



CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION

16/2019

CIDB GRADING CLASS 7CE

<p>City of Mbombela P.O. Box 45 1 Nel Street Nelspruit 1200</p> <p>Contact: Name Mr. Rudolph Mashego Telephone (013) 759 2190</p>	<p>SML PROJECTS PTY LTD 14 Nel Street Bateleur Building Nelspruit 1200</p> <p>Contact: Name Mr. T Mofokeng Telephone (013) 753 3191 Email smladmin@smlprojects.co.za</p>
June 2019	
Tenderer	
Total of the prices inclusive of value added tax: R	
Preferences claimed for : (tick relevant boxes)	
<input type="checkbox"/> B-BBEE Status level Contributor	

CLOSING DATE: 23 JULY 2019

CITY OF MBOMBELA

CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION ROAD

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**CITY OF MBOMBELA
BID NO: 16/2019
CLOSING DATE: 23 JULY 2019**

T1.1 TENDER NOTICE AND INVITATION TO TENDER

CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION

Bids are hereby invited from capable and experienced service providers with a CIDB rating of 7CE or Higher for the construction of CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION FOR CITY OF MBOMBELA

It is compulsory that service providers download a copy of the bid document that will ONLY be available as from 21 June 2019 on eTender Publication Portal: www.etenders.gov.za, free of charge.

Duly completed bid documents clearly marked "Original and Copy" together with supporting documents which are **COPY OF TAX CLEARANCE CERTIFICATE AND PIN, CERTIFIED COPY OF B-BBEE CERTIFICATE, RATES AND TAXES CLEARANCE FROM RELEVANT LOCAL AUTHORITY, CSD REGISTRATION REPORTS (SUMMARY REPORTS NOT ACCEPTABLE)**, together with the bid document must be sealed in an envelope clearly marked: "**BID NO.: 16/2019 ELANDSHOEK N4 INTERSECTION** , closing date **23 July 2019**" with the name of the bidder shall be placed in the bid box at the **NELSPRUIT CIVIC CENTRE** at **1 NEL STREET, NELSPRUIT**, before **11:00** on the closing date. The bids will be opened in public.

A compulsory site inspection will take place on Wednesday, **28 June 2019 @ 10:00**. Prospective bidders are requested to meet the project manager at the Elandshoek Community Hall, Mbombela.

Bids received by telegram, fax or e-mail will not be considered. Late bids shall not be accepted nor considered.

A preferential point system shall apply whereby this contract will be allocated to a bidder in accordance with the Preferential Procurement Policy Framework Act, No. 5 of 2000 and as defined in the Conditions of Bid in the bid document, read in conjunction with the Preferential Procurement Regulation of 2017 where 80 points will be allocated in respect of price and functionality, and 20 points in respect of the B-BBEE status of contributor.

Procurement Enquiries : N Ndukuya Tel - (013) 759 9052
Technical Enquiries : R Mashego (013) 759 2190
Employer : Municipal Manager: N Diamond
City of Mbombela
P.O Box 45; NELSPRUIT; 1200

Visit our website: www.mbombela.gov.za

NB: the results of this bid will be published on council's website as prescribed on section 75(1) (g) of the MFMA and section 23(c) of the SCM Regulations.

CITY OF MBOMBELA

ELANDSHOEK N4 INTERSECTION ROAD

16/2019

T1.2 TENDER DATA

The Conditions of tender are the standard conditions of tender as contained in annex F of SANS 294: 2004, published by Standards South Africa, Private Bag X191, Pretoria 0001, Tel 012 428 7911.

The standard conditions of tender for procurements make several references to the Tender Data. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender.

Where applicable, items of data given here below are cross-referenced to the sub clause in the standard conditions of tender to which it applies.

Sub-clause	Data
F.1.1	The employer is City of Mbombela
F.1.2	<p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to submit tenders:</p> <p>a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 7CE class of construction work; and Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation in the 7CE class of construction work; and 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 7CE class of construction work. <p>The Project Document issued by the employer consists of the following:</p> <p>THE BID</p> <p>Part T1: Tendering procedures:</p> <ul style="list-style-type: none"> T1.1 Tender notice and invitation to tender T1.2 Tender Data <p>Part T2: Returnable documents</p> <ul style="list-style-type: none"> T2.1 Forms Certificates and Schedules required for Evaluation T2.2 Other Forms, certificates and Schedules that will be incorporated into the contract T2.3 Returnable Schedules that will be incorporated into the Contract T2.4 Other Schedules and Documents that will be Incorporated into the Contract <p>THE CONTRACT</p> <p>Part C1: Agreements and Contract Data</p> <ul style="list-style-type: none"> C1.1 Safety Agreement C1.2 Guarantee C1.3 Agreement with Adjudicator C1.4 Contract Data

	<p>Part C2: Pricing Instruction and Summary of Bill of Quantities C2.1 Pricing instructions C2.2 Summary of Bills of Quantities</p> <p>Part C3: Scope of Work C3.1 Description of Works C3.2 Engineering C3.3 Construction C3.4 Management</p> <p>Part C4: Site Information C4.1 Site Information C4.2 Locality Plan</p> <p>Part C5: Annexures C5.1 Proforma Documents C5.2 Guidelines for the implementation of labour intensive infrastructure projects under the expanded public works programme C5.3 Contract Drawings</p>
F.1.3	Interpretation
F.1.3.1	The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.
F.1.3.2	These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.
F.1.3.3	<p>For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:</p> <p>a) comparative offer means the tenderer's financial offer after the factors of non-firm prices, all unconditional discounts and any other tendered parameters that will affect the value of the financial offer have been taken into consideration</p> <p>b) corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process; and</p> <p>c) fraudulent practice means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels</p> <p>d) quality (functionality) means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs</p>
F.1.4	<p>The employer's agent</p> <p>Name: SML PROJECTS PTY LTD</p> <p>Physical Address: 14 Nel Street, Bateleur Building, 1200 Postal Address: 14 Nel Street, Bateleur Building, 1200</p> <p>Tel: 013 753 3191 Fax: 013 753 3157</p> <p>E-mail: smladmin@smlprojects.co.za</p>
F.1.5	The employer's right to accept or reject any tender offer
F.1.5.1	The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so.
F.1.5.2	The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the tenderer.

F.2.1	<p>Eligibility</p> <p>A contract will only be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff</p>
F.2.2	<p>Cost of tendering</p> <p>Accept that the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer satisfy requirements.</p>
F.2.3	<p>Check documents</p> <p>Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.</p>
F.2.5	<p>Reference documents</p> <p>Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.</p>
F.2.6	<p>Acknowledge addenda</p> <p>Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.</p>
F.2.7	<p>Site Visit and Clarification Meetings</p> <p>The arrangements for a compulsory clarification meeting are: Location: Elandshoek Community Hall Date: 28 June 2019 Time: 10h00</p>
F.2.8	<p>Seek clarification</p> <p>Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data.</p>
F.2.9	<p>Insurance</p> <p>No insurance cover will be provided by the Employer</p>
F.2.10	<p>Pricing the tender offer</p>
F.2.10.1	<p>Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.</p>
F2.10.2	<p>Show VAT payable by the employer separately as an addition to the tendered total of the prices.</p>
F.2.10.3	<p>Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.</p>
F.2.10.4	<p>State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.</p>
F.2.11	<p>Alterations to documents</p> <p>Not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.</p>
F.2.12	<p>Alternative Tender Offer</p> <p>No alternative offers will be considered.</p>

F2.13.1	<p>Whole of Works</p> <p>Tenderers shall offer to provide for the whole of the Works identified.</p> <p>Parts of each tender offer communicated on paper shall be submitted as original, plus 0 copies.</p>
F.2.13.2	Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing in black ink.
F.2.13.3	Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
F.2.13.4	Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
F.2.13.5	<p>The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:</p> <p>Location of tender box: Mbombela Civic Centre, Ground Floor</p>
F.2.13. & F.3.5	A two-envelope procedure will not be allowed.
F.2.13.6	Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
F.2.13.7	Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
F.2.13.8	Accept that the employer shall not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
F.2.14	<p>Information and data to be completed in all respects</p> <p>Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.</p>
F.2.15	Closing time for submission of tender offers is: 11:00 (Prospective bidders are encouraged to arrive as early and convenience as possible due to logistical and parking challenges at Civic centre)
F.2.15	Telephonic, telegraphic, telex facsimile or e-mailed tender offers will not be accepted.
F.2.16	The tender offer validity period is 120 days .
F.2.16.1	Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
F.2.16.2	If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period.
F.2.17	<p>Clarification of tender offer after submission</p> <p>Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the total of the prices or substance of the tender offer is sought, offered, or permitted. The total of the prices stated by the tenderer shall be binding upon the tenderer.</p>

	<p>Note: Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.</p>
F.2.18.1	<p>Provide other material</p> <p>Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.</p>
F.2.18.2	<p>Dispose of samples of materials provided for evaluation by the employer, where required.</p>
F.2.19	<p>Inspections, tests and analysis</p> <p>Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.</p>
F.2.20	<p>Submit securities, bonds, policies, etc.</p> <p>If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.</p>
F.2.21	<p>Check final draft</p> <p>Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.</p>
F.2.22	<p>Return of other tender documents</p> <p>If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.</p>
F.2.23	<p>Certificates</p> <p>The following certificates are to be provided with this tender:</p> <ul style="list-style-type: none"> • Record of Addenda to Tender Documents • Certificate of Authority of Joint Ventures/ Close corporations/ Partnership/ Company/ Sole proprietor (Certified Copies of the Identity Documents in the Case of sole proprietor) • Registration Certificates of Entities – Joint Ventures/ Close corporations/ partnership/ Company/ Sole Proprietor • Compulsory Enterprise Questionnaire • Schedule of Tenderer's Experience (Certified copies of Appointment letters & completion certificates of similar projects) • Schedule of Key Personnel • Format of Curriculum Vitae (CV) and certified copies of qualifications • Proposed Amendments, Qualifications and Alternatives • Schedule of Sub-Contractors • Schedule of plant and equipment • Copy of Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993)

	<ul style="list-style-type: none"> • An Original Tax Clearance Certificate issued by the South African Revenue Services • BBBEE Certificate (certified) • 3 year Audited Annual Financial Statements • Contractor's health and safety declaration • Proforma notification form in terms of the Occupational Health and Safety Act 1993, Construction Regulations, 2003 • Form of offer • Minimum grading of 7CE is required. <p><u>Important Note:</u></p> <p>Failure to provide the required particulars as per the above-listed certificates implies a non-responsive tender and may warrant rejection of the tender on account of non-compliance with the requirements of the Tender Data.</p>
F.3.1	<p>Respond to clarification</p> <p>Respond to a request for clarification received up to five working days prior to the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.</p>
F.3.2	<p>Issue Addenda</p> <p>If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date of the Tender Notice until seven days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, will then notify it to all tenderers who drew documents.</p>
F.3.3	<p>Return late tender offers</p> <p>Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.</p>
F.3.4	<p><u>Opening of tender submissions</u></p> <p>The time and location for opening of the tender offers are: 11:00</p> <p>Location: City of Mbombela</p> <p>offices at Mbombela Civic Centre, Ground Floor</p>
F.3.4.1	<p>Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.</p>
F.3.4.2	<p>Announce at the opening held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened, the total of his prices, preferences claimed and time for completion, if any, for the main tender offer only.</p>
F.3.4.3	<p>Make available the record outlined in F.3.4.2 to all interested persons upon request.</p>
F.3.5.1	<p>Two-envelope system</p> <p>Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.</p>

F.3.5.2	Evaluate the quality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the quality evaluation above the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.		
F.3.6	<p>Non-disclosure</p> <p>Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.</p>		
F.3.7	<p>Grounds for rejection and disqualification</p> <p>Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.</p>		
F.3.8	<p>Test for responsiveness</p> <p>Determine, on opening and before detailed evaluation, whether each tender offer properly received:</p> <p>a) meets the requirements of these Conditions of Tender, b) has been properly and fully completed and signed, and c) is responsive to the other requirements of the tender documents.</p> <p>A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:</p> <ul style="list-style-type: none"> • detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work, • change the Employer's or the tenderer's risks and responsibilities under the contract, or • affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. <p>Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.</p>		
F.3.9.1	<p>Arithmetical errors</p> <p>Check responsive tender offers for arithmetical errors, correcting them in the following manner:</p> <p>a) Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.</p> <p>b) If bills of quantities (or schedule of quantities or schedule of rates) apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.</p> <p>c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.</p>		
F.3.10	<p>Clarification of a tender offer</p> <p>Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.</p>		
F3.11.1	<p>Evaluation of tender offers</p> <p>General</p> <p>Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate it using the tender evaluation method that is indicated in the Tender Data and described below:</p> <table border="1"> <tr> <td style="width: 15%;"></td> <td>1) Rank tender offers from the most favourable to the least favourable comparative offer.</td> </tr> </table>		1) Rank tender offers from the most favourable to the least favourable comparative offer.
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F.3.12	<p>Insurance provided by the employer</p> <p>If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.</p>								
F3.13.1	<p>Tender offers will only be accepted on condition that:</p> <ul style="list-style-type: none"> a) The tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; b) The tenderer or any of its directors is not listed in the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; and c) The tenderer has not over the last five years failed to satisfactorily perform a contract for the employer and has been issued with a written notice to this effect. d) the Tenderer or a competent authorized representative of the Contractor who submitted the tender has attended the compulsory clarification meeting or site inspection e) The contractor who submits the tender has been registered with the Construction Industry Development Board in accordance with the Construction Industry Development Board Act No. 38 of 2000 and the CIBD Regulations 2003 promulgated in terms of the Act, or if the Contractor can submit proof or evidence that he will be able to register within 10 days of the closing date for submission of tenders; f) The Tenderer or any of its principals is not listed on the register of Tender Defaulters in terms of the Prevention and Combating of Corrupt activities Act of 2004 as a person prohibited from doing business with the public sector; 								

F.3.13.2	<p>Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful tenderer as described in the form of offer and acceptance.</p>
F.3.14	<p>Notice to unsuccessful tenderers</p> <p>After the successful tenderer has acknowledged the employer's notice of acceptance, notify other tenderers that their tender offers have not been accepted.</p>
F.3.15.	<p>Prepare contract documents</p> <p>If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:</p> <ul style="list-style-type: none"> a) addenda issued during the tender period, b) inclusion of some of the returnable documents, c) other revisions agreed between the employer and the successful tenderer, and d) the schedule of deviations attached to the form of offer and acceptance, if any.
F.3.16	<p>Issue final contract</p> <p>Prepare and issue the final draft of contract documents to the successful tenderer for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of tender require the tenderer to submit, after acceptance by the employer, shall be included.</p>
F.3.17	<p>Complete adjudicator's contract</p> <p>Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.</p>
F.3.18	<p>Parts of each Bid offer communicated on paper shall be submitted as original, plus 0 copies.</p>

Each item of data given below is cross-referenced to the sub-clause in the Standard Conditions of Tender to which it mainly applies.

EVALUATION PROCESS AND CRITERIA

The following evaluation process and criteria will be used to evaluate all bids submitted:

Standard Conditions of Bid

F.1 General

F.1.1 Actions

The employer and each Bidder submitting a Bid offer shall comply with these conditions of Bid. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently.

F.1.2 Bid Documents

The documents issued by the employer for the purpose of a Bid offer are listed in the Bid data. This document in which are bound the Tendering Procedures, Returnable Documents, Agreements and Contract Data, Pricing Data and Scope of Work. Tenderers are reminded that irrespective of any other provision or requirement contained in this tender, the only mandatory required documents to be submitted with this tender are listed in Part T2 of the Returnable Documents.

F.1.3 Interpretation

F.1.3.1 The Bid data and additional requirements contained in the Bid schedules that are included in the returnable documents are deemed to be part of these conditions of Bid.

F.1.3.2 These conditions of Bid, the Bid data and Bid schedules which are only required for Bid evaluation purposes, shall not form part of any contract arising from the invitation to Bid.

F.1.3.3 For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:

- a) **Comparative offer** means the Bidder's financial offer after the factors of non-firm prices, all unconditional discounts and any other Bided parameters that will affect the value of the financial offer have been taken into consideration
- b) **Corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the Bid process; and
- c) **Fraudulent practice** means the misrepresentation of the facts in order to influence the Bid process or the award of a contract arising from a Bid offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels
- d) **Quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

F.1.3.4 *The Tender documents have been drafted in English. The contract arising from the invitation of tender shall be interpreted and construed in English."*

F.1.4 Communication and employer's agent

Each communication between the employer and a Bidder shall be to or from the employer's agent only, and in a form that can be read, copied and recorded. Writing shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a Bidder. The name and contact details of the employer's agent are stated in the Bid data.

F.1.5 The employer's right to accept or reject any Bid offer

F.1.5.1 *The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so.*

F.1.5.2 *The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the tenderer.*

F.1.6. Evaluation and award of the tender.

F1.6.1 The City of Mbombela reserves the right to accept the whole or any portion of a tender.

F.2 Bidder's obligations

F.2.1 Eligibility

Submit a Bid offer only if the Bidder complies with the criteria stated in the Bid data and the Bidder, or any of his principals, is not under any restriction to do business with employer.

F.2.2 Cost of Bidding

Accept that the employer will not compensate the Bidder for any costs incurred in the preparation and submission of a Bid offer, including attending interviews in the office of the employer or employer's agent and the costs of any testing necessary to demonstrate that aspects of the offer satisfy requirements.

F.2.3 Check documents

Check the Bid documents on receipt for completeness and notify the employer of any discrepancy or omission.

F.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the Bid. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a Bid offer in response to the invitation.

F.2.5 Reference documents

Obtain, as necessary for submitting a Bid offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the Bid documents by reference.

F.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the Bid documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the Bid data, in order to take the addenda into account.

F.2.7 Clarification meeting

Attend **compulsory clarification meeting** at which Bidders may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the Bid data. *Where applicable, details of the compulsory clarification meeting with a representative of the Employer are stated in the Tender Notice and Invitation to Tender. Confirmation of attendance will be recorded in the attendance register to be signed by all tenderers. Tender documents will not be made available at the clarification meeting.*

F.2.8 Seek clarification

Request clarification of the Bid documents, if necessary, by notifying the employer *in writing* at least *seven* working days before the closing time stated in the Bid data.

F.2.9 Insurance

Be aware that the extent of insurance to be provided by the employer (if any) may not be for the full cover required in terms of the conditions of contract identified in the contract data. The Bidder is advised to seek qualified advice regarding insurance.

- F.2.10.1** Include in the rates, prices, and the Bided total of the prices (if any) all duties, taxes (except Value Added Tax (VAT)), and other levies payable by the successful Bidder, such duties, taxes and levies being those applicable 14 days before the closing time stated in the Bid data.
- F.2.10.2** Show VAT payable by the employer separately as an addition to the Bided total of the prices.
- F.2.10.3** Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.
- F.2.10.4** State the rates and prices in Rand unless instructed otherwise in the Bid data. The conditions of contract identified in the contract data may provide for part payment in other currencies.
- F.2.10.5** "If no offer is made for an item, a line must be drawn through the space in pen. All prices and details must be legible/readable to ensure the tender will be considered for adjudication."

F.2.11 Alterations to documents

Not make any alterations or additions to the Bid documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the Bidder. All signatories to the Bid offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.

"In the event of a mistake having been made on the price schedule, it shall be crossed out in ink and be accompanied by an initial at each and every price alteration."

If correction fluid has been used on any specific item price, such item will not be considered. Corrections in terms of price may not be made by means of correction fluid such as Tippex or similar product. No correction fluid may be used in a Price Schedule where prices are calculated to arrive at a total amount. If correction fluid has been used, the tender as a whole will not be considered. The Municipality will reject the bid if corrections are not made in accordance with the above."

F.2.12 Alternative Bid offers

- F.2.12.1** Submit alternative Bid offers only if a main Bid offer, strictly in accordance with all the requirements of the Bid documents, is also submitted. The alternative Bid offer is to be submitted with the main Bid offer together with a schedule that compares the requirements of the Bid documents with the alternative requirements the Bidder proposes.
- F.2.12.2** Accept that an alternative Bid offer may be based only on the criteria stated in the Bid data or criteria otherwise acceptable to the employer.

F.2.13 Submitting a Bid offer

- F.2.13.1** Submit a Bid offer to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the Bid data.
- F.2.13.2** Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing in black ink. *Each Tenderer is required to return the complete set of documents as listed in Part T2 with all the required information supplied and completed in all respects. Prior to submitting their tender document tenderers should make a copy thereof for record purposes. No copies of any part of the submitted tender document will be made for the tenderers during the evaluation and adjudication processes.*
- F.2.13.3** Submit the parts of the Bid offer communicated on paper as an original plus the number of copies stated in the Bid data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
- F.2.13.4** Sign the original and all copies of the Bid offer where required in terms of the Bid data. The employer will hold all authorized signatories liable on behalf of the Bidder. Signatories for Bidders proposing to contract as joint ventures shall state which of the signatories is the lead partner, whom the employer shall hold liable for the purpose of the Bid offer.

CONTRACT No: 16/2019

PROJECT NAME: ELANDSHOEK ACCESS N4 INTERSECTION

Only authorised signatories may sign the original and all copies of the tender offer where required in terms of F.2.13.3 In the case of a ONE-PERSON CONCERN submitting a tender, this shall be clearly stated. In case of a COMPANY submitting a tender, include a copy of a resolution by its board of directors authorising a director or other official of the company to sign the documents on behalf of the company. In the case of a CLOSE CORPORATION submitting a tender, include a copy of a resolution by its members authorising a member or other official of the corporation to sign the documents on each member's behalf. In the case of a PARTNERSHIP submitting a tender, all the partners shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case proof of such authorisation shall be included in the Tender.

In the case of a JOINT VENTURE/CONSORTIUM submitting a tender, include a resolution of each company of the Joint Venture together with a resolution by its members authorising a member of the Joint Venture to sign the documents on behalf of the Joint Venture.

F.2.13.5 Seal the original and each copy of the Bid offer as separate packages marking the packages as "**ORIGINAL**" and "**COPY**". Each package shall state on the outside the employer's address and identification details stated in the Bid data, as well as the Bidder's name and contact address.

F.2.13.6 Where a two-envelope system is required in terms of the Bid data, place and seal the returnable documents listed in the Bid data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the Bid data, as well as the Bidder's name and contact address.

F.2.13.7 Seal the original Bid offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the Bid data.

F.2.13.8 Accept that the employer shall not assume any responsibility for the misplacement or premature opening of the Bid offer if the outer package is not sealed and marked as stated.

F.2.14 Information and data to be completed in all respects

Accept that Bid offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the Bid offer at the address specified in the Bid data not later than as stated in the Bid data. Proof of posting shall not be accepted as proof of delivery. The employer shall not accept Bid offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the Bid data. Prospective bidders are encouraged to arrive as early and convenience as possible due to logistical and parking challenges at Civic centre.

F.2.15.2 Accept that, if the employer extends the closing time stated in the Bid data for any reason, the requirements of these conditions of Bid apply equally to the extended deadline.

F.2.16 Bid offer validity

F.2.16.1 Hold the Bid offer(s) valid for acceptance by the employer at any time during the validity period stated in the Bid data after the closing time stated in the Bid data. *The Tender Offer validity period is 90 days. If the tender validity expires on a Saturday, Sunday or public holiday, the Tender Offer shall remain valid and open for acceptance until the closure of business on the following working day.*

F.2.16.2 If requested by the employer, consider extending the validity period stated in the Bid data for an agreed additional period.

F.2.17 Clarification of Bid offer after submission

Provide clarification of a Tender Offer in response to a request to do so from the Employer during the evaluation of Tender Offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors resulting from the product of the unit rate and the quantity by the adjustment of certain

line item totals. No change in the unit rate or prices or substance of the Tender Offer is sought, offered, or permitted.

Note: Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred Bidder following a competitive selection process, should the Employer elect to do so.

F.2.18 Provide other material

F.2.18.1 Provide, on request by the employer, any other material that has a bearing on the Bid offer, the Bidder's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the Bidder not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the Bid offer as non-responsive.

F.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

F.2.19 Inspections, tests and analysis

Provide access during working hours to premises for inspections, tests and analysis as provided for in the Bid data.

F.2.20 Submit securities, bonds, policies, etc.

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

F.2.21 Check final draft

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

F.2.22 Return of other Bid documents

If so instructed by the employer, return all retained Bid documents within 28 days after the expiry of the validity period stated in the Bid data.

F.2.23 Certificates

Include in the Bid submission or provide the employer with any certificates as stated in the Bid data. Refer to part T1 and part T2: Returnable Documents for a list of documents that are to be returned with the tender. Tenderers are required to develop a booklet with a table of contents as per table stated in part T2 under T2.0 for all certificates and supporting documentation.

F.2.24 Canvassing and obtaining of additional information by tenderers

Accept that no Tenderer shall make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. No Tenderer shall make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.

F.2.25 Prohibitions on awards to persons in service of the state

Accept that the Employer is prohibited to award a tender to a person - a) who is in the service of the state; or b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or c) a person who is an advisor or consultant contracted with the municipality or municipal entity.

In the service of the state" means to be – a) a member of - • any municipal council; • any provincial legislature; or • the National Assembly or the National Council of Provinces; b) a member of the board of directors of any municipal entity; c) an official of any municipality or municipal entity; d) an employee of

any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999); f) a member of the accounting authority of any national or provincial public entity; or g) an employee of Parliament or a provincial legislature." In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in Section T2.2 must be completed.

F.2.25 Awards to close family members of persons in the service of the state.

Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause 2.25), or has been in the service of the state in the previous twelve months, including

- a) The name of that person;
- b) The capacity in which that person is in the service of the state; and
- c) The amount of the award.

In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 – Returnable Documents must be completed in full and signed.

F.2.26 Tax Clearance Certificate

In the case of a Joint Venture/Consortium the tax clearance certificate must be for the Joint Venture/Consortium or individual valid tax clearance certificates for all the members of the Joint Venture/Consortium

F.3 The Employer's undertakings

F.3.1 Respond to clarification

Respond to a request for clarification received up to seven calendar days before the tender closing time stated in the tender data and notify all Tenderers who drew procurement documents.

The time and location for the tender submissions are stated in the Tender Notice and Invitation to Tender.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the Bid documents to each Bidder during the period from the date of the Bid Notice until seven days before the Bid closing time stated in the Bid Data. If, as a result a Bidder applies for an extension to the closing time stated in the Bid Data, the Employer may grant such extension and, will then notify it to all Bidders who drew documents.

F.3.3 Return late Bid offers

Return Bid offers received after the closing time stated in the Bid Data, unopened, (unless it is necessary to open a Bid submission to obtain a forwarding address), to the Bidder concerned.

F.3.4 Opening of Bid submissions

F.3.4.1 Unless the two-envelope system is to be followed, open valid Bid submissions in the presence of Bidders' agents who choose to attend at the time and place stated in the Bid data. Bid submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

The time and location for the tender submissions are stated in the Tender Notice and Invitation to Tender.

F.3.4.2 Announce at the opening held immediately after the opening of Bid submissions, at a venue indicated in the Bid data, the name of each Bidder whose Bid offer is opened, the total of his prices, preferences claimed and time for completion, if any, for the main Bid offer only.

F.3.4.3 Make available the record outlined in F.3.4.2 to all interested persons upon request.

F.3.5 Two-envelope system

A two-envelope procedure will **not** be followed in this contract.

F.3.6 Non-disclosure

Not disclose to Bidders, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of Bid offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful Bidder.

F.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a Bidder to influence the processing of Bid offers and instantly disqualify a Bidder (and his Bid offer) if it is established that he engaged in corrupt or fraudulent practices.

F.3.8 Test for responsiveness

Determine, on opening and before detailed evaluation, whether each Bid offer properly received:

- a) Meets the requirements of these Conditions of Bid,
- b) Has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the Bid documents.

A responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bid documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- Detrimentially affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- Change the Employer's or the Bidder's risks and responsibilities under the contract, or
- Affect the competitive position of other Bidders presenting responsive Bids, if it were to be rectified.

Reject a non-responsive Bid offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

F.3.9 Arithmetical errors

Check responsive Bid offers for arithmetical errors, correcting them in the following manner:

- Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.
- If a bill of quantities (or schedule of rates) apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as **quoted shall govern**, and the **unit rate** will be corrected.
- Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the Bidder's addition of prices, the total of the prices shall govern and the Bidder will be asked to revise selected item prices (and their rates if a bills of quantities applies) to achieve the Bided total of the prices.

Consider the rejection of a Bid offer if the Bidder does not correct or accept the correction of his arithmetical errors in the manner described above.

F.3.10 Clarification of a Bid offer

Obtain clarification from a Bidder on any matter that could give rise to ambiguity in a contract arising from the Bid offer.

The tender evaluation method to evaluate all responsive tender offers will be **Method 2**.

Method 1: Financial offer	1) Rank tender offers from the most favourable to the least favourable comparative offer. 2) Recommend highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 2: Financial offer and preferences	1) Score tender evaluation points for financial offer. 2) Confirm that tenderers are eligible for the preferences claimed and if so, score tender evaluation points for preferencing. 3) Calculate total tender evaluation points. 4) Rank tender offers from the highest number of tender evaluation points to the lowest. 5) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 3: Financial offer and quality	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data. 2) Score tender evaluation points for financial offer. 3) Calculate total tender evaluation points. 4) Rank tender offers from the highest number of tender evaluation points to the lowest. 5) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 4: Financial offer, quality and preferences	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data. 2) Score tender evaluation points for financial offer. 3) Confirm that tenderers are eligible for the preferences claimed, and if so, score tender evaluation points for preferencing. 4) Calculate total tender evaluation points. 5) Rank tender offers from the highest number of tender evaluation points to the lowest. 6) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

Name of Document that must be submitted	Non-submission may result in disqualification?
Form of Offer	<u>YES</u>
Authority for signatory	<u>YES</u>
Original Tax Clearance Certificate	<u>YES</u>
3 year Audited Annual Financial Statements	<u>YES</u>
FULLCSD REPORT	<u>YES</u>
COIDA	<u>YES</u>
Invitation to Bid	<u>YES</u>
CIDB Grading	<u>YES</u>
Company Registration	<u>Yes</u>
Certified Copies of Directors of The Company	YES
Usage of Tippex	YES
Price amendment without signature in the bills of quantity	YES
Completion of the bid document using pencil and Erasable ink	Yes

Gate 1

First stage – Evaluation of functionality:

According to the MFMA Circular No. 53 of the Municipal Finance Act No. 56 of 2003. Bidders will firstly be evaluated on Functionality. Only those meeting the minimum Score for functionality will be evaluated on **Method 2**.

Responsive tenders will firstly be evaluated on functionality. The minimum score for functionality is **70%**, and a bidder who scores below this minimum shall not be considered for further evaluation in terms of the preference point systems.

Functionality for responsive tender submitted is evaluated according to the predetermined criteria described below, taking into account, among other factors, the quality, reliability and technical capacity and ability of the tenderer.

FUNCTIONALITY COMPETENCE ACHIEVEMENT SCHEDULES

(I) Functionality Points will be spread as follows (100 points maximum):

Note: None submission of requirements stated below will result in loss of points

A. Relevant Overall Experience of Company – 30 points

No.	Value of Contract (Attach Certified Appointment Letter and Completion Certificate)	Tender maximum points	Allocated Points
1	Previously completed road & Bridges project of similar scope to the amount of R15 million and above	30	

No.	Value of Contract (Attach Certified Appointment Letter and Completion Certificate)	Tender maximum points	Allocated Points
2	Previously completed road project of similar scope to the amount of R11 million and above	20	
3	Previously completed road & bridge project of similar scope to the amount of R8 million and above	15	
4	Previously completed road & bridge project of similar scope to the amount of R5.5 million and above	10	
5	Previously completed road & bridge project of similar scope to the amount of R5.4 million and less	0	
Total Points		30	

Evaluation shall be based on the five largest projects executed in the past 5 years. Only experience from the tendering entity, and not by staff members, shall be taken into account.

Tenderers are required to only attach five (5) certified appointment letters and completion certificates. Failure to attach both appointment letter and completion certificate will result in zero points being awarded, and if tenderer attaches more than five (5) projects the evaluation will only be on the first five (5) for which appointment letter and completion certificate is submitted.

The contractor must provide the reference letter from the client only for the projects which appointment letter is not specific and the projects were inclusive of the civil works indicating his involvement into the mechanical or electrical works.

Client references	Points Claimed	Points
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<p>A) Provide the names of contactable references for each project related to this contract that the bidder has tendered for. The information provided include:</p> <ul style="list-style-type: none">• Customer• company name• contact person• address• phone number• contract value• duration of contract• brief description of the services provided <p>Attach five (5) certified appointment letters and completion certificates</p>		<p>30</p>
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B. EXPERIENCE REFERENCES SPECIFIC KNOWLEDGE

Contract Manager

Civil Engineer CV and professionally registered with ECSA on permanent/contract basis, least with NQF Level 7 or related qualification registered with ECSA as a professional in any engineering categories with experience in **Roads and Bridge Projects** of not less than two (2) years in LIC. Points will be allocated on a pro-rata basis for experience between 4 to 7 years, as indicated below:

YEARS EXPERIENCE	4	5	6	7
POINTS	5	6	7	8

Foreman.

Foreman on permanent/contract basis, least with NQF Level 4 or related qualification with experience in **Roads and Bridge Projects** of not less than two (2) years in LIC. Points will be allocated on a pro-rata basis for experience between 5 to 8 years, as indicated below:

YEARS EXPERIENCE	5	6	7	8
POINTS	2	3	4	5

Safety Officer

Qualified Safety Officer registered with South African Institute of Occupational Safety and Health (SAIOSH).The officer must have the necessary competence with level 1 first aid and OHSA Construction regulations qualifications. Experienced to perform duties diligently in treatment works projects of similar scope. Points will be allocated on a pro-rata basis for experience between 1 to 5 years, as indicated below

YEARS EXPERIENCE	1	3	5
POINTS	0	1	2

Experience	Points Claimed	Points
Provide detailed CVs as per template provided for all Key Personnel for each category stated above.		15

All qualifications for key personnel must be certified by a commissioner of Oath. All certified copies must have a date and must not be older than 3 months on the date of Closing. Bidders not complying with the requirement will score 0 points.

C. Plant and Equipment – 15 points

The Bidder must list below all the items of major Plant and Equipment which he guarantees will be provided on Site in perfect working order to complete the Works. This list shall include, or additional lists shall be supplied to include all Plant provided by sub-contractors. The lists of items of Equipment shall provide the Bidder’s warranty of ownership of such Plant. Phrases such as ‘adequate equipment will be provided’, will not be accepted. Tender to provide relevant documentation proving ownership of the plant in order to achieve 100% of points and no lease agreement will be accepted. The Schedule below include the plants and equipment to be provided for this project.

Plant & Equipment	Tendered Goal
1 Grader	2
1 Smoot Drum Rollers of 10 ton	1
4 (10 m ³) Tipper trucks	2
1 Water tankers	1
1 Excavators	4
1 (Tractor-Loader-Backhoe) TLB	3
1 Tractor with trailer	2

Tenderer to attach relevant documentation proving ownership of the plant in order to claim points, and letter of intent for hire will not be accepted. List of other equipment to be provided to execute the work will earn the bidder points.

Plant and Equipment	Points Claimed	Points
Provided detailed of plant and equipment currently owned and certified proof of ownership must be attached for each plant and equipment stated in order to achieve 100% of points		15

Tenderer to attach relevant documentation proving ownership of the plant and equipment.in order to claim points, **Bidders who have at attached letter of intent for hire of plant and equipment will score 0 points.**

D. Financial Status – 20 points

Financial Capacity	Returnable schedule Ref	Bank Rating	Score
Very Good – indisputable for enquiries	2.3.5 financial standing/bank rating	A	13
Good – Good for the amount of work		B	13
Adequate – Good for the amount strictly in accordance with business		C	13
Poor – Reasonable business risk		D	0

Inadequate and risky	E	0
Contractor's original letter of intent from a registered financial institution of guarantor in the amount of 10% for surety		2
Audited financial statements not older than 2 financial years		5

Please note that failure to provide all relevant required documentation in above will result in loss of points and possibility of failure to qualify for functionality. Bank rating must not be older than three months.

E. Programme and Method Statement (Not lesser than 10 pages)– 20 points

The bidder is required to provide a method approach not less than 10 pages for social development plan. A Bidder who scores less than 70% on the total functionality points will automatically be disqualified and will not be considered for further evaluation.

