISSION AND COMPLETION OF SBD 6.1

8.1. The contractor shall, when requested to do so, furnish particulars of supplies delivered or services executed. If he/she fails to do so, the Department may, without prejudice to any other rights which it may have, institute inquiries at the expense of the contractor to obtain the required particulars.

8. STATEMENT OF SUPPLIES AND SERVICES

Full Name: Signature: Date:	Institution Stamp: Institution Site Inspection / briefing session Official
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(ii) The institution has determined that a compulsory site meeting will take place on Date 26 / 08 / 2022 Time 10 : 00 Place SUNDUMBILI CHC

7. COMPULSORY SITE INSPECTION / BRIEFING SESSION

7.1. Bidders who fail to attend the compulsory meeting will be disqualified from the evaluation process.

6.2. (i) If a Bidder fails to provide a sample of their product on offer for scrutiny against the set specification when requested, their offer will be rejected. All testing will be for the account of the bidder.

6.2. (ii) Samples must be made available when requested in writing or if stipulated on the document.

6.1. (i) If a company/s who has not won the quote requires their samples, they must advise the institution in writing of such. If samples are not collected within three months of close of quote the institution reserves the right to dispose of them at their discretion.

6.1. (ii) In the case of the quote document stipulating that samples are required, the supplier will be informed in due course when samples should be provided to the institution. (This decreases the time of safety and storage risk that may be incurred by the respective institution). The bidders sample will be retained if such bidder wins the contract.

6. SAMPLES

5.6. Quotation documents must not be included in packages containing samples. Such quotations may be rejected as being invalid.

5.5. No quotation/bid sent through the post will be considered if it is received after the closing date and time stipulated in the quotation documentation, and proof of posting will not be accepted as proof of delivery.

5.4. A specific box is provided for the receipt of quotations, and no quotation found in any other box or elsewhere subsequent to the closing date and time of quotation will be considered.

5.3. All quotations received in sealed envelopes with the relevant quotation numbers on the envelopes are kept unopened in safe custody until the closing time of the quotation/bids. Where, however, a quotation is received open, it shall be sealed. If it is received without a quotation/bid number on the envelope, it shall be opened, the quotation number ascertained, the envelope sealed and the quotation number written on the envelope.

5.2. Each quotation shall be addressed in accordance with the directives in the quotation documents and shall be lodged in a separate sealed envelope, with the name and address of the bidder, the quotation number and closing date indicated on the envelope. The envelope shall not contain documents relating to any quotation other than that shown on the envelope. If this provision is not complied with, such quotations/bids may be rejected as being invalid.

5.1. Quotation shall be lodged at the address indicated not later than the closing time specified for their receipt, and in accordance with the directives in the quotation documents.

5. SPECIAL INSTRUCTIONS REGARDING HAND DELIVERED QUOTATIONS

4.10. The Department is under no obligation to pay suppliers in part for work done if the supplier can no longer for fulfill their obligation.

11. TAX INVOICE
11.1. A tax invoice shall be in the currency of the Republic of South Africa and shall contain the following particulars:
(i) the name, address and registration number of the supplier;
(ii) the name and address of the recipient;
(iii) an individual serialized number and the date upon which the tax invoice is issued;
(iv) a description and quantity or volume of the goods or services supplied;
(v) the official department order number issued to the supplier;
(vi) the value of the supply, the amount of tax charged;
(vii) the words tax invoice in a prominent place.

12. PATENT RIGHTS
The supplier shall indemnify the KZN Department of Health (hereafter known as the purchaser) against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

13. PENALTIES
13.1. If at any time during the contract period, the service provider is unable to perform in a timely manner, the service provider must notify the institution in writing/email of the cause of and the duration of the delay. Upon receipt of the notification, the institution should evaluate the circumstances and, if deemed necessary, the institution may extend the service provider's time for performance.
13.2. In the event of delayed performance that extends beyond the delivery period, the institution is entitled to purchase commodities of a similar quantity and quality as a substitution for the outstanding commodities, without terminating the contract, as well as return commodities delivered at a later stage at the service provider's expense.
13.3. Alternatively, the institution may elect to terminate the contract and procure the necessary commodities in order to complete the contract. In the event that the contract is terminated the institution may claim damages from the service provider in the form of a penalty. The service provider's performance should be captured on the service provider database in order to determine whether or not the service provider should be awarded any contracts in the future.
13.4. If the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance.

14. TERMINATION FOR DEFAULT

14.1. The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
(i) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract;
(ii) if the supplier fails to perform any other obligation(s) under the contract; or
(iii) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
14.2. In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services.
14.3. Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

15. THE DEPARTMENT RESERVES THE RIGHT TO PASS OVER ANY QUOTATION WHICH FAILS TO COMPLY WITH THE ABOVE

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

SBD 6.1 This preference form must form part of all quotes invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

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

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all quotes:
 - the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - 1.2 The value of this quote is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable.
 - 1.3 Points for this quote shall be awarded for:
 - (a) Price; and
 - (b) B-BBEE Status Level of Contributor.
 - 1.4 The maximum points for this quote is allocated as follows:

POINTS	PRICE	B-BBEE STATUS LEVEL OF CONTRIBUTOR	Total points for Price and B-BBEE must not exceed
80			100
20			

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

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

2. DEFINITIONS

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

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		

Designated Group: An EME or QSE which is at least 51% owned by:
 EME QSE

8. (iv) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:
 (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.....
 Whether the sub-contractor is an EME or QSE
 YES NO (Tick applicable box)

7.1.1 Will any portion of the contract be sub-contracted?
 YES NO (Tick applicable box)

7. SUB-CONTRACTING
 (Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.)

6.1 B-BBEE Status Level of Contributor =(maximum of 20 points)

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

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

5. BID DECLARATION

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

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

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

Ps = Points scored for price of bid under consideration
 Pt = Price of bid under consideration
 Pmin = price of lowest acceptable bid

$$Ps = 80 \left(1 - \frac{Pt - Pmin}{Pmin} \right) \text{ Where}$$

3.1 A maximum of 80 points is allocated for price on the following basis:
 THE 80/20 PREFERENCE POINT SYSTEMS

3. POINTS AWARDED FOR PRICE

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 [TICK APPLICABLE BOX]
 - Partnership/Joint Venture / Consortium
 - One person business/sole property
 - Close corporation
 - Company
 - (Pty) Limited
- 9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

COMPANY CLASSIFICATION [TICK APPLICABLE BOX]

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

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 contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have -

- (a) disqualify the person from the bidding process;
- (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
- (e) forward the matter for criminal prosecution.

WITNESSES

- 1.
- 2.

SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS:

SUNDUMBILI CHC - CONSTRUCTION OF THE WAITING AREA SHELTER

- 1.1 SCOPE OF CONTRACT
This Contract is for the execution of the project indicated above.
- 1.2 CONTRACT DRAWINGS
NO DRAWINGS
- 1.3 CONDITIONS OF CONTRACT AND PRELIMINARIES
- 1.3.1 PERIOD OF CONTRACT
Eight (08) Weeks as the Contract Period for the completion of the Work from date of Site handover.
- 1.3.2 CONTRACT GUARANTEE:
The Successful Bidder will NOT be required to submit a contract guarantee.
- 1.3.3 GUARANTEE PERIOD
The guarantee period for the completion of the Structural work and all materials must be a minimum of Three (3) Calendar Months from the date of first delivery.
- 1.3.4 SITE AND MODE OF PROCEDURE
The work contained in this contract will be carried out on the site of the existing at SUNDUMBILI CHC

The Bidder is advised that the existing premises will be occupied throughout the period of the contract, and that the minimum amount of disruption to services is of the utmost importance.
Damage to the existing buildings - Bidders to note that any damages done or occurring to any of the buildings will be repaired at the expense of the contractor/ Bidder.

The repairs must be to the satisfaction of the Kwazulu-Natal Department of Health. Bidders are advised to visit the site prior to tendering and to acquaint themselves with the nature of the work to be done and access to the siting of the existing buildings etc., as no claim whatsoever will be allowed on the grounds of ignorance of the conditions under which the work will be executed.

1.3.5 SATISFACTORY INSTALLATION

The whole of the installation shall be carried out in accordance with the South African Bureau of Standards Code of Practice for the application of National Building Regulations, the KZNPA Standard Preambles to all Trades, the KZNPA General Electrical Specification, ICASA, Telecommunications regulations, the South African

Bureau of Standards Code of Practice for the Wiring of Premises SABS 0142 and the Occupational Health and Safety Act and Regulations 85/1993 as amended. Copies of the KZNPA Standard Preambles to all Trades and the KZNPA General Electrical Specification are available at the office of the Secretary for Health - Kwazulu-Natal and can be obtained on request.

1.3.6 CERTIFICATE OF COMPLIANCE

On completion of the service, a copy of the "Certificate of Compliance for Electrical Installation" must be submitted to the office of the Secretary for Health - Kwazulu-Natal.

1.3.7 GENERAL

The Bidders / Contractors will be responsible for all masonry work associated with the electrical installation and making good of all work related to the electrical installation. The patching and painting must be to the satisfaction of the Kwazulu-Natal Department of Health.

SUNDBILI CHC - CONSTRUCTION OF THE WAITING AREA SHELTER

TECHNICAL SPECIFICATIONS

2. TECHNICAL SPECIFICATION

2.1 GENERAL

This TECHNICAL SPECIFICATION shall be read in conjunction with all other sections of the SPECIFICATION and cognisance shall be taken of the clauses relevant to this particular installation, whether any specific clauses are referred to or not.

2.2

Standard Preambles

This is available from the department on request.

2.3

Health and Safety Specification

Health and Safety Plan with Risk assessment schedule is to be compiled taking cognisance of the specific type of patient's that walk around the institution all day. All areas are to be protected at all times from patients falling in. All new and old materials are to be securely stored during construction to eliminate any person from rolling them around or playing inside them.

SUNDUMBILI CHC- CONSTRUCTION OF THE WAITING AREA SHELTER

3. SCOPE OF WORK

The work to be carried out under this contract includes the supply of all materials, and including all labour to carry out all electrical work and leaving in service condition to the satisfaction of the Secretary for Health: Kwazulu-Natal.

3.1. The work comprises of

- a) Earthworks
- b) Removal of the Existing paving and cabs
- c) Construction of ramp
- d) Construction of ownning
- e) Repairs to waiting area shelter

EARTHWORKS

SITE CLEARANCE:—The item given in the Bills of Quantities for site clearance shall be deemed to include the removal from the site, or burning if permitted by the Local Authority, of shrubs and trees with trunks under 200mm girth measured at 1m above ground level, hedges, bushes, other vegetation, rubbish and debris.
Holes left by roots are to be backfilled with earth and rammed.

EXCAVATIONS:— Rates for excavations are to include for forming and trimming to the correct levels, falls, slopes, curves, etc. for trimming sides, stepping, levelling and ramming bottoms, staging and disposing of the excavated material as described in the items. Rates for excavations to reduce levels over site are also to include for forming and trimming banks to the required batter. The Contractor is to allow in his rates for the bulking of excavated material.

The term "excavate", unless otherwise stated, shall mean excavate in "soft excavation" as defined below and for the purpose of classifying excavations the following will apply:

- a) **Soft excavation:**— shall be excavation in material that can be efficiently removed by a back-acting excavator of flywheel power approximately 0, 10 kW per millimetre of tined-bucket width without the assistance of pneumatic tools such as paving breakers, or that can be efficiently loaded without ripping or stockpiling by a rubber tired front-end loader of approximately 15t mass and a flywheel power of approximately 100 kW.
- b) **Intermediate excavation:**— shall be excavation in material that requires a back-acting excavator of flywheel power exceeding 0,10kW per millimetre of tined-bucket width and the assistance of pneumatic tools prior to removal by equipment equivalent to that specified in (a) above.
- c) **Hard rock excavation:**— shall be excavation in material that cannot be efficiently removed without blasting or without wedging and splitting prior to removal.
- d) **Class A Boulder excavation:**— shall be excavation in material containing more

than 40% by volume of boulders of size between 0.03m³ and 20m³ in a matrix of softer material or smaller boulders.

Note: — Excavation of solid boulders or lumps of size exceeding 20m³ will be classed as hard rock excavation. (2) Excavation of fissured or fractured rock will not be classed as boulder excavation but as hard rock or intermediate excavation according to the nature of the material.

Class B Boulder excavation: — shall be excavation of boulders only in a material containing 40% or less by volume of boulders of size between 0.03m³ and 20m³ in a matrix of softer material or smaller boulders.

Note: — Those boulders requiring individual drilling and blasting in order to be loaded by a back-acting excavator as specified in (a) above, or by a track type front-end loader, will each be separately measured as Class B boulder excavation.

The excavation of the rest of the material will be classed as soft or intermediate excavation according to the nature of the material.

Method of Classifying: — The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Department will decide on the classification of the materials. The classification will be based on inspection of the material to be excavated and the criteria given in (a) to (e) above, as applicable. The decision of the Department shall be, subject to the relevant provisions of the contract, final and binding.

Should the Contractor consider that the excavation is other than "soft excavation" he must notify the Department immediately in order that an inspection be made and a decision arrived at by the Department as to the category of such excavation. Should the Contractor fail to give such notification, the excavation shall be deemed to be "soft excavation" and shall be measured and valued accordingly.

Blasting will only be permitted with the written authority of the Department, if and when permission is granted, it is to be executed only by persons holding the necessary Government Blasting Certificate and subject to all regulations imposed by the Department and/or Local Authority. In addition, the Contractor is to indemnify the Provincial Administration against all claims in respect of damage to persons and property resulting from such blasting operations.

Before commencing any excavations, the Contractor must satisfy himself as to the accuracy of any levels indicated on the drawings, as no claim will be entertained at a later date for any alleged inaccuracy in such levels.

Excavation shall be carried down to such depths as are necessary to obtain firm foundations, but before proceeding to greater depths than are shown on the drawings, the Department's approval must be obtained.

The Contractor will be responsible if he excavates wider or deeper than shown or required. If the excavations are deeper than shown or required such extra excavations are to be filled in with mass concrete at the Contractor's expense. If the excavations are wider than shown or required, any form-wait or mass concrete filling required to the side of the concrete foundations is to be executed at the Contractor's expense and to the approval of the Department.

Depths of excavations as approved shall be checked and recorded by the a Departmental Official and the Contractor's Foreman before any concrete is laid or the excavations are otherwise covered or filled in.

Notwithstanding such approval, any excavations which become waterlogged or otherwise spoil after approval, shall be cleaned out and reformed, at the

Contractor's expense and to the satisfaction of the Department, before any concrete, etc. is laid.

WATER: — The Contractor shall keep all excavations free from water or mud by pumping, baling or otherwise.

WORKING SPACE: — The Contractor is to allow against the items of "excavate to provide working space" for excavating beyond the extent of the net excavations measured to provide the necessary working space for the carrying out of such work as is described in the items. Rates are to include, in addition to the extra excavation, for any additional risk of collapse so incurred and for filling back and compacting the excavated material.

No separate item for working space is provided or will be considered where the face of the measured excavation is 750mm or more away from the finished face of the structure. Separate items for working space for the building of brick foundation walls on ordinary concrete wall footings will not be considered.

In the case of column base and pile cap excavations, where the dimensions between the column face and the excavation face is less than 500mm, working space has been measured for the width of the column face from the commencing level of excavation to the top of the column base or pile cap only where the top of the column base or pile cap exceeds 1.5m below the commencing level of excavation.

RISK OF COLLAPSE: — The Contractor shall maintain all excavated faces affecting the safety of the works and workmen. He must either provide all necessary temporary planking, strutting or shoring to all vertical excavated faces or carry the risk of collapse of these faces with all its implications. He must assume full responsibility in this connection and must allow in his rates accordingly. In addition, all excavated faces exceeding 1.5m deep are to be maintained in accordance with Government Regulations.

Quantities reflect the total superficial areas of the vertical excavated faces and will be subject to variation only in so far as these areas may vary, notwithstanding whether any temporary supports are used or not.

FILLING, ETC.: — All backfilling and filling under floors and paving must be of selected material from the excavations, unless otherwise stated, returned and compacted in layers as later described and with the top surface dressed to the correct levels and grades, all to the approval of the Department. Under no circumstances will the Contractor be allowed to use clay, peat or other unsuitable material for filling. Rates for all items of filling with material from the excavations are to include haulage not exceeding 100m from the perimeter of the excavations.

Any filling supplied by the Contractor is to be of suitable material approved by the Department.

COMPACTION OF FILLING ETC.: — All filling and backfilling is to be done in layers not exceeding 200mm thick before compaction, with the layers level to ensure uniform compaction. Each layer is to be thoroughly compacted over the whole of the area to a dry density not less than 90% of Mod. A.A.S.H.O. density. The surface of each compacted layer shall be uniform and tightly bonded. Care is to be taken that no damage is done to foundation walls, drains and other services.

The densities of compaction referred to are to be determined by tests carried out in accordance with A.S.T.M. Designation D 1557-58 and at an optimum moisture content of not more or less than 5% of the required Mod. A.A.S.H.O. The Contractor shall be responsible for having sufficient tests taken of the density of the compacted filling to ensure that the required compaction is being attained to the satisfaction of the

Department. These tests are to be undertaken by an independent testing authority nominated by the Contractor to the approval of the Department. The costs of all tests in this connection shall be borne by the Contractor and shall be allowed for in his rates.

PROTECTION AGAINST SUBTERRANEAN WOOD-DESTROYING TERMITES: —
Where protection against termites is to be provided: —

- a) Remove vegetable matter
All dead roots and other vegetable matter likely to encourage termites must be removed from the ground under, against the building and from all filling material.
- b) Treating the ground
The ground under surface beds, and below suspended wood floors, must be treated by the application of Soil Insecticides of Chlordane or Aldrin types complying with SANS Specifications 1165 and 1164 respectively, mixed with water and applied at the rate of not less than 5 litres of solution per square metre uniformly over the whole surface. The concentration of the solution must be strictly in accordance with the manufacturer's instructions and to the approval of the Department.

The Department reserves the right to take samples of the diluted solution, at any time, in order to test the concentration of the chemicals used.

Where the ground to be treated is of earth filling, the upper 50mm layer of filling must be levelled by raking, but must not be rammed until after the solution has been applied, and where of natural ground, it must be loosened to a depth of not less than 50mm and similarly levelled, in order to enable the solution to penetrate into the soil. After the solution has been applied and allowed to penetrate the surface, the soil must be well rammed and consolidated.

Before applying the solution to the ground under the floors, splay back earth for a depth and width of 75mm from the internal faces of walls enclosing the floors, against internal walls, sleeper piers, etc. and thoroughly saturate with the solution. After the solution has soaked into the earth, the splayed grooves must be filled with earth and consolidated.

The treated layer of soil under suspended wood floors must be protected with a 75mm thick layer of approved clean gravel, finished to an even surface.

The treated layer of soil under concrete surface beds must be protected with a 25mm thick layer of well-consolidated approved grit prior to laying the waterproofing membrane. Great care must be taken when laying concrete surface beds, protective layers, etc. in order to avoid rupturing the treated layer of soil. Should the treated layer be ruptured at any point it must be made good and the area affected re-treated with the soil insecticide.

Contractors are advised that:

- a. Special precautions must be taken to protect the workmen whilst using the soil insecticide.
- b. The treatment of filling or ground under floors shall be done as soon as practicable, so that treatment may dry out before the floors are laid.
- c. The treatment of the ground must be carried out under the supervision of the Department.

The soil insecticide to be delivered to the site in sealed drums clearly labelled or stamped with the name of the product.

In addition to the foregoing the application of the soil insecticide to be carried out in accordance with SANS Code of Practice 0124 — the application of Certain Soil Insecticides for the Protection of Buildings.

f. The protective layers of gravel or grit have been measured separately.

RE-USE OF EXCAVATED MATERIAL: — Material of any kind that may be discovered on the site during the excavation shall remain the property of the Administration. Such material may, if approved, be used for aggregate. Material so used shall be valued and the value deducted from the Contract Sum.

CONCRETE, FORMWORK AND REINFORCEMENT

GENERAL: — This specification applies to concrete work formed into its final shape and position in-situ.

All concrete and formwork shall be carried out in accordance with SANS Specification 1200 G — Concrete (Structural) (a copy of which the Contractor will be required to keep on the site so that it can be referred to at all times during the Contract), with the following amplifications and amendments: —

INTERPRETATIONS: — Clauses 2.1 and 2.2 of SANS Specification 1200G refer. This preamble, together with any other supplementary preambles appearing in these Bills of Materials shall be deemed to be the project specification and are the "Portion 2" referred to in Clause 2.2.

DEFINITIONS: — Clause 2.3 of SANS Specification 1200 G refers. All references to the Engineer shall be deemed to mean the Department.

MATERIALS

Cement: — unless otherwise specified, shall be one or more of the following and shall, in each case, comply with the requirements of the relevant standard specification: —
Portland cement and rapid-hardening cement to SANS 471 Specification
Portland blast-furnace cement to SANS Specification 626.

Portland cement 15 to SANS Specification 831.
Nevertheless, no cement other than ordinary Portland cement shall be used without the approval of the Department. Cement containing more than 15% blast-furnace slag will not be permitted in columns or in members less than 50mm thick.

In addition (for the abovementioned items) where Ordinary Portland cement is used, blast-furnace slag (from separate containers) must not be added in any proportion whatsoever.

No mixing of two different types of cement in the same batch will be allowed, and unless otherwise approved by the Department, the same brand and type shall be used in all exposed concrete.

Lumpy cement, broken sacks and sweepings shall not be used.

Cement supplied in sacks shall be used in the order in which it was delivered and shall not be kept in storage for longer than six (6) weeks without the approval of the Department.

Water: — Shall be clean and free from injurious amounts of acids, alkalis, sugar, organic matter and other substances that could impair the strength or durability of the concrete. If so required by the Department, the suitability of the water shall be proved by tests carried out by an approved laboratory.

Aggregates: — Unless otherwise specified both the coarse aggregate (stone) and the fine aggregate (sand) shall comply with the requirements of SANS Specification 1083. The Contractor is to prove compliance by means of either a certificate from the supplier or by grading analysis tests.

Admixtures: — i.e. materials other than cement, aggregate and water shall not be used in the concrete mix without the approval of the Department. The onus for proof of satisfaction to the Department for any admixture proposed shall be with Contractor.

Reinforcement: — for concrete shall be as specified and shall, in each case, comply with one of the following: —

- a) Type A hot rolled mild steel bars of plain round cross section to SANS Specification 920
- b) Type C Class 2 hot rolled high yield stress Grade 1 deformed bars to SANS Specification 920
- c) Type D Grade 1 cold worked deformed bars to SANS Specification 920.
- d) Welded steel fabric to SANS Specification 1024 manufactured from plain hard-drawn mild steel wire.

A sample reinforcing rod, approximately 600mm long, may be taken from each consignment of rods of similar diameter, for testing. If any sample is found unsatisfactory the whole consignment of rods from which the sample was taken will be rejected.

No substitution of the bars specified shall be made without the prior approval of the Department.

REINFORCEMENT

Bending: — Reinforcing bars shall be cut and bent according to the dimensions shown on the working drawings and in accordance with SANS Specification 82.

Except as allowed for below, all bars shall be bent cold and bending shall be done slowly, a steady even pressure being used without jerk or impact.

If approved by the Department, hot bending of bars of diameter at least 32mm shall be permitted, provided that the bars do not depend for their strength on cold working. When hot bending is approved, the bars shall be heated slowly to a cherry red heat (not above 840 C°) and after bending shall be allowed to cool slowly in air. Quenching with water shall not be permitted.

Fixing: — All steel reinforcement, at the time of placing of the concrete, must be free from loose rust, scale, oil and other agents which will reduce the bond between the steel and the concrete or initiate corrosion of the reinforcement. Reinforcement exposed to sea spray shall be washed down, and the formwork drained, just prior to concreting.

Reinforcement shall be positioned as shown on the working drawings or as directed by the Department and maintained in those positions within the tolerances given in the Specification for Tolerances. It shall be secured against displacement by tying at intersections with 1.6 or 1.25mm diameter annealed wire or by the use of suitable clips or, if permitted by the Department, by welding in accordance with SANS 1856. Welding will not be permitted on cold worked bars. Reinforcement shall be supported in its correct position by hangers, saddles or cover blocks and aligned by chairs and spacers all of approved design and material. Where such hangers, saddles, chairs or spacers are of steel, they will be detailed on the drawings or in bending schedules.

Cover: — The minimum cover of concrete over reinforcement, excluding any applied finish, shall be as shown on the working drawings, or as directed by the Department.

Cover shall be maintained by using cover blocks, which shall be made of small aggregate concrete, not mortar, using the same cement and aggregate type and ratio as

the parent concrete. Alternatively, cover blocks may be of the plastic type provided that sufficient number are used to prevent their collapse, that they are of a colour compatible with that of concrete and that the prior approval of the Department is given. Metal cover blocks shall not be used.

If the concrete face has a Class F2 smooth finish or some other special finish as is described elsewhere, hemispherical or pyramid shaped concrete cover blocks shall be used unless otherwise specifically approved by the Department.

Splicing: — or joining of reinforcing bars shall be made only as and where shown on the working drawings or as otherwise approved. The length of the overlap in a splice shall be not less than that shown on the working drawings or forty-five times the diameter of the bar if not shown.

Protection of Exposed Bars: — If left exposed for future bonding of extensions to the works, reinforcement shall be protected from corrosion as specified by the Department.

Electric Current: — Reinforcement shall not be used as a means for conducting electric current unless there is conformity with the requirements of SANS Code of Practice 03.

Inspection of Reinforcement: — Reinforcement shall be subject to inspection by the Department after the Contractor is satisfied that it has been completely and correctly fixed. The amount of notice given by the Contractor to the Department before concreting commences that reinforcement is ready for his inspection shall be agreed between the Department and the Contractor at the commencement of the Contract.

FORM WORK

Design: — Formwork shall be so designed and constructed by the Contractor that the concrete can be properly placed and compacted and that the required shapes, finishes, positions, levels and dimensions shown on the working drawings are maintained, subject to the tolerances given in the Specification for Tolerances. Unless otherwise directed by the Department, all formwork to beams and slabs shall be evenly cambered, unless otherwise specified or shown on the drawings, to the mid-point of the span of the member at the rate of 2mm per metre of span, all to the approval of the Department and the full cross section of the member shall be maintained after placing of concrete.

The formwork and joints shall be capable of resisting the dead load and pressure of the wet concrete, effect of vibration equipment, wind forces and all other superimposed loads and forces it is necessary for it to carry.

Should it be necessary to support formwork off suspended or ground bearing slabs, the manner of execution of the support shall be agreed with the Department so that overstress of, or damage to, those members is prevented.

In structures having, in whole or part, two or more reinforced concrete floors, props to the floor which is being used to support the formwork and new concrete of the floor above. These props shall not be removed until the formwork for the new concrete has been struck.

Wedges and clamps shall be used in preference to nails. Joints in forms shall be tight enough to prevent leakage of cement paste.

Finish: — The quality of the finished surface of the concrete shall be as shown on the working drawings or as otherwise specified, and the type of formwork used shall be adequate to provide such finishes.

Ties: — The type of ties used and their position shall be such that the finish required in

terms of the clause "Finish" is achieved. The rods are preferable to wire ties and the forms shall not be secured to the reinforcement. No corrosion of the rod or wire shall be allowed within the depth of concrete cover, and in the case of water-retaining or tanked structures, no removable tie rod or wire shall pass right through the concrete member. Preparation of Formwork: — Surfaces that are to be in contact with fresh (wet) concrete shall be so treated by coating with a non-staining mineral oil or other approved material, or, in the case of timber forms, by thoroughly wetting surfaces so as to ensure easy release and non-adhesion to formwork during stripping. If any substance other than water is used, every precaution shall be taken to avoid contamination of the reinforcement.

Re-use of Formwork: — Before re-use, all formwork shall be reconditioned, and all form surfaces that are to be in contact with the concrete shall be thoroughly cleaned without unduly damaging the surfaces of the formwork.

Openings: — Where necessary for the proper placing of the concrete, temporary openings for cleaning, inspection or placing purposes shall be provided, taking cognisance of the finishes specified.

Removal of Formwork: — Formwork shall not be removed before the concrete has attained sufficient strength to support its own mass and any loads that may be imposed on it. Except where the Contractor can prove by means of cube tests, at his own expense to the satisfaction of the Department that, because of its strength development characteristics the concrete has attained sufficient strength and that shorter periods are practicable, formwork shall not be removed within shorter periods than those given in Table A. The number of cube tests required shall be equal to the number required for testing at 28 days. Where full design loads are carried, no soffit forms and props may be removed until the full design strength is attained.

In structures having, in whole or part, two or more reinforced concrete floors, props to the approval of the Department shall be provided under the soffits of beams and slabs of any floor which is being used to support the formwork and concrete of the new floor above. These props shall not be removed until the formwork for the new concrete has been struck.

All formwork props shall have been removed from under beams and slabs before the commencement of construction of brickwork thereon, unless otherwise agreed with the Department. Formwork shall be removed carefully so that shock and damage to the concrete are avoided.

TABLE A—REMOVAL OF FORMWORK (MINIMUM TIMES IN DAYS (24 hrs))

CONCRETE QUALITY

* Shorter periods may be used for sections of thickness 300mm or more.
 + In cool weather, stripping times shall be determined by interpolation between the periods specified for normal and cold weather.

1	Type of structural member or formwork									
	Type of cement used									
	Weather									
	Portland cement and hardening Portland cement 15					Portland blast-furnace cement				
	Portland cement 15					Rapid-hardening Portland cement and rapid-hardening Portland cement 15				
	Hot	Co	ol	Co	ol	Hot	Co	ol	Hot	Co
	mal	ol	ol	mal	ol	mal	ol	ol	mal	ol
	+	+	+	+	+	+	+	+	+	+
(a)	0,75	+	1,5	0,5	+	1	2	+	2	4
(b)	Slabs with props left underneath	+	7	2	+	4	6	+	6	10
(c)	Beam soffits with props left underneath, and ribs of a ribbed floor construction	+	12	3	+	5	10	+	10	17
(d)	Slab props including cantilevers	+	17	5	+	9	10	+	10	17
(e)	Beam props including cantilevers	+	21	7	+	12	14	+	14	21

General: — Concrete shall comply with the requirements for "Strength Concrete" as specified. The type of aggregate and cement, and their sources of supply, shall not be altered during the currency of the Contract without the prior written agreement of or instruction from the Department.

Strength Concrete: — The Contractor shall be responsible for the design of the concrete mix and for the proportions of its constituent materials, measured as described, necessary to produce concrete that complies with the requirements specified by the Department thus:-

- a) For each section of the work, the class of concrete and position on the Works, as shown on the drawings:
- b) For each class of concrete:

- i) the minimum compressive strength at 28 days as shown in Table B
- ii) the maximum nominal size of coarse aggregate as shown in Table B
- iii) the slump as shown in Table D
- iv) the maximum cement/water ratios as shown in Table C.

At the earliest possible stage in the Contract, at least 35 (thirty-five) days before the first concrete is placed, or as otherwise agreed with the Department, the Contractor shall submit samples of the aggregates which he proposes to use on the works to the Department.

The Contractor, under the supervision of the Department, shall prepare trial mixes using these same aggregates, to establish his ability to achieve the strengths specified, and satisfactory workability of the concrete. The Contractor shall provide all necessary equipment for, and carry out tests of moisture content of aggregates at the time of preparation of the trial mixes, tests of the slump of the mixes and at the same time cast not less than six standard cubes from each mix for compression tests.

The target strengths to be achieved under trial mix procedure shall exceed the specified minimum compressive strengths by a factor which is acceptable to the Department.

The Contractor shall also, when required to do so, prove the concrete yield obtained per sack of cement by suitable measurement of batches after placing.

No structural concrete work shall be poured until trial mix procedure has been properly followed and satisfactory 7 (seven) day compression strengths achieved. (Equivalent 28 (twenty-eight) day strength = $4/3 \times 7$ day strength + 5 MPA).

Thereafter, the materials, preparation of and method of manufacture of subsequent concrete shall conform accurately to those used in the trial mixes. If materials vary in the course of the Contract from the samples first submitted, the Contractor shall, on the instructions of the Department, repeat the trial mix procedure and vary the proportions to attain the specified qualities.

The costs of preparation of trial mixes, with tests associated with them, shall be borne by the Contractor and must be allowed for in the pricing of the concrete.

A valid concrete test result shall be the average obtained from the testing of three test cubes of concrete in accordance with SANS Method 863.

TABLE B—CONCRETE CLASSES: STRENGTH, AGGREGATE SIZE AND COMPACTION

Class	Minimum 28 day cube compressive strength (MPa)	Maximum nominal size of coarse aggregate (mm)	Method of Compaction
Mechanical (see clause "Compaction")	50/26	26,5	Non-mechanical (See clause "Compaction")
	50/19	19,0	
	45/26	26,5	
	45/19	19,0	
	40/26	26,5	
	40/19	19,0	
	35/26	26,5	
	35/19	19,0	
	30/37	37,5	
	30/26	26,5	
	30/19	19,0	
	30/13	13,2	
	25/37	37,5	
	25/26	26,5	
25/19	19,0		
25/13	13,2		
20/37	37,5		
20/26	26,5		
20/19	19,0		
20/13	13,2		
15/37	37,5		
15/26	26,5		
15/19	19,0		
10/37	37,5		
10/26	26,5		
10/19	19,0		

The Contractor shall be deemed to have satisfied himself, before tendering, of his ability to produce concrete of the required quality with available materials conforming to the specification, and mixed in the proportions on which his tendered rates are based. Any subsequent alterations of the mix proportions to meet these requirements shall be at the Contractor's expense.

If, in the opinion of the Department, the concrete proportions are likely to lead to excessive segregation, honeycombing, bleeding or shrinkage cracking, he shall have the right to order the Contractor to amend the proportions at the Contractor's own cost.

TABLE C — MAXIMUM CEMENT / WATER RATIOS FOR DIFFERENT CONDITIONS OF EXPOSURE

Type of structure	Exposure Conditions			
	Mild	Moderate	Severe	Very Severe
Thin sections; reinforced piles; all sections with less than 25mm cover reinforcement.	*	0.53	0.48	0.40
Moderate sections; retaining walls, piers, beams	*	*	0.53	0.43
Exterior portions of mass concrete	*	*	0.53	0.43
Concrete slabs laid on ground	*	0.53	0.48	*
Concrete protected from the weather, inside buildings, or in ground below frost level	*	*		*

* In these cases the ratio will be based on the strength for the workability desired.

Consistency and Workability: — Slump measurements taken in accordance with SANS Method 862 shall be within the limits given in Table D appropriate to the type of construction, or within such other limits as are laid down by the Department.

The concrete shall be of such workability that it can readily be compacted into the corners of the formwork and around reinforcement without segregation of the materials or excessive "bleeding" of free water at the surface.

TABLE D—SLUMP LIMITS

Type of construction	Slump, mm			
	1	2	3	4
Paving and pre-cast units	75	50	50	30
Heavy mass construction	75	25	50	20
Reinforcing foundation walls and footings	125	50	80	30
Plain footings, caissons, and substructure walls	100	25	60	20

Ready-mixed Concrete: — This may be used subject to the approval of the Department. This approval may be withdrawn on 24 (twenty-four) hours notice to the Contractor if at any time if documents do not conform to the requirements of this Specification. Ready-mixed concrete shall also comply with the requirements of SANS Specification 878. Details of the mix ingredients and tests thereon, the mix designs and relevant tests shall be forwarded to the Department for his approval. Ready-mixed concrete shall be cast within 3 (three) hours of placing all the ingredients in the mixing plant. Ready-mixed concrete shall be subject to the same sampling and testing at the site as that mixed on site and only the results of these tests will be regarded as valid.

TRANSPORTATION AND PLACING

Transportation: — Unless agreed with the Department, concrete shall not be pumped into its final position.

The Contractor must provide suitable runways for the distribution of concrete to the various parts of the structure and these must be solidly constructed in such a manner so as to obviate the possibility of interference with the steel reinforcement.

Placing: — Unless otherwise agreed with the Department, the Contractor shall give the Department at least 24 (twenty-four) hours notice of his intention to place concrete. No concrete shall be placed without the prior approval of the Department and without a representative of the Department being present. Concrete shall be placed within one hour of the time of its discharge from the mixer. Concrete shall not be re-tempered by the addition of water or other material. The forms to be filled shall be clean internally. All excavations and other surfaces of an absorbent nature that are to come into contact with the concrete shall be dampened with water. There shall be no free-water on the surface against which concrete is to be placed. Wherever possible, the concrete shall be deposited directly into its final position to avoid segregation and displacement of reinforcement and other items that are to be embedded. Deposited concrete shall not be so worked (whether by means of vibrators or otherwise) as to cause it to flow laterally in such a way that segregation occurs. Where possible, the concrete shall be brought up in horizontal layers of compacted thickness not exceeding 450mm and heaping shall be avoided.

Where a chute is used to convey the concrete, its slope shall be such as will not cause segregation, and a suitable spout or baffles shall be provided for the discharge of the concrete. Concrete shall not be allowed to fall freely through a height of more than 3 m, unless otherwise approved. Concrete shall not be placed during periods of heavy or prolonged rainfall.

Compaction: — The concrete shall be fully compacted by approved means during and immediately after placing. It shall be thoroughly worked against the formwork and around reinforcement and other embedded fittings without displacing them.

The concrete shall be free of honeycombing and planes of weakness. Successive layers of the same lift shall be thoroughly worked together.

The method of compaction shall be as specified. Mechanical compaction shall be undertaken by means of high frequency immersion vibrators of minimum frequency of 6000 vibrations per minute and a maximum acceleration of 4 g when under load, being capable of visibly affecting concrete over a radius of at least 500mm. Vibrators shall be inserted at about 500mm centres and withdrawn slowly to close the hole formed by the vibrator.

Non-mechanical compaction shall be undertaken by means of spading, rodding or forking.

Over-compaction resulting in segregation, surface laitance or leakage (or any combination of these) shall not be allowed.

Vibrators shall not be allowed to come within 30mm of the face of the formwork in the case of formed finishes, nor within 75mm of the face of the formwork in the case of special finishes.

Construction Joints: — Concreting shall be carried out continuously up to the construction joints shown on the working drawings or as prior approved by the Department, except that if, because of an emergency (such as a breakdown of the mixing plant or the occurrence of unsuitable weather), concreting has to be interrupted a construction joint shall be formed at the place of stoppage in conformity with the detail shown on the drawings for construction joints generally and in the manner which will least impair the durability, appearance and proper functioning of the concrete. The Department shall approve the method adopted for forming the construction joints, one of the following methods being adopted, as relevant: —

- a) Construction joints when concrete is not more than 24h old: — The surface of the concrete shall be brushed with a steel wire brush before new mortar and concrete are placed as specified in (b) below.
- b) Construction joints when concrete is more than 24h but not more than 3 days old: — The surface of the concrete shall be sand-blasted or chipped with a light hammer, swept clean, and thoroughly wetted and covered with a 10mm thick layer of mortar composed of cement and sand mixed in the same ratio as the cement and sand in the concrete mixture. This mortar shall be freshly mixed and placed immediately before the new concrete is placed.
- c) Construction joints when concrete is more than 3 days old: — The procedure specified in (b) above shall be followed, except that the old surface shall be prepared and kept continuously wet for at least 24h before the mortar and new concrete are placed.
- d) Construction joints at tops of columns: — The procedure for brushing or cleaning specified in (a) or (b) above, as applicable, shall be followed before the steel reinforcement of the slab or floor to be cast on the columns is placed in position.

Curing and protection: — Formwork shall be retained in position for the appropriate period given in the clause "Removal of Formwork" and shall be considered as providing adequate curing on those surfaces for that period. Should this curing period still be less than that specified, alternatively, should surfaces not be cured by forms then all such concrete shall immediately be protected from contamination and loss of moisture by one or more of the following methods: —

- a) ponding the exposed surfaces by means of water, except where atmospheric temperatures are low, i.e., less than 2°C,
- b) covering the concrete with sand, or mats made of a moisture-retaining material, and keeping the covering continuously wet;
- c) continuous spraying of the exposed surfaces with water;
- d) covering with a waterproof or plastic sheeting firmly anchored at the edges,
- e) using a prior approved curing compound applied in accordance with the manufacturer's instructions, provided that in this case, the presence of the compound is not detrimental to subsequently applied finishes.

Whatever method of curing is adopted, its application shall not cause staining, contamination, or marbling of the surface of the concrete.

The curing period shall be at least 5 days for concrete made with Portland cement, at least 2 days for that made with rapid-hardening Portland cement and at least 7 days if Portland blast-furnace cement is used. When atmospheric temperatures are below 5°C these minimum curing periods shall be extended by 72, 36 and 72 hours respectively.

CONSTRUCTION DETAILS

Holes, Chases and Fixing Blocks: — No holes or chases other than those shown on the working drawings or approved by the Department shall be cut or otherwise formed in the concrete. No blocks for the attachment of fixtures shall be embedded in the concrete unless approved by the Department.

Pipes and Conduits: — No pipes or conduits other than those shown on the working drawings shall be embedded in the concrete without the approval of the Department. The clear space between any such pipes and the clear distance between such-a-pipe and any reinforcement shall be at least 25mm or the maximum size of the coarse aggregate plus 5mm, whichever is greater. The amount of concrete cover over pipes and fittings shall be at least 25mm.

Honeycombing and Other Defects: — After removal of the forms, if the concrete shows any defect in terms of the Specification for Finishes for that concrete, the Contractor shall, on the instructions of the Department, make good the defect at his own cost, by either removing and replacing the defective concrete, or by patching, all as approved by the Department and to the standard of finish required. No remedial work shall be carried out by the Contractor without the prior approval of the Department.

Building on Concrete Footings: — No structural load shall be imposed on concrete footings until at least three days after depositing the concrete in the case of mass concrete footings and after seven days in the case of reinforced concrete footings, or as may be directed by the Department.

RECORDS: — The Contractor shall maintain written records indicating: —
a) the date on which each section was concreted, the time taken to place the concrete, and the position of that section in the Works and its construction joints;
b) daily weather conditions with temperatures being recorded by maximum and minimum thermometers and
c) the nature of samples and dates on which they were taken. In the case of cubes these shall also state the identification marks, test results and age, minimum strength required and position of parent concrete.

TESTS

Compressive Strength: — During the time in which each class of concrete, having a specified 28 day compressive strength equal to or greater than 20 MPa, is being placed, samples of the concrete shall be taken from the point of deposit at the rate of at least one sample from each 5m³ of concrete placed in columns, and from each 30 m³ or part thereof of concrete placed elsewhere, but in either case, nevertheless at least once a week. A group of at least three 150mm test cubes shall be made from each sample for testing at 28 days age. If the Contractor plans to execute further work which relies on previously completed work for support but for which the results of 28 day tests are not available, he is to prove the strength of that concrete by taking and testing at 7 days age an equal number of test cubes to that which is to be tested at 28 days age, prior to the commencement of the planned further work.

The cost of the necessary extra test cubes and testing will be for the Contractor's account. Each group of test cubes shall be deemed to represent the whole of the concrete from which sample was taken and shall be identifiable with the concrete.

The Contractor shall provide, at his own expense, sufficient moulds to keep pace with the rate of concreting. He shall also perform all tasks in respect of compressive strength testing except the actual crushing.

If ready-mixed concrete is used, site testing as specified herein shall still be undertaken, and only the results of such site testing shall be considered in determining the acceptance or otherwise of the concrete.

Grading Analysis: — If so directed by the Department, a grading analysis shall be made for each 40m³ of fine aggregate to be used and for each 75 m³ of the coarse aggregate to be used. The analysis shall be made by the method given in SANS Specification 1083.

Determination of Consistency: — When the slump test is used to measure the consistency of the concrete mix, it shall be carried out by the method given in SANS Method 862 with samples taken in accordance with SANS Method 861.

Costs of Tests: — to concrete, trial mixes, cement, aggregates, water and reinforcing steel shall be borne by the Contractor. The Contractor shall also bear the costs of any other tests (including load tests), which are required as a result of failure on the part of the Contractor to meet the requirements of the Specification.

An item against which the Contractor may allow for all costs in connection with tests on concrete cubes has been included elsewhere in these Bills of Quantities.

Testing Authority: — The crushing of cubes and testing of other samples except in the case of the clause "Determination of Consistency" shall be undertaken by an independent Authority as approved by the Department. The Contractor shall arrange with the Authority that copies of the results of all tests are sent direct to the Department.

ACCEPTANCE CRITERIA FOR STRENGTH OF CONCRETE: — Should any test result obtained from a set of three test cubes of concrete of a specific grade that have been made and tested as specified show that the strength is more than 3 MPA below the specified strength, the concrete represented by such results shall be deemed to have failed to meet the Specification. Should an examination carried out in terms of the clause "Procedure in the event of failure" satisfy the Department that the structural adequacy and durability of that part of the structure where the concrete concerned has been used, is not impaired, the concrete will be acceptable. The Contractor will however be required to review the mix design and any other factors influencing the quality to ensure that further concrete is acceptable.

Where three or more consecutive valid test results (i.e., results of sets of three test cubes that have been made and tested as specified) become available, the following criteria shall apply: —
a) The average of any three consecutive valid test results obtained on concrete of a specific grade must exceed the specified strength by at least 2 MPA.
b) If the criterion given in (a) above is not met but the average is at least equal to the specified strength, the concrete cast will be acceptable but the Contractor will be required to adjust the mix design and standard of control.
c) Should the average result be less than the specified strength, an examination must be carried out in terms of the clause "Procedure in the event of failure" on that part of the structure in which concrete represented by the result has been used.

Alternatively, should a concreting operation be of such size or the testing be of such frequency that thirty or more valid test results (i.e., results of sets of three test cubes that have been made and tested as specified) become available within three months, the Contractor may choose, subject to the approval of the Department, to have the results assessed statistically. In such a case, the average of all the test results of a specific trade of concrete at any stage must exceed the specified strength by at least 1,7 standard deviations, failing which the Contractor will be required to adjust the mix design to ensure compliance with this criterion.

PROCEDURE IN THE EVENT OF FAILURE: — If after the evaluation of the test results

Notwithstanding any requirements previously described, the Department may permit

The Department shall have the right to vary the proportions of the constituents in any of the prescribed mixes as necessary to obtain the required compressive strength, optimum density and workability of the concrete. Any variation in the rates of the concrete will only be considered if the proportion of cement to the total volume of aggregate, in each case, is varied from that Specified.

The cement / water ratios and the maximum and minimum slumps for concrete shall be as previously listed in Tables C and D.

Cement and aggregates shall be mixed by volume and the contents of a 50 kg sack of cement shall be taken to be 0.033 m³

Class of Concrete	Estimated minimum compressive strength in MPA at 28 days	Maximum nominal size of coarse aggregate in mm	Proportion of Constituents		
			Cement (Parts)	Fine Aggregate (Parts)	Coarse Aggregate (Parts)
A	1	37,5	1	2	3
B	15	19,0	1	2	3
C	20	19,0	1	2 ½	3 ½

TABLE E - PRESCRIBED MIX CONCRETE FOR NON-STRUCTURAL PURPOSES

NON-STRUCTURAL PRESCRIBED MIX CONCRETE: — Concrete for non-structural purposes shall be "Prescribed mix concrete" produced in accordance with the requirements indicated in the table below, and the Contractor is also referred to the foregoing Preambles insofar as they apply: —

- a) An assessment of the stress level in the structure concerned in relation to the test result obtained.
- b) Non-destructive testing, subject to the availability of similar concrete of proven acceptable quality in comparable members in the same construction as a reference.
- c) The testing of drilled cores in accordance with the relevant SANS Standard Methods.
- d) Full scale load tests in accordance with Section 6 of SANS Code of Practice 0100: Part II.

Where load tests are, in the opinion of the Department, unsuitable or impracticable, and if an examination carried out in terms of the above does not show the concrete strength to be acceptable, or if a tested portion of the structure fails to pass the tests, the Contractor shall, on the instructions of the Department, replace or strengthen by approved means: —

- a) each portion that failed or contains concrete that failed, as relevant, and
- b) any other portion, irrespective of strength, the functional purpose of which is affected by the portion or concrete referred to in (a) above.

in terms of the clause "Acceptance criteria for strength concrete" an examination of the concrete in the structure is necessary, one or more of the following procedures in the sequence given may be adopted at the discretion of the Department, and for the account of the Contractor, to determine the acceptability or otherwise of the concrete in that particular part of the structure: —

certain items of non-structural concrete in small quantities to be mixed by hand.

Where concrete is mixed by hand, the coarse aggregate shall be spread out on a timber, concrete or metal platform in a flat heap, the sand-then spread evenly over the heap, followed by the cement also spread evenly, and the whole thoroughly mixed by shovelling from the centre to the side to form a ring, then back to the centre and again to the side. Water shall then be poured into the ring and the materials mixed into it and then back into the ring, the remainder of the water then added slowly as materials are mixed into it. Mixing shall continue until the colour is uniform and the consistency the same throughout the pile.

"NO-FINES" CONCRETE: — shall consist of one part of cement to eight parts of 19mm aggregate (1:8 — 19mm stone) with a water/cement ratio of approximately 0,46. This water/cement ratio may be varied slightly to suit conditions on approval by the Department.

The quantity of water used shall be just sufficient to form a smooth grout, which shall completely coat every particle of aggregate, and also to ensure that the grout is just wet enough to form a small fillet at each point of contact between the stones. "No-fines" concrete mixed with excessive water, which results in a thin grout which drops off the aggregate, will be rejected.

"No-fines" concrete shall be placed in its final position within 20 minutes of mixing and shall be placed in continuous horizontal layers. "No-fines" concrete shall be spade worked sufficiently to ensure that it fills the forms but vibrating, tamping or ramming will not be permitted.

BREEZE CONCRETE: — shall consist of one part cement to eight parts clean dry furnace ashes, the ashes being free from all coal or other foreign matter and graded up to particles which will pass a 26. 5mm ring from a minimum which passes a 4.75mm mesh. The finer materials from the screening to be first mixed with the cement into the mortar and the ashes added afterwards and thoroughly incorporated. The breeze concrete is to be mixed in batches not exceeding 0, 1 in 3 and each batch is to be immediately placed in position. The ashes for breeze concrete are to be obtained in an unscreened state and are to be kept dry so that sufficient fine material will be obtained from the screening to make the mortar.

FINISHES TO IN-SITU CONCRETE

Formed Finishes: — are the concrete surface finishes developed using formwork and whose standard of finish in each class shall be as described.

The Department shall be informed by the Contractor of any defect in terms of this Specification, and no remedial work shall be carried out by the Contractor without the prior approval of the Department. Any defect shall be made good at the Contractor's expense by either removing and replacing the defective concrete, or, in certain instances only, by patching, all as approved by the Department and to the standard of finish required.

Class F1 Ordinary Finish: — Formwork panels shall be of such quality that upon removal, the concrete is true and even, free from fins and recesses greater than 5mm size, honeycombing, large air holes and the like. Bolt holes shall be filled if so required by the Department.

Class F2 Smooth Finish: — This class of finish requires a high standard of concrete work, formwork and technique.

Concrete placed in any one structure to give this finish shall be made from cement and aggregates from the same source, and similarly, the grading of the aggregate shall be kept constant.

Formwork shall be metal or wrot timber in a new condition designed and constructed to suit the particular job in hand and with shutter bolts and joints between panes in a pattern approved by the Department. Joints between panes shall be watertight, but the use of sealing tape, which marks the concrete, shall not be permitted.

Construction joints shall be in the position and of the detail shown upon the working drawings. Should the Contractor wish to incorporate further construction joints or amend the position of those shown to suit his own requirements or technique, this may be allowed provided that all design considerations are met, that the prior approval of the Department is obtained and that any extra costs are borne by the Contractor. In the case of horizontal construction joints, the top edge of the concrete on the Class F2 smooth finish side is to be struck true and level with a trowel. Special care shall be taken to ensure that forms are clean of all pieces of tying wire, nails, and other debris at the time of concreting.

The standard of finish shall be such that, upon removal of the formwork, no further treatment, other than treatment of bolt holes if required shall be found necessary to provide a straight, smooth and uniform finish of good quality and consistent colour and texture, free of all honeycombing and large air holes.

UNFORMED FINISHES: — are those concrete surface finishes developed without the use of formwork -

Class U1 Ordinary Finish: — Immediately after placing, the concrete shall be finished by screeding with the edge of a wooden board of straight and true line and working between guides set accurately to level. No mortar shall be added and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after removing or tamping down the offending aggregate.

Class U2 Wood Float Finish: — The concrete surface shall first be brought to the standard Class U1 ordinary finish and then floated with a wood float. Floating shall be started as soon as the screeded finish is stiffened sufficiently and the bleed water has evaporated or been removed and it shall be the minimum necessary to produce a surface free from screed marks and uniform in texture.

Class U3 Steel Trowel Finish: — The concrete surface shall first be brought to the standard of Class U2 wood float finish with floating being continued until a small amount of mortar without excess water is brought to the surface and then the floated surface has hardened sufficiently to prevent any more excess fine material from being drawn to the surface, trowelling with a steel trowel. Trowelling shall be performed with firm pressure such as will flatten the sandy texture of the floated surface and produce a dense uniform surface free from blemishes and trowel marks. Gradual surface irregularities shall not exceed 5mm over any 3m. The sprinkling of sand and/or neat cement on the surface to absorb excess moisture shall not be permitted.

Class U4 Power Float Finish: — The concrete surface shall first be brought to the standard of Class U1 ordinary finish using wooden screeding boards or steel rollers. After evaporation or removal of all bleed water and immediately the concrete is stiff enough to support the machine the surface shall be closed with a mechanical power float

and then finished with a mechanical power trowel. The texture of the finished surface shall be either non-slip or polished as shown on the drawings. Irregularities shall be of long wavelength not exceeding a curvature of 2mm in 600mm. Under no circumstances shall sand and/or neat cement be sprinkled over the surface either to absorb excess moisture or to fill surface blemishes or irregularities. Power floats and trowels shall be operated by skilled operators.

TOLERANCES: — Clause 6 of SANS Specification 1200G refers. Unless otherwise agreed by the Department, 'Degree of Accuracy' shall apply to all concrete work and steel reinforcing.

SUPERVISION: — The construction of all concrete work shall, at all times, be under the supervision of a competent person experienced in the production and placing of high-grade concrete. He shall personally supervise all work relating to the concrete construction and pay special regard to: —

- a) The quality, testing and mixing of materials.
- b) The finish, stability and cleanliness of formwork and excavations.
- c) The cleanliness, correct positioning and maintenance in position of steel reinforcing.
- d) The transporting, placing, compacting and curing of the concrete. The construction and stripping of formwork.
- e) The production of samples, test cubes, slump and other tests.

GENERAL

Measurement and Payment: — The provisions of Clause 8 of SANS Specification 1200G will NOT apply and the system of measurement that is adopted in these Bills of Quantities is the only system of measurement that will be recognised in this Contract.

No deductions have been made for pipes not exceeding 200mm internal diameter, reinforcing, conduits, structural steel, bolts and the like.

Rates for Concrete: — are to include for mixing, handling and depositing (by hoisting or lowering) in the forms. Rates for items of reinforced concrete are to include for thoroughly working and packing around the steel reinforcement. All reinforcement, except where otherwise described, has been measured separately.

Rates for concrete surface beds are to include for laying in suitable size panels not exceeding 20m² or as may be directed. The Contractor is to allow in his pricing of the concrete for all construction joints. **Striking off and Curing:** — of concrete slabs and surface beds has been measured separately. The rates for all other items of concrete including stairs and landings and concrete bindings, are, except where otherwise described, to include for all necessary striking off of surfaces and curing.

The rates for items of striking off and curing top surfaces of concrete shall, unless otherwise described, apply to level surfaces.

Where exposed sloping surfaces of concrete do not exceed the limits of pitches laid down for the measurement of back shuttering, the striking off and curing of the sloping top surfaces has been measured in the case of concrete slabs and surface beds, and in other-cases provision has been made for dressing the concrete surfaces to splay.

Where items of striking off and curing are described as to falls or ramps this shall include cross-falls, etc.

The rates for striking off and curing of surface beds formed in panels must also include

for all necessary temporary formwork in forming the panels.

Rates for Formwork: — are to be for use and waste only (except where described as "permanent") and are to include for fitting together in the required forms, propping, strutting, shoring, wedging, plumbing and fixing to true angles and surfaces, cambering formwork to slabs and beams where required, preparation and treatment of surfaces as necessary to ensure easy release during stripping, reconditioning as necessary before re-use, providing necessary temporary openings for the purpose of cleaning, inspection and placing of concrete, and for all straight cutting, splayed edges, intersections, notching and narrow widths, including waste and properly fitting at intersections, maintaining in position for periods as directed and for striking and removing.

Rates for items of formwork to soffits of slabs and to sides and soffits of beams, lintels and the like are to include for horsing exceeding 1,5m and not exceeding 4,5m high unless otherwise stated in the items.

Rates for formwork to soffits of stairs and landings are to include for all necessary horsing.

Rates for Permanent Formwork: — are to include for leaving in all formwork, props, etc. as permanent formwork shall be regarded as not being recoverable.

Rates for Steel Fabric Reinforcement: — are to include for lapping the reinforcement at all edges, as specified, for all cutting and waste, notching, etc. bending where required, wiring together at laps and for maintaining in position during placing of concrete.

Rates for Steel Bar Reinforcement: — are to include for all cutting, bending, hooked ends, wiring together at passing points, hoisting or lowering to the required levels, fixing in accordance with the detail drawings, cover blocks and maintaining in position during placing of concrete. The mass of mild and high yield stress steel bars shall be based on the values shown in Table E1 of SANS Specification 920—Appendix E (with no allowance being made for rolling margin and waste).

The mass of the binding wire required for fastening the reinforcement together is not included in the mass of the reinforcement. Provision for the cost of this wire shall be deemed to have been made by the Contractor in calculating the unit rate for the net mass (i.e. excluding the mass of binding wire) of the reinforcement.

ROOF COVERINGS

CONCRETE ROOFING TILES: — shall conform to SANS Specification 542. The tiles are to be of pattern and colour specified and is to be even in thickness, uniform in shape and colour and free from cracks and blemishes. The tiles are to be laid to "straight bond" in accordance with SANS Code of Practice 062 with vertical joints and bottom edges of each course ranging perfectly straight.

Unless otherwise specified each tile in every third course, all tiles in eaves and ridge courses and tiles in every course on each side of hips and valleys shall be secured with copper clout headed nails driven into the battens or with approved non-corrodible tile clips and nails in accordance with the manufacturer's instructions. Where nail holes in tiles have been cut off at hips, valleys, top edges, etc. new holes are to be drilled. All ridge and hip cappings are to be of the types specified and of colour to match the roofing tiles. The cappings are to be bedded, jointed, pointed and torched up over roofing tiles in

1:3 cement mortar tinted to match the tiles. Where cappings having butt jointed ends are specified, an approved damp proof course conforming to Type C of SANS Specification

is to be fixed under, laid over the roofing tiles in accordance with the manufacturer's instructions.

Barge cappings are to be of the types specified and of colour to match the roofing tiles. The barge capping tiles are, unless otherwise specified, to be bedded, jointed, pointed and

ouched up over roofing tiles in 1:3 cement mortar tinted to match the tiles with every tile drilled and secured with copper clout headed nails to timber barge boards or bearers (elsewhere measured).

Concrete tiles to residential units in non hall areas are permitted.

CHROMODEK™ ROOFING SHEETS: - Shall be the secret fixed type, supplied with all fittings in full-length sheets in the profile and colour as specified. Sheets shall be a minimum of .58mm and maximum of .8mm thickness. When .58 thick sheets are used, purlin spacings shall be a maximum of 1.2mtr and maximum 1.5mtr for .8 thickness.

Sheets shall leave the factory in the specified colour and any scratches etc., due to handling are to be 'touched up' on site after installation. All fixings, valleys, cappings and securing clips shall be to manufacturers' recommendations and no variations shall be accepted without prior approval from the department.

0.58mm thick roof sheeting for purlins up to 1.2m spacing and 0.8mm thick roof sheeting for purlins exceeding 1.2m - 1.5m spacing.

In areas up to 30km from the coast, metal roof sheeting to be 0.58mm thick with special corrosion protection as supplied in "Global-Duro" roofing sheets. All other areas to be 0.58mm as "Global-Tech corrosion protection, 0.58mm "Klip Lock 700" or "Craflack"

and 0.8mm "Brownbuilt"; (0.8mm is recommended for high rainfall and snow fall areas due to deeper trough.)

RATES: - for roof coverings, are to include for all necessary half tiles at verges and for all square cutting and waste at verges, abutments, and top and bottom edges and to both sides of ridges.

Rates for cappings, etc. are to include for all short lengths, cutting, waste and fitting at intersections.

All measurements are nett. No allowances have been made for overlaps.

CORRUGATED IRON ROOFING, CLADDING AND FITTINGS: - are to be of an approved brand and are to be manufactured from galvanized steel sheets of the thickness specified after galvanising and having a galvanized coating of "Isacor Coating Designation Z275" for inland areas and "Z600" for coastal areas as specified.

Roofing, etc. shall be lapped one and a half corrugations at sides and 30mm at ends unless otherwise specified. Roofing, etc. shall be fixed to timber purlins, rails etc. with standard galvanized drive screws 65mm long and to steel purlins, etc. with 8mm galvanized hook bolts of the lengths stated.

Each screw or bolt shall be fitted with one lead washer and one bituminous felt washer and shall be spaced not less than one screw or bolt to every alternate corrugation across the width at end laps and at each intermediate purlin or rail.

Rates for roofing, cladding and fittings are to include for: -

- a) Fixing as described.
- b) Bedding washers in an approved mastic sealing compound
- c) Coating projecting ends of hook bolts and nuts with bitumen after fixing
- d) All square notches, square cutting and waste, laps, fitting and drilling. All measurements

are nett. No allowance has been made for laps.

FLUTED STEEL ROOFING, CLADDING AND FITTINGS: — are to be approved galvanized fluted steel sheets and fittings manufactured from galvanized steel sheets of the

thickness specified after galvanising

(a) **Galvanized steel sheets and fittings:** — are to be manufactured from galvanized steel having a galvanized coating of "Isacor Coating Designation Z275" for inland areas and of "Z600" for coastal areas as specified with the sheets having a plain galvanized finish and the fittings an embossed galvanized finish.

Roofing, etc. shall be fixed to timber purlins, rails, etc. with standard drive crews of the lengths stated and to steel purlins, rails, etc. with 8mm galvanized hook bolts of the lengths stated. Each fixing screw or bolt shall be fitted with washers as recommended by the manufacturer of the roofing.

Vertical cladding shall be fixed with broad flutes externally - unless otherwise described - to timber rails with standard galvanized drive screws 50mm long and to steel rails with 6mm diameter x 25mm long galvanized sheet bolts. Each fixing screw or bolt shall be fitted with washers as recommended by the manufacturer of the cladding including drilling steel rails as necessary.

(b) **Baked enamel finished galvanized steel sheets and fittings:** — are to be manufactured from un-passivated galvanized steel having a galvanized coating of "Isacor Coating Designation Z275" and finished where described in the items, with approved factory applied baked enamel finish of colours to be selected by the Department.

Roofing, etc. shall be fixed to timber purlins, rails, etc. with sherardised or stainless steel drive screws of the lengths stated and to steel purlins, rails, etc. with 8mm diameter sherardised or stainless hook bolts of the lengths stated. Each fixing screw or bolt shall be fitted with washers as recommended by the manufacturer of the roofing.

Vertical cladding shall be fixed with broad flutes externally, unless otherwise described, to timber rails with sherardised or stainless drive screws 50mm long and to steel rails with 6mm diameter x 25mm long sherardised or stainless steel sheet bolts. Each fixing screw or bolt shall be fitted with washers as recommended by the manufacturer of the cladding including drilling rails as necessary.

(c) **Generally:** — where sheet lengths are in excess of 12m these have been measured separately.

Roofing, etc. shall be lapped one flute at sides and 230mm at ends unless otherwise specified. Fixing roofing sheets are to be spaced one every crest along purlins at top and bottom edges of roof slopes and one to every alternate crest along intermediate purlins. Fixings to vertical cladding are to be spaced one to even alternate trough to each rail.

Fittings, unless otherwise specified, are to be lapped a minimum of 150mm and where necessary are to be drilled for and fixed with the fixings securing the roofing and cladding sheets.

Rates for roofing, cladding and fittings are to include for: —

(a) Fixing as described and in accordance with the manufacturer's instructions.

(b) Seam bolting all side laps at not exceeding 450mm centres with 6mm diameter x 25mm long sheet bolts or with 20mm x No. 14 self-tapping screws and each screw or bolt is to be fitted with washers as recommended by the manufacturer of the roofing.

(c) Fixing of fittings where described as fastened to roofing, cladding, etc. with approved pop rivets spaced at not more than 340mm centres.

(d) Sealing side and end laps of sheeting and end laps of fittings with one continuous strip of approved 5mm diameter pre-formed flexible sealant strip.

(e) Coating the exposed heads of fixings and fasteners to baked enamel finished materials and cut edges of sheets and fittings with matching touch-up compound supplied by the manufacturer of the sheeting and in accordance with his instructions.

(f) All square notches, square cutting and waste, laps fitting and drilling. No punched holes will be permitted.

(g) Taking special care at all times to prevent damage to the finished surfaces of the baked enamel finished materials.

All measurements are nett. No allowance has been made for laps.

CARPENTRY AND JOINERY

7.

NOMENCLATURE OF TIMBERS: — Timber described as "softwood" is to be South African

softwood of the relevant type, grade, etc. as specified.
he names used for imported timbers are those given in Supplement No. 1 to SANS Code of Practice 12 under "Nomenclature of Standard Trade Names of Imported Commercial Timbers used in South Africa" and the Contractor is referred thereto.
TIMBER SIZES: — Sawn and wrot timbers are to be of the full sizes stated. Where "out of" sizes have been shown for wrot timbers on the drawings, an allowance of 4mm for each wrot face off the sizes shown has been made.
Doors, fanlight, sashes, manufactured boarding, plywood, veneers, etc. must be of the full thickness specified.
Where doors, door frames, fanlights and frames, sashes, windows and frames are measured as numbered items, the overall sizes are given to the nearest 10mm.
Tolerances in nominal dimensions for imported timber shall not exceed the following:

a) For nominal dimensions up to 76mm the actual dimension may be 2.5mm under for each 25mm

b) For nominal dimensions 76mm and over the actual dimension may be 1.6mm under for each 25mm.

STORAGE OF TIMBERS: — Timber delivered to the site is to be properly stacked above ground, either on bearers or platforms under cover and protected from inclement weather. **ORDERS:** — for timber, are to be placed immediately after the Contract is signed, as the Contractor will be held responsible for any delay in delivery.

PRE-TREATMENT OF TIMBERS: — All permanent timbers installed in the buildings are to be treated against borer, cryptoterms, termites, and all wood destroying agencies with an approved preventative, all in accordance with SANS Code of Practice 05. Any surface subsequently exposed by cutting or planing must be touched up with the same preservative solution and rates are to include for all preservative required. The Contractor is to obtain a certificate from the merchants supplying the treated timber, to the effect that the timber has been treated against wood destroying agencies. The Department has the right to remove samples of the treated timber to have tests carried out by the Division of Entomology or any other Authority. Temporary timber on the site, e.g. shuttering props, etc. must be free from wood destroying agencies. Any timber so affected is to be immediately removed from the site. Materials which do not comply with the above requirements or are in any way damaged or discoloured by the pre-treatment must be replaced by the Contractor at his own expense, if so directed by the Department.

STRESS GRADING OF SOFTWOOD TIMBER: — The Mechanical Stress Grading of Softwood Timber (Flexural Method) shall be in accordance with SANS Code of Practice 0149.

STRUCTURAL TIMBER: — for carpentry is to be South African softwood in accordance with SANS Specification 563 and, unless otherwise specified, of Stress Grade V4, and branded accordingly. If it is necessary to use sizes that have to be re-sawn, these shall be re-graded and stamped with the respective SANS stress grade mark. Unless this is done, timber which is re-sawn is no longer considered as complying with the specification and shall on no account be used.

BRANDERING / BATTENS: — of cross-sectional size 50 x 50mm and under shall be South African softwood in accordance with SANS Specification 653 and branded accordingly.

JOINERY AND SHELVING: — Softwood for joinery and shelving shall be South African

softwood (S. A. Pine) in accordance with SANS Specification 1359 and branded accordingly. All timber for joinery is to be air or kiln-dried to a moisture content of approximately 12 %.

STRUCTURAL LAMINATED TIMBERS: — are to be of the sizes detailed, wrot on all faces and are to be manufactured by an experienced fabricator to the approval of the Department. Adhesives used must meet the requirements of the current SANS 1204 for external use.

The surface appearance of members shall be Class C (Constructional) or Class S (Selected) as defined in SANS Specification 876 and as stated in the items of Practice 096 — "The manufacture of finger-jointed structural timber".

FINGER-JOINTED TIMBERS: — are to be manufactured in accordance with SANS Code of Practice 096 — "The manufacture of finger-jointed structural timber".

Contractors wishing to use finger-jointed timber must supply a guarantee that the finger jointing complies with the above Code of Practice and that the glue is suitable for the particular member.

JOINTING OF PURLINS, FASCIAS, RAILS, BEAMS, ETC.: — shall, unless otherwise detailed, be as follows: —

Purlins, slating battens, etc. of cross-sectional size 50 x 76mm and under shall be jointed over the rafter. Larger sized purlins may be dealt with in the same way or by using some other suitable, recognised method. All purlins and battens shall be fixed to the supporting rafter by at least one nail skew driven from the direction of the ridge. Where the purlin or batten is fixed at more than 900mm centres, at least two nails shall be used at every fixing point.

Fascias shall be jointed over rafters. Beams, rails, etc. shall be jointed over a support or at 1/5th span with a recognised joint using bolts, etc.

Rafters and floor plates are to be halved at joints, angles and intersections and nailed together.

Floor joists and bearers are to have splayed heading joints nailed together and staggered to occur over bearers and sleeper piers respectively.

Sawn bracing is to be butt-jointed at heading joints and angles and where wrot, is to have splayed heading joints and mitred angles over all point of support.

HARD WOODS: — (Red Meranti and Sapele) are to be best quality, specially selected and well seasoned, free from all sapwood to the approval of the Department and are to be well kiln-dried.

Red Meranti is to be even in grain and colour, selected from "Standard and Better" grade from Malaysia. Sapele is to be *Entandrophragma cylindricum* of F. A. S. grade.

PREFABRICATED TIMBER ROOF TRUSSES: -

Design: — The design of prefabricated roof trusses, bracing, and secondary members forming part of the total timber roof construction shall be prepared by a professional structural engineer (Truss Systems Engineer) strictly in accordance with SANS Code of Practice 0160 and the superimposed loading, unless otherwise specified, is to be taken as that for inaccessible roofs.

Analysis: — From the configuration and mechanism shown on the tender drawings the Truss System Engineer shall submit, through the Contractor, to the Department detailed calculations and working drawings showing timber sizes, connections, truss dimensions, etc.

This submission must include details of both trusses and bracing as specified below:

(a) **TRUSSES:** The analysis of the truss system is to include diagrams of the trusses with marked up members and nodes showing dimensions, positions of supports and positions

and values of applied loads, which, if not specified in the tender documents, must be derived from an approved source of reference which shall be indicated in the analysis. Due account must be taken of any eccentricity particularly at supports. The analysis must also indicate allowable stresses, internal axial forces, moments and resulting stresses, as well as timber sizes and grades and detailed plate sizes (b) BRACING: Bracing must be designed to withstand the forces specified in SANS Code of STANDARD PREAMBLES TO ALL TRADES 34 Rev 3 January 2009

Submissions: — A copy of letter reference TR1 (attached at the end of this document) completed and signed by the Truss System Engineer must be submitted by the Contractor at the same time as the list of Sub-Contractors. Two sets of calculations and drawings with pertinent erection instructions for the whole roof construction as presented by the Truss System Engineer must be submitted to the Department for consideration and permission to proceed.

This in no way absolves the Contractor of his responsibilities. Any modifications to design or drawings are to be arranged directly between the Truss System Engineer and the Department. It will be the Contractor's responsibility to ensure that information is presented to the Department in good time and no claims will be entertained in respect of any delays resulting from the late approval of drawings, etc. Any difference in cost between the roof system initially submitted by the Contractor and the finally accepted system to meet the original design requirements will be for the account of the Contractor. The Truss System Engineer will be required to inspect the roof structure and certify on letter reference TR2 (attached at the end of this document) that the construction is in conformity with his design, and any costs in this respect must be included in rates for the truss system. If, in the opinion of the Department, further visits are necessary due to errors or omissions on the part of the Contractor or the Truss System Engineer the costs of these inspections will be for the account of the Contractor.

Fabrication and Storage: — Fabrication shall not commence until written permission has been given by the Department. The prefabricated roof trusses shall be manufactured, supplied and delivered to site by an approved manufacturer with all members accurately mitred cut, close butted and rigidly fixed together by approved galvanized metal spike connectors applied simultaneously to both sides of every joint by use of a mechanical press in accordance with SANS Code of Practice 0163. Permissible deviations in fabrication of trusses are to be as specified in SANS Code of Practice 0155.

The following will not be permitted at joints: —
b) knots, splits or finger joints
c) varying member thicknesses
d) plates not fully pressed into timber
e) gaps between members exceeding 1.5mm average over the width of the mitred members.
Stress grade marks must be clearly visible on all members.
Relevant dimensions must be checked on site before fabrication. Trusses must be stored off the ground and under cover both at the factory and on site.

Erection and Bracing: — Unless otherwise instructed, erection must be carried out as described in "The Erection and Bracing of Timber Roof Trusses" published by the Truss Plate Association of South Africa and the National Timber Research Institute - CSIR. Where the overall lengths of trusses exceed 13 m, complete braced bays are to be assembled on level ground and lifted into position suspended at maximum 3m intervals from a spreader bar. Alternatively, braced bays may be assembled in position on a minimum of two lines of temporary intermediate supports below node joints. Temporary supports must be removed before roof covering is placed. The erector must be suitably qualified and must satisfy the Department that he can meet the specification. Where the roof incorporates a hipped end, the construction is to commence with the hip, otherwise erection is to be commenced with a fully braced bay. Temporary bracing must be installed as erection proceeds in accordance with the accepted design. The Contractor must notify the Department in sufficient time in order that an inspection may be made before the roof covering is placed. The trusses will be subject to the following tolerances: —
a) maximum out of straight — length/400
b) maximum out of vertical at any point—height/200.

Rates: — The Contractor is to allow in his rates for the roof trusses for the design, manufacture, supply, hoisting and fixing of the roof trusses and permanent bracing, any necessary temporary bracing, and for the costs of all inspections by the Truss System Engineer. Purlins or battens for roof coverings have been measured elsewhere. Rates for roof trusses are also to include for the exposed rafters at eaves overhangs to be wrought all round and trimmed and splay cut as required.

INSULATION, WATERPROOFING AND DUST PROOFING MATERIAL FOR ROOFS: — shall be of an approved aluminium foil faced both sides laminated Kraft Paper and synthetic reinforced material fixed in accordance with the manufacturer's instructions, lapped 150mm at all edge, unless otherwise specified.

GYPNUM PLASTERBOARD: — is to be in accordance with SANS Specification 266.
GYPNUM COVERED CORNICES: — are to be in accordance with SANS Specification 622.
FIBRE CEMENT SHEETS: — are to be in accordance with SANS Specification 685.
FIBRE CEMENT CELLULOSE SHEETS: — are to be in accordance with SANS Specification 803.

HARDBOARD: — is to be in accordance with SANS Specification 540. Tempered and untempered hardboard is to be conditioned in accordance with the manufacturer's instructions before fixing in position.

VENEERS: — All decorative face veneers are to be selected kiln dried of best quality of the respective timbers, free from knots, cracks, patchwork, sapwood and other defects and bonded under heat and hydraulic pressure with water-resistant synthetic resin adhesive. Commercial veneers are to be selected rotary cut hardwood veneers and otherwise as described above.

PLYWOOD: — is to be long grain three or five-ply type manufactured with hardwood veneers with selected face veneers as described, bonded under heat and hydraulic pressure with water-resistant synthetic resin adhesive and sanded to a smooth finish.

CHIPBOARD: — All joinery fixtures shall be manufactured from 18mm Moisture resistant V313 Melamine Faced Chipboard (Particle Board) only with 32mm worktop as specified.

BATTEN BOARDING: — is to be long grain three-ply boarding manufactured with kiln-dried South African Meranti softwood core formed of laminations not exceeding 45mm wide

and faced on both sides with selected veneers as described, bonded under heat and hydraulic pressure with water-resistant synthetic resin adhesive and sanded to a smooth finish.

DECORATIVE LAMINATE LININGS: — are to be 1.2mm thick approved general purpose quality high pressure decorative melamine laminate sheeting with satin finish and of selected colours and patterns, and rates are to include for all square cutting and waste and square notching, close cut and mitred external angle intersections where required and for bonding to the timber backings with an approved adhesive in accordance with the manufacturer's instructions.

NAILS AND SCREWS: — Mild steel nails are to be in accordance with SANS Specification 820. Mild steel and brass screws are to be round headed, countersunk, etc. as appropriate and are to be in accordance with SANS Specification 1171. Nails and screws shall be of the size, length and type appropriate to their respective uses.

PLUGS, ETC.: — Where items of woodwork are described as "plugged", these may be nailed to timber plugs or slips built into the structure, and where described as "plugged and screwed" these may be screwed to timber or approved patent fixing plugs.

SHOT FIXING: — Where items of woodwork are described as "shot fixed" these are to be fixed with an approved cartridge-assisted tool, and rates are to include for all nails, spikes, blanks, washers, cartridges, accessories, etc.

CARPENTRY: — Timbers are to be the best of their respective kinds, free from sap, shakes, large or dead knots, wavy edges and other defects and thoroughly seasoned. Wrot surfaces are to be finished clean, smooth and free from tool marks.

Timbers shall be in as long lengths as possible.
Rates for sawn and wrot structural timbers are to include for notching, splay and birds mouth cutting, housing, halving, scarfing, cutting timbers to the required lengths, spiking and clinching and or hoisting and fixing timber in position.

CEILING: — are to be of the types described, fixed to timber bracing, bearers etc. as described and with panels set out so as to give even width panels not less than half a sheet wide at edges. Bracing shall be spaced at not more than 400mm c/c and fixed at right angles to sheets.

FLUSH PLASTERED CEILINGS: — are to be formed of gypsum plaster board of the thickness stated, generally in 1200mm widths and long lengths, fixed grey side down to timber bracing, bearers, etc. as described, with butted joints between the boards covered with 65mm wide strips of galvanized wire scrim fixed along both edges, including all square notches and square cutting and waste, and the ceiling finished with two coats of approved retarded hemi hydrate gypsum plaster applied in accordance with the manufacturer's instructions to a finished thickness of not less than 6mm, including pressing into scrim over joints and finished to a smooth polished surface.

TRAP DOORS:- 900 x 600 Prefabricated hinged trap door.
SUSPENDED CEILING BOARDS: — are to be of the types described or as specified — normally 6mm x 600mm x 1200mm embossed fibre cement boards — and inclusive of their component parts must be of sufficient strength to perform the function for which they are to be used, manufactured from best quality materials and conform to the requirements of the Fire Master. The exposed surfaces of all ceiling panels and supporting members are to be uniform in colour and free from surface blemishes.

Hangers are to be galvanized and are to be at maximum 1,2mtr centres to meet the requirements of the specification, each with one end fixed to the suspension grid main bearers and the other end fitted with suitable galvanized fixing straps to the roof structure.

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Fixing points must be agreed to by the Department before any power shot fixings are made. Hangers must not be suspended from air-conditioning ducts. Component parts and fixings other than aluminium must be non-corrosive and able to withstand atmospheric pollution. Surfaces of aluminium which are in contact with other materials when fixed, particularly ferrous metals, are to be suitably insulated to prevent electrolytic corrosion.

All work is to be executed by specialists in accordance with the manufacturer's instructions, and to the approval of the Department.

Rates for ceilings are to include for hangers, suspension systems, ceiling panels, for constructing the ceilings in a manner suitable for carrying air conditioning diffusers and light fittings in the positions required, for setting out the ceilings to layouts approved by the Department, for all non-standard size panels, for modifications to standard suspension systems as necessary to work around any air-conditioning ducts or pipes or light fittings, for all necessary square cutting and waste, notching and fitting around projections, columns, etc.

EXPOSED TEE-SYSTEM SUSPENDED CEILINGS: — are to be of the type described with main tees and cross tees spaced at the required centres to suit the sizes of panels used, with the cross tees fitted between and notched to form a flush fit with main tees unless otherwise described. All suspended ceilings to be fitted with shadow line trimming to perimeters.

Main and cross tees shall be holed as necessary and provided with timber wedges or steel clips to prevent ceiling panels from lifting.

CONCEALED TEE-SYSTEM SUSPENDED CEILINGS: — are to be of the type described with main and cross tee section bearers spaced at the required centres and all properly fitted together at intersections.

ALUMINIUM TRIMS TO CEILINGS: — are to be of extruded aluminium of 6063-TF or equivalent quality and temper, of the sections described. Anodised trims are to be of the colour stated.

Rates are to include for all cutting, fitting at intersections, mitres, etc. and rates for items described as fixed with screws are to include for countersunk drilling and fixing with approved countersunk stainless steel screws.

SUNDMBILI CHC - CONSTRUCTION OF THE WAITING AREA SHELTER

SCHEDULE OF RATES

4.1 ITEMS AND PRICING

The Department reserves the right to place an order for any quantities of items included in the Schedules. The Schedule of Rates must also not be assumed to include and describe every detail of the supply requirement, but must be taken and read in conjunction with the other parts of the document. Thus the supplier shall not have claim for further payment in respect of any order which may be described or implied in the contract, although apparently no corresponding items are given in the Schedule of Rates. The supplier shall be deemed to have satisfied himself before quoting as to the correctness and sufficiency of his quote for the contract and of the rates and prices stated in the Schedule of Rates.

4.2 TAX AND DUTIES

Prices, quoted and paid, must include all customs, excise and import duties, and any other tariffs or taxes levied by the government or statutory body having jurisdiction on the goods provided under this contract, including Value Added Tax (applicable to the current rate).

3.3 RATES

Except where provision is made in the Schedule of Rates, the rates and prices inserted shall be the full rates and prices for the service delivered described under the respective items and shall cover all labor, transport, overhead charges and profit, etc. as well as the general liabilities, obligations and risks arising out of the Conditions of Contract, the overhead charges and profit being spread proportionately over the rates of the relative items in the Schedule of Rates.

For all floor coverings are to include for laying as described, for cleaning down backing surfaces before laying and for all square and ranking cutting and waste and fitting, fair edges where no skirting occur, protection from injury and for cleaning down etc. as described at completion.

Rates for all fittings are to include for laying as described, cleaning down backing surfaces before laying, sizing backing surfaces if necessary to ensure proper adhesion, all square and raking cutting and waste and fitting, fair etc. as described at completion.

Rates for skirting, stair nosing, edging strips, etc. are to include for fixing as described, cutting to lengths, fitting at intersections, mitres, ends, etc. and for cleaning down at completion.

SCHEDULE OF RATES

WORK TO BE DONE AND SCHEDULE OF PRICES:

Item No	Description	Unit	Qty	Rate	Total
	<p><u>EARTHWORKS</u> BILL NO. 1</p> <p>For Preambles see " Standard Preambles to all Trades - W20" - 1986", including Supplementary Preambles to the standard Preambles</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>ALL MATERIALS TO BECOME THE PROPERTY OF THE CONTRACTOR:</p> <p>Old material for alterations, except where described to be reused or handed over become the property of the Contractor who must allow credit for same in final summary</p> <p>OLD MATERIAL TO BE CARTED AWAY</p> <p>Old material from the alteration, except where described to be reused or handed over, as well as all rubbish, etc. must be regularly carted from site and not be allowed to accumulate on the site.</p> <p>OLD MATERIAL NOT TO BE RE-USED</p> <p>None old material are to be used for new work except where specifically described being set aside for re-use</p> <p><u>CARTING AWAY OF EXCAVATED MATERIAL</u></p> <p>Take out and remove roofs, ceilings, etc.</p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations, or alternatively from stock piles situated on the building</p>				

BILL NO. 1

Earthworks

Item No	Description	Unit	Qty	Rate	Total
1.	<p>EXCAVATION, ETC</p> <p>Excavation not exceeding 2m deep for Stub Column, Catchips</p> <p>Trenches</p> <p>Extra over all excavation for carting away</p>	m ³	5.1		
2.	<p>Surplus material from excavation or stock piles on site to a dumping site to be located by the contractor approved by the local municipal</p> <p>Risk of collapse of excavations</p>	m ³	5.1		
3.	<p>Sides of the trench and hole excavation not exceeding 1,5mm deep</p> <p>Keeping excavation free of water</p>	m ²	8		
4.	<p>Keeping excavation free from water, mud etc.</p> <p>FILLING, ETC</p> <p>Earth filling obtained from the excavation or prescribed stock piles on site compacted to 90% Mod AASHTO density</p>	Item			
5.	<p>Back filling to trenches holes, etc.</p> <p>PROTECTION AGAINST TERMITES</p> <p>Soil insecticide</p>	m ³	1		
7.	<p>Under floors, etc including forming and poisoning shallow furrows against foundation wall, and filling in furrows and rramming, including issuing of certificate</p>	m ²	60		
COLLECTION					
Bill No. 1 Earthworks					

Item No	Description	Unit	Qty	Rate	Total
1.	<p>BILL NO.2 CONCRETE, FORMWORK AND REINFORCEMENT PREMABLES For Premables see " Standard Premables to all Trades - W20" - 1986", including Supplementary Premables to the standard Premables SUPPLEMENTARY PREMABLES The SUPPLEMENTARY PREMABLES applicable to the same trade in the preceding section, apply to this trade. UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES REINFORCED CONCRETE 25Mpa concrete slab 150mm thick and Ref 193 mesh laid to have a 100mm fall to the center catchpit and to have a smooth trowel finish, stub column 25Mpa reinforced concrete 230 x 230mm with champhered edges and with the holding down bolts cast in concrete</p>	m ³	5.1		
2.	<p>CONCRETE SUNDRIES Class U2 wood float finish to concrete</p>	m ²	60		
3.	<p>Allow for mesh ref 193 reinforcement in concrete</p>	m ²	60		
4.	<p>25Mpa concrete slab 150mm thick and Ref 193 mesh laid to have a 100mm fall to the center catchpit and to have a smooth trowel finish, stub column 25Mpa reinforced concrete 230 x 230mm with champhered edges and with the holding down bolts cast in concrete</p> <p>Concrete stub column, slab, etc (4200mm x 4200mm x 200mmhigh)</p>	m ³	4		
COLLECTION Bill No. 2 Concrete, Formwork And Reinforcement					

Item No.	Description	Unit	Qty	Rate	Total
BILL NO.3					
CARPENTRY AND JOINERY					
EAVES, VERGES, ETC.					
1.	225 x 12 fibre cement fascia boards screwed to 100 x 75x 20mm 3mm thick lipped mild steel channel, channel else where measured	m	25		
2.	225 x 75 x 12 fibre cement badge boards screwed to mild steel bracket with brass nuts and bolts bracket else where measured	m	10		
3.	114 x 38mm SABS approved timber screwed to 100 x 75x 20mm 3mmthick lipped mild steel channel, channel elsewhere measured	m	24		
4.	RELOCATION OF WENDY HOUSE Relocate the existing Wendy house to the new site not exceed 15m away concrete slab elsewhere measured	item			
COLLECTION					
Bill No. 3					
Carpentry And Joinery					

Item No	Description	Unit	Qty	Rate	Total
	<p>BILL NO. 4 ROOF COVERING, ETC. PREAMBLES</p> <p>For Preambles see " Standard Preambles to all Trades - W20" - 1986", including Supplementary Preambles to the standard Preambles</p> <p>SUPPLEMENTARY PREAMBLES</p> <p>Proprietary items or materials</p> <p>Proprietary items or materials where specified are to be of brand specified or other approved by Head: Health</p> <p>Fixing</p> <p>Fixing must be done in accordance to SABS 1200HB with minimum 225mm end laps</p> <p>STEEL ROOF SHEETING AND ACCESSORIES</p> <p>Finishing</p> <p>Roof sheeting and accessories shall match the existing galvanized steel sheets</p> <p>0.8mm chromadec metal roof sheet secured to 100mm x 75mm x 20mm x 3mm thick lipped channel with galvanized hooked bolts</p> <p>Roof sheet (12000 x 5000mm)</p> <p>Allow for redrawing of the attached plan for the Local Municipal <u>Town Planning</u></p>	m ²	60		
1.					
2.	<p>Redrawing of the plans</p>	No	1		
3.	<p>Drawing of the as built plans</p>	No	1		
<p>COLLECTION Bill No. 4 Roof Covering, etc.</p>					

Item No	Description	Unit	Qty	Rate	Total
BILL NO.5					
STRUCTURAL STEELWORK					
<p>Mild steel structural steel components manufactured and erected to client details and specifications and erected onsite as drawing details and all steel components i.e. uprights, base plates angled cleats etc.</p>					
1.	<p>127 x 76.2mm x 4mm thick mild steel hot dipped galvanized hollow type column steel posts 400mm high welded to 240 x 70 x 10mm thick mild steel plate, top of the post to be cut out and bolted to receive rafter. Two end flanges to be bent inwards</p>	No	05		
2.	<p>127 x 76.2mm x 4mm thick mild steel hot dipped galvanized hollow type column steel posts 390mm high welded to 240 x 70 x 10mm thick mild steel plate, top of the post to be cut out and bolted to receive rafter. Two end flanges to be bent inwards</p>	No	05		
3.	<p>100 x 75x 20mm 3mm thick heavy hot dipped galvanized lipped mild steel channel (500mm long)</p>	m	25		
4.	<p>100 x 75x 20mm 3mm thick lipped mild steel channel (1200mm long)</p>	m	36		
BOLTS					
5.	<p>10mm diameter bolts</p>	No	40		
Sundries					
7.	<p>240 x 70 x 10mm plate welded to 127x76x4mm heavy duty galvanized hollow type upright</p>	No	10		
8.	<p>300 x 150 x 0.3mm Mild steel bracket welded to end of 150 x 76 lipped channel</p>	No	12		
COLLECTION					
Bill No. 5					
Structural Steelwork					

Item No	Description	Qty	Rate	Amount
BILL NO, 6	METAL WORK			
	ALUMINIUM WINDOWS, DOORS, SCREENS, ETC.			
	Aluminum Windows			
	Aluminum windows are to be manufactured and supplied by Messrs. Sheerline Systems or other approved institution.			
	Windows are to be factory-glazed and fitted with all necessary PVC or neoprene glazing gaskets, aluminium glazing beads, weather seals, etc., in accordance with the manufacturers standard details.			
	After fabrication the windows, glazing beads, etc., are to be properly etched and anodised bronze with an anodised film thickness of 25 microns in accordance with SABS 999.			
	The frames are to be formed perfectly flat on all faces, truly square and properly jointed at angles and intersections.			
	The sight lines are to be the same throughout each window of the same type.			
	All frames are to be fitted with standard fixing lugs spaced one near each corner and not exceeding 450mm apart immediately all round frame.			
	The windows are to be protected with plastic sheeting held in position with non-staining adhesive tape capable of easy stripping.			
	Prices for windows are to include for assembling the component parts, setting up in position and plugging and screwing fixing lugs to concrete, oiling and easing all opening sections, protecting from damage and cleaning down and leaving in perfect condition at completion.			
	Metal work		R	

Item No.	Description	Qty	Rate	Amount
	<u>'Sheerline System 30' natural anodised aluminium windows glazed as scheduled and factory fitted with burglar bars to all opening sections:</u>			
1.	Window in nine top hung opening lights and six fixed bottom lights 1550 x 2580mm high fitted with 4mm 'Armourplate' six top hung clear bottom lights obscure glass.	8	NO	
2.	Window in nine top hung opening lights and six fixed bottom lights 2500 x 2750mm high fitted with 4mm 'Armourplate' six top hung clear bottom lights obscure glass.	4	NO	
3.	Window in nine top hung opening lights and six fixed bottom lights 1500 x 2750mm high fitted with 4mm 'Armourplate' six top hung clear bottom lights obscure glass.	8	NO	
4.	Aluminium double door 2520 x 2215mm high fitted with 4mm 'Armourplate' clear top half and obscure bottom glass.	2	NO	
Carried to Summary Metal work				

Item No	Description	Qty	Rate	Amount
BILNO. 7				
PLUMBING AND DRAINAGE				
WATER DISPOSAL				
1.	<u>0,7mm Baked enamel on aluminium gutters system in continuous lengths including brackets, etc.</u>	12		
	127 x 80 mm high aluminium seamless gutters			
2.	75mm x 50mm x 4000mm long aluminium seamless down pipes including brackets and cutting intogutters to accommodate down pipes as specified in item 3.5 brackets shall be installed 700mm apart including of sets and outlet shoe	02		
3.	127 x 80 mm high aluminium seamless gutters end cap	02		
Carried to Collection PLUMBING AND DRAINAGE				
			R	

Item No	Description	Page	Amount
	FINAL SUMMARY		
	Earthworks	35	
	Concrete, Formwork And Reinforcement	36	
	Carpentry And Joinery	37	
	Roof Covering,	38	
	Structural Steelwork	39	
	Metal Work	41	
	Plumbing And Drainage	42	
		R	

COLLECTION SUMMARY

INSTITUTION:

SUNDUMBILI CHC

PROJECT DESCRIPTION: CONSTRUCTION OF THE WAITING AREA SHELTER

NOTE:

THIS COLLECTION SUMMARY MUST BE COMPLETED IN FULL BY THE CONTRACTOR AND RETURNED TOGETHER WITH THE QUOTATION FORM.

EARTHWORKS	R		
CONCRETE, FORMWORK AND REINFORCEMENT	R		
CARPENTRY AND JOINERY	R		
ROOF COVERING, ETC.	R		
STRUCTURAL STEELWORK	R		
PLUMBING AND DRAINAGE	R		
<u>SUB-TOTAL: CARRIED TO QUOTATION FORM</u>	R		

DATE :

DEPARTMENTAL STAMP:

SIGNATURE OF DEPARTMENTAL REPRESENTATIVE

DATE :

SIGNATURE OF TENDERER OR AUTHORISED REPRESENTATIVE

THIS IS TO CERTIFY THAT..... OF (STATE NAME OF TENDERER) VISITED AND INSPECTED THE SITE ON (DATE) AND IS THEREFORE FAMILIAR WITH THE CIRCUMSTANCES AND THE SCOPE OF THE SERVICE TO BE RENDERED.

Service: CONSTRUCTION OF THE WAITING AREA SHELTER R

Quotation No.: ZNQ -

Site/building/institution involved: SUNDUMBILI CHC

OFFICIAL BRIEFING SESSION / SITE INSPECTION CERTIFICATE

IMPORTANT
THIS FORM IS ONLY TO BE INCLUDED AND COMPLETED WHEN APPLICABLE TO THE QUOTATION.