



TENDER 19/2026

UPGRADING OF THE ROBERTSON PRECINCT

TENDERER	
ADDRESS OF TENDERER	
TELEPHONE/FACSIMILE	
EMAIL ADDRESS	
B-BBEE STATUS	
TENDER AMOUNT	
COMPLETION PERIOD	
NAME REPRESENTATIVE	

May 2026



**THE MUNICIPAL MANAGER
LANGEBERG MUNICIPALITY
28 MAIN ROAD
ASHTON
6715**

TEL: (023) 615 8000



**5th FLOOR MODENA BUILDING
BELLA ROSA VILLAGE
C/O DURBANVILLE & BELLA ROSA
STREET
BELLVILLE
7530**

TEL: (021) 975 1718

CONTENTS		
SECTION	DESCRIPTION	PAGE
COVER		
PAGE		
CONTENTS		(i) to (ii)
THE TENDER		
PART T1	TENDERING PROCEDURES	
T1.1	Tender Notice and Invitation to Tender	T1.1-1
T1.2	Tender Data	T1.2-1 to T1.2-12
PART T2	RETURNABLE DOCUMENTS	
T2.1	List of Returnable Documents	T2.1-1 to T2.1-2
T2.2	Returnable Schedules	T2.2-1 to T2.2-46
THE CONTRACT		
PART C1	AGREEMENT AND CONTRACT DATA	
C1.1	Form of Offer and Acceptance	C1-1 to C1-4
C1.2	Contract Data	C1-5 to C1-10
C1.3	Performance Guarantee (Pro Forma)	C1-11 to C1-13
PART C2	PRICING DATA	
C2.1	Pricing Instructions	C2.1-1 to C2.1-2
C2.2	Bill of Quantities	C2.2-3 to C2.2-12
PART C3	SCOPE OF WORKS	
C3.1	Description of the Works	C3.1-1 to C.3.1-5
C3.2	Engineering	C3.2-6
C3.3	Procurement	C3.3-7 to C3.3-8
C3.4	Construction	C3.4-9 to C3.4-61
C3.5	Management	C3.5-62 to C3.5-69

SECTION	DESCRIPTION	PAGE
C3.6	Annexures	C3.6-70
	Annexure 1: B-BBEE Sub-contractor Expenditure Report	C3.6-71
	Annexure 2: Project Labour Report	C3.6-72
	Annexure 3: Environmental Management Plan	C3.6-73
	Annexure 4: Health and Safety Plan	C3.6-79
PART C4	SITE INFORMATION	C4-80
PART C5	DRAWINGS	C5-81

PART T1 : TENDERING PROCEDURES

T1.1 Tender Notice and Invitation to Tender

T1.2 Tender Data



TENDER NOTICE

TENDER NO. 19/2026

UPGRADING OF THE ROBERTSON PRECINCT

Tenders are hereby requested for the **UPGRADING OF THE ROBERTSON PRECINCT**, as specified in the bid document. Completed Bids, in sealed envelopes, clearly marked **TENDER 19/2026 UPGRADING OF THE ROBERTSON PRECINCT**, should be placed in the tender box, at the Langeberg Municipal Office, 28 Main Road, Ashton, not later than **12:00 on 19 June 2026** when the Bids will be opened in public. Late, faxed or e-mailed tenders will not be considered.

Tenderers must be registered with the CIDB in a class of construction works and have a grading designation equal to or higher than that determined in accordance with the sum tendered or a value determined in accordance with regulation 25 (7A) of the Construction Industry Development Regulations, 2004. It is estimated that tenderers will need a grading designation of 7CE OR HIGHER,

COMPULSORY CLARIFICATION MEETING:

A COMPULSORY CLARIFICATION MEETING WILL BE HELD ON 26 MAY 2026 AT 10H00, AT THE ROBERTSON MUNICIPAL OFFICES – TOWN HALL, 52 CHURCH STREET, ROBERTSON. NO LATE COMERS WILL BE ADMITTED AFTER 10H05.

PLEASE NOTE:

The official Bid document must be fully completed in black ink, all pages must be returned and the document should preferably be stapled or bound. Supporting documents must be submitted separately and must be stapled or bound. The Langeberg Municipality may appoint "reserve bidders" and award the bid to the second – or third ranked bidder during the adjudication stage if the highest-scoring bidder fails to perform during contract execution.

The lowest, or any tender, will not necessarily be accepted and council reserves the right to accept any tender. Tenders will be evaluated according to the Council's Supply Chain Management Policy and the **90/10 Preference Point System**. The Supply Chain Management Policy can be viewed at Municipal Offices or www.langeberg.gov.za

A minimum **functional assessment score of 56 out of 80 points** will apply to this contract.

Bid documents are available from **15 May 2026**, on the Langeberg Municipal website: www.langeberg.gov.za

Please refer written enquiries to MR N ALBERTYN nalbertyn@langeberg.gov.za

DP LUBBE

MUNICIPAL MANAGER

Private Bag X2,

Ashton, 6715

TENDER NO. 19/2026

UPGRADING OF THE ROBERTSON PRECINCT

CONTRACT NO: 2302587

General Tender Information

TENDER ADVERTISED	:	15 May 2026
ESTIMATED CIDB CONTRACTOR GRADING DESIGNATION	:	7CE or higher
SITE VISIT/CLARIFICATION MEETING	:	26 May 2026 at 10h00
VENUE FOR SITE VISIT/ COMPULSORY CLARIFICATION MEETING	:	Robertson Municipal Offices – Town Hall, 52 Church Street, Robertson
CLOSING DATE	:	19 June 2026
CLOSING TIME	:	12h00
TENDER BOX & ADDRESS	:	The Bid Box, at the Entrance of Municipal Office, 28 Main Road, Ashton, LANGEBERG

The Tender Document (which includes the Form of Offer and Acceptance) completed in all respects, plus any additional supporting documents required, must be submitted in a sealed envelope with the name and address of the tenderer, the tender No. and title and the closing date indicated on the envelope. The sealed envelope must be inserted into the appropriate official tender box before closing time at 12h00.

If the tender offer is too large to fit into the abovementioned box or the box is full, please enquire at the reception for alternative instructions. The onus remains with the tenderer to ensure that the tender is placed either the original box or as alternatively instructed.

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADEMARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SUCH REFERENCE SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS “OR EQUIVALENT”

**PART A (MBD1)
INVITATION TO BID**

**THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO WILL RESULT IN YOUR OFFER BEING DISQUALIFIED)**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE LANGEBERG MUNICIPALITY					
BID NUMBER:	T19/2026	CLOSING DATE:	19 June 2026	CLOSING TIME:	12h00
DESCRIPTION:	UPGRADING OF THE ROBERTSON PRECINCT				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM.					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:
ENTRANCE OF THE MUNICIPAL OFFICES 28 Main Road Ashton 6715

SUPPLIER INFORMATION			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE CODE & NUMBER			
CELL PHONE NUMBER			
FACSIMILE CODE & NUMBER			
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
TAX PIN		TAX REFERENCE NUMBER	
CSD No			
ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE / TSC PIN SUBMITTED? YES ☐ NO ☐			
A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BEE. NOTE A CERTIFIED COPY OR ORIGINAL IS COMPULSORY			
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE SUBMITTED? (MBD 6.1) YES ☐ NO ☐			
IF YES, WHO WAS THE CERTIFICATE ISSUED BY? (Tick applicable box)			
A VERIFICATION AGENCY ACCREDITED BY SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM (SANAS)			☐
or			
A SWORN AFFIDAVIT FOR EME'S AND QSE'S			☐
RECENT MUNICIPAL ACCOUNT OF COMPANY (NOT OLDER THAN 90 DAYS) MUST BE ATTACHED			
RECENT MUNICIPAL ACCOUNTS OF ALL THE DIRECTORS/ SHAREHOLDERS MUST BE ATTACHED			
IF LEASING/RENTING/LODGING – ATTACHED LATEST VALID COPY OF AGREEMENT			
IF NO PROPERTY REGISTERED IN YOUR NAME SUBMIT AN AFFIDAVIT CONFIRMING THIS.			

BID PRICE OFFERED

**NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE
(see definition on MBD 4 attached)**

TOTAL BID PRICE (INCL Contingencies
& 15% VAT)

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

LANGEBERG MUNICIPALITY

Contact Person: Mr N Albertyn
Tel: 023 626 8200
Fax: 023 615 1563
E-mail: nalbertyn@langeberg.gov.za

**SIGNED ON BEHALF OF
TENDERER:**

NAME, SURNAME & POSITION

DATE

YOURS FAITHFULLY,

**DP LUBBE
MUNICIPAL MANAGER
MUNICIPAL OFFICES
PRIVATE BAG X2
ASHTON
6715**

TEL: 023 626 8200

PART B (MBD 1)
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1 BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION. 1.2 ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED – (NOT TO BE TYPED) OR ONLINE 1.3 THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS. 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYERS PROFILE AND TAX STATUS. 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PARAGRAPH 3 BELOW 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID. 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER. 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS
3.1 IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO 3.2 DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO 3.3 DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO 3.4 DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO 3.5 IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO IF THE ANSWER IS “NO” TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

CHECK LIST

This list is to assist all bidders to submit complete proposals. Bidders are to check the following points before the submission of their proposals:		
1	All pages of the document have been read by the contractor and initialled.	☐
2	Any discrepancy and/or misunderstanding is cleared with the relevant officials.	☐
3	All pages requiring information have been <u>completed in black ink.</u>	☐
4	The Schedule of Quantities has been checked for arithmetic correctness.	☐
5	Totals from each sub section of the Schedule of Quantities have been carried forward to the summary page and done so correctly.	☐
6	The total from the summary page has been carried forward to the Form of Offer.	☐
7	Surety details where applicable have been included in the proposal.	☐
8	All sections requiring information have been completed.	☐
9	Bidder ensured that all documents is properly completed and signed	☐
10	The contractor has complied with the proposal prerequisites.	☐
11	The document is submitted before 12h00 on the due date at the designated bid box of Langeberg Municipality.	☐

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

T1.2: TENDER DATA

The Conditions of Tender are the Standard Conditions of Tender as contained in Annexure F of the CIDB Standard for Uniformity in Construction Procurement (www.cidb.co.za) and included as Appendix A in this document.

The Standard Conditions of Tender 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.

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

Clause	Wording
F.1.1	The employer is Langeberg Municipality
F.1.2	The tender documents issued by the employer comprise: THE TENDER PART T1 : TENDERING PROCEDURES T1.1: Tender Notice and Invitation to Tender T1.2: Tender Data PART T2 : RETURNABLE DOCUMENTS T2.1: List of Returnable Documents T2.2: Returnable Schedules THE CONTRACT PART C1: AGREEMENTS AND CONTRACT DATA C1.1: Form of Offer and Acceptance C1.2: Contract Data C1.3: Form of Guarantee (Pro Forma) PART C2 : PRICING DATA C2.1: Pricing Data C2.2: Bills of Quantities C2.3: Dayworks Schedule PART C3 : SCOPE OF WORKS C3: Scope of Work C3.1: Description of the Works C3.2: Engineering C3.3: Procurement C3.4: Construction C3.5: Management C3.6: Annexes
F.1.4	PART C4: SITE INFORMATION The Employer's Agent is: Name: Invictus Engineering Services Pty (Ltd) Address: 5th Floor Modena Building, Bella Rosa Village, BELLVILLE, 7530 Tel: 021 975 1718 E-mail: francoisr@invictuseng.co.za
F.2.1.1.1	Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:

Clause	Wording
	a) Availability of resources b) Availability of skills to manage and perform the contract (assigned personnel.) c) Previous experience on contracts of a similar value and nature. d) Financial good standing and capability.
F.2.1.1.2	Only those tenders who are registered with the Construction Industry Development Board (CIDB), or are capable of being so prior to the evaluation of submissions, in a Contactor grading designation determined in accordance with the sum tendered, or a value in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, for a 7CE class of construction work, are eligible to have their tenders evaluated. Joint Ventures are eligible to submit tenders provided that: 1. Every member of the joint venture is registered with the CIDB; 2. The lead partner has a contractor grading designation in the class of construction work; and 3. The combined contractor 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 or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations. Notwithstanding the above, tenderers who are capable of being so registered prior to the evaluation of submission may be evaluated at the sole discretion of the Employer.
F.2.7	The arrangements for a compulsory clarification meeting are as stated in the Tender Notice. Tenderers should be represented at the clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.
F.2.12	If a tenderer wishes to submit an alternative offer/solution, then the Bill of Quantities (BoQ) must be completed (as is) and the alternative offer/solution, must be presented in a tender letter attached to the BoQ. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Tender Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed.
F.2.13.5	The Employer's address for delivery of tender offers and identification details to be

Clause	Wording
	shown on each tender offer package are: Location of tender box: Langeberg Municipality Physical Address: 28 Main Road ASHTON, 6730 Identification details: TENDER NO: 19/2026 UPGRADING OF THE ROBERTSON PRECINCT
F.2.13 / F.3.5	A two-envelope procedure will not be followed.
F.2.15	The closing time for submission of tender offers is: 12H00, 19 June 2026
F.2.15	<i>Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted</i>
F.2.16	<i>The tender offer validity period is 120 days.</i>
F.2.22	Return all retained tender documents within twenty-eight (28) days after the expiry of the validity period.
F.2.23	The tenderer is required to submit the following certificate with the tender:
F2.23.1	Tax Clearance Certificate Tenderers shall be registered and in good standing with the South African Revenue Service (SARS) and shall submit documentary evidence in the form of an original valid Tax Clearance Certificate issued by SARS or proof that he or she has made arrangements with SARS to meet his or her outstanding tax obligations. Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate, or proof that he or she has made the necessary arrangements with SARS.
F3.2	Issue addenda <i>Add the following to F.3.2:</i> Notwithstanding any request for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.
F3.4	The time and location for opening of the tender offers are: Time: 12h00, 19 June 2026 Location: Municipal Offices – Ashton, Langeberg Municipality, 28 Main Road, ASHTON
F.3.11.1	General <i>Add the following to F.3.11.1:</i> The procedure for the evaluation of responsive tenders is Method 2: Financial Offer and Preference. (F.3.11.3)
F.3.11.3	Method 2: Financial Offer and Preference.

Clause	Wording
	<i>Add the following to F.3.11.3:</i> Pre-evaluation of tenders The following criteria will be used. a) Tenders will be pre-evaluated on specific criteria. b) Satisfactory bank rating. c) Bidders that score less than 70% (56 Points) for the functionality criteria, will be regarded as submitting a non-responsive tender and will not be evaluated on price and preference points. The evaluation and scoring of the respective bidders will be based on the sole discretion of Langeberg Municipality. The Municipality reserves the right to adjudicate no tender. d) Information not indicated on the respective schedules, unclear or incomplete information provided will result in no points being allocated. e) Bidders should therefore ensure that all information is provided. The procedure for the evaluation of responsive tenders is as follows:The financial offer will be scored: a) 90 where financial value inclusive of VAT of all responsive tenders received.
F3.11.4	Risk Analysis Notwithstanding compliance with regard to CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following: a) Reasonableness of the financial offer b) Reasonableness of the unit rates and prices c) The tenderers ability to fulfil his obligations in terms of the tender document, that is, that the tenderer can demonstrate that he possesses the necessary professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience, reputation, personnel to perform the contract. No tenderer will be recommended for an award unless the tenderer has demonstrated that he has the recourses and skills required.
F.3.11.7	Scoring Financial Offers <i>Add the following to F.3.11.7:</i> The financial offer will be scored using Formula 2 (Option 1) where the value of W1 is 80 (eighty) or 90 (ninety) points. A maximum of 80 (eighty) or 90 (ninety) tender evaluation points (W1) will be scored for Financial Offers from responsive tenders under consideration scoring points according to the formula:
	<u>(P-Pm)</u> NFO = $W1 \times [1 - Pm]$ where, NFO = Number of tender evaluation points awarded for Financial Offer W1 = Maximum tender evaluation points awarded for Financial Offer = 80 (eighty) or 90 (ninety) points
	P = Financial Offer+ Tender Sum (including VAT, contingencies, provisional Sums and escalation) = the comparative offer of the tender offer under construction Pm = Lowest Tender Sum (including VAT, contingencies, provisional sums and escalation) = the comparative offer of the most favourable comparative offer.
F.3.11.8	Scoring Preferences

Clause	Wording
	<i>Add the following to F.3.11.8:</i> The procedure for the evaluation of responsive tenders will be in accordance with the Tenderer's B-BBEE Status Level Certificate and Specific Goals in respect of Location. Points for preference may be awarded to bidders having attained a B-BBEE status level of contributor and/or for goals envisaged in Section 2(1)(d) and (e) of the PPPFA.
F.3.13	Acceptance of Tender Offer <i>Add the following to F.3.13:</i> The Municipality reserves the right to withdraw any invitation to tender and/or to re-advertise or to reject any tender or to accept a part of it. The Municipality does not bind itself to accepting the lowest or only Tender. Tender offers will only be accepted if: i) the Tenderer has included within this document, or provided on request, an original Tax Clearance Certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations. ii) the Tenderer is registered with the Construction Industry Development Board (CIDB) in the appropriate CIDB Contractor grading designation before the tender closing date/time. iii) the Tenderer or any of its directors is not listed on the Register of Tenders Defaulters in the terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. iv) the Tenderer had not: a) Abused the Employer's Supply Chain Management System; or b) Failed to perform on any previous contract and has been given a written notice to this effect. v) the Tenderer has completed the Compulsory Enterprise questionnaire and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process. vi) the Tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer. vii) the Employer is reasonably satisfied that the Tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and recourses to carry out the work safely.

Clause	Wording
	Tender offers will be rejected if they show any additional items nor originally included in the tender documents, conditional or incomplete offers, irregularities of any kind in the tender. A tender may be rejected if the unit rates, or lump sums for some of the terms in the Schedule of Quantities are, in the opinion of the Employer, unreasonable or out of proportion, and the Tenderer fails, within a period of 7 (seven) days of having been notified in writing by the Employer to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the tender sum unchanged. The Employer does not bind himself to accept the lowest priced tender, highest point's tender or any tender offer. The Employer has the right to accept any part of a tender as he may deem expedients subject to negotiation with the successful Tenderer for the whole tender. viii) the Tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; ix) the Employer is reasonably satisfied that the Tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and recourses to carry out the work safely. <i>Add the following new sub clause F.3.13.1:</i>
F.3.17	F.3.13.1 Notification of decision and objection period All Tenderers will be notified of the decision of the Supply Chain Management Tender Adjudication Committee as regards to the successful Tenderer. Regulation 49 of the Supply Chain Management Regulations gives any person whose rights have been affected by such a decision, the right to objection such decision within 14 (fourteen) days of notification of the decision. Any Tenderer wishing to exercise this right, must submit their objection in writing to the Employer. The format of the objection must: i) set out the reasons for the objection. ii) state on which way the appellant's rights have been affected by the decision. iii) state the remedy sought, and iv) be accompanied by a copy of the notification advising the Tenderer of the decision of the Supply Chain Management Tender Adjudication Committee. The notification of the decision sent to the successful Tenderer is Acceptance in terms of the General Conditions of Contract. The successful Tenderer will be notified in writing after 14 (fourteen) days of the notification of any final decision (i.e. Acceptance) or any developments with respect to the objection process, and, if applicable, procedures for the commencement of the work.
F.3.17	Provide copies for the contract. <i>Add the following to F.3.17:</i> The number of paper copies of the signed contract to be provided by the Employer is 1 (one).
	Local Labour It is a requirement from the client (Langeberg Municipality) that un-skilled labour used on site will consist of at least 100% local labour employed from the local ward/s in Robertson.
F.3.18.4	Letter of good standing from the Commissioner of Compensation

Clause	Wording
	a) A valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof, must accompany the bid documents unless the bidder is registered on the Accredited Supplier Database of the Municipality and the Municipality has a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof for the bidder on record. The onus is on the bidder to ensure that the Municipality has a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof on record. b) In the case of a Consortium/Joint Venture every member must submit a separate valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof with the bid documents unless the member is registered on the Accredited Supplier Database of the Municipality and the Municipality has a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof on record for all members of the Consortium/Joint Venture. c) If a bid is not supported by a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof, either as an attachment to the bid documents or on record in the case of suppliers registered on the Supplier Database of the Municipality, the Municipality reserves the right to obtain such document after the closing date. If no such document can be obtained within a period as specified by the Municipality, the bid will be disqualified. d) If a bid is accompanied by proof of application for valid Letter of Good Standing from the Compensation Commissioner, the original or certified copy thereof must be submitted on/or before the final date of award. e) Should a bidder's Letter of Good Standing from the Compensation Commissioner expire during the contact period, a valid certificate must be submitted within an agreed upon time. f) The right is reserved to not award a tender if a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof is not submitted within the requested time. EPWP This is not an EPWP project, but the project needs to report on EPWP with regards to creation of work opportunities. The Langeberg LM will do induction training on EPWP, where-after the Contractor will have to abide to the monthly reporting instructions related to it.

PART T2 : RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

T2.2 Returnable Schedules

T2.1 : LIST OF RETURNABLE DOCUMENTS

The following documents are to be completed and returned as they constitute the tender. Whilst many of the returnables are required for the purpose of evaluating the tenders, some will form part of the subsequent contract, as they form the basis of the tender offer. For this reason, it is very important that tenderers return all information requested.

1. **RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES (included hereafter for completion)**

Schedule 1	Pre-Qualification of Bidders
Schedule 2	Compulsory Enterprise Questionnaire
Schedule 3	Authority for Signatory
Schedule 4	Certificate of Authority for Joint Ventures
Schedule 5	Personnel Schedule
Schedule 6	Schedule of Work Experience
Schedule 7	Details of Key-Personnel Experience
Schedule 8	Preliminary Programme
Schedule 9	Estimated Monthly Cash Flow
Schedule 10	Schedule of Proposed Subcontractors
Schedule 11	Proposed Amendments and Qualifications
Schedule 12	Certificate of Attendance at Clarification Meeting
Schedule 13	Declaration of Interest – MBD 5
Schedule 14	Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2022 – MBD 6.1
Schedule 15	Health and Safety
Schedule 16	Tax Clearance Certificate – MBD 2
Schedule 17	Certificate of Contractor's Registration Issued by the CIBD
Schedule 18	Documents of Incorporation
Schedule 19	Declaration of Bidder's past Supply Chain Management Practices – MBD 8
Schedule 20	Certificate of Independent Bid Determination – MBD 9
Schedule 21	Banking Details
Schedule 22	Municipal Rates and Services
Schedule 23	Letter of Good Standing to Relevant Authorities

2. **RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT (included hereafter for completion)**

Schedule 24	Record of Addenda to Tender
Schedule 25	Declaration Concerning Fulfilment of the Construction Regulations, 2003
Schedule 26	Mandatory Agreement
Schedule 27	Notification of Construction Work
Schedule 28	Authorisation for the deduction of outstanding amounts owed to the Langeberg Municipality

3. OTHER SCHEDULES AND AFFIDAVITS THAT WILL BE INCORPORATED INTO THE CONTRACT (included hereafter for completion)

C1.1 Form of Offer and Acceptance

C1.2 Contract Data

C1.3 Pro Formats

C2.2 Bills of Quantities

C2.3 Daywork Schedule

SCHEDULE 1: PRE-QUALIFICATION OF BIDDER

The following Functionality criteria shall apply to this tender:

1. Bank rating (Eligibility Criteria)

- Proof of bank rating is applicable from bids with an estimated value of R10m and higher and proof must be submitted with the tender document.
- Bidders can easily obtain such proof within a few days, and it must be attached to their tender document. The municipality can verify this, if necessary, by asking its own bankers to verify the rating at the bidder's bank. This can take a few days.
- This is a tender condition and if proof is not submitted the bid will be deemed not responsive or if a bidder does not have the required rating, it will also be deemed not responsive.
- Bank rating to be project specific (name and value of the works)

2. Pre-evaluation of tenders

- a) The following criteria will be used.
- a. Tenders will be pre-evaluated on the criteria as set out under (e).
 - b. Bidders that score less than 70% (56 Points) for the functionality criteria, will be regarded as submitting a non-responsive tender and will not be evaluated on price and preference points. The evaluation and scoring of the respective bidders will be based on the sole discretion of Langeberg Municipality. The Municipality reserves the right to adjudicate no tender.
 - c. Unclear or incomplete information provided will result in no points being allocated.
 - d. Bidders should therefore ensure that all information is provided.
 - e. The following criteria will be used to calculate points for the functionality of tenders and bidders should ensure that they submit all information in order to be pre-evaluated on the criteria mentioned below:

	CRITERIA	WEIGHT	SCORE
1	Relevant experience and references (Schedule 6)	40	
2	Personnel qualifications (Schedule 7)	40	
	TOTAL	80	

Functionality criteria are further divided as follows and points will be awarded as indicated below:

Criterion 1a: Relevant experience (Schedule 6 – 25points)

- (a) A maximum of 25 points will be awarded at the sole discretion of the Municipality's Bid Evaluation for bidders with experience of construction and/or upgrade of municipal roads > R30m.

Construction and/or upgrade of municipal roads > R30m

Description	Maximum points	Points Scored by bidder
zero relevant projects completed	0	
1 or less relevant projects (value R30 million plus)	5	
2 completed relevant projects (value R30 million plus)	10	
3 or less relevant projects (value R30 million plus)	15	
4 completed relevant projects (value R30 million plus)	20	
5 completed relevant projects (value R30 million plus)	25	

- (b) In order to claim points for the above, bidders **must submit** the following information in Schedule 6 as well as documentary proof:
- i. Information of how long the business is in existence supported by Company or Business registrations documents.
 - ii. Detailed list of information for each project completed to be entered on Schedule 6.
 - 1) Names of client with contact details.
 - 2) Description of work performed.
 - 3) Duration of contracts.
 - 4) Letter of Appointment
 - 5) Completion Certificate
 - iii. Points will only be awarded for **relevant** experience for information entered in Schedule 6 and not evaluated without 4 and 5 above.

Criterion 1b: References (Schedule 6 – 15points)

- (a) In order to claim points, bidders must submit in Schedule 6 with the tender document details of three **contactable** references from businesses to which the required similar services have been provided to.
- (b) These references must not be older than ten (10) years.
- (c) If the references are unable to provide information on past performances or relevant experience, no point will be awarded for that particular reference.
- (d) If the provided references are not reached or contactable by 3 telephone calls and 1 email within the 1-week period, no point will be awarded for that particular reference.

A maximum of 15 points will be awarded. Points will be awarded by contacting 3 references who will answer 5 questions. 1 point will be awarded for every "yes" answer. The following questions will be asked to reference:

Question	Response
1. Has the Contractor performed similar/relevant Nature of work	Yes / No Comments
	
	
	
	
	
2. Was the work completed within the time frame?	Yes / No Comments
	
	
	
	
	
3. Was the work completed within budget?	Yes / No Comments
	
	
	
	
	
4. Did the Contractor comply with safety regulations?	Yes / No Comments
	
	
	
	
	
5. Overall satisfied with the Contractor's performance?	Yes / No Comments
	
	
	
	
	
	

Criterion 2: Personnel qualifications (Schedule 7 – 40 points)

- (a) A maximum of 40 points will be awarded at the sole discretion of the Municipality's Bid Evaluation

Committee based on the information provided and will be split as follows:

Description	Years Relevant Experience	Highest Qualification	Professional Registration
Contracts Manager (10 points)	4 (1 point per year)	3	3
Construction Manager (15 points)	5 (1 point per year)	5	5
General Foreman (15 points)	10 (1 point per year)	5	N/A

- (b) In order to claim points for the above, bidders must submit the following information as well as documentary proof:

- Detailed Curriculum Vitae of key personnel
- Points will only be awarded for relevant experience only
- Points will be awarded for B Eng, B Tech, ND (All Civil) and Grade 12
- Points will be awarded for Pr Eng, Pr Tech and PrTechni (All Civil).

The Tenderers were required to provide names and CV's for the Contracts Manager, Construction Manager and General Foreman in Schedule 7 or attached clearly showing years relevant experience (Total 19 points), highest qualification (Total 13 points) and professional status (Total 8 points) in order to claim the points.

Contracts Manager (10 points):

Experience (4 points) – 1 point per year relevant experience to maximum of 4 points;

Qualification (3 points) – BSc Eng/B Eng 3 points, BTech/NHD 2 points and ND/Grade 12 with experience > 10yrs 1 point;

Professional Status (3 points) – PrEng 3 points, PrTech 2 points and PrTechni 1 point.

Construction Manager (15 points):

Experience (5 points) - 1 point per year relevant experience to maximum of 5 points;

Qualification (5 points) – BSc Eng/B Eng 5 points, BTech/NHD 3 points and ND/Grade 12 with experience > 10yrs 1 point;

Professional Status (5 points) – PrEng 5 points, PrTech 3 points and PrTechni 1 point.

General Foreman (15 points):

Experience (10 points) - 1 point per year relevant experience to maximum of 10 points;

Qualification (5 points) BTech/NHD 5 points, ND 3 points and Grade 12/Grade 10 with experience > 10yrs 1 point.

NB: Relevant experience is defined as experience in the construction and/or upgrade of municipal roads > R30m and as determined by the Langeberg Municipality and/or professional consulting engineer overseeing this project.

SCHEDULE 2: COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships.....

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners.

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

☐ a member of any municipal council	☐ 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 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	☐ a member of an accounting authority of any national or provincial public entity
☐ an official of any municipality or municipal entity	☐ an employee of Parliament or a provincial legislature

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

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	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 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation 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 | ☐ an employee of any provincial department, national or |
| ☐ a member of any provincial legislature | ☐ provincial public entity or constitutional institution within |
| ☐ a member of the National Assembly or the National Council of Province | ☐ the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of the board of directors of any municipal entity | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ An official of any municipality or municipal entity | ☐ an employee of Parliament or a provincial legislature |

Name of spouse, child or parent	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

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have 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; and
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed Date

Name Position

Enterprise

Name

SCHEDULE 3: AUTHORITY FOR SIGNATORY

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.

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation

A. Certificate for Company

I, chairperson
of the board of directors of
..... hereby
confirm that by resolution of the board (copy attached) taken on20...,
Mr./Ms
acting in the capacity of, was
authorized to sign all documents in connection with this tender and any contract resulting from it on behalf
of the company.

As witnesses:

1. Chairman:
2. Date:

Tenderers must attach a copy of the Resolution of the Board.

B 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 Contract 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

C. Certificate of Joint Venture

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

This authorization is evidence by the attached power of attorney signed by legally authorizes signatories of all the partners to the Joint Venture.

NAME OF FIRM	ADDRESS	AUTHORIZING SIGNATURE NAME & CAPACITY	Date

D. Certificate of Sole Proprietor

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

As witnesses:

1. Signature
Sole
Owner:

2. Date:

E. 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 Contract and any contract resulting from it on our behalf.

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

SCHEDULE 4: Certificate of Authority for Joint Ventures

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, close corporation or partnership.....,

..... 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
CIDB registration no		Designation
.....		
Partner		Signature
.....		Name
CIDB registration no		Designation
.....		
Partner		Signature
.....		Name
CIDB registration no		Designation
.....		

SCHEDULE 5: PERSONNEL SCHEDULE

Tenderers shall provide curriculum vitae of all key personnel as indicated under Schedule 7.

Job Description	Number of Non-Local Labour to be Employed on the Contract	Number of Local Labour to be Employed on the Contract
Contract Manager		
Construction Manager (Site Agent)		
Quantity Surveyor		
Surveyors		
General Foreman		
Foremen		
First Aid Officer		
Community Officers		
Clerks		
Operators		
Bricklayers		
Learner Bricklayers		
Steel fixers		
Watchmen		
Gang Bosses		
Pipe Layers		
Labourers		
* Other		

* To be filled in by Tenderer

Signed Date

Name Position

Tenderer:

SCHEDULE 6: SCHEDULE OF WORK EXPERIENCE

The tenderer shall insert in the spaces provided below a list of the tenderer's past work experience in terms of similar new and/or upgrade of municipal roads > R30m, **successfully completed**. The value and scale of the projects indicated for these purposes must be supplied together with any other relevant information requested. A letter of appointment and completion letter/certificate, per project, must be attached to this schedule.

Listed projects with invalid or incorrect contact details for the employer and/or consulting engineer and information not supplied in the format as requested below will **NOT** be evaluated.

Criteria 1a – 5 projects experience for new and/or upgrade of municipal roads > R30m

Employer (Name and Contact No)	Consulting Engineer (Name and Contact No)	Relevant projects (Tenderer need to identify the type of work in a brief description)	Value of Work Incl. VAT (R million)	Date Completed (Month and Year)
Project 1				
Project 2				
Project 3				
Project 4				
Project 5				

Criteria 1b – 3 References:

Employer (Name and Contact No)	Consulting Engineer (Name and Contact No)	Project Reference and Description	Value of Work Incl. VAT (R million)	Date Completed (Month and Year)
Reference 1				
Reference 2				
Reference 3				

Signed Date

Name Position

Tenderer:

SCHEDULE 7: DETAILS OF KEY PERSONNEL EXPERIENCE

The tenderer shall set out in the table's hereafter details of the relevant experience in similar successfully completed projects of the persons identified for each listed position. Tenderers shall provide curriculum vitae of all key personnel as indicated under Schedule 5.

Tenderers that fail to supply the information requested in this schedule (both pages of this schedule included) with their tender offers and in this format will NOT be evaluated.

Note: One person only to qualify for each of the positions listed below. The key personnel to be used in this regard will be subject to the approval of the Engineer prior to the commencement date of the contract. Should any of the persons identified not be available for the position which they are indicated for, then a suitable candidate with equal or superior tertiary qualification and/or relevant experience than that of the person which he/she replaces shall be used for every such positions.

CONTRACT MANAGER	NAME:			
	HIGHEST QUALIFICATION:		PROFESSIONAL STATUS:	
Contact and Client	Project Description	Position held	Value of work (incl. VAT) (R million)	Year completed

CONSTRUCTION MANAGER	NAME:			
	HIGHEST QUALIFICATION:		PROFESSIONAL STATUS:	
Contact and Client	Project Description	Position held	Value of work (incl. VAT) (R million)	Year completed

GENERAL FOREMAN	NAME: HIGHEST QUALIFICATION:			
Contact and Client	Project Description	Position held	Value of work (incl. VAT) (R million)	Year completed

Signed Date

Name Position

Tenderer:

SCHEDULE 8: PRELIMINARY PROGRAMME

The tenderer shall attach a preliminary program for the duration of the construction period indicated to this schedule which must show that the tenderer clearly understands and fully identifies with the scope of works of this project.

The works to be executed over three financial years namely 2026/27, 2027/28 and 2028/29. Tenderers to see to it that programming and resources are allocated to ensure spending requirements are achieved.

A detailed program (Gant chart) indicating all construction activities, phasing, resources, timelines, monthly expenditure and critical path for the duration of the construction period indicated is requested.

The tenderer shall also take into account the additional requirements stated in the Project Specifications when drawing up the program and the working hours shall be indicated.

Note: Where the entity tendering is a joint venture, one preliminary plan on behalf of the joint venture is adequate for these purposes.

Details of the Preliminary Plan shall be appended to this Schedule.

Number of sheets appended by the tenderer to this Schedule (if nil, enter NIL).

Signed Date

Name Position

Tenderer:

SCHEDULE 9: ESTIMATED MONTHLY CASH FLOW

The Tenderer shall state below the estimated value of work to be completed every month, based on his preliminary programme and his tendered unit rates.

The amounts for Contingencies and Contract Price Adjustment must not be included. The Tenderer must make note of any cash-flow restrictions.

MONTH	VALUE
Cluster 1	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Cluster 2	
1	
2	
3	
Cluster 3	
1	
2	
3	
4	
5	
6	
7	
8	
TOTAL	

Signed Date

Name Position

Tenderer:

SCHEDULE 10: SCHEDULE OF PROPOSED SUBCONTRACTORS

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

If we are awarded the 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.

No.	Name and Address of Proposed Subcontractor	Nature and Extent of Work	Previous Experience with Subcontractor
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Signed Date

Name Position

Tenderer:

SCHEDULE 11: 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 F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer's handling of material deviations and qualifications.

Page	Clause or Item	Proposal

Signed Date

Name Position

Tenderer:

SCHEDULE 12: CERTIFICATE OF ATTENDANCE OF CLARIFICATION 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

..... (location) on (date), starting at

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

Particulars of BUSINESS ENTITY attending the meeting and representative(s):

Name Signature

Capacity

Name Signature

Capacity

Attendance of the above Business Entity at the meeting is confirmed by the Employer's Agent, namely:

Name Francois Ryke Signature

Capacity Engineer

Particulars of other individuals within the BUSINESS ENTITY to whom tender information need to be forwarded to:

Name Signature

Capacity

Email Address

SCHEDULE 13: MBD 5 - DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

For all procurement expected to exceed R10 million (VAT included), bidders must complete the following questionnaire:

1. Are you by law required to prepare annual financial statements for auditing?	YES		NO	
1.1. If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.				
2. Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days?	YES		NO	
2.1. If no, this serves to certify that the bidder has 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.				
2.2. If yes, provide particulars.				
3. Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?	YES		NO	
3.1. If yes, furnish particulars				
4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES		NO	
4.1 If yes, furnish particulars				
CERTIFICATION I, the undersigned (name), _____ certify that the information furnished on this declaration form is correct. I accept that the state may act against me should this declaration prove to be false.				
SIGNATURE		DATE		
NAME (PRINT)				
CAPACITY				
NAME OF FIRM				

SCHEDULE 14: MBD6.1 – PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

The applicable preference point system for this tender is the 90/10 preference point system.

1.2 **Points for this tender shall be awarded for:**

- (a) Price; and
- (b) Specific Goals.

1.3 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	90
SPECIFIC GOALS	10
Total points for Price and SPECIFIC GOALS	100

1.4 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.5 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

“**tender**” means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

- (a) “**price**” means an amount of money tendered for goods or services, and

includes all applicable taxes less all unconditional discounts;

- (b) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (c) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (d) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1 POINTS AWARDED FOR PRICE

3.1.1 THE 90 PREFERENCE POINT SYSTEMS

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

$$Ps = 90 \left(1 - \frac{90/10 \cdot (Pt - P_{min})}{P_{min}} \right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

P min = Price of lowest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

- 4.2 In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system)	Number of points claimed (90/10 system) (To be completed by the tenderer)
BBBEE Level 1	5	
BBBEE Level 2	4.5	
BBBEE Level 3	4	
BBBEE Level 4	2.5	
BBBEE Level 5	2	
BBBEE Level 6	1.5	
BBBEE Level 7	1	
BBBEE Level 8	0.5	
Non-compliant contributor	0	

Locality	Number of Points for Preference	Number of points claimed (90/10 system) (To be completed by the tenderer)
	90/10	
Within the boundaries of the Langeberg Municipality	5	
Outside of the boundaries of the Langeberg Municipality	0	

5. DECLARATION WITH REGARD TO COMPANY/FIRM

5.1 Name of company/firm.....

5.2 Company registration number:

5.3 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company
- ☐ State Owned Company

[TICK APPLICABLE BOX]

5.4 I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

6. SUB-CONTRACTING

6.1	Will any portion of the contract be sub-contracted?	YES / NO	
6.2	If yes, indicate:		
6.2.1	What percentage of the contract will be subcontracted?	%	
6.2.2	The name of the sub-contractor? (Insert below)		
6.2.3	The B-BBEE status level of the sub-contractor?		
6.2.4	Whether the sub-contractor is an EME or QSE?	YES / NO	
6.2.5	Specify, by ticking the appropriate box, if sub-contracting with an enterprise in terms of Preferential Procurement Regulations, 2022.		
Designated Group: An EME or QSE which is at least 51% owned by:		EME √	QSE √
6.3	Black people		
6.4	Black people who are youth		
6.5	Black people who are women		
6.6	Black people with disabilities		
6.7	Black people living in rural or underdeveloped areas or townships		
6.8	Cooperative owned by black people		
6.9	Black people who are military veterans		
	OR		
6.10	Any EME		
6.11	Any QSE		

SURNAME AND NAME OF REPRESENTATIVE:	
DATE:	
ADDRESS:	
SIGNATURE(S) OF REPRESENTATIVE:	

SCHEDULE 15: HEALTH AND SAFETY PLAN

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all cost in compliance therewith.

The tenderer shall attach to this schedule a Health and Safety Plan in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations.

Such Health and Safety Plan shall cover inter-alia the following details:

1. Management Structure, Site Supervision and Responsible Persons including a succession plan.
2. Contractor's induction training programme for employees, sub-contractors and visitors to the Site.
3. Health and safety precautions and procedures to be adhered to in order to ensure compliance with the Act, Regulations and Safety Specifications.
4. Regular monitoring procedures to be performed.
5. Regular liaison, consultation, and review meetings with all parties.
6. Site security, welfare facilities and first aid.
7. Site rules and fire and emergency procedures.

Tenders are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.

The tenderer shall also take into account the additional requirements stated in Part C3: Scope of Work when drawing up the Health and Safety Plan for the contract.

Note: Where the entity tendering is a joint venture, one Health and Safety Plan on behalf of the joint venture is adequate for these purposes and the score awarded for it will be based on the same criteria than that for a sole partner entity.

Details of the Health and Safety Plan shall be appended to this Schedule.

Number of sheets appended by the tenderer to this Schedule..... (If nil, enter NIL)

Signed Date

Name Position

Tenderer:

SCHEDULE 16: TAX CLEARANCE CERTIFICATE – MBD 2

An original Tax Clearance Certificate from the South African Revenue Services (SARS) shall be attached to this Schedule or proof that the tenderer has made arrangements with SARS to meet his or her outstanding tax obligations.

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate, or proof that he or she has made the necessary arrangements with SARS.

Signed Date

Name Position

Tenderer:

TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

- 1 In order to meet this requirement bidders are required to complete in full form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3 The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4 In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
- 5 Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
- 6 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

SCHEDULE 17: CERTIFICATE OF CONTRACTOR'S REGISTRATION ISSUED BY THE CIDB

A certificate of the Contractor's Registration issued by the CIDB or proof of application for registration submitted shall be attached to this schedule.

Signed Date

Name Position

Tenderer:

SCHEDULE 18: DOCUMENTS OF INCORPORATION

A certified copy of the Certificate of Incorporation of the tenderer's company, close corporation or trust shall be attached to this schedule.

Signed Date

Name Position

Tenderer:

SCHEDULE 19: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES – MBD 8

1. This Municipal Bidding Document must form part of all bids invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b) been convicted for fraud or corruption during the past five years;
 - c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
4. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1.	Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audial teram partem rule was applied).	Yes ☐	No ☐

4.1.1. If so, furnish particulars:

Item	Question	Yes	No
4.2.	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? (To access this Register enter the National Treasury's website, www.treasury.gov.za , click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).	Yes ☐	No ☐

4.2.1. If so, furnish particulars:

4.3.	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
------	--	--	---------------------------------------

4.3.1. If so, furnish particulars:

4.4. Does the bidder or any of its directors owe any municipal rates Yes No and taxes or
municipal charges to the municipality / municipal entity, or to any other municipality /
municipal entity, that is in arrears for more than three months? **Yes** **No**
☐ ☐

4.4.1. If so, furnish particulars:

4.5. Was any contract between the bidder and the municipality / Yes No municipal entity or any
other organ of state terminated during the past five years on account of failure to perform
on or comply with the contract? **Yes** **No**
☐ ☐

Item	Question	Yes	No
4.5.1.	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME).....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST
ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

Signature

Date

Position

Name of Bidder.....

SCHEDULE 20: CERTIFICATE OF INDEPENDENT BID DETERMINATION – MBD9

1. This Municipal Bidding document (MBD) must form part of all bids¹invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).²Collusive bidding is a pe se prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - (a) Take all reasonable steps to prevent such abuse;
 - (b) Reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - (c) Cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

.....

(Bid Number and Description)

In response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of:that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) Has been requested to submit a bid in response to this bid invitation;
 - (b) Could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) Provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) Prices;
 - (b) Geographical area where product or service will be rendered (market allocation)
 - (c) Methods, factors or formulas used to calculate prices;
 - (d) The intention or decision to submit or not to submit, a bid;
 - (e) The submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) Bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public

Sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

Signature

Date

Position

Name of Bidder.....

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

SCHEDULE 21: BANKING DETAILS

The Bidder must provide all relevant banking details in table below:

Financial Institution	
Contact Person	
Branch	
Account Number	
Name of Account Holder	

We hereby attach the necessary bank codes from our financial institution.

Signature	Date
-----------------	------------

Position	Name of Bidder.....
----------------	---------------------

SCHEDULE 22: MUNICIPAL RATES AND SERVICES

The bidder must provide all relevant details in table below:

Names of Directors/Partners/Senior Managers	Physical Residential Address of the Director/Partner/Senior Manager	Residential Municipal Account Numbers	Name of Municipality

NB: Please attach copy/copies of Municipal Account(s)

DECLARATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE

Signature Date

Position Name of Bidder.....

SCHEDULE 23: LETTER OF GOOD STANDING TO RELEVANT AUTHORITIES

The tenderer must attach to this page a letter from the relevant authorities indicating his good standing with regard to UIF payments and COIDA. Each party to a Joint Venture or Consortium shall submit separate documents.

SIGNED BY TENDERER:

SCHEDULE 24: RECORD OF ADDENDA TO TENDER DOCUMENTS

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

No.	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:

SCHEDULE 25: DECLARATION CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS 2014

In terms of the Construction Regulations, 2014 and the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender to the due fulfilment of all the applicable requirements of the Act and the Regulations.

Tenderers shall answer the questions below:

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all the requirements of the Regulations.

(Tick)

Yes	
No	

2. Indicate which approach shall be employed to achieve compliance with the Regulations.

(Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – Specify:	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CV to be attached)

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

4. Provide details of proposed training (if any) that will be undergone:

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

5. List potential key risks identified and measures for addressing risks:
-
-
-
6. I have fully included in my tender rates and prices (in the appropriate payment items provide in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

(Tick)

Yes	
No	

SIGNATURE OF PERSON(S) AUTHORISED TO SIGN THIS TENDER:

1. ID NO:
- (Name in Print):
2. ID NO:
- (Name in Print):

SCHEDULE 26: MANDATARY AGREEMENT

OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993

Note: Section 1(1) (xxviii) of the Act defines a "mandatary" as including "an agent, a contractor or a subcontractor for work"

Agreement made and entered into between LANGEBERG MUNICIPALITY

and (mandatary)

as envisaged by the provisions of Section 37(2) of the Occupational Health and Safety Act 1993 as amended.

I,representing

(Mandatary)do hereby

Acknowledge that (mandatary)

Is and employer in its own right with duties as prescribed in the Occupational Health and Safety Act 1993 as amended and agree to ensure that all contractual work will be performed and that all machinery and plant will be used in accordance with the provisions of the said Act. In conclusion, I do hereby indemnify the LANGEBERG MUNICIPALITY

against any claim of whatever nature that may arise as a result of any injury sustained by or any act of omission or negligence by any employee of (mandatary): .

SIGNED: on the day of2026.

WITNESS

(for and on behalf of the Mandatary)

WITNESS

(for and on behalf of the LANGEBERG MUNICIPALITY)

SCHEDULE 27 : NOTIFICATION OF CONSTRUCTION WORK

ANNEXURE A

**OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
Regulation 4 of the Construction Regulations, 2014**

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

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

2. Principal contractor's compensation registration number: _____
3. (a) Name and postal address of client: _____

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

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

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

5. Name and telephone number of principal contractor's construction manager on site appointed in terms of regulation 8(1) : _____

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 8(2) : _____

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

8. Nature of construction work: _____

9. Expected commencement Date: _____
10. Expected completion Date: _____

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

Total:...

Male:...

Female:...

12. Planned no of contractors on the construction site accountable to principal contractor:

13. Name(s) of contractors already chosen:

Principal
Contractor: Date

Client: Date

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

LANEBERG MUNICIPALITY

TENDER NO. 19/2026

UPGRADING OF THE ROBERTSON PRECINCT

**SCHEDULE 28 : AUTHORISATION FOR THE DEDUCTION OF OUTSTANDING AMOUNTS OWED
TO THE LANE BERG MUNICIPALITY**

To: THE MUNICIPAL MANAGER, LANE BERG MUNICIPALITY

From: _____
(Name of tenderer)

The tenderer:

- a) hereby acknowledges that according to SCM Regulation 38(1)(d)(i) the Municipal Manager may reject the tender of the tenderer if any municipal rates and taxes or municipal service charges owed by the tenderer (or any of its directors/members/partners) to the LANE BERG MUNICIPALITY, or to any other municipality or municipal entity, are in arrears for more than 3 (three) months; and
- b) therefore hereby agrees and authorises the LANE BERG MUNICIPALITY to deduct the full amount outstanding by the Tenderer or any of its directors/members/partners from any payment due to the tenderer; and
- c) confirms the information as set out in the tables below for the purpose of giving effect to b) above;
- d) The tenderer hereby certifies that the information set out in this schedule and/or attached hereto is true and correct, and acknowledges that failure to properly and truthfully complete this schedule may result in steps being taken against the tenderer, the tender being disqualified, and/or (in the event that the tenderer is successful) the cancellation of the contract and/or steps in terms of abuse of the Supply Chain Management Policy.

Physical Business address of the Tenderer	Municipal Account number(s)

If there is not enough space for all the names, please attach the additional details to the Tender Document

Name of Director / Member / Partner	Identity Number	Physical residential address of Director / Member / Partner	Municipal Account number(s)

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

PART C1 : AGREEMENT AND CONTRACT DATA
--

- C1.1 Form of Offer and Acceptance**
- C1.2 Contract Data**
- C1.3 Pro Forma's**
- C1.4 Performance Guarantee**

C1.1 : FORM OF OFFER AND ACCEPTANCE

(Agreement)

OFFER

The Employer, identified in the acceptance signature block / the Contract Data Part 1, has solicited Offers to enter into a Contract in respect of the following works:

LANGEBERG MUNICIPALITY: TENDER NO: 19/2026: UPGRADING OF THE ROBERTSON PRECINCT

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 terms of the Conditions of Contract identified in the Contract Data.

For the Tenderer:

Signature

Name

Capacity

Name and address of organization:

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

Signature and name of Witness:

Signature

Name

Date

ACCEPTANCE

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

The terms of the contract are contained in

Part C1 : Agreements and Contract Data (which include this Agreement)

Part C2 : Pricing data

Part C3 : Scope of work

Part C4 : Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

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

The Tenderer shall after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), deliver to the Employer's agent (whose details are given in the Contract Data), within such time(s) as stated in the Contract Data, any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of the obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor), within five (5) days of the date of such receipt, notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding Contract between the parties.

For the Employer:

Signature

Name

Capacity

Name and address of organization:

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

Signature and name of Witness:

Signature

Name

Capacity

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 agreements and recorded here, shall also be incorporated into the final draft of the Contract.

1. Subject _____
2. Details _____
3. Subject _____
4. Details _____
5. Subject _____
6. Details _____

By the duly authorized 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 changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

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

FOR THE TENDERER		FOR THE EMPLOYER
	Signature:	
	Name:	
	Capacity:	
Name and address of organisation:		Name and address of organisation:
	Witness Signature	
	Witness Name	
	Date	

CONFIRMATION OF RECEIPT

The Tenderer (now Contractor), identified in the Offer part of this Agreement, hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

Theday)
of (month)
20. (year)
At (place)

For the Contractor:

Signature
Name
Capacity

Signature and name of witness:

Signature
Name

C1.2: CONTRACT DATA

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works, Third Edition 2015, published by the South African Institution of Civil Engineering (SAICE), Private Bag x200, Halfway House, 1685 is applicable to this Contract and are obtainable from www.saice.org.za.

CONTRACT SPECIFIC DATA

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition 2015, are applicable to this Contract:

1.1.1.10	The Contract Sum may be subject to such addition or deduction thereto as may be required by the funds available for the Contract .
1.1.1.13	Defects Liability Period The Defects Liability Period is 12 (Twelve) calendar months .
1.1.1.14	The time for achieving Practical Completion of the whole of the Works is as stated in Part 2 of the Contract Data.
1.1.1.15	Name of the Employer The name of the Employer is Langeberg Municipality .
1.1.1.16	Name of the Employers Agent The name of the Engineer is Invictus Engineering Services represented by an employee duly authorised thereto in writing.
1.1.1.26	Pricing Strategy Re-measurement Contract.
1.2.1.2	The Employer's address for receipt of communications is: Telephone: 023 615 8002 E-mail: nalbertyn@langeberg.gov.za Address (Postal): Private Bag X2 ASHTON 6715 Address (Physical): 28 Main Road ASHTON 6715

1.2.1.2	The Engineer's address for receipt of communications is: Telephone: 021 975 1718 E-mail: francoisr@invictuseng.co.za Address: 5th Floor Modena Building Bella Rosa Village c/o Durbanville Avenue and Bella Rosa Street BELLVILLE 7530
1.3.2	Governing Law The governing law is the law of the Republic of South Africa.
1.3.3	Language of the Contract The language of the Contract and of written communications is English.
4.3.2	If required, and for the duration of this contract, the Contractor shall provide proof to the Engineer that the Contractor is in good standing with respect to duties, taxes, levies, and contributions required in terms of legislation applicable to the work in this Contract. Failure to prove such prove shall entitle the Employer to withhold any payments due to the Contractor until such proof is provided.
4.4.1	The Contractor shall not subcontract the whole contract
4.4.2	The Contractor shall be liable for the acts, default and negligence of any subcontractor, his agents, or employees as fully as if they were the acts, default or negligence of the Contractor.
4.4.3	The contractual relationships be the Contractor and any subcontractor selected by the Contractor in consolation with the Employer in accordance with the requirements of and a procedure set out in the Scope of Work, shall be the same as if the Contractor had appointed the subcontractor in terms of Clause 4.4.2
4.4.4.	Any appointment of a subcontractor in accordance with Clause 4.4.3 shall not amount to a contract between the Employer and the subcontractor, or a responsibility or liability on the part of the Employer to the subcontractor and shall not relieve the Contractor from any liability or obligation under the contract.
4.4.6	In the events of termination of the contract under 9.2, the subcontractor in terms of Clause 4.4.4 shall be assigned to the Engineer upon such instruction by the Employer.
5.3.1	Documentation Required before Commencement of Works The following documentation is required before Commencement with Works execution: a) Health and Safety Plan (Refer to Clause 4.3) b) Letter of Good Standing (Refer to Clause 4.3) c) Initial Programme (Refer to Clause 5.6). d) Security (Refer to Clause 6.2) e) Insurance (Refer to Clause 8.6)
5.3.2	Time to submit documentation The time to submit the documentation required before commencement with Works execution is 14 days.

5.4.2	Access to and possession of the site shall not be exclusive to the Contractor insofar as the provisions of Clause 4.8 apply and where ongoing use by the general public is required. The Contractor shall bear all cost and charges for special and temporary rights of way required by him in connection with access to the site.																												
5.8.1	Non-working days The non-working days are after 14h00 Saturdays and full day Sundays. The special non-working days are public holidays and the year-end break as stated by SAFCEC or similar be defined for the purposes of this Contract.																												
5.12.2	Add the following to GCC 5.12.2 Extension of time from abnormal climatic conditions The Contractor shall make allowance for the average rainfall and windy conditions that may exist during the contract period. All necessary steps shall be taken to proceed with the works despite inclement weather. The Contractor shall however record all rainy and windy periods which adversely affect the contract extension of time in terms of clauses 5.12 (2, 3 & 4) of the general conditions of contract, arising from abnormal climatic conditions, shall be applied as follows: 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 program of work for an expected delay of "n" working days caused by normal inclement weather, for which he will not receive any extension of time. The value of "n" for this contract shall be based on the loss of 31 working days per annum due to inclement weather. Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" working days as mentioned above. When considering extension of time for abnormal climatic conditions, the effect of the loss of 31 working days per annum due to normal inclement weather shall be taken cumulatively over the whole contract period. For portions of less than one year the appropriate number of days of normal inclement weather will be determined on a pro rata basis based on the following table: <table border="1"> <thead> <tr> <th>MONTH</th><th>NUMBER OF NORMAL INCLEMENT WEATHER DAYS EXPECTED</th></tr> </thead> <tbody> <tr><td>January</td><td>2</td></tr> <tr><td>February</td><td>3</td></tr> <tr><td>March</td><td>2</td></tr> <tr><td>April</td><td>2</td></tr> <tr><td>May</td><td>3</td></tr> <tr><td>June</td><td>3</td></tr> <tr><td>July</td><td>4</td></tr> <tr><td>August</td><td>3</td></tr> <tr><td>September</td><td>2</td></tr> <tr><td>October</td><td>3</td></tr> <tr><td>November</td><td>3</td></tr> <tr><td>December</td><td>1</td></tr> <tr><td>Total</td><td>31</td></tr> </tbody> </table> Should the Contractor wish to submit a claim for extension of time for the completion of the works due to the works being delayed by reason of abnormal climatic conditions he shall do so in writing and with the following details: 1. The times work was stopped and recommenced.	MONTH	NUMBER OF NORMAL INCLEMENT WEATHER DAYS EXPECTED	January	2	February	3	March	2	April	2	May	3	June	3	July	4	August	3	September	2	October	3	November	3	December	1	Total	31
MONTH	NUMBER OF NORMAL INCLEMENT WEATHER DAYS EXPECTED																												
January	2																												
February	3																												
March	2																												
April	2																												
May	3																												
June	3																												
July	4																												
August	3																												
September	2																												
October	3																												
November	3																												
December	1																												
Total	31																												

	2. A motivation for the reason's construction could not continue, with reference to the agreed construction programme activities. 3. A report on active resources on site at the time of the disruption, which shall be certified by the Engineer's Agent or Clerk-of-Works. 4. The circumstances surrounding any instruction by a third to stop work due to inclement weather (i.e. Industrial Council/Safety Officer, etc.). The Contractor shall submit to the Engineer claims for all time lost due to inclement weather within 1 working day of the claim day, duly certified by the Engineer's representative or Clerk-of-Works, as the case may be. A record of inclement weather will be kept and recorded at site meetings on a regular basis. Only when all parts of the contract have been handed over will claims, if any, be considered for exceptionally inclement weather. The onus is on the Contractor to prove these claims. The delays granted, in terms of this clause, shall not automatically result in an overall extension of time being granted for completion of the works unless the effect is clearly applicable to the critical path of the agreed construction programme.
5.13.1	Penalty for delay The penalty for delay of the Works is R 10,000 per calendar day, exclusive of 15% VAT.
5.16.3	Latent Defect Period The latent defects period is 10 years.
6.2.1	The Performance Guarantee is to contain the wording of the document included in C1.3 The Performance Guarantee shall be ten percent (10%) of the Tender Price.
6.2.2	Delete Clause 6.2.2 in its entirety.
6.2.3	The expiry date shall be the date on which the Certificate of Completion of the Works is issued, approved by the Engineer and by the Municipality.
6.3	Variation Orders Prior approval of variations is to be obtained from the Director: Economic, Social and Integrated Development Services, in writing, before commencement of work. Failure to comply will result in unauthorised expenditure.
6.5.1.2.3	Percentage allowance for overheads The percentage allowance to cover overheads charges is as stated in the Part 2 of the Contract Data.
6.8.2	Contract Price Adjustment Factor A Contract Price Adjustment Factor shall not be applied to the value of certificates and the rates for the first calendar year and prices shall be final and binding. Contract Price Adjustment Factor shall be applied to the value of certificates and the rates for the second and third calendar year.
6.8.2	Add the following to Clause 6.8.4: Notwithstanding the above, in the event that a public holiday is proclaimed within 28 days before the closing date for tenders, no cost other than those that can be claimed under Clause 5.12.3 shall be added to the contract price.
6.10.1.5	Percentage advance on materials The percentage advance on materials not yet built into the Permanent Works is 80% (Eighty percent) and has to relate to the approved Project Programme.
6.10.3	Limit of Retention Money Notwithstanding the provision of a performance guarantee in terms of clause 6.2.1, interim payment certificates to the contractor shall be subjected to a retention by the Employer of an amount of 10% of the certificate value. The limit of retention money shall be 5% of total contract value.

6.10.4	Add the following to Clause 6.10.4: Notwithstanding the above, the Engineer shall be empowered to withhold the delivery of the payment certificate until the Contractor has complied with his obligations to report in terms of GCC Clause 4.10.2 and as described in the Scope of Work.
8.6.1.1.2	Value of Plant & Materials by Employer The Tender makes provision for an alternative where the Employer procure segmented paving through an existing Municipal Tender. Paving bricks will be delivered to site in accordance with the successful Tenderers programme. Should this alternative be followed, it will be required from the Tenderer to add the value of the materials, procured by the Langeberg Municipality, to the tendered value for the required insurance value.
8.6.1.1.3	Amount to cover Professional Fees The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 20,000.00.
8.6.1.3	Liability Insurance The limit of indemnity for liability insurance is R 10,000,000.00
8.6.1.5	In addition to the insurance required in terms of General Conditions of Contract Clauses 8.6.1.1 to 8.6.1.4 the following insurance is also required: a) Insurance of construction equipment (including tools, offices and other temporary structures and contents) and other things (except those intended from incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement. b) Insurance in terms of the provisions of the Compensation for Occupational injuries and Diseases Act No. 130 of 1993. c) Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" risk including Passenger Liability Indemnity. d) Where the contract involves manufacturing and/or fabrication of the Works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such work during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.
8.6.6	The evidence that the insurances have been affected in terms of Clause 8.6.1, shall be in the form of an insurance broker's warranty.
10.7.1	Determination of disputes The determination of disputes shall be by arbitration.

C1.2: CONTRACT DATA

PART 2 : DATA PROVIDED BY THE CONTRACTOR

1.1.1.9	The Contractor is:				
1.2.1.2	The Contractor's address for receipt of communications is:				
	Telephone: _____				
	Facsimile: _____				
	E-mail : _____				
	Address (Postal) : _____ _____ _____				
	Address (Physical) : _____ _____ _____				
1.1.1.14	Practical Completion The time for achieving Practical Completion for Cluster 1 of the Contract is maximum 10 months (inclusive 2 weeks for the Contractor to provide the guarantee, Health and Safety File and other requirements, and for approval by the Municipality), plus all non-working and special non-working days. Cluster 2 will be maximum 3 months and Cluster 3 will be maximum 8 months .				
6.2.1	Security by Contractor The security to be provided by the Contractor shall be as follows and include Value Added Tax: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Type of Security</th> <th style="width: 30%;">Contractor's Choice "Yes" or "No"</th> </tr> </thead> <tbody> <tr> <td>Performance Guarantee of 10% of the Contract Sum plus</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table>	Type of Security	Contractor's Choice "Yes" or "No"	Performance Guarantee of 10% of the Contract Sum plus	Yes
Type of Security	Contractor's Choice "Yes" or "No"				
Performance Guarantee of 10% of the Contract Sum plus	Yes				
6.5.1.2.3	Percentage allowance to overhead charges The percentage allowance to cover overhead charges is %				

C1.3 PERFORMANCE GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means:

"Contractor" means :

"Engineer" means:

"Works" means:

"Site" means:

"Contract" means: The Agreement made in term 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 VAT of R

Amount in words:

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

Amount in words:

"Expire Date" means: Date id issue by the Engineer of the Certificate of Completion of the Work

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificates 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 acknowledge that:

Any reference in this Performance Guarantee to the Contract is made for the Purpose of convenience and shall not be constructed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.

It's obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the document identified in 4.1 to 4.3:
 1. A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer is an Interim or Final Payment Certificate has not been made in terms of the 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;

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;
3. A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract to 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:
 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
 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
 3. the aforesaid written demand is accompanied by a copy of the notice of termination and/or the 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 the 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 the original Performance Guarantee by the 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 the 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 Magistrate's Court.

Signed at

Date

Guarantor's signatory: (1)

Capacity

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

Capacity

Witness signatory (1):

Witness signatory (2):.....

PART C2 : PRICING DATA

- C2.1 Pricing Instructions**
- C2.2 Bill of Quantities**

C2.1: PRICING INSTRUCTIONS

C2.1.1 PREAMBLE TO THE BILL OF QUANTITIES

- C2.1.1.1 The method of measurement published by the South African Bureau of Standards in Clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section "Applicable SABS 1200 standardised specifications".
- C2.1.1.2 Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill, the requirements of the Standardised or Scope of Work, as applicable, shall prevail.
- C2.1.1.3 The clauses in a specification in which further information regarding the bill item can be obtained appear under "Reference clause" in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of schedule items. Further information and set specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SABS in the SABS 1200 series of specifications, e.g. G for SABS 1200 G.
- C2.1.1.4 Unless otherwise stated, items are measured nett in accordance with the drawings, and no allowance is made for waste.
- C2.1.1.5 The quantities set out in the Bill of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
- C2.1.1.6 The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
- C2.1.1.7 A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities.
- C2.1.1.8 Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

C2.1.1.9 The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1 000 kg)
m ²	=	square metre	No.	=	number
m ² .pass	=	square metre-pass	sum	=	lump sum
ha	=	hectare	MN	=	Mega Newton
m ³	=	cubic metre	MN.m	=	Mega Newton-metre
m ³ .km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
ℓ	=	litre	Prov sum	=	Provisional sum
kℓ	=	kilolitre	%	=	per cent
MPa	=	Mega Pascal	kW	=	kilowatt

C2.2: BILL OF QUANTITIES

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SANS 1200 A	<u>SCHEDULE A: PRELIMINARY AND GENERAL</u>				
A.1	8.3	FIXED-CHARGE ITEMS				
A.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2.1	Facilities for Engineer (SANS 1200 AB)				
A.1.2		a) Nameboard	Sum	1		
	8.3.2.2	Facilities for Contractor				
A.1.3		a) Offices and storage shed	Sum	1		
A.1.4		b) Living accommodation	Sum	1		
A.1.5		c) Ablution	Sum	1		
A.1.6		d) Tools and equipment	Sum	1		
A.1.7	SD A 8.3.2.3	e) Water supplies, electrical power and communication facilities	Sum	1		
A.1.8	SD A 8.3.3.2	f) Dealing with water	Sum	1		
A.1.9	SD A 8.3.2.3	g) Access	Sum	1		
A.1.20		h) Plant	Sum	1		
A.1.21	8.3.3	Other fixed-charge obligations (Specify)	Sum	1		
A.1.22	8.3.5	Health and safety plan - submit for approval	Sum	1		
A.2	8.4	TIME-RELATED ITEMS				
A.2.1	8.4.1	Contractual requirements	Month	10		
A.2.2	8.4.2	Operation and maintenance of facilities on site	Month	10		
	SD A 8.4.2.1	Facilities for Engineer (SANS 1200 AB)				
A.2.3		a) Nameboard	Month	10		
	8.4.2.2	Facilities for Contractor for duration of Contract				
A.2.4		a) Offices and storage shed	Month	10		
A.2.5		b) Living accommodation	Month	10		
A.2.6		c) Ablution	Month	10		
A.2.7		d) Tools and equipment	Month	10		
A.2.8	SD A 8.3.2.3	e) Water supplies, electrical power and communication facilities	Month	10		
A.2.9	SD A 8.3.2.3	f) Dealing with water	Month	10		
A.2.10	SD A 8.3.2.3	g) Access	Month	10		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
BROUGHT FORWARD						
A.2.11		h) Plant	Month	10		
A.2.12	8.4.5	Other time-related obligations (Specify)	Month	10		
A.2.13	8.4.3	Supervision	Month	10		
A.2.14	SD A 8.4.4	Company and Head office overhead costs	Sum	1		
A.2.15	SD A 8.19	Wayleaves	Sum	1		
A.3	SD A 8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
	SD A 8.5 (a)	Sums Stated Provisionally by Engineer for work done by Contractor or Selected Sub-Contractor				
A.3.1		i) Tests required by Engineer	Prov. Sum	1	15 000,00	R 15 000,00
A.3.2		ii)	Prov. Sum			
A.3.3		iii)	Prov. Sum			
A.3.4	SD A 8.5 (b)	(ii) Contractor's overheads, profit etc on items A.3.1 - A.3.3	%	R 15 000,00		
A.4	SD A 8.7	DAYWORK				
A.4.1		Trench excavator with minimum capability of 75 kW Manufacturer:..... Model:.....	h	5		
A.4.2		Front end Loader with minimum capability of 60 kW Manufacturer:..... Model:.....	h	5		
A.4.3		Digger-loader with minimum capability of 50 kW Manufacturer:..... Model:.....	h	5		
A.4.4		Tip truck with minimum capacity of 6m3 Manufacturer:..... Model:.....	h	5		
A.4.5		Grader with minimum capability of 150kW Manufacturer:..... Model:..... Compactors:	h	5		
A.4.6		Self-propelled single drum vibrating compactor. Minimum mass: 19 t Minimum capability: 97 kW Manufacturer:..... Model:.....	h	5		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
BROUGHT FORWARD						
A.4.7		Hand controlled double drum vibrating compactor Minimum drum width: 0.39 m Minimum capability: 3.7kW Manufacturer:..... Model:.....	h	5		
A.5	SD A 8.7.1	STANDING TIME COSTS				
A.5.1		Plant	day	5		
A.5.2		Labour	day	5		
A.5.3		Other resources (Specify)	day	5		
A.6	8.8	TEMPORARY WORKS				
A.6.1	SD A 8.8.2	Accommodation of traffic Johan De Jongh Drive	Sum	1		
A.6.2	SD A 8.8.2	Accommodation of traffic Wesley Street	Sum	1		
A.6.3	SD A 8.8.5	Cost of Survey - beacons, benchmarks, boundary pegs: locate, protect and re-establish	Sum	1		
A.6.4	SD A 8.9	Implementation and adherence to the Occupational Health and Safety Act	Sum	1		
A.6.5	SD A 8.10	Environmental Control	Sum	1		
A.7		COMMUNITY LIASON OFFICER				
A.7.1		Advertise, interview,appoint and accommodate CLO for duration of the contract.	PC Sum	1	80 000,00	R 80 000,00
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SANS 1200 C	SCHEDULE B: SITE CLEARANCE				
B.1	SD C 8.2.1	JOHAN DE JONGH DRIVE Clear and grub in :				
B.1.1	SD C 8.2.11	Remove from site and dispose of rubble and undesirable material at a site to be identified by the Contractor	m³	100		
B.1.2	SD C 8.2.12	Remove from site and dispose at a site to be identified by the Contractor				
B.1.2.1		a) BK2+C1 Kerbing	m	35		
B.1.2.2		b) MK10 Kerbing	m	75		
B.1.2.3		c) E1 Kerbing	m			
B.1.2.4		d) BK2 Kerbing	m			
B.1.2.5		e) CK5 Kerbing	m	125		
B.1.2.6		f) Headwall Structure< 750mm dia	No.	1		
B.1.2.7		g) 450mm dia stormwater pipe	m	5		
B.1.3	SD C 8.2.13	Remove and relocate to position on drawing and/or as instructed by the Engineer:				
B.1.3.1		a) Streetlights	No	1		
B.1.3.2		b) Road sign with one post (such Stop, Yield, Prohibition, Warning signs, etc)	No	14		
B.1.3.3		c) Road sign with 2 posts (Chevron, Direction signs, etc)	No	3		
B.2	SD C 8.2.1	WESLEY STREET Clear and grub in :				
B.2.1	SD C 8.2.11	Remove from site and dispose of rubble and undesirable material at a site to be identified by the Contractor	m³	100		
B.2.2	SD C 8.2.12	Remove from site and dispose at a site to be identified by the Contractor				
B.2.2.1		a) BK2+C1 Kerbing	m	380		
B.2.2.2		b) MK10 Kerbing	m	100		
B.2.2.3		c) E1 Kerbing	m	200		
B.2.2.4		d) BK2 Kerbing	m			
B.2.2.5		e) CK5 Kerbing	m	1250		
B.2.2.6		f) MK2 + C1 Kerbing	m	990		
B.2.2.7		g) C1+C1 Channel	m	260		
B.3		Remove tree stump and spoil off site	No	1		
B.4		Remove existing paving and store at municipal stores	m²	200		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
	SANS 1200 D	SCHEDULE C: EARTHWORK GENERAL				
		JOHAN DE JONGH DRIVE				
	8.3.2	Bulk excavation				
	SD D 8.3.2	Restricted cut (400mm deep) in all materials from road prism excavation and use for the following:				
C.1		a) Fill in sidewalks compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	300		
C.2		b) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	80		
C.2		c) Fill in road prism SV 1620 to 1780 at pipe structure compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	1600		
C.3	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	40		
	SD D 8.3.2	Restricted cut (200mm deep) in all materials from sidewalk prism excavation and use for the following:				
C.4		a) Spoil off site at spoil site identified by Contractor	m³	250		
C.5	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	10		
		ii) Existing E1 edging	m	10		
C.6	SD D 8.3.2	Cut in all materials at retention pond area				
C.6.1		a) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	2000		
		WESLEY STREET				
	8.3.2	Bulk excavation				
	SD D 8.3.2	Restricted cut (250mm deep) in all materials from road prism excavation and use for the following:				
C.7		a) Fill in sidewalks compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	150		
C.8		b) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	2200		
C.9		c) Fill in road prism compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	3510		
C.10	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	120		
	SD D 8.3.2	Restricted cut (200mm deep) in all materials from sidewalk prism excavation and use for the following:				
C.11		a) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	765		
	SD DM 8.3.21	Existing services that adjoin excavations				
C.12		i) Existing kerb and/or channelling	m	250		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
D.1	SANS 1200 DM	SCHEDULE D: EARTHWORKS STREETS JOHAN DE JONGH DRIVE TREATMENT OF ROADBED				
	8.3.3 (a)	Preparation and in-situ compaction of roadbed to:				
D.1.1		93% MOD.AASHTO density (100 % for sand) 150mm depth under roads and parkings	m ³	70		
D.1.2		93% MOD.AASHTO density (100 % for sand) 150mm depth under sidewalks	m ³	870		
D.2		FINISHING				
D.2.1	SD DM 8.3.17	Trim, shape and compact verges	m ²	9660		
D.3		EXISTING SERVICES				
		Lower and raise existing services as required:				
D.3.1		a) Sewer or stormwater manhole	No	2		
D.3		WESLEY STREET TREATMENT OF ROADBED				
	8.3.3 (a)	Preparation and in-situ compaction of roadbed to:				
D.3.1		93% MOD.AASHTO density (100 % for sand) 150mm depth under roads and parkings	m ³	1305		
D.3.2		93% MOD.AASHTO density (100 % for sand) 150mm depth under sidewalks	m ³	460		
D.4		FINISHING				
D.4.1	SD DM 8.3.17	Trim, shape and compact verges	m ²	4200		
D.5		EXISTING SERVICES				
		Lower and raise existing services as required:				
D.5.1		a) Sewer or stormwater manhole	No	13		
D.5.2		b) Belltobey	No	8		
D.5.3		c) Fire Hydrant	No	3		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		<u>SCHEDULE E: SUBBASE</u>				
		JOHAN DE JONGH DRIVE				
	SANS 1200 ME	SUBBASE				
E.1		Construct subbase compacted to 95% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the road prism				
E.1.1	ME 8.3.3	150mm thick G5 quality for roads and parking areas compacted to 95% MOD AASHTO density from commercial sources	m³	70		
E.1.2	ME 8.3.3	125mm thick G5 quality for sidewalks compacted to 95% MOD AASHTO density from commercial sources	m³	725		
		WESLEY STREET				
	SANS 1200 ME	SUBBASE				
E.2		Construct subbase compacted to 95% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the road prism				
E.2.1	ME 8.3.3	150mm thick G5 quality for roads and parking areas compacted to 95% MOD AASHTO density from commercial sources	m³	0		
E.2.2	ME 8.3.3	125mm thick G5 quality for sidewalks compacted to 95% MOD AASHTO density from commercial sources	m³	460		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		SCHEDULE F: BASECOURSE				
F.1	SANS 1200 MF	JOHAN DE JONGH DRIVE BASECOURSE Construct basecourse compacted to 98% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the road prism				
F.1.1	ME 8.3.3	150mm thick G4 quality for roads and parking areas compacted to 98% MOD AASHTO density from commercial sources	m³	70		
F.2	SANS 1200 MF	WESLEY STREET BASECOURSE Construct basecourse compacted to 98% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the road prism				
F.2.1	ME 8.3.3	150mm thick G4 quality for roads and parking areas compacted to 98% MOD AASHTO density from commercial sources	m³	1305		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		<u>SCHEDULE G: STORMWATER DRAINAGE</u>				
G.1	SANS 1200 DB	JOHAN DE JONGH DRIVE EXCAVATIONS				
	SD DB 8.3.2(a)	Trench excavations in all materials, backfilling, compacting and removal of surplus material for pipes: with a nominal diameter of 110 mm (subsoils) for the following depths:				
G.1.1		a) 0,00 - 1,00 m	m	10		
G.1.2		b) 1,00 - 1,50 m	m	150		
G.2	DB 8.3.3	EXCAVATION ANCILLARIES				
	DB 8.3.3.1	Make up deficiency in backfill material from:				
G.2.1	8.3.3.1(c)	a) trench excavations	m ³	20		
G.2.2	SD DB 8.3.3.3	Compaction in road reserve	m ³	20		
	SD DB 8.3.6.1	Reinstatement of road surface complete with all courses as per specification:				
G.2.3		For surfaced roads	m ²	45		
G.3	SANS 1200 LB	BEDDING (PIPES)				
		Supply and compact bedding to 100% Mod.AASHTO-density with material:				
	8.2.2.3	from commercial sources excavations:				
G.3.1		a) Bedding	m ³	20		
G.3.2		b) Blanket	m ³	130		
G.4	SANS 1200 LE	PIPEWORK				
	SD LE 8.2.1	Supply, handle, lay and bed (Class C bedding) concrete pipes, type OG Interlocking Joint				
G.4.1		450 mm dia 100D	m	10		
G.4.2		600 mm dia 100D	m	80		
G.4.3		4 x 750 mm dia 100D	m	15		
G.5	SD LE 8.2.8	STRUCTURES				
G.5.1		a) 450mm dia HW as per detail	No	2		
G.5.2		b) 600mm diam HW as per detail	No	10		
G.5.3		c) 4 x 750mm diam HW as per detail	No	2		
G.5.4		c) Double kerb inlet, sidewalk slab and stonepitching to detail	No	31		
G.5.5		d) New stormwater grid inlet at 45 deg to detail	No	1		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	TENDER AMOUNT
BROUGHT FORWARD					
G.6		OVERLAND CHANNELS			
	SD LE 8.2.21	Construct unlined open drain, including excavations, trimming, etc. as per specification			
G.6.1		Construct trapezoidal drainage channel complete (unlined) drainage channel 300 mm (bottom width) x 1500 mm (top width)	m	1150	
G.7		GABIONS			
		Supply and install gabions, inclusive geotextile wrap, to detail as follows:			
G.7.1		6m x 3m x 0.3m Reno Mattress or similar	No	4	
G.7.2		3m x 1m x 1m Reno Boxes or similar	No	4	
G.1	SANS 1200 DB	WESLEY STREET EXCAVATIONS			
	SD DB 8.3.2(a)	Trench excavations in all materials, backfilling, compacting and removal of surplus material for pipes:			
		with a nominal diameter of 110 mm (subsoils) for the following depths:			
G.1.1		a) 0,00 - 1,00 m	m	5	
G.1.2		b) 1,00 - 1,50 m	m	15	
G.2	DB 8.3.3	EXCAVATION ANCILLARIES			
	DB 8.3.3.1	Make up deficiency in backfill material from:			
G.2.1	8.3.3.1(c)	a) trench excavations	m³	12	
G.2.2	SD DB 8.3.3.3	Compaction in road reserve	m³	12	
	SD DB 8.3.6.1	Reinstatement of road surface complete with all courses as per specification:			
G.2.3		For surfaced roads	m²	30	
G.3	SANS 1200 LB	BEDDING (PIPES)			
		Supply and compact bedding to 100% Mod.AASHTO-density with material:			
	8.2.2.3	from commercial sources excavations:			
G.3.1		a) Bedding	m³	3	
G.3.2		b) Blanket	m³	16	
G.4	SANS 1200 LE	PIPEWORK			
	SD LE 8.2.1	Supply, handle, lay and bed (Class C bedding) concrete pipes, type OG Interlocking Joint			
G.4.1		375 mm dia 100D	m	20	
G.5	SD LE 8.2.8	STRUCTURES			
G.5.1		a) Remove and reinstate double kerb inlet to detail	No	9	
G.5.2		b) Remove and reinstate special double kerb inlet to detail	No	3	
TOTAL CARRIED FORWARD TO SUMMARY					

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
H	SANS 1200 MK	<u>SCHEDULE H: KERBING AND CHANNELLING</u>				
		JOHAN DE JONGH DRIVE				
	SD MK8.2.2	Precast concrete kerb and channel (BK2&C1) on concrete bedding according to detail:				
H.1		a) Radius to 20 m	m	485		
H.2		b) Radius greater than 20 m and straight	m	2 800		
	SD MK8.2.2	Precast concrete kerb (BK2) on concrete bedding according to detail:				
H.3		a) Radius to 20 m	m	50		
H.4		b) Radius greater than 20 m and straight	m	355		
	SD MK8.2.2	Precast concrete mountable kerb (CK5) on concrete bedding according to detail:				
H.5		a) Radius to 20 m	m	5		
H.6		b) Radius greater than 20 m and straight	m	5		
	SD MK8.2.2	Precast concrete edging (E1) on concrete bedding according to detail:				
H.7		a) Radius to 20 m	m	360		
H.8		b) Radius greater than 20 m and straight	m	3 220		
	SD MK8.2.2	Precast concrete edging (E3) on concrete bedding according to detail:				
H.9		a) Radius to 20 m	m	4		
H.10		b) Radius greater than 20 m and straight	m	16		
	SD MK 8.2.16	Transition Kerb:				
H.11		a) BK2/C1 to BK2	No	6		
H.12		Extra-over items H.1 to H.4 for dropped kerbing	m	650		
H.13		Extra-over items H.1 to H.4 for 100mm wide asphalt insert to existing roadway	m	30		
H.14		Supply and install handrailing to detail	m	100		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	TENDER AMOUNT
BROUGHT FORWARD					
		WESLEY STREET			
	SD MK8.2.2	Precast concrete kerb and channel (BK2&C1) on concrete bedding according to detail:			
H.15		a) Radius to 20 m	m	450	
H.16		b) Radius greater than 20 m and straight	m	1770	
	SD MK8.2.2	Precast concrete kerb (BK2) on concrete bedding according to detail:			
H.17		a) Radius to 20 m	m	10	
H.18		b) Radius greater than 20 m and straight	m	10	
	SD MK8.2.2	Precast concrete channel (C1&C1) on concrete bedding according to detail:			
H.19		a) Radius to 20 m	m		
H.20		b) Radius greater than 20 m and straight	m	10	
	SD MK8.2.2	Precast concrete edging (E1) on concrete bedding according to detail:			
H.21		a) Radius to 20 m	m	380	
H.22		b) Radius greater than 20 m and straight	m	1740	
	SD MK8.2.2	Precast concrete edging (E3) on concrete bedding according to detail:			
H.23		a) Radius to 20 m	m	20	
H.24		b) Radius greater than 20 m and straight	m	50	
H.25		Extra over item H12 and H13 for dropped kerbing	m	1000	
	SD MK 8.2.16	Transition Kerb:			
H.26		a) BK2/C1 to BK2	No	20	
H.27		Extra-over items H.15 to H.24 for 100mm wide asphalt insert to existing roadway	m	60	
H.28		Supply and install concrete bollards to detail	No	5	
TOTAL CARRIED FORWARD TO SUMMARY					

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	TENDER AMOUNT
I	SANS 1200 MJ	<u>SCHEDULE I: SEGMENTED PAVING</u>			
	8.2.2	JOHAN DE JONGH DRIVE Construction of precast concreted segmented paving, complete with 20mm sand bedding and joint filling, using CEL pavers or similar approved as following:			
		ROADS			
I.1		Supply and install 80mm interlocking pavers to Herringbone pattern, including cutting units to suite the edge requirements.	m ²	450	
		SIDEWALKS			
I.2		Supply and install 50mm block pavers to Running Bond pattern, including cutting units to suite the edge requirements.	m ²	5800	
I.3		Extra over Items K.1.1-K.1.2 for applying weed killer, roundup or similar approved on the sand bedding at a rate to the manufacturers specification	m ²	6250	
	8.2.3	Cutting units to fit edge restraints			
I.4		a) Straight	m	3155	
I.5		b) Curved	m	410	
I.6	8.2.4	Rolling to locked up condition	m ²	5800	
		RAISED INTERSECTION			
I.7		Extra over Item I.1 to I.6 for construction of raised intersection to detail at van Oudtshoorn Street	No	1	
	8.2.2	WESLEY STREET Construction of precast concreted segmented paving, complete with 20mm sand bedding and joint filling, using CEL pavers or similar approved as following:			
		ROADS			
I.8		Supply and install 80mm interlocking pavers to Herringbone pattern, including cutting units to suite the edge requirements.	m ²	8210	
		SIDEWALKS			
I.8		Supply and install 50mm block pavers to Running Bond pattern, including cutting units to suite the edge requirements.	m ²	3530	
I.9		Extra over Items K.1.1-K.1.2 for applying weed killer, roundup or	m ²	11740	
	8.2.3	Cutting units to fit edge restraints			
I.10		a) Straight	m	2910	
I.11		b) Curved	m	280	
I.12	8.2.4	Rolling to locked up condition	m ²	11740	
		RAISED INTERSECTION			
I.13		Extra over Item I.8 to I.12 for construction of raised intersection to detail as follows:			
I.13.1		Scholtz Street	No	1	
I.13.2		Van Zyl Street	No	1	
TOTAL CARRIED FORWARD TO SUMMARY					

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
J	SANS 1200 MM	<u>SCHEDULE J: ANCILLARY ROADWORKS</u>				
	SD MM 8.3.1	JOHAN DE JONGH DRIVE Road signs with painted background and symbols and with signboard constructed from chromadek sheeting (2,0 mm thick)				
J.1		a) Type R1 - 610 mm dia (Stop sign)	No	5		
J.2		b) Type R2.1 (Yield to Pedestrian Sign)	No	4		
J.3		c) Type W401 & 402 (Delineator Plate Sign)	No	4		
J.4		d) Type R5 + R110 (Pedestrian Crossing Sign)	No	4		
	8.3.3	Sign supports				
J.5		a) 2,4 m	No	15		
J.6		b) 1,8 m	No	2		
	SD MM 8.4.1	Road Markings Non-reflectorized paint applied at a nominal rate of 0,42 l,m ² b) white characters and symbols				
		i) RTM1 (Stop marking)	No.			
		ii) Raised Intersection	No	1		
	SD MM 8.4.1	WESLEY STREET Road Markings Non-reflectorized paint applied at a nominal rate of 0,42 l,m ² a) White Lines				
		i) 300 mm wide (RTM4)	m	50		
		ii) 300mm wide (RTM3)	m	60		
		iii) 100mm wide (RM1)	m	40		
		iv) 100mm wide (WM3)	m	1030		
		v) 100mm wide (RM11)	m	360		
		b) white characters and symbols				
		i) RTM1 (Stop marking)	No.	11		
		ii) 2.4m Pedestrian cross	No	6		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 1
SUMMARY OF SCHEDULES

	SCHEDULE	DESCRIPTION		FROM PAGE		TENDER AMOUNT
	A	PRELIMINARY AND GENERAL				
	B	SITE CLEARANCE				
	C	EARTHWORKS GENERAL				
	D	EARTHWORKS STREETS				
	E	SUBBASE				
	F	BASECOURSE				
	G	STORMWATER DRAINAGE				
	H	KERBING & CHANNELLING				
	I	SEGMENTED PAVING				
	J	ANCILLARY WORKS				
		Sub total				
		10% contingencies				
		Subtotal				
		15% VAT				
		TOTAL				

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SANS 1200 A	<u>SCHEDULE A: PRELIMINARY AND GENERAL</u>				
A.1	8.3	FIXED-CHARGE ITEMS				
A.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2.1	Facilities for Engineer (SANS 1200 AB)				
A.1.2		a) Nameboard	Sum	1		
	8.3.2.2	Facilities for Contractor				
A.1.3		a) Offices and storage shed	Sum	1		
A.1.4		b) Living accommodation	Sum	1		
A.1.5		c) Ablution	Sum	1		
A.1.6		d) Tools and equipment	Sum	1		
A.1.7	SD A 8.3.2.3	e) Water supplies, electrical power and communication facilities	Sum	1		
A.1.8	SD A 8.3.3.2	f) Dealing with water	Sum	1		
A.1.9	SD A 8.3.2.3	g) Access	Sum	1		
A.1.20		h) Plant	Sum	1		
A.1.21	8.3.3	Other fixed-charge obligations (Specify)	Sum	1		
A.1.22	8.3.5	Health and safety plan - submit for approval	Sum	1		
A.2	8.4	TIME-RELATED ITEMS				
A.2.1	8.4.1	Contractual requirements	Month	3		
A.2.2	8.4.2	Operation and maintenance of facilities on site	Month	3		
	SD A 8.4.2.1	Facilities for Engineer (SANS 1200 AB)				
A.2.3		a) Nameboard	Month	3		
	8.4.2.2	Facilities for Contractor for duration of Contract				
A.2.4		a) Offices and storage shed	Month	3		
A.2.5		b) Living accommodation	Month	3		
A.2.6		c) Ablution	Month	3		
A.2.7		d) Tools and equipment	Month	3		
A.2.8	SD A 8.3.2.3	e) Water supplies, electrical power and communication facilities	Month	3		
A.2.9	SD A 8.3.2.3	f) Dealing with water	Month	3		
A.2.10	SD A 8.3.2.3	g) Access	Month	3		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
BROUGHT FORWARD						
A.2.11		h) Plant	Month	3		
A.2.12	8.4.5	Other time-related obligations (Specify)	Month	3		
A.2.13	8.4.3	Supervision	Month	3		
A.2.14	SD A 8.4.4	Company and Head office overhead costs	Sum	1		
A.2.15	SD A 8.19	Wayleaves	Sum	1		
A.3	SD A 8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
	SD A 8.5 (a)	Sums Stated Provisionally by Engineer for work done by Contractor or Selected Sub-Contractor				
A.3.1		i) Tests required by Engineer	Prov. Sum	1	15 000,00	R 15 000,00
A.3.2		ii) Electrical High Mast Lighting	Prov. Sum	1	R 100 000,00	R 100 000,00
A.3.3		iii)	Prov. Sum			
A.3.4	SD A 8.5 (b)	(ii) Contractor's overheads, profit etc on items A.3.1 - A.3.3	%	R 115 000,00		
A.4	SD A 8.7	DAYWORK				
A.4.1		Trench excavator with minimum capability of 75 kW Manufacturer:..... Model:.....	h	5		
A.4.2		Front end Loader with minimum capability of 60 kW Manufacturer:..... Model:.....	h	5		
A.4.3		Digger-loader with minimum capability of 50 kW Manufacturer:..... Model:.....	h	5		
A.4.4		Tip truck with minimum capacity of 6m3 Manufacturer:..... Model:.....	h	5		
A.4.5		Grader with minimum capability of 150kW Manufacturer:..... Model:..... Compactors:	h	5		
A.4.6		Self-propelled single drum vibrating compactor. Minimum mass: 19 t Minimum capability: 97 kW Manufacturer:..... Model:.....	h	5		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
BROUGHT FORWARD						
A.4.7		Hand controlled double drum vibrating compactor Minimum drum width: 0.39 m Minimum capability: 3.7kW Manufacturer:..... Model:.....	h	5		
A.5	SD A 8.7.1	STANDING TIME COSTS				
A.5.1		Plant	day	5		
A.5.2		Labour	day	5		
A.5.3		Other resources (Specify)	day	5		
A.6	8,8	TEMPORARY WORKS				
A.6.1	SD A 8.8.2	Accommodation of traffic R60 for raised intersection	Sum	1		
A.6.2	SD A 8.8.5	Cost of Survey - beacons, benchmarks, boundary pegs: locate, protect and re-establish	Sum	1		
A.6.3	SD A 8.9	Implementation and adherence to the Occupational Health and Safety Act	Sum	1		
A.6.4	SD A 8.10	Environmental Control	Sum	1		
A.7		COMMUNITY LIASON OFFICER				
A.7.1		Advertise, interview,appoint and accommodate CLO for duration of the contract.	PC Sum	1	30 000,00	R 30 000,00
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SANS 1200 C	SCHEDULE B: SITE CLEARANCE				
B.1	SD C 8.2.1	WALKWAY CHURCH STREET TO MAIN ROAD Clear and grub in :				
B.1.1	SD C 8.2.1(a)	a) Walkway POS Reserve	m ²	450		
		RAISED INTERSECTION				
B.1.2	SD C 8.2.11	b) Remove existing bitumen surfacing and dispose material at a site to be identified by the Contractor	m ²	500		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
	SANS 1200 D	SCHEDULE C: EARTHWORK GENERAL				
	8.3.2	WALKWAY CHURCH STREET TO MAIN ROAD Bulk excavation				
C.1	SD D 8.3.2	Restricted cut in all materials from walkway prism excavation and use for the following: a) Fill in sidewalks compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	35		
C.2	SD DM 8.3.21	Existing services that adjoin excavations i) Existing fenceline	m	40		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
	SANS 1200 DM	SCHEDULE D: EARTHWORKS STREETS				
D.1		WALKWAY CHURCH STREET TO MAIN ROAD TREATMENT OF ROADBED				
	8.3.3 (a)	Preparation and in-situ compaction of roadbed to:				
D.1.1		93% MOD.AASHTO density (100 % for sand) 150mm depth under walkway	m³	70		
D.2		SELECTED SUB-GRADE				
		Construct Selected Sub-grade compacted to 93% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the walkway				
	ME 8.3.3	150mm thick G7 quality for walkway compacted to 93% MOD AASHTO density from commercial sources	m³	70		
D.3		FINISHING				
D.3.1	SD DM 8.3.17	Trim, shape and compact verges	m²	200		
		RAISED INTERSECTION				
D.4	8.3.3 (a)	Preparation and in-situ compaction of roadbed to:				
D.4.1		93% MOD.AASHTO density (100 % for sand) 150mm depth under raised intersection	m³	75		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		<u>SCHEDULE E: SUBBASE / BASECOURSE</u>				
		WALKWAY CHURCH STREET TO MAIN ROAD				
	SANS 1200 ME	SUBBASE				
E.1		Construct subbase compacted to 95% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the walkway				
E.1.1	ME 8.3.3	125mm thick G5 quality for the walkway compacted to 95% MOD AASHTO density from commercial sources	m³	55		
		RAISED INTERSECTION				
	SANS 1200 MF	BASECOURSE				
E.2		Construct basecourse compacted to 98% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the road prism				
E.2.1	ME 8.3.3	150mm thick G2 quality for roads compacted to 98% MOD AASHTO density from commercial sources	m³	75		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		<u>SCHEDULE F: STORMWATER DRAINAGE</u>				
F.1	SANS 1200 DB	WALKWAY CHURCH STREET TO MAIN ROAD EXCAVATIONS				
	SD DB 8.3.2(a)	Trench excavations in all materials, backfilling, compacting and removal of surplus material for pipes: with a nominal diameter of 110 mm (subsoils) for the following depths:				
F.1.1		a) 0,00 - 1,00 m	m	1		
F.1.2		b) 1,00 - 1,50 m	m	5		
F.2	DB 8.3.3	EXCAVATION ANCILLARIES				
	DB 8.3.3.1	Make up deficiency in backfill material from:				
F.2.1	8.3.3.1(c)	a) trench excavations	m³	2		
F.2.2	SD DB 8.3.3.3	Compaction in road reserve	m³	2		
F.3	SANS 1200 LB	BEDDING (PIPES)				
		Supply and compact bedding to 100% Mod.AASHTO-density with material:				
	8.2.2.3	from commercial sources excavations:				
F.3.1		a) Bedding	m³	1		
F.3.2		b) Blanket	m³	4		
F.4	SANS 1200 LE	PIPEWORK				
	SD LE 8.2.1	Supply, handle, lay and bed (Class C bedding) concrete pipes, type OG Interlocking Joint				
F.4.1		600 mm dia 100D	m	5		
F.5	SD LE 8.2.8	STRUCTURES				
F.5.1		a) 600mm diam outlet HW as per detail	No	2		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		<u>SCHEDULE G: WALLS</u>				
G.1		WALKWAY CHURCH STREET TO MAIN ROAD RETAINING WALL Supply and install TERRAFORCE, or similar approved , retaining blocks. Type L11 coarse face, area measured vertically. Complete including infill material, subsoil drain and 20Mpa concrete footing for the following heights as per details on drawing 2302587/C/114:				
G.1.1		a) 0,0 - 0.5m	m	13		
G.1.2		b) 0,51 - 1.0m	m	15		
G.1.3		b) 1,01 - 1,5m	m	25		
G.1.4		b) 1,51 - 2,0m	m	30		
G.2		FREE STANDING BALUSTRADE WALL				
G.2.1		Supply and install 110mm masonry wall from cement bricks, with piers, on 20Mpa concrete footing as per details on drawing 2302587/C/114:	m	40		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
H	SANS 1200 MK	<u>SCHEDULE H: KERBING AND CHANNELLING</u>				
		WALKWAY CHURCH STREET TO MAIN ROAD				
	SD MK8.2.2	Precast concrete edging (E1) on concrete bedding according to detail:				
H.1		a) Radius to 20 m	m	15		
H.2		b) Radius greater than 20 m and straight	m	210		
		RAISED INTERSECTION				
	SD MK8.2.2	Precast concrete kerb (BK2) on concrete bedding according to detail:				
H.3		a) Radius to 20 m	m	10		
H.4		b) Radius greater than 20 m and straight	m	80		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
I	SANS 1200 MJ	SCHEDULE I: SEGMENTED PAVING				
		WALKWAY CHURCH STREET TO MAIN ROAD				
	8.2.2	Construction of precast concreted segmented paving, complete with 20mm sand bedding and joint filling, using CEL pavers or similar approved as following:				
		WALKWAY				
I.1		Supply and install 70mm block pavers to Running Bond pattern, including cutting units to suite the edge requirements.	m ²	415		
I.2		Extra over Items K.1.1-K.1.2 for applying weed killer, roundup or similar approved on the sand bedding at a rate to the manufacturers specification	m ²	415		
	8.2.3	Cutting units to fit edge restraints				
1.3		a) Straight	m	130		
1.4		b) Curved	m	15		
1.5	8.2.4	Rolling to locked up condition	m ²	415		
		RAISED INTERSECTION				
I.6		Supply and install 80mm interlocking pavers to Herringbone pattern, including cutting units to suite the edge requirements.	m ²	500		
I.7		Extra over Items K.1.1-K.1.2 for applying weed killer, roundup or similar approved on the sand bedding at a rate to the manufacturers specification	m ²	500		
	8.2.3	Cutting units to fit edge restraints				
1.8		a) Straight	m	120		
1.9		b) Curved	m	30		
1.10	8.2.4	Rolling to locked up condition	m ²	500		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
J	SANS 1200 MM	SCHEDULE J: ANCILLARY ROADWORKS				
	SD MM 8.3.1	WALKWAY CHURCH STREET TO MAIN ROAD Road signs with painted background and symbols and with signboard constructed from chromadek sheeting (2,0 mm thick)				
J.1		a) Type R5 + R110 (Pedestrian Crossing Sign)	No	2		
	8.3.3	Sign supports				
J.2		a) 2,4 m	No	2		
		RAISED INTERSECTION				
	SD MM 8.3.1	Road signs with painted background and symbols and with signboard constructed from chromadek sheeting (2,0 mm thick)				
J.3		d) Type R5 + R110 (Pedestrian Crossing Sign)	No	3		
	8.3.3	Sign supports				
J.4		a) 2,4 m	No	3		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : ROBERTSON PRECINCT ROADS : CLUSTER 2
SUMMARY OF SCHEDULES

	SCHEDULE	DESCRIPTION		FROM PAGE		TENDER AMOUNT
	A	PRELIMINARY AND GENERAL				
	B	SITE CLEARANCE				
	C	EARTHWORKS GENERAL				
	D	EARTHWORKS STREETS				
	E	SUBBASE				
	F	STORMWATER DRAINAGE				
	G	WALLS				
	H	KERBING & CHANNELLING				
	I	SEGMENTED PAVING				
	J	ANCILLARY WORKS				
		Sub total				
		10% contingencies				
		Subtotal				
		15% VAT				
		TOTAL				

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SANS 1200 A	<u>SCHEDULE A: PRELIMINARY AND GENERAL</u>				
A.1	8.3	FIXED-CHARGE ITEMS				
A.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2.1	Facilities for Engineer (SANS 1200 AB)				
A.1.2		a) Nameboard	Sum	1		
	8.3.2.2	Facilities for Contractor				
A.1.3		a) Offices and storage shed	Sum	1		
A.1.4		b) Living accommodation	Sum	1		
A.1.5		c) Ablution	Sum	1		
A.1.6		d) Tools and equipment	Sum	1		
A.1.7	SD A 8.3.2.3	e) Water supplies, electrical power and communication facilities	Sum	1		
A.1.8	SD A 8.3.3.2	f) Dealing with water	Sum	1		
A.1.9	SD A 8.3.2.3	g) Access	Sum	1		
A.1.20		h) Plant	Sum	1		
A.1.21	8.3.3	Other fixed-charge obligations (Specify)	Sum	1		
A.1.22	8.3.5	Health and safety plan - submit for approval	Sum	1		
A.2	8.4	TIME-RELATED ITEMS				
A.2.1	8.4.1	Contractual requirements	Month	8		
A.2.2	8.4.2	Operation and maintenance of facilities on site	Month	8		
	SD A 8.4.2.1	Facilities for Engineer (SANS 1200 AB)				
A.2.3		a) Nameboard	Month	8		
	8.4.2.2	Facilities for Contractor for duration of Contract				
A.2.4		a) Offices and storage shed	Month	8		
A.2.5		b) Living accommodation	Month	8		
A.2.6		c) Ablution	Month	8		
A.2.7		d) Tools and equipment	Month	8		
A.2.8	SD A 8.3.2.3	e) Water supplies, electrical power and communication facilities	Month	8		
A.2.9	SD A 8.3.2.3	f) Dealing with water	Month	8		
A.2.10	SD A 8.3.2.3	g) Access	Month	8		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
BROUGHT FORWARD						
A.2.11		h) Plant	Month	8		
A.2.12	8.4.5	Other time-related obligations (Specify)	Month	8		
A.2.13	8.4.3	Supervision	Month	8		
A.2.14	SD A 8.4.4	Company and Head office overhead costs	Sum	1		
A.2.15	SD A 8.19	Wayleaves	Sum	1		
A.3	SD A 8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
	SD A 8.5 (a)	Sums Stated Provisionally by Engineer for work done by Contractor or Selected Sub-Contractor				
A.3.1		i) Tests required by Engineer	Prov. Sum	1	15 000,00	R 15 000,00
A.3.2		ii) Nkqubela Streets Stormwater Ponding Issues	Prov. Sum	1	R 150 000,00	R 150 000,00
A.3.3		iii) CIDB registration and facilitate CIDB CE2 status for sub-contractors	Prov. Sum	1	R 200 000,00	R 200 000,00
A.3.4	SD A 8.5 (b)	(ii) Contractor's overheads, profit etc on items A.3.1 - A.3.3	%	R 365 000,00		
A.4	SD A 8.7	DAYWORK				
A.4.1		Trench excavator with minimum capability of 75 kW Manufacturer:..... Model:.....	h	5		
A.4.2		Front end Loader with minimum capability of 60 kW Manufacturer:..... Model:.....	h	5		
A.4.3		Digger-loader with minimum capability of 50 kW Manufacturer:..... Model:.....	h	5		
A.4.4		Tip truck with minimum capacity of 6m3 Manufacturer:..... Model:.....	h	5		
A.4.5		Grader with minimum capability of 150kW Manufacturer:..... Model:..... Compactors:	h	5		
A.4.6		Self-propelled single drum vibrating compactor. Minimum mass: 19 t Minimum capability: 97 kW Manufacturer:..... Model:.....	h	5		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
BROUGHT FORWARD						
A.4.7		Hand controlled double drum vibrating compactor Minimum drum width: 0,39 m Minimum capability: 3,7kW Manufacturer:..... Model:.....	h	5		
A.5	SD A 8.7.1	STANDING TIME COSTS				
A.5.1		Plant	day	5		
A.5.2		Labour	day	5		
A.5.3		Other resources (Specify)	day	5		
A.6	8,8	TEMPORARY WORKS				
A.6.1	SD A 8.8.2	Accommodation of traffic Paddy Street	Sum	1		
A.6.2	SD A 8.8.2	Accommodation of traffic Nkqubela Streets	Sum	1		
A.6.3	SD A 8.8.5	Cost of Survey - beacons, benchmarks, boundary pegs: locate, protect and re-establish	Sum	1		
A.6.4	SD A 8.9	Implementation and adherence to the Occupational Health and Safety Act	Sum	1		
A.6.5	SD A 8.10	Environmental Control	Sum	1		
A.7		COMMUNITY LIASON OFFICER				
A.7.1		Advertise, interview,appoint and accommodate CLO for duration of the contract.	PC Sum	1	70 000,00	R 70 000,00
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SANS 1200 C	SCHEDULE B: SITE CLEARANCE				
B.1	SD C 8.2.1	PADDY STREET Clear and grub in :				
B.1.1	SD C 8.2.11	Remove from site and dispose of rubble and undesirable material at a site to be identified by the Contractor	m³	100		
B.1.2	SD C 8.2.12	Remove from site and dispose at a site to be identified by the Contractor				
B.1.2.1		a) BK2+C1 Kerbing	m	220		
B.1.2.2		b) MK10 Kerbing	m			
B.1.2.3		c) E1 Kerbing	m			
B.1.2.4		d) BK2 Kerbing	m			
B.1.2.5		e) CK5 Kerbing	m	3000		
B.1.2.6		f) MK2 + C1 Kerbing	m			
B.1.2.7		g) C1+C1 Channel	m			
B.1.3	SD C 8.2.13	Remove and relocate to position on drawing and/or as instructed by the Engineer:				
B.1.3.1		a) Streetlights	No			
B.1.3.2		b) Road sign with one post (such Stop, Yield, Prohibition, Warning signs, etc)	No	5		
B.1.3.3		c) Road sign with 2 posts (Chevron, Direction signs, etc)	No	1		
B.2	SD C 8.2.1	NKQUBELA STREETS Clear and grub in :				
B.2.1	SD C 8.2.11	Remove from site and dispose of rubble and undesirable material at a site to be identified by the Contractor	m³	50		
B.2.2	SD C 8.2.12	Remove from site and dispose at a site to be identified by the Contractor				
B.2.2.1		a) BK2+C1 Kerbing	m			
B.2.2.2		b) MK10 Kerbing	m	50		
B.2.2.3		c) E1 Kerbing	m			
B.2.2.4		d) BK2 Kerbing	m			
B.2.2.5		e) CK5 Kerbing	m	50		
B.2.2.6		f) MK2 + C1 Kerbing	m			
B.2.2.7		g) C1+C1 Channel	m			
B.2.3	SD C 8.2.13	Remove and relocate to position on drawing and/or as instructed by the Engineer:				
B.2.3.1		b) Road sign with one post (such Stop, Yield, Prohibition, Warning signs, etc)	No	3		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
	SANS 1200 D	SCHEDULE C: EARTHWORK GENERAL				
		PADDY STREET				
	8.3.2	Bulk excavation				
	SD D 8.3.2	Restricted cut (250mm deep) in all materials from road prism excavation and use for the following:				
C.1		a) Fill in sidewalks compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	500		
C.2		b) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	3300		
C.3	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	50		
	SD D 8.3.2	Restricted cut (200mm deep) in all materials from sidewalk prism excavation and use for the following:				
C.4		a) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	880		
C.5	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	40		
		ii) Existing E1 edging	m	10		
		NKQUBELA STREETS				
	8.3.2	Bulk excavation				
	SD D 8.3.2	Restricted cut (250mm deep) in all materials from road prism excavation and use for the following:				
C.1		a) Fill in sidewalks compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	225		
C.2		b) Fill in berm at circle compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	700		
C.3	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	1280		
	SD D 8.3.2	Restricted cut (200mm deep) in all materials from sidewalk prism excavation and use for the following:				
C.4		a) Fill in sidewalks compacted to 93% MOD.AASHTO density (100% for sand) with material from road excavation	m³	255		
C.5	SD DM 8.3.21	Existing services that adjoin excavations				
		i) Existing kerb and/or channelling	m	1280		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
	SANS 1200 DM	SCHEDULE D: EARTHWORKS STREETS				
D.1		PADDY STREET TREATMENT OF ROADBED				
	8.3.3 (a)	Preparation and in-situ compaction of roadbed to:				
D.1.1		93% MOD.AASHTO density (100 % for sand) 150mm depth under roads and parkings	m ³	1550		
D.1.2		93% MOD.AASHTO density (100 % for sand) 150mm depth under sidewalks	m ³	880		
D.2		FINISHING				
D.2.1	SD DM 8.3.17	Trim, shape and compact verges	m ²	9750		
D.3		EXISTING SERVICES				
		Lower and raise existing services as required:				
D.3.1		a) Sewer or stormwater manhole	No	15		
D.3.2		b) Belltobey	No	8		
D.3.3		c) Fire Hydrant	No	4		
D.4		NKQUBELA STREETS TREATMENT OF ROADBED				
	8.3.3 (a)	Preparation and in-situ compaction of roadbed to:				
D.4.1		93% MOD.AASHTO density (100 % for sand) 150mm depth under roads and parkings	m ³	550		
D.4.2		93% MOD.AASHTO density (100 % for sand) 150mm depth under sidewalks	m ³	270		
D.5		FINISHING				
D.5.1	SD DM 8.3.17	Trim, shape and compact verges	m ²	640		
D.6		EXISTING SERVICES				
		Lower and raise existing services as required:				
D.6.1		a) Sewer or stormwater manhole	No	5		
D.6.2		b) Belltobey	No	5		
D.6.3		c) Fire Hydrant	No	5		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		SCHEDULE E: SUBBASE				
	SANS 1200 ME	PADDY STREET SUBBASE				
E.1		Construct subbase compacted to 95% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross sections of the road prism				
E.1.1	ME 8.3.3	150mm thick G5 quality for roads and parking areas compacted to 95% MOD AASHTO density from commercial sources	m³			
E.1.2	ME 8.3.3	125mm thick G5 quality for sidewalks compacted to 95% MOD AASHTO density from commercial sources	m³	750		
	SANS 1200 ME	NKQUBELA STREETS SUBBASE				
E.2		Construct subbase compacted to 95% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross sections of the road prism				
E.2.1	ME 8.3.3	150mm thick G5 quality for roads and parking areas compacted to 95% MOD AASHTO density from commercial sources	m³	560		
E.2.2	ME 8.3.3	125mm thick G5 quality for sidewalks compacted to 95% MOD AASHTO density from commercial sources	m³	225		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADE OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
		<u>SCHEDULE F: BASECOURSE</u>				
F.1	SANS 1200 MF	PADDY STREET BASECOURSE Construct basecourse compacted to 98% MOD.AASHTO-density with material from a commercial source, as indicated on the typical cross-sections of the road prism				
F.1.1	ME 8.3.3	150mm thick G4 quality for roads and parking areas compacted to 98% MOD AASHTO density from commercial sources	m³	1550		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
SCHEDULE G: STORMWATER DRAINAGE						
G.1	SANS 1200 DB	PADDY STREET EXCAVATIONS				
	SD DB 8.3.2(a)	Trench excavations in all materials, backfilling, compacting and removal of surplus material for pipes: with a nominal diameter of 110 mm (subsoils) for the following depths:				
G.1.1		a) 0,00 - 1,00 m	m	5		
G.1.2		b) 1,00 - 1,50 m	m	25		
G.2	DB 8.3.3	EXCAVATION ANCILLARIES				
	DB 8.3.3.1	Make up deficiency in backfill material from:				
G.2.1	8.3.3.1(c)	a) trench excavations	m³	15		
G.2.2	SD DB 8.3.3.3	Compaction in road reserve	m³	15		
	SD DB 8.3.6.1	Reinstatement of road surface complete with all courses as per specification:				
G.2.3		For surfaced roads	m²			
G.3	SANS 1200 LB	BEDDING (PIPES)				
		Supply and compact bedding to 100% Mod.AASHTO-density with material:				
	8.2.2.3	from commercial sources excavations:				
G.3.1		a) Bedding	m³	4		
G.3.2		b) Blanket	m³	24		
G.4	SANS 1200 LE	PIPEWORK				
	SD LE 8.2.1	Supply, handle, lay and bed (Class C bedding) concrete pipes, type OG Interlocking Joint				
G.4.1		600 mm dia 100D	m	30		
G.5	SD LE 8.2.8	STRUCTURES				
G.5.1		a) 600mm diam outlet HW as per detail	No	4		
G.5.2		b) Remove and reinstate double kerb inlet to detail	No	15		
G.5.3		c) Remove and reinstate triple kerb inlet to detail	No	2		
G.5.4		d) Remove and reinstate special triple kerb inlet to detail	No	5		
G.5.5		e) Double kerb inlet, sidewalk slab and stonepitching to detail	No	7		
G.6		OVERLAND CHANNELS				
	SD LE 8.2.21	Construct unlined open drain, including excavations, trimming, etc. as per specification				
G.6.1		Construct trapezoidal drainage channel complete (unlined) drainage channel 300 mm (bottom width) x 1500 mm (top width)	m	480		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : UPGRADE OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY	TENDER AMOUNT
BROUGHT FORWARD					
G.1	SANS 1200 DB	NKQUBELA STREETS EXCAVATIONS			
	SD DB 8.3.2(a)	Trench excavations in all materials, backfilling, compacting and removal of surplus material for pipes: with a nominal diameter of 375 mm for the following depths:			
G.1.1		a) 0,00 - 1,00 m	m	5	
G.1.2		b) 1,00 - 1,50 m	m		
G.2	DB 8.3.3	EXCAVATION ANCILLARIES			
	DB 8.3.3.1	Make up deficiency in backfill material from:			
G.2.1	8.3.3.1(c)	a) trench excavations	m³		
G.2.2	SD DB 8.3.3.3	Compaction in road reserve	m³		
	SD DB 8.3.6.1	Reinstatement of road surface complete with all courses as per specification:			
G.2.3		For surfaced roads	m²		
G.3	SANS 1200 LB	BEDDING (PIPES)			
		Supply and compact bedding to 100% Mod.AASHTO-density with material:			
	8.2.2.3	from commercial sources excavations:			
G.3.1		a) Bedding	m³	1	
G.3.2		b) Blanket	m³	4	
G.4	SANS 1200 LE	PIPEWORK			
	SD LE 8.2.1	Supply, handle, lay and bed (Class C bedding) concrete pipes, type OG Interlocking Joint			
G.4.1		375 mm dia 100D	m	5	
G.5	SD LE 8.2.8	STRUCTURES			
G.5.1		a) 375mm dia HW as per detail	No	1	
G.5.2		b) 375mm dia Gully Grid Inlet Structure Single as per detail	No	2	
TOTAL CARRIED FORWARD TO SUMMARY					

CONTRACT 2302587 : UPGRAADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
H	SANS 1200 MK	<u>SCHEDULE H: KERBING AND CHANNELLING</u>				
	SD MK8.2.2	PADDY STREET Precast concrete kerb and channel (BK2&C1) on concrete bedding according to detail:				
H.1		a) Radius to 20 m	m	260		
H.2		b) Radius greater than 20 m and straight	m	3 000		
	SD MK8.2.2	Precast concrete kerb (BK2) on concrete bedding according to detail:				
H.3		a) Radius to 20 m	m	40		
H.4		b) Radius greater than 20 m and straight	m	50		
	SD MK8.2.2	Precast concrete mountable kerb (CK5) on concrete bedding according to detail:				
H.5		a) Radius to 20 m	m	10		
H.6		b) Radius greater than 20 m and straight	m	30		
	SD MK8.2.2	Precast concrete mountable kerb (MK10) on concrete bedding according to detail:				
H.7		a) Radius to 20 m	m	5		
H.8		b) Radius greater than 20 m and straight	m	10		
	SD MK8.2.2	Precast concrete edging (E1) on concrete bedding according to detail:				
H.7		a) Radius to 20 m	m	300		
H.8		b) Radius greater than 20 m and straight	m	3 050		
	SD MK8.2.2	Precast concrete edging (E3) on concrete bedding according to detail:				
H.9		a) Radius to 20 m	m	10		
H.10		b) Radius greater than 20 m and straight	m	30		
	SD MK8.2.2	Precast concrete channel (C1+C1) on concrete bedding according to detail:				
H.11		a) Radius to 20 m	m	10		
H.12		b) Radius greater than 20 m and straight	m	30		
	SD MK 8.2.16	Transition Kerb:				
H.13		a) BK2/C1 to BK2	No	5		
H.14		b) BK2/C1 to CK5	No			
H.15		c) BK2 to MK10	No			
H.16		d) CK5 to C1/C1	No	5		
H.17		e) MK10 to CK5	No			
H.18		Extra-over items H.1 to H.4 for dropped kerbing	m	480		
TOTAL CARRIED FORWARD						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
BROUGHT FORWARD						
H.19		Extra-over items H.1 to H.4 for 100mm wide asphalt insert to existing roadway	m	2 000		
		Supply and install TERRAFORCE, or similar approved , retaining blocks. Type L11 coarse face, area measured vertically. Complete including infill material, subsoil drain and 20Mpa concrete footing for the following heights as per details on drawing 2302587/C/114:				
H.20		a) 0,0 - 0.5m	m	200		
	SD MK8.2.2	NKQUBELA STREETS Precast concrete mountable kerb and channel (CK5) on concrete bedding according to detail:				
H.20		a) Radius to 20 m	m	10		
H.21		b) Radius greater than 20 m and straight	m	40		
	SD MK8.2.2	Precast concrete mountable kerb (MK10) on concrete bedding according to detail:				
H.22		a) Radius to 20 m	m	40		
H.23		b) Radius greater than 20 m and straight	m	355		
	SD MK8.2.2	Precast concrete edging (E1) on concrete bedding according to detail:				
H.24		a) Radius to 20 m	m	160		
H.25		b) Radius greater than 20 m and straight	m	1000		
	SD MK8.2.2	Precast concrete edging (E3) on concrete bedding according to detail:				
H.26		a) Radius to 20 m	m	5		
H.27		b) Radius greater than 20 m and straight	m	10		
	SD MK 8.2.16	Transition Kerb:				
H.28		a) BK2/C1 to CK5	No	3		
H.29		a) BK2 to MK10	No	3		
H.30		a) MK10 to CK5	No	8		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
I	SANS 1200 MJ	SCHEDULE I: SEGMENTED PAVING				
		PADDY STREET				
	8.2.2	Construction of precast concreted segmented paving, complete with 20mm sand bedding and joint filling, using CEL pavers or similar approved as following:				
		ROADS				
I.1		Supply and install 80mm interlocking pavers to Herringbone pattern, including cutting units to suite the edge requirements.	m ²	10080		
		SIDEWALKS				
I.2		Supply and install 50mm block pavers to Running Bond pattern, including cutting units to suite the edge requirements.	m ²	6710		
I.3		Supply and install 70mm block pavers to Running Bond pattern, including cutting units to suite the edge requirements.	m ²			
I.3		Extra over Items K.1.1-K.1.2 for applying weed killer, roundup or similar approved on the sand bedding at a rate to the manufacturers specification	m ²	16790		
	8.2.3	Cutting units to fit edge restraints				
I.4		a) Straight	m	3050		
I.5		b) Curved	m	300		
I.6	8.2.4	Rolling to locked up condition	m ²	16790		
		RAISED INTERSECTION AND PEDESTRIAN CROSSING				
I.7.1		Extra over Item I.1 for construction of raised pedestrian crossing to detail	No	1		
I.7.2		Extra over Item I.1 to I.6 for construction of raised intersection to detail as follows:				
I.7.2.1		Langeberg and Wesley Streets	No	1		
I.7.2.2		Pietersen and Nerina Streets	No	1		
I.7.2.3		Heide and Hahn Streets	No	1		
I.7.2.4		Rolbos	No	1		
		NKQUBELA STREETS				
	8.2.2	Construction of precast concreted segmented paving, complete with 20mm sand bedding and joint filling, using CEL pavers or similar approved as following:				
		ROADS				
I.8		Supply and install 80mm interlocking pavers to Herringbone pattern, including cutting units to suite the edge requirements.	m ²	3570		
		SIDEWALKS				
I.9		Supply and install 70mm block pavers to Running Bond pattern, including cutting units to suite the edge requirements.	m ²	1785		
I.10		Extra over Items K.1.1-K.1.2 for applying weed killer, roundup or similar approved on the sand bedding at a rate to the manufacturers specification	m ²	5355		
	8.2.3	Cutting units to fit edge restraints				
I.11		a) Straight	m	940		
I.12		b) Curved	m	250		
I.13	8.2.4	Rolling to locked up condition	m ²	5355		
		RAISED INTERSECTION AND PEDESTRIAN CROSSING				
I.14.1		Extra over Item I.1 for construction of raised pedestrian crossing to detail	No	1		
I.14.2		Extra over Item I.1 to I.6 for construction of raised intersection to detail as follows:				
I.7.2.1		a) Qhaniso / Dantis Streets	No	1		
I.7.2.2		b) May / Pieters Streets	No	1		
I.7.2.3		c) May / Nokhonya Streets	No	1		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

ITEM NO	PAYMENT	DESCRIPTION	UNIT	TENDER QTY		TENDER AMOUNT
J	SANS 1200 MM	SCHEDULE J: ANCILLARY ROADWORKS				
	SD MM 8.3.1	PADDY STREET Road signs with painted background and symbols and with signboard constructed from chromadek sheeting (2,0 mm thick)				
J.1		a) Type R1 - 610 mm dia (Stop sign)	No	3		
J.2		b) Type (W405 TW405 W407 TW407 Sharp Curve Chevron Left Sign)	No	2		
J.3		c) Type W401 & 402 (Delineator Plate Sign)	No	8		
J.4		d) Type R5 + R110 (Pedestrian Crossing Sign)	No	14		
	8.3.3	Sign supports				
J.5		a) 2,4 m	No	19		
J.6		b) 1,8 m	No	8		
	SD MM 8.4.1	Road Markings Non-reflectorized paint applied at a nominal rate of 0,42 l,m ²				
		a) White Lines				
J.7		i) 300 mm wide (RTM4)	m	60		
J.8		ii) 300mm wide (RTM3)	m	75		
J.9		iii) 100mm wide (RM1)	m	140		
J.10		iv) 100mm wide (WM3)	m	1550		
J.11		v) 100mm wide (RM11)	m	660		
		b) white characters and symbols				
J.12		i) RTM1 (Stop marking)	No.	2		
J.13		ii) 2.4m Raised Intersection and Pedestrian Crossing	No	14		
J.14		iii) GM8	No	10		
	SD MM 8.3.1	NKQUBELA STREETS Road signs with painted background and symbols and with signboard constructed from chromadek sheeting (2,0 mm thick)				
		a) Type R1 - 610 mm dia (Stop sign)	No	3		
		b) Type R2.1 (Yield to pedestrian sign)	No	2		
		c) Type R5 + R110 (Pedestrian Crossing Sign)	No	9		
	8.3.3	Sign supports				
		a) 2,4 m	No	5		
	SD MM 8.4.1	Road Markings Non-reflectorized paint applied at a nominal rate of 0,42 l,m ²				
		a) White Lines				
		i) 300 mm wide (RTM4)	m	20		
		ii) 300mm wide (RTM3)	m	20		
		iii) 100mm wide (RM1)	m	20		
		iv) 100mm wide (WM3)	m	650		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT 2302587 : UPGRADING OF ROBERTSON PRECINCT : CLUSTER 3

SUMMARY OF SCHEDULES

SUMMARY OF SCHEDULES						
	SCHEDULE	DESCRIPTION		FROM PAGE		TENDER AMOUNT
	A	PRELIMINARY AND GENERAL				
	B	SITE CLEARANCE				
	C	EARTHWORKS GENERAL				
	D	EARTHWORKS STREETS				
	E	SUBBASE				
	F	BASECOURSE				
	G	STORMWATER DRAINAGE				
	H	KERBING & CHANNELLING				
	I	SEGMENTED PAVING				
	J	ANCILLARY WORKS				
		Sub total				
		10% contingencies				
		Subtotal				
		15% VAT				
		TOTAL				

SUMMARY

SUMMARY	FROM PAGE	AMOUNT (RAND)
CLUSTER 1 – Johan de Jongh Drive & Wesley Street		
CLUSTER 2 – Walkway Church Street to Main Road		
CLUSTER 3 – Paddy Street and Nkqubela Streets		
SUB-TOTAL		
CONTINGENCIES		
Allow the sum of 10% (ten percent) of the above Sub-total for Contingencies to be spent as the Engineer may direct and to be deducted in whole or in part if not required.		
SUB-TOTAL INCLUDING CONTINGENCIES		
<u>VALUE ADDED TAX (VAT)</u>		
ADD: VAT at the Rate of 15%		
TOTAL Carried to Part C1.1 – Form of Offer & Acceptance		

DECLARATION (In respect of completeness of Tender)

To:

The Municipal Manager
Langeberg Municipality
Private Bag X2
ASHTON
6715

I/we, the undersigned, do hereby declare that these are the properly priced Bills of Quantities forming Part C2.2 of this Contract Document containing **46 pages** in consecutive order upon which my/our tender for **TENDER NO: 19/2026: UPGRADING OF THE ROBERTSON PRECINCT** .

SIGNATURE OF TENDERER/S

DATE

Part C3: Scope of Work

	<u>Pages</u>
C3.1 Description of the Works	1 – 5
C3.2 Engineering	6
C3.3 Procurement.....	7 - 8
C3.4 Construction.....	9 - 61
C3.5 Management.....	62 - 69
C3.6 Annexes.....	70-81

Status
Should any requirement of provision in the parts of the Scope of Works conflict with any requirement of any Standardised Specification, particular specification or any drawings, the order of precedence, unless otherwise specified, is:

- Drawings
- Scope of work
- SANS/ Standardised Specifications

This **Scope of Works** is set out as follows:

C 3.1: DESCRIPTION OF THE WORKS covers a general description of the works or project and the facilities available.

C 3.2: ENGINEERING covers a list of drawings and standard drawings supplied separately and/or bound with the tender document

C 3.3: CONSTRUCTION covers variations and additions to the standard specifications that are applicable to the contract, as well as Particular Specifications that is applicable.

All clauses in the Specification Data are preceded with "SD" followed by the relevant letter(s) and number of the relevant clause of the standard specifications. This will replace, amend or add to the standard specification with the same number. For a new clause the numbers follow on from the last clause number used in the relevant specification.

Any clause referred to in the standard specification will also include the relevant Specification Data.

The Particular Specifications are the Environmental and Health & Safety Specifications.

C 3.4: MANAGEMENT cover the applicable standards and the methods and procedures to be followed in managing the works to the requirements of the Engineer and the Employer.

C 3.5: ANNEXURES covers the Locality Plan and other drawings issued to Tenderers

C3.1 Description of the Works

<u>CONTENTS</u>	<u>PAGES</u>
1. EMPLOYER'S OBJECTIVES	2
2. OVERVIEW OF THE WORKS	2
3. EXTENT OF THE WORKS	3
4. CONSTRUCTION TIME PERIOD	3
5. CONTRACTOR'S CAMP SITE, POWER SUPPLY AND SERVICES	3
6. CONSTRUCTION IN CONFINED AREAS	3
7. WATER FOR CONSTRUCTION PURPOSES	4
8. FEATURES REQUIRING SPECIAL ATTENTION	4
9. ACCOMMODATION OF TRAFFIC	5
10. ENVIRONMENTAL REQUIREMENTS	5
11. LIMITED FUNDS	6

1 EMPLOYER'S OBJECTIVES

The Employer's objective for this contract is the upgrading of various road and pedestrian infrastructure in Robertson.

The description of the project contained in the Scope of Work is merely an outline of the Contract Works and shall not limit the work to be carried out by the Contractor under this Contract. Details of some of the major items are given in this section and approximate detailed quantities for each type of work to be carried out in accordance with the Contract Documents are included in the Bill of Quantities.

2 OVERVIEW OF THE WORKS

2.1 General Description

The employer of the project is Langeberg Municipality.

The work to be carried out under this contract entails the following:

- Cluster 1:
 - Upgrades to road and pedestrian infrastructure in Johan de Jongh Drive;
 - Upgrades to road and pedestrian infrastructure in Wesley Street.
- Cluster 2:
 - New walkway from Church Street to Main Road;
 - Raised Intersection on R60.
- Cluster 3:
 - Upgrades to roads and pedestrian infrastructure in Paddy Street;
 - Upgrades to roads and pedestrian infrastructure in May Street;
 - Upgrades to roads and pedestrian infrastructure in Qhanqiso Street.

Approximate quantities of each type of work are given in the Schedule of Quantities.

2.2 Work Areas

The construction site is within the boundaries of Robertson Municipal Area.

The Contractor must take note of the fact that transport equipment to be used on existing roads is limited to the allowed legal axle-loads in accordance with the Road Ordinance of the relevant Authority. The Contractor shall use temporary bypass roads where necessary. No additional payment shall be made in this regard and any additional costs shall be regarded to be included in relevant supplied rates.

The Contractor is made aware that except for payment item 8.3.2.2 of the SANS 1200 A regarding access, no other payment will be made for access to the site of works, borrow pits and dumping sites.

2.3 Occupation of the site

Access to the site of the works will be given to the Contractor on the Commencement Date of various Cluster or parts thereof during the 2026, 2027 and 2028 calendar years.

The site of the works is on municipal roads used by the public, which will remain in use by residents during the course of the work. Roads may be closed with authorization in writing by the Engineer, after consultation with Langeberg Municipality, and traffic shall be accommodated as specified.

3. EXTENT OF THE WORKS

The work that is to be carried out under the contract is as provided for in the schedule of quantities. However, if during the course of construction conditions are found to differ from those anticipated, the Engineer reserves the right to modify the scope of the work to suit the prevailing conditions and circumstances. Variations introduced in this manner will be measured and paid for at the rates tendered for appropriate items listed elsewhere in the schedule of quantities or in the absence of such rates, as extra work.

The work to be undertaken by the Contractor shall include the following:

- Cluster 1:
 - Upgrades to road and pedestrian infrastructure in Johan de Jongh Drive;
 - Upgrades to road and pedestrian infrastructure in Wesley Street.
- Cluster 2:
 - New walkway from Church Street to Main Road;
 - Raised Intersection on R60.
- Cluster 3:
 - Upgrades to roads and pedestrian infrastructure in Paddy Street;
 - Upgrades to roads and pedestrian infrastructure in May Street;
 - Upgrades to roads and pedestrian infrastructure in Qhanqiso Street.

This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

4 CONSTRUCTION TIME PERIOD

The time period specified for completion by the Engineer, as stated in the Contract Data in terms of Clause 1.1.1.14 of the Conditions of Contract, is a maximum of **10 months for Cluster 1, 3 months for Cluster 2 and 8 months for Cluster 3**, inclusive of all non-working, special non-working days and year end break as prescribed by SAFCEC or similar. The Contractor shall plan and programme his construction sequence for completion within the time period specified.

4.1 Construction work programme

The Contractor shall take note of various factors contained in these specifications, which will have a significant influence on the compilation of the construction work programme. Prominent items are those which might require a lead time for ordering the equipment or which might entail a special manufacturing period.

The specified contract period is maximum **10 months for Cluster 1, 3 months for Cluster 2 and 8 months for Cluster 3**. The Contractor shall take the above into consideration when drawing up his programme and no claims will be entertained in this regard. The contractor shall programme his works in relation with the budget and financial year constraints set out by the municipality.

5. CONTRACTOR'S CAMP SITE, POWER SUPPLY AND OTHER SERVICES

The Contractor must make his own arrangements for a camp site.

"The camp site area must be fenced off with a temporary 1.8m high 100% shade cloth fence. The cost to erect, maintain and remove and all related costs will be deemed to be included in his tendered rates".

The Contractor shall make his own arrangements concerning the provision of water, electricity and other services for the campsite and office facilities.

No direct payment will be made for the provision of electrical and other services. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

6. CONSTRUCTION IN CONFINED AREAS

It will be necessary for the Contractor to work within confined and restricted areas. The method of construction in these confined areas largely depend on the contractor's constructional plant.

Regardless, measurement and payment will be in accordance with the specified cross-sections and dimensions only, irrespective of the method used for achieving these cross-sections and dimensions. It is deemed that the rates tendered in the Pricing Schedule / Priced Bill / Schedule of Quantities include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions. **No additional payment will be made nor will any claim for payment be considered for work done in such confined areas, despite indications to the contrary in the Standard Specifications.**

7. WATER FOR CONSTRUCTION PURPOSES

The Contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and all related costs will be deemed to be included in his tendered rates.

8. FEATURES REQUIRING SPECIAL ATTENTION

8.1 Existing Services

Any work requiring the excavation of existing road pavements, sidewalks and verges will require the necessary wayleaves be obtained from the relevant service authorities (Telkom, Electrical Department / Eskom, Roads & Stormwater Department, Waterworks Department and Drainage & Sewerage Department).

Prior to commencing work, the Contractor shall confer with all Authorities and Departments concerned and obtain the necessary wayleaves for both overhead and underground services affected by the Works and shall satisfy himself that he has obtained all the relevant information required to complete the Contract. The Contractor will be liable for obtaining all the necessary wayleaves and work permits from the relevant service authorities prior to the commencement of work within the road reserve.

The Contractor shall carry out the works with the minimum interference to existing services and it shall be clearly understood that obtaining the necessary wayleaves, will be at his own cost. The cost of repairing any damage to services, due to miscalculations or negligence on the part of the Contractor or his failure to carry out the duties set out in this Clause, shall be borne by the Contractor.

8.2 Health and Safety Plan

Prior to commencing work, the Contractor shall submit a Health and Safety Plan, compiled in accordance with the Health and Safety Specifications in Part E of the Works Specifications to the Engineer for approval. The Contractor may not commence construction without the Engineer's approval of the Health and Safety Plan.

8.3 Standard of Materials, Workmanship, Testing and Performance

The attention of Tenderers is particularly drawn to the high standard of materials, workmanship, testing and performance applicable to his Contract as a whole and he shall convey this requirement to his proposed Sub-Contractors.

The Contractor will carry out control testing of materials and workmanship as required in terms of the specifications. Where necessary, the Engineer may carry out acceptance control testing. The Employer will not pay claims or grant extension of time for delays to the works resulting from the awaiting of test results. Testing as required by the Engineer will be effected as promptly as possible but it is in the Contractors own interest to submit material samples and other components of workmanship for testing in good time to assist in avoiding or minimising delays.

8.4 Weatherproof Protection for Workers

All staff required to continue working during rain shall be provided with oilskins and rubber knee boots, or other approved protective clothing and footwear.

8.5 Night Work and Work on Public Holidays

Where the Contractor requires staff to work overtime, he shall make the necessary arrangements with the Client and obtain written approval from the Client. No work will be allowed on public holidays and Sundays. The Contractor shall bear the cost of his overtime work. Normal working hours shall be between 08:00 and 17:00 on weekdays from Mondays to Fridays and between 8:00 and 14:00 on Saturdays.

8.6 Other Contractors

The Contractor's attention is drawn to the fact that there will be other contractors working on the Site of the Works. In accordance with Clause 4.8 of the General Conditions of Contract, the Contractor shall note and make allowance for reasonable access to and for the adjacent operations of these other contractors on the site of the works.

9. ACCOMMODATION OF TRAFFIC

The traffic shall be accommodated on the existing surfaced carriageway and shoulders. No bypasses or temporary deviations shall be constructed. Road closures may be arranged with authorization from the Engineer, after consultation with the Langeberg Municipality. During non-working days the Contractor will be required to shut down normal construction activities and only emergency work will be allowed. The traffic safety officer will be required to patrol during these non-working periods and ensure that all temporary traffic-control facilities are in place and functional.

10. ENVIRONMENTAL REQUIREMENTS

The Contractor shall take particular note of the environmental requirements contained in the Works Specifications.

Personnel and plant shall not enter property beyond the sportsground boundary irrespective of whether or not the boundary is fenced. The Contractor shall take every precaution to avoid damage to vegetation within that area of the sportsground which falls outside the designated work area is indicated on the drawings. Any damage caused is to be repaired at the Contractor's expense.

Storage and stockpiling of materials within the sportsground will not be permitted without the written consent of the Engineer. Excess material from excavations and waste material shall be spoiled off site at suitable locations.

11. LIMITED FUNDS

While the Employer has every intent to complete the full scope of works over a period of three (3) years, the Employer reserves the right to reduce or increase the scope of works according to the dictates of the budget, or to terminate this contract, with adjustment to the agreed rates, sums or fees and without payment of any penalty in this regard. The Service Provider shall however be entitled to pro-rata payment for all services carried out in terms of any adjustment to the Scope of Work or, in the case of termination, remuneration and/or reimbursement.

Should the total Contract Value, for various clusters, not be available for construction, the scope of work will be reduced in line with the available funding. The time related preliminary and general items will be adjusted pro-rata to the pro-rata adjusted contract duration.

C3.2 Engineering

Drawings

The drawings listed below are attached in order to give an overview of the project. Additional construction drawings will, in terms of the General Conditions of Contract, be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required.

The Works shall be carried out in accordance with the drawings listed in C5 of the tender documents and included in Volume 4: Drawings and form part of the contract documents.

The reduced drawings that form part of the tender documents shall be used for tender purposes only.

The Contractor will be supplied with 3 unreduced paper prints of each of the drawings required for construction. These copies are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.

Only figured dimensions shall be used, and drawings shall not be scaled unless otherwise instructed.

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 either co-ordinates, or stake value and offset. 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 the possession of the Contractor, which the Engineer requires to complete his record drawings shall be supplied to the Engineer's Representative before a certificate of completion will be issued.

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

C3.3 Procurement

<u>CONTENTS</u>	<u>PAGES</u>
3.3.1. TARGETED CONSTRUCTION PROCUREMENT	8
3.3.2 SUBCONTRACTING	8

3.3.1. TARGETED CONSTRUCTION PROCUREMENT

3.3.1.1 Objective

The Employer applies and promotes the principles of Targeted Construction Procurement. In terms of Employer's current procurement policy this project provides for the following objectives to be actively pursued:

- the provision of opportunities for Small, Medium and Micro- Business Enterprises (SMMEs).
- the provision of work opportunities for local labour.
- the maximising of job creation by adopting labour-intensive construction methods wherever physically feasible and economically justifiable.

3.3.1.2 Contract requirements

The labour portion of the **upgrading works to all the sidewalks and where possible on streets** are to be sub-contracted to local suitable approved sub-contractors from the Robertson Municipal Area who must be assisted to achieve CIDB CE 2 Level where possible (PC Sum provided).

3.3.1.3 Labour workforce

100% of unskilled labour to be sourced locally, meaning within the boundary of the Robertson Municipal Area and be issued with reference letters listing tasks performed on completion.

3.3.1.4 Labour-intensive construction

Where practical and economically feasible, construction work should be undertaken using labour-intensive methods. The Contractor shall employ labourers, artisans and subcontractors for the execution and completion of this work.

Some of the activities, which may be considered as being suitable to be undertaken by labour-intensive methods include the following:

- sidewalk construction;
- accommodation of traffic;
- cleaning and trimming of site

3.3.2. SUBCONTRACTING

3.3.2.1 General

The Contractor may subcontract portions of the Works included in the Contract. Clause 4.4 of the General Conditions of Contract makes provision for subcontracting.

Subcontract work provides opportunities for small or specialist businesses and can also be used to secure contract participation goal credits for HDI participation or other specific goals, where applicable. In the interests of all parties, the Contractor shall enter into a written subcontract agreement with each Subcontractor.

Where participation credits are claimed by the Contractor in respect of subcontractors, suppliers, manufacturers and/or service providers, the Contractor shall ensure that all such are registered and verified on the Western Cape Supplier Database. The Employer shall not accept any claim for participation in respect of subcontractors, etc. unless they are registered and verified.

Notwithstanding the above, contract participation goal credits may not be claimed for work undertaken in respect of provisional sums and prime cost items.

Where monetary allowances for provisional sums or prime costs items have been allowed and the monetary allowance is less than R200 000, the Contractor shall invite three quotations from suitably qualified subcontractors, etc. for the required scope of works. The selection of the Subcontractors, etc. shall be approved by the Engineer.

Where monetary allowances for provisional sums or prime cost items have been allowed and the monetary allowance is greater than R200 000, an open tender process will have to be followed in respect of a subcontractor for this work. In such cases the tender will be issued by the Engineer on behalf of the Contractor.

3.3.2.2 Selected Subcontractors

With reference to subcontractors selected by the Contractor in consultation with the Employer, Clause 4.4.4 (GCC 2015) of the General Conditions of Contract states that this shall be done in accordance with the requirements of "a procedure set out in the Scope of Work."

The procedure for Selected Sub-contractors as referred to in Subclause 4.4.4 (GCC 2015) of the General Conditions of Contract and Contract Data shall be:

All specialist merchants, tradesmen and others executing any work or supplying any goods for which provisional or prime cost sums are provided in the Bill / Schedule of Quantities and who are selected for this purpose by the Contractor as specified hereafter, shall in the execution of such work be subcontractors of the Contractor and are herein referred to as "Selected Subcontractors".

Unless another procedure is specified, Selected Subcontractors are chosen and appointed as follows. The Employer and the Contractor shall compile a list of firms or persons acceptable to both and who will be invited to submit tenders for certain work or goods to be supplied by Selected Subcontractors. Before the closing date of such tenders the Contractor shall furnish the Employer with a sealed list in which is indicated the price increase required by the Contractor regarding the handling and appointment of every tenderer as Selected Subcontractor. No price increase requested by the Contractor in such list may be higher than the percentage or amount the Contractor has tendered in the main Contract against the provisional or prime cost item concerned. The list is then opened with the tenders and on the basis thereof the Employer shall indicate which tender he wishes to accept. The Contractor shall accept the tenderer and appoint him as Selected Subcontractor.

The Contractor shall incorporate in the subcontract provisions that:

- (a) In respect of the work or the goods that are the subject of the subcontract the Selected Subcontractor undertakes to the Contractor mutatis mutandis the obligations and liabilities as are imposed upon the Contractor to the Employer in terms of the Contract, and holds the Contractor harmless from and indemnifies him against the same and in respect of all claims, demands, lawsuits, damages, costs, charges and expenses whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities, and,
- (b) The Selected Subcontractor holds the Contractor harmless and indemnifies him against:
 - (i) Shortcomings in the subcontract works if and where the works were designed by the Selected Subcontractor;
 - (ii) defects in the goods if and where the goods were manufactured and/or supplied by the Selected Subcontractor;
 - (iii) any negligence by the Selected Subcontractor, his agents, workmen and servants;
 - (iv) any misuse by the Selected Subcontractor of any Constructional Plant, Temporary Works or materials provided by the Contractor for the purposes of the Contract;
 - (v) any claims as aforesaid.

C3.4 Construction – Works specification

<u>CONTENTS</u>	<u>PAGE(S)</u>
PART A: STANDARD SPECIFICATIONS	11
PART B: PROJECT SPECIFICATIONS REFERRING TO THE STANDARD SPECIFICATIONS	12 - 71
PART C: ENVIRONMENTAL SPECIFICATIONS	72 - 114
PART D: HEALTH AND SAFETY REQUIREMENTS	115 - 139

PART A: STANDARD SPECIFICATIONS

The **Standard Specifications for Civil Engineering Construction, SANS 1200**, which the tenderer shall obtain/purchase from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

The following relevant standardised specifications, as listed below, shall form the Standard Specifications and apply to this contract:

SECTION	DESCRIPTION
A	GENERAL
AB	ENGINEERS OFFICE
C	SITE CLEARANCE
D	EARTHWORKS
DB	EARTHWORKS (PIPE TRENCHES)
DM	EARTHWORKS STREETS
L	MEDIUM PRESSURE PIPELINES
LB	BEDDING (PIPES)
LC	CABLE DUCTS
LE	STORMWATER DRAINAGE
M	ROADWORKS GENERAL
ME	SUBBASE
MF	BASECOURSE
MH	ASPHALT BASE AND SURFACING
MJ	SEGMENTED PAVING
MK	KERBS AND CHANNELLING
MM	ANCILLARY ROADWORKS

PART B: PROJECT PARTICULAR SPECIFICATIONS

Amendments to the standard specifications are included in this Part B: Project Specifications.

- (i) The project specifications form an integral part of the contract documents and supplement the standard specifications.
- (ii) In the event of any discrepancy between the project specifications and a part of the standard specifications, the schedule of quantities, or the drawings, the project specifications shall take precedence.
- (iii) The standard specifications, which form part of this contract, have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

In certain clauses the standard specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains some additional specifications required for this particular contract.

The number of each clause and each payment item in this part of the project specifications consists of the prefix SD followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or a payment item which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by SD followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.

Amendments to the standard specifications are bound in the contract documents. The following relevant section off the Standard Specifications, as listed below, shall apply to this contract:

The following variations and additions to the SANS 1200 Standardized Specifications referred to will be valid for this contract. The prefix "SD A" indicates an amendment to SANS 1200 A, "SD C" to SANS 1200 C, etc. The numbers following these prefixes are the relevant clause numbers in SANS 1200.

A: GENERAL

SD A 1: SCOPE

Replace subclause 1.1 with the following:

"This specification covers requirements, principles and responsibilities of a general nature which are normally applicable to all civil engineering contracts as well as the requirements for the contractor's establishment on site."

SD A 2: INTERPRETATIONS

SD A 2.2: Applicable edition of standards

Add at the beginning of Subclause 2.2:

"Unless a specific edition is specified (see the List of Applicable Specifications)"

SD A 2.3: Definitions

General

Add the following definitions:

"General conditions: The general conditions of contract specified for use with this contract and the special conditions of contract as applicable.

Specified: As specified in the standardized specifications, the drawings or the Specification Data. Specifications shall have the corresponding meaning."

Measurement and payment

Replace the definitions for fixed charge, time-related charge and value-related charge with the following:

"Fixed charge: A charge that is not subject to adjustment on account of variation in the value of the contract amount or the contract time of completion.

Time-related charge: A charge, the amount of which is varied in accordance with the time for completion of the work as adjusted in accordance with the provisions of the contract.

Value-related charge: A charge, the amount of which is varied pro rata the final value of the measured work executed and valued in accordance with the provisions of the contract."

The terms "ESCOM", "ESC" and "Electricity Supply Commission" shall mean "Eskom".

The terms "GPO", "P&T", "Department of Posts and Telecommunications" and "Telkom" shall mean "Telkom SA Limited".

The terms "South African Railways", "SAR", "South African Transport Services", "SATS" shall mean "Transnet Limited".

Except for references to the Bureau itself, or to the (official) SABS mark, the term "SABS" shall mean "SANS".

SD A 2.4: Abbreviations

Abbreviations relating to standard documents

Add the following abbreviations:

"CKS: SANS Co-ordinating Specification."

"MAMDD: Modified AASHTO maximum dry density".

A3: MATERIALS

SD A 3: Quality

Substitute the second sentence of the first paragraph of A3.1 with the following:

"Where a material to be used in this Contract is specified to comply with the requirements of an SANS Standard Specification, and such material is available with the official SANS mark, the material used shall bear the official mark."

Substitute the second paragraph with the following:

"Samples on which control testing is required by the Engineer, shall be delivered free of charge to an SANAS approved commercial laboratory. The Contractor is responsible for the cost of all testing to ascertain that the materials do comply with the relevant minimum requirements and all such costs shall be deemed to be included in the tendered rates. The cost of control test done by the Engineer and of which the results do not comply with the minimum requirements shall be for the Contractor's account.

The Contractor shall inform the Engineer of any control testing to be done at least 48 hours before such test are required and must allow in his programme for the time necessary for the tests and the processing of the results thereof."

Add the following sub-clause to Clause A3:

SD A 3.3: Ordering of materials

The quantities set out in the Bill of Quantities have been determined from calculations based on data available at the time and should therefore be considered to be only approximate quantities. The contractor shall, therefore, verify the quantities before ordering materials of any kind. No liability or responsibility whatsoever shall be attached to the employer for materials ordered by the contractor except if they have been ordered in accordance with written confirmation issued by the Engineer.

The Contractor shall satisfy himself of the continuous availability of material. No extension of time or additional compensation will be granted if material cannot be obtained locally or has to be sourced elsewhere."

A 4: PLANT

SD A 4.2: Contractor's Office, Stores and Services

Add the following paragraph before the first paragraph:

"The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. The camp shall always be kept in a neat and tidy condition.

Add the following the second paragraph:

"One toilet per 10 workmen shall be provided and must be screened from public view and their use shall be enforced. The suitable sanitary services shall be of the bucket or chemical type and shall be readily accessible to workers at all areas of the site. The Contractor shall make all the necessary arrangements with the relevant local authority for the disposal of the contents of the toilets on a regular basis."

The contractor shall make arrangements if necessary for the removal of any soil.

Add the following to A 4.2:

"The Contractor's site agent or representative must be contactable at all times by phone. Should use be made of radio and or cellular-phones, these must be operational at all times with sufficient back-up batteries or recharging facilities.

There is no housing facilities for the Contractor's work force, and arrangements must be made by the Contractor to accomplish that as well as transport. The Contractor is solely responsible for their housing, or the arranging thereof, and no payment or extension of time will be allowed because of any delay and/or work damage that may arise. No personnel will be allowed to reside on the site. Only night-watchmen may be on the site after hours.

SD A 4.3: Medical facilities and safety equipment

The suitable first aid services required in terms of Subclause 4.2 of SANS 1200 A shall include, inter alia, a First Aid cabinet fully equipped and maintained with at least the minimum contents as listed in the Annexure (Regulation 3) to

the General Safety Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), to deal with accidents and ailments which are likely to occur during the construction period.

The Contractor shall provide personal safety equipment and facilities as required by Regulation 2 of the General Safety Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993)."

On completion of the Works the Contractor shall scarify all disturbed areas where offices, stores, etc., were located and all temporary roads and tracks, and he shall place a 100 mm thick layer of approved topsoil over all such areas. These areas shall then be seeded with an approved indigenous grass or other approved seed, watered and fertilized in an approved manner and in such quantity as to promote rapid growth. The cost for placing the 100mm layer of topsoil shall be deemed to be included in the rates tendered for the site facilities.

A 5: CONSTRUCTION

A 5.1: Survey

SD A 5.1.1: Setting out of the Works

Add the following to A 5.1.1:

Benchmarks as well as reference pegs have been placed on the Site and these will be used to set out the Works. Setting out of the works is the sole responsibility of the Contractor and shall be done from survey pegs along the road reserve boundaries and from benchmarks as indicated on the drawings. The positions and values of these pegs are given on the drawings.

The Contractor shall within two (2) weeks after the land surveyor has set out pegs, check levels over all reference pegs and benchmarks and line pegs. This must be done before the Contractor intends constructing any portion of the Works influenced by such pegs or benchmarks. The Engineer shall be informed in writing of any discrepancy discovered in the positions or levels immediately on discovery but in any event at least 7 days before such construction is due to start. The Contractor shall advise the Engineer of any conflict between the position of any part of the Works and an existing feature. Any costs or subsequent costs arising from discrepancies, which have not been reported to the Engineer within the aforementioned period, shall be the sole responsibility of the Contractor. If no written statement is received from the Contractor it will be held that the Contractor has satisfied himself that the positions and levels of the reference pegs and benchmarks are correct.

"The Contractor shall be responsible for the true and proper setting out of the Works and for the correctness of the position, levels, dimensions and alignment of all parts of the Works and for the provisions of all necessary instruments, appliances and labour in connection therewith.

The Contractor shall carefully protect and preserve all benchmarks, sight-rails, pegs and other things used in setting out the Works.

The checking of any setting-out or of any line or level by the Engineer shall not relieve the Contractor of his responsibility for the correctness thereof.

If at any time during the progress of the Works, any error shall appear or arise in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required to do so by the Engineer, shall at his own expense rectify such error to the satisfaction of the Engineer, but if such error is based on incorrect data supplied in writing by the Engineer or if there is any delay in providing the particulars required, the Contractor shall, in respect of that delay and the Cost of such rectification, be entitled to make a claim in accordance with Clause 10 of General Condition of Contract (First Edition 2004)."

SD A 5.1.2: Preservation and replacement of beacons and pegs subject to the land survey act

Add the following to A 5.1.2:

"Immediately upon taking over the site the Contractor shall identify and mark all relevant cadastral boundary pegs. After the completion of mass earthworks, the Contractor shall, under the direction of the Engineer, search for these pegs and compile a list of such pegs that are apparently in their correct positions. The Contractor shall certify this list for future reference.

In the case where cadastral boundary pegs have already been placed, these pegs will be pointed out and handed over to the Contractor and he shall take all precautions necessary to ensure that such pegs and the pegs referred to in SD A 5.1.1 are not disturbed or destroyed. Any costs in connection with the replacement of pegs for which the Contractor is responsible in terms of Sub-clause 5.1.2 will be recoverable from the Contractor by deduction from the monthly certificate of payment.

A Land Surveyor shall verify all cadastral boundary pegs after the completion of all operations. All disturbed pegs shall be replaced at the Contractors expense."

SD A 5.1.3: Dilapidation report:

Add the following below A 5.1.3.

Before any construction activity can commence, the Contractor must draft and submit a dilapidation report to the Engineer. The report must contain a photo record of all infrastructure on or along the site of works. The report must indicate the condition of all services, road marks, road signs, fences and other infrastructure in detail. Where needed descriptions must be added especially of existing damage to infrastructure and/or facilities. A locality plan showing the position of all photo's must be included.

SD A 5.2: Watching, Barricading, Electric Lighting and Traffic Crossing

Add the following to A 5.2:

"The crossing of existing entrances to sites and streets must be done so that free access is ensured at all times.

The crossing of roads with services must be done in half-widths to ensure vehicular access at all times. Traffic control shall be done with Stop/Go sign control with the relevant road signs during daytime. The Contractor must use hazard lights to warn traffic at night. All excavations must be marked with reflective delineators, reflecting tape and warning signs to satisfaction of the Engineer.

Road traffic signs shall comply with the requirements of the "South African Road Traffic Signs Manual" and shall be approved by the Engineer before construction commences."

"The Contractor shall, in connection with the Works, provide and maintain all signs signboards, lights, barriers, barricades, fencing and watching when and where

- a) specified in or reasonably to be inferred from the Contract, or
- b) required by any competent statutory or other authority, or
- c) required by the Engineer for the protection of the Works or for the safety or convenience of the public or others;

provided that, if the Engineer shall instruct the Contractor to provide any sign, signboard, light, barrier, barricade, fencing or watching not included in paragraphs (a), (b) or (c), such requirement shall constitute a variation by the Engineer in terms of Clause 37 of the General Conditions of Contract (First Edition 2004)."

SD A 5.3: Protection of structures

Add the following to A 5.2:

"Before commencing work in an area, the Contractor shall make sketches as directed by, and to the satisfaction of the Engineer, and, if so directed, take photos of the fences, walls and structures within the working width, in order that the standard after completion of the Works can be compared with the original standard, and shall submit the sketches and photos to the Engineer.

If the Engineer issues a written instruction to remove existing fences, walls or other structures or parts thereof, the Contractor shall dismantle and recover the various components and store them in a security area. As soon as possible after completion of the work in the area, the Contractor shall, if so directed, re-erect the fences, walls or other structures to a standard at least equal to the original, using the recovered material as far as possible and, if necessary, new material of a type and quality equivalent to the original."

SD A 5.4: Protection of the overhead and underground services

Add the following to A 5.4:

"The Contractor shall as soon as possible after handing over of the site, commence with the detection of existing services, continuously without interruptions and finalize it at least 7 days before excavation starts at that particular section.

Provision must be made for the protection and maintenance of existing services for the duration of the contract. No payment will be made in respect of this and all costs must be included in the tendered rates. All such services, the positions of which have been located at the critical points, shall be designated as "known" services and their positions shall be indicated on a separate set of drawings, a copy of which shall be furnished to the Engineer.

While he is in occupation of the site, the Contractor shall be liable for all damage caused by him to known services as well as for consequential damage arising there from, whether caused directly by his operations or by lack of proper protection."

Various services are known to exist on the site. Their approximate positions are shown on the drawings but, although they are based on the best information available, their accuracy cannot be guaranteed. It is likely that other services that are not shown on the drawings exist along the route of the pipeline.

All services, in particular cables, shall be treated as live until proven otherwise.

Before the commencement of any excavation the Contractor shall confirm the name and telephone number of the relevant officials directly concerned with the known or suspected services, shall acquaint himself with the position of the control points of the services and shall have readily available the equipment necessary to shut-off and isolate any such service. The Contractor shall liaise with the relevant authorities or controlling bodies for the necessary temporary closure of any services during construction.

Before any work that involves services to any property is carried out, the Contractor shall serve notice on the resident, occupier and/or owner of every property, at least 7 working days in advance of any temporary disconnection, advising the nature, time and duration.

In addition to the requirements of Subclause 5.4 the Contractor shall deal with the crossing of known existing services by the pipelines by:

Notifying to the Engineer's Representative and the relevant authority 48 hours prior to executing the work.

Serving notice on the resident, occupier and/or owner of every property affected at least 36 hours in advance of any temporary disconnection, advising the nature, time and duration.

Excavating by hand, under the supervision of the Engineer's Representative and/or the authority involved, on the line of the trench up to 2 m, or such for the distance as may be necessary, in both directions from the indicated position to locate the exact position of the services.

Work done by service authorities:

The Contractor shall give assistance to service authorities with the location, protection, alteration and/or removal of services controlled by that authority.

Electricity cables:

The Contractors shall at all times accept that all underground and overhead cables are live and that Cape Town Municipality nor Eskom nor Telkom, in their capacity as either the Employer or the owner of the service shall not be held liable for injury or death of any person due to the live electricity cables exposed under the Contract.

SD A 5.6: Pollution

The Contractor's attention is drawn specifically to dust disturbance, due to the fact that the works takes place near an existing residential area (See SD D 5.1.4.1).

SD A 5.8 Ground and access to works

Add to Subclause 5.8:

"The Contractor shall not use the Site or land connected with the Works or cut down trees or vegetation, for any purpose whatsoever other than for the proper carrying out of the Works and shall locate any facilities that may be required for the Contract on the Site in such areas as the Engineer shall stipulate."

The Contractor shall not operate outside the "working width" or construction area as defined on the drawings, and he will be held wholly responsible for any damage or nuisance caused by himself, his plant, vehicles or staff throughout the period of the Contract. Also refer to the Environmental Management Plan in Appendix A of Part C.3.3.

The Contractor shall:

a) During construction of the Works:

improve and maintain to a standard that will ensure the safe execution of the Works, any existing access roads, or roads built under this contract and required by him for the works,

construct and maintain additional roads as necessary for his purposes to and along the working width of the channel route, to a standard required for the efficient construction of the Works,

keep all roads and access tracks used by him watered to minimise dust. The frequency of the watering shall be at least daily when roads and tracks are used by the Contractor, unless it is sufficiently damp after rain.

b) Immediately on completion of each section of the Works:

reinstate all private roads used by him, other than those under (ii) below, to at least their original condition,

scarify all roads constructed by him for construction purposes and which are not required by the property owner or the Employer.

Add the following new items

SD A 5.9: Workmen's Compensation Act

Add the following after A 5.8:

Compensation for Occupational Injuries and Disease Act (COID)

All labour employed on the site shall be covered by the COID Act. The Contractor shall pay in full, including the payment of the necessary levies, such amounts as are due in terms of the Act. The manner in which Compensation will be handled shall be resolved by the Contractor at the commencement of the Contract.

SD A 5.10: Drawings and details

Tender drawings shall not be used for construction purposes. Construction drawings and additional detailed information will be made available to the Contractor as and when required by him. The Contractor shall indicate on his construction program critical items/information required from the Engineer.

The originals of all Drawings and Specifications prepared by or on behalf of the Engineer shall remain in his custody and references herein to delivery to the Contractor of Drawings or specifications shall relate to true copies thereof.

The Contractor shall receive one set of Construction Drawings, thereafter further copies and revisions will be issued in digital PDF format.

One copy of all documents constituting the Contract shall be kept on the Site and be available for perusal by the Engineer or any person authorised by him.

The Contractor shall, in accordance with the Engineer's instructions, maintain a register on the Site of all Drawings and revisions thereof in the chronological order in which they are delivered to him.

SD A 5.11: Connections to existing live water services

All connections to any existing live systems will be undertaken by the relevant authority. This work may have to be done at night in order to minimise inconvenience to users. The Contractor shall supply all materials required to undertake the connections to existing services and provide any other assistance that may be required.

A7: TESTING

SD A 7.4: Statistical analysis of control tests

Replace A 7.4 with the following:

"Test results will not be analysed by statistical methods, and all results must comply with the minimum requirements of the materials concerned."

A 8: MEASUREMENT AND PAYMENT

SD A 8.1.1: Measurement

In the second line of Subclause 8.1.1, after the words "standardized specification or in" add: "the measurement and payment clause of the standard specification, particular specification or".

Add the following sub clause to A 8.1.1:

Free haul and Overhaul

Notwithstanding any clauses in any of the Standardized Specifications or Standard Specification Section dealing with the definition, no measurement and/or payment for overhaul will be made. All haulage will be considered to be free haul and the cost thereof will be deemed to be covered by other rates in the Bill of Quantities.

SD A 8.2: Payment

SD A 8.2.2: Adjusted payment for time-related items

The payment to the Contractor for time-related items shall be adjusted in accordance with the following formula in the event of the contract being extended:

$$\begin{array}{ccc} \text{Sum of Tendered amounts} & \times & \text{Extended Contract Period As Authorised By Variation Order} \\ \text{for time-related items} & & \text{Tender contract period} \end{array}$$

The abovementioned adjustment of the payment for time-related items shall be made in the Completion Payment Certificate and shall be the only payment for additional time-related costs.

Notwithstanding the stipulation of Sub-clause 8.2.2, an approved extension of time will only entitle the Contractor to payment in terms of the General Conditions of Contract (First Edition 2004).

SD A 8.3.3.2: Dealing with water

The cost of supplying and operating the equipment for dewatering of excavations and controlling of stormwater will be held to be included in the tendered sums for Items A1.10 and A2.11 and no separate payment will be made for this work.

The sums shall cover all costs with regard to the preventive measures that must be taken with regard to water and the repair of damaged portions of the Works, as well as all costs for supplying and operating the equipment to keep excavations dry and to control stormwater.

SD A 8.3.3: Access

Add the following to A 8.3.2.3:

In addition to the above, the tendered rates for A 8.3.2.2 (i) must also include all costs including materials for the building, gravelling and maintenance of access roads to the works, borrow pits and spoil sites, as well as the breaking up and, the removing or clearing and tidying up of such roads on completion of the works, in addition to keeping all spoil routes clean throughout the contract."

SD A 8.5(a): Sums Stated Provisionally by Engineer for work done by Contractor or Selected Sub-Contractor **Unit: Prov Sum**

Add the following to A 8.5(b)(i):

"Payment will be in accordance with Clause 45.1.2 of the General Conditions of Contract (2004), whichever is relevant."

SD A 8.5(b): Percentage Allowed for Supervision, Management and Co-Operation with Selected Sub-Contractor **Unit: %**

Add the following to A8.5(b)(ii):

"The tender percentage includes full compensation for supervision and control over the nominated sub-Contractor, delays, profits, etc.

The percentage will be calculated on the final amount paid under SD A 8.5."

SD A 8.6: Prime cost items **Unit: PC. Sum**

Amend the penultimate sentence of Subclause 8.6 to read:

"The percentage rate for (b) shall cover the Contractor's overheads, charges for taking delivery and profit on the supply of materials or goods covered by the sums stated in (a) above. Payment will be made on the basis of the sums actually paid for such materials or goods, exclusive of VAT."

SD A 8.7: Day work

Add the following:

"Day work will be paid according to the percentage allowance method for items not included in a Schedule of Day work rates. In this case, for calculating the total remuneration the General Conditions of Contract for the Construction of Civil Engineering Work (First Edition 2004) shall apply, with the amendments as in the appropriate special conditions of contract, which are bound into this document. A day work schedule will be provided for filling in the necessary information. A working day will consist of 9.25 hours per day only."

Provisional items for Daywork are scheduled as follows:

- a) Labour at hourly rates for skilled, semi-skilled and unskilled labourers.
- b) Material as a Provisional Sum with a percentage allowance on the net cost.
- c) The Contractor's own plant as a Provisional Sum.

Tendered unit rates or unit rates that are agreed in terms of the General Conditions of Contract (First Edition 2004) for the Contractor's own plant used for Daywork shall cover the full cost of the use of such plant and shall therefore, in addition to the items listed in Sub-clause 8.7, cover the cost of plant operators, consumable stores, fuel and maintenance.

- d) Hired plant as a Provisional Sum with a percentage allowance on the net cost.

The Contractor will be paid the actual net cost of plant hired by him for Daywork and in addition will be paid a percentage allowance on the net cost of such hire, which allowance will cover the Contractor's own overhead costs and profit.

Add the following sub-clause to A 8.7:

SD A 8.7.1: Standing time costs

Equipment	Unit: working day
Labour	Unit: working day
Other resources (to be specified by Contractor)	Unit: working day

The tendered sum for each item shall include full compensation for all standing time costs of the specified resource of whatever nature and approved by the Engineer, which are not recoverable by way of the provision made in SD A 8.2.5 for the adjusted payment of time-related items.

For purpose of calculating the total standing time cost, a working week shall be held to consist of five working days and a working day of 9,25 hours.

Payment for the partial standing of any of the scheduled resources for a day or part thereof, or the standing of a complete resource for part of a day, will be made pro-rata in proportion to an appropriate factor assessed by the Engineer.

The amounts by which the standing time costs are adjusted shall be subject to the contract price adjustment formula as defined in the conditions of contract.

The Contractor shall take note that this payment item shall only apply to delays, which in the opinion of the Engineer, are incurred as a result of riot, commotion, politically motivated sabotage and acts of terrorism or disorder outside the Contractor's control. This item shall also apply to standing time incurred as a result of labour boycotts, except that only sub-items (a) and (c), as applicable, will be paid where the Contractor did not pay his labour for the time of boycott. Costs for delays incurred for all other circumstances shall be treated as provided for in the conditions of contract.

The provision of this clause shall in no way prejudice the right of either the Employer or the Contractor to determine the contract in terms of the provisions of Clause 54 of the General Conditions of Contract (First Edition 2004).

The Contractor shall take note that no payment will be considered for additional cost or time lost for any daily removal of plant and equipment from the site, any additional costs incurred in protecting his plant and site establishment, or loss incurred in protecting his equipment and site establishment, or loss incurred in respect of damage to construction plant, equipment and materials supplied and the works.

In the event that Clause 43.1 of the General Conditions of Contract (First Edition 2004) becomes applicable, the time on which such penalties are calculated shall be reduced by the total standing time approved by the Engineer.

SD A 8.8.1: Dealing with access (Subclause 8.8.1)

The Contractor will be held to have satisfied himself with regard to the accessibility of the sites and the standard of access available via the existing main roads and minor roads. The tendered sums shall cover the cost of the maintenance of existing access.

The cost of maintenance of all existing access roads shall be included in the amounts allowed for Items A.1.11 and A.2.12.

SD A 8.8.2: Accommodation of traffic Unit: Sum

Add the following to A 8.8.2:

“Separate items are measured for traffic accommodation for the various activities for which it will be required. These are as listed later in this clause.

For all of these items the tendered rate covers all costs in respect of the supplying, erection, moving, re-erection and maintenance of all temporary barricades, road signs, lights and flagmen that are required for the protection and safe guarding of the works (all as per the S.A. Road Traffic Signs manual Vol. 2, Chapter 13), for making the necessary traffic arrangements and arrangements with regards to the regulations in respect of moving and/or the re-erection of existing road signs, as well as other costs that may arise during construction in respect of the traffic. No old style signs shall be permitted.”

SD A 8.8.5: Cost of survey –beacons; benchmarks; boundary pegs Unit: Sum

Replace A 8.8.5 with the following:

“The amount covers all costs in respect of labour, materials and equipment needed for the finding, noting and compilation of a list and protecting of pegs, all of which are described in Clause 5.1.2 of SANS 1200 A.”

SD A 8.8.6: Dilapidation Report Unit: Sum

The amount covers all costs in respect of labour, materials and equipment needed for the finding, noting and compilation of photo record of all services and /or infrastructure on or near the construction site of works.

SD A 8.9: Implementation and Adherence to the Occupational Safety and Health Act Unit: Sum

The tendered sum for each item shall include full compensation to cover all requirements as specified in the Health and Safety Specifications – Appendix B of PART C3.3 CONSTRUCTION – PARTICULAR SPECIFICATIONS.

SD A 8.10: Environmental Control Unit: Sum

The tendered sum for each item shall include full compensation to cover all requirements as specified in the Environmental Management Plan & Specifications – Appendix A of PART C3.3 CONSTRUCTION – PARTICULAR SPECIFICATIONS.

SD A 8.11: Freehaul and overhaul

Notwithstanding any clauses in any Standardized Specification or Standard Specification Section dealing with the definition, measurement and/or payment for transport, freehaul and/or overhaul, no measurement nor payment for overhaul will be made. All haulage will be considered to be freehaul and the cost thereof will be deemed to be covered by the rates for the provision or disposal of the applicable material.

SD A 8.12: Survey

SD A 8.12.1: Setting out

The cost of setting out, including the cost of establishing temporary bench marks and pegs in terms of SD A 5.1.1, will be held to be covered by the rates tendered for the fixed charge and time-related items in Section A of the Bill of Quantities.

SD A 8.12.2: Survey beacons and boundary pegs

Any costs in connection with the replacement of beacons or pegs for which the Contractor is responsible in terms of Subclause 5.1.2 will be recoverable from the Contractor by deduction from the monthly certificate of payment.

SD A 8.13: Dealing with authorities and others

The rates for dealing with authorities and others shall cover the cost of liaison with the relevant Authority and others to their requirements and will be measured and paid as a lump sum for each Authority and others.

SD A 8.14: Removal of site establishment

The tendered rate for the removal of the Site establishment and the Engineer's site offices shall, in addition to Subclause 8.3.4, cover the cost of the work specified in SD A 4.2 and the cost of complying with Clause 19.1 of the General Conditions of Contract (First Edition 2004).

SD A 8.15: Fencing of Contractor's site

The fencing of the Contractor's site will be held to have been covered by the tendered rates for the establishment and removal of site facilities.

SD A 8.16: Protection and/or moving of structures and fences

The structures to be protected or moved will be measured by the sum for each structure scheduled. The tendered sum shall cover the cost of either protecting or moving and replacing the structure or for the additional cost of working in close proximity to such structure as the case may be.

Structures not scheduled will be held to have been covered by the tendered rates for other scheduled items.

SD A 8.17: Alterations to existing services

Permanent alterations made to existing services by the Contractor will be measured and paid under the relevant scheduled items. The length of service that is re-laid will be measured in its final position.

AB: ENGINEERS OFFICE

AB 3: MATERIAL

SD AB 3.1: Name boards

Substitute "South African Institution of Civil Engineers" in the first paragraph of AB 3.1 with "South African Association of Consulting Engineers".

A name board must be erected on site, situated as specified by the Engineer. The board will be as specified on the standard detail drawing no. ST/G/1.

One nameboard, manufactured as specified in Subclause 3.1 and as shown on the drawings, shall be provided, and shall be erected, plumb and level, in position as directed by the Engineer.

SD AB 3.3: Protective clothing

The Contractor shall provide and replace when necessary one set of rubber wellington boots (of sizes as required), reflective safety jacket and hard hat to the Engineer.

SD AB 4.2: Medical facilities and safety equipment

The Contractor shall make the first aid services and such personal safety equipment and facilities as are required in terms of SD A4.3, available to the Engineer and his site staff.

AB 5: CONSTRUCTION

SD AB 5.1: Name boards

Add the following to AB 5.1:

The name board shall be erected within a month of the commencement date of the contract and shall be placed at the position indicated by the Engineer. Any damage to these board shall be repaired within fourteen days of a written instruction issued by the Engineer. No payment shall be made in terms of the contract prior to the erection of the name boards.

Site instruction book

Throughout the construction period the Contractor shall supply an A4 carbon triplicate book as a site instruction book.

This book shall be kept on Site and shall be accessible to both the Contractor and the Engineer at all times. It shall be used:

- a) by the Contractor for providing the Engineer with any information regarding the construction of the Works which may be requested, and giving notification in writing of inspections, drawings, etc, required by the Contractor, and
- b) by the Engineer for the purpose of writing day-to-day instructions and confirming any verbal information or instructions given to the Contractor.

One copy of each site note issued shall remain in the book.

SD AB 5.2: Key personnel

The Contractor shall inform the Engineer of the person whom he has charged with the duties with respect to the Site in terms of the Occupational Health and Safety Act and the person(s) who are in possession of a valid certificate of competency in first aid. The Contractor shall give copies of the minutes of the site safety meetings to the Engineer.

SD AB 5.5: Survey Assistants

Replace paragraph 5.5 with :

"one suitable, trained and experienced workman to be used as a survey assistant shall be made available to the Engineer during working hours as and when required. As far as practical the same assistant, shall be allocated to the Engineer for the full duration of construction."

SD AB 5.6: Survey Equipment

The Contractor shall provide the following tested and approved survey equipment on site for the duration of the contract and for the use of the Engineer whenever needed:

- a) 1 x engineer's automatic level with tripod,
- b) 1 x level staff with staff bubble,
- c) 2 x ranging rods,
- d) 1 x builder's spirit level of length 900 mm,
- e) 1 x steel tape of length 30 m,
- f) 1 x pocket tape of length 3 m,
- g) 1 x steel level transfer plate, and
- h) all steel and wood pegs, concrete, hammers, picks, etc., that the Engineer may require.

The above-mentioned equipment may by arrangement be shared between the Contractor and the Engineer's representative.

The Contractor shall provide proof, at the start of the contract, that an acceptable institution has recently serviced the tachometer and level.

The Contractor shall keep the equipment continuously insured against any loss, damage or breakage, and he shall indemnify the Engineer and the Employer against any claims in this regard.

The Contractor shall maintain the equipment in good working order and keep it clean throughout the contract period.

SD AB 5.7: Medical facilities and safety equipment

The Contractor shall make the first aid services and such personal safety equipment and facilities as are required in terms of SD A 4.3 available to the Engineer and his site staff.

AB 8: PAYMENT

SD AB 8.2.2: Telephone, Fax machine, Photocopy machine, Survey Assistants, Equipment, etc.

No payment will be made in respect of the above-mentioned, and all the costs concerned will be deemed covered by the unit prices for the Contractors' facilities.

SD AO OCCUPATIONAL HEALTH AND SAFETY

The Occupational Health and Safety Specification Document is attached as Appendix B in Part C.3.3.

C: SITE CLEARANCE

SD C 3: MATERIAL

SD C 3.1: Disposal of material

Substitute the first sentence of C 3.1 with the following:

"Material obtained from clearing and grubbing, demolition of concrete structures and brickwork, dismantling of pipes and removal of any items shall be disposed of off-site at a spoil site to be identified and procured by the Contractor. Materials qualifying for disposal on site will be spoiled where indicated by the Engineer. All transport costs shall be included in the rates tendered for site clearance."

SD C 5: CONSTRUCTION

SD C 5.1: Areas to be cleared and grubbed

Substitute the first sentence of C 5.1 with the following:

Only areas as directed by the Engineer shall be cleared and grubbed where necessary. The Contractor may proceed with clearing and grubbing after handing over of the site only in areas as approved by the Engineer.

Excavation for structures and pipe trenches should generally allow for a sufficiently wide strip equal to the trench width or structural area plus the estimated allowance for side slopes plus the width of stockpiled backfill and an area for placing material alongside the excavation shall be cleared of vegetation.

The vegetation cleared shall be disposed of off-site to an approved spoil site approved by the relevant authority, or used as ordered by the Engineer.

Measurement and payment for clearing and grubbing shall only occur for areas as required in writing by the Engineer.

Substitute the last paragraph with the following:

The Contractor shall program his work in such a way that re-clearing will not be necessary. The cost of re-clearing shall be borne by the Contractor.

SD C 5.2.3.2: Individual trees

Add the following to C 5.2.3.2:

Trees outside channel and pipeline routes must be left standing and undamaged, except where otherwise ordered in writing by the Engineer.

SD C 5.3: Clearing

Add the following to C 5.2:

Damages that occur to the removed fence shall be at the Contractors expense and no additional payment shall be made in this regard.

SD C 5.6: Conservation of Topsoil

Add the following sentence to C 5.6:

All topsoil removed to a nominal depth of 150 mm shall be preserved for re-use and erosion thereof shall be prevented. Measurement and payment shall be in accordance to C 8.2.10.

Until required for spreading, the stockpiles of topsoil shall be stabilized by watering or other approved means.

SD C 5.9: Topsoiling

Upon completion of construction, a 150mm thick topsoil layer from the stockpile shall be placed and watered until germination of natural seeds in the soil is achieved. Measurement and payment shall be in accordance to SD C 8.2.12.

C 8: MEASUREMENT AND PAYMENT

C 8.2: SCHEDULED ITEMS

Add the following payment items:

SD C 8.2.1: Clear and Grub in: Unit: m² or m

The clearing operation will be decided into the following sections as listed below:

Road reserves
Pipe servitudes (6m wide)
Erven
Servitudes for stormwater channels (4m wide)
Detention pond areas

SD C 8.2.11: Sawing or cutting asphalt or cemented pavement layers:

- a) Cutting asphalt 40mm thick Unit: m
- b) Cutting Concrete 100mm thick Unit: m

"The unit of measurement for subitem (a) shall be the metre of cut measured in accordance with the authorized saw length. The tendered rate shall include full compensation for all material and sawing or cutting costs and for all incidentals for cutting or sawing the pavement in accordance with the instructions of the engineer. The rate must also allow for any and all labour, equipment and plant associated thereto."

SD C 8.2.12: Remove existing asphalt and spoil off-site to approved dump sites as identified by the Contractor Unit: m²

"The rate shall cover the cost of removing existing asphalt in areas as indicated in the layout drawings. The rate must include the cost of spoiling off-site the removed asphalt, to an approved dump site as indicated by the Contractor. The rate must also allow for any and all labour, equipment and plant associated thereto."

SD C 8.2.13: Demolish, remove from site and dispose of kerbs and channels Unit: m²

The rate shall cover the cost of excavating, removal, loading, transporting of the existing kerbs, edgings and channels to a dump site off-site identified by the Contractor, and the finishing of the area to the Engineers satisfaction.

SD C 8.2.14: Remove from site and dispose of rubble and undesirable material Unit: m³

The rate shall cover the cost of dismantling, demolishing of all structures and foundations, the additional costs for precautions required during the demolition and loading operations, all excavations and backfilling as required, tyres, domestic waste and the cost of loading, transporting and dumping of the material at a dump site off-site to be identified by the Contractor.

D: EARTHWORKS

SD D 2: INTERPRETATIONS

SD D 2.1: Supporting Specifications

Replace subclause 2.1.2 with the following:

"SD D 2.1.2: Any of the other SANS 1200 specifications may form part of the contract documents."

SD D 2.3: Definition

Replace the definition "Borrow" with the following:

"Borrow material: Material, other than material obtained from excavations required for the works, obtained from sources such as borrow pits or the authorized widening of excavations. 'Borrow' shall have a corresponding meaning."

Replace the definition "Specified density" with the following:

"Specified density: The specified dry density expressed as a percentage of modified AASHTO dry density."

Replace the definition "Stockpile" with the following:

"Stockpile (Verb): The process of selecting and, as maybe necessary, loading, transporting and off-loading material in a designated area for later use and a specific purpose."

Add the following definitions:

"Fill: An embankment or terrace constructed from material obtained from excavations or borrow. In roads it includes the earthworks up to below the selected subgrade level.

Fill (material): Material used for the construction of an embankment or terrace.

Roadbed: The in situ material on which a fill is to be constructed.

Placing: Placing shall mean spreading of backfilling material, watering, mixing, compacting, final grading, complying with the required tolerances and providing for testing, all in accordance with the requirements of the specification."

D3: MATERIALS

D 3.1: Classification for Excavation purposes

SD D 3.1.2: Classes of excavation

Add the following to D 3.1.2:

For the purposes of measurement and payment in this contract, intermediate and boulder excavation are to be classified as soft excavation, Hard Rock remains as classified in this clause.

D 3.2: Classification for placing purposes

SD D 3.2.1: Material suitable for embankments and terraces

Add the following to D 3.2.1:

Boulders may be used in fill for embankments, provided that no voids result and that the material around the boulders is compacted to the required density.

D 3.3: Selection

SD D 3.3.1: General

Substitute the second paragraph of D 3.3.1 with the following:

The Contractor shall deal selectively with material from general excavation. Any imported material in road reserves that does not comply with the minimum requirements for the respective layers, shall be removed and replaced with suitable material, all at the Contractor's expense.

The Contractor shall deal in such a way with materials from all excavations for streets, channels or pipe trenches to ensure that usable material is not contaminated with unsuitable material. If usable material is contaminated, such contaminated material shall be removed and replaced with suitable material, all at the Contractor's expense. No additional payment shall be made in respect of this and all relevant costs shall be deemed to be included in the tendered rates.

All unsuitable material shall be removed prior to importing fill material to such areas.

Prior to commencing with earthworks, the Contractor shall make trial holes at positions and to depths ordered by the Engineer, to determine the area containing unsuitable material that is to be spoiled.

D5: CONSTRUCTION

D 5.1: Precautions

SD D 5.1.2.2: Detection, location and exposure

Add the following to D 5.1.2.2:

If existing services are not shown on the drawings but the existence thereof can be reasonably expected, the Contractor shall, in conjunction with all relevant authorities, determine the exact depth and location of such services before commencing with construction. After locating the exact position of services the Contractor shall be liable for all costs and subsequent costs arising from the damage thereof as a result of the Contractor's activities. These services must also be indicated on the record drawings.

SD D 5.1.4.1: Dust nuisance

Add the following to D 5.1.4.1:

The Contractor is responsible for dust control and is responsible for all claims which may arise from dust disturbance from the date of site handover to the date of completion of the contract. No payment will be made in respect of the above mentioned and all costs will be deemed as covered by the tendered rates.

SD D 5.1.6: Road traffic control

Add the following to D 5.1.6:

Sufficient road signs must be erected in such a way that motorists are warned well in advance of works, e.g. at the closing of a street sufficient signs to direct traffic must be erected at the preceding intersection. Bypasses and/or road signs shall be provided and/or erected at all locations where the free flow of traffic is obstructed and shall be approved by the Engineer before the commencement of construction. Where main roads are crossed, detours and temporary traffic signs must be provided. Where a trench crosses a street or wherever a trench crosses the direction of traffic flow, reflective delineators must be placed in the street, and not just along the sides of the street, with warning tape in between. Delineators shall be reflective, TW401/402 as necessary and provided with retro-reflective warning tape between and around them. Delineators shall be plastic with plastic basis. The delineator size will be 150mm x 600mm. The spacing and placement of delineators must be according to Table 13.4 of SARTSM Volume 2 and must be visible from all directions.

D 5.2: Methods and Procedures

SD D 5.2.2.3: Disposal

Substitute the second sentence of D 5.2.2.3 with the following:

All surplus and unsuitable material shall be dumped and neatly finished off to the levels as instructed by the Engineer at the dump site (dump site must be off-site and must adhere to the Environmental requirements) which is to be identified by the Contractor and agreed to by the Engineer.

D 8: MEASUREMENT AND PAYMENT

D 8.3: Scheduled items

SD D 8.3.1: Preparation of in-situ material before fill Unit: m²

Before bulk earthworks commences and after the area has been cleared and grubbed the in-situ material must be compacted with 6 roller passes with a 13t roller.

Measurements for preparation of in-situ material before fill will be made in square meters.

This rate shall include the cost of transportation, plant, consumables and labour needed to complete the work.

SC D 8.3.2: Bulk Excavation

Amend the payment item as follow:

Excavate in all materials and use for the following:

Fill on erven compacted to 93% MOD. AASHTO density (100% for sand)
with materials from site or pond excavation Unit: m3

Add the following to D 8.3.2(a):

Payment shall be irrespective of the depth of excavation. No differentiation shall be made between material containing rubble and material not containing rubble. The rate must include the compaction of the insitu material to 93% MOD.AASTHO density (100% for sand), before the fill on the insitu material (erven) commence.

No payment shall be made for stockpiling of imported fill material where such stockpiling is necessitated by non-removal of unsuitable material.

SD D 8.3.14: Existing services that adjoin the Bulk Earthworks Unit: m

The provision of items SD DB 8.3.5 (a) and SD DB 8.3.5 (b) shall apply mutatis mutandis.

Boundary walls

Existing streets

Kerbs

Special precautions must be taken to protect the overhead cables and poles where blasting may be required.

DB: EARTHWORKS (PIPE TRENCHES)

SD DB 3.1: Classes of excavation

Add the following to DB 3.1:

For the purposes of measurement and payment in this contract, intermediate and boulder excavation are to be classified as soft excavation. Hard Rock remains as classified in this clause.

SD DB 3.5: Backfill Materials

Substitute "from trenches" in DB 3.5(a) with "from trenches, channels or street excavations".

Add the following to DB 3.5.

All pipe trenches underneath the roadway must be backfilled with sand of upper selected layer quality compacted to 100% of the modified AASHTO maximum density. Sand is defined as non-plastic material and complies with the following sieve analysis:

	% passing
4.740 mm sieve	95% minimum
0.425 mm sieve	50% minimum
0.075 mm sieve	10% maximum

DB 3.6: Materials for reinstatement of roads and paved areas

SD DB 3.6.1: Subbase and Base

Substitute DB 3.6.1 with the following:

Where trenches cross or run adjacent to surfaced roads and paved areas of which the surfaces are scheduled to be reinstated, the material excavated from the existing base and/or subbase pavement layer(s) shall be set aside and used in the reconstruction of the subbase layer. Where applicable, new material complying with the requirements of SANS 1200 MF shall be used for the reconstruction of the base layer. Any shortfall in material for the reconstruction of the subbase layer shall be made up by the use of material complying with the requirements of SANS 1200 ME.

SD DB 3.8: Geotextiles for unstable trench-bottom conditions

The following products are acceptable: A4 Geotextile.

Alternatives may be submitted to the Engineer for approval.

DB 4: PLANT

SD DB 4.1: Excavation equipment

Add the following to DB 4.1:

All excavations exceeding the specified widths shall be backfilled with approved selected material. No payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates.

DB 5: CONSTRUCTION

DB 5.1: Precautions

SD DB 5.1.: Stormwater, seepage and dewatering of excavations

The Engineer may instruct the Contractor to place a layer of crushed stone bedding (150 mm minimum thickness or as specified) on the bed of the trench. If the conditions remain unstable due to the condition of the material and degree of saturation, the Engineer may instruct the Contractor to place a geotextile membrane underneath the layer of crushed stone.

After placement of the stone bedding, geotextiles must be folded over with a minimum overlap of 300 mm to form a closed subsoil drain. The crushed stone bedding and geotextile will only be measured when instructed in writing by the Engineer.

SD DB 5.1.4.3: Crossing of brick paved and asphalt roads and entrances

The following will apply for the crossing:

direct liaison and negotiation, at least 2 (two) weeks before construction commences, with the relevant authorities with regard to the programming of the work;
construction must be done in half widths, backfilled completely and the surface reinstated before the next half is done in order to accommodate the traffic flow;
the necessary detours and temporary traffic signs shall be supplied;
the bituminous surface must be cut in a straight line (not stepped), perpendicular to the road edge to ensure a neat finish;
usable material from the excavation of the crossing is to be selected and stockpiled for re-use;
dewatering of excavations to be done before and during crossing if necessary;
the pipe shall be laid according to the levels indicated on the relevant drawing;
sand compacted to 100% of MAASHTO density shall be used to backfill the trenches up to the pavement layers;
the subbase and base materials shall be approved imported materials of the same quality and thickness as that of the existing material;
the paved surface must be reinstated to the same quality and thickness as that of the existing material or as otherwise specified.

SD DB 5.2: Minimum base widths specified

Substitute paragraph (b) of DB 5.2 with the following:

Base widths: The base width of a trench (see Drawing DB-4) shall be the pipe barrel plus 2 x 300mm side allowance for all pipes. The base width for all pipes with a diameter less than 125 mm shall be 600mm plus the outside diameter of the pipes, irrespective of the depth at which they are laid, except for subsurface drains where the width shall be 560 mm and for house water connections where the width shall be 300 mm.

The base width for communication and electric cable ducts shall be the pipe diameter plus 600 mm.

The payment for bedding, blanket and other volumetric based items will be based on the base width specified above irrespective of the equipment used by the Contractor, which may result in wider trenches.

SD DB 5.4: Excavation

Add the following to DB 5.4:

Excavation and backfilling of pipe trenches on sidewalks in the residential area shall be done in such a way as to ensure the least possible disruption to the public and entrances to properties. No additional payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates.

SD DB 5.5: Trench bottom

Substitute "90%" in the second paragraph of DB 5.5 with "93% (100% for sand)".

DB 5.6: Backfilling

SD DB 5.6.2: Material for backfilling

Substitute "from trench excavations" in the first paragraph for DB 5.6.2 with "from trench, channel, road reserve or other excavations on the site of works".

Add the following:

All trenches underlying or adjacent to streets shall be backfilled with sand compacted to 100% of Mod AASHTO density, to the bottom of the subbase.

SD DB 5.6.3: Disposal of Soft Excavation Material

Add the following to DB 5.6.3:

All surplus and unsuitable material as described in DB 5.6.3 shall be disposed of at the spoil site, (as described in SD D 5.2.2.3) and levelled off.

DB 5.7: Compaction

SD DB 5.7.2: Areas subject to traffic loads

Add the following to DB 5.7.2:

All pipe trenches that fall in the street reserves will be regarded as areas subject to traffic loads.

Sand backfilling shall be compacted to 100% of Mod.AASHTO density.

DB 5: Reinstatement of surface

SD DB 5.9.4: Roads & Sidewalks: Subbase and Base

Add the following to DB 5.9.4:

Any additional imported material required for the reinstatement of selected layers, subbase or base shall comply with the requirements of the relevant standardised and/or specification data for this contract.

DB 8: MEASUREMENT AND PAYMENT

SD DB 8.1: Basic principles

Delete "along the route of the pipeline" in DB 8.1.1.

SD DB 8.1.2 (b) Replace the depth increments of 1 m with 0.5 m for excavation, where applicable.

DB 8.2: Computation of quantities

SD DB 8.2.4: Shoring

Add the following to DB 8.2.4:

No payment will be made in respect of this and all costs will be deemed as covered by the rate for excavation.

DB 8.3: Scheduled items

SD DB 8.3.2: Excavation

SD DB 8.3.2 (a): Trench excavation in all material, backfill, compact and removal of surplus material Unit: m

In the first line add "culvert sizes" before "for various pipe diameters....."

Add the following to DB 8.3.2 (a):

The depth of excavation in street reserves shall be measured from the final finished level of the road reserve profile to the invert level of the pipe. Additional excavations required for bedding of pipes must also be included in this rate.

The rates for trench excavation must also include any actions needed to deal with any water in the excavations, as well as loading and transportation of material to a spoil site, spoiling and compacting the material to 90% (100% for sand) of Mod AASHTO at a spoil site as described in SD D 5.2.2.3. The backfill material must be compacted to 93% of Mod AASHTO (100% for sand) in all backfilling of trenches.

The rate for excavation for subsurface drains shall cover the costs of excavation and spoil of surplus material to a spoil site and the supply of suitable free draining sand to be placed directly above the geotextile up to 200mm below the final surface levels.

The rate shall also provide for the fact that the excavation width in sand/boulders will be wider than normal.

For duct excavations the tender shall refer to the section where all the types, diameters and pipe combinations are listed to determine trench width and depth detail.

The rates are to allow for excavation in the classes of material as referred to in SD D 3.1.2 as well as excavation and disposal of unsuitable material from the trench bottom. There will be no extra-over payment in terms of intermediate or boulder excavation, but only for hard-rock excavation.

SD DB 8.3.2 (d): Excavation by hand to expose existing services Unit: m3

The provision of subclause SD D 8.3.8.1 (c) shall apply mutatis mutandis.

SD DB 8.3.3.4: Overhaul Unit: m3 or m3 km

No overhaul will be measured or paid and all haulage will be regarded as free haul.

SD DB 8.3.5 (a): Services that intersect a trench Unit: no

Add the following to DB 8.3.5 (a):

Existing services with a depth of cover exceeding 300 mm, measured from the bottom of excavation to the top of the existing service shall not be measured and paid for. There will be distinguished between existing trunk services and existing erf connection.

The rate shall also allow for the cost of the following:

- (i) Sufficient photos of existing services being taken and handed over to the Engineer before they are being crossed, if there is a possibility of a difference in opinion over the condition of those services.
- (ii) Reinstatement of existing services damaged by the Contractor.
- (iii) Reinstallation of services which were removed by the Contractor.

SD DB 8.3.5 (b): Services that adjoin a trench Unit: no or m

Add the following to DB 8.3.5 (b):

The unit "number" will only be used for services such as poles and trees.

The cost for shoring shall be deemed as covered by the listed items and no additional payment will be made for this.

No payment will be made for overhead services that do not directly rest on the ground except where allowance is made for this in the schedule of quantities.

Existing services that rest directly on the ground e.g. poles, trees, walls and structures are handled in the same way as underground services, but the axis of the services will be determined as follows:

The vertical axis is defined as the nearest side or corner of the existing structure to the excavation, measured at the point where the structure and natural ground level intersect.

The horizontal axis will be at the point where the structure and the natural ground level intersects. In this instance, where the excavation falls above the 45o line but within 1,0 meter horizontally from the structure, the service will also be measured as adjoining.

If the structure, according to the abovementioned does not qualify as an adjoining service but the foundation of the structure is such that if a 45o line drawn from the nearest bottom corner thereof cuts through the excavation, the structure will be measured as an adjoining service if approved by the Engineer.

If there is more than one service adjoining the same trench and such a service is on the same side of the trench, payment will only be made for the nearest service to the trench, of if they are the same distance from the trench for the top one. The maximum number of services that will be paid for, is therefore one on each side.

SD DB 8.3.6.1: Reinstatement of road surfaces complete with all courses Unit: m²

The layerworks to be allowed for under this item are as follows below. The costs of the imported material to be used in terms of SD DB 3.6.1 and SD DB 5.9.4, and for surfacing to be included in this rate are:

For roads: 40mm Medium continuously graded premix / 80mm paver
 150mm G4 base coarse / 20mm sand bedding
 150mm G5 subbase
 150mm G7 upper selected
 150mm G9 lower selected

For sidewalks: 30mm Fine continuously graded premix / 60mm paver on 20mm sand bedding
 100mm G5 subbase
 150mm G7 upper selected.

Should the layerworks for reinstatement at certain locations be changed, on instruction by the Engineer to suit the existing, the rate will be adjusted accordingly.

SD DB 8.3.8: Handling of ground water in the trench

The rates for excavation must include any costs for action needed to deal with water in the excavation.

Where instructed by the Engineer, a layer of crushed stone will be put down to stabilize the trench bed. The volume will be calculated according to the length of the trench, the specified minimum width and prescribed thickness.

The tendered rate shall provide for all additional excavations, and the preparation of the trench bed to allow for the layer of stone, the removal of unsuitable material, the provision and placing of 150 mm layer of crushed stone for the prescribed width as well as any other action need to stabilize the trench.

If the Engineer instructs the use of geotextile, it will be measured per area.

The rate must include all costs for the provision and placing of material and losses for excavation that are bigger than prescribed.

- a) Provision and placing of crushed stone Unit: m³
- b) Provision and placing of geotextile Unit: m²

DM: EARTHWORKS (ROADS, SUBGRADE)

DM 2: INTERPRETATIONS

DM 2.3: Definitions and Abbreviations

SD DM 2.3.1: Roadbed

Paved areas shall also be taken as roads. Therefore all references to i.e.: roadbed will refer to work under paved areas.

DM 3: MATERIALS

DM 3.2: Classification for placing purposes

SD DM 3.2.3: Selected layers

Substitute DM 3.2.3 with the following:

Materials in the selected layers shall comply with the following:

Description	Lower selected layer (G9-TRH14)	Upper selected layer (G7-TRH14)
Minimum CBR at 93% Mod.AASHTO density (100% for sand)	7	5
Maximum CBR swell at 100% Mod.AASHTO density	1.5%	1.5%
Maximum size of aggregate after compaction	100 mm	100 mm
Minimum Grading Modulus (GM)	0.5	0.75
Maximum Plasticity Index (PI)	18	10 + 3GM
Maximum Group	-	1

All material underlying the subbase or base of the final road prism, whichever may be applicable, that does not comply with the requirements for lower selected layer or upper selected layer in the respective depth categories, shall be removed and replaced with material complying with the requirements of selected layers.

Where required for drainage purposes, the Engineer may instruct that free draining sand be used in the selected layers. The same specification in the table above shall apply, except the grading requirements.

M 4: PLANT

SD DM 4.2: Plant for Treatment of Road-bed

SD DM 4.2.1: Pneumatic-tyre Roller

Pneumatic-tyre rollers shall be of the self-propelled type that is equipped with smooth pneumatic-tyre wheels of the same diameter. The mass of the roller shall be at least 10 tons. All wheels must bear the same mass. The rollers must be equipped with devices that will be able to keep the wheels wet and clean during operation.

The wheels of the roller shall be arranged in such a way that one passes with the roller will cover the whole width of the machine. The roller must be able to take a tyre pressure of 600 kPa and the minimum allowed working tyre pressure shall be 450 kPa. The maximum difference in pressure between any two wheels shall not be greater than 35 kPa.

DM 5: CONSTRUCTION

DM 5.1: Precautions

SD DM 5.1.2: Accommodation of traffic

Add the following to DM 5.1.2:

Bypasses shall be constructed and road signs erected where the free flow of public traffic is restricted. Such bypasses and road signs shall be in accordance with the Chapter 13 of the SA Road Traffic Signs Manual and shall be approved by the Engineer before the commencement of construction.

Add the following to DM 5.1:

SD DM 5.1.3: Existing Services

SD DM 5.1.3.1: General

The provisions of Subclause 5.4 of SANS 1200 A or of Subclause 5.2 of SANS 1200 AA, as relevant, shall apply in addition to the requirements of SD DM 5.1.3.2-SD DM 5.1.3.4 below.

SD DM 5.1.3.2: Detection, location and exposure

The drawings show the position of existing services based on the best information available. The Contractor shall verify the position of all services and all other obstacles and existing works on the Site. Manholes, valve boxes and the like will be regarded as known services. Before commencing construction in any particular area, the Contractor shall verify the positions of services and report to the Engineer any that are missing.

Where any underground services are shown on the drawings, the Contractor shall have the equipment referred to in 4.4 SANS 1200 D available on the Site for as long as is necessary to detect and locate such services and, if so ordered, he shall excavate by hand to expose such services in areas and in a manner and at a time agreed upon with the Engineer (see 8.3.8.1 of SANS 1200 D.) and relevant local Authority.

DM 5.2: Methods and procedures

DM 5.2.2: Cut and borrow

SD DM 5.2.2.2: Dimensions of cuts

Substitute "subbase" in the second paragraph of DM 5.2.2.2 with "subbase or selected layer, whichever may be applicable" and

Substitute "CBR of at least 7" with "CBR as applicable according to the provisions of SD DM 3.2.3".

SD DM 5.2.2.3 (b): Cut to spoil

Substitute DM 5.2.2.3 (b) with the following:

All surplus and/or unsuitable material shall be removed from the site and disposed of at the spoil site (as described in SD D 5.2.2.3) and shall be shaped to establish a free draining surface and compacted to 90% MOD AASHTO (100% for sand).

SD DM 5.2.2.4: Temporary stockpiling of materials

Add the following to DM 5.2.2.4:

The Contractor shall program the works in such a manner that suitable excavated material shall, if practically possible, be placed directly in the appropriate position to ensure that temporary stockpiling is limited to an absolute minimum. No payment shall be made for the temporary stockpiling of material where such material is to be used for backfilling of pipe trenches, except when so ordered in writing by the Engineer.

DM 5.2.3: Treatment of road bed

SD DM 5.2.3.3: Treatment of road bed

Preparation and compaction of road bed.

Substitute the first paragraph of DM 5.2.3.3 (a) with the following:

The road-bed shall be scarified to a depth of 150 mm, shaped and compacted to 93% of Mod.AASHTO density (100% for sand), except where otherwise ordered by the Engineer.

Any portion of the road-bed that lies within the selected layers and that, with the exception of its density, complies with the requirements of selected layer material, shall be scarified to the necessary depth, watered and compacted to 93% of mod AASHTO density (100% for sand) over the specified depth for selected layers.

SD DM 5.2.5: Selected layer

Add the following to DM 5.2.5:

Where the quality of the in-situ material that lies within the selected layers complies with the requirements of selected layer material, these areas will be treated as described in SD DM 5.2.3.3 (Treatment of road-bed).

To determine the suitability of in-situ material for selected layers, the Engineer may order the Contractor to dig test holes with maximum dimensions of 1.5 m x 1.5 m and 1.0 m deep at positions indicated by the Engineer and to have tests conducted, before construction commences. The Contractor must allow for this in his programming

of works. The Contractor shall backfill all test holes with selected material and compact it to 95% of Mod.AASHTO density (100% for sand), after the Engineer has taken samples and profiled the holes.

SD DM 5.2.8: Transport

SD DM 5.2.8.1: Freehaul

Replace the content of this subclause with the following:

"All transport will be regarded as freehaul."

SD DM 5.2.8.2: Overhaul

Delete the contents of this clause and replace with the following:

"No overhaul inside or outside the site boundaries will be paid. All transport costs for spoiling or importation of material will be deemed to be included in the relevant rates."

DM 6: TOLERANCES

SD DM 6.5: Dimensions and level control

The Contractor shall submit to the Engineer, in a form acceptable to the Engineer, records of dimensions and level control, prior to requesting the Engineer to carry out any routine inspections.

DM 7: TESTING

SD DM 7.2: Process control

Amend table 1 of DM 7.2 as follows:

Substitute "2000 m2" with "1500 m2", "1500 m,2 with 1200 m2 and "5000 m2" with "3 000 m2".

DM 7.3: Routine inspection and testing

Substitute DM 7.3.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

The cost of all routine resting done by the Engineer, and of which the results do not comply with the specified minimum requirement for the material, shall be borne by the Contractor and will be subtracted from the monthly payment certificates.

DM 8: MEASUREMENT AND PAYMENT

SD DM 8.2: Computation of quantities

Replace subclause 8.2.1 to 8.2.3 (inclusive) with the following:

SD DM 8.2.1: The provisions of subclause 8.2.1 of SANS 1200 D shall apply.

SD DM 8.2.2: The provisions of subclause 8.2.2 of SANS 1200 D shall apply.

SD DM 8.2.3: The provisions of subclause 8.2.3 of SANS 1200 D shall apply.

SD DM 8.2.5: Verifying quantities

Replace the first sentence with the following:

"Before any earthworks are commenced but after completion of any site preparation, the contractor must provide an existing ground level survey and cross-sections for the purpose of measurement of earthworks quantities."

SD DM 8.2.7: Excavation widths

For the measurement of quantities the excavation width will be measured from 200 mm behind the rear of the precast kerb. The total width therefore is the sum of the blacktop width, the plan measurement of the kerb/channel plus 400 mm. In the case of gravel roads the excavation width will be measured from the specified edge of the gravel layer. No additional payments will be made for wider excavations.

DM 8.3: Scheduled items

SD DM 8.3.3: Treatment of road bed

Substitute DM 8.3.3 (b)(1) and (2) with the following:

Treatment of in-situ road-bed in:

- | | | |
|----|-----------------------|----------|
| 1) | Intermediate material | Unit: m3 |
| 2) | Hard rock material | Unit: m3 |

SD DM 8.3.4: Cut to fill or spoil off-site Unit: m3

Substitute "90%" in DB 8.3.4 with "93% (100% for sand)" and "road prism" with "road prism and borrow pits".

Add the following:

Separate items will be scheduled for (a) fill on erven and (b) spoil off-site as instructed by the Engineer (where a minimum density for such spoil material is required by the Engineer) from road prism.

The rate for fill from commercial sources shall, in addition to the requirements of DM 8.3.4, cover the cost of the location of the source, complying with all the applicable precaution as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road or elsewhere on site as instructed by the Engineer where it is to be used. The fill will be shaped and compacted to the Engineer's approval.

The rate for fill on erven must include the compaction of the insitu material to 93% MOD.AAHSTO density (100% for sand), before the fill on tie insitu material (erven) commence.

SD DM 8.3.5: Selected Layer compacted to 93% of Mod.AASHTO density Unit: m3

Substitute "93% of Mod.AASHTO density" in the heading of DM 8.3.5 with "93% (100% for sand) of Mod.AASHTO density".

Add the following to DM 8.3.5:

Separate items will be scheduled for lower and upper selected layers as well as for material from the site of works and from commercial sources. The rate for selected layers from commercial sources shall, in addition to the provisions of DM 8.3.5, allow for locating the source, complying with all the applicable precautions as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road where it is going to be used. No payment shall be made for the removal and replacement of unsuitable imported material.

Where in-situ material is used as selected layer material, this is scheduled as a separate item under DM 8.3.3 (a) (Treatment of road bed).

SD DM 8.3.7: Cut to spoil or (c) stockpile Unit: m3

Add the following to DM 8.3.7:

The Tenderer shall tender a rate against each item. The rate for cut to spoil shall make provision for all costs for the spoiling of material at a site identified by the Contractor.

The rate for cut to stockpile shall make provision for all costs for the stockpiling of material obtain from cuts on the erf.

The site for spoil is as described in SD D 5.2.2.3.

Payment for temporary stockpiling shall be made under DM 8.3.11, only if so instructed in writing by the Engineer.

Material spoiled on erven must be compacted to 93% of Mod AASHTO density (100% for sand).

SD DM 8.3.12: Overhaul Unit: m3 or m3/km

Substitute DM 8.3.12 with the following:

"All transport will be regarded as freehaul".

SD DM 8.3.17: Trim, shape and compact Unit: no

Sidewalks and verges

The area to be trimmed is the area of in-situ material from the backside of the kerbs or gravelled area to the boundary of the road reserve, or such wider area necessitated by the road prism.

Measurement and payment for the above shall be restricted to areas ordered in writing by the Engineer.

The rate shall cover the cost of trimming and shaping the sidewalks to the lines, levels and dimensions as shown on the drawings, of acquiring additional material to compensate for any material lost due to weather or other reasons, and of the compaction of any loose or disturbed material to 90 % of Mod.AASHTO density (100 % for sand).

Pond

The area to be trimmed is the slopes of the detention pond, including the pond bottom.

Measurement and payment for the above shall be restricted to areas ordered in writing by the Engineer.

The rate shall cover the cost of trimming and shaping the pond to the lines, levels and dimensions as shown on the drawings, of acquiring additional material to compensate for any material lost due to weather or other reasons, and of the compaction of any loose or disturbed material to 90 % of Mod.AASHTO density (100 % for sand).

SD DM 8.3.19: Removal of unsuitable material from roadbed Unit: m3

The volume measured for payment will be the volume of unsuitable material removed under the roadbed on instruction of the Engineer in accordance with clause 5.2.3.2 of SANS 1200 DM.

This tariff is an extra-over payment item for DM 8.3.7 and cover all additional costs for the removal and spoiling off-site of unsuitable material. The rate must also include the backfilling of the area where the unsuitable material was removed with imported G7 material from commercial source, compacted to 93% MOD.AASHTO density (100% for sand).

Unsuitable material in the roadbed will be measured in the increments as listed.

SD DM 8.3.23: Tie in with existing road edge Unit: m

The tendered rate shall include full compensation for removal and disposal of existing surfacing (at least 150mm width), protecting the existing paving or asphalt when excavating the road box adjacent to it and tying the new layerworks to the existing. The rate shall also include for saw cutting of the existing pavement to a depth of 75 mm.

L: MEDIUM PRESSURE PIPELINES

L3: MATERIAL

SD L 3.1: General

Substitute the first sentence of L3.1 with the following:

Types and classes of pipes shall be as specified on the drawings.

All bends, T-pieces, reducers and other fittings for uPVC pipes, excluding couplings, shall be Ductile Iron to EN 12842, fusion bonded thermoplastic coated internally and externally with Plascoat PPA 571 HES, to minimum 0.25mm coating thickness with EPDM rubber insert seal. The only exception here are pressure bends for uPVC pipes up to class 16, which must comply with the requirements of SANS 966 1976 Class 16.

All mild steel specials shall after manufacture be hot dip galvanized and coated internally and externally with Plascoat PPA 571 HES, to minimum 0.25mm coating thickness or carboline 891 (3 coats, minimum 125 microns/coat) to the manufacturers specification.

Only stainless steel bolts and nuts shall be used on all fittings such as saddles, flanges, short collar couplings, etc.

All brass fittings shall be SANS approved and manufactured from DZR brass.

Compression fittings for HDPE pipes must be in accordance with the Particular Specifications.

SD L 3.3: C.I. pipes, fittings and specials

In the second sentence:

Change "AC pipes" to "AC or uPVC pipes"

SD L 3.8: Jointing materials

SD L 3.8.1: uPVC pipes

Add the following to L 3.8.1:

Cast iron fittings, valves and hydrants must be joined to AC pipes with short collar couplings. If the pipe differs from the class of the cast iron fittings, class to class adaptors shall be used and the cost shall be included in the cost of the fitting.

SD L 3.4: Steel pipes, fittings and specials

SD L 3.4.3: Pipes of nominal Bore over 150 mm

Replace L 3.4.3 with the following:

All pipes shall be manufactured from Grade B steel and shall have a wall thickness of at least 4.5 mm. The pipes and specials are to be welded and manufactured according to the requirements of SANS 719 Grade B.

Hydraulics tests, according to SANS 719, shall be carried out on all pipes prior to dispatch from the manufacturers workshops. The welding protective painting etc. shall be inspected and tested by the SANS or an approved independent inspection company. The test certificate shall be submitted to the Engineer upon delivery of the pipes to site.

SD L 3.8.3: Flanges and Accessories

Change "SANS 1123 to "SANS 1123: Table 1600/3"

SD L 3.8.4: Loose flanges

Substitute the first sentence of the last paragraph of L 3.8.4 with the following:

Bolts and nuts shall comply with the requirements of SANS 135.

SD L 3.9.5: Joints, Bolts, Nuts and Washers

Substitute L 3.9.5 with the following:

All joints, bolts, nuts and washers shall be stainless steel.

Add the following to L 3.10

SD L 3.10.1: Valves

All gate valves shall comply with the requirements of SANS 664, shall bear the SANS mark, and shall be suitable for a working pressure of 1,6 Mpa (i.e. Class 16).

Resilient seal valves shall be used for general applications.

Wedge gate valves shall be used for valves dividing zones.

Valves shall have non-rising spindles and the direction for opening and closing shall be permanently engraved on the valve casing and shall open clockwise.

Valves shall have spigot ends unless shown differently on the drawings.

Valves shall be fitted with cast iron tops, secured with retaining bolts.

Only valves supplied with minimum thickness of 250 micron Coupon KSIR 88 epoxy paint applied to all internal and external surfaces after it has been thoroughly cleaned by grit blasting to SA 2.5 finish in compliance with requirements of SIS 050900 or valves with similar approved coatings will be acceptable.

All flanged gate valves shall be drilled according to SANS 1123 Table 1600/3.

Pipes shall not be tested against a closed valve.

Thrust blocks for test sections shall be approved by the Engineer prior to testing of pipes.

SD L 3.10.2: Fire Hydrants

Fire hydrants shall be of the Ainsworth screw-down underground type and shall be suitable for a working pressure of 1,6 MPa with a 65 mm inlet.

The outlet shall be 65 mm dia (internal) gun-metal with London Round screw thread with cap top and securing chain. It shall open clockwise with a square spindle nut of the same size as specified for gate valves.

Hydrant spindles shall be provided with cast iron caps, secured with retaining bolts

Only hydrants supplied with minimum thickness of 250 micron Coupon KSIR 88 epoxy paint applied to all internal and external surfaces after it has been thoroughly cleaned by grit blasting to SA 2.5 finish in compliance with requirements of SIS 050900 or valves with similar approved coatings will be acceptable.

Hydrants shall be supplied and installed complete with a flanged CI extension piece complete with stainless steel nuts and bolts to ensure depth not greater than 400mm.

Fire hydrants shall be bolted to flanged branches of cast-iron hydrant tees.

L 3.11: Manholes and surface boxes

SD L 3.11.6: Surface boxes

Add the following to L 3.11.6:

The type of boxes shall be as specified on the drawings.

L 4: PLANT

SD L 4.3: Testing

Add the following to L 4.3:

The Contractor must ensure that the test equipment is in good order and that it is supplied with a calibration certificate upon request of the Engineer.

L 5: CONSTRUCTION

L 5.1: Laying

SD L 5.1.1: General

Add the following to L 5.1.1:

Where fibre cement pipes are built into structures as indicated on the drawings, the length of pipe that is built in must not exceed 600 mm.

In order to facilitate for movement between structures, a length of asbestos cement pipe of a minimum of 600 mm must be connected to the section that is built into the structure or to the pipe, as indicated on the drawings.

SD L 5.1.4.5: Double flanged distance pieces

Add the following to L 5.1.4.5 :

Double flanged distance pieces of the correct length to position valves on the correct level as indicated on the drawings must be installed at hydrants. This item will not be measured separately and will be deemed to be included in the rate for hydrants.

SD L 5.1.4.6: Crossing of major water mains with sewer and stormwater pipe

Add the following to L 5.1.4

The minimum cover on water mains through erven and in road reserves is 800 mm. The cover must be a minimum of 1 000 mm at road crossing. The transition in cover from the road to the sidewalk must be carried as specified in sub-clause 5.1.4.2 of SANS 1200L. Where water mains cross new stormwater inlet structures the cover must be a minimum of 1500 mm or as otherwise specified on the drawings.

L 5.6: Valve and hydrant chambers

SD L 5.6.1: General

Substitute the first sentence of L 5.6.1 with the following:

The drawings of valve and hydrant chambers which are bound into the document shall supersede the corresponding drawings in the standard specification.

SD L 7: TESTING

SD L 7.3: Standard hydraulic pipe test

SD L 7.3.1: Test pressure and time of test

Add the following to L 7.3.1.1:

Pipes shall not be tested against isolating valves. Special blank flanges or end caps, fully anchored, shall be provided for testing and these costs must be included in the tender rates.

Substitute L 7.3.1.2 with the following:

The test pressure for field testing shall be 1,5 times the rated maximum working pressure of the pipe.

Substitute L 7.3.1.3 with the following:

The test pressure applied according to L 7.3.1.2, must, with allowance for any level differences along the pipe line, be such that the pressure at any point in the pipe will be at least 1,25 times and not more than 1,5 times the rated working pressure of the pipe.

SD L 8: MEASUREMENT AND PAYMENT

SD L 8.2: Scheduled items

SD L 8.2.1: Supply, lay and bed pipes complete with couplings **Unit: m**

Add the following to L 8.2.1:

"The tendered rates shall also include full compensation for the cost of all labour, material, construction equipment, chemicals and overheads for the complete sterilization of the entire potable water reticulation system and the disposal of the sterilizing solution as approved by the engineer."

SD L 8.2.3: Extra-over 8.2.1 for the supplying, fixing and bedding of hydrants, valves and air valves **Unit: no**

Add the following to L 8.2.3:

Hydrants, gate valves and air valves are measured and paid for per item, complete with the inclusion of the cutting of pipes, couplings, extra excavation and all extra material and labour that is required, including tees, fittings complete as shown on the drawings. Flanged distance pieces shall be included in the rate for fire hydrants, gate valves and air valves.

SD L 8.2.11: Anchor/Thrust blocks and pedestals Unit: m3

Substitute L8.2.11 with the following:

Anchor and thrust blocks shall be measured per cubic metre concrete and the tendered rate shall include for all formwork and reinforcement (where specified) for the required dimensions.

SD L 8.2.17: Kerb Paint Markings Unit: no

The tendered rate shall allow for the following:

Water erf connection: Cut single groove with grinder on kerb face 75 mm high by 5mm thick and painted blue.

Poly Acrylic paint will be used on concrete surfaces.

Hydrant: Paint one kerb in yellow over total width of kerb and painting of cover and frame (yellow) and letter "H" in black 75mm high. Poly Acrylic paint will be used on concrete surfaces.

Valve: Paint one kerb in yellow over total width of kerb and painting of cover and frame (yellow) and letter "v" in black 75mm high. Poly Acrylic paint will be used on concrete surfaces.

SD L 8.2.18: Marker posts Unit: no

The tendered rate shall allow for the following:

- a) House connection marker post as per drawing ST/G/5.

LB: BEDDING (PIPES)

LB 3: MATERIALS

SD LB 3.1: Selected granular material

Substitute LB 3.1 with the following:

Selected granular material shall be an aggregate, sand or granular material, all of a non-cohesive nature and free from any organic material, of which the grading analysis shows 100% passing a 13,2 mm sieve and not more than 5% passing a 0,075 mm sieve.

SD LB 3.2: Selected fill material

Substitute LB 3.2 with the following:

The requirements of SD LB 3.1 shall apply mutatis mutandis.

SD LB 3.3: Bedding

Add the following to LB 3.3:

All pipes shall be classified as rigid pipes and shall be laid on a Class B bedding.

SD LB 3.4.1: Suitable material available from trench excavation

Replace the first sentence of LB 3.4.1 with:

Irrespective the requirements of subclause 3.7 of SANS 1200 DB and subclause 3.4.1 of SANS 1200 LB regarding the use of selective methods of excavation, the Contractor must use selective methods of excavation and supply and use plant that will avoid burying or contaminating material that is suitable and required for bedding or covering the pipeline.

SD LB 3.5: Bedding in waterlogged conditions

In waterlogged conditions a bedding cradle of the thickness as specified in writing by the Engineer, comprising 13,2 mm single size stone complying with the requirements of SANS 1083 shall be used.

LB 5: CONSTRUCTION

LB 5.1: General

SD LB 5.1.4: Compacting

Substitute "90% of MAASTHO" in LB 5.1.4 with "93% of Mod.AASHTO (100% for sand)".

LB 8: MEASUREMENT AND PAYMENT

LB 8.1: Principles

SD LB 8.1.1: Supply of bedding materials measured separately

Add the following to LB 8.1.1:

Payment for bedding material and selected fill material is only made if the selected trench-excavation material cannot be used in the same position as bedding material but has to be obtained from another part of the site of works or designated borrow pits, or from commercial sources.

SD LB 8.1.3: Supply of bedding materials measured separately

Add the following to LB 8.1.3:

Where the Contractor uses plant, which will result in a width of the trench wider than the width as per SD DB 5.2, the volume of the bedding will be determined on the width (pipe diameter + 600 mm) specified and not the wider width. The rate tendered must make provision for this and no additional payment will be made.

SD LB 8.1.4: Separate items for cradle and blanket

Substitute LB 8.1.4 with the following:

Although distinction may be made as regards items for the bedding cradle and selected fill blanket, the material in both cases shall comply with the requirements for material for bedding cradle.

SD LB 8.1.5: Disposal of displaced material

Add the following to LB 8.1.5:

Excess displacement material must be disposed of at the dumping site as specified in clause SD D 5.2.2.3.

LC: CABLE DUCTS

LC 3: MATERIALS

SD LC 3.1: Ducts

Add the following to LC 3.1:

Class 6 uPVC pipes to SANS 966 shall be used. Pipes to be plugged at each end to prevent backfilling entering the pipe prior to and after installation.

SD LC 3.2: Bedding

Substitute LC 3.2 with the following:

The provisions of SANS 1200 LB : Bedding (Pipes) and the relevant SPECIFICATION DATA shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SANS 1200 LB.

SD LC 3.3: Backfill

Substitute LC 3.3 with the following:

The provisions of SANS 1200 DB : Earthworks (Pipe Trenches) and the relevant SPECIFICATION DATA shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SANS 1200 DB.

SD LC 3.4: Cable duct markers

Add the following to LC 3.4:

Cable duct markers shall be provided as specified in SD LC 5.10.

LC 5: CONSTRUCTION

LC 5.1: Excavation of trenches

SD LC 5.1: Trench widths and depths

Add the following to LC 5.1.1:

Trench widths shall be in accordance with the provisions of SANS 1200 DB.

The minimum depth of cover over ducts shall be 600 mm from the final road level.

SD LC 5.1.3: Excavation of trenches at road crossings

The minimum depth of cover over ducts shall be 300 mm where construction traffic is liable to cross them. Road crossing shall therefore be constructed after the construction of the roadworks has reached the stage where the required cover is available.

SD LC 5.2: Bedding and compaction of bedding

Substitute LC 5.2.1 and LC 5.2.2 with the following:

All ducts shall be laid on a Class B bedding according to the provisions of SANS 1200 LB : Bedding (Pipes). Backfilling shall be according to the provisions of SANS 1200 DB : Earthworks (Pipe Trenches).

SD LC 5.4: Backfilling and compaction

Add the following to LC 5.4:

Road crossings shall be backfilled with sand from designated borrow pits, the site or commercial sources, whichever is applicable, up to underneath the subbase, and compacted to a minimum of 100% of Mod.AASHTO density.

SD LC 5.6: Laying of cables with other services

Add the following to LC 5.6:

"For telephone cables the following will apply:

The trench shall be excavated in such a position that pipes can be laid at least 300 mm from the power cables. Where this is not possible, pipes shall be separated from power cables by concrete or paving slabs placed vertically."

SD LC 5.7: Crossing of telephone and electricity cable ducts

Replace this subclause with the following:

SD LC 5.7: Crossing of PT ducts with other services

Where the PT duct will cross an existing service such as an electricity supply cable, a water supply pipe or a sewerage pipe, the Telkom duct shall, if possible, be laid not less than 25 mm above the other service. Where the depth of the existing service is insufficient for this to be done, the Telkom duct shall be laid to pass not less than 25 mm below the other service.

SD LC 5.8: Road crossings

Substitute "0,5 m" in the last sentence of LC 5.8 with "1,0 m" and add the following:

Ducts for road crossings shall be effectively sealed by means of end caps.

SD LC 5.10: Position to be marked

Change the following in LC 5.10

The draw wire, as specified in LC 5.3.3, shall be secured to a service marker as per the detailed drawing and a uPVC end cap will be fitted to prevent any moisture or soil from entering the duct

Electrical duct positions must be marked with a 5 mm deep 75 mm "E" letter grinded on the kerb both sides of the road and painted Red. Poly Acrylic paint will be used on concrete surfaces

Irrigation duct positions must be marked with a 5 mm deep 75 mm "I" letter grinded on the kerb both sides of the road and painted green. Poly Acrylic paint will be used on concrete surfaces

LC 7: TESTING

SD LC 7.2: Compaction tests

Substitute LC 7.2 with the following:

The Contractor shall, for at least one out of every five road crossings, submit density tests to the Engineer at his own expenses. The decision as to which road crossing densities shall be tested, rests with the Engineer. The Contractor shall, if such densities fail to meet the minimum requirements, prove at his expense that all the other densities do comply with the specified requirements.

LC 8: MEASUREMENTS AND PAYMENT

LC 8.2: Scheduled items

SD LC 8.2.5(a): Supply, lay, bed and provide duct Unit: m

Substitute "GPO" in LC 8.2.5 (a) with "Telkom".

SD LC 8.2.7: Draw pits / Manholes

Amend Item to read:

MANHOLES AND ACCESSIBLE JUNCTION BOXES

Construct complete to drawings for the following structures:

- a) Accessible Junction Box (600mm x 600mm) as per drawing no. ST/T/1 Unit: no

SD LC 8.2.8: Cable markers Unit: no

Substitute LC 8.2.8 with the following:

The rate shall also cover:

The cost of the end cap, and the service marker fixed to the draw wire, as specified in SD LC 5.10.

The Electrical duct positions marked with a 5 mm deep 75 mm "E" letter grinded on the kerb both sides of the road and painted Red with a Poly Acrylic paint used on concrete surfaces

The irrigation duct positions marked with a 5 mm deep 75 mm "I" letter grinded on the kerb both sides of the road and painted green with a Poly Acrylic paint used on concrete surfaces.

The communication duct positions marked with a 5mm deep 75mm "T" letter grinded on the kerb both sides of the road and painted yellow with a Poly Acrylic paint used on concrete surfaces.

SD LC 8.2.10: Connection to existing telecommunications network Unit: Sum

The tendered rate must allow for all associated work to break into an existing network and the coupling of the old and new system. The excavation for the pipeline, the backfilling and all materials and spoil of excess materials will be include in the rate.

LE: STORMWATER DRAINAGE

LE 3: MATERIALS

LE 3.1: Culvert units and pipes

Add the following:

Types and classes shall be as specified on the drawings.

SD LE 3.1 (d): Skewed Ends

Substitute LE 3.1 (d) with the following:

Where pipe culverts are to be constructed with a skew angle of more than 20°, the skew ends shall be cut on site.

LE 3.4: Manholes, catchpits and accessories

SD LE 3.4.3: Manhole covers, grid inlets, etc.

Substitute the last sentence in LE 3.4.3 with the following:

Covers and frames for manholes shall comply with EN124-D400 and shall be Heavy Duty ductile iron with hinged cover where the hinge of the lid must be positioned on the side of the approaching traffic in the lane, or at right angles to the direction of the flow.

Side inlet catchpits will be constructed with a precast concrete cover slab with cover and frame to withstand the loading requirements of SANS for heavy duty applications.

Grid inlets shall be heavy duty ductile iron with hinged cover in compliance with EN124, Class B125.

SD LE 3: Geofabric blanket

All geotextile shall be confirmed as suitable for use in the site specific environment. For tender purposes the specified geotextile will be priced. During construction, laboratory testing (paid for separately) will determine the type of geotextile to be used. A price adjustment on the cost of the specified geotextile will then be granted.

Replace LE 3.5 with the following:

The geotextile blanket shall be made of a polymer material which has been processed to achieve a homogeneous permeability. A geotextile blanket made from polyamide is not acceptable as this material is sensitive to varying temperatures and moisture absorption.

a) Testing

Testing must be done in accordance with the standard test-methods approved by the Provincial Administration: Department of Roads. A copy of these methods, hereafter called Appendix A, are available for inspection at the engineers offices.

b) Classification

The geotextiles used for subsoil-drainage are classified into two grades (Grade 2 and 3) as well as four classes. The grade is mainly determined by the required tensile strength and resistance to puncture needed whereas the class determine the permeability and the equivalent opening sizes (EOS) required. Geotextiles used for protection work shall be a Grade 1 (greater tensile strength, CBR strength and better resistance to puncture) and classified as Class B.

c) Tensile strength

The minimum tensile strengths per meter width for the various grades as determined by test-method 8 of appendix A are:

Grade 1: 15000 N/m
Grade 2: 10000 N/m
Grade 3: 5000 N/m

d) Elongation at breakpoint

The average elongation at breakpoint shall be determined according to test-method 8 of Appendix A, expressed as a percentage of the original length and presented to the Engineer for approval with respect to Grade 2 and 3. The minimum average elongation at breakpoint for Grade 1 is 50%.

e) Resistance to puncture

The resistance to puncture shall be determined according to test-method 9 of Appendix A and expressed as the average diameter hole formed by a 45 cone having a mass of 1 kg and dropped from a height of 500 mm above the outstretched geotextile being:

Grade 1: 14 mm maximum
Grade 2: 26 mm maximum
Grade 3: 32 mm maximum

f) Mass

The minimum mass for Grade 1, Class B geotextile, determined according to test-method 6 of Appendix A shall be 320 gr/m².

g) Porosity

The porosity for Grade 1, Class B geotextile determined according to test-method 5 of Appendix A shall be 80% ± 10%.

h) CBR strength or penetration joints

The minimum tensile strength for a Grade 1 geotextile, determined according to test-method 7 of Appendix A shall be 25 000 N/m at breakpoint.

i) Filtration

The minimum rate of filtration determined according to test-method 11 of Appendix A, shall be 30 l/s per square meter for a constant water pressure head of 100 mm.

j) Equivalent opening size (EOS)

The class division according to EOS is as follows:

Class OS (095) mm

A	0.02 - 0.06
B	0.06 - 0.20
C	0.20 - 0.60
D	0.60 - 0.80

k) Chemical reaction

The geotextile shall not show any perceptible signs of weakening after submersion in the following chemicals:

- i) an Alkaline-solution with a minimum pH of 12 at 50°C.
- ii) an Acid-solution with a pH of 3 at 50°C.

l) Ultra-violet light

The geotextile shall, after exposure to direct sunlight for 1500 hours, have at least 80% of the original strength.

m) Decay

The geotextile must be totally decay resistant and must not promote algae growth.

SD LE 3.6: Subsurface drains

SD LE 3.6.1: Pipes

Add the following to LE 3:

Pipes for subsurface drains shall be uPVC "Corflo" pipes (or similar approved) complying with the requirements of SANS 1601 and shall be perforated or slotted with smooth internal bore.

Perforations shall be spaced in two rows for 110 mm pipes and in three rows for 160 mm pipes. The arrangement of perforations and slots shall be subject to the Engineer's approval.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be unperforated uPVC pipes as specified above.

"Core-drain" pipes will not be accepted.

SD LE 3.6.2: Geotextile blanket

Geotextile blanket around subsurface drains shall comply with the requirements of SD LE 3.5 and shall be "A4 Geotextile" or similar approved.

SD LE 3.6.3: Crushed stone

Crushed stone in subsurface drains shall be 19 mm nominal size stone complying with the grading requirements of SANS 1083.

SD LE 3.6.4: Sand backfilling

Sand for backfilling subsurface drains shall be clean, hard, free-draining sand from approved borrow pits.

LE 5: CONSTRUCTION

LE 5.1: Trench bottom

SD LE 5.1.3: Unsuitable founding conditions

Substitute "90% of MAASTHO maximum density" in LE 5.1.3 with "90% of Mod.AASHTO maximum density (100% for sand)".

LE 5.2: Bedding and laying

SD LE 5.2.2: Pipe culverts

Add the following to LE 5.2.2:

All pipes shall be laid on a Class B bedding, as specified in SANS 1200 LB.

Spigot and socket pipes are to be used.

SD LE 5.4: Backfilling of prefabricated culvert units

SD LE 5.4.2: Portal and rectangular sections

Add the following to LE 5.4.2:

Backfilling on the sides of portal and rectangular sections can, if indicated on the drawings and requested in writing by the Engineer, be done with a 1:3:6/38 mix concrete.

LE 5.5: Catchpits, manholes, inlets and outlet structures

SD LE 5.5.1: General

Add the following to LE 5.5.1:

Manholes and inlet and outlet structures shall be constructed in accordance with the details as shown on the drawings.

Dolomite aggregate and low alkali sulphate resistant cement to SANS 471 shall be used for all concrete, mortar or screeding.

All joints to be sealed with Sika Pro 2 HP or similar approved.

All external joints between concrete rings to be wrapped with a 300mm denso tape or similar approved.

All manholes shall be watertight.

Lifting holes to be plugged with Sika Pro 2 HP or similar approved.

Maximum chimney height of 400mm (measured from underside of topslab to the top of cover) will be acceptable.

SD LE 5.5.5: Precast manholes and SD LE 5.5.7: Precast inlet and outlet structures

Substitute LE 5.5.5 and LE 5.5.7 with the following:

Manholes and inlet and outlet structures shall be constructed in accordance with the details as shown on the drawings.

SD LE 5.8: Backfilling around Structures

Add the following to LE 5:

Material used to backfill around manholes that fall within the road reserve must comply with SANS 1200 LB Subclause 3.1. Material used to backfill around other manholes must comply with SANS 1200 DB Subclause 3.5.

Material adjacent to the walls of the manholes must be watered and mixed to its optimum moisture content, and compacted in layers not exceeding 150 mm in the compacted state. Compaction must be minimum 100% MOD ASSHTO for non-cohesive material, and minimum 93% of MOD AASHTO density for cohesive materials.

Backfilling around the structure must be carried out in even layers to avoid uneven side forces."

LE 8: MEASUREMENT AND PAYMENT

LE 8.2: Scheduled items

SD LE 8.2.1: Supply, handle, lay and bed concrete pipes Unit: m

Add the following to LE 8.2.1:

The provisions of LE 8.2.1 shall apply mutatis mutandis to uPVC pipes.

SD LE 8.2.4: Extra-over items LE 8.2.1 for cutting end units for pipes on site Unit: no

Add the following to LE 8.2.4:

Payment shall be made only for skew cuts greater than 20° at manholes, kerb inlets and inlet and outlet structures.

SD LE 8.2.8: Supply and install manholes, catchpits, and the like Unit: no

Substitute LE 8.2.8 with the following:

The unit of measurement shall be the number of each, in the depth increments as scheduled, fully installed in accordance with the details shown on the drawings.

The rate shall cover the cost of excavating and backfilling with approved selected material compacted to 93% of Mod.AASHTO density (100% for sand), supplying and installing of all material and accessories transporting precast concrete elements from stacks, the inlet kerbs (with transition kerb if applicable) and the channel adjacent thereto as well as for the removal and spoil of all surplus material. The rate shall also include the connection of pipe to manholes, catchpits, etc. and of building pipes into the walls of such structures, but not for the cutting of skewed ends.

The rate for manholes shall also cover the cost of providing and installing the specified cover and frame and locking devices if specified. The depth of the manhole, catchpit, and the like shall be measured from the final finish level of the road reserve profile to the invert level of the pipe.

Add the following to LE 8.2:

SD LE 8.2.10(d)i: Accessories Unit: no

Add the following to LE 8.2.10 (d) for Rodding eyes:

The rate tendered for the items shall include all costs (labour, materials and overhead costs) to install the rodding eyes indicated on the detail drawing ST/R/4. The rate shall include, but will not be limited to the

SD LE 8.2.14: Supply and install subsurface drains according to drawings Unit: m

The length shall be measured on the centre line of the completed subsurface drain.

The rate shall cover the cost of supplying, transporting, off-loading and installing all materials, including perforated pipes, crushed stone and geotextile blanket, as well as for cutting, wasting, overlapping and installing of the materials where applicable.

SD LE 8.2.15: Connecting subsurface drains to manholes and inlet structures Unit: no

The number is the number of subsurface drain pipes built in at manholes or inlets structures.

The rate shall cover the cost of labour, plant and materials necessary to connect the subsurface drain to manholes and/or kerb inlets, and making the structure watertight, all as shown on the drawings.

SD LE 8.2.16: Erosion protection Unit : m2

The tendered rate must allow for procuring, transporting and placing of the armourflex to the levels and the excavation and spoil of surplus material to obtain the cross-section dimension as per the detail drawings.

The openings in the armourflex must be filled with topsoil and the third bottom (measured in vertical) grouted with a 1:3 cement sand mix.

The armourflex must be laid on top of a geotextile blanket "A4 Geotextile" or similar approved and the cost of the geotextile will be covered under this item.

The rate must also cover all labour and other activities required to complete the channels to the satisfaction of the Engineer.

SD LE 8.2.17: Break into and connect to existing structures and make good benching Unit: no

The tendered rate must allow for all associated work to break into an existing manhole, the handling of the water flow in the existing system when necessary, the coupling of the old and new system, and the adapting of the benching. The excavation for the pipeline, the backfilling and all materials and spoil of excess materials will be included in the rate.

M: ROADS (GENERAL)

M5: CONSTRUCTION

Add the following to M 5:

SD M 5.2: Selection

The Contractor must be selective when breaking up existing roads to ensure that subbase material is not contaminated. If suitable material is contaminated the Contractor must replace the contaminated material as his own cost with material complying with the requirements.

M6: TOLERANCES

SD M 6.3: Frequency of Checks

Replace "sufficient checks" with "do sufficient checks and submit to the Engineer for approval".

M 7: TESTING

SD M 7.3: Routine inspection and testing

Substitute M 7.3.3 with the following:

Statistical evaluation of test results shall not be applicable to this contract and all tests shall meet the specified minimum requirements for the specific material.

M8: MEASUREMENT AND PAYMENT

SD M 8.1: Measurement and Payment

Add the following to M 8.1:

The cost of all routine testing done by the Engineer, and of which the results do not comply with specified minimum requirements for the material, shall be borne by the Contractor.

These costs shall be deducted from the Contractor's monthly payment certificate if accounts are not settled with the appointed laboratory.

ME: SUBBASE

ME 3: MATERIALS

ME 3.2: Physical Properties

SD ME 3.2.: Subbase Material (G5 quality according to TRH 14)

Substitute the requirements for unstabilized subbase in ME 3.2.1 with the following:

Materials for use in the unstabilized subbase shall comply with the following requirements:

i)	Maximum size of aggregate after compaction	63mm
ii)	Maximum liquid limit	30
iii)	Maximum plasticity index (PI)	10
iv)	Maximum linear shrinkage	5%
v)	Minimum CBR at 95% of Mod.AASHTO density	45
vi)	Maximum CBR swell at 100% of Mod.AASHTO density	0.5%
vii)	Maximum group index	0
viii)	Minimum grading modulus (GM)	1.5%

No crushed building rubble will be accepted as a subbase material

ME 5.4: Placing and Compaction

SD ME 5.4.1: Placing

Substitute "the project specification" in the second paragraph of ME 5.4.1 with "ME 6.1.4".

SD ME 5.4.4: Compaction

Add the following to ME 5.4.4:

In certain cases, such as in Provincial roads or under block-paving, the subbase may be specified to be compacted to 97% Mod.AASHTO density.

SD ME 5.4.4.3: Penetration

Add the following new sub-clause to ME 5.4.4:

The Contractor must provide for the penetration of the subbase material in the selected layer. The specified layer thickness will be a net homogenous layer. Only the homogenous layer will be measured or payment.

ME 5.7: Transport

SD ME 5.7.1: Free haul

Substitute ME 5.7.1 with the following:

An unlimited free haul distance shall apply to subbase material.

ME 7: Testing

ME 7.2: Process control and routine inspection and testing

SD ME 7.2.1: Process control

Substitute "1500 m2" with "1200 m2" and "5000 m2" with "3500 m2" in Table 2 of ME 7.2.1.

SD ME 7.2.2: Routine inspection and testing

Substitute the second sentence of ME 7.2.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

ME 8: MEASUREMENT AND PAYMENT

SD ME 8.2: Compaction of Quantities

Substitute ME 8.2 with the following:

Measurement and payment shall be to the exact dimensions as shown on the drawings.

MF: BASE

MF 3: MATERIALS

MF 3.3: Physical and Chemical Properties

SD MF 3.3.1: Natural Gravel (Unstabilized or Stabilized) (G4 quality according to TRH 14)

Substitute the requirements of MF 3.3.1 for unstabilized natural gravel with the following:

Natural gravel placed in the base, must comply to the following requirements after compaction:

- a) The grading must comply with the following requirements:

Nominal opening size of sieve	% Passed according to mass
53.0	100
37.5	85 - 100
19.0	60 - 90
4.75	30 - 65
2.00	20 - 50
0.425	10 - 30
0.075	5 - 15

- | | | |
|----|---|------|
| b) | Maximum liquid limit | 25 |
| c) | Maximum plasticity index (PI) | 6 |
| d) | Maximum linear shrinkage | 3% |
| e) | Minimum CBR at 98% of Mod.AASHTO density | 80 |
| f) | Maximum CBR swell at 100% of Mod.AASHTO density | 0.2% |
| g) | Minimum grading modules (GM) | 2.0 |

No crushed building rubble will be accepted as a base course.

SD MF 3.3.2: Graded crushed stone (G1 quality according to TRH 14)

Amend the requirements of SANS 1083 and substitute MF 3.3.2 (a) with the following:

- | | | |
|----|--|--------|
| a) | At least 50% (by mass) of the material retained on the 4.75 mm sieve must have at least one fractured shearface. | |
| b) | The weighted average of the flakiness index of the -26.5 mm + 19.0 mm fraction and the -19.0 mm + 13.2 mm fraction shall not exceed 35%. | |
| c) | Minimum 10% FACT (dry) for diamictites (tillite) of the -13.2 mm + 9.5 mm fraction | 200 kN |
| d) | Minimum ACV for diamictites (tillite) of the -13.2 mm + 9.5 mm fraction (dry) | 21 % |
| e) | Maximum plasticity index (PI) | 4 % |
| f) | Maximum linear shrinkage | 2% |
| g) | Minimum ration of 10% FACT (wet) to 10% FACT (dry) | 75 % |

SD MF 3.3.3: Graded crushed stone and soil fines (G2 quality according to TRH 14)

Substitute MF 3.3.3 with the following:

The provisions of SD MF 3.3.2 shall apply mutatis mutandis, except for the following amendments and/or additions.

- | | | |
|----|--|------|
| a) | Maximum plasticity index (PI) | 6 |
| b) | Maximum linear shrinkage | 3% |
| c) | Maximum CBR at 98% of Mod.AASHTO density | 80 |
| d) | Maximum CBR swell at 100 % of Mod.AASHTO density | 0.2% |
| e) | At least 50% (by mass) of the material retained on the 4.75 mm sieve shall have at least one fractured face. | |

SD 5.4.4: Compaction

Add the following to SD 5.4.4.2 In certain cases, such as in Provincial roads, the base may be specified to be compacted to 100% Mod. AASHTO density.

MF 5.9: Transport

SD MF 5.9.1: Free haul

Substitute M 5.9.1 with the following:

An unlimited free haul distance shall apply to basecourse material.

MF 6: TOLERANCES

MF 6.1: Dimensions, Levels, etc.

SD MF 6.1.2: Grade

Add the following to MF 6.1.2

In addition to the above-mentioned requirements the surface shall be of such a grade that all surface water shall drain freely to the adjacent kerbs and/or channels, and all subsequent costs to rectify the surface to comply hereto shall be borne by the Contractor.

MF 7: TESTING

SD MF 7.2: Process Control

Substitute "1500 m2" with "1200 m2", "1500 m3" with "1200 m3" and "5000 m2" with "3000 m2" in Table 3 of MF 7.2.

MF 7.3: Routine inspection and testing

Substitute MF 7.3.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

MF 8: MEASUREMENT AND PAYMENT

SD MF 8.2: Computation of Quantities

Substitute MF 8.2 with the following:

SD ME 8.2 shall apply mutatis mutandis.

MH: ASPHALT BASE AND SURFACING

MH 3: MATERIAL

SD MH 3.1: Prime

Substitute MH 3.1 with the following:

The prime shall be Colprime E bitumen complying with the applicable requirements of SANS 4001 – BT2:2012.

SD MH 3.3: Tack coat

Substitute MH 3.3 with the following:

The tack coat shall be a 60% stable-grade bitumen emulsion diluted with water at a 1:1 ration.

MH 3.4: Bituminous binder

SD MH 3.4.2: Surfacing

Substitute MH 3.4.2 with the following:

The bituminous binder shall consist of 50/70 penetration-grade bitumen complying with the requirements of SANS 307.

SD MH 3.5.8: Grading

Substitute Table 2 of MH 3.5.8 with the following:

Percentage by mass passing sieve										
Nominal aperture size of sieve (mm)	Gap-graded			Continuously graded			Semi gap graded	Open graded		Sand Asphalt
	Stone content									
	Low	Inter-mediate	High	Coarse	Medium	Fine		Coarse	Fine	
19.0	100	100	100	100	100	100	100	100	100	100
13.2	75-100	75-100	75-100	84-100	100	100	80-100	100	100	95-100
9.5	70-90	70-90	64-85	70-92	82-100	100	65-80	75-90	100	69-90
4.75	65-75	60-70	50-60	50-70	54-70	64-88	45-60	25-50	30-50	59-76
2.36	60-70	53-63	45-55	37-55	40-57	48-70	42-55	5-15	5-15	57-75
1.18	60-70	53-63	45-55	26-41	27-42	35-54	40-52	-	-	55-74
0.600	55-70	45-63	36-52	18-32	18-32	24-40	35-48	-	-	45-67
0.300	45-65	35-55	25-45	12-23	12-23	16-28	25-45	3-8	-	28-52
0.150	20-40	15-35	12-32	7-16	7-16	10-20	15-25	-	-	10-22
0.075	5-12	5-12	5-12	4-10	4-10	4-12	5-12	2-5	2-5	4-10

MH 5: CONSTRUCTION

SD MH 5.1: General Requirements

SD MH 5.1.1: Preparation of Surface

Add the following to MH 5.1.1:

The application of the prime coat may only proceed after the written approval of the Engineer and only if the moisture content of the upper 50 mm of the base is lower than 50% of the optimum moisture content.

SD MH 5.1.5: Weather Limitations

Add the following to MH 5.1.5.1:

- d) if the moisture content of the upper 50 mm of the base is more than 50% of the optimum moisture content.

MH 5.5: Design of Asphalt

SD MH 5.5.2: Marshall criteria

Amend Table 6 of MH 5.5.2 as follows:

Property	Continuously Graded		Gap-graded or semi gap-graded		Sand asphalt	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Stability, kN	4.0	12.5	3.0	12.5	7.0	14.0
Air voids, %	3.0	5.0	2.0	6.0	10.0	13.0

The rest of the values remains the same.

SD MH 5.8: Compaction

Substitute the second paragraph of MH 5.8 with the following;

The compacted asphalt shall have a density equal to or greater than 95% of Marshall Density described in TMH 1, and must comply with the requirements for the surface texture.

SD MH 5.11: Construction of trial section

Before the Contractor commences the construction of asphalt surfacing, he shall if so ordered, demonstrate, by laying a trial section 200 m² in areas, that the equipment and processes that he proposes to use will enable him to construct the asphalt layer in accordance with the specified requirements.

Only when such a trial section has been satisfactorily laid and finished, and is found to comply with the specified requirements, will the Contractor be allowed to commence with construction of the permanent work.

Should the Contractor make any alteration in the methods, processes, equipment, or materials used, or should the work consistently fail to comply with the applicable requirements of the specifications, the Engineer may require that further trial sections be laid and tested at the cost of the Contractor before allowing the Contractor to continue with the permanent work.

Trial sections shall be laid where indicated by the Engineer. The Contractor shall prepare the surface on which a trial section is to be laid and shall also, if the work fail to comply with the applicable requirements of the specification, remove the trial section after completion and acceptably restore the surface on which it was constructed, all at his own cost.

MH 6: TOLERANCES

MH 6.3: Dimensions, levels, etc.

SD MH 6.3.6: Smoothness

Add the following to MH 6.3.6:

The appropriate degree of accuracy under this contract shall be degree II.

In addition to the above-mentioned requirements the surface shall be of such a grade that all surface water shall drain freely to the adjacent kerbs and/or channels and subsequent costs to rectify the surface to comply herewith shall be borne by the Contractor.

MH 7: TESTING

SD MH 7.1: Mix Design

Add the following to MH 7.1:

The proposed mixture design shall be submitted for approval to the Engineer at least two weeks (14 days) before commencement of the construction of asphalt surfacing. The Contractor shall ensure that the samples on which the mixture is based, are a true representation of the actual materials to be used for the work.

MH 8: MEASUREMENT AND PAYMENT

SD MH 8.1: Rates of application and bituminous binder content

SD MH 8.1.5: Bituminous binder content

Amend MH 8.1.5(b)(1) as follows:

(b) Surfacing 1) Continuously graded: 5.5%.

Add the following to paragraph (b):

5) Sand asphalt surfacing: 4.5%

SD MH 8.4: Computation of Quantities

Substitute the first sentence of MH 8.4.2 with the following:

Asphalt is measured and paid for according to the exact dimensions (width and thickness) as indicated on the drawings.

Delete the last paragraph of MH 8.4.2.

Add the following paragraph:

SD MH 8.12: Extra-over item 8.5.4 for transportation of bitumen from outside Cape Town area **Unit: Ton (t)**

The unit of measurement