ITEM	Maximum Points to be Allocated	ALLOCATED POINTS claimed (Do not Complete)
REPUTATION AND REFERENCES	30	
EXPERIENCE REFERENCES SPECIFIC KNOWLEDGE	15	
PLANT AND EQUIPMENT	15	
FINANCIAL REFERENCES	20	
METHOD STATEMENT	20	
TOTAL POINTS	100%	
MINIMUM REQUIRED POINTS TO QUALIFY	70%	
DID THE TENDERER ACHIEVE THE MINIMUM REQUIRED POINTS	Yes	No

This category will be evaluated by 3 independent individuals with knowledge and technical expertise of the subject.

Second stage – Compliance to administrative requirements

Bidders will be evaluated on the following administrative compliance / responsiveness:

- **CSD registration report (Summary Report not acceptable)**
- **Price amendment without signature in the bills of quantity**
- **Certificate of Independent Bid Determination**
- **Alterations to the bid document**

- **Completion of the bid document using pencil and erasable ink**
- **Usage of Tippex**
- **3 year Audited Annual Financial Statements**

Over and above the test for responsiveness as described under F3.8, failure of the tender to submit the following will result in immediate disqualification.

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

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

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

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
- 1.2 The value of this bid 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 Preference points for this bid shall be awarded for:
- (a) Price; and
 - (b) B-BBEE Status Level of Contribution.
- 1.4 The maximum points for this bid are allocated as follows:

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

- 1.5 Failure on the part of a bidder to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or a sworn affidavit confirming annual turnover and level of black ownership in case of an EME and QSE together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.
- 1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-

Based Black Economic Empowerment Act;

- (c) **“B-BBEE status level of contributor”** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (d) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- (e) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003) as amended by Act No 46 of 2013;
- (f) **“comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- (g) **“consortium or joint venture”** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- (h) **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- (i) **“EME”** means an Exempted Micro Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (j) **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- (k) **“functionality”** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
- (l) **“non-firm prices”** means all prices other than “firm” prices;
- (m) **“person”** includes a juristic person;
- (n) **“QSE”** means a Qualifying Small Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (o) **“rand value”** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- (p) **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- (q) **“total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- (r) **“trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- (s) **“trustee”** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The bidder obtaining the highest number of total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
- 3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

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

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

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

Where

- P_s = Points scored for comparative price of bid under consideration
- P_t = Comparative price of bid under consideration
- P_{min} = Comparative price of lowest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 5.1 In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

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

- 5.2 A bidder who qualifies as an EME in terms of the B-BBEE Act must submit a sworn affidavit confirming Annual Total Revenue and Level of Black Ownership.
- 5.3 A Bidder other than EME or QSE must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

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- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 5.6 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

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

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

7.1 B-BBEE Status Level of Contribution: = (maximum of 10 or 20 points)
 (Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or a sworn affidavit.

8. SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

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

8.1.1 If yes, indicate:

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

(Tick applicable box)

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

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:.....

9.2 VAT registration number:.....

9.3 Company registration number:.....

9.4 TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
 - One person business/sole propriety
 - Close corporation
 - Company
 - (Pty) Limited
- [TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

9.6 COMPANY CLASSIFICATION

- Manufacturer
 - Supplier
 - Professional service provider
 - Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:.....

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

9.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

WITNESSES
1.
2.

..... SIGNATURE(S) OF BIDDERS(S)
DATE:
ADDRESS
.....
.....



PART T2 - RETURNABLE DOCUMENTS

Notes:

The Tender Document must be submitted as a whole. All forms must be properly completed as required and the document **shall not be taken apart or altered in any way whatsoever.**

All forms must be duly completed in **black ink** as required and all required returnable documents must be submitted on a **booklet.**

The list of returnable documents, which consist of forms and schedules to be completed and company specific certificate and information pages to be attached, comprise the following:

RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

1. RETURNABLE SCHEDULES REQUIRED ONLY FOR TENDER EVALUATION PURPOSES

- A. RECORD OF ADDENDA TO TENDER DOCUMENTS
- B. PROPOSED AMENDMENTS AND QUALIFICATIONS
- C. PREFERENCING SCHEDULE: BROAD BASED BLACK ECONOMIC EMPOWERMENT STATUS
- D. COMPULSORY DECLARATION
- E. MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS
- F. CERTIFICATE OF ATTENDANCE AT A TENDER SITE MEETING
- G. CERTIFICATE OF AUTHORITY OF JOINT VENTURES/ CLOSE CORPORATIONS/ PARTNERSHIP/ COMPANY/ SOLE PROPRIETOR (CERTIFIED COPIES OF THE IDENTITY DOCUMENTS IN THE CASE OF SOLE PROPRIETOR)
- H. REGISTRATION CERTIFICATES OF ENTITIES – JOINT VENTURES/ CLOSE CORPORATIONS/ PARTNERSHIP/ COMPANY/ SOLE PROPRIETOR
- I. SCHEDULE OF TENDERER'S EXPERIENCE
- J. SCHEDULE OF PREVIOUS WORK CARRIED OUT BY BIDDER
- K. SCHEDULE OF KEY PERSONNEL
- L. FORMAT OF CURRICULUM VITAE (CV)
- M. DECLARATION OF THE LOCAL EMERGING CONTRACTORS/ SUPPLIES DEVELOPMENT
- N. PROGRAMME AND METHOD STATEMENT
- O. SCHEDULE OF PLANT AND EQUIPMENT
- P. ANNEXURE AA: CREDIT CHECK
- Q. PROOF OF REGISTRATION WITH CIDB

2. OTHER DOCUMENTS REQUIRED ONLY FOR TENDER EVALUATION PURPOSES

- Q. CERTIFICATES AND 3 YEAR AUDITED ANNUAL FINANCIAL STATEMENTS
- R. CERTIFICATE OF ACQUAINTANCE WITH TENDER DOCUMENTS
- S. QUALITY ASSURANCE PLAN, PROCEDURES & CERTIFICATION
- T. SITE ESTABLISHMENT REQUIREMENTS
- U. FORM OF INTENT TO PROVIDE A PERFORMANCE GUARANTEE
- V. TAX CLEARANCE CERTIFICATE

3. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

- W. EXECUTION PROGRAMME
- X. CONTRACTOR'S HEALTH & SAFETY DECLARATION
- Y. CONTRACTOR'S SAFETY PLAN
- Z. PROFORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993, CONSTRUCTION REGULATIONS, 2014
- AA. TENDER CLARIFICATION REQUEST FORM

Annexure A: Record of Addenda to tender documents

We confirm the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer

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

Attach additional pages if more space is required.

Signed _____

Date _____

Name _____

Position _____

Tenderer _____

Annexure B: Proposed amendments and qualifications

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

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

Page	Clause or item	Proposal

Signed _____

Date _____

Name _____

Position _____

Tenderer _____

Annexure C: Preferencing schedule: Broad Based Black Economic Empowerment Status

Preamble

Section 10(b) of the Broad-Based Black Economic Empowerment Act of 2003 (Act No. 53 of 2003) states that “Every organ of state and public entity must take into account and, as far as is reasonably possible, apply any **relevant code of good practice** issued in terms of this Act in developing and implementing a preferential procurement policy:”

A number of codes of good practice have been issued in terms of Section 9(1) of the B-BBEE Act of 2003 including a generic code of good practice and various sector codes. The sector codes vary the metrics, weightings and targets used in the generic code of good practice to establish the overall performance of an entity and its B-BBEE status. The B-BBEE status needs to be assessed in accordance with the applicable code.

1 Conditions associated with the granting of preferences

Tenderers who claim a preference shall provide sufficient evidence of their B-BBEE Status in accordance with the requirements of section 2 in respect of the applicable code as at the closing time for submissions, failing which their claims for preferences will be rejected.

2 Sufficient evidence of qualification

2.1 Exempted micro enterprises

Sufficient evidence of qualification as an Exempted Micro-Enterprise is a :

- a) a registered auditor’s certificate or similar certificate issued by an accounting officer as contemplated in the Close Corporation Act of 1984 in respect of the entity’s last financial year or a 12 month period which overlaps with its current financial year; or a certificate issued by a verification agency and which is valid as at the closing date for submissions; or.
- b) a sworn affidavit - B-BBEE Exempted Micro Enterprise (see www.thedti.gov.za/gazettes/Affidavit_EME.pdf)

2.2 Enterprises other than micro exempted enterprises

Sufficient evidence of B-BBEE Status is:

- a) an original or certified copy of the certificate issued by a verification agency accredited by the South African National Accreditation System (SANAS) or registered auditors approved by Independent Regulatory Board for Auditors (IRBA) and which is valid as at the closing date for submissions; or.
- b) a sworn affidavit – B-BBEE Qualifying Small Enterprise (see www.thedti.gov.za/gazettes/BBEE_QUALIFYING_SMALL_ENTERPRISE.pdf)

3 Tender preferences claimed

The scoring shall be as follows:

B-BBEE status determined in accordance with the preferencing schedule for Broad-Based Black Economic Empowerment	% max points for preference
Form not completed or no-complaint contributor	0
Level 8 contributor	2
Level 7 contributor	4
Level 6 contributor	6
Level 5 contributor	8
Level 4 contributor	12
Level 3 contributor	14
Level 2 or contributor	18
Level 1 contributor	20

4 Declaration

The tenderer declares that

- a) the tendering entity is a level contributor as stated in the submitted evidence of qualification as at the closing date for submissions
- b) the tendering entity has been measured in terms of the following code *(tick applicable box)*
 - Generic code of good practice

 - Other – specify
- c) the contents of the declarations made in terms of a) and b) above are within my personal knowledge and are to the best of my belief both true and correct

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tenderer confirms that he / she understands the conditions under which such preferences are granted and confirms that the tenderer satisfies the conditions pertaining to the granting of tender preferences.

Signature:

Name:

Duly authorised to sign on behalf of:

Telephone:

Fax: Date :

Name of witness Signature of witness

- Note:**
- 1) Failure to complete the declaration will lead to the rejection of a claim for a preference
 - 2) Supporting documentation of the abovementioned claim for a preference must be submitted with the tender submission to be eligible for a preference

Annexure D: Compulsory Declaration

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

Section 1: Enterprise Details

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Particulars of companies and close corporations

Company / Close Corporation registration number	
--	--

Section 3: SARS Information

Tax reference number	
VAT registration number:	<i>State Not Registered if not registered for VAT</i>

Section 4: CIDB registration number

CIDB Registration number (if applicable)	
---	--

Section 5: National Treasury Central Supplier Database

Supplier number	
Unique registration reference number	

Section 6: Particulars of principals

principal: means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporation Act, 1984, (Act No. 69 of 1984).

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary

Section 7: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

If any of the above boxes are marked, disclose the following:

Name of principal	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 8: Record of family member in the service of the state

family member: a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such a relationship results from birth, marriage or adoption

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has been within the last 12 months been in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

Name of family member	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 9: Record of termination of previous contracts with an organ of state

Was any contract between the tendering entity including any of its joint venture partners terminated during the past 5 years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract.

Yes No (Tick appropriate box)

If yes, provide particulars (interest separate page if necessary)

Section 10: Declaration

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tendering entity confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise in an attachment hereto, are to the best of my belief both true and correct, and:

- i) neither the name of the tendering entity or any of its principals appears on:
 - a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004)
 - b) National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za)
- ii) neither the tendering entity or any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);
- iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
- iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers
- v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc) or intention to not win a tender;
- vi) has no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- vii) neither the tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;
- viii) SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

Signed

.....

Date

Name

.....

Position

Enterprise name

.....

NOTE 1 The Standard Conditions of Tender contained in SANS 10845-3 prohibits anticompetitive practices (clause 3.1) and requires that tenderers avoid conflicts of interest, only submit a tender offer if the tenderer or any of his principals is not under any restriction to do business with employer (4.1.1) and submit only one tender either as a single tendering entity or as a member in a joint venture (clause 4.13.1). Clause 5.7 also empowers the Employer to disqualify any tenderer who engages in fraudulent and corrupt practice. Clause 3.1 also requires tenderers to comply with all legal obligations.

NOTE 2: Section 30(1) of the Public Service Act, 1994, prohibits an employee (person who is employed in posts on the establishment of departments) from performing or engaging remunerative work outside his or her employment in the relevant department, except with the written permission of the executive authority of the department. When in operation, Section 8(2) of the Public Administration Management Act, 2014, will prohibit an employee of the public administration (i.e. organs of state and all national departments, national government components listed in Part A of Schedule 3 to the Public Service Act, provincial departments including the office of the premier listed in Schedule 1 of the Public Service Act and provincial departments listed in schedule 2 of the Public Service Act, and provincial government components listed in Part B of schedule 3 of the Public Service

CONTRACT No: 16/2019

PROJECT NAME: ELANDSHOEK ACCESS N4 INTERSECTION

Act) or persons contracted to executive authorities in accordance with the provisions of section 12A of the Public

Service Act of 1994 or persons performing similar functions in organs of state from conducting business with the State or to be a director of a public or private company conducting business with the State. The offence for doing so is a fine or imprisonment for a period not exceeding 5 years or both. It is also a serious misconduct which may result in the termination of employment by the employer.

NOTE 3: Regulation 44 of Supply Chain Management regulations issued in terms of the Municipal Finance Management Act of 2003 requires that organs of state and municipal entities not award a contract to a person who is the service of the state, a director, manager or principal shareholder in the service of the state or who has been in the service of the state in the previous twelve months.

NOTE: 4: Regulation 45 of Supply Chain Management regulations requires a municipality or municipal entity to disclose in the notes to the annual statements particulars of any award made to a close family member in the service of the state.

NOTE: 5 Corrupt activities which give rise to an offence in terms of the Prevention and Combating of Corrupt Activities Act of 2004) include improperly influencing in any way the procurement of any contract, the fixing of the price, consideration or other moneys stipulated or otherwise provided for in any contract and the manipulating by any means of the award of a tender.

NOTE: 6 Section 4 of the Competition Act of 1998 prohibits restrictive horizontal practice including agreements between parties in a horizontal relationship which have the effect of substantially preventing or lessening competition, directly or indirectly fixing prices or dividing markets or constitute collusive tendering. Section 5 also prohibits restrictive vertical practices. Any restrictive practices that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties.

Annexure E: Municipal declaration and returnable documents

NAME OF COMPANY: _____

I / We _____ do hereby certify that:

1. City of Mbombela has supplied and we have received appropriate responses to any/all questions (as applicable) which were submitted by ourselves for bid clarification purposes;
2. we have received all information we deemed necessary for the completion of this tender;
3. at no stage have we received additional information relating to the subject matter of this tender from City of Mbombela sources, other than information formally received from the designated City of Mbombela contact(s) as nominated in the tender documents;
4. we are satisfied, insofar as our company is concerned, that the processes and procedures adopted by City of Mbombela in issuing this tender and the requirements requested from bidders in responding to this tender have been conducted in a fair and transparent manner; and
5. furthermore, we acknowledge that a direct relationship exists between a family member and/or an owner / member / director / partner / shareholder (unlisted companies) of our company and an employee or board member of the City of Mbombela Group as indicated below: [Respondent to indicate if this section is not applicable]

FULL NAME OF OWNER / MEMBER /DIRECTOR /PARTNER / SHAREHOLDER:

ADDRESS:

Indicate nature of relationship with City of Mbombela:

[Failure to furnish complete and accurate information in this regard may lead to the disqualification of your response and may preclude a Respondent from doing future business with City of Mbombela]

6. We declare, to the extent that we are aware or become aware of any relationship between ourselves and City of Mbombela (other than any existing and appropriate business relationship with City of Mbombela) which could unfairly advantage our company in the forthcoming adjudication process, we shall notify City of Mbombela immediately in writing of such circumstances.

7. We accept that any dispute pertaining to this bid will be resolved through the Ombudsman process and will be subject to the Terms of Reference of the Ombudsman. The Ombudsman

Process must first be exhausted before judicial review of a decision is sought. (Refer "Important Notice to Respondents" overleaf).

8. We further accept that City of Mbombela reserves the right to reverse a tender award or decision based on the recommendations of the Ombudsman without having to follow a formal court process to have such award or decision set aside.

For and on behalf of duly authorised thereto	AS WITNESS:
Name:	Name:
Position:	Position:
Signature:	Signature:
Date:	
Place:	

2) the enterprise and its directors has / have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days (*ie: all municipal accounts are paid up to date*);

3) source of goods and / or services:
(tick one of the boxes and insert percentages if applicable):

- goods and / or services are sourced only from within the Republic of South Africa
- % of the total cost of goods and / or services will be sourced from outside the Republic of South Africa and the percentage of payment from the municipality or municipal entity which is expected to be transferred out of the Republic is

I furthermore confirm that the following contracts were awarded to the enterprise by an organ of state during the last five years and attached particulars of any material non-compliance or dispute concerning the execution of such contracts:

Name of organ of state	Estimated number of contracts	Nature of contracts

Attach separate page as necessary

I, the undersigned who warrants that I am duly authorised on behalf of the tendering entity, hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise are to the best of my belief both true and correct

Signed _____

Date

Name _____

Position

Enterprise name _____

Annexure F: Certificate of Attendance at a tender site meeting

This is to certify that (*Tenderer*)

.....

of

(*address*).....

.....

....

was represented by the person(s) named below at the compulsory meeting held for all tenderers at Elandshoek Community Hall

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name:

Signature:.....

Capacity:

Name:

Signature:

Capacity:

Attendance of the above person(s) at the meeting is confirmed by the Employer's representative, namely:

Name: Signature:

Capacity: Date and Time:

Annexure G: Certificate of Authority of Joint Ventures/ Close corporations/ Partnership/ Company/ Sole proprietor (Certified Copies of the Identity Documents in the Case of sole proprietor)

Indicate the status of the Tenderer by ticking the appropriate box hereunder. The Tenderer must complete the certificate set out below for the relevant category.

(I) COMPANY	(II) CLOSE CORPORATION	(III) PARTNERSHIP	(IV) JOINT VENTURE	(V) SOLE PROPRIETOR

(I) Certificate For Company

I,, chairperson of the Board of Directors of, hereby confirm that by resolution of the Board (copy attached) taken on 20....., Mr/Ms, acting in the capacity of, was authorized to sign all documents in connection with the tender for Bid No. XXXX and any contract resulting from it on behalf of the company.

Chairman:

As Witnesses: 1.....

2.....

Date:

(II) Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as
 hereby authorize Mr/Ms , acting in the capacity of
, to sign all documents in connection with the
 tender for Bid No. 16/2019 and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Note: This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.

(II) Certificate for Partnership

We, the undersigned, being the key partners in the business trading as,
, hereby authorize Mr/Ms ,
 acting in the capacity of , to sign all documents in connection
 with the tender for Bid No. 16/2019 and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Note : This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.

(IV) Certificate for Joint Venture

This Returnable Schedule is to be completed by joint ventures.

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

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature. Name Designation.....
		Signature. Name Designation.....
		Signature. Name Designation.....
		Signature. Name Designation.....

Note: *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Joint Venture as a whole.*

(V) Certificate for Sole Proprietor

I,, hereby confirm that I am the sole owner of the Business trading as

Signature of Sole owner:

As Witnesses:

Date:

- 1.....
- 2.....

Annexure H: Registration Certificate of an Entity

[Important note to Tenderer: Registration Certificates for Companies, Close Corporations and Partnerships, and ID documents for Sole Proprietors, must be attached here. In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement must be included]

Annexure I: Schedule of the Tenderer's Experience

30 points allocated for functionality.

Evaluation shall be based on the five largest projects executed in the past 5 years. Only experience from the tendering entity, and not by staff members, shall be taken into account.

Tenderers are required to only attach five (5) certified appointment letters and completion certificates. Failure to attach both appointment letter and completion certificate will result in zero points being awarded, and if tenderer attaches more than five (5) projects the evaluation will only be on the first five (5) for which appointment letter and completion certificate is submitted.

The contractor must provide the confirmation letter from the client only for the projects which appointment letter are specific.

I) Relevant Overall Experience of Company

No.	Value of Contract (Attach Certified Appointment Letter and Completion Certificate)	Tender maximum points	Allocated Points
1	Previously completed road & Bridges project of similar scope to the amount of R15 million and above	30	
2	Previously completed road project of similar scope to the amount of R11 million and above	20	
3	Previously completed road & bridge project of similar scope to the amount of R8 million and above	15	
4	Previously completed road & bridge project of similar scope to the amount of R5.5 million and above	10	
5	Previously completed road & bridge project of similar scope to the amount of R5.4 million and less	0	
Total Points		30	

ANNEXURE J: SCHEDULE OF PREVIOUS WORK CARRIED OUT BY BIDDER (Refer to tender data – functionality competency schedule for claimable points)

Provide the following information on **SIMLAR previous experience**. Indicate comparable projects of similar or larger size. This information is material to the award of the Contract. **No points will be awarded if reference cannot be reached or if it refuses to supply information. Give at least two (2) names and telephone numbers and e-mail address per reference.** Only five similar scope projects are required for assessment of this project.

No	CLIENT				CONSULTING ENGINEER		VALUE OF WORK	YEAR OF COMPLETION	COMPLETION CERTIFICATE ISSUED (Yes or No)
	NAME	E MAIL	TEL	FAX	NAME	E MAIL			
1									
2									
3									
4									
5									

NOTE: In order for the Tenderer to claim points for Experience under Functionality for the above listed projects, the Tenderer must attach the following proof for each of the projects: **Certified copy of Appointment Letter, and Certified copy of Completion Certificate**

SIGNED _____ Date _____

Name: Position

Tenderer:

Annexure K: Schedule Key Personnel

Key Persons/ Experience References Specific Knowledge

15 points allocated for functionality.

The CV's of key persons and specific experience of each individual key person required in order to provide the Works related to the Works Information.

Please certify the qualifications of all the technical team

Please describe the management arrangements for the *Works*.

Submit the following documents as a minimum with your tender document:

1. An organization chart showing on-site and off-site management (including the key people you have identified in the Contract Data Part two and identify the required legal appointments.)
2. CV's for people proposed for all identified posts including Safety Officer, Quality Assurance Representative, Construction Manager, Construction Supervisor, Project Planner/Scheduler and Costing Personnel.

A. Construction Manager.

Civil Engineer CV and professionally registered with ECSA on permanent/contract basis, least with NQF Level 7 or related qualification registered with ECSA as a professional in any engineering categories with experience in **Roads and Bridge Projects** of not less than two (2) years in LIC. Points will be allocated on a pro-rata basis for experience between 4 to 7 years, as indicated below:

YEARS EXPERIENCE	4	5	6	7
POINTS	5	6	7	8

B. FOREMAN.

Foreman on permanent/contract basis, least with NQF Level 4 or related qualification with experience in **Roads and Bridge Projects** of not less than two (2) years in LIC. Points will be allocated on a pro-rata basis for experience between 5 to 8 years, as indicated below:

YEARS EXPERIENCE	5	6	7	8
POINTS	2	3	4	5

C. SAFETY OFFICER

Qualified Safety Officer registered with South African Institute of Occupational Safety and Health (SAIOSH). The officer must have the necessary competence with level 1 first aid and OHS Act Construction regulations qualifications. Experienced to perform duties diligently in treatment works projects of similar scope. Points will be allocated on a pro-rata basis for experience between 1 to 5 years, as indicated below

YEARS EXPERIENCE	1	3	5
POINTS	0	1	2

3. Details of the location (and functions) of offices from which the *works* will be managed.

4. Details of the experience of the staff who will be working on the *works*.

If staff experience of these matters is limited, an indication of relevant training that they have attended would be helpful;

Working with the GCC Construction Contract Option chosen for this contract. If staff experience of these matters is limited, an indication of relevant training that they have attended would be helpful.

5. An explanation of how you propose to allocate adequate resources to enable you to comply with the requirements and prohibitions imposed on you by or under the statutory provisions relating to health and safety.

Attached submissions to this schedule:

SIGNED _____ Date _____

Name: Position

Tenderer:

Annexure M: Declaration of the local emerging contractors/suppliers development

0 points allocated for functionality

I/We _____ hereby **agree or do not agree** to commit 20% (Twenty percent) of the

contract value will be spent cumulatively on subcontractors Development Initiatives. This pre-qualification criterion must be discharged against the following Supplier/contractors Development categories as outlined in the Supplier Development Value Summary

- Capability and capacity building in South Africa (Localisation)
- New Skills development
- Job creation

I/We do hereby certify that the Local emerging contractors/suppliers Development commitments made in relation to this RFP are solely in relation to this transaction and are not duplicated in relation to any other contracts that I/we have secured with any other organ of state including other State Owned Companies.

Furthermore, I/we do hereby declare that this undertaking also applies to any other contracts that I may have secured with CoM. For the purposes of verification of this undertaking, the list of contracts with Supplier Development commitments that I/we have secured with CoM:

SIGNED _____ Date _____

Name: Position

Tenderer.....

20 points allocated for functionality

Note to tenderers:

Programme

Ability to Provide the Works

Ability to execute the works in terms of the Employer's requirements within the required timeframe indicating, in a logical sequence, the order and timing of the construction that will take place in order to Provide the Works clearly indicating the capacity & capability to achieve the dates stated in the Contract Data.

Provision of Dates

The Contractor indicates how he plans to achieve the following dates and clearly shows them on the schedule; Starting Date, Key Dates, Access Dates, Planned Completion and Completion Date, submission & approval process & timing for Health & Safety Files, Environmental Files and Quality Files.

Critical Milestones

The Contractor clearly indicates in the schedule all critical milestones and critical path including interim approvals by the Project Manager, the Supervisor and/or the Employer.

Provision for TRA

Provisions for Time Risk Allowances (TRA). Against each activity the Tenderer indicates "time risk allowances". These allowances are not float, are owned by the Tenderer, must be included in the activity duration and illustrated in the schedule.

Method statement and subcontracting – local emerging subcontractors

Please provide your proposed method statements for all major activities indicated in your proposed program.

The execution method statement must respond to the scope of work (the Works Information) and outline the proposed methodology including that relating to the Programme.

Tenderer to provide comment here if necessary
--

SIGNED _____ Date _____

Name: Position

Tenderer:

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

If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

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

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

Annexure O: Schedule of Plant and Equipment

15 points allocated for functionality

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract or will acquire or hire for this contract if my / our tender is accepted.

(a) Details of major equipment that is owned by and immediately available for this contract.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

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

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

Signed Date

Name Position

Tenderer:.....

Annexure P: Credit Check

I consent to you making enquiries about my credit record with credit reference agencies when assessing this tender or quotation or updating my information in future.

Yes

No

The City of Mbombela shall ensure that all necessary precautions are taken to ensure that all Information received or collected is:

- i. Properly and accurately recorded, maintained, collated, synthesised and/or processed;
- ii. Protected against loss;
- iii. Protected against unauthorised access, use, modification or disclosure;

SIGNED at _____ on this _____ day of _____ 201__

Name: Position

Tenderer:

2. Other documents required only for tender evaluation purposes

- Q. Certificates and Statements
- R. Certificate of Acquaintance with Tender Documents
- S. Quality Assurance Plan, Procedures & Certification
- T. Site Establishment Requirements
- U. Form of intent to provide a performance Guarantee
- V. Tax Clearance certificate

Annexure Q: Certificates and Statements

No	Description	Is the document Attached	
		Yes	No
1	Attach an original valid Tax Clearance Certificate issued by the South African Revenue Services.		
2	Attach a valid Letter of Good Standing with the Compensation Fund or with a licensed compensation insurer.		
3	Certificate of authority for joint ventures (where applicable);		
4	Company registration documents		
5	Certified copies of ID documents of the Members or Directors of your Company		
6	Attach Audited Financial Statements for the past three years. This must include: <ul style="list-style-type: none"> - Income Statements - Balance Sheet - Cash flow Statement - Notes to the Financial Statement 		

Annexure R: Certificate of Acquaintance with Tender Documents

NAME OF ENTITY:

1. I/we _____

_____ do hereby certify that I/we acquainted myself/ourselves with all the documentation comprising this Tender and all conditions contained therein, as laid down by CoM for the carrying out of the proposed supply/service/works for which I/we submitted my/our Proposal.

2. I/we furthermore agree that CoM shall recognise no claim from me/us for relief based on an allegation that I/we overlooked any RFP/contract condition or failed to take it into account for the purpose of calculating my/our offered prices or otherwise.

3. I/we understand that the accompanying Bid will be disqualified if this Certificate is found not to be true and complete in every respect.

4. For the purposes of this Certificate and the accompanying Bid, I/we understand that the word "competitor" shall include any individual or organisation, other than the Bidder, whether or not affiliated with the Bidder, who:

- a) has been requested to submit a Bid in response to this Bid invitation;
- b) could potentially submit a Bid in response to this Bid invitation, based on their qualifications, abilities or experience; and
- c) provides the same Services as the Bidder and/or is in the same line of business as the Bidder

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

6. In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

- a) prices;
- b) geographical area where Services will be rendered [market allocation]
- c) methods, factors or formulas used to calculate prices;
- d) the intention or decision to submit or not to submit, a Bid;
- e) the submission of a Bid which does not meet the specifications and conditions of the RFP; or
- f) bidding with the intention not winning the Bid.

7. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the Services to which this RFP relates.

8. 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.

9. I/We am/are 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 10 [ten] years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

SIGNED at _____ on this _____ day of _____ 201__

Name: Position

Tenderer:

Annexure S: Quality Assurance Plan, Procedures & Certification

Project Quality Plan

Project Quality Plan for the contract which satisfies the technical and quality requirements of the Scope of Works, identifying all procedures, reviews, audits, controls and records used to control and verify compliance with the specified Contractual requirements.

Quality Control Plan

The Q.C.P's shall identify all inspection, test and verification requirements to meet Contractual obligations, specifications, drawings and related details including destructive and non-destructive testing, witness and hold points.

Quality Policy

A signed Quality Policy based on International Organization for Standardization (ISO 9001:2008) that displays the five key policy requirements

Attached submissions to this schedule:



Tenderers to indicate their Site establishment, site assembly and/or laydown area requirements. Tenderer to note that site will be within an operating area and therefore space is limited.

SIGNED _____ Date _____

Name: Position

Tenderer.....

Annexure U: Form of Intent to Provide a Performance Guarantee

The Tenderer must attach hereto a letter from the bank or institution with whom he has made the necessary arrangements, to the effect that the said bank or institution will be prepared to provide the required performance guarantee when asked to do so.

PRO-FORMA FOR A PERFORMANCE GUARANTEE

PERFORMANCE GUARANTEE

Employer: (Name and Address)

.....

Bid No:

(Contract title)

WHEREAS

.....

(hereinafter referred to as "the Employer") entered into, a Contract with

.....

.

(hereinafter called "the Contactor") on theday of
20...
for the construction of (Contract Title)

.....

.

at

.....

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS (hereinafter referred to as "the Guarantor") Has/have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE,

.....

Do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-Principal Debtors to the Employer under renunciation of the benefits of division and exclusion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor. However, upon receipt by us of an authenticated copy of the Certificate of Completion in terms of the Contract, the amount of liability shall be reduced by 50%, which shall be in force until the issue of the Final Approval Certificate at expiry of the Defects Liability Period
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the sum of

.....
.....
.....(in words) R
..... (in figures)

(10 % of the tender sum) which amount I/we agree to hold at your disposal.

6. The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon the Guarantor's liability hereunder shall cease.

I/We declare that I/we, on behalf of the Guarantor, waive the legal exceptions available to a guarantor and undertake to pay the said amount or such portion thereof as may be demanded, immediately on receipt of a written demand from you.

A certificate under your hand shall be sufficient and satisfactory evidence as to the amount of the Guarantor's liability for the purpose of enabling provisional sentence or any similar relief to be obtained against the Guarantor.

This guarantee is neither negotiable nor transferable, and must be surrendered to the Guarantor in the event of the full amount of the Guarantee being paid to the Employer.

7. I/We hereby choose our address for the serving of all notices for all purposes arising here from as

.....
.....

IN WITNESS WHEREOF this guarantee has been executed by us at

on this day of 20.....

As witnesses:

1. Signature

2. Signature

Duly authorized to sign on behalf of (*Guarantor*)

Address

.....
.....

Annexure V: Tax Clearance Certificate

Tax Clearance Certificate obtained from SARS to be inserted here.

IMPORTANT NOTES:

1. The following is an abstract from the Preferential Procurement Regulations 2001 promulgated with the Preferential Policy Framework Act No 5 of 2000:

Tax clearance certificate

16. No contract may be awarded to a person who has failed to submit an original Tax Clearance Certificate from the South African Revenue Service ("SARS") certifying the taxes of that person to be in order or that suitable arrangement have been made with SARS."
2. Before entering into a contract with a successful Tenderer, the Employer will confirm with the CIDB that the Tenderer's registration is active and the expiry date of the tax certificate
3. The ST 5.1 form, Application for Tax Clearance Certificate (in respect of tenders), must be **completed by the tenderer in every detail and submitted to the Receiver of Revenue** where the tenderer is registered for income tax purposes. The Receiver of Revenue will then furnish the tenderer with a Tax Clearance Certificate that will be valid for 12 months from date of issue. **This Tax Clearance Certificate must be submitted in the original with the tender before the closing time and date of the tender.**

Each party to a Consortium / Joint Venture / Subcontractors must complete a separate Tax Clearance Certificate.

Failure to submit an original and valid Tax Clearance Certificate ISSUED BY SARS WITH YOUR BID DOCUMENT AT THE TIME OF CLOSING will invalidate the tender.

**APPLICATION FORM FOR TAX CLEARANCE CERTIFICATE/
 (IN RESPECT OF TENDER)**

1. NAME OF TAXPAYER/TENDERER:

2. TRADE NAME:

3. IDENTIFICATION No. (if applicable) :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

4. COMPANY/CLOSE CORPORATION REG No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

5. INCOME TAX REFERENCE No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

6. VAT REGISTRATION No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

7. PAYE EMPLOYERS REG No. (if applicable) :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NB : Copy of the tender request must be attached to this application.

CONTACT PERSON REQUIRING TAX CLEARANCE CERTIFICATE:

SIGNATURE:

NAME :

TELEPHONE NUMBER : CODE: NUMBER:

ADDRESS :

DATE : 20...../...../.....

Please note that the Commissioner for the South African Revenue Service (SARS) will not exercise his discretionary powers in favour of any person with regard to any interest, penalties and/or additional tax leviable due to the late or underpayment of taxes, duties or levies or the rendition of returns by any person.

NAME OF PERSON RESPONSIBLE FOR CONTRACT :

(ST 5.1) March 1999

NB: *This is a pro forma application form that has to be submitted to SARS to enable them to issue the required Tax Clearance Certificate. The original and valid Tax Clearance Certificate furnished by the Receiver of Revenue must be submitted with the tender (to be attached to the next page).*

TAX CLEARANCE CERTIFICATE

[Tax Clearance Certificate obtained from SARS to be attached here]

3. Other documents that will be incorporated into the contract

W. Execution Programme

X. Contractor's Health & Safety declaration

Y. Contractor's Safety Plan

Z. Proforma Notification form in terms of the Occupational Health and Safety Act 1993, construction regulations, 2014

AA. Tender clarification request form

ANNEXURE W: EXECUTION PROGRAMME

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

PROGRAMME													
ACTIVITY	WEEKS / MONTHS												

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

SIGNATURE:..... DATE:
 (of person authorized to sign on behalf of the Tenderer)

Annexure X: Contractor's Health and Safety Declaration

In terms of Clause 4(4) of the OHS Act 1993 Construction Regulations 2003 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHS Act 1993 Construction Regulations 2003.

To that effect a person duly authorized by the tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I, the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHS Act 1993 Construction Regulations 2003.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I hereby confirm that adequate provision has been made in my tendered rates and prices in the Bill of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHS Act 1993 Construction Regulations 2003, including the cost of the specific items listed in the tables hereafter.
4. The tenderer must provide their health and safety plan and include, as a minimum the following documents:
 - Valid letter of good standing with Workman's Compensation.
 - Roles and responsibilities of legal appointees.
 - Safety Officer's role and responsibility.
 - Safety, Health & Environmental Policies.
 - Overview of Tenderer's SHE system for project.
 - List of job categories for project and competencies required per category and plan to address and meet outstanding competencies.
 - SHE challenges envisaged for the project and how they will be addressed and overcome.
 - Signed statement acknowledging receipt and budget provision for SHE pack requirements.
5. Project Specific Risk Assessment
6. Construction Safety Work Method Statement.

Attached submissions to this schedule:

SIGNED _____ Date _____

Name: Position

Tenderer:

(Tables to be completed by Tenderer)

TABLE 1: COST OF SAFETY PERSONNEL

PERSONNEL	COSTS AS ALLOWED IN TENDER	NOMINATED PERSON/S
Construction Supervisor		
Construction Safety Officer		
Health and Safety Representatives		
Health and Safety Committee		

TABLE 2: COST OF SAFETY EQUIPMENT

EQUIPMENT	STATE YES or NO	COST ALLOWED FOR IN TENDER
Hard hats		
Safety boots		
Harnesses		
Gas detectors		
Add items as per risk assessment:		

4. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 5(1) of the Construction Regulations, which plan shall be subject to approval by the Employer.
5. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHS Act 1993 Construction Regulations 2003 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer and his Agents, visitors, and officials and inspectors of the Department of Labour.
6. I hereby confirm that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations (Regulation 30) for failure on the Contractor's part to comply with the provisions of the Act and the Regulations.
7. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHS Act 1993 Construction Regulations 2003, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: DATE:
 (of person authorized to sign on behalf of the Tenderer)

ANNEXURE Y: Contractor's Safety Plan

[The Tenderer shall submit separately before commencement of the works his Health and Safety Plan as required in terms of Regulation 5 of the Occupational Health and Safety Act 1993 Construction Regulations 2003, and referred to in T2.1]

Annexure Z: Pro forma Notification form in terms of the Occupational Health and Safety Act 1993, Construction Regulations, 2014

[This form must be completed and forwarded, prior to commencement of work on site, by all Contractors that qualify in terms of Regulation 3 of the Construction Regulations 2003, to the office of the Department of Labour]

1.

(a) Name and postal address of Contractor:

(b) Name of Contractor's contact person:

Telephone number:

2. Contractor's workman's compensation registration number:

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

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

(b) Name of client's contact person or agent:

Telephone number:

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

(b) Name of designer's contact person:

Telephone number:

5. Name of Contractor's construction supervisor on site appointed in terms of: Regulation 6(1):

..... Telephone number:.....

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

.....

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

8. Nature of the construction work:

- 9. Expected commencement date:
- 10. Expected completion date:
- 11. Estimated maximum number of persons on the construction site:
- 12. Planned number of subcontractors on the construction site accountable to Contractor:.....
- 13. Name(s) of subcontractors already chosen:
-
-
-
-

SIGNED BY:.....

CONTRACTOR:

DATE:

CLIENT:

DATE:.....

Annexure AA: Tender Clarification Request Form

RFP deadline for questions / RFP Clarifications: Before 12h00 on Monday, July 15, 2019

TO: City of Mbombela
ATTENTION: R Mashego and N Ndukuya
EMAIL
rudolph.mashego@mbombela.gov.za, nomsan@mbombela.gov.za , and smladmin@smlprojects.co.za

BID No: 16/2019

RFP Clarification No

REQUEST FOR RFP CLARIFICATION

SIGNED at _____ on this _____ day of _____ 201__

Name: Position

Tenderer:

.....



ELANDSHOEK N4 INTERSECTION ROAD

16/2019

C1.2 CONTRACT DATA

THE CONTRACT

PART C1	AGREEMENT AND CONTRACT DATA
PART C2	PRICING DATA
PART C3	SCOPE OF WORKS
PART C4	SITE INFORMATION

PART C1: AGREEMENT AND CONTRACT DATA

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PART C1

CONTRACT No: XXXX
PROJECT NAME: ELANDSHOEK ACCESS ROAD



C1.1 SAFETY AGREEMENT

MEMORANDUM OF AGREEMENT CONCLUDED BY AND BETWEEN:

CITY OF MBOMBELA
(HEREINAFTER REFERRED TO AS THE MUNICIPALITY)

herein represented by _____

in his capacity as _____
of the Municipality, he being duly authorised thereto

and

(hereinafter referred to as the Mandatory)

herein represented by _____

in his capacity as _____
of the Mandatory, he being duly authorised thereto

WHEREAS:

1. The City of Mbombela and the Mandatory entered into a written, alternatively oral agreement on the.....Day of20.....in terms of which the Mandatory undertook to carry out the following work for the City of Mbombela , viz., ELANDSHOEK N4 INTERSECTION Road.

*(The said contract work is hereinafter referred to as the **Work**)*

2. The Occupational Health and Safety Act, Act 85 of 1993 as amended (hereinafter referred to as **the Act**) contains amongst others certain provisions with regard to the health and safety of people at work and in connection with the usage of plant and machinery, as well as the protection of other persons than persons at work against hazards to health and safety that originates from or in connection with the activities of persons at work.
3. Section 37(2) of the Act makes provision for the exclusion by the parties, by way of a written agreement, of supposition and accompanying liability of the Municipality as stipulated in section 37(1) of the Act.
4. The parties have reached consensus with regard to the terms and conditions to which they agree in terms of the provisions of section 37(2) of the Act.

PART C1

CONTRACT No: XXXX
PROJECT NAME: ELANDSHOEK ACCESS ROAD



NOW THEREFORE THE PARTIES AGREE AS FOLLOWS

1.

WRITTEN AGREEMENT

The parties herewith agree in terms of section 37(2) of the Act on the arrangements and procedures that must be followed to ensure compliance with the provisions of the Act by the Mandatory.

2.

ACKNOWLEDGEMENT BY THE MANDATORY

The mandatory acknowledge herewith that he is fully acquainted with the contents of the Act, as well as with all regulations and SANS codes of practice that have been made in terms of section 43 of the Act.

3.

UNDERTAKING BY MANDATORY

- (a) The Mandatory hereby undertakes and binds himself to the Municipality to ensure prompt and strict compliance with the provisions of the Act and the said regulations as well as with the provisions included in this Safety Agreement at all times during the execution of the Works
- (b) It is hereby recorded that the provisions of this Safety Agreement as set out hereinafter are in no way intended to restrict the duties of the Mandatory, nor to exempt the Mandatory from his obligation in accordance with the Act and the said regulations

4.

PERSONAL PROTECTIVE EQUIPMENT

- (a) It is compulsory to wear equipment for eye protection when working in an eye protection zone or where the Work requires eye protection.
- (b) It is compulsory to wear safety helmets when working in a safety helmet zone or where the Work requires safety helmets.
- (c) It is compulsory to wear hearing protection when working in a noise zone or where the Work requires hearing protection.
- (d) The wearing of other protective clothing and equipment as prescribed by the Occupational Health and Safety Officer of Nelspruit Municipality is compulsory.
- (e) The Mandatory shall ensure that the statutory requirements are complied with at all times.

5.

FENCING AND GENERAL MACHINERY PROTECTION

No shield or fencing may be removed from or be moved at any machinery or installation without written permission.

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6.

SCAFFOLDING, LADDERS, TOOLS, ET CETERA

The Mandatory without the written permission of the Municipality may use no equipment or tools that belong to the Municipality.

Except where agreed beforehand the Mandatory shall provide enough tools and equipment to enable him to complete the Works and the Mandatory shall provide all storerooms, offices and eating halls that he may need. The Mandatory will be responsible for all his material on site.

In special case where the Municipality may lend equipment, tools or materials to the Mandatory, the Mandatory will use such equipment, tools and/or materials at his own risk and the Mandatory herewith indemnifies the Municipality against any liability of whichever nature or from any cause whatsoever, whether direct or indirect, that may arise from such usage.

7.

SERVICES AND WORKING METHODS

The written permission of the Chief Executive/Town Clerk of the Municipality shall be obtained where any work which must be undertaken by the Mandatory is connected with a working process or machinery or any other service in connection therewith, or may possibly affect it, before he commences with such work.

Approval shall be obtained from the client Electrical Engineer of the Municipality before any equipment is connected to the electrical supply of the Municipality. All equipment shall be isolated before any equipment is connected to the electrical supply of the Municipality. It shall be isolated and be provided with earth leakage protection. Electrical machinery, portable electrical tools and portable lights must comply with the requirements of the applicable regulations.

Work permits must be issued in terms of the Occupational Health and Safety Act and Regulations when the nature of the work requires it. Permits must be issued by the relevant departmental head where necessary.

8.

EXCAVATIONS

Written permission for excavations shall be obtained from the City Engineer of the Municipality and the Mandatory shall make sure of the existence and position of electrical cables, discharge pipes, gas lines, water conduits, et cetera before he commences with any excavation work.

All excavations and obstructions and/or any openings in platforms or floors shall be enclosed in a safe way and warning notices shall be erected to ensure absolute safety. An adequate number of red or orange caution lights shall be provided when it is dark or should bad light prevail.

The area surrounding excavations shall be kept in a safe, orderly and tidy condition. No loose material of whatever nature may be left in walkways or workplaces or be allowed to block walkways or workplaces.

Nobody may enter into any restricted area in which hazardous fumes or a shortage of oxygen exists without a permit giving permission to do so, issued by the head of the relevant department of the Municipality and until it has been certified safe for entrance by the Occupational Health and Safety Officer and the Health Inspector of the Municipality.

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9.

RESTRICTION TO WORKPLACE

Employees of the Mandatory shall be restricted to their workplaces except when they have to leave their area for work purposes or when they visit toilets.

10.

SUBCONTRACTORS

The Mandatory shall ensure that all subcontractors receive a copy of this safety agreement and must ensure they comply with it.

11.

OCCUPATIONAL HEALTH AND SAFETY OFFICER AND THE REPORTING OF ALL ACCIDENTS

The Occupational Health and Safety Officer of the Municipality is available for consultation and he will make periodical visits to the workplace of the Mandatory. Any hazardous occurrence or incident to the employees of the Mandatory that results in absence from work for a period longer than three days shall be reported in writing to the Occupational Health and Safety Officer of the Municipality within forty eight hours as well as to the Department of Labour as specified by the Act. Every user, employer, occupier, builder or excavator must, under this Act, keep record of all accidents that occur.

In the case of an accident that results in loss of life, nobody may disturb the scene of the accident or any articles involved in the accident prior to the arrival of the Occupational Health and Safety Officer and the Inspector, unless it is to prevent another accident from happening or the prevention of loss of life or to remove corpses.

The Occupational Health and Safety Officer will issue contravention notices to the Mandatory or a sub-contractor when there is a noncompliance and will specify the time in which it must be rectified.

The Occupational Health and Safety Officer will issue work stop notices to the Mandatory or sub-contractor whenever he is of the opinion that the health and safety of any person at work is threatened or that the contravention notices are not adhered to.

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12.

FIRST AID

Where five or more persons are employed at a workplace, the Mandatory shall provide and maintain an adequately equipped first-aid box that meets the following requirements.

- (a) Every first-aid box shall contain the minimum contents as prescribed by the Occupational Health and Safety Act.
- (b) Nothing except articles and equipment required for first-aid purposes may be kept in the first-aid box.
- (c) Each first-aid box shall be kept in a place readily accessible in case of an accident.

All first-aid boxes shall be placed under control of a responsible person except where five or less persons are at work. The responsible person must be in the possession of a valid first-aid certificate issued by one of the following organisations:

- A South-African Red Cross Society
- B St. John's Ambulance Foundation
- C South-African First-Aid League

A notice indicating where the first-aid box is kept as well as the name of the person in charge, shall be affixed in a conspicuous place. The first-aid facilities of the Municipality may be used during emergencies.

13.

FIRE PREVENTION MEASURES AND STORAGE OF FLAMMABLE MATERIAL

The Fire department of the Municipality shall be notified before any welding, oxyacetylene welding, cutting, burning of paint or tar from floors or roofs is undertaken so that the necessary fire prevention measures can be arranged. All "NO SMOKING AND OPEN SURFACE FIRES/LIGHTS PROHIBITED" notices shall be adhered to. The Mandatory and his senior employee shall acquaint themselves and their fellow workers with the fire prevention measures of the Municipality, which will also include fire alarm notices and exits in case of fire, and they shall ensure that these rules are strictly complied with.

14.

COMPLETION OF WORK

Before the mandatory or his sub-contractors leaves the site they shall inform the Head of the relevant Department of the Municipality and obtain his/her written approval that the work has been completed satisfactory and that the site of the work is left in a good condition.

15.

SALVAGED MATERIAL AND EQUIPMENT

Any building demolished or equipment or materials that are salvaged whilst carrying out the work shall remain the property of the Municipality, unless the contract specifically provides otherwise.

16.

BREAKING OF THESE RULES AND POOR CONDUCT

The Mandatory is warned that no behaviour that causes danger to their own employees, to the employees of the Municipality or general public will be tolerated. The Occupational Health and Safety Officer of the Municipality reserves the right of the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any default or breach of the agreement and to order that the completion of the work be stayed, pending compliance with

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this agreement; alternatively to cancel the agreement referred to in par.2 in which event the Municipality will be entitled to appoint an alternative contractor to complete the work and recover the costs thereof from the mandatory, without prejudice to any alternative or additional right or action or remedy to the Municipality, to recover from the mandatory damages for the default or breach and the cancellation.

The senior employees of the Mandatory shall sign a note of acknowledgement of this safety agreement to certify that they have received the regulations as included herein and that they understand the regulations

17.

INTOXICATION

Nobody that is in a state of intoxication or that is in any other condition that causes or may cause his/her incapability to control him/herself or persons under his control may and shall not be permitted on the premises of the Municipality. The Occupational Health and Safety Officer of the Municipality reserves the right to the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any transgression of this nature.

18.

CONFIDENTIALLY

The Mandatory shall at all times treat data and information that have been made known to him or that he requires in connection with his work from the Municipality as confidential and he may not make unauthorised use thereof. He must also ensure that such data and information are not communicated to anybody else that is not an employee of the Mandatory without obtaining prior written approval from the Municipality and he must further ensure that such persons do in fact know that the said information is confidential and that they are obliged to treat it as such. The Mandatory shall provide for adequate physical protection for any confidential documents, sketches, et cetera that he receives from the Municipality in connection with the work as well as for any copies thereof that he makes. He shall hand back all documents sketches and copies thereof to the Municipality upon completion of the work, or earlier, if so requested by the Municipality. The Mandatory shall inform the Municipality immediately should any such documents or sketches become lost.

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19.

INDEMNIFICATION BY THE MANDATORY

The following conditions will be applicable to the Mandatory:

- (a) The Mandatory is liable and herewith indemnifies the Municipality irrevocably and in full against any claim for loss or damage to property or arising from death or injury of any person and any associated loss or damage suffered, and against all lawsuits, claims, demands, costs, expenses, and charges that may arise when the said occurrences are caused on purpose or through the negligence, violation of legal obligations or failure by the Mandatory or its employees.
- (b) Whenever any of the employees of the Municipality is busy with work to, or with the supply of material that will be used during the execution of the work by the Mandatory, or otherwise busy with work under the instruction and supervision of the Mandatory, in as far as they may be negligent or fail to do their duty, they will be regarded as employees of the Mandatory
- (c) All installations, equipment, hoisting-apparatus and other implements, scaffolding, ladders, material, et cetera that are borrowed from the Municipality by the Mandatory for usage during the execution of the work, will be used entirely at the risk of the Mandatory or employees of the Mandatory and the Mandatory herewith indemnifies the Municipality irrevocably and in full against any liability that may arise from such usage.

20.

AMENDMENTS MUST BE IN WRITING

The parties agree herewith that this safety agreement is the only safety agreement between them and that no amendment thereof will be valid unless it is in writing and signed by both parties.

21

JURISDICTION AND LEGAL COSTS

In the event of any legal action being instituted pertaining to the this agreement the party in default or breach will be liable for the other party's legal costs on the scale as between attorney and own client and the parties consent to the jurisdiction of the magistrate's court for purpose of any legal action being instituted.

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PARTICULARS OF THE MANDATORY

Name (Mandatory) _____

C.E.O. (Section 16(1)) _____

ID NO _____

Designation _____

Name of Business _____

Address of Business _____

Tel number (h) _____ (w) _____ e-mail _____

Number of employees employed _____

Registration number as allocated to the Mandatory by the Workman's Compensation Commissioner

Date allocated _____

Thus done and signed on this _____ day of _____ 20 _____

As witnesses:

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

THE MANDATORY

Thus done and signed on this _____ day of _____ 20 _____

As witnesses

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

THE MUNICIPALITY

Acknowledgement of receipt of the agreement:

THE MANDATOR

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PROJECT NAME: ELANDSHOEK ACCESS ROAD

C1.2 GUARANTEE

Form of Guarantee

For use with the General Condition for Contract for Construction Works, 3RD Edition, 2015

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means:

"Contractor" means:

"Engineer" means:

"Works" means:

"Site" means:

"Contract " means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

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

Amount in words:.....

"Guaranteed Sum" means: The maximum aggregate amount of R

Amount in words:

"Expiry Date" means:

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

- 1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. The Guarantor hereby acknowledges that:

any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a surety ship;

3.1 its obligation under this Performance Guarantee is restricted to the payment money.

4. Subject to the Guarantor's maximum liability refer to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

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- 4.1 A copy of first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
- 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of original Performance Guarantee by Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the

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Magistrate's Court.

Signed at.....

Date.....

Guarantor's signatory (1).....

Capacity.....

Guarantor's signatory (2).....

Capacity.....

Witness signatory (1).....

Witness signatory (2).....

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C1.3 AGREEMENT WITH ADJUDICATOR

This agreement is made on the.....day of 20.....between: the Employer
(name of company / organisation).....
of (address).....
.....and the
Contractor(name of company / organisation)
of (address).....
.....(hereinaft
er called **the Parties**)

and
(name).....
of (address)
..... (hereinafter
called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....
and known as Contract No.....
(Contract title).....

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

IT IS NOW AGREED as follows:

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

SIGNED BY:

(Signature):..... (Signature):..... (Signature):.....

Name: **Name:** **Name:**

who warrants that he/ she is who warrants that he/ she is the **Adjudicator** in the duly
authorised to sign for and duly authorised to sign for presence of on behalf of the **First Party** in and on
behalf of the **Second** the presence of **Party** in the presence of

Witness: **Witness:** **Witness:**
(Signature)..... (Signature).....Signature).....

Name: **Name:** **Name:**.....

Address: Address: Address:

Date: Date: Date:

PART C1

CONTRACT No: XXXX
PROJECT NAME: ELANDSHOEK ACCESS ROAD



C1.4 CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE (Agreement)

OFFER

The Tenderer is to complete and sign the Form of Offer

The Employer, Identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works;

ELANDSHOEK N4 INTERSECTION ROAD: No 16/2019

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

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

.....
..... Rand (in words); R (in figures),
.....

This offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature(s) _____

Name(s) _____

Capacity _____

For the Tenderer _____
(Name and address of organization)

Name and signature of witness _____ **Date** _____

PART C1

CONTRACT No: XXXX
PROJECT NAME: ELANDSHOEK ACCESS ROAD



ACCEPTANCE

The Employer will complete and sign the form of Acceptance

By signing this part of the Form of Offer and Acceptance, **the Employer** identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

- Part 1 Agreement and Contract Data, (which includes this Agreement)
- Part 2 Pricing Data
- Part 3 Scope of Work
- Part 4 Site Information

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

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorized representative(s) of both parties.

The Tenderer shall within 14 days after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the employer's agent (whose details are given in the Contact Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date of this Agreement comes into effect. Failure to fulfill any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now the Contractor) within five days after the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute binding contract between the parties,

Signature(s)

Name(s)

Capacity

For the Employer

(Name and address of organization)

**Name and
signature of
witness**

Date

PART C1



CONTRACT No: XXXXX
PROJECT NAME: ELANDSHOEK ACCESS ROAD

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender,
2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here,
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here,
4. Any change or addition to the tender documents arising from the above arrangements and recorded here shall also be incorporated into the final draft of the Contract,

1	Subject _____
	Details _____
2	Subject _____
	Details _____
3	Subject _____
	Details _____
4	Subject _____
	Details _____
5	Subject _____
	Details _____
6	Subject _____
	Details _____
7	Subject _____
	Details _____
8	Subject _____
	Details _____

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during the process of offer and acceptance.

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

PART C1



CONTRACT No: XXXXX
PROJECT NAME: ELANDSHOEK ACCESS ROAD

For the Tenderer:

Signature(s)

Name(s)

Capacity

(Name and address of organization)

**Name and
signature of
witness**

Date

For the Employer:

Signature(s)

Name(s)

Capacity

(Name and address of organization)

**Name and
signature of
witness**

Date

C1.7.1 Contract Specific Data

The conditions of contract are the General Conditions of Contract for Construction Works (3rd Edition 2015) published by the South African Institute of Civil Engineering, Private Bag X200, Halfway House, 1685, Tel 011 805 5947.

The General Conditions of Contract make several references to the Contract Data. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency

between it and the General Conditions of Contract.

Where applicable, items of data given here below are cross-referenced to the sub clause in the General Conditions of Contract to which they apply.

1. AMPLIFICATIONS OF THE GENERAL CONDITIONS OF CONTRACT

2.1 Data Provided by the Employer

2.1.1 Commencement Date (Clause 1.1.1.5)

The "Commencement Date" means the date on which the Contractor receives a Letter of Acceptance from the Employer. The instruction to commence with the works will not be issued later than 28 days from the date that the Agreement made in terms of the Form of Offer and Acceptance comes into effect.

2.1.2 Defects Liability Period (CL 1.1.1.13)

The Defects Liability Period is **12** calendar months calculated from the date of the Certificate of Completion.

2.1.3 Due Completion Date (CL1.1.1.14)

This clause shall apply *mutatis mutandis* to any portion or phase of the Works that may be described in the Scope of Works or in the Contract Data, or agreed Subsequently between the Contractor and the Employer, and committed to writing.

The time for achieving Practical Completion is **8 Months** calculated from the Commencement Date.

2.1.4 Employer (CL 1.1.1.15)

The Employer is: City of MBOMBELA

2.1.5 Engineer (CL. 1.1.1.16)

'Engineer' means any Director, Associate or Professional Engineer appointed by **City of Mbombela** to fulfil the functions of the Engineer in terms of the Contract Data.

2.1.6 Pricing Strategy (CL 1.1.1.26)

The pricing strategy is the Re-measurement Contract,

2.1.7 Delivery of Notices (CL 1.2.1.2)

The Engineer's address for receipt of communications is:

14 Nel Street, 14 Bateleur, Nelspruit 1200

Tel: 013 753 3191

Fax: 013 753 3157

E-mail: smladmin@smlprojects.co.za

The Employer's address for receipt of communications is:

THE CITY OF MBOMBELA

P.O Box 45
 NESPRUIT
 1200

2.1.8 Contractor's Copyright

Add the following new Clause 1.3.6:

The copyright in all documents, drawings and records (prepared by the Engineer) related in any manner to the Works shall vest in the Employer or the Engineer or both (according to the dictates of the Contract that has been entered into by the Engineer and the Employer for the Works), and the Contractor shall not furnish any information in connection with the Works to any person or organization without the prior approval of the Employer to this effect.

2.1.9 Specific Approval of the Employer Required (CL 3.1.3)

The Engineer is required to obtain the specific approval of the Employer before executing any of the following functions or duties:

- 2.1.9.1 Nominating the Engineer's Representative in terms of CI 3.3.1
- 2.1.9.2 Delegation of Engineer's authority in terms of CI 3.2.4
- 2.1.9.3 The issuing of further drawings or instructions in terms of CI 5.9.1
- 2.1.9.4 The issuing of instructions for dealing with fossils and the like in terms of CI 4.7.1
- 2.1.9.5 Authorizing the Contractor to repair and make good excepted risks in terms of CI 8.2.2.2
- 2.1.9.6 The issuing of a variation order in terms of CI 6.3.1 Issuing of instructions to carry out work on a day work basis in terms of CI 6.4.1.4
- 2.1.9.8 Granting permission to work during non-working times in terms of CI 5.8.1.1
- 2.1.9.9 Suspend the progress of the works in terms of CI 5.11.1
- 2.1.9.10 The issuing of an instruction to accelerate progress in terms of CI 5.7.3
- 2.1.9.11 The reduction of a penalty for delay in terms of CI 5.13.2
- 2.1.9.12 The determination of additional or reduced costs arising from changes in legislation in terms of CI 6.8.4
- 2.1.9.13 The giving of a ruling on a contractor's claim in terms of CI 10.1.5
- 2.1.9.14 The agreeing of an extension to the 28 period in terms of CI 10.1.5.1
- 2.1.9.15 The inclusion of credits in the next payment certificate in terms of CI 10.1.5.2
- 2.1.9.16 The agreeing of the adjustment of the sums for general items in terms of CI

6.11

2.1.10 Contractor's Liability for Own Design Errors (CL 4.1.2)

Add the following to the clause:

The Contractor shall provide the following to the Engineer for retention by the Employer or his assignee in respect of all works designed by the Contractor:

- 4.1.2.1 A Certificate of Stability of the Works signed by a registered Professional Engineer confirming that all such works have been designed in accordance with the appropriate codes of practice.
 - 4.1.2.2 Proof of registration and of adequate and current professional indemnity insurance cover held by the designer(s).
 - 4.1.2.3 Design calculations should the Engineer request a copy thereof.
 - 4.1.2.4 Engineering drawings and workshop details (both signed by the relevant professional engineer), in order to allow the Engineer to compare the design with the specified requirements and to record any comments he may have with respect thereto.
 - 4.1.2.5 "As-Built" drawings in DXF electronic format after completion of the Works. The Contractor shall be responsible for the design of the Temporary Works.
- 2.1.11 Health and Safety Act

- 2.1.11.1 Contractor's Compliance (CL 4.3)
Add the following new Clause 4.3:
The Contract shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2003 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993)
- 2.1.11.2 Contractor's Liability as Mandatory (CL 4.3)
Add the following new Clause 4.3.4:
Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2003, for which he is liable as mandatory. By entering into this Contract it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37 (2) of the Act.
- 2.1.11.3 Contractor to Notify Employer (CI 4.3)
Add the following new Clause 4.3.5:

The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub-contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations.
- 2.1.12 Commencement of the Works (CL 5.3.1)
The Contractor shall commence executing of the works within 14 days of the commencement date.
The documentation required before commencement with Works execution are:
- a) Approved Health and Safety Plan (refer to CL 4.3)
 - b) Initial Programme (Refer to CL 5.6)
 - c) Security (Refer to CL 6.2.1 and CL 6.2.3)
 - d) Insurance (Refer to CL 8.6)
- 2.1.13 Time to Submit the Documentation (CL 5.3.2),
The time to submit the documentation after the Commencement Date is **14 days.**
- 2.1.14 Access Not Exclusive (CL 5.4.2)
The access and possession of the Site shall not be exclusive to the Contractor as other construction services might be executed concurrently by independent Contractors or bodies under separate Contracts entered into with the Employer. The other Works which will be in progress or come into operation during the progress or tenancy of this Contract are likely to include, but are not limited to the following: Modifications to pipelines and/or installation of pipeline fittings related to the borehole pumping system.

The Contractor shall ensure that neither his operations nor his employees shall interfere with or hinder the operations of the Employer or of other Contractors and he shall indemnify the Employer against all claims arising through default of this requirement. The Contractor shall hand over portions of the Site of

Works (whether completed or not), or completed portions of Works, to these Contractors when required by the Employer. The Contractor shall cause no interference with or delays in the execution of these Contracts.

No discount or commission for the Contractor is allowed on these contracts and it will be assumed that he has fully allowed in the Contract Price for the presence of these contractors on Site. Any service rendered or assistance given by the Contractor to these contractors save as are contained in the Works Specifications, shall be for their accounts only and the Employer shall in no way be responsible to the Contractor for any payments in this respect.

The Contractor shall protect all existing services and all work being carried out and structures being erected on the Site by other contractors. Any damage caused to these services or structures or any obstructions or hindrance caused to other contractors by the Contractor and claims arising there from, will be the sole responsibility of the Contractor.

Any repair work shall be carried out at the Contractor's expense, in conformity with the Works Specifications.

The same obligations shall be imposed on the Employer and on other Contractors in respect of the Works being executed under this Contract.

2.1.15 Non-working Days (CL 5.8.1)

a) The non-working days are Sundays.

b) The special non-working days are statutory public holidays and the year-end break commencing on 15 December 2017 and ending on 07 January 2018.

2.1.16 Penalty for Delay (CL 5.13.1)

The penalty for failure to complete the Works is 0.05% of the Contract Sum per calendar day.

2.1.17 Latent Defect Period (CL 5.16.3)

The latent defect period is 10 years

2.1.18 Contractor Failing to Select or Provide Security (CL 6.2.2)

Delete the entire contents of Clause 6.2.2 and replace with: "Failure to deliver an acceptable security as selected in the Contract Data within the stipulated period is a fundamental breach of Contract".

2.1.19 Day works (CL 6.5.1.2.3)

The percentage allowance to cover overhead charges is maximum 15 (fifteen) per centum.

2.1.20 Contract Price Adjustment (CL 6.8.2)

The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:

$$\text{Contract Price Adjustment Factor} = (1 - x) \left[\frac{aL_t}{L_o} + \frac{bP_t}{P_o} + \frac{cM_t}{M_o} + \frac{dF_t}{F_o} - 1 \right] \text{ rounded}$$

off to the fourth decimal place.

Coefficients for calculating Contract price Adjustment Factor shall be:

Value of x is 0.10

$$a = 0.20$$

$$b = 0.35$$

$$c = 0.35$$

$$d = 0.10$$

“L” is the “Labour Index” and shall be the “Consumer Price Index – for Nelspruit Area” In Release P 0141 Table 21.

“P” is the “Plant Index” and shall be the “Civil Engineering Plant” index as published in the Statistical Release P0141 in table A of Statistics South Africa.

“M” is the “Materials Index” and shall be the price index for “Civil Engineering (Materials)” as published in the Statistical Release P0142.1 in table 11 of Statistics South Africa.

“F” is the “Fuel Index” and shall be the index for “Diesel oil” (Coast or Witwaters-rand) as published in Statistical Release P0142.1 Table 12 of Statistics South Africa.

The suffix “o” denotes the basic indices applicable to the base month.

The suffix “t” denotes the current indices applicable to the month in which the last day of the period falls to which the relevant payment certificate relates.

If any index relevant to any particular certificate is not known at the time when the certificate is prepared, the Engineer shall estimate the value of such index. Any correction, which may be necessary when the correct indices become known, shall be made by the Engineer in subsequent payment certificates.

The base month is: the month prior to the closing of the Tender.

2.1.21 Variation in Cost of Special Materials (CL6.8.3)

Price adjustments for variations in the costs of special materials are not permitted

2.1.22 Percentage Limit on Materials (CL 6.10.1.5)

The percentage limit on Materials not yet built into the Permanent Works is 80 (eighty) per centum.

2.1.23 Retention Money (CL 6.10.3)

The percentage retention on amounts due to the Contractor is 10% (ten) per centum. A Retention Money Guarantee may be not offered in lieu of the retention of money.

2.1.24 Variations Exceeding 15 per cent (CL 6.11)

Delete "15% and replace it with "20%.

2.1.25 insurance of Materials Supplied by the Employer (CL 8.6.1.1.2)

The insurance amount to cover the value of Plant and Materials, supplied by the Employer for incorporation in the Works and not included in the Contract Sum, is NIL. Contractor to provide

2.1.26 insurance to Cover Professional Fees (CL 8.6.1.1.3)

The insurance amount to cover professional fees, not included in the Contract Sum, payable in respect of the repair or reinstatement of damage to the Works, is NIL.

2.1.27 Liability insurance (CL 8.6.1.3)

The limit of indemnity for liability insurance is R10 000 000 per event, the number of events being unlimited.

2.1.28 Dispute Resolution (CL 10.5.2)

Dispute resolution shall be referred to amicable settlement.

2.1.29 Disagreement with ad-hoc Adjudicator's Decision

Add Clause 10.12

Should either of the contracting parties disagree with any decision of the ad-hoc adjudicator, such matter shall be referred to litigation for court judgment.

2.2 Data Provided by the Contractor

2.2.1 Contractor (CL 1.1.1.9)

The legal name of the Contractor

2.2.2 Delivery of Notices to the Contractor (CL 1.2)

The Contractor's address for receipt of communication is:

Postal: _____

Telephone _____

Facsimile _____

E-mail: _____

Important Note

Paragraphs 2.2.1 and 2.2.2 here above, to be duly completed by the Bidder before submitting the Bid.



2.3 CONTRACT DATA

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause 4.4.3: Selection of Sub-Contractors

The Tenderer shall list in page T.2.3.7 the Subcontractors and Suppliers whom he intends to appoint in respect of the various specialist items of work to be done or goods supplied on this contract. Alternatives may be mentioned.

The Tenderer shall state whether he intends to carry out any specialised work or supply of goods himself.

Acceptance of this tender shall not be construed as approval of all or any of the listed specialist Subcontractors or Suppliers. Should any of or all of the specialist Subcontractors or Suppliers not be approved subsequent to the acceptance of the tender, it shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a Subcontractor or Supplier not listed below being approved by the Employer.

The sub-contractors listed in page T.2.3.7 exclude the identified local emerging contractors who will be identified by the Employer.

Signed on behalf of Tenderer:

.....

PART C 2

CONTRACT No: 16/2019

PROJECT NAME: CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION FOR COM



3 ADDITIONAL SPECIAL CONDITIONS OF AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or sub clause in the General Conditions of Contract 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

The variations to the General Conditions of Contract are:

SCC 4.4.3

For conditions regarding selection of **LOCAL EMERGING SUB-CONTRACTORS** (LES Work), see additional clauses below.

The additional clauses to the General Conditions of Contract are:

Local Emerging Sub-Contractors

The Contractor shall promptly, and in any event within a reasonable time after the Commencement Date, sub-contract a portion of the Works to the value of ten (30) percent of the work specified in the Schedule of Works (excluding preliminary and general costs) ("the LES Work") to one or more of the local emerging sub-contractors notified by the Employer to the Contract ("the Local Emerging Sub-Contractors"), in strict accordance with, and subject to, the requirements set out in Paragraphs (i) to (x) of this Clause, as follows:

- (i) The Contractor shall select the Local Emerging Sub-Contractor(s) to whom he is to sub-contract the LES Work by means of a competitive bidding process conducted strictly in accordance with the CIDB Standard for Uniformity in Construction Procurement and Best Practice Guidelines January 2009, and in doing so shall exercise all reasonable endeavours to ensure as inclusive and equal a distribution of the LES Work as shall be practicable amongst all the Local Emerging Sub-Contractors, taking into account price, competency and capacity only.
- (ii) The Contractor shall, without reference to the Employer, taking into account only the competencies and capacity of each Local Emerging Sub-Contractor, be free to identify those components of the LES Work that he shall allocate to each Local Emerging Sub-Contractor.
- (iii) Subject to paragraphs (iv) and (vii) of this clause, in the event that the Contractor fails to sub-contract and/or allocate the required quantum of LES Work or any portion thereof in accordance with this clause, the Engineer may either a) apply a penalty equal to 20% of the value of the shortfall, or b) make a determination regarding the setting aside of the LES Work so as to prevent the shortfall.
- (iv) Subject to paragraph (vii) of this clause, and notwithstanding paragraph (iii) of this clause, in the event that the Contractor fails to sub-contract and/or allocate the required quantum of LES Work or any portion thereof in accordance with this clause by reason of his inability to reach agreement on price with one or more of the Local Emerging Sub-Contractor(s), the Engineer may, in his absolute discretion, advise the Employer to allow an increase in the Contractor's rates to so as to facilitate successful price negotiation. In the event that the Employer refuses to authorize an increase to the Contractor's rates or, in the event that the authorized increase in rates fails to facilitate successful negotiation between the Contractor and the relevant Local Emerging Sub-Contractor(s), the Contractor

PART C 2

CONTRACT No: 16/2019

PROJECT NAME: CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION FOR COM



shall be relieved of his obligation to sub-contract the relevant portion of LES Work, always subject to paragraph (vii) of this clause.

- (v) The rates to be applied by the Contractor in the sub-contracts with the Local Emerging Sub-Contractors for the LES Work shall at all times be based strictly on the rates applicable to the Contractor under the Contract, save for any adjustments allowed in terms of paragraph (iv) above.
- (vi) The Contractor shall apply the same rates to each Local Emerging Sub-Contractor in respect of each component of the LES Work, such that, in the event that more than one Local Emerging Sub-Contractor is successfully selected for a single component of the LES Work, the same rates shall apply to each of the selected Local Emerging Sub-Contractors in respect of the said single component.
- (vii) The Contractor shall not be under any obligation to employ a Local Emerging Sub-Contractor against whom the Contractor raises reasonable objection by written notice to the Engineer as soon as practicable, with supporting particulars in writing. In the event of failure on the part of the Contractor to prove reasonable objection to the satisfaction of the Engineer, the Engineer's determination shall be final and binding.
- (viii) The Contractor shall be entitled to include within the Contract Price a maximum management fee of 20% in excess of the rates paid to the Local Emerging Sub-Contractors.
- (ix) When tendering the Contractor shall have exercised all reasonable care not to distort any rates in such a way as to hinder or preclude his obligations under this clause, and, in the event that the Engineer determines the setting aside of the LES Work in terms of paragraph (iii) above, the Contractor shall be prevented from arguing that such LES Work is reserved not to be subcontracted.
- (x) The Contractor shall submit a priced copy of the final agreed version of each proposed sub-contract with a Local Emerging Sub-Contractor ("the Final Draft LES Sub-Contract") to the Employer prior to the execution of such sub-contract. In the event that the Employer, in consultation with the Engineer, deems the price or any other term of any Final Draft LES Sub-Contract to be unduly onerous or unfair to the Local Emerging Sub-Contractor concerned, the Contractor shall modify the price and/or terms in accordance with the Engineer's reasonable instructions.

In sub-contracting the LES Work, the Contractor shall be responsible for performing the LES Work as if he had not sub-contracted. The Contractor shall be liable for the acts and omissions of the employees, sub-contractors and agents of the Local Emerging Sub-Contractors as if they were his own employees, sub-contractors and agents.

PART C 2

CONTRACT No: 16/2019

PROJECT NAME: CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION FOR COM



CONDITIONS OF CONTRACT FOR LABOUR-INTENSIVE CONSTRUCTION

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work.

Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

Applicable labour laws

The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R63 of 25 January 2002 shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers, as reproduced below.

1 Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

In this document –

“department” means any department of the State, implementing agent or contractor;

“employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;

“worker” means any person working in an elementary occupation on a SPWP;

“elementary occupation” means any occupation involving unskilled or semi-skilled work;

“management” means any person employed by a department or implementing agency to administer or execute an SPWP;

“task” means a fixed quantity of work;

“task-based work” means work in which a worker is paid a fixed rate for performing a task;

“task-rated worker” means a worker paid on the basis of the number of tasks completed;

“time -rated worker” means a worker paid on the basis of the length of time worked.

2 Terms of Work

2.1 Workers on a SPWP are employed on a temporary basis.

2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.

2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3 Normal Hours of Work

3.1 An employer may not set tasks or hours of work that require a worker to work–

(a) more than forty hours in any week

(b) on more than five days in any week; and

(c) for more than eight hours on any day.

3.2 An employer and worker may agree that a worker will work four days per week.

The worker may then work up to ten hours per day.

3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4 Meal Breaks

4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

4.2 An employer and worker may agree on longer meal breaks.

4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5 Special Conditions for Security Guards

5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6 Daily Rest Period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7 Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8 Work on Sundays and Public Holidays

8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.

8.2 Work on Sundays is paid at the ordinary rate of pay.

8.3 A task-rated worker who works on a public holiday must be paid –

(a) the worker's daily task rate, if the worker works for less than four hours;

(b) double the worker's daily task rate, if the worker works for more than four hours.

8.4 A time-rated worker who works on a public holiday must be paid –

(a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;

(b) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

9 Sick Leave

9.1 Only workers who work four or more days per week have the right to claim sick pay in terms of this clause.

9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

9.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

9.4 Accumulated sick-leave may not be transferred from one contract to another contract.

9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

9.7 An employer must pay a worker sick pay on the worker's usual payday.

9.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –

· absent from work for more than two consecutive days; or

· absent from work on more than two occasions in any eight-week period.

9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

9.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

10 Maternity Leave

10.1 A worker may take up to four consecutive months' unpaid maternity leave.

10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

10.5 A worker may begin maternity leave –

(a) four weeks before the expected date of birth; or

(b) on an earlier date –

(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or

(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

10.7 A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

11 Family responsibility leave

11.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -

(a) when the employee's child is born;

(b) when the employee's child is sick;

(c) in the event of a death of –

the employee's spouse or life partner;

the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

12 Statement of Conditions

12.1 An employer must give a worker a statement containing the following details at the start of employment –

(a) the employer's name and address and the name of the SPWP;

(b) the tasks or job that the worker is to perform; and

the period for which the worker is hired or, if this is not certain, the expected duration of the contract;

the worker's rate of pay and how this is to be calculated;

the training that the worker will receive during the SPWP.

12.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

12.3 An employer must supply each worker with a copy of these conditions of employment.

13 Keeping Records

13.1 Every employer must keep a written record of at least the following –

- (a) the worker's name and position;*
- (b) in the case of a task-rated worker, the number of tasks completed by the worker;*
- (c) in the case of a time-rated worker, the time worked by the worker;*
- (d) payments made to each worker*

13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

14.2 A task-rated worker will only be paid for tasks that have been completed.

14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

14.4 A time-rated worker will be paid at the end of each month.

14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

14.6 Payment in cash or by cheque must take place –

- (a) at the workplace or at a place agreed to by the worker;*
- (b) during the worker's working hours or within fifteen minutes of the start or finish of work;*
- (c) in a sealed envelope which becomes the property of the worker.*

14.7 An employer must give a worker the following information in writing –

- (a) the period for which payment is made;*
- (b) the numbers of tasks completed or hours worked;*
- (c) the worker's earnings;*
- (d) any money deducted from the payment;*
- (e) the actual amount paid to the worker.*

14.8 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.

14.9 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

15 Deductions

15.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law

15.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

15.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

15.4 An employer may not require or allow a worker to –

- (a) repay any payment except an overpayment previously made by the employer by mistake;
- (b) state that the worker received a greater amount of money than the employer actually paid to the worker; or pay the employer or any other person for having been employed.

16 Health and Safety

16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

16.2 A worker must –

- (a) work in a way that does not endanger his/her health and safety or that of any other person;
- (b) obey any health and safety instruction;
- (c) obey all health and safety rules of the SPWP;
- (d) use any personal protective equipment or clothing issued by the employer;
- (e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

17 Compensation for Injuries and Diseases

17.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

17.2 A worker must report any work-related injury or occupational disease to their employer or manager.

17.3 The employer must report the accident or disease to the Compensation Commissioner.

17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months.

The employer will be refunded this amount by the Compensation Commissioner.

This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

18 Termination

18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.

18.2 A worker will not receive severance pay on termination.

18.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

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18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

19 Certificate of Service

19.1 On termination of employment, a worker is entitled to a certificate stating –

- (a) the worker’s full name;
 - (b) the name and address of the employer;
 - (c) the SPWP on which the worker worked;
 - (d) the work performed by the worker;
 - (e) any training received by the worker as part of the SPWP;
 - (f) the period for which the worker worked on the SPWP;
- any other information agreed on by the employer and worker.

The additional clauses to the General Conditions of Contract are:

Clause	Data
SCC5.12.2.2.1	A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the Engineer, all progress on an item or items of work on the critical path of the working programme of the contractor has been brought to a halt. Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal rainy weather, for which he will not receive any extension of time. Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" workings days. The number of "n" working days will be calculated based on the Contract period and the expected number of working days lost as a result of normal rainfall between the contractual commencement and completion dates.

3.1 General

The following clauses add to, vary or otherwise amend the General Conditions of Contract:

3.1.1 Cession (CL 2.5.1)

Delete the words "without the written consent of the other".

3.1.2 Subcontracting (CL 4.4.1)

Delete the contents of Clause 4.4.1 and insert:

"The Contractor shall not subcontract more than 30 per centum of the value of the Contract."

3.1.3 The type of Security (CL 6.2.1)

The type of security required for the due performance of the Contract shall be restricted to one of the following:

Performance Guarantee of 10 (ten) per centum of the Contract Sum, issued by a Commercial Bank registered in the Republic of South Africa,

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Or Performance Guarantee of 10 (ten) per centum of the Contract Sum, issued by an insurance Company registered in terms of the Short-term Insurance Act (Act 53 of 1998).

Whenever a Joint Venture constitutes the contracting party (Contractor) to this Contract, the Performance Guarantee shall be issued on behalf of the Joint Venture.

3.1.4 The wording of the Performance Guarantee shall be in the form appended in C1.2 Program (CL 5.6)

Add the following sub-clause 5.6.6 to Clause 5:

"Failure on the part of the Contractor to deliver to the Engineer, the programme of the Works in terms of Clause 5.6.1 and 5.6.2 within the period stated in the Contract Data, shall be sufficient cause for the Engineer to retain 25 per centum of the value of the Fixed Charge and Value-related items in assessment of amounts due to the Contractor, until the Contractor has submitted aforementioned first Programme of the Works and Supporting Documents".

3.1.5 Contractor's Superintendence (CL 4.12)

Add the following sub-clause 4.12.4 to Clause 4.12:

"Where a form is included in the Appendix to the Contract Data for this purpose, the Tenderer shall fill in the name of the person he proposes to entrust with the post of Contractor's Site Agent on this Contract in the space provided therefore. Previous experience of this person on work of a similar nature during the past five (5) years is to be entered in the list.

The Contractor's Site Agent shall be on Site at all times when work is being performed. The person as approved of by the Engineer in writing shall not be replaced or removed from Site without the written approval of the Engineer."

3.1.6 Insurances (CL 8.6)

3.1.6.1 Contractor to produce proof of payment

Delete sub-clause 8.6.6 and substitute with:

"The Contractor shall before commencement of the Works produce to the Engineer:

8.6.6.1 The policies by which the insurances are effected,

8.6.6.2 Proof that due payment of all premiums there under, covering the full required period has been made, and

8.6.6.3 Proof of continuity of the policies for the required period.

Should, during the currency of the Contract, the required period of insurance be extended for any reason, the Contractor shall timeously extend (so as to maintain) the said insurances for the full extended duration.

The Engineer shall be empowered to withhold all payment certificates until the Contractor has complied with his obligations in terms of this Clause 8.6."

3.1.6.2 Remedy of Contractor's failure to insure

Delete sub-clause 8.6.7 and substitute with:

"Failure on the part of the Contractor to effect and keep in force any of the insurances referred to in Clause 8.6.1 and its sub-clauses, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2 and with specific reference to sub-clause 55.2.5, as amended, in the Special Conditions of Contract."

3.1.7 Variations (CL 6.3)

Omit the words "Provided that" under Clause 6.3.2 and omit Clause 6.3.2.1.

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3.1.8 Suspension of the Works (CL 5.1 1)
 Add the following sub-clause 5.1 1.4 to Clause 5.11:

"If the Contractor does not receive from the Employer the amount due under an Interim Payment Certificate within 28 days after expiry of the time stated in sub-clause 6.10.4 within which payment is to be made (except for deductions in accordance with sub-clauses 6.10.1.6 and 6.10.1.7), the Contractor may, after giving 14 days' notice to the Employer, suspend the progress of the Works.

The Contractor's action shall not prejudice his entitlements to a claim in terms of Clause 10.1 and to termination of the Contract in terms of Clause 9.3.

If the Contractor subsequently receives full payment of the amount due under such Interim Payment Certificate before giving a notice of termination of the Contract, the Contractor shall resume normal working as soon as is reasonably practicable."

3.1.9 Extension of time arising from Abnormal Rainfall (CL 5.12)
 Add the following to sub-clause 5.12.2.2:

"The extension of time to be allowed due to abnormal rainfall shall be calculated separately for each calendar month or part thereof in accordance with the following formula:

$$V = (Nw - Nn) + \left(\frac{Rw - Rn}{X} \right)$$

- V = Extension of time in calendar days for the calendar month under Consideration
- Nw = Actual number of days during the calendar month on which a rainfall of **10** mm or more has been recorded
- Nn = Average number of days for the calendar month on which a rainfall of **10** mm or more has been recorded, as derived from existing rainfall records
- Rw = Actual recorded rainfall for the calendar month
- Rn = Average rainfall for the calendar month, as derived from existing rainfall records
- X = 20

The rainfall records which shall provisionally be accepted for calculation purposes are:

Month	Average Rainfall (mm)	Ave Rain Days
JAN	104.5	17
FEB	96.8	13
MAR	91.5	11
APR	64.6	10
MAY	5.1	3
JUN	9.6	2
JUL	8.7	2
AUG	6.9	3
SEP	16.6	5
OCT	50	13
NOV	104.2	16
DEC	112.4	17
Total	670.9	112

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The factor (Nw - Nn) shall be considered to represent a fair allowance for days during which rainfall exceeds 10 mm and the factor (Rw - Rn)/x shall be considered to represent a fair allowance for those days when rainfall does not exceed 10 mm but wet conditions prevent or disrupt work.

The total extension of time shall be the algebraic sum of all monthly totals for the contract period, but if the algebraic sum is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for a part of a month shall be calculated using pro rata values of Nn and Rn."

3.1.10 Interim Payments (CL 6.10)

Add to the end of Clause 6.10.1 the following paragraph:

"The Contractor shall complete the 'Contractor's Monthly Report Schedule', which pro forma documentation is obtainable from the Engineer. Pursuant to Sub-clause (l), these, duly signed by all concerned, together with the Contractor's statement and a VAT invoice in original format are to be submitted to the Engineer. Issue by the Engineer to the Employer and Contractor of any signed payment certificate is conditional to this information being fully endorsed, accurately and timeously submitted to the Engineer".

Add to the end of Clause 6.10.1.5 the following paragraph:

"All documentary evidence of such materials shall be unambiguous with respect to ownership having fully passed to the Contractor on or before the date of submittal of the Contractor's monthly statement.

Should the Contractor fail to supply unambiguous documentary evidence, he shall, prior to submittal of his monthly statement, deliver to the Employer a Guarantor Guarantee in the form contained in the Appendices to the Contract Data."

3.1.1.1 Variations Exceeding 15 Per Cent (CL 6.1.1)

In sub-clause 50.1.3 omit the words "15 per cent" and replace with "20 per cent"

3.1.12 Cancellation of the Contract (CL 9.1)

Alter the numbering of:

Clause 9.1.4 to 9.1.5,

Clause 9.1.5 to 9.1.6 and

insert the following new clause 9.1.4:

"The Employer shall be entitled to cancel the Contract, at any time for the Employer's convenience, by giving written notice of such cancellation to the Contractor. The Contractor termination shall take effect 28 days after the later of the dates which the Contractor receives this written notice or the Employer returns the Demand Guarantee. The Employer shall not cancel the Contract under this sub-clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor. This restriction on the Employer shall lapse 18 months after the date of receipt by the Contractor of cancellation in terms of this sub-clause".

3.1.13 Termination by Employer (CL 9.2)

Delete the contents of Clause 9.2 and substitute with:

"9.2.1 The Employer may terminate the Contract by written notice to the Contractor if:

9.2.1.1 Sequestration of the Contractor's estate is ordered by a Court with due Jurisdiction, or

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- 9.2.1.2 The Contractor publishes a notice of surrender or presents a petition for the surrender of his estate as insolvent, or makes a compromise with his creditors, or assigns in favour of his creditors, or agrees to carry out the Contract under the supervision of a committee representing his creditors, or (being a company) goes into liquidation, whether provisionally or finally (other than a voluntary liquidation for the purpose of amalgamation or reconstruction), or if the Contractor assigns the Contract without having first obtained the Employer's consent in writing, or if execution is levied on his goods, or
- 9.2.1.3 the Contractor, or anyone on his behalf, or in his employ, offers to any person in the employ of the Employer or the Engineer, a gratuity or reward or commission, or
- 9.2.1.4 the Contractor furnished materially inaccurate information in his Tender, which had a bearing on the award of the Contract, or
- 9.2.1.5 the Contractor has abandoned the Contract.
- 9.2.2 If the Contractor:
 - 9.2.2.1 Has failed to commence the Works in terms of Clause 5.3 hereof, or has suspended the progress of the Works for fourteen (14) days after receiving from the Engineer written notice to proceed, or
 - 9.2.2.2 Has failed to provide the Guarantee in terms of Clause 6.2 within the time stipulated in the Contract Data, or
 - 9.2.2.3 Has failed to proceed with the Works with due diligence, or
 - 9.2.2.4 Has failed to remove materials from the Site or to pull down and replace work within fourteen (14) days after receiving from the Engineer written notice that the said materials or work have been condemned and rejected by the Engineer in terms of these conditions, or
 - 9.2.2.5 Is not executing the Works in accordance with the Contract, or is neglecting to carry out his obligations under the Contract, or
 - 9.2.2.6 Has, to the detriment of good workmanship or in defiance of the Engineer's instructions to the contrary, sublet any part of the Contract, or
 - 9.2.2.7 Has assigned the Contract or any part thereof without the Employer's consent in writing, then the Employer may give the Contractor 14 days notice to rectify the default, and if the Contractor fails to rectify the default in said 14 days, then, without further notice, notify the Contractor in writing of the termination of the Contract and expel the Contractor and order the Contractor to vacate the site within 24 hours of issue of the Notice of Termination and to hand the Site over to the Employer, and the Employer may then enter upon the Site and the Works without affecting the rights and powers conferred on the Employer or the Engineer by the Contract and the Employer may himself complete the Works or may employ another contractor to complete the Works, and the Employer or such other contractor may use for such completion so much of the Construction Equipment.

Temporary Works and materials brought onto the Site by the Contractor as the Employer may think proper, and the Employer may at any time sell any of the said Construction Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any sums that may be due or become due to the Employer by the Contractor under the Contract. In such circumstances the Contractor shall forthwith vacate the Site and shall not be entitled to remain on the Site on the grounds that he is entitled to do so on a right of retention until amounts due to him have been paid, neither will the Contractor be entitled to any further payments in terms of this Contract.

- 9.2.3 If the Contractor, having been given notice to rectify a default in terms of **55.2** above, rectifies said default, but later repeats the same or substantially the same default, then the Employer may notify the Contractor of the immediate termination of the Contract, and proceed as stated in the paragraph following the word "writing" in Clause 55.2.7 above.

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9.2.4 Should the amounts the Employer must pay to complete the Works exceed the sum that would have been payable to the Contractor on due completion by him, then the Contractor shall upon demand pay to the Employer the difference, and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly. Provided that should the Contractor on demand not pay the amount of such excess to the Employer, such sum may be determined and deducted by the Employer from any sum due to or that may become due to the Contractor under this or any previous or subsequent contract between the Contractor and the Employer."

3.1.14 Termination by Contractor (CL 9.3)

Add the following paragraph as Clause **9.3.5**:

"In addition to, or as an alternative to the rights to termination contained in this Clause **9.3**, the Contractor may notify the default to the Employer, with a copy to the Engineer, and if the default is not rectified within 10 days the Contractor may suspend progress of the works until a date 7 days after the default is rectified. The Contractor shall be entitled to extension of time to the extent of delay caused by or resulting from such suspension, and to payment of additional costs caused by or resulting from the suspension. Such extension of time and additional costs shall be promptly ascertained by the Engineer, who shall then grant the extension of time and include the additional costs in all future payment certificates. Such suspension, extension of time and/or payment of additional costs, shall not prejudice the Contractor's rights to cancel the contract."

3.1.15 information in respect of Employees (CL 20.2)

The Contractor shall deliver to the Engineer, on a monthly basis, a return in detail of supervisory staff and the number of categorized classes of labour employer each day for the said period by the Contractor for execution of the Contract. Such return shall be submitted by the seventh day of the month following the month to be reported.

3.1.16 information in respect of Construction Equipment (CL 23.3)

The Contractor shall deliver to the Engineer, on a monthly basis, a detailed inventory of Construction Equipment kept on Site, fill particulars given for each day of the month. Distinction shall be made between Owned Equipment and Hired Equipment as well as Equipment in working order and Equipment out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.

4 PRIORITY OF DOCUMENTS

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purpose of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) the Form of Offer and Acceptance.
- b) amplifications of the General Conditions of Contract within the Contract Data.
- c) the General Conditions of Contract.
- d) the Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.

If any ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

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PART C2: PRICING DATA

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**PART C2
PRICING DATA**



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PROJECT NAME: ELANDSHOEK ACCESS ROAD

C2.1 PRICING INSTRUCTIONS

1 For the purposes of this bill of quantities, the following words shall have the meanings hereby assigned to them:

Unit: The unit of measurement for each item of work as defined in the standard specifications or the project specifications.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work for which the tenderer tenders to do the work.

Amount: The product of the quantity and the rate tendered for an item.

Lump Sum: An amount tendered for an item, the extent of which is described in the bill of quantities, the specifications or elsewhere, but of which the quantity of work is not measured in units.

2 This bill of quantities forms part of the contract documents and must be read in conjunction with all the other documents comprising the contract documents.

3 The quantities set out in the bill of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the bill of quantities, will be used to determine payments to the contractor.

The validity of the contract shall in no way be affected by differences between the quantities in the bill of quantities and the quantities finally certified for payment. Work is valued at the rates or lump sums tendered

4 The tenderer shall fill in a rate or a lump sum for each item where provision is made for it even where no quantities are given. Items against which no rate or lump sum has been entered in the tender will not be paid for when the work is executed, as payment for such work will be regarded as being covered by other rates or lump sums in the bill of quantities. The tenderer shall fill in a rate against all items where the words "rate only" appears in the amount column. Although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tendered rate shall apply should work under this item actually be required. Tenders should note the provisions of paragraph 12 of this preamble.

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

The tendered lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the contract.

5 The amount of work or the quantities of material stated in the bill of quantities shall not be considered as restricting or extending the amount of work to be done or quantity of material to be supplied by the contractor.

**PART C2
PRICING DATA**



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- 6 The statement of quantities of material or the amount of work in the bill of quantities shall not be regarded as authorisation for the contractor to order material or to execute work. The contractor shall obtain the engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements in this regard.

- 7 The short descriptions of the payment items in the bill of quantities are only given to identify the items and to provide specific details. Reference shall, inter alia, be made to the drawings, standard specifications, project specifications, general conditions of contract and special conditions of contract for more detailed information regarding the extent of work entailed under each item.

- 8 The provisions of clause of the general conditions of contract Second Edition 2012 shall apply to provisional sums and prime cost sums.

- 9 Subject to the conditions stated in paragraph 10 below, the rates and lump sums filled in by the tenderer in the bill of quantities shall be final and binding with regard to submitting the tender, and may not be adjusted should there be any mistakes in the extensions thereof and in the total sums appearing in the tender. Should there be any discrepancies between the tender sum and the correctly extended and totalled bill of quantities, the rates will be regarded as being correct, and the employer shall have the right to make adjustments to the tender sum to reconcile the tender sum with the total of the bill of quantities. In such an event the contractor will be consulted but, failing agreement between the parties, the decision of the employer shall be final and binding. Adjustment of the tender sum will take place prior to the signing of the contract. In their own interest tenderers must make doubly sure of the correctness of their tendered rates, the extensions and the tender sum.

- 10 A tender may be rejected if the unit rates or lump sums for some of the items in the bill of quantities are, in the opinion of the employer, unreasonable or out of proportion.

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11 The units of measurement indicated in the bill of quantities are metric units

The following abbreviations are used in the bill of quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m ²	=	square metre
m ² -pass	=	square metre pass
ha	=	hectare
m ³	=	cubic metre
m ³ km	=	cubic metre kilometre
l	=	litre
kl	=	kilolitre
kg	=	kilogram
t	=	ton (1000 kg)
No	=	number
mn	=	mega newton
mn-m	=	mega newton-metre
%	=	per cent
kW	=	kilowatt
Kn	=	kilo newton
PC sum=		prime cost sum
Prov sum	=	provisional sum

12 All rates and sums of money quoted in the bill of quantities shall be in rands and whole cents. Fractions of a cent shall be discarded

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CITY OF MBOMBELA

ELANDSHOEK N4 INTERSECTION ROAD

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C2.2 Bills of Quantities

(Insert BOQ Hereafter)

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PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK						SECTION 1200
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
GENERAL REQUIREMENTS AND PROVISIONS						
B12.01	Training:					
	(a) Engineering (technical) skills	Prov Sum	1	40 000.00	40 000.00	
	(b) Generic skills	Prov Sum	1	40 000.00	40 000.00	
	(c) Training venue	Lump Sum	1	40 000.00	40 000.00	
	(d) Remuneration of workers undergoing technical skills training	Prov Sum	1	40 000.00	40 000.00	
	(e) Contractor's handling costs, profit and all other charges in respect of subitems B12.01(a), (b), (c) and (e):					
	(i) Engineering (technical) skills	%	40 000.00			
	(ii) Generic skills	%	40 000.00			
	(iii) Remuneration of workers undergoing technical skills training	%	40 000.00			
B12.02	Remuneration of the Project Liaison Officer and members of the Project Liaison Committee:					
	(a) Project Liaison Officer	Month	8	7 000.00	56 000.00	
	(b) Contractor's handling costs, profit and all other charges in respect of subitems B12.02(a) and (b):					
	(i) Project Liaison Officer	%	56 000.00			
B12.05	Compliance with OHS Act and Regulations (including the Construction Regulations 2015)	Lump Sum	1			
1200	Carried forward					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					SECTION 1200	
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
	Brought forward					
B12.06	Protection, removal, realignment and replacement of services:					
	(a) Existing services					
	(i) The removal, protection and replacement of installations	PC Sum	1	100 000.00	100 000.00	
	(ii) Handling cost and profit in respect of subitem B21.06(a)(i)	%	100 000.00			
B12.07	Name Boards (x2)	Lump Sum	1			
1200	TOTAL CARRIED TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
 PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK				SECTION 1300	
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<u>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</u>				
B13.01	The contractor's general obligations:				
	(a) Fixed obligations	Lump Sum	1		
	(b) Value-related obligations	Lump Sum	1		
	(c) Time-related obligations	month	8		
	<u>NB</u> The combined total tendered for subitems (a), (b) and (c) shall not exceed 15% of the Tender Sum (excluding CPA, contingencies and VAT).				
1300	TOTAL CARRIED TO SUMMARY				

PART C 3

CONTRACT No: 16/2019

PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



PART C 3

CONTRACT No: 16/2019

PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					SECTION 1400	
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
	<u>HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL</u>					
B14.01	Office and laboratory accommodation:					
	(a) Offices (interior floor space only)	m ²	20			
	(e) Ablution units:					
	(i) Site unit	m ²	2			
	(g) Venue for site meetings	m ²	30			
14.02	Office and laboratory furniture:					
	(a) Chairs	No	10			
	(d) Desks, complete with drawers and locks	No	1			
	(e) Drawing tables	No	1			
	(f) Conference tables	No	1			
B14.03	Office and laboratory fittings, installations and equipment:					
	(a) Items measured by number:					
	(i) 220/250 volt power points including voltage stabilisers and regulators as specified	No	2			
	(iii) Double 80 watt fluorescent-light fittings complete with ballast and tubes	No	2			
	(iv) Double 55 watt fluorescent-light fittings complete with ballast and tubes	No	2			
	(vi) Wash-hand basins complete with taps and drains	No	1			
	(x) Fire extinguishers, 9,0 kg all purpose dry powder type, complete, mounted on wall with brackets	No	1			
	(xi) Air-conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	No	1			
1400	Carried forward					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK				SECTION 1400		
ITEM NO	DESCRIPTION		UNIT	QUANTITY	RATE	AMOUNT
	Brought forward					
B14.03 (cont)	(a)	(xiv) General-purpose steel cupboards with shelves	No	1		
		(xvi) Refrigerators	No	1		
		(xvii) Bookcases	No	1		
		(xviii) Voltage stabilizers	No	1		
		(xix) Steel plan cabinets	No	1		
		(xx) Floodlights complete with poles and minimum 500 watt globes	No	1		
	(b)	Prime-cost items and items paid for in a lump sum:				
		(ix) Provision of cellphones complete with car kits fitted to vehicles as directed, including all fees and the cost of phone calls in connection with the administration of the Contract	PC Sum	1	10 000.00	10 000.00
		(x) Handling costs and profit in respect of subitem B14.03(b)(ix) above	%	10 000.00		
14.04		Car ports	No	2		
14.08		Services:				
	(a)	Services at offices and laboratories:				
		(i) Fixed costs	Lump Sum	1		
		(ii) Running costs	month	8		
14.10		Provision of photostat facilities	month	8		
B14.12		Supply of computer hardware and software:				
	(a)	Supply of computer equipment and software	PC Sum	1	10 000.00	10 000.00
	(b)	Handling cost and profit in respect of subitem B14.12(a)	%	10 000.00		
1400	TOTAL CARRIED TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 1700			Cast-in situ deck		
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1500	ACCOMMODATION OF TRAFFIC				
15.03	Temporary traffic-control facilities				
	(a) Flagmen	man-day	160.0		
	(d) Amber flicker lights	No	2.0		
	(e) Road signs, R- and TR-series, 1200mm dia	No	2.0		
	(f) Road signs, TW-series, 1524mm	No	2.0		
	(g) Road signs, STW-series, DTG, TGS- and TG-series (excluding delineators and barricades)	m ²	2.0		
	(h) Delineators (DTG50J) (250 x 1000mm) :				
	(i) Single	No	20.0		
	(i) Moveable barricade/road sign combination	No	2.0		
	(m) Two-way communication devices	No	2.0		
B15.03	(n) Cost of daily patrol	month	8.0		
B15.16	Costs incurred by contractor for:				
	(a) Media release on public relations	PC	1.0	30 000.0	30 000.0
	(b) Handling costs and profit in respect of subitem B15.16(a)	%	30 000.0		
B15.18	Penalty for non-compliance with requirements for accommodation of traffic				
	(a) Fixed penalty for occurrence	No			Rate Only
	(b) Time-related penalty	h			Rate Only
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019

PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 1700			Cast-in situ deck		
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1500	ACCOMMODATION OF TRAFFIC				
15.03	Temporary traffic-control facilities				
	(a) Flagmen	man-day	160.0		
	(d) Amber flicker lights	No	2.0		
	(e) Road signs, R- and TR-series, 1200mm dia	No	2.0		
	(f) Road signs, TW-series, 1524mm	No	2.0		
	(g) Road signs, STW-series, DTG, TGS- and TG-series (excluding delineators and barricades)	m ²	2.0		
	(h) Delineators (DTG50J) (250 x 1000mm) :				
	(i) Single	No	50.0		
	(i) Moveable barricade/road sign combination	No	2.0		
	(m) Two-way communication devices	No	2.0		
B15.03	(n) Cost of daily patrol	month	8.0		
B15.16	Costs incurred by contractor for:				
	(a) Media release on public relations	PC	1.0	50 000.0	50 000.0
	(b) Handling costs and profit in respect of subitem B15.16(a)	%	50 000.0		
B15.18	Penalty for non-compliance with requirements for accommodation of traffic				
	(a) Fixed penalty for occurrence	No			Rate Only
	(b) Time-related penalty	h			Rate Only
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 5500		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
51.01 (c)	Grouted stone pitching on concrete bed at inlet (200 thick) and around substructure foundation	m ²	250		
52.03	(a) Galvanized gabion boxes (2x1x1)	m ³	550		
	(b) Galvanised gabion mattresses (3m wide)	m ³	135		
52.04	Bidim A5 filter fabric	m ²	550		
54.01	Guardrails on timber posts				
	(a) Galvanized (single)	m	120		
54.04	End treatments				
	(a) End wings	No	4		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6100		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6100	FOUNDATIONS FOR STRUCTURES				
	Excavation:				
61.02	(a) Excavating soft material situated within the following successive depth ranges:				
	(i) 0m up to 2m	m ³	1 000		
	(ii) Exceeding 2m and up to 4m	m ³	500		
	(b) Extra over sub-item 61.02 (a) for excavation in hard material irrespective of depth	m ³	500		
	(c) Extra over subitem 61.02(a) for additional excavation required by the engineer after the excavation has been completed	m ³	200		
	(d) Extra over subitem 61.02 (a) for excavation by hand	m ³	100		
61.03	Access and drainage:				
	(a) Access	Lump Sum	1.00	150 000.00	150 000.00
	(b) Drainage where no access has been provided (provisional)	Lump Sum	1.00	150 000.00	150 000.00
61.04	Backfill to excavationsn utilising:				
	(a) Material from the excavation	m ³	1 200		
	(b) Imported material	m ³	300		
61.05	Fill within a restricted area (extra over item 33.01)	m ³	200		
61.06	Overhaul in excess of 1,0km on excavated material and on material imported for backfill, foundation fill and fill for caissons	m ³ -km			
	(a) Rock Fill	m ³	1 000		
	(b) Crushed-stone Fill	m ³	300		
	(c) Compacted granular material	m ³	270		
	(d) Mass concrete (class 15/19) (provisional)	m ³	150		
	(e) Concrete screed, 75mm thick, class 15/13 concrete	m ³	60		
61.14	Foundation lining				
	(a) 0,250m Um PVC dampproof membrane under approach slab	m ²	130		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6200		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6200.00	FALSEWORK, FORMWORK AND CONCRETE FINISH				
62.02	Vertical formwork to provide:				
	(a) Class F1 finish to:				
	(i) Culvert Base	m ²	60		
	(ii) Apron Slabs	m ²	90		
	(iii) Walkway Slab	m ²	80		
	(ii) Wing walls Bases	m ²	50		
	(b) Class F2 finish to:				
	(i) Culvert Walls	m ²	605		
	(ii) Wing walls	m ²	380		
	(iii) Walkway Slab	m ²	40		
	(iv) Head Walls	m ²	300		
62.03	Horizontal formwork to provide:				
	(a) Class F2 finish to:				
	(i) Culvert soffit	m ²	450		
B62.10	Service ducts:				
	(i) To form voids of 160mm nom. diameter in deck cantilever	m	70		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
 PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6200		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6200	FALSEWORK, FORMWORK AND CONCRETE FINISH (continued)				
B62.11	Unformed surfaces				
	(a) Class U1 surface finish to top of:				
	(i) Culvert footings	m ²	480		
	(ii) Apron Slabs footings	m ²	380		
	(iii) Culvert Roof	m ²	480		
	(b) Class U2 surface finish to top of:				
	(i) Wing walls	m ²	15		
	(ii) Head walls	m ²	15		
TOTAL CARRIED FORWARD TO SUMMARY					

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PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6300			Cast-in situ deck		
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6300	STEEL REINFORCEMENT FOR STRUCTURES				
63.01	Steel reinforcement for:				
	(a) Culvert footings				
	(i) High-yield-stress steel bars (450 Mpa)	t	55		
	(b) Apron Slab				
	(i) High-yield-stress steel bars	t	25		
	(c) Apron Slab Beams				
	(i) Mild steel bars (250MPa)	t	1		
	(ii) High-yield-stress steel bars (450 Mpa)	t	2		
	(d) Culvert walls				
	(i) Mild steel bars (250MPa)	t	1		
	(ii) High-yield-stress steel bars (450 Mpa)	t	30		
	(e) Culvert Roof Slab				
	(i) Mild steel bars (250MPa)	t	1		
	(ii) High-yield-stress steel bars (450 Mpa)	t	45		
	(f) Wing Walls				
	(i) Mild steel bars (250MPa)	t	1		
	(ii) High-yield-stress steel bars (450 Mpa)	t	15		
	(h) 800mm high concrete barrier				
	(i) Mild steel bars	t	1		
	(ii) High-yield-stress steel bars	t	3		
	(j) Hand rails				
	(i) Mild steel bars (250MPa)	t	1		
	(ii) High-yield-stress steel bars	t	3		
	(l) Sidewalk				
	(i) Mild steel bars (250MPa)	t	1		
	(ii) High-yield-stress steel bars	t	8		
TOTAL CARRIED FORWARD					

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 PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6400		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6400	CONCRETE FOR STRUCTURES				
64.01	Cast in situ concrete				
	(a) 40/19				
	(i) Culvert Base footing	m ³	315		
	(ii) Apron Slab	m ³	200		
	(iii) Apron Slab Beams	m ³	10		
	(iv) Culvert walls	m ³	190		
	(v) Culvert Roof slab	m ³	290		
	(vi) Wing Walls	m ³	65		
	(vii) Head Walls	m ³	60		
	(d) 30/19				
	(i) Sidewalk	m ³	100		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

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PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6600		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6600	NO-FINES CONCRETE, JOINTS, BEARING, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES				
66.05	Expansion Joints: (Polystyrene strip between)				
	(a) Culvert Walls, 10mm thick and 4700 deep	m	15		
	(b) Sidewalk slab, 10mm thick and 500 deep	m	10		
66.06	Filled joints:				
	(a) 10mm Bitumen impregnated fibre board between Culvert and Wing Walls	m ²	10		
66.07	Joints:				
	(b) Backing rod between Culvert Walls	m	15		
66.08	Sealing of joints with:				
	(a) Polyurethane sealant between Culverts	m	15		
66.13	Sheeting layers:				
	(a) Polyethylen sheeting (0.25mm) under apron slab	m ²	390		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
 PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE @ KM			Option 2		
SECTION 6600			Cast-in situ voided deck		
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
66.15	Concrete Parapets				
	(i) NJ - 800mm concrete barrier	m	64		
	(ii) Hand rails	m	64		
66.17	End blocks: (To end of)				
	(i) NJ - 800mm concrete barrier	No	4		
	(ii) Hand rails	No	4		
66.18	Numbers for structures				
	(c) Numbers formed in concrete	No	2		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CONSTRUCTION OF ROAD OVER RIVER BRIDGE AT ELANDSHOEK					
SECTION 6600		Cast-in situ deck			
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6600	NO-FINES CONCRETE, JOINTS, BEARING, PARAPETS AND DRAINAGE FOR STRUCTURES (continued)				
66.19	Drainage pipes and weep holes				
	(a) Agricultural drainage pipes (M65 nelton pipe or similar approved) behind the				
	(i) Culvert ends (200mm diameter)	m	30		
	(ii) Head walls (200mm diameter)	m	64		
	(iii) Supply and install weep holes on Culvert ends (Ø 75mm)	m	15		
	(ii) Supply and install weep holes Head walls (Ø 50mm)	m	20		
66.20	Supply and install drainage collecting pit @ approachs including welded mesh reinforcement	No	4		
66.20	Supply and install precast concrete down chutes	m	160		
TOTAL CARRIED FORWARD TO SUMMARY					

PART C 3

CONTRACT No: 16/2019
PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



ELANDSHOEK N4 INTERSECTION ROAD

16/2019

SUMMARY OF PRICE SCHEDULE

(Insert summary of BOQ Hereafter)

CONSTRUCTION OF ROAD OVER RIVER CULVERT AT ELANDSHOEK		
ITEM NO	DESCRIPTION	AMOUNT R
	BoQ CONCEPTUAL COST ESTIMATE SUMMARY	
1200	GENERAL REQUIREMENTS AND PROVISIONS	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL	
1500	TRAFFIC ACCOMMODATION	
3200	STOCKPILING	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT BASE AND SURFACING	
5100	PITCHING, STONEMWORK AND EROSION PROTECTION	
5700	ROAD MARKINGS	
6100	FOUNDATIONS FOR STRUCTURES	
6200	FALSEWORK FORMWORK AND CONCRETE FINISH (1)	
6200	FALSEWORK FORMWORK AND CONCRETE FINISH (2)	
6300	STEEL REINFORCEMENT	
6400	CONCRETE	
6600	NO FINES CONCRETE, JOINTS, BEARINGS, ETC	
6600	PARAPETS, DRAINAGE ETC	
	ELECTRICAL	
	TOTAL CARRIED TO CALCULATION OF TENDER SUM	

PART C 3

CONTRACT No: 16/2019
 PROJECT NAME: Construction of Elandshoek N4 Intersection for COM



CITY OF MBOMBELA			
CONTRACT NO			
FOR			
ELANSHOEK ACCESS ROAD			
CALCULATION OF TENDER SUM			
TOTALS BROUGHT FORWARD FROM SUMMARY OF SCHEDULE OF QUANTITIES			
SCHEDULE A : ROAD CONSTRUCTION		R	
TOTAL OF SCHEDULE OF QUANTITIES		R	
CONTRACT PRICE ADJUSTMENT Sum provided in terms of the provisions of the General Conditions of Contract		R	
CONTINGENCIES The sum provided here is under the sole control of the engineer and may be deducted in whole or in part		R	
SUBTOTAL		R	
VALUE-ADDED TAX (VAT) The tenderer shall add 15% of the subtotal for VAT		R	
TENDER SUM CARRIED TO FORM OF TENDER		R	
SIGNED ON BEHALF OF TENDERER :			

ELANDSHOEK N4 INTERSECTION ROAD

16/2019

C3: SCOPE OF WORK

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TECHNICAL SPECIFICATION

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PART C3

SCOPE OF WORK

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- C3.1.2 Overview of the Works
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- C3.6.3 Barricades and lighting
- C3.6.4 Traffic control on roads
- C3.6.5 Measures against disease and epidemics
- C3.6.6 Aids awareness

C3. STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the Standard Specification for Road and Bridge Work for State Road Authorities (1998 Edition), the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 COM OBJECTIVES

The employer's objectives are to deliver public infrastructure using labour-intensive methods with the aim of services delivery, job creation and poverty alleviation. The work entails the Construction of A Culvert at Elandshoek. As part of the construction of the new road, job creation will occur through the employment of local labourers, local subcontractors.

Labour-intensive works comprise the activities described by the letter "L" in the Item Column in the Bill of Quantities which are to be performed by hand/Labour-Intensive Specification(1) and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this scope of work.

Should any work or varied work not to be covered by any of the project or particular specifications, then the Standard Specification for Road and Bridge Works for State Road Authorities (1998 Edition) shall apply. In the absence of such standardised specification, the Engineer shall issue the necessary specification.

C3.1.2 OVERVIEW OF THE WORKS

This Particular Specification covers the construction of concrete cast in-situ culvert structure crossing a stream and related activities. It also covers paving paths on either sides of the culvert. The culvert foundations consist of dump rock and weak mass concrete. The wingwalls are on spread footings and dump rock.

This specification also covers any other work arising out of or incidental to the above or required of the Contractor for the proper completion of the Works in accordance with the true meaning and intent of the contract documents

C3.1.3 EXTENT OF WORKS

The scope of the work consists of:

- Establishment of Contractor
- Accommodation of traffic
- Relocation of services
- Clearing and grubbing
- Cast iron gratings for gullies and storm water drains
- uPVC pipes for underground non-pressure application
- Precast concrete kerbs and channels
- Earthworks
- Gabions and Pitching
- Concrete (structural)
- Precast concrete
- Cable ducts
- Stormwater drainage
- Kerbing and channeling
- Falsework, formwork and concrete finish
- Electrical works

C3.1.4 LOCATION OF THE WORKS

The works are in the Elandshoek in the Mbombela area.

The approximate location of the township:

Latitude: 25° 21' 56"S
Longitude: 31° 11' 14"E

C3.1.5 TEMPORARY WORKS

The Employer is responsible for the design of the permanent Works as reflected in these Contract Documents unless otherwise stated.

The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

The Contractor shall supply all details necessary to assist the engineer in the compilation of the as-built drawings.

The contractor is to ensure that he obtains the necessary wayleaves and departmental approvals prior to commencing with any works within a road reserve or on public property.

C3.2 ENGINEERING

C3.2.1 DESIGN

(a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.

(b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

(c) The Contractor shall PROVIDE all details necessary to assist the Engineer in the compilation of the as-built drawings.

C3.2.2 COM'S DESIGN

The design norms and standards for the project were based as far as possible on the publications listed below:

COLTO Standard Specifications for Road and Bridge Works for State Authorities (1998 Edition)

City of Mbombela applicable standards and specifications

The General Conditions of Contract for Works of Civil Engineering Construction, First Edition (2010), issued by the South African Institute of Civil Engineers

The design philosophy is that services should be provided at a level and cost affordable to the beneficiaries. The long term cost is the determining factor that includes the cost of maintaining services when a suitable level is considered.

The contractor must adhere to the specifications at all times.

C3.2.3 CONTRACTOR'S DESIGN

(a) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

(b) The Contractor shall compile the as-built drawings which will be certified by the professionally registered engineer.

Where the contractor is to responsible for the design of designated parts of the permanent Works or temporary Works he shall provide full working drawings supported by a professional engineer's design certificate.

C3.2.4 DRAWINGS

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by co-ordinates. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings, must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

The Drawings prepared by the Employed for the permanent Works are listed The Employer reserves the right to issue amended and/or additional drawings during the Contract.

The drawings listed hereunder, bound into Annexure A, refer to the work described in this contract.

- C – SH_01 SITE PLAN A (Locality)
- C – SH_02 SITE PLAN B (Geotechnical Information)
- C – SH_03 GENERAL ARRANGMENT
- C – SH_04 CULVERT DETAILS
- C – SH_05 PARAPETS DETAILS
- C – SH_06 MISCELLANEOUS DETAILS
- C – SH_07 LIGHTING - LAYOUT

These drawings are for bid purpose only and all design drawings, including detail drawings and standard detail drawings are to be approved by the employer prior to construction.

C3.2.5 DESIGN PROCEDURES

The following design procedure (not in any order) must be following:

Wayleaves will need to be obtained from relevant authorities by the Engineer before any construction work can commence

Existing services must be located and shown on the drawings

Environmental and safety considerations

Any temporary works requirements, in order to protect the works as well as person and property that will be affected by the construction activities.

C3.3 PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT

C3.3.1.1 Requirements

Refer to Form 2.3.3

C3.3.2 SUBCONTRACTING

C3.3.2.1 Scope of mandatory subcontract works

In addition to the requirements of the General Conditions of Contract, the Contractor shall be responsible for all work carried out by sub-contractors on his behalf. The Engineer will not communicate directly with such sub-contractors. Problems related to payments, programming, workmanship, etc, shall be the concern of the Contractor and the sub-contractor, and the Engineer will not become involved in this regard. The Contractor shall approach the Project Steering Committee for assistance and advice regarding conditions of employment, minimum wages, disputes and disciplinary procedures in respect of local sub-contractors.

The contractor has an obligation to tender out 10% of the total value of the contract inclusive of the portion of works listed below:

- 1) Concrete kerbing and channelling
- 2) Pitching, stonework and protection against erosion
- 3) Hand Finishing road and culvert
- 4) Hand Landscaping and grassing
- 5) Paved Walkways

C3.3.2.2 Preferred subcontractors/suppliers

List of approved local subcontractors and suppliers, can be obtained from the Municipality.

C3.3.2.3 Subcontracting procedures

Contracts with sub-contractors must be submitted to the Employer for approval before appointment. The works cannot be subcontracted without prior approval by the Employer.

C3.3.2.4 Attendance on subcontractors

Refer to Form 2.3.3

C3.4 CONSTRUCTION

C3.4.1 WORKS SPECIFICATIONS

C3.4.1.2 Project Specifications

The relevant provisions of the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition) shall apply to the contract with the following amendments:

Replace clause with the following:

The general conditions of contract are the General Conditions of Contract for Construction Works (2010) as published by the South African Institution of Civil Engineering read in conjunction with the Contract Data.

Clause No. in the Standard Specifications	Clause No. in COLTO General Conditions	Equivalent Clause No. in General Conditions of Contract 2004
1202	15	12(2)
1206	14	Deleted
1209	52	49(1)(5)
1210	54	51(1)
1212(1)	49	46
1215	45	42(2)
1217	35	32
1303	49	46
1303	53	50
1303	12	10
1303	45	42(2)
1403	40(1)	37
1505	40	37
31.03	40	37
3204(b)	40	37
3303(b)	2	2
5803(c)	40	37
5805(d)	40	37
6103(c)	40	37
Item 83.03	22	19
ALL SECTIONS	48	45

Each Specification or Standard referred to in the Contract Documents but not bound therein shall be the latest edition or revision published by the date, which are six calendar months prior to the closing date for receipt of tenders.

C3.4.1.3 National and International Standards

No other standards are applicable

C3.4.2 SITE ESTABLISHMENT

C3.4.2.1 Services and facilities provided by the Employer

- (a) Water sources
 - (i) Alternative A

Contractor responsibility

The Contractor is to provide, and remove and make good upon completion, all the necessary temporary plumbing connections and purchase water from the local authority for the works at his own cost

- (b) Electricity Services
- (i) Alternative A

Contractor responsibility

The Contractor is to provide, and remove and make good upon completion, all the necessary temporary electrical connections and installations and purchase electricity from the local authority / ESKOM for the works at his own cost

- (c) Excrement disposal
- (i) ALTERNATIVE A - Water-borne sewage disposal NOT available

The Contractor must make his own provisions for temporary ablution facilities.

Should the Contractor, in complying with his obligations in terms of sub clause C3.4.2.2(d): Excrement disposal, wish to avail himself of such facility, he shall, in accordance with the provisions of sub clause C3.4.2.2(d), and at his own cost, be responsible for making his own arrangements with the responsible disposal authority, and for making such connections he may require to the available services.

If so required by the responsible sewage disposal authority, the Contractor shall, at his own cost, be responsible for making connections to the available services at the Positions specified by the sewage disposal authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water-borne sewage disposal will necessarily be adequate for the Contractor's purposes nor that its operation is in any way guaranteed.

- (d) Area for contractor's site establishment

Employer to make site available)

A specific area in close proximity to or on the Site of the Works will be made available by the Employer to the Contractor for the Contractor's site establishment. The specific area for the Contractor's site establishment will be identified to the Contractor by the Engineer and the Contractor shall have sole use of such area, free of charge, for the duration of the Contract. The Contractor shall use this area only for the purposes of erecting his site offices, workshops, stores and other facilities required for the execution of the Contract. The Contractor shall not use the area nor allow it to be used for any purposes not directly associated with the execution of the Contract.

The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

Should the Contractor deem the area made available by the Employer to be inadequate or unsuitable for the Contractor's particular needs, then the Contractor shall be at liberty to make his own arrangements with the owners of other sites which he considers are better suited to his needs; provided always that the use by the Contractor of any area other than that made available to him by the Employer shall be subject to the prior written approval of the Engineer, which approval shall not be unreasonably withheld; and provided further that the Contractor shall have no claim against the Employer in respect of any costs incurred by him, either directly or indirectly in consequence of utilising any area other than that made available to him by the Employer, and which costs exceed those costs allowed for by the Contractor in his Bid.

C3.4.2.2 Facilities provided by the Contractor

(a) Facilities for the Engineer

(i) Office accommodation

ALTERNATIVE 2

No separate office is required for the Engineer or his Representative, but the Contractor must provide a suitable office desk with lockable drawers, an office chair and a lockable plan cupboard in one of his offices, for the exclusive use of the Engineer and his Representative.

The Engineer and his Representative shall be allowed free use of all the Contractor's site facilities.

The Engineer and the Engineer's Representative shall be allowed free use of survey equipment and assistants to carry out control work as and when required, and the Contractor shall provide all pegs, concrete, tools and other necessary items as well as all necessary labour for excavation, bush clearing, mixing and placing of concrete, as and when required for the control of the setting out of the Works.

(ii) Carports

ALTERNATIVE 2

The Contractor shall provide on Site for the duration of the Contract, One (1) carport for the sole use of the Engineer and his staff. Each carport shall be constructed so that the vehicle parked under it is always protected against the direct rays of the sun. The carport area shall be at least 20 m² and the floor shall be covered with a layer of crushed stone to alleviate dusty and muddy conditions. The carport(s) shall be positioned so as to provide easy and convenient access to the Engineer's office.

(iii) Site meeting venue (Compulsory)

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of six (6) persons at site meetings. The Engineer shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.

(iv) Contract name boards (Compulsory)

ALTERNATIVE 2

The Contractor shall provide, erect and maintain One (1) contract name boards at such positions and locations directed by the Engineer, which name boards shall, unless otherwise specified elsewhere in the Contract, comply with the recommendations for the standard board of the South African Association of Consulting Engineers, with regard to size, painting, decorating and detail, and the requirements described hereunder.

Each name board shall be made of tempered hardboard with a thickness of at least 12 mm, so braced on the reverse side as to prevent warping and shall be mounted on two or more, as necessary, firmly planted poles. The painting of the boards shall comply with the relevant requirements of CKS 193 and the colours of the paints shall be an acceptable match to the applicable colours given in SABS 1091.

The Contractor shall keep the contract name boards in good state of repair for the duration of the Contract and shall remove them on completion of the Contract.

(v) Survey equipment and assistants

ALTERNATIVE 1

Survey equipment

The Contractor shall, in accordance with the requirements of COLTO Section 1400 (as amended) provide the following survey equipment for the exclusive use of the Engineer and his staff:

- 1 upright reading automatic level with tripod;
- 1 metric levelling staff with protective cover bag;
- 6 ranging rods;
- 1 100 metre Stilon tape measure;
- 1 ± 2 kg hammer.

Whenever reasonably required by the Engineer, the Contractor shall, in accordance with the requirements of COLTO Section 1200, make available to the Engineer or his representative, the following additional survey equipment:

- 1 tachometer with tripod;
- 1 survey staff for tachometer;
- 1 Distomat, complete with tripod, fully charged battery and all appurtenant accessories.

Survey assistants

The Contractor shall, make available to the Engineer, two (2) survey assistants.

All such survey equipment provided by the Contractor shall be in good condition, properly calibrated and fit for the purpose and shall be kept fully serviceable at all times by the Contractor at his own cost. The Contractor shall have any defective equipment repaired or replaced at his own cost within 12 hours after notification by the Engineer's staff.

Where required by the Engineer, the Contractor shall at his own cost, promptly arrange for the recalibration of survey equipment provided.

(vi) Telephone facilities

ALTERNATIVE 2

The Contractor shall, for the duration of the Contract, provide the telephone facilities as specified hereunder for the exclusive use of the Engineer and his staff:

Telkom telephones

Subject to the availability of telephone lines, the Contractor shall, at his own cost, make all necessary arrangements with Telkom for the provision of a complete direct and independent telephone service which is not connected to the Contractor's telephone exchange. Such Telkom telephone service shall comprise:

- Exchange lines: Nil
- Extensions: Nil

The Contractor shall advise Telkom promptly of any faults which develop in the telephone service and shall, in such circumstances, arrange for the earliest possible restoration of the said service.

The Contractor shall ensure that the telephone account is promptly paid. The Contractor shall, on production of an itemised statement, be reimbursed only the cost of the Engineer's telephone calls.

Cell phones

In addition to a Telkom telephone line and subject to satisfactory transmission and reception quality in the vicinity of the Site, the Contractor shall provide NIL (0) cell phones and associated service contracts from a reputable cellular service provider. The Contractor shall further insure the cell phones against loss or damage from whatever cause arising, and shall ensure that all cell phone accounts are promptly paid on the due dates for payment. The Contractor shall further, at his own cost, ensure the prompt repair of all cell phones provided under this clause, when reasonably required by the Engineer.

The Contractor shall, on production of an itemised statement, be reimbursed only the cost of the Engineer's cell-phone calls.

(vii) Computer facilities

Computers

Computers shall comply with the following minimum specifications:

1 of required:

- (i) Dell Latitude E6430 Intel i7 Notebook
- (ii) 8GB DDR 3
- (iii) 256 GB SSD
- (iv) DVD +/- RW Drive
- (v) Wi-Fi + Bluetooth enabled
- (vi) Minimum 1 GB Graphics Card
- (vii) Windows 8 Professional Office 2013 or later
- (viii) Carry Case

Printers

Printers shall, unless otherwise approved by the Engineer, be Desk Jet (Black and White) or laser printer.

All computer hardware shall be provided complete with the requisite connecting cables and all inter-facing devices and software necessary for its efficient operation as an integral system.

(viii) Fax facilities

Not required

(ix) Electricity Services for the Engineer

All electricity services to the Engineer's office(s) and laboratory (if applicable), whether provided by the Contractor by way of a reticulated services from a local authority or other authorised electricity services, or by way of on-site generators, shall be regulated by the Contractor to within limits such as to prevent damage due to fluctuations in the electrical current services that may occur to any electrical plant and equipment provided by the Contractor or the Engineer.

The Contractor shall be liable for and pay to the Engineer on demand, all costs that the Engineer may incur in the repair or replacement of any electrical equipment provided by the Engineer on the Site. Reliance by the Contractor on the regulation of the electrical services by the supplier or on current regulators fitted to generators shall not absolve the Contractor of his liabilities in terms of this Sub clause and, where appropriate, the Contractor shall provide and install at his own cost, all such electrical current-regulating equipment as is necessary to prevent damage to the said equipment.

(x) Site instruction book

The Contractor shall keep a triplicate book for site instructions on the Site at all times.

(xi) Housing for Engineer's Representative

Not Required

(b) Water

The Contractor shall, at his own expense, be responsible for obtaining and distributing all water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use, as well as for making all arrangements in connection therewith. The Contractor shall further, at his own expense, be responsible for providing all necessaries for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Engineer, produce proof of such Compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Engineer, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of water, the costs of which will be deemed to be included in the Contractor's bided rates.

(c) Electricity

The Contractor shall, at his own expense, be responsible for obtaining and distributing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's bided rates and prices.

(d) Excrement disposal
(ii) ALTERNATIVE 2: Disposal on site allowed

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the Engineer and the responsible health authorities in the area of the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this sub clause and the costs thereof shall be deemed to be included within the Contractor's bided Preliminary and General Items.

C3.4.2.3 Site usage

During the process of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

An item for the operating of a first aid and medical service as described by the Contractor is scheduled. The sum for this item shall include the cost.

C3.4.2.4 Permits and Wayleaves

The Contractor shall be responsible to obtain all the way leave required under this Contract.

The way leave to be obtained by the Contractor consists of but is not limited to the following:

City of Mbombela Water Department
City of Mbombela Electricity Department
City of Mbombela Roads and Storm water Department
Eskom
Telkom

C3.4.2.5 Features requiring special attention

(a) Site maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

(b) Testing and quality control

(i) Contractor to engage services of an independent APPROVED SANAS ACCREDITED laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved SANAS accredited independent laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Engineer in deciding whether the quality of materials utilised and workmanship achieved by the Contractor comply with the requirements of the Specifications. The foregoing shall apply irrespective of whether the specifications indicate that the said testing is to be carried out by the Engineer or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Engineer with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, an "independent laboratory" shall mean an SANAS approved laboratory which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(ii) Additional testing required by the Engineer

In addition to the provisions of subclause C3.4.2.5(b)(i): Contractor to engage services of an independent laboratory, the Engineer shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in subclause C3.4.2.5(b)(i), at such times and at such locations in the Works as the Engineer shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Engineer, and copies of the test results shall be promptly submitted to the Engineer.

(iii) Costs of testing

(a) Tests in terms of subclause C3.4.2.5(c)(i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.2.5(c)(i), above shall be borne by the Contractor and shall be deemed to be included in the bided rates and prices for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.2.5(c)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes Necessary to carry out additional tests (eg re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor's account.

(b) Additional tests required by the Engineer

The costs of any additional tests required by the Engineer in terms of subclause 13.04: Additional testing required by the Engineer, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional tests ordered by the Engineer, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

(c) Subcontractors

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Engineer and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Engineer will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Engineer will not become involved.

(d) Opening up and closing down of designated borrow pits

None

(e) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 17.1 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the Occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(f) Existing residential areas

Electricity and water SERVICES interruptions in existing residential areas shall be kept to a minimum. The Engineer's approval shall be obtained prior to such interruptions and residents shall be notified in writing at least 24 hours but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

(g) Labour-intensive competencies of supervisory and management staff

Contractor having a CIDB contractor grading designation of 5CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the

period 1 April 2004 to 30 June 2006, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE, 2CE, 3CE and 4CE shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme, for the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour-intensive Construction systems and Techniques to Work Activities	This unit standard must be completed, and one of these 3 unit standards be used
		Use Labour-intensive Construction Methods to Construct and Maintain roads and Stormwater Drainage	
		Use Labour -intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-intensive Construction methods to Construct, Repair and Maintain Structures	
Foreman / supervisor	4	Implement Labour-intensive Construction systems and Techniques	This unit standard must be completed, and any one of these 3 unit standards be used
		Use Labour-intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	
		Use Labour-intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (ie the contractor's most senior representative who is resident on the site)	5	Manage Labour-intensive Construction Processes	Skills Programme against this single unit standard

LOCAL LABOUR AND TRAINING

The Bidder shall limit the utilisation of his permanently employed personnel to Key Personnel, such as Bids Managers, Site Agents, Foremen, Supervisors, Plant Operators, Materials and Survey Technicians, Trainers, Buyers, Store men and the like should such expertise not be available out of the community. All other personnel and labourers shall be recruited locally

The Bidder shall make maximum use of the human resources existing in the local community. The bidders shall apply to the employment labour desk, conveyed by the Steering Committee for details of those labourers who are available in the area of work and he shall provide preference to those labourers identified by the Steering Committee.

Formal structured skills training of labour in certain fields have been done. The bidder shall utilise trained labour in all instances. The employment of labour from outside the local area will only be considered and permitted by the Engineer in the event of:

a) the unavailability of sufficient numbers of local labourers to execute the work;
b) the unavailability within the local community of the required skills necessary for the execution of specific portion of work, and where the completion period does not permit the creation of the necessary skills through training.

In both cases the Bidder shall prove to the satisfaction of the Engineer that he has exercised his best endeavours and taken all reasonable actions to recruit local labour.

The bidder shall maintain accurate and comprehensive daily records of all labour engaged on the bid and shall submit to the Engineer at two weekly intervals detailed labour returns substantiating the actual numbers of labourers employed, the amounts actually paid in respect thereof, and details of the various activities undertaken by the labourers.

The employment of casual labour will be done in co-operation with community leaders and local structures. The bidder shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, No 75 of 1997, as determined by the Department of Labour.

(j) Monthly statements and payment certificates

The statement to be submitted by the Contractor in terms of Clause 49 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal working days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of Subclause 49.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

(k) Construction in restricted areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be

strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices bided will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

(l) Notices, signs, barricades and advertisements

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their SERVICES, erection, maintenance and ultimate removal and shall make provision for this in his bided rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

(m) Workmanship and quality control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates bided for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

C3.4.2.6 Extension of time due to abnormal rainfall

NOTE: 1 ALTERNATIVE 1 (Rainfall formula) should be used for projects where all the Works are to be executed "out of doors" (ie in the open) where all or most of the Works will be affected by rain, and where historical rainfall data is available.

2 ALTERNATIVE 2 (Critical path method) should be used where historical rainfall records are not available and/or where significant portions of the Works are to be executed in the dry and will not be delayed by rainfall. Note also that when Alternative 2 (Critical path method) is used, then compilers must ensure that a critical path programme is called for.

3 ALTERNATIVE 3 (No extension of time for rainfall) should be used with caution. Normally this alternative will only be used where all the Works are to be executed under cover and will not be affected by rainfall and wet climatic conditions.

ALTERNATIVE 1 (Rainfall formula)

(a) Extension of time in respect of delays resulting from wet climatic conditions on the Site will only be considered in respect of abnormally wet climatic conditions and shall be determined for each calendar month or part thereof, in accordance with the formula given below:

$$V = (Nw - Nn) + (Rw - Rn)/X$$

in which formula the symbols shall have the following meanings:

V = Potential extension of time in calendar days for the calendar month under consideration:

If V is negative and its absolute value exceeds N_n , then V shall be taken as equal to minus N_n .

When the value of V for any month exceeds the number of days in the particular month, V will be the number of days in the month.

N_w = Actual number of days in the calendar month under consideration on which a rainfall of Y mm or more was recorded on the Site

N_n = Average number of days, derived from existing records of rainfall in the region of the Site, on which a rainfall of Y mm or more was recorded for the calendar month

R_w = Actual rainfall in mm recorded on the Site in an approved rain gauge for the calendar month under consideration

R_n = Average rainfall in mm for the calendar month, derived from existing records of rainfall in the region of the Site

The factor $(N_w - N_n)$ shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall exceeds Y mm.

The factor $(R_w - R_n)/X$ shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

(b) The rainfall records at nearest rainfall station reproduced in the accompanying table, and the monthly averages (R_n and N_n) for this period shall, for the purposes of this Contract be taken as normal and as the values to be substituted for R_n and N_n in the formula above. The values of X and Y shall be 20 and 10 respectively.

The potential extension of time V has been calculated for each month and year of the period concerned to indicate the possible effect of the rainfall formula. The values of V were obtained by applying the rainfall formula and using the actual rainfall figures and the calculated values of R_n and N_n indicated in the table.

(c) The Contractor shall, at his own cost, provide and erect on the Site at a location approved by the Engineer, an approved rain gauge, which shall be fenced off in a manner which will prevent any undue interference by workmen and others. The Contractor shall, at his own cost, arrange for the reading of the rain gauge on a daily basis for the duration of the Contract. The gauge readings, as well as the date and time at which the reading was taken shall be recorded in a separate record book provided by the Contractor for this purpose. All entries in the rainfall record books shall be signed by the person taking the reading and the gauge shall be properly emptied immediately after each reading has been taken. If required by the Engineer, the Engineer shall be entitled to witness the reading of the gauge.

(d) The Contractor's claims in terms of Subclause 42.2 of the Conditions of Contract for extension of time in respect of delays resulting from wet climatic conditions on the Site during each month, shall be submitted in writing to the Engineer monthly;

provided always that

(i) the period allowed to the Contractor in terms of Clause 48 of the Conditions of Contract in which to submit his claim for each month shall be reduced to seven (7) days, calculated from the last day of the month to which the claim applies; and

(ii) the 28-day period allowed to the Engineer in terms of Subclause 42.2 of the Conditions of Contract in which to give his ruling on the claim, shall be reduced to fourteen (14) days.

The Contractor's monthly claim shall be accompanied by a copy of the signed daily rainfall readings for the applicable month.

(e) The extent of any extension of time which may be granted to the Contractor in respect of wet climatic conditions (whether normal or abnormal) shall be determined as the algebraic sum of the "V" values for each month between the Commencement Date and the Due Completion Date of the Contract, calculated in accordance with subclause C3.4.2.6(a) above; provided always that

(i) rainfall occurring within the period of the Contractor's Christmas shut-down period (referred to in Subclause 1.6 of the Conditions of Contract) shall not be taken into account in the calculation of the monthly "V" values;

(ii) rainfall occurring during any period during which the Contractor was delayed due to reasons other than wet climatic conditions on the Site, and for which delay an extension of time is granted by the Engineer, shall not be taken into account in the calculation of the monthly "V" values;

(iii) if the algebraic sum of the "V" values for each month is negative, the time for completion will not be reduced on account of subnormal rainfall, and

(iv) where rainfall is recorded only for part of a month, the "V" value shall be calculated for that part of the month using pro rata values for N_n and R_n .

(f) The Engineer shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the " N_n " values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.

Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of Clause 42 and Clause 48 of the Conditions of Contract.

RAINFALL TABLE

If no suitable rainfall records are available, the above formula will not apply.

Y = 10 mm/24 hour day
X = 20 mm

STATISTICAL INFORMATION: 04764032 Springs: 1904-2004

Month	Average Rainfall (mm)	
JAN	112.7	6.4
FEB	112	5.5
MAR	75.5	5
APR	33.7	2.4
MAY	25.3	1.5
JUN	7.9	0.4
JUL	7.1	0.3
AUG	8.9	0.5
SEP	18.2	1.6
OCT	45.3	3.7
NOV	98.3	6.5
DEC	119.1	7.2
Total	663.8	41
Month	Average Rainfall (mm)	Ave Rain Days

(e) Extension of time, if granted by the Engineer, will be determined as the aggregate number of normal working hours for which all progress on the item or items on the critical path was brought to a halt as a result of wet climatic conditions, less the number of normal working days specified in subclause (d) above.

(f) In determining the revised Due Completion Date of the Contract, the Engineer shall add the equivalent number of normal working days delay determined in accordance with subclause (e) and all intervening normal non-working days to the prevailing Due Completion Date.

C3.4.3 PLANT AND MATERIALS

C3.4.3.1 Plant and materials supplied by the employer

The Employer shall not supply any plant or materials.

C3.4.3.2 Materials, samples and shop drawings

(a) Samples

Materials or works which do not conform to the approved samples submitted in terms of Subclause 23.4 of the Conditions of Contract will be rejected. The Engineer reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such tests conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Subclause 23.7 of the Conditions of Contract, be for the Contractor's account.

C3.4.4 CONSTRUCTION EQUIPMENT

C3.4.4.1 Requirements for equipment

The contractor is to provide equipment as necessary to successfully complete the works as issued under the letter of acceptance and letters of instruction of proceed as detailed in the document.

C3.4.4.2 Equipment provided by the employer

The Employer shall not supply any equipment.

C3.4.5 EXISTING SERVICES

C3.4.5.1 Known services

It is been noted that construction work will be done adjacent to or traversing services. Prior to commencement of any constructional work in the aforesaid affected area, the Contractor shall satisfy the Engineer that all necessary precautions with respect to setting out procedures have been taken by the Contractor to evade the existing services.

The Contractor shall exercise all due care during the course of construction to ensure that no damage is caused to existing overhead and buried services in the area, regardless of whether the service is visible or not.

Damage to services where these could reasonably have previously been detected shall be made good at the expense of the Contractor. Should services be detected which are not shown on the Drawings, the Contractor shall record the position of each of these and take all precautions necessary to ensure that the services will not be damaged.

In all cases the Contractor shall indemnify the Employer against any claims which may arise as a result of damage or disruption to services caused by reason of his/her works.

The contractor should consult the relevant municipal department in order to obtain information as to the location of known service. There are no guarantees provided as the accuracy of information provided by the relevant service providers and the contractor accept the risk associated therewith.

C3.4.5.2 Treatment of existing services

The location, protection and relocation of existing services form an integral part of this contract.

Prior to commencement of any diversion of services, the Contractor shall satisfy the Engineer that all necessary precautions with respect to the diversion have been taken by the Contractor.

No guarantee as to the accuracy of the information can be given and the responsibility lies with the contractor to determine the exact positions of all existing services.

Before any work is commenced, the contractor shall contact all private owners or public authorities controlling services so that they may either protect, move or relocate any services as required, or confirm that all such work has been completed.

C3.4.5.3 Use of detection equipment for the location of underground services

It is recommended that the contractor use detection equipment for the location of underground services.

Prior to commencement of any detection equipment being used, the Contractor shall satisfy the Engineer that all necessary precautions with respect to pipe location have been taken by the Contractor.

C3.4.5.4 Damage to services

Any damage of these services as a result of acts by the contractor, his sub-contractors or their respective employees, shall be repaired at the contractor's expense.

C3.4.5.5 Reinstatement of services and structures damaged during construction

Wherever, for the proper construction of the works, any telephone or electricity line or poles, or any water supply pipes, conduits, electric cables, sewers, drains or any other services are required to be removed or relocated, or where any of these services requires to be repaired as a result of damage by the contractor or otherwise, the contractor shall immediately advise the Engineer thereof, and further notify the responsible authorities concerned in order that such work as is necessary be undertaken by such authorities. The Engineer will also decide the extent of the work, if any to be undertaken by the contractor in removing, relocating or repairing such services.

PSA : GENERAL

PSA15 PRIME COST ITEMS (Clause 8.6)

PSA15.1 Community Liaison Officer (CLO)

A prime cost item has been included in Schedule 1 for the compensation of the CLO. Payments will be done to the Community Liaison Officer on instruction of the engineer, in writing. In addition to the abovementioned amount, provision is made in Schedule 1 for a mark-up on the payments made to Community Liaison Office. The payment for the CLO will be R 7500 per month. This mark-up shall be regarded as a full compensation for overheads, charges and profits as provided for Clause 45(2) of the Conditions of Contract.

PSA15.1.1 Labour Rates

All labour rates should be as per current SAFCEC rate.

PSA15.2 Artisan and Skills Training

A Prime Cost Item has been included in Schedule 1 for payments to be made to specialists for the training of unskilled or semi-skilled persons industry accredited management and generic skills. Payment to the Contract will be based on invoices certified by the Engineer and issued by training specialists to the contractor for work undertaken in terms of this item.

In addition to the above amounts, provision is made in Schedule 1 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in Clause 45(2) of the Condition of Contract.

PSA16 ADJUSTMENT OF PRELIMINARY AND GENERAL ITEMS DUE TO RAIN

Should the period for completion be automatically extended due to abnormal weather conditions occurring during execution of the Contract as provided for in the Project Specification, no adjustment to the total for time-related preliminary and general items will be applicable.

PSA17 ADJUSTMENT OF PRELIMINARY AND GENERAL TIME-RELATED ITEMS

An approved extension of time will qualify the Contractor to receive additional payment for each relevant time related item at a unit rate based on the sum originally tendered for such item, and which shall be fair and reasonable as contemplated in Clause 40 of the General Conditions of Contract.

PSA18 ADJUSTMENT OF PRELIMINARY AND GENERAL ITEMS DUE TO INTERRUPTION IN WORK SCHEDULE

Should the period of completion be automatically extended in terms of clause PS5.3 as a result of interruption in the contractors work schedule during execution of the contract, no adjustment to the total for time related preliminary and general items would be applicable. Time related preliminary and general items will be paid only if the Contractor has been established on site during a specific period. Therefore, if the Contractor was not established on site, time related P & G-items will not be paid.

If he was on site for only a limited period during a specific month, time related P&G items are to be paid in full for such a month.

PSD EARTHWORKS (PIPE TRENCHES)

PSD1 FREE WATER (SUB-CLAUSE 5.1.2)

No provision has been made in the Schedule of Quantities for separate payment for dealing with water. The unit rate for excavation shall cover the cost of dealing with water in the excavations.

PSD2 BASE WIDTH OF TRENCHES (SUB-CLAUSE 4.1; 5.2 AND 8.2.3)

No provision has been made in the Schedule of Quantities for separate payment for extra excavation for dealing with services in the trenches. The unit rate for excavation and backfilling shall cover the cost for over excavation in the width to provide for the services and their temporary and/or permanent protection thereof.

PSD8 CLASSES OF EXCAVATION (SUB-CLAUSE 3.1)

Only the classes of excavation listed below shall be measured:

Soft excavation

Extra over for hard rock excavation (blasting where necessary).

Boulder excavation

PSD10 BORROW (SUB-CLAUSE 5.2.2.3 [D])

If insufficient excavated material is available to complete the earthworks in any particular section of the work, the Contractor shall locate other economic sources of borrow material, within the free haul distance.

PSB CONCRETE (STRUCTURAL)

A first-in-first-out circulation shall be followed to ensure that no cement for reinforced concrete shall be older than three months from the date of manufacture; and mass concrete shall be older than six months from the date of manufacture.

Concrete for structures shall be concrete of 35MPa with fibres.

PSB2 PIPES AND CONDUITS EMBEDDED IN CONCRETE (Clause 5.4)

Except with the written approval of the Engineer, no pipes other than those shown on the drawings shall be embedded in concrete and the approval of the Engineer for the position of all services to be embedded shall be obtained before concreting commences. The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement shall not at any point be less than:

40mm or
5mm plus the maximum size of coarse aggregate.

Whichever is the greater.

PSL8 BACKFILL

Following the inspection by the Engineer with respect to the grade, direction and line, as well as the successful testing of the pipeline, the Contractor shall promptly refill trenches and excavations.

PSL8.1 Material and Method

The Contractor shall promptly refill trenches and excavations as soon as the works have been inspected, tested and passed by the Engineer.

The backfilling in contact with pipes and for a distance of 600mm above the barrels of the pipes shall consist of selected material from the excavations, free from excess clay, vegetable matter and stones. Shortages of selected material in any section of a trench shall be made up free of additional cost by borrowing from adjacent excavations containing a surplus of suitable material.

The selected material shall be brought up in 300mm layers, uniformly moistened to the optimum moisture content to attain the specified compaction and shall be thoroughly compacted round the pipes and joints.

PARTICULAR SPECIFICATIONS

PLI: PARTICULAR SPECIFICATION FOR GENERIC LABOUR-INTENSIVE SPECIFICATION

Note: (This specification must be incorporated in the Scope of Works without amendment or modification. When SANS 1921-5, Construction and management requirements for works contracts Part 5: Earthworks activities which are to be performed by hand, is published, the earthworks portions of this generic specification must be replaced with a reference to SANS 1921-5 and its associated specification data.)

B 1231 LABOUR BASED CONSTRUCTION METHODS

Bidders must take into consideration that the following works may only be constructed using labour-based construction methods:

- a) Excavation to expose existing services.
- b) Hand excavation for concrete lined open drains.
- c) Concrete lining for open drains.
- d) Construction of walk ways (Paving Blocks)
- e) Preparation of bedding material for stormwater pipes.
- f) Gabion construction.

Where Bidders propose to use additional labour-based methods, the methods must be stated as well as the activities. It will reflect positively on the Bidder's bid if he should use more labour-based methods.

PLI 1 Scope

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- (a) stormwater drainage

- (b) side walks
- 15
 PLI 2 Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

PLI 3 Hand excavatable material

Hand excavatable material is material:

(a) Granular materials:

(i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or

(ii) where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100 mm.

(b) Cohesive materials:

(i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or

(ii) where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

Note: (1) A boulder, a cobble and gravel is material with a particle size greater than 200 mm.

(2) A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400 mm and drives a cone having a maximum diameter of 20 mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

Granular materials		Cohesive materials	
Consistency	Description	Consistency	Description
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30 - 40 mm; can be moulded by fingers with some pressure.

Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in upto 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

PLI 1 Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100 mm. Each layer shall be compacted using hand stampers

(a) to 90% Proctor density;

(b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10 mm and contains no isolated boulders, or

(c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

PLI 6 Excavation

The excavation of any material outside the road prism which presents the possibility of danger or injury to workers shall not be excavated by hand.

PLI 8 Shaping

All shaping that falls outside the road prism shall be undertaken by hand.

PLI 11 Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

PLI 12 Spreading

All material outside the road prism shall be spread by hand.

PLI 13 Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved.

PLI 14 Grassing

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

PLI 15 Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

Grout shall be mixed and placed by hand.

PLI 16 Manufactured elements

Elements manufactured or designed by the contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320 kg. In addition, the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper handhold on them.

SCHEDULES OF QUANTITIES

Note: Labour-intensive works must be highlighted in the schedules/bills of quantities for the payment items relating to labour-intensive works.

The following wording, as appropriate, may be included in the preamble or pricing instructions to the schedules/bills of quantities in the contract with the contractor:

1 Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.

2 Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

The following payment items should be included in the bill of quantities:

Item	Description	Unit	Quantity	Rate	Amount
	Training allowance paid to targeted labour in terms of formal training	Person days	(insert quantity) (as above)	(insert specified day rate)	

	Extra over for the administration of payment of training allowances to targeted labour Transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site. (Provisional sum)	Person days Sum	(insert provisional sum)		
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C3.5 MANAGEMENT OF THE WORKS

C3.5.1 GENERIC SPECIFICATIONS

COLTO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE WORKS FOR STATE AUTHORITIES.

C3.6 HEALTH AND SAFETY

Compiler: The Employer's Occupational Health and Safety Act, Construction Regulations Specification should be included here.

C3.6.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES

(a) Construction Regulations, 2003

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2003 (the regulations) as promulgated in Government Gazette No 25207 and Regulation Gazette No 7721 of 18 July 2003. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Schedule of Quantity and Drawings, as well as in the Employers' health and safety specifications (regulation 4(1)) of the Construction Regulations 2003, which are bound in the Contract document/will be issued separately by the Employer.

The Contractor shall in terms of regulation 5(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is/Payment items are included in the Schedule of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

C3.6.2 PROTECTION OF THE PUBLIC

The principal contractor is responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from the construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes:

Non- employees entering the site for whatever reason;
The surrounding community; and
Passers-by the site.

Appropriate signage must be posted to this effect and all employees on site must be instructed to ensure that non-employees are protected at all times

All non-employees entering the site must receive induction into the hazards and risks of the site and the control measures to be observed.

C3.6.3 BARRICADES AND LIGHTING

Access scaffolding must be erected, used and maintained safely in accordance with Construction Regulation 14 and SA Bureau of Standards Code of Practice, SANS 085 entitled, "The Design, Erection, Use and Inspection of Access Scaffolding.

Detailed consideration must be given to all scaffolding to ensure that it is properly planned to meet the working requirements, designed to carry the necessary loadings and maintained in a sound condition. Sufficient material must be available to erect the scaffolding properly.

Scaffolding must only be erected, altered or dismantled by persons who have adequate training and experience and are competent in this type of work and under the continuous supervision of such a person

C3.6.4 TRAFFIC CONTROL ON ROADS

The Contractor and the affected landowner must collaborate on the planning and construction of new access routes and the repair or upgrading of existing routes. Access to the site must be controlled such that only vehicles and persons directly associated with the work gains access to the site. Temporary access roads must not be opened until required and must be restored to its former state as soon as the road is no longer needed.

C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS

Training is to be carried out as required by the OSHACT and the Regulations. The contents and syllabi of all training courses required and attended are to be included in the principal contractor's occupational health and safety plan.

General induction training

All members of contractor's site management as well as all the persons appointed as responsible for occupational health and safety in terms of the Construction and other Regulations will be required to attend a general induction session.

All employees of the principal and other contractors are to be in possession of proof of general induction training.

Site-specific induction training

The principal contractor will be required to develop a project specific induction training course based on the risk assessments for the contract work. He will ensure that all his employees and other contractors and their employees have received this training course.

All employees of the principal and other contractors are to be in possession of proof that they have attended a site-specific occupational health and safety induction training course

C3.6.6 AIDS AWARENESS

The principal contractor is required to have a promotion and awareness programme in place to create an occupational health and safety culture within employees. The following are some of the methods that may be used:

Toolbox talks

Posters

Videos

Competitions

Suggestion schemes

Participative employee activities such as "occupational health and safety circles".

C3.6.7 SPECIFICATIONS OH&S MANAGEMENT

REFERENCES TO THE PROJECT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS

SPECIFICATION IN TERMS OF THE CONSTRUCTION REGULATIONS 4 (1) (a) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO 85 OF 1993

C3.6.7.1 BACKGROUND

In terms of the Construction Regulation 4 (1) (a) of the Occupational Health and Safety Act, No. 85 of 1993, the Client is required to compile a Health & Safety Specification for the intended project and provide such specification to any prospective tenderer.

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The Client's further duties are as 4(1) to 4(6) in The Construction Regulations, July 2003.

C3.7 SCOPE
C3.7.1 SUPPORTING SPECIFICATIONS

This list does not include Standard Specifications referred to in descriptions of proprietary items in the Scope of Work:

SANS 1115	Cast iron gratings for gullies and storm water drains.
SANS 791	uPVC pipes for underground non-pressure application.
SANS 927	Precast concrete kerbs and channels.
SANS 1200 D	Earthworks
SANS 1200 DK	Gabions and Pitching.
SANS 1200 G	Concrete (structural).
SANS 1200 GE	Precast concrete.
SANS 1200 LC	Cable ducts.
SANS 1200 LE	Stormwater drainage.
SANS 1200 MK	Kerbing and channeling.
COLTO 6200	Falsework, formwork and concrete finish.

In addition to the specifications listed in clause 3.2.1 of SANS 1200 G, the following specifications also apply where relevant:

SANS 0100-2:1992	The structural use of concrete – Part 2: materials and execution of work.
SANS ENV 197-1	Cement composition, specifications and conformity criteria. Part 1: common cements.
SANS 1491-1:1989	Portland cement extenders – Part 1: ground granulated blast furnace slag.
SANS 1491-2:1989	Portland cement extenders – Part 2: fly ash.
SANS 1491-3:1989	Portland cement extenders – Part 3: condensed silica fume.

C3.7.2 DEFINITIONS

CONSTRUCTION JOINT
means a joint made by design or made necessary by a prolonged interruption in placing of concrete.

BUTT JOINT
means a joint between adjacent slabs of concrete at which the meeting faces are plane surfaces.

DOWELLED OR TIED CONSTRUCTION JOINT
means a butt or keyed joint at which dowels or tie-bars are set in the concrete with half their length on either side of the joint line.

FILLER
means a non-extruding premoulded compressible material is used to fill the gap at an expansion joint.

DOWEL
means a plain mild or high tensile steel bar set across a joint so as to permit contraction of the concrete and resist movement of one slab relative to another in a vertical plane or parallel to the joint.

TIE-BAR
means a steel bar with a deformed surface set across a joint so as to prevent separation of the joint faces of adjacent slabs.

BOND-BREAKING COMPOUND

means a material with which dowels are coated to prevent concrete from adhering to the dowels.

BEARING

means a device for transmitting loads from the superstructure to the substructure.

BRIDGE

means a structure having a clear span greater than 6m measured square to the supports.

BRIDGE

CODE

means the document defining a code of practice for the design of highway bridges and culverts in South Africa, requirements for the design and construction of the bridges and culverts.

FALSEWORK

means the temporary structure supporting formwork or a structure until the structure can support itself.

SUBSTRUCTURE

means the abutment (breast & wing walls) and piers of a culvert or bridge.

SUPERSTRUCTURE

means that part of a bridge or culvert which is supported by the substructures.

VOID

FORMERS

means hollow formers built into bridge decks.

C3.7.3 ABBREVIATIONS

AASHTO	American Association of State Highway Transport Officials.
ASTM	American Society for Testing and Materials.
BS	British standards.
EMP	Environmental Management Plan.
SANS	South African National Standards.
COLTO	Committee of Land Transport Officials.
TMH	Technical Methods for Highways.
TRH	Technical Recommendations for Highways.
AISI	American Iron and Steel Institute

C3.8 MATERIAL
C3.8.1 CEMENT

All cements used for concrete work shall comply with SANS ENV 197-1. All cement extenders used for concrete work shall comply with SANS 1491. The cement types given below are acceptable for use in the Works. On no account shall masonry cements be used for concrete work, even if the strength designations are the same as for common cements

- | | | |
|-------|-------------|-----------------------------------|
| (i) | CEM 1 42,5 | Portland Cement. |
| (ii) | CEM 1 42,5R | Portland Cement, rapid hardening. |
| (iii) | CEM 11/B-V | Portland fly ash cement. |
| (iv) | CEM 11/B-W | Portland fly ash cement. |
| (v) | CEM 111/A | Blast furnace cement. |

C3.8.2 AGGREGATES

Should the Contractor use a coarse aggregate type, which is reactive with alkali, the Contractor will have to ensure that the equivalent Na₂O content in the concrete mix is such that it is below the threshold value, which causes the deleterious reaction in the concrete.

A laboratory report by the Contractor on the mix design and trial mixes prior to construction will need to elaborate on the above matter. If required by the Engineer, the Contractor shall submit 40kg samples for approval at least 6 weeks before concreting is to commence. No aggregate shall be delivered for use in the Works until the Engineer's written approval is given.

The use of plums in concrete will not be permitted.

C3.8.3 ADMIXTURES

Admixtures containing chlorides are not permitted in reinforced concrete.

C3.8.4 CURING COMPOUND

In all cases where a concrete curing compound is specified, the curing compound is grey or white-pigmented membrane forming material complying with ASTM specification C309, except that the maximum permissible water loss in the test is 0.40 kilograms per square meter.

Before any curing compound is used, the Contractor submits a one-litre sample of the compound, with full technical details, to the Engineer for approval. Technical details referred to include a recent SANS report showing the following:

- | | |
|-------|--|
| (i) | Compliance with ASTM C-309. |
| (ii) | The relative density of the compound. |
| (iii) | The infrared spectrum of the compound. |

Alternatively, the concrete curing compound is acceptable if the treated concrete retains 90% or more of its mixing water when subject to the test set out in BS 8110: Part 1, clause 6.6(c).

C3.8.5 PARTS OF A STRUCTURE SUBMERGED IN WATER

One or more of the following cementitious binders are used in all structural concrete elements in this application.

Portland blast furnace cement, Type 111/A, is certified as containing not less than 40% and not more than 50% milled granulated blast furnace slag (MGBS), or a blend of Type 1 Portland cement with not less than 40% and not more than 50% MGBS. MGBS complies with SANS 1491 Part 1.

Portland fly ash cement Type 11/B-V or Portland fly ash cement Type 11/B-W, certified as containing not less than 25% and not more than 30% fly ash comply with SANS 1491 Part 2.

C3.8.6 JOINT FILLERS

The Contractor furnishes details and specifications of joint fillers he proposes to use, for approval. Jointex or similar joint filler must be durable and non-extruding, composed of closed-cell expanded polyethylene and comply with AASHTO 153 modified as follows:

(i)	Minimum density	25 kg/m ³
(ii)	Load causing compression to 50% of volume	100 to 150 kPa
(iii)	Minimum recovery after compression to 50% of volume	To 80% of original volume
(iv)	Maximum water absorption after immersion of 28 days	3% by volume

Polystyrene joint fillers consist of a closed-cell foam and have the following properties:

- (i) Adequate rigidity for handling.
- (ii) Minimum density of 16 kg/m³
- (iii) An increase in density of not more than 1% when a cement slurry is rubbed into exposed surfaces.
- (iv) An accuracy of ± 2 mm on specified thickness.
- (v) Dimensional stability at a temperature of 40° C.
- (vii) Compression to not less than 50% of its original thickness under a load not exceeding 240 kPa after saturation with cement slurry and curing for 14 days.

Joint filler sheeting is used in the longest lengths possible. Joints are neatly butted and sealed with waterproof adhesive tape.

Joint filler is attached to the concrete previously cast in such a manner that it will neither displace during concreting or thereafter if the filler is to remain permanently in the joint. On the side to be concreted, polystyrene is lined to ensure that the joint surfaces are formed without defect.

After removal of formwork, mortar fouling the chamfers is taken out neatly and the joint filler removed to a depth of 20 mm beyond the chamfer depth, or as shown on the drawings. Polystyrene may be removed by flame evaporation.

C3.8.7 JOINT SEALING

Preformed elastomeric compression joint seals:

comply with SANS 1023 for Type 1 and 2 seals and are of an approved configuration; are supplied in the longest lengths possible. A 2 m long sample of each size and type of seal, which the Contractor proposes to use, is submitted for approval; adhesive used with compression seals is as recommended by the manufacturer of the seal and has lubricating qualities.

Cold-applied sealant consists of two-component polysulphide complying with SANS 110.

Alternative sealants

cold-applied, one component, low modulus silicone sealant

cold-applied, two component polyurethane

cold-applied, two component elastomeric sealant with resistance to diesel, petrol and other fuel oils

are considered provided that full details of the sealant's characteristics and applicable specification are submitted to the Project Manager for approval prior to application. Application of these sealants is subject to the manufacturer's instructions.

C3.8.8 STAINLESS STEEL

Grade 316 and 316L stainless steel is in compliance with AISI.

C3.8.9 BRIDGE BEARINGS

Elastomeric bearing pads

Elastomeric bearing pads may not be bonded to the bearing seats unless specified on the drawings, in which case only an approved epoxy adhesive is used.

Concrete plinths on which elastomeric bearing pads are to be placed are constructed of 30 Mpa/13 mm concrete, and are finished to a smooth level surface without addition of cement mortar, except to fill minor voids. Alternatively, in order to ensure a perfect seating, the bearing pad may be placed on the wet concrete.

Roofing felt

Roofing felt complies with SANS 92, type 60.

C3.8.10 TIE BARS

Tie-bars are deformed steel bars complying with SANS 920, type B, C or D. They are wrapped in DENSO tape as shown on the drawings.

They are sufficiently secured so as not to move or displace during concreting.

C3.9 EQUIPMENT

C3.9.1 CONCRETE BATCHING

Concrete batching equipment include bins and mass measuring equipment for each size of aggregate and cement, if used in bulk. The mass measuring equipment is accurate to within 0,5 percent throughout its working range. The Contractor provides a certificate of accuracy of all measuring equipment on a quarterly basis.

C3.9.2 FORMWORK

Securing of Formwork

Forms are provided with adequate devices for secure setting so that, when in place, they withstand, without visible spring or settlement, the impact of the vibration of the compacting and finishing equipment.

Formwork ends

The ends of abutting forms lock tightly and securely together.

Damaged formwork

Forms that are out of tolerance, bent, twisted or broken, or which have battered top surfaces, are not used. Forms are at all times kept clean and free from rust and adhesions so as to ensure clean stripping. The use of rough and dirty forms is not permitted.

Deflection of formwork

The spacing of supports for formwork is such that the deflection of the formwork under load of wet concrete does not exceed 3 mm. The supports are adjustable by means of screw jacks or wedges, both of which are secured.

Temporary trusses or beams used to support formwork are designed to ensure that the deflection under the weight of wet concrete does not exceed 2,5 mm/m of clear span.

If placement of concrete in stages is specified or approved, the deck formwork must be fully supported by the falsework until all stages are completed. The stiffness of temporary trusses or beams used to support formwork must be such that the deflection under wet concrete placed during the first stage does not exceed 2,5 mm/m of clear span of the permanent structure, or such lesser figure as specified, multiplied by the ratio of first stage concrete to total deck concrete exclusive of parapets. Approval for any relaxation of these stipulations must be obtained in writing.

The falsework is adjusted to ensure that the finished soffit has an upward camber of between 0 and 2 mm/m of clear span after removal of false work, under permanent loading due to parapets and surfacing.

Unless shown otherwise on the drawings or directed by the Engineer, falsework for all spans is kept in position until, in the case of continuous concrete structures, the concrete of the last pour reaches the appropriate minimum age given in SANS 1200 G.

Inspection by the Supervisor:

The alignment and levels of all formwork is checked and accepted by the Engineer prior placing concrete.

Forms are fixed in position not later than 12:00 on the working day prior to that on which concreting takes place, in order that the Engineer may inspect them.

C3.9.3 VIBRATORS

Internal (poker) and surface vibrators are capable of fully compacting each layer of concrete where compaction by vibration is used. At least one standby vibrator is available for every three (or smaller number of) internal vibrators necessary to maintain the rate of placement.

C3.10 CONSTRUCTION
C3.10.1 REINFORCEMENT

The minimum required concrete cover to all steel reinforcement is as shown on the drawings. Maintenance of this minimum cover during casting of concrete is strictly enforced. Concrete, which is cast with insufficient cover to the reinforcement, is demolished and re-cast at the contractor's cost.

Cover blocks used to ensure the cover to reinforcement must be made of cement mortar. They must be dense and have a minimum 28 days crushing strength of 50 MPa, and are cured in water for at least 14 days before being used. Spacer blocks made of plastic will not be permitted.

C3.10.2 FORMWORK

All exposed concrete surfaces require a smooth finish to a Degree of Accuracy II as specified in clause 6, SANS 1200G.

The Contractor must take particular care to ensure that formwork joints are tight enough to prevent leakage of cement mortar. Shutters that are damaged, or that leave a surface that is unacceptable to the Engineer, shall be removed and repaired, or discarded.

C3.10.3 CONCRETE

3.10.3.1 Concrete Quality

Before the start of concrete work on site, the Contractor submits a quality assurance plan to ensure compliance with specification, and to provide acceptable documentary proof that all specified operations are carried out satisfactorily

Potential Heat Generation

Measures, subject to the approval of the Engineer, are applied to reduce heat development in concrete of which the minimum dimension to be placed during a single pour is larger than 600 mm, and the cement content exceeds the values given in table below.

HEAT GENERATION – LIMITING CEMENT CONTENTS

STRUCTURAL ELEMENT	CEMENT TYPES I AND III/A (kg/m ³)	CEMENT TYPES II/B-V AND II/B-W (kg/m ³)
Reinforced Concrete	400	450

Chloride Content

The chloride content in steel reinforced concrete at the time of placing shall not be greater than 0.15% by mass of the cement

Durability

In order to enhance durability, and notwithstanding strength considerations, the concrete mixes satisfy one of the mixes given in the table below. Prior written approval for the mix is obtained from the Engineer.

CONCRETE MIXES

			MINIMUM CEMENT	
--	--	--	----------------	--

CONCRETE TYPE	CEMENT TYPE AND % CONTENT	EXTENDER TYPE AND % CONTENT	PLUS EXTENDER CONTENT kg/m ³	MAXIMUM WATER/CEMENT RATIO
Steel reinforced	CEM 1 50% - 60%	GGBS 40% - 50%	420	0.40
Steel reinforced	CEM 1 70% - 75%	FA 25% - 30%	420	0.40
Plain	CEM 1 100%	Nil	340	0.50
Plain	CEM 1 75%	FA < 25%	340	0.50
Plain	CEM 1 35% - 65%	GGBS 35% - 65%	340	0.50
Plain	CEM 1 65% - 74%	FA 26% - 35%	300	0.55

Note:

CEM 1 may be CEM 1 42,5 or 42,5 R.

GGBS – Ground Granulated Blast furnace Slag.

FA – Fly Ash.

Factory blended cements (CEM 11/B-V, CEM 11/B-W or CEM 111/A) are accepted provided that they conform to one of the blends specified in the table. The Contractor supplies certification thereof.

Water-reducing admixtures may be used to improve workability (see also clause 3.3 above). The water cement ratio includes the water content of admixtures.

Blends of CEM 1 and Condensed Silica Fume (CSF) are not acceptable for steel reinforced concrete. Ternary blends such as CSF with CEM 1 and FA or GGBS are considered provided that they are shown to be equivalent in durability to the mixes given. The onus is on the Contractor to prove to the Project Manager the adequacy of the blend.

Strength Concrete

The strength of the concrete mixes as specified on the drawings or given in the Particular Specifications for the works, conforms to the following requirements, as Class x/y, where:

x = minimum 28 days crushing strength in MPa

y = maximum aggregate size in mm.

Batching

All aggregates are precisely measured by mass using approved precision weigh batching equipment, unless otherwise permitted by the Project Manager.

Should any variation in the composition of the aggregate become apparent, the Engineer is notified and a further sample of the aggregate submitted immediately for his/her approval.

Ready-mixed Concrete

The use of ready-mixed concrete is permissible. Concrete test results obtained from the production facility are acceptable, provided that the tests are carried out in accordance with the specifications. Samples must be taken on site randomly to check the results to be given by the contractor's lab. Ideally these cubes must be tested or crushed from an alternative lab.

Where concrete is delivered to site ready mixed, the requirements of SANS 878 apply.

Methods of Depositing Concrete

By Tremie

The top section of the tremie shall consist of a hopper of greater capacity than the pipe.

The tremie shall be sturdily constructed of steel, and be not less than 200 mm in diameter. It shall be strong enough to withstand the full hydrostatic pressure, even if a partial vacuum develops in the pipe, and shall be completely watertight.

The lower end of the tremie shall be equipped with an automatic check valve, which shall be watertight.

Initial filling of the tremie shall be carried out with the valve closed, in such a manner as to avoid air locks.

When concrete is deposited, the tremie shall penetrate the concrete bed and shall be slowly raised to discharge a uniform flow of concrete. The end of the tremie shall be under concrete during the whole operation.

Concreting shall continue to such a point that laitance can be removed and a sound surface left at the final finished level.

By Pumping Concrete

The same conditions and criteria as for concreting by tremie as described in (i) above, apply.

Placing

Inspection of excavation: The size, shape and depth of any excavation must be approved by the Engineer before concrete is placed.

Inspection of reinforcement: Unless otherwise permitted by the Engineer, no concrete is placed until the fixed reinforcement has been approved by him/her.

The Engineer's written approval is obtained before any concrete is cast.

Construction Joints

The joint surface of the concrete to which future concrete is to be bonded is roughened while still green by means of brush and water spray to expose the coarse aggregate. Retarders may be used on stop-ends, which are removed after 12 hours for green cutting. Mechanical roughening of hardened concrete using power tools is not permitted.

All surfaces are cleaned and kept continuously wet for 24 hours before pouring of the adjoining cast.

Stub-columns, stub walls and stays on footings are cast integrally with the footings and not afterwards, even where another class of concrete is being used.

Joint lines are so arranged that they coincide with features of the finished work.

At contraction joints (joints having no reinforcement passing through the joint), no bond is required between casts. Contraction joints are smooth and have one coat of limewash or PVA applied to the older surface prior to casting the newer concrete.

The Engineer's prior written approval is obtained before the adjoining concrete is cast.

Curing

In order to enhance the long-term durability of the concrete, proper curing is carried out so that adequate hydration of the cement and extenders takes place.

Curing is according to SABS 1200G.

Concrete Surfaces

All exposed concrete surfaces have a neat, smooth, even and uniform finish, free from any honeycombing and blow holes.

Records

The Contractor maintains the following daily records for every part of the concrete structure and makes these available at all times during the progress of the work for inspection by the Engineer.

The date, weather (including temperature if possible) and times during which concrete is placed.
Identification of the part of structure in which the concrete is placed.

The mix proportions and specified strength.

The type and brand of cement.

The slump of the concrete and plumb accuracy of elevated structures is measured before and after pouring.

The identifying marks of test cubes made.

Curing procedure applied to concrete placed.

The times when shuttering is stripped and props are removed.

The date of dispatch of the cubes to the testing laboratory.

The test results.

The records are delivered to the Engineer each week except in the case of sub-standard concrete, when the Engineer is informed immediately.

C3.10.4 EXCAVATIONS

3.10.4.1 Excavations

Notwithstanding clause 3 of SANS 1200 D and SANS 1200 DB, all excavations are classified as hard or soft. Hard excavation comprises material that can only be removed with pneumatic tools or by blasting. All other excavations are classified as soft.

Safety of excavations

Refer to Trench Shoring (Section 10), clause 10.5.5.

Founding depths

If the material at founding level differs from that shown on the drawings, or is not approved, the Engineer instructs the Contractor to do one of the following:

Over-excavate to the depth required by the Engineer and re-compact the in-situ material at founding level in layers not exceeding 150 mm until a density of at least 95% MOD AASHTO for cohesive materials and 100% MOD AASHTO for non-cohesive materials is attained to the founding level.

Excavate the unapproved material to the depth ordered, and found at this level.

Excavate the unapproved material to the depth ordered and fill to the level ordered, either with mass concrete or approved backfill, as directed.

Exposed rock founding surfaces are roughened to provide sound bond with the foundation, brushed to remove all loose material, and flushed with water if so ordered. Surplus water is removed before concreting.

The Project Manager is notified as soon as possible if suitable material is encountered before reaching the designed level.

Where the Contractor makes the excavations larger or deeper than directed, the Contractor replaces the over break in the floor of the excavation with concrete of strength as directed or, if authorized, with approved backfill.

Backfilling and Embankments

After completion of concrete work, or when so directed, the Contractor restores the original ground level by backfilling with approved material.

Where the material from excavations is not suitable for backfill or embankments, the Contractor provides approved material, from borrow pits or other sources, as directed or instructed by the Engineer.

In addition to the requirements of 5.2.3.2 of SANS 1200 D, backfilling complies with the following:-

Backfill replacing over break below founding level is compacted to 95% MOD AASHTO density in the case of cohesive materials and 100% MOD AASHTO density in the case of non-cohesive material. If it forms part of the embankment, backfill against structures must have the material properties complying with, be placed and compacted in accordingly.

No fill is placed against any concrete structure until the required cube strength has been attained. Fill around bridge decks is brought up evenly in layers extending over the whole structure.

During backfilling and compacting, the difference in level on opposite sides of a structural element does not exceed 0,8 m.

Within 500 mm of a structure, the fill is compacted manually only.

No construction plant should pass over any new structure without permission from the Engineer.

Coffer-Dams and Artificial Islands

Where dewatering of the foundation excavation is impracticable and cannot be achieved by pumping methods, the Contractor constructs a coffer-dam or an artificial island

The design and construction of coffer-dams complies with the requirements of CP 2004: Code of Practice for Foundations.

Unless otherwise permitted, coffer-dams and artificial islands are removed after completion of the structure, excavations properly backfilled and compacted, and the waterway freed of any obstruction created by the coffer-dam or artificial island.

C3.10.5 CONCRETE PLACING

Approval of Aggregates

The Contractor submits 40 kg samples for approval at least six weeks before concrete construction is commenced. No aggregate is delivered for use in the works until approval is given. In addition, evidence of compliance of the aggregates with the requirements of 12.3.3 is furnished at least four weeks before concreting commences.

Quality Assurance Plan

The provisions of 12.5.3.13 apply.

Potential Heat Generation

The provisions of 12.5.3.3 apply.

Batching

The provisions of 12.5.3.6 apply.

Inspection of Excavation

The size, shape and depth of any excavation are approved by the Project Manager before concrete is placed.

Inspection of Reinforcement

Unless otherwise permitted, no concrete is placed until the fixed reinforcement has been accepted by the Project Manager and confirmed in writing by way of a release certificate.

Trimming of Excavations

In addition to requirements of 5.2.2.1 of SANS 1200 D, excavated surfaces that will act as forms for concrete works are trimmed so that concrete cover is not less than the cover stated on the drawings or 80 mm, whichever is greater.

Compaction of Concrete

Each layer of concrete is thoroughly compacted before the next layer is placed, and is covered by the next layer within 30 minutes of completion of compaction. If more than 30 minutes have elapsed since completion of compaction of a layer, concreting may not be resumed unless the concrete in place is still soft enough to be penetrated by the vibrator. If the vibrator can penetrate, a layer of

fresh concrete not exceeding 150 mm in thickness is placed over the concrete already placed and the vibrator passed through the fresh concrete into the concrete previously placed so that both are vibrated and a knitting of fresh and older concrete is satisfactorily achieved. If the concrete already placed has hardened so that a vibrator will not penetrate, concreting is stopped and instructions are obtained from the Engineer.

Stub columns, stub walls or kickers on footings are cast integrally with the footings and not afterwards, even when a different class of concrete is used.

Removal of Excess Mortar

After concrete is brought to the correct level and struck off, the surface is smoothed by means of a bull- or wood-float. The thickness of the mortar cover over particles of coarse aggregate is then measured by light scraping of a few representative areas. If this thickness exceeds 1,5 mm, the surplus mortar is removed by scraping with a rubber-edged squeegee approximately 750 mm long.

Final Finishing (delayed power trowel finishing)

Where specified, this operation is performed only

after bleeding of the concrete has ceased
after bleed water has evaporated or been removed from the surface of the concrete, and
after the concrete has stiffened appreciably (to the extent that a footprint will barely show).

Allowance must, therefore, be made for a delay period of two to three hours or more, especially in cold weather, after bull-nosing or wood-floating, before finishing operations can be started. Troweling continues at intervals until an even surface with a slightly matt texture is obtained.

C3.10.6 TOLERANCES

Tolerances are within the limits listed in SANS 1200 G for Degree of Accuracy II, specified in clause 6, unless stated otherwise on drawings

C3.10.7 Concrete Structures

Tolerances are within the limits listed in SANS 1200 G for Degree of Accuracy II. Tolerances for cable ducts placed in the concrete are as listed below:

Cable ducts: a tolerance of 8 mm on level and 25 mm on alignment. At butts between the ducts, the offset between adjacent units does not exceed 3 mm vertically and 5 mm horizontally.

Drawing chambers: are located within 50 mm of the designated plan position. Cover plates are constructed to a level tolerance of 3 mm.

C3.10.8 Holding Down Bolt Groups

Holding down bolt groups for electrification masts are assembled into accurately fabricated, welded cages, and cast into position in the deck slab, to a tolerance of ± 10 mm.

C3.11 TESTING

C3.11.1 Concrete

Before the start of any concrete work on the site, the Contractor supplies the Project Manager with a statement of the mix proportions which he proposes to use, and the target strength for each grade of concrete.

C3.11.2 General

All testing conforms to the relevant clauses in SANS 1200.

Frequency of sampling

Frequency of sampling and testing is as specified in SANS 1200 G, sections 7.1 and 7.2, subject to the testing of a minimum of three sets of samples per day from each grade of concrete placed in each independent structure if the concrete quantity from which these samples were taken, exceeds 40 m³, and the testing of a minimum of two sets of samples per day when such quantity is equal to or less than 40 m³.

Where required, the two-point loading method of the flexural strength tests, as described in SANS Method 864 (1994) is used.

Acceptance criteria

Acceptance criteria are as specified in SANS 1200G, section 7.3. If the Contractor disputes test results on concrete cubes, the concrete represented by the cubes are considered acceptable only if the Contractor, at his own cost, proves to the satisfaction of the Engineer that the estimated actual strength of cores taken from the structure, determined in accordance with SANS Method 865, is not less than the specified strength.

If the strength of concrete fails to meet the acceptance criteria stipulated, the Engineer may in his sole discretion, and in addition to the options listed in SANS:

accept the concrete subject to approved remedial measures being undertaken by the Contractor or permit the concrete to remain subject to the payment of a penalty.

The penalty is determined as follows:

$$\text{Penalty} = V \times R \times F$$

Where:

V = Volume of concrete of unsatisfactory strength represented by the test result.

R = Relevant scheduled rate.

$$F = 1 - \sqrt{\frac{\text{(Average strength of unsatisfactory concrete)}}{\text{(Specific strength + 6 MPa)}}}$$

when the relevant schedule rate (R) includes the cost of formwork or

$$F = 1 - \frac{\text{(Average strength of unsatisfactory concrete)}}{\text{(Specific strength + 6 MPa)}}$$

when the relevant schedule rate (R) excludes the cost of formwork, or where no formwork is involved.

C3.12 SPECIFICATION FOR ELECTRICAL WORK

C3.12.1 REGULATIONS, FACTORIES ACT AND BY-LAWS

(a) The latest issue of the SANS 10142-1 "Code of Practice for the Wiring of Premises", hereafter called the "Wiring Code".

(b) The Occupational Health & Safety Act of 1993.

(c) The Municipal By-Laws and any special requirements of the local Supply Authorities.

(d) The local Fire Office Regulations.

C3.12.2 NOTICES AND FEES

The contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority. The fee charged by the Supply Authority for connection of the installation to the supply mains, will be arranged and paid by the contractor.

C3.12.3 SCHEDULE OF FITTINGS

In all instances where schedules of light, socket outlet and power points are attached or included on the drawings, these schedules are to be regarded as forming part of the specification.

C3.12.4 QUALITY OF MATERIALS

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Department. Departmental specifications for various materials to be used on this contract are attached to and form part of this specification.

Wherever applicable material is to comply with the relevant South African National Standards specifications, or to British Standard Specifications, where no SANS specifications exist.

Materials wherever possible, must be of South African manufacture.

C3.12.5 DELAY

If the electrical contractor's work should cause any delay to the building operations, he will be held responsible for any claims arising out of such delay.

C3.12.6 CONDUIT AND ACCESSORIES:

Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout.

The conduit and conduit accessories shall comply fully with the applicable SANS specifications as set out below and the conduit shall bear the mark of approval of the South African Bureau of Standards.

(a) Screwed metallic conduit and accessories: SANS 162

(b) Plain-end metallic conduit and accessories: SANS 1007

(c) Non-metallic conduit: SANS 950

All non-metallic conduits shall comply fully with SANS 950 and shall be installed in accordance with Appendix C of the same specification as well as SANS 0142.

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

Luminaires and other fittings shall not be supported by non-metallic conduit or conduit boxes. These fittings shall be secured to the surrounding structure in a way that is acceptable to the Department.

The conduit shall be supported and fixed with saddles with a maximum spacing of 1 m, even in roof spaces. (Refer to SANS 10142). The contractor shall supply and install ALL ADDITIONAL SUPPORTING MATERIAL REQUIRED.

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

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

- (a) Outside a building (unless protected, or sheltered under eaves).
- (b) For mechanical load bearing.
- (c) Where they may be subjected to temperatures below - 10°C or above 70°C for prolonged periods.
- (d) As primary electrical insulation.
- (e) In areas where they may be subject to mechanical damage
- (f) For applications other than those for which they are designed.

C3.12.7 Painting of Conduits

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

C3.12.8 Connecting of Conduit to Metal Equipment/Components

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

C3.12.9 Bends

In conduit of nominal size not exceeding 25 mm, bends may be made as described hereunder. In all other cases bends must be achieved by the use of accessories that are introduced into the conduit run. Bends shall comply with SANS 0142.

C3.12.10 Bending

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

- (a) Determine the angle through which the conduit is to be bent.
- (b) Warm the cold conduit over the length to be bent by rubbing with hands.
- (c) Select a bending spring which matches the conduit size and insert it into the conduit beyond the point where the bend is required.
- (d) Bend the conduit slowly with one motion (either with the hands alone approximately 1 m apart, or across the knee) to double the required angle, release the conduit and, when its position is stable, withdraw the bending spring (turning it in an anti-clockwise direction to reduce its diameter) and gently correct the angle.
- (e) Install and secure the conduit immediately following bending.

C3.12.11 Adhesive Joints

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

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

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

C3.12.12 Cutting of Conduit

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

C3.12.13 WIRING

Except where otherwise specified in Part 2 of the specification, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduits to be clear of moisture and debris before wiring is commenced.

Unless otherwise specified in Part 2 of this specification or indicated on the service drawings, the wiring to the installation shall be carried out in accordance with the "Wiring Code". Further to the requirements concerning the installation of earth conductors to certain length points as set out in the "Wiring Code", it is a specific requirement of this document that where plain-end metallic conduit or non-metallic conduit has been used, earth conductors must be provided and drawn into the conduit with the main conductors to all points, including all lighting points throughout the installation.

Wiring for lighting circuits is to be carried out with 6 mm² conductor and a 4 mm² earth conductor. For socket outlet circuits the wiring shall comprise 4 mm² and a 2,5 mm² earth conductor. In certain instances, as will be directed in Part 2 of this specification the sizes of the aforementioned conductors may be increased for specified circuits. Sizes of conductors to be drawn into conduits in all other instances, such as feeders to distribution boards, power points etc, shall be as specified elsewhere in this specification or indicated on the drawings. Sizes of conductors not specified must be in accordance with the "Wiring Code".

The loop-in system shall be followed throughout, and no joints of any description will be permitted.

The wiring shall be done in PVC insulated 300/500 V grade cable to SANS 1507.

Where cable ends connect onto switches, fittings, etc. the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will

C3.12.14 SWITCHES AND SOCKET OUTLETS

outlets may be indicated on the drawings.

All switches and switch socket outlet combination units shall conform to the Departmental Quality Specifications which form part of this specification.

No other than 16A 3 pin sockets are to be used, unless other special purpose types are distinctly specified or shown on the drawings.

All light switches shall be installed at 1,4 m above finished floor level and all socket outlets as directed in the Schedule of fittings which forms part of this specification or alternatively the height of socket

C3.12.15 SWITCHGEAR

Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-plug units, contactors, time switches, etc., is to be in accordance with the Departmental Quality Specifications which form part of this specification and shall be equal and similar in quality to such brands as may be specified.

For uniform appearance of switchboards, only one approved make of each of the different classes of switchgear mentioned shall be used throughout the installation.

C3.12.16 SWITCHBOARDS

All boards shall be in accordance with the types as specified, be constructed according to the detail or type drawings and must be approved by the Department before installation.

In all instances where provision is to be made on boards for the supply authority's main switch and/or metering equipment the contractor must ensure that all requirements of the authorities concerned in this respect are met.

Any construction, or standard type board proposed as an alternative to that specified, must have the prior approval of the Department. All busbars, wiring, terminals, etc., are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear shall be mounted within the boards to give a flush front panel. Cable end boxes and other auxiliary equipment must be provided where required.

Clearly engraved labels are to be mounted on or below every switch. The wording of the labels, in English shall be according to the layout drawings or as directed by the Departments, representative and must be confirmed on site. Flush mounted boards to be installed with the top of the board 2,0 m above the finished floor level.

C3.12.17 Installation

All distribution boards shall be supplied and installed in the positions shown on the drawings. The distribution boards must be placed in such a way that it can be built into the walls where applicable. Special provision must be made that the distribution board tray is not damaged or distorted while being built in.

Where boards have to be installed in walls of single brick width an expanded mesh shall be affixed to the rear of the board tray to provide support to plaster. All distribution boards must be installed level.

Where a sleeve to provide cable entry into a flush board is required, the distribution board tray shall be set back into the wall to permit the sleeve to terminate below the tray for its full diameter. Face brick facets shall in such instances be used to conceal the sleeve. Slots in the wall with a cover plate will not be permitted unless specifically approved by the Employer's Agent.

Earth conductors must be fastened with screws and/or lugs to earth bars.

Cables must be mounted with compression glands to the distribution board tray. Earth rings and glands must be used to earth cable armouring inside distribution boards

C3.12.18 Labelling

Circuit breakers that do not feed any load must be marked "SPARE" on the distribution boards.

Labels indicating the source of supply and size of the supply cable must be provided on each distribution board.

Where switchboards are positioned behind doors of the building structure i.e. built-in cupboards, a suitable approved electrical danger sign as well as the applicable distribution board designation label must be supplied and fitted in a suitable position on the outside top section of one of the entrance doors at each such location

C.3.12.19 WORKMANSHIP AND STAFF

All employees employed on the service must be under the constant supervision of a registered accredited person. The workmanship shall be of the highest grade to the satisfaction of the Department.

All inferior work shall, on indication by the Consulting Engineer or the Department's inspecting officers, immediately be removed and rectified by and at the expense of the electrical contractor

C3.12.20 EARTHING OF INSTALLATION

The type of main earth provided must be as required by the Supply Authority, in addition to any requirements indicated by the Employer's Agent, who may require additional earthing to achieve desired results.

Installations shall be effectively earthed in accordance with the Wiring Code. Additional earth rods or trench earths may be required as specified or directed by the Employer's Agent.

C3.12.21 VARIATIONS IN EXTENT OF CONTRACT

The Department reserves the right to instruct the contractor to carry out variations to the contract either in terms of the Standard Conditions of Contract or in accordance with prices quoted by the contractor in the Price Schedule for Variations or Bill of Quantities, whichever is applicable.

For variations not provided for in the Price Schedule, or Bill of Quantities the Department may call on the contractor to submit a separate written quotation.

The Department, however, reserves the right to execute any alterations or additions that may be necessary by others.

Before any light fittings are ordered by the Contractor, the makes and types of these fittings must be approved by the Department or Department's representative. The Department reserves the right to omit the supply of light fittings, cooking appliances and hot-water cylinders from the contract in whole or in part, and to deliver such material to the contractor by others.

C3.12.22 DEPARTMENTAL MATERIAL

When certain materials are supplied by the Department to the contractor for installation, the contractor must arrange for taking delivery and providing safe storage of these materials.

The contractor will be held responsible for all damage to or loss of such material while it is in his custody.

C3.12.23 BALANCING OF LOAD

The electrical contractor is required to balance the load as equally as possible over the multi-phase supply

C.3.12.24 CABLES

General

The electrical contractor is to supply and install all the low voltage cables specified in this document along the routes shown on the drawings and according to the sizes shown on the single line diagrams and/or as specified.

Bare hard drawn copper earth continuity conductors are to run with all four core underground cables constituting part of the low voltage distribution system. The earth conductors must be bound to the cables at intervals not exceeding 1 meter with cable ties.

For clean earth connections to computer equipment a green PVC insulated single core cable shall be used, which shall be bonded to the main board earth bar and to the clean earth bar of the computer distribution board, and to no other earthed material.

Conductor insulation which is colour coded by a line only, will not be accepted. The total insulation must have the phase colour.

Installation

a) Testing

All low voltage cables must be tested on site, in the presence of the Employer's Agent. All test results must be submitted to the Employer's Agent.

On each completed section of the laid cable, the insulation resistance shall be tested to approval with an approved Megger type instrument of not less than 1000 V for low voltage cables.

b) Depth of Trenches

All low voltage cables must be installed 600mm to the top of the cable, below ground level.

c) Marking Tape

Yellow PVC marking tape, 150 mm wide must be supplied and installed 300mm below the final surface and directly above all cables. The wording "Electric Cable" must be provided on the marking tape.

d) Cable Lengths

Tenderers must base their tender price on the preliminary lengths specified in the Bill of Quantities. After installation the exact lengths shall be determined on site. Adjustments to the contract price shall then be calculated using the rates in the Bill of Quantities.

Cables are not to be ordered according to lengths measured in the Bill of Quantities. It shall be the responsibility of the electrical contractor to establish the correct lengths of cable required on site including lengths required for termination of cables, before placing an order. The electrical contractor shall not be reimbursed for any surplus cable.

Cable Trenches

Tenderers must base their rates for cable trenches in soil, soft rock and hard rock on the quantities given in the Bill of Quantities. The actual quantities shall be determined on site. Adjustments to the Contract Price shall be calculated using the rates in the Bills of Quantities, after completion of the installation.

The different classes of materials for excavation are defines as follows:

SOIL: Shall mean hand-pickable soil and includes loose gravel, clay, backfilled soil, loose or soft shale, loose literati and rocks less than 75 mm dia.

SOFT ROCK: Shall mean rock that is hand-pickable including hard shale, dense literati and rocks exceeding 75 mm in dia to 0,03 cubic metres volume.

HARD ROCK: Shall mean granite, quartz sandstone, slate and stone of similar hardness as well as rocks exceeding 0,03 cubic metre volume.

No guarantee can be given that explosives will not be necessary for excavations. However, should explosives be necessary and the contractor receive permission to use explosives, the electrical contractor shall remain responsible for all work done with the explosives and shall comply with all conditions, regulations, requirements etc. imposed by the governing bodies.

Should excavations be done in close proximity of existing services extreme care must be exercised. Only labourers with experience of these conditions may be utilised.

The bottom and sides of trenches must be of smooth contour, and shall have no sharp dips or rises that may cause tensile forces in the cable during backfilling.

Backfilling of trenches may commence only after the trenches have been approved and shall be compacted in layers of 150 mm. Sufficient allowance must be made for final settlement. For the first layer of 150 mm, soil sifted to remove all hard objects of 15mm mesh or larger and of which 75 mm must be below and 75 mm must be above the cable must be used. Where no suitable soil is available on site, the contractor shall import fill from elsewhere and make all the necessary arrangements to do so. The cost of soil importation must be included in the appropriate rate for excavations.

The electrical contractor shall be responsible to take the necessary precautions where excavations may be dangerous. Refer to the Occupational Health & Safety Act (Act 85 of 1993), Reg. 11 of the Construction Regulations. The electrical contractor must ensure that all buildings, sewer, etc., are protected against collapsing soil conditions.

The cable trenches shall be excavated to width of 300mm wide for one to three cables and the width shall be increased where more than three cables are laid together so that the cables may be placed at least two cable diameters apart throughout the run.

Payment will be made on the tendered rates based the specified dimensions or the actual dimensions whichever is the lesser. The only exception shall be in cases of additional excavations caused by obstructions such as water pipes, drains, large rocks, etc., in which case the magnitude of the additional excavation must be agreed upon on site by the Employer's Agent.

Joints

Joints in cable runs shall not be allowed unless specified or authorised in writing by the Employer's Agent. Where cable joints are to be made, a joint hole must be excavated of sufficient size to enable the cable jointer to work efficiently and unimpeded.

Each cable end must be left in a loop of 0,9 m to prevent any tension on the joint.

During backfilling the section supporting the joint must be compacted to the extent that no movement will take place after the trenches have been backfilled.

All joints in LV underground cables and terminations shall be made by means of approved epoxy-resin pressure type jointing kits such as Scotchcast. Epoxy resin joints must be made entirely in accordance with the manufacturer's instructions and with materials stipulated in such instructions. Low voltage PVC cables are to be made off with sealing glands and materials designed for this purpose that must be of an approved make.

Where cables are cut and not immediately made off, the ends are to be sealed without delay.

Cable laying

Cables must be removed from the drums in such a manner that the cable is not subjected to mechanical damage, twisting or tension exceeding that stipulated by the cable manufacturer.

The laying of cables shall not commence until the trenches have been inspected and approved. The cables must be adequately supported at intervals during the whole operation. Particular care must be exercised where it is necessary to draw cables through pipes and ducts to avoid abrasion, elongation or distortion of any kind. The ends of such pipes and ducts shall be sealed to the approval of the Employer's Agent after drawing in of the cables.

Sleeves

All sleeves indicated on the drawings are to be supplied and installed by the electrical contractor. Electrical cable sleeves and communication sleeves must be installed at least 600mm apart. All crossings of these sleeves must be at 90° with the communication sleeves on top.

Before backfilling, the ends of all sleeves must be sealed with paper and a weak cement mixture.

Cable Markers

Cable markers must be provided on all cable runs at 50 m intervals on straight runs and at all bends. The position of cable markers must be confirmed on site.

Cable markers must consist of 150mm x 150mm x 300mm high concrete blocks with aluminium or other corrosion proof metal plates marked with arrows to indicate the route.

The cable markers must protrude 25mm above ground level.

One cable marker must be placed at the site boundary where the telephone sleeve enters the site

C.3.12.23 DAYLIGHT SWITCHES

The exterior area and walkway lighting must be switched by the photocell daylight switches, either directly or via a contactor in the relevant distribution board where a contactor is called for in the single line diagrams.

3 x 2,5 mm² PVC conductors in conduit must link the daylight switch with the relevant distribution board.

The daylight switch must comply with the following: -

Daylight switches of 25A 220-240V rating shall be provided.

The ON/OFF switching points must be adjustable from 5 to 100 lux.

iii) It must be weatherproof and must have a built in time delay of approximately 40 seconds.

Built-in protection against voltage surges must be provided.

The daylight switch must be mounted in an empty bulkhead type luminaire with IP65 moisture ingress rating and with a clear high impact acrylic diffuser and a LM6 die cast aluminium base with epoxy powder finish. The daylight switch shall be mounted in such manner that the lux switching level adjustment screw can be easily reached for adjustment after installation.

A sample of the proposed daylight switch and light fitting must be submitted to the Employer's Agent for approval.

C3.12.24 MANHOLES

The building contractor will construct all manholes. The electrical contractor shall however coordinate the exact location and orientation of all manholes with the building contractor

C3.12.25 SITE RETICULATION

Refer to the site layout drawings and the single line diagrams for particulars re routes and types/sizes of cables to be installed

C3.12.26 TESTING AND INSPECTION

The electrical contractor shall test the entire installation in terms of Regulation 7 of the Electrical Installation Regulations 1992 of the Occupational Health & Safety Act (Act 85 of 1993) and shall issue a Certificate of Compliance on the official form, Annexure 1, obtainable from the Electrical Contracting Board of South Africa. All tests shall be carried out in conjunction with and to the

satisfaction of the Supply Authority. The electrical contractor shall make all arrangements for testing and inspection, the costs thereof being included in the Tender Price.

All 230 V socket outlets shall be tested for polarity and the sensitivity of the earth leakage protection equipment shall be tested by means of an approved instrument.

Each length of cable shall be tested for insulation and polarity by means of a 1000 volt Megger designed for that purpose. In the case of underground cables this shall be done before backfilling. In addition, the earth-loop impedance of each main and sub-main feed shall be measured. The earth resistance at each down conductor earth electrode shall be measured. The earth resistance shall be tested by means of an approved instrument.

If there is no power on the day of the test, the electrical contractor shall supply a 3kW, 230 V generating plant for testing purposes.

"DANGER" notices shall be displayed at remote ends of cables under test.

The Employer's Agent reserves the right to witness all tests. The electrical contractor shall advise the Employer's Agent in writing of all results and furnish copies of all certificates.

Load balancing shall be undertaken by the electrical contractor to the satisfaction of the Employer's Agent. Where conductors are altered to achieve satisfactory results they shall be re-laced by the electrical contractor.

The electrical contractor shall provide all the necessary instruments for the proper testing of the complete installation. If there is reason to doubt the accuracy of such instruments, the electrical contractor shall take the necessary action to prove their accuracy.

The electrical contractor shall ensure that the installation is completed in every respect and that there are no major defects prior to notifying the Employer's Agent (in writing) for a first delivery inspection. The Employer's Agent will accept no defects during the final inspection. Should any defects be encountered at the final inspection then the Employer's Agent will abandon that inspection and request that the electrical contractor arrange an additional final inspectio

C3.13 PROJECT SPECIFICATION ELECTRICAL.....

C3.13.1 CONTRACT WORK

The installation shall be carried out entirely by the Sub-Contractor's own staff and shall not in any way be sub-let. This part of the specification shall have preference to any other part of the specification.

C3.13.2 SITE

The Tenderers must, before submitting their tenders, acquaint themselves with the local conditions, accessibility of the sites, soil conditions, availability of labour and labour conditions, transport, off-loading store and custody conditions for materials and equipment necessary for the completion of the total contract. No claim based on ignorance in this regard shall be considered.

It shall be expected from the electrical Contractor to erect a suitable temporary site store and fenced camp on site to store his plant, tools and contract materials. The safe storage of these materials shall be at all times being the responsibility of the Contractor.

On completion of the contract the contractor shall be responsible for the removal of all temporary site buildings and for any clearing as result of the site establishment

Permission must be obtained from the Regional Representative of the Department before any Tenderer visits the site, or the Contractor establishes himself on the site

C3.13.3 EXTENT OF WORK

The work covered by this contract comprises the complete electrical installation, in working order, as shown on the drawings and as per this specification, including the supply and installation of all fittings and the installation of such equipment supplied by the Department.

C3.13.4 SUPPLY AND CONNECTION

The Consulting Engineer will arrange with the Local Supply Authority for the electrical supply as well as the commissioning thereof. Payment of the service connection shall be made by the electrical contractor. The provisional amount for the supply will be adjusted, if necessary, by a variation order.

On production of the official account, only the nett amount of the fee charged by the Supply Authority for connection of the installation to the supply mains will be refunded to the contractor by the Department.

The electrical sub-contractor shall be responsible for the supply, installation and connection of the specified low-voltage cables including the supply cable to the supply point of the Local Authority

C3.13.5 INFORMATION

The tenderer's attention is drawn to the fact that if the schedules of this specification are not complete, his tender cannot be adjudicated and may be disqualified

C3.13.6 SPECIFICATION AND DRAWINGS

The specification and drawings generally show the character and extent of the proposed work, and shall not be held as showing every minute detail of the work to be executed.

Tenderers must ensure that their copy of the specification is complete and that all drawings as listed have been received.

Any discrepancy must immediately be brought to the attention of the Department

C3.13.7 Contract Drawings

The layout and extent of the electrical installation are shown on the drawings which form part of this document.

The positions of all power-, light- and switch outlets or routes which may be affected by other services, must be confirmed by the Contractor with the Department before placing such outlets

C3.13.8 As Built Drawings

The contractor is to prepare the As-Built paper prints in strict accordance with this specification. These drawings are to be kept in the site office. Retention monies normally due before commencement of the maintenance period will not be released until As-Built drawings have been prepared to the satisfaction of the Engineer and the Department Representative. As each portion of the work is completed, the Contractor shall provide the Engineer with as-built drawings showing the exact location of each outlet point, cable runs, etc.

In addition a complete reticulation diagram showing all supply cables and switchboards shall be provided behind a plastic cover in the substation or adjacent to the Main Switchboard if not located in the substation

C3.13.9 MAKING GOOD

The successful tenderer will be responsible for making good in all trades of any damage to buildings or other services which he or his employees may have incurred during the construction of the works.

The Contractor will be responsible for keeping the site clean and tidy and shall remove from the site all rubble and litter resulting from the construction work

C3.13.10 WORDING

The word "approve" means approval by the Department's inspection engineer or representative.

C3.13.11 SUPERVISION

Work must under all circumstances be supervised by a qualified and experienced representative of the Contractor who must be registered as an accredited person.

The representative must be authorized by the Contractor and must be able to receive instructions on behalf of the Contractor

C3.13.12 ELECTRICAL EQUIPMENT

All fittings, material and equipment and component parts thereof are to be in accordance with the attached quality specifications and must have the approval of the Department. In addition all equipment shall be designed, manufactured and tested in accordance with the relevant South African National Standards Specification or otherwise the relevant British Standard Specification.

All material and equipment must be suitable for the supply voltage 400/ 230V and the necessary precautions shall be taken against corrosion, i.e. exposed metal shall be anti-rust treated to approval and all metalwork to be galvanised or painted

C3.13.13 LABELLING

Circuits which are removed from distribution boards must be marked "SPARE" on the distribution boards.

All outlets especially the terminal boxes associated with the intercom or telephone installation must be labelled as such.

Labels indicating the supply point and size of the supply cable must be provided on each distribution board.

Where switchboards are positioned behind doors of building structure i.e. build-in cupboards, a suitable approved electrical danger sign as well as the applicable distribution boards designate label must be supplied and fitted in a suitable position on the outside top section of one of the entrance doors at each such location

C3.13.14 DETAILED SPECIFICATION

3.13.14.1 GENERAL

The Detail Specification and the Bill of Quantities will take preference to the Quality Specification if any discrepancy may exist. Any discrepancy between the Detail Specification, Bill of Quantities and

Drawings must be reported to the Engineer who will clarify such contradiction before the tender closing.

3.13.14.2SCOPE OF WORKS

This Particular Specification covers the construction of concrete cast in-situ culvert structure crossing a stream and related activities. It also covers paving paths on either sides of the culvert. The culvert foundations consist of dump rock and weak mass concrete. The wingwalls are on spread footings and dump rock.

This specification also covers any other work arising out of or incidental to the above or required of the Contractor for the proper completion of the Works in accordance with the true meaning and intent of the contract documents

The system shall also comply with the requirements laid down by the latest editions of:

- a) Occupational Health and Safety Act of 1993.
- b) Relevant regulations of the Public Works.
- c) Code of practice for wiring of premises, SANS 10142-1 as amended.

3.13.14.3DRAWINGS

Drawings accompanying this document show the complete electrical, power, lighting, and forms part of the contract. Three sets of drawings and documents shall be handed out to the successful Tenderer of which one set shall be available on site all the times during the installation of the works.

The complete lists of drawings for this service are:

Location	Drawing No.	Description

The Contractor must make provision for a site instruction book (triplicate pages), which shall be kept at the site. The Engineer while attending the site shall write all instructions and variations in this site instruction book. The onus will be on the Contractor to confirm such instruction in writing, within 14 days after the issuing of this instruction, especially if it has a cost implication.

3.13.14.4SITE SUPERVISION AND SKILLED PERSONNEL

The successful tenderer shall appoint a full-time site foreman for the duration of the contract who shall be responsible for the overall supervision of the installation work. The site foreman shall act as the tenderers official site representative for the contract as a whole. He will also be required to attend all scheduled site meetings. The tenderer shall allow this requirement in their Preliminary and General costing in the Bill of Quantities section of this document. Deviation in changing this, particularly in changing the site foreman without the approval of the Engineer will not be accepted.

The successful contractor will complete a schedule for all site and skilled personnel who are to be engaged on this contract. This schedule is attached at the back of this document.

3.13.14.5 PROGRAMME

The Contractor must submit a detailed programme before commencement of any work based on prior experience and accounting for site conditions. The Engineer and the employer reserve the right to alter the programme to meet the priorities of the client. These amendments will be such that the Contractor will still be able to complete the works within the tendered construction time. The completion date of the contract shall be as indicated at the site handover meeting or in the appointment letter.

The Contractor must submit a progress report on each monthly scheduled site meeting based on this original programme. The contractor must also indicate his labour force and equipment on site in this report. A summary schedule indicating the main activities of the project shall also be submitted to the Engineer.

3.13.14.6 TIME FOR COMPLETION

The Contractor must allow sufficient time in his contract-working period for delays due to in climate weather, which is normal for the area. Extension of time will only be granted if evidence can be provided that the delays were caused by abnormal weather conditions or late delivery of material to site. Claims for rework will not be considered, and is an issue for insurance. The contract shall be completed on or before the completion date indicated at the site handover meeting.

The penalty for late completion of the works, is indicated in PART III of the special conditions of contract. The contractor must also inform his supplier of materials if they are responsible for the late delivery of materials, as the penalty would be passed on to them.

3.13.14.7 SITE CONDITIONS

The onus will be on the Contractor to ascertain for himself the site conditions before tender closing date.

3.13.14.8 TEST

The Electrical Contractor shall be responsible for the arrangement of all tests at the required times, as specified.

The whole of the installation shall be tested after completion in accordance with the Wiring Code and any applicable By-laws of Local Authorities.

The Electrical Contractor shall assist the Inspector of the Local Authority during any tests carried out by the Inspector and shall supply tools and instruments for testing purposes as required.

The Engineer reserves the right to be present at any tests and the Electrical Contractor shall advise the Engineer of all tests in good time to enable him to be present if he so desires.

The Engineer may perform similar tests at any time and the Electrical Contractor shall render all assistance and shall provide all tools and instruments, which may be required for such tests.

The Electrical Contractor shall replace any portion of the installation if it does not meet with the requirements of the regulations or this specification as may be found by test or inspection. Such replacement shall be done at his own cost.

3.13.14.9 CERTIFICATE OF COMPLIANCE

The work specified in this contract shall be performed by the 3-phase Installation electrician as defined by OHSACT 1993, and shall not be considered to have been completed until a certificate of compliance for the electrical installation has been issued by the Contractor. A copy of a certified valid installation certification shall be submitted with the tender.

The final payment shall be withheld until the above COC is produced by the Electrical Contractor, who is the master electrician and the handover certificate issued by the Engineer.

INSPECTIONS, TESTING, COMMISSIONING AND HANDING OVER

3.13.14.10 PHYSICAL INSPECTION PROCEDURE

Once the Contractor has completed the installation, written notice shall be given to the Engineer in order that a mutually acceptable date can be arranged for a joint inspection.

During the course of the inspection, the representative of the Engineer will compile a list of items (if any) requiring further attention. A copy of this list will be provided to the Contractor who will have a period of 7 days in which to rectify the offending items of the installation.

The Contractor shall then provide written notice that he is ready for an inspection of the remedial work to the offending items.

This procedure will continue until the entire installation has been completed to the satisfaction of the Engineer.

3.13.14.11 TESTING AND OPERATIONAL INSPECTION PROCEDURE

In addition to the above, the Contractor shall have the complete installation tested and approved by the local authorities where applicable.

Subsequent to the above testing and approval, the Contractor shall in the presence of the representative of the Engineer test all the circuits with respect to:

- a) Phase balance
- b) Insulation level
- c) Polarity

Upon completion of the installation and within 3 months of the handover date, the Contractor shall provide and make available a recording voltmeter to record the voltages at three locations in the complex over a period of 48 hours each. These locations will be nominated by the Engineer.

3.13.14.12 MATERIAL

All material used in the execution of the works must be new, from fresh stock and of the highest quality available.

Products that are specified as mark-bearing must bear the mark of the relevant standards body.

When so requested by the department, provide evidence in form of delivery slips, certificates test reports or other written proof that material or components comply with the standards laid down in this specification. The Department reserves the right to have any suspect equipment or material tested and certified by an approved testing authority for compliance with the required standards. If the tests are successful the Department will bear the cost of the tests, however if the material or equipment fails the tests, the Contractor will bare the costs.

Any material or equipment that needs to be replaced must be replaced with the same quality material or equipment. All material or equipment that must be removed or replaced must be handed to the supervisor on site.

Take special care to ensure neatness in all parts of the specification.

The equipment and material must be suitable for the purpose for which they are employed and the arrangement of the equipment must be of the best current practice.

Install only material and equipment manufactured in South Africa wherever possible.

3.13.14.13 DOCUMENTATION

The technical specification must be read in conjunction with the standard specifications referred to herein.

Any ambiguous or dubious wording must be cleared with the Department before work is started.

The wrong interpretation of the specification and/ or drawings, resulting in alterations and/or additional costs, is solely the responsibility of the contractor.

3.13.14.12 DRAWINGS

The Electrical Contractor shall submit working drawings in duplicate, to the Engineer for approval, prior to the manufacturing of any distribution board or kiosk.

These drawings must show full constructional details, finish, etc of all distribution boards. Distribution boards will not be accepted by the Engineer on site upon failure of the Electrical Contractor to comply with this requirement.

Drawings approved by the Engineer for this purpose shall not exempt the Contractor from his responsibilities in terms of this specification or contract document.

If required by the Engineer, the Contractor shall supply two sets of maintenance manuals for any special equipment, which are mounted in the distribution board.

3.13.14.13 GUARANTEES

All light fittings including the components shall be unconditionally guaranteed by the electrical contractor against any defects in the material and or manufacturer for a period of 12 calendar months from the date that the installation has been accepted by the client. Fluorescent and discharged lamps shall be guaranteed for a period of 6 months by the electrical contractor from the date of final handing over to the client. Should any light fitting or defect in the components or painting occur before the guarantee period has expired then the electrical contractor shall replace same at his own expense. Only the electrical contractor and no one else shall be liable for the full responsibility related to the guarantees and ensure that allowance is made in his tender for this.

3.13.14.14 ORDERING OF EQUIPMENT

The timeous ordering of all light fittings is the responsibility of the electrical contractor. Prior to ordering the electrical contractor shall confirm whether the guarantees and types of fittings had changed.. The electrical contractor shall also refer to alterations to drawings issued from time to time.

3.13.14.15 SCHEDULES OF EQUIPMENT

SCHEDULE OF DISTRIBUTION BOARDS

Distribution Board	Mounting style	Location	Fed from

DB – CC	Free Standing mounted on concrete plinth	Elandshoek	Pole mounted transformer
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SCHEDULE OF FEEDERS

Fed from	Feeding to	Cable
Pole mounted transformer (Pole No.MF91-6C or CLPH128/2)	DB - CC	10mmsq, 3 core PVC SWA copper cable + 6mmsq BCEW

SCHEDULE OF LIGHT FITTINGS

Symbol	Description	Qty
Type B11	Type B11: 4500mm Beacon post top luminaire covered with a clear, opaque or fluted diffuser and cylindrical GRP column providing a seamless and smooth surface and c/w 70W MH-T opaque diffuser.	7
Type Pcell	Photocell in an empty round oval shaped bulkhead	1

3.13.14.16CABLE TRENCHING

The Electrical Contractor is responsible for all trenching excavations unless specified to the contrary. Cable trench excavations shall comply with the following dimensions:

Trench depth : 600mm
 Trench width : 400mm
 Bedding : 75mm
 Cable cover layer : 75mm
 Sifted Backfill : 300mm
 Compact soil : 150mm layers
 Cable tape marker depth : 300mm beneath final ground level

C3.14. OH&S MANAGEMENT

C3.14.1 Structure and Organization of OH&S Responsibilities

5.14.1. Overall Supervision and Responsibility for OH&S

The Client is to ensure that the Principal Contractor, appointed in terms of Construction Regulation 4(1)(c), implements and maintains the agreed and approved OH&S Plan.

The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act is to ensure that the Employer (as defined in the Act) complies with the Act. Annexure 2 - "Legal Compliance Audit" may be used for this purpose.

Any OH&S Act (85 /1993), Section 16 (2) appointee/s as detailed in his/her respective appointment forms.

The Construction Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 6.

5.14.2 Further (Specific) Supervision Responsibilities for OH&S

Appointments required by the Act and Regulations:

- OH&S Representatives (Sections 17/18 of the Act)
- OH&S Committees (Sections 19/20 of the Act)
- Risk Assessor (Construction Regulation. 7(1))
- Accident/Incident Investigations Co-ordinator (General Administrative Regulation 9 (2))
- Form/Support work Supervisor (Construction Regulation 10(a))
- Batch Plant Supervisor (Construction Regulation 18(1))
- Stacking & Storage Supervisor (Construction Regulation 26(a))
- Fire Equipment Inspector (Construction Regulation 27(h))
- Electrical Installations, Machinery & Appliances Inspector (Construction Regulation 22)
- Excavations Supervisor (Construction Regulation 11(1))
- Demolition Supervisor (Construction Regulation 12(1))
- OH&S Officer (where necessary) (Construction Regulation 6(6))
- Person Responsible for Machinery (General Machinery Regulation 2)
- Emergency, Security and Fire Coordinator (Construction Regulation 27(h) & Environmental Regulation 9)
- Fire Equipment Inspector (Construction Regulation 27(h) Environmental Regulation 9)
- First Aider (General Safety Regulation 3(2))
- Hazardous Chemical Substances Supervisor (HCS Regulations)
- Ladders Inspector (General Safety Regulation 13A)
- Lifting Equipment Inspector (Construction Regulation 20)
- Operators & Drivers of Construction Plant & Vehicles (Construction Regulation 21 (i))
- Structures Supervisor (Construction Regulation 9)
- Users Operators of Construction Equipment (Construction Regulation 21(i))
- Welding Supervisor (General Safety Regulation 9)

C3.14.3 Communication and Liaison

OH&S liaison between the Client, the Principal Contractor, the other Contractors, the Consulting Engineer and other concerned parties will be through the OH&S Committee as in 3.10.

In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their Supervisors, OH&S Representatives, the OH&S Committee and their elected Trade Union Representatives, if any.

The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and the Consulting Engineer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

C3.14.4 OH&S File

The Principal Contractor must, in terms of Construction Regulation 5 (7), keep a health and safety file on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. The following documents must be kept in the OH&S file:

- Notification of Construction Work (Construction Regulation 3.)
- Copy of OH&S Act (updated) (General Administrative Regulation 4.)
- Proof of Registration and good standing with a COID Insurer (Construction Regulation 4 (g))
- Copy of health and safety plan (construction regulation 5 (1))
- OH&S Programme agreed with Client including the underpinning Risk Assessment and Method Statements (Construction regulation 5 (1))
- Designs/drawings (Construction Regulation 5 (8))
- A list of Contractors (Subcontractors) including copies of the agreements between the parties and the type of work being done by each contractor (Construction Regulation 9)
- Appointment / Designation forms as per 3.1.1. and 3.1.2. above.

Registers as follows:

- * Accident/Incident Register (Annexure 1 of the General Administrative Regulations)
- * OH&S Representatives Inspection Register
- * Form/Support work Inspection
- * Excavations Inspection
- * Lifting Equipment
- * Demolition Inspections
- * Designer's Inspection of Structures Record
- * Batch Plant Inspections
- * Arc & Gas Welding & Flame Cutting Equipment Inspections
- * Construction Vehicles & Mobile Plant Inspections
- * Electrical Installation and Machinery Inspections
- * Fire Equipment Inspection & Maintenance
- * First Aid
- * Hazardous Chemical Substances
- * Lifting Tackle and Equipment Inspections
- * Inspection of Cranes
- * Inspection of Ladders
- * Inspection of Vessels under Pressure
- * Machinery Inspections
- * Drivers/Operators of Mobile Plant/Construction Vehicles Daily Inspections

The Principal Contractor will be required to submit the abovementioned registers monthly to the chairperson of the OH&S Committee for endorsement.

The Health & Safety File must be handed over to the Client on completion of the contract. It must contain all the documentation handed to the Principal Contractor by any subcontractors together

with a record of all drawings, designs, materials used and other similar information concerning the completed project.

3.14.4.1 OH&S Goals and Objectives and Arrangements for Monitoring and Review of OH&S Performance

The Principal Contractor is required to maintain a Compensation Incidence Frequency Rate (CIFR) of at least 8 (Refer Annexure 3 - "Measuring Injury Experience") and to report on this to the Client on a monthly basis.

3.14.4.2 Identification of Hazards and Development of Risk Assessments, Standard Working Procedures (SWP) and Method Statements

The Principal Contractor is required to develop Risk Assessments, Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (Refer to Section 4. below "Project/Site Specific Requirements")

Arrangements for Monitoring and Review

3.14.4.3.1. Monthly Audit by Client

The Client will be conducting a Monthly Audit to comply with Construction Regulation 4 (1) (d) to ensure that the Principal Contractor has implemented and is maintaining the agreed and approved OH&S Plan.

Other Audits and Inspections by Client

The Client reserves the right to conduct other ad hoc audits and inspections as deemed necessary.

A representative of the Principal Contractor must accompany the Client on all Audits and Inspections and may conduct his/her own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results.

3.14.4.3.3 Reports

The Principal Contractor is required to provide the Client with a monthly report in the format as per the attached Annexure 4: "SHE Risk Management Report"

The Principal Contractor must report all incidents where an employee is injured on duty to the extent that he/she:

dies

becomes unconscious

loses a limb or part of a limb

is injured or becomes ill to such a degree that he/she is likely either to die, or to suffer a permanent physical defect, or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

a major incident occurred

the health or safety of any person was endangered

where a dangerous substance was spilled

the uncontrolled release of any substance under pressure took place

machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
machinery ran out of control

to the Provincial Director of the Department of Labour within seven days. (Section 24 of the General Administrative Regulations 8.). The Principal Contractor is required to provide the Client with copies of all statutory reports required in terms of the Act.

The Principal Contractor is required to provide the Client with copies of all internal and external accident/incident investigation reports including the reports contemplated in 3.9. below.

3.14.4.3.4 Review

The Principal Contractor is to review the Hazard Identification, Risk Assessments and SWP's at each two weekly site inspection/meeting as the construction work develops and progresses and each time that changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide the Client, other Contractors and all other concerned parties with copies of any changes, alterations or amendments.

C3.14.4.4 Site Rules and Other Restrictions

3.14.4.4.1 Site OH&S Rules

The Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the OH&S aspects of the construction.

3.14.4.4.2 Security and Emergency Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period.

Access control must include the rule that non-employees will not be allowed on site unaccompanied.

The Principal Contractor must develop a set of security rules and procedures and maintain these throughout the construction period.

The Principal Contractor must appoint a competent Emergency Controller who must develop emergency contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programme for the plans e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

C3.14.4.5 Training

The contents and syllabi of all training required by the Act and Regulations must be included in the Principal Contractor's OH&S Plan.

General Induction Training

All employees of the Principal and other Contractors to be in possession of proof of General Induction Training

Site Specific Induction Training

All employees of the Principal and other Contractors to be in possession of Site Specific OH&S Induction Training.

Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment to be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations to be in possession of valid proof of training.

OH&S Training Requirements: (as required by the Construction Regulations and as indicated by the OH&S Specification and the Risk Assessment/s):

- * General Induction (Section 8 of the Act)
- * Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- * Site/Project Manager
- * Construction Supervisor
- * OH&S Representatives (Section 18 (3) of the Act)
- * Training of the Appointees indicated in 3.1.1. & 3.1.2. above
- * Operation of Cranes (Driven Machinery Regulations 18 (11))
- * Operators and Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
- * Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction regulation 27)
- * Basic First Aid (General Safety Regulations 3)
- * Storekeeping Methods & Safe Stacking (Construction Regulation 26)
- * Emergency, Security and Fire Coordinator

C3.14.4.6 Accident and Incident Investigation

The Principal Contractor is responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she had to be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9).

The results of the investigation to be entered into the Accident/Incident Register. (General Administrative Regulation 9)

The Principal Contractor is responsible for the investigation of all non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

C3.14.4.7 OH&S Representatives and Committees

Designation of OH&S Representatives

Where the Principal Contractor employs more than 20 persons (including the employees of other contractors (sub-contractors) he has to appoint one OH&S Representative for every 50 employees or part thereof. General Administrative Regulation 6 requires that the appointment or election and

subsequent designation of the OH&S Representative is executed in consultation with Employee Representatives or Employees. (Section 17 of the Act and General Administrative Regulations 6 & 7.)

OH&S Representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

C3.14.4.8 Duties and Functions of the OH&S Representatives

The Principal Contractor must ensure that the designated OH&S Representatives conduct a minimum monthly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor.

OH&S representatives must be included in accident/incident investigations.

OH&S representatives must attend all OH&S committee meetings.

C3.14.4.9. Appointment of OH&S Committee

The Principal Contractor must establish an OH&S Committee consisting of all the designated OH&S Representatives together with a number of management representatives (this number is not to exceed the number of OH&S representatives on the committee) and a representative of the Client who shall act as the chairperson without a vote. The members of the OH&S committee must be appointed in writing.

The OH&S Committee must meet minimum monthly and consider, at least, the following Agenda:

- Opening and welcome
- Present/Apologies/Absent
- Minutes of previous meeting
- Matters arising from the previous minutes
- OH&S Representatives Reports
- Incident Reports & Investigations
- Incident /Injury statistics
- Other matters
- Endorsement of Registers and the statutory documents by a representative of the Principal Contractor
- Close/Next Meeting

C3.14.4.10 PROJECT / SITE SPECIFIC REQUIREMENTS

The following is a list of specific activities and considerations that have been identified for the project and the construction site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- * Clearing & Grubbing of the Area/Site
- * Site Establishment including:
 - Office/s
 - Secure/safe storage for materials, plant & equipment
 - Ablutions
 - Sheltered eating area
 - Maintenance workshop
 - Vehicle access to the site
- *Dealing with existing structures (NB: the existing pipeline is also a structure.)
- * Location of existing services
- * Installation and maintenance of temporary construction electrical supply, lighting and equipment

- * Adjacent land uses/surrounding property exposures
- * Boundary and access control/Public Liability Exposures (NB: the Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
- * Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
- * Exposure to noise
- * Exposure to vibration
- * Protection against dehydration and heat exhaustion
- * Protection from wet & cold conditions
- * Dealing with HIV/Aids and other diseases
- * Use of Portable Electrical Equipment including

Angle grinder

Electrical drilling machine

Skill saw

- * Excavations including

Ground/soil conditions

Trenching

Shoring

Drainage of trench

- * Welding including

Arc Welding

Gas welding

Flame cutting

Use of LP gas torches and appliances

- * Loading & offloading of trucks
- * Aggregate/sand and other materials delivery
- * Manual and mechanical handling
- * Lifting and lowering operations
- * Driving & operation of construction vehicles and mobile plant including

Trenching machine

Excavator

Bomag roller

Plate compactor

Front end loader

Mobile cranes and the ancillary lifting tackle

Parking of vehicles & mobile plant

Towing of vehicles & mobile plant

- * Use and storage of flammable liquids and other hazardous substances
- * Layering and bedding of trench floor
- * Installation of pipes in trench
- * Pressure testing of pipeline
- * Installing heat shrink joint sleeves
- * Backfilling of trench
- * Protection against flooding
- * Gabion work
- * Use of explosives
- * Protection from overhead power lines
- * As discovered by the Principal Contractor's hazard identification exercise
- * As discovered from any inspections and audits conducted by the Client or by the Principal Contractor or any other Contractor on site
- * As discovered from any accident/incident investigation.

Annexure 1: Construction Occupational Health – Safety – Environment Audit System

Annexure 2: Guidelines for the development of a Health and Safety Plan.

Annexure 3: Guide to Risk Assessment

ANNEXURE 1

CONSTRUCTION OCCUPATIONAL HEALTH - SAFETY - ENVIRONMENT
AUDIT SYSTEM
(Based on the New Construction Regulations)

* Denotes items applicable to both Construction sites and Contractors Plant/Storage

ADMINISTRATIVE & LEGAL REQUIREMENTS

Section/Regulation	Subject	Requirements	Yes/No
Construction. Regulation 3	Notice of carrying out Construction work	Department of Labour notified Copy of Notice available on Site	
General Admin. Regulation 3	*Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations on site Readily available for perusal by employees	
COID Act Section 80	*Registration with Compensation. Insurer	Written proof of registration / Letter of good standing available on Site	
Construction. Regulation 4 & 5(1)	OH&S Specification & Plan	OH&S Specification received from Client OH&S plan developed Updated regularly	
Section 8(2)(d) and Construction. Regulation 6	*Hazard Identification & Risk Assessment	Hazard Identification carried out/Recorded Risk Assessment and Plan drawn up/Updated Risk Assessment Plan available on Site Employees/Subcontractors informed/trained	
Section 16(2)	*Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.	
Construction. Regulation 5(2)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Supervisor	
Construction. Regulation 5(5)(a)	Designation of Subordinate Person	Competent person appointed in writing as Sub-ordinate Construction Supervisor	
Section 17 & 18	*Designation of Occupational Health & Safety Representatives	More than 20 employees - one OH&S Representative, one additional OH&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified. Meaningful OH&S Rep. reports. Reports actioned by Management.	
Section 19 & 20	*Occupational Health & Safety Committee/s	OH&S Committee/s established. Members appointed in writing. Meetings held monthly. Minutes kept. Actioned by Management.	
Section 37	*Agreement with Mandatories (Sub-Contractors)	Written agreement with Subcontractors. List of Subcontractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Work Supervisor designated Written arrangements concerning	

Section/Regulation	Subject	Requirements	Yes/No
		OH&S Reps & OH&S Committee Written arrangements regarding First Aid	
Construction. Regulation 7	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated Available on Site	
Construction. Regulation 8	Roofwork	Competent person appointed to plan & supervise Roofwork. Proof of appointees competence available on Site Risk Assessment carried out Roofwork Plan drawn up/updated Roofwork inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof available	
Construction. Regulation 9	Structures	Information re. the structure being erected received from the Designer including: - geo-science technical report where relevant - the design loading of the structure - the methods & sequence of construction - anticipated dangers/hazards/special Measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site Structures inspected before each shift. Inspections register kept	
Construction. Regulation 10	Formwork & Support work	Competent person appointed in writing to supervise erection, maintenance, use and dismantling of Support & Formwork Design drawings available on site Risk Assessment carried out Support & Formwork inspected: - before use/inspection - before pouring of concrete - weekly whilst in place - before stripping/dismantling. Inspection register kept	
Construction. Regulation 11	Scaffolding	Competent persons appointed in writing to: - erect scaffolding (Scaffold Erector/s) - act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Copy of SABS 085 available on Site Risk Assessment carried out Inspected weekly/after bad weather. Inspection register/s kept	
Construction. Regulation 12	Suspended Scaffolding	Competent persons appointed in writing to: - erect Suspended scaffolding (Scaffold Erector/s) - act as Suspended Scaffold Team Leaders	

Section/Regulation	Subject	Requirements	Yes/No
		<ul style="list-style-type: none"> - inspect Suspended Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Risk Assessment conducted Certificate of Authorization issued by a registered professional engineer available on Site/copy forwarded to the Department of Labour The following inspections of the whole installation carried out by a competent person - after erection and before use - daily prior to use. Inspection register kept The following tests to be conducted by a competent person: - load test of whole installation and working parts every 12 months - hoisting ropes/hooks/load attaching devices quarterly. Tests log book kept Employees working on Suspended Scaffold medically examined for physical & psychological fitness. Written proof available 	
Section/Regulation	Subject	Requirements	Yes/No
Construction. Regulation 13	Excavations	<p>Competent person/s appointed in writing to supervise and inspect excavation work</p> <p>Written Proof of Competence of above appointee/s available on Site</p> <p>Risk Assessment carried out</p> <p>Inspected:</p> <ul style="list-style-type: none"> - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept <p>Method statement developed where explosives will be/ are used</p>	
Constructions Regulation 14	Demolition Work	<p>Competent person/s appointed in writing to supervise and control Demolition work</p> <p>Written Proof of Competence of above appointee/s available on Site</p> <p>Risk Assessment carried out</p> <p>Engineering survey and Method Statement available on Site</p> <p>Inspections to prevent premature collapse carried out by competent person before each shift.</p> <p>Inspection register kept</p>	
Construction. Regulation 16	Materials Hoist	<p>Competent person appointed in writing to inspect the Material Hoist</p> <p>Written Proof of Competence of above appointee available on Site.</p> <p>Materials Hoist to be inspected weekly by a competent person. Inspections register kept.</p>	
Construction. Regulation 17	Caissons & Cofferdams	<p>Competent person appointed in writing to supervise, control & inspect the construction, installation/dismantling of caissons/coffer dams</p>	

Section/Regulation	Subject	Requirements	Yes/No
		Written Proof of Competence of above appointee available on Site Risk Assessment carried out To be inspected daily by a competent person. Inspections register kept	
Construction. Regulation 18	Explosive Powered Tools	Competent person appointed to control the issue of the Explosive Powered Tools & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use	
Construction. Regulation 19	Batch Plants	Competent person appointed to control the operation of the Batch Plant and the service, maintenance and cleaning. Register kept of above Risk Assessment carried out Batch Plant to be inspected weekly by a competent person. Inspections register kept	
Construction. Regulation 20/ Mine Health & Safety Act (29 of 1996)	Tunneling	Complying with Mines Health & Safety Act (29 of 1996) Risk Assessment carried out	
Construction. Regulation 21/ Driven Machinery Regulations 18 & 19	Cranes & Lifting Machines Equipment	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - daily by operator - Tower Crane/s – after erection/6monthly - Other cranes – annually by comp. person - Lifting tackle(slings/ropes/chain slings etc.) - 3 monthly Risk Assessment carried out	
Construction. Regulation 22/ Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	*Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools and -lights and extension leads identified/numbered. Monthly visual inspection by User/Issuer/Storeman. Register kept.	

Section/Regulation	Subject	Requirements	Yes/No
Construction. Regulation 2 Diving Regulations	Water Environments	<p>Competent person appointed in writing to supervise diving operations and ensure maintenance, statutory inspection and testing by an Approved Inspection Authority of equipment used</p> <p>Written Proof of Competence of above appointee available on Site</p> <p>Proof of registration of all divers present on site available</p> <p>Risk Assessment carried out</p> <p>Diving Manual produced. Available on Site</p> <p>Record of Voice Communications kept</p> <p>Diving Operations record kept</p> <p>Each Diver keeps a personal logbook. Entries countersigned by the Diving Supervisor</p> <p>Decompression tables available on Site</p> <p>Records of any Decompression illness kept</p> <p>Certificate of Manufacture of any Compression Chamber or Diving Bell in use available on Site</p>	
Construction. Regulation 30/ General Safety Regulation 8(1)(a)	*Designation of Stacking & Storage Supervisor.	<p>Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage</p> <p>Written Proof of Competence of above appointee available on Site</p>	
Construction. Regulation 31/ Environmental Regulation 9	*Designation of a Person to Co-ordinate Emergency Planning And Fire Protection	<p>Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures</p> <p>Emergency Evacuation Plan developed: Drilled/Practiced</p> <p>Plan & Records of Drills/Practices available on Site</p> <p>Fire Risk Assessment carried out</p> <p>All Fire Extinguishing Equipment identified and on register.</p> <p>Inspected weekly. Inspection Register kept</p> <p>Serviced annually</p>	
Construction. Regulation 32/ General Safety Regulation 3	*First Aid	<p>Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed)</p> <p>First Aid freely available</p> <p>Equipment as per the list in the OH&S Act.</p> <p>One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed)</p> <p>List of First Aiders and Certificates</p> <p>Name of person/s in charge of First Aid box/es displayed.</p> <p>Location of F/Aid box/es clearly indicated.</p> <p>Signs instructing employees to report all Injuries/illness including first aid injuries</p>	

Section/Regulation	Subject	Requirements	Yes/No
Construction. Regulation 33/ General Safety Regulation 2	Personal Safety Equipment (PSE)	PSE Risk Assessment carried out Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE	
Construction. Regulation 34/ General Safety Regulation 9	*Inspection & Use of Welding/Flame Cutting Equipment	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site Equipment identified/numbered and entered into a register Equipment inspected monthly. Inspection Register kept	
Construction. Regulation 35/ Hazardous Chemical Substances (HCS)	*Control of Storage & Usage of HCS	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of HCS Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of HCS kept/used on Site	
Construction. Regulation 36/Vessels under Pressure Regulations	Vessels under Pressure (VUP)	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of VUP's on Site Inspections & Testing by Approved Inspection Authority (AIA): after installation/re-erection or repairs every 36 months. Register/Log kept of inspections, tests. Modifications & repair	
Construction. Regulation 37	Construction Vehicles & Earth Moving Equipment	Operators/Drivers appointed to: Carry out a daily inspection prior to use Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site Record of Daily inspections kept	
Construction. Regulation 38/ General Safety Regulation 13D	*Inspection of Ladders	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and monthly there after. Inspections register kept.	

CONTRACT No: 16/2019
PROJECT NAME: ELANDSHOEK ACCESS ROAD



Section/Regulation	Subject	Requirements	Yes/No
Construction. Regulation 39/ General Safety regulation 13B	Ramps	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept.	

ANNEXURE 2

GUIDELINES FOR THE DEVELOPMENT OF A HEALTH & SAFETY PLAN

1. Project Background

In terms of the Construction Regulations [Regulation 4 (1) (a)] of the Occupational Health and Safety Act, No 85 of 1993, the Client is required to compile an Occupational Health and Safety specification for each of its projects and the Principle Contractor, appointed by the Client in terms of Regulation 4 (1) (c), is required to prepare an Occupational Health and Safety Plan. This plan has to be prepared in terms of Regulation 5 (1) as well as the Client's Occupational Health & Safety Specification. In terms of Regulation 4 (2), the Client and the Principle Contractor are required to agree on the Occupational Health and Safety Plan before any work may commence.

2. Framework for an Occupational Health and Safety Plan

Introduction

The Principal Contractor has to demonstrate to the Client that he has a suitable and sufficiently documented Occupational Health and Safety Plan as well as the necessary competencies, experience and resources to perform the construction work safely. The Principle Contractor could be required to submit the following documentation for perusal and verification by the Client:

Management Structure

Quality Plan

Human Resources Plan

Registered Workplace Skills Plan

"Letter of good standing" from the Compensation Commissioner or licensed compensation insurer.

Proof of induction and other training of employees

Example copy minutes of previous Occupational Health and Safety Committee meetings and copies of Incident Investigation Reports

Contents of an Occupational Health and Safety Plan

Occupational Health and Safety Management Programme

Management of Occupational Health and Safety risks

Occupational Health and Safety structures and appointments

Programme of Occupational Health and Safety inspections

Occupational Health and Safety Representatives

Occupational Health and Safety committee

Communication and Management of the Work

Management structure and responsibilities

Occupational Health and Safety goals for the project and arrangements for monitoring and review of Occupational Health and Safety performance.

Arrangements for:

Regular liaison between parties on site

Consultation with the workforce

The exchange of design information between the Client, engineer, supervisors and contractors on site

Handling design changes during the project

Selection and control of contractors

The exchange of Occupational Health and Safety information between all contractors

Security

Site induction and onsite training

Facilities and first-aid

The reporting and investigation of accidents and incidents
The production and approval of risk assessments and method statements
Site OH&S rules
Fire and emergency procedures
Reporting to the Client i.e. results of Occupational Health and Safety inspections, incident and incident investigations and committee meetings
Reporting of incidents to the Department of Labour and Compensation insurer where appropriate

Arrangements for controlling significant site risks

The following are some examples of the arrangements for controlling the most significant site risks:

Safety risks

Services, including temporary electrical installations
Preventing employees from falling into excavations, from trucks etc.
Work with, on or near fragile materials
Control of lifting operations
The maintenance of plant and equipment
Poor ground conditions
Traffic routes and segregation of vehicles and pedestrians
Storage of hazardous materials
Dealing with existing unstable structures/land
Accommodating adjacent land use
Other significant safety risks as and when identified

Health risks

Storage and use of hazardous chemical substances
Dealing with contaminated land or material
Manual handling
Reducing noise and vibration
Provision of adequate lighting
Ventilation considerations
Extreme heat and cold temperature considerations
Dealing with HIV/Aids and other illnesses
Provision of and maintaining ablution and eating facilities
Other significant health risks as and when identified

Preparation of an Occupational Health and Safety Operational Reference File/Manual

The following are some of the requirements to be addressed:

Layout, format and content requirements
Arrangement for the collection and gathering of information
Storage and archiving of all the information
Copy to the Client at completion of project

Suggested Contents of an OH&S File/Manual

OH&S Policy
Notice of new project
Site start-up
Security measures
Written designations & appointments
Arrangements with contractors/mandataries
OH&S rules and procedures
Induction

CONTRACT No: 16/2019
PROJECT NAME: ELANDSHOEK ACCESS ROAD



OH&S training
OH&S promotion
OH&S representatives
OH&S committees
Workplace facilities e.g. ablutions, sheltered eating areas etc.
Protective equipment
Workplace inspections and audits
Investigation & reporting of incidents/accidents
Mechanical safeguarding
Electrical safeguarding
Safeguarding against hazardous substances
Lifting machinery & equipment
Construction vehicles & mobile plant
Welding, heating & flame cutting
Excavations
Protection of the environment affected by construction activities
Keeping of records in terms of the OH&S Act (85 of 1993)

ANNEXURE 3

GUIDE TO RISK ASSESSMENT

1. HOW TO DO IT?

Steps to Effective Risk Assessment

- Step 1 : Identifying the hazards
- Step 2 : Aim to identify major hazards, don't waste time on the minor & detail
- Step 3 : Involve as many people as possible in the process especially those at risk
- Step 4 : Gather all the information and analyse it
- Step 5 : Look at what actually occurs including non-routine operations
- Step 6 : Use a systematic approach to ensure all hazards are adequately addressed
- Step 7 : Assess the risks arising taking into account the effectiveness of controls
- Step 8 : Ensure the process is practical and realistic
- Step 9 : Always record the assessment in writing including assumptions and why

3. How serious is it?

PROBABILITY

- A Common
- B Has Happened
- C Could Happen
- D Not Likely
- E Practically impossible

CONSEQUENCES

- 1 Fatality or permanent disability
- 2 Major injury
- 3 Average Lost Time Injury
- 4 Minor Injury
- 5 Medical Treatment or less

PROBABILITY

C
O
N
S
E
Q
U
E
N
C
E
S

1	1	2	3	4	5
2	2	3	4	5	6
3	3	4	5	6	7
4	4	5	6	7	8
5	5	6	7	8	9

Risk Rating:	1 – 3 =	Serious	ACTION
	4 - 5 =	High	Immediate (within 1 week)
	6 – 7 =	Moderate	Within 1 month
	8 – 9 =	Acceptable	> 4 weeks No action

SAFCEC – SA Federation of Civil Engineering Contractors

LIST OF RISK ASSESSMENTS AVAILABLE (as at 2003.07.07)

Access Towers
 Acid Washing

Fuel Supply
 Gas Cylinders – Handling of

Aggregate/Sand Delivery	
Angle Grinder	
Arc Welding	Gas Welding-cutting operations
Armco Barriers - installation	Gas Welding-cutting operations
Assembly of elements by boilermaker	Guillotine
Backfilling	Hand & Spray Painting
Bag Filling	Hand Tools Jacking – with Hydraulic Pump
Band Saw	Hanging scaffolding
Banksman	Hauling
Batch Plant	High cut operations
Bench Grinder	Jacking Hydraulic Pump (1)
Bin Scraper	Jacking Hydraulic Pump (2)
Block Feeder	
Block Machine	Kerb Laying
Boom Scraper	Landscaping
Bricks – Laying of	Lathe
Brickwork	Layering of (Road work) Materials
Bulk Earthworks	Layering Process
Cement Spray Truck	Laying Kerbs
Clearing & Grubbing of Area/Site	Laying of stormwater drains
Compr. Gas Cylinders-handling	Leveling – of materials
Compressors – Air	Lifting Concrete Beams on to trailers
Concrete – placing of (1)	Loading supervisor
Concrete – placing of (2)	Loading/Unloading - of Trucks
Confined Spaces – Working in	Loffels – placing/laying
Conveyors	Machine operator
Cutting – of Earthworks	Making of steel items
David Arm	Material delivery
Deck Panels – placing	Materials Handling
Depilator Operator	Mixer operator
Diss. Assembly Rejects	Mobile Cranes
Distribution Boards – Electrical	Pedestal Drill
Drivers – of Vehicles	Pedestal Grinder
Dry Tile Deracking	Placing Concrete
Dumpers - Concrete	Plastering
Electrical Installation – Maintenance of	Portable Electric Drill
Elevated Positions	Portable Electric Tools
Erecting – Install/ Shutters	Portable Ladders
Excavations (1)	Post
Excavations (2)	Radial Arm Drill
Explosive Powered Tools	Refueling Vehicles/Plant
Finger Car	Reinforcing Steel – placement (1)
Fire Fighting Prevention	Reinforcing Steel – placement (2)
Fire Prevention & Protection	Road Traffic Signs – placement of
Formwork	Road works - Deviations
Friction Saw	Roof Truss erection
Front End Loader	Sand Blasting
Shuttering – Erection	Scaffolding
Shuttering – Stripping	
Site Establishment (1)	
Site Establishment (2)	
Skill Saw	
Spray Painting	
Stormwater pipes - laying	
Structural Steel – Erection	
Structural Steel – Lay down	
Surveying	
Suspended Scaffolds	

Tensioning

CONTRACT No: 16/2019
PROJECT NAME: ELANDSHOEK ACCESS ROAD



Termite Proofing
Tile Machine
Tile stacking
Timber Feeder
Tower Cranes
Traffic Accommodation
Traffic Control/Regulation
Trench Excavation
Use of angle grinder
Use of Port. Elec. Tools.
Wet tile racking
Work confined spaces
Work in Elevated Positions
Working Platforms
Workshops

RISK ASSESSMENT: SITE ESTABLISHMENT

TYPE OF WORK PERFORMED:

DATE COMPLETED: _____

ASSESSMENT PERFORMED BY:

—

Step No.	Activity Rules	What can cause injury/damage?	Result of cause (injury/damage)	Preventative Measures (tools, PPE, equipment)	Controls (test, check list)	Weights		
1.	Access to be a main consideration when positioning offices, stores and parking areas on site during planning stage. Possible one way traffic to be introduced	Restricted access to parking and delivery areas to storage areas.	Damage to transport and plant	Proper layout of site by Construction Manager and Site Agent taking into consideration all transport plant and material movements and storage on site.	Site Agent to check layout Drg. To compare with OHS Act requirements and whether they are to Concor's standards.			
2.	Oxygen and acetylene store to be a minimum distance of five metres away from other buildings. It needs to be well ventilated and have a roof to keep direct exposure to the sun.	Fire explosion leaking gas may spread if to close to other buildings.	Damage to property and plant. Health of employees.	See item 1.	See item 1.			
3.	Diesel tanks to be a distance of 10 metres away from any building and parking areas. A slab with a bund wall capable of carrying 110% of the tank capacities must be constructed for the tanks to stand in.	Fire may spread to adjacent buildings and plant if is too close.	Burns on all parts of body. Damage to plant and property.	See item 1. Persons in charge of tanks should be inducted regarding all the hazards involved and how to control them	See item 1. Supervisor to monitor on an ongoing basis if rules are complied with			

Step No.	Activity Rules	What can cause injury/damage?	Result of cause (injury/damage)	Preventative Measures (tools, PPE, equipment)	Controls (test, check list) During erection & ongoing	Weights		
						Safety	Health	R/R
4.	All cables from distribution board to offices, store and for security to be underground. The distribution board is to stand on a firm level base and should be locked at all times.	Damaged cables loose wires exposed.						
5.	Security fencing minimum height of 1.8 meter around site area together with two double gates.	Theft of property. Access to unauthorised persons.	Loss of property. Injury to persons.	Security guards to be appointed to keep watch.	Supervisor to put system of control in place			
6. 6.1 6.2 6.3 6.4 6.5	Services to be available during site establishment. Fire fighting equipment. First aid boxes. First aider. Drinking water. Toilets.	Not having the essential services at hand.	Health of employees. Loss of property through fire.	6.1 to 6.5 are to be included on first order placed for contract. Dry chemical powder ABCDE fire extinguishers to be ordered 4 off for start.	Site Agent to see that these requirements are on site from start of site establishment.			
7.	Water tank tower to consist of very well cross braced pipe structure standing on concrete base.	Badly constructed water tower under designed structurally could cause tower to collapse.	Injury to persons. Damage to property.	Supervisor to erect as per design office specifications.				

Step No.	Activity Rules	What can cause injury/damage?	Result of cause (injury/damage)	Preventative Measures (tools, PPE, equipment)	Controls (test, check list) During erection & ongoing	Weights		
8.	Safety sign & notice board to be placed close to entrance of main gate	Not informing employees and public what the site rules are.	Injury to persons. Damage to property.	Concor standard notices/ Posters to be displayed. Available from Head Office.	Site manager to check that board has been erected.			
9.	Laydown areas to be sufficient in size. timber poles to be available to stack materials on.	With inadequate space various materials will be stacked on top of each other causing unstable stacks.	Injury to persons loading, unloading materials.	Allow sufficient space for laydown area during planning stage of site layout. Access to be considered important.	Site agent to discuss with Foreman regarding his requirement at planning stage.			
10.	Toilets are to be well ventilated.	No ventilation in toilets may cause germs to propagate.	Possible health problems due to germs.	Extraction fans to be fitted if required.	Supervisor to check if he is satisfied with ventilation.			

ASSESSMENT: 1 – 10 (HIGH) 11 – 16 (MEDIUM) 17 – 25 (LOW)

RISK ASSESSMENT: EXCAVATIONS (PLANT & MANUAL)

TYPE OF WORK PERFORMED: _____

DATE COMPLETED: _____

ASSESSMENT PERFORMED BY: _____

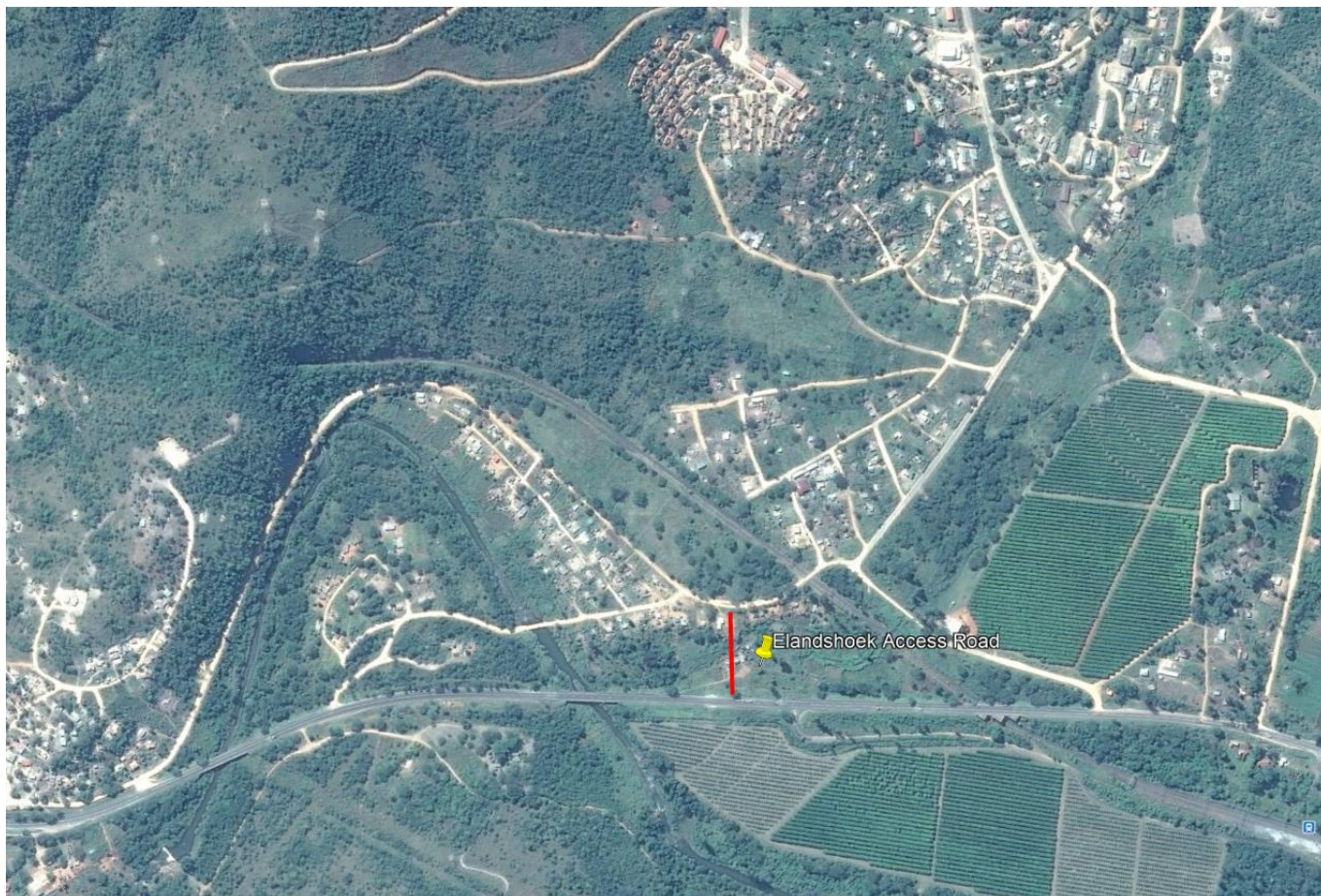
Step No	Activity Rules	What can cause injury/damage	Result of cause (injury/damage)	Preventative measures (tools, PPE, equipment)	Controls (test, checks)			
	When using a machine to excavate, observe the following:					Safety	Health	Finan.
1	Operator must ensure there are no employees working in this area.	Employees not visible to operate or moving machine.	An injury to all parts of the body and as well as more serious fatal injuries.	Operator must work under close supervision. He must inspect the work area prior to commencing work.	Supervisor to ensure employees are informed and operator works under his supervision.			
2	Machine not to operate while employees are working in same excavations.	Danger of injury of employee by machine.	Bruises, scratches, fractures and fatal.	Supervisor must instruct operator when to commence work.	Supervisor to control and enforce procedure.			
3	All excavated materials must be discharged not closer than 2m from the edge of the excavation. When excavating manually, observe the following. See original	Materials can fall onto employees and the excavation may need extra work.	Injuries to employees and the excavation may need extra work.	Supervisor must instruct operator where to place discharged soil and gravel.	Supervisor to control.			
4	Using a pick and a shovel.	Unsafe use of a pick or a shovel.	Injury to employees.	Induct employees on safe working procedures.	Supervisor and charge hand to control.			
5	Check sides of excavations.	Unstable / loose material causes unsafe condition.	Injury to employees and damage to excavations.	Supervisor to inspect sides on a regular basis.	Supervisor / charge hand to control.			

6	Excavated material to be placed away from side of excavation.	Materials can fall onto employees when working inside the excavation.	Bruises, scratches, fractures and fatal.	Employees to be instructed not to place loose soil on edge of the excavation.	Supervisor to control.			
7	All excavations deeper than 1,5 m must have an access ladder available for employees to get into and out of the excavation safely.	Employees not able to enter or exit the excavation safely.	In case of an emergency too many employees may be buried as a result of inadequate access. Employees may also strain muscles to get into or out of an excavation without safe and convenient access.	Providing a ladder makes access into and out of the excavation area easy and safe.	Supervisors to ensure employees are given safe and convenient access to excavations.			
8	Sides of excavation to be shored (if necessary) and barricaded immediately.	Sides may collapse. Employees may NOT BE AWARE OF THE EXCAVATION AND FALL INTO IT.	Damage to the excavation. Injury to employees,	Put adequate shoring and strong physical barricades in place immediately.	Supervisor and chargehand to control.			
9	Excavations must be backfilled as soon as possible after excavation.	Excavations could collapse. Employees could trip and fall in. Vehicles and machinery could damage excavations.	Damage to excavations. Injury to employees. Damage to plant and machinery.	Keep area barricaded with a strong physical barricade and backfill as soon as possible.	Supervisor and chargehand to control.			

C4: SITE INFORMATION

ELANDSHOEK N4 INTERSECTION Road is located within Elandshoek, under The City of Mbombela in Mpumalanga Province.

Area	Latitude (S)	Longitude (E)
ELANDSHOEK N4 INTERSECTION	25°29'49"S	30°42'06"E



C4.1 LOCALITY PLAN

The Locality Plan is included in the set of drawings.

C4.2 CONSTRUCTION NOTICE BOARD

A copy of the drawing of the construction notice board is included in the set of drawings.

C5 TENDER DRAWINGS

A separate booklet containing the reduced size tender drawings have been issued under Volume 2 of the tender documentation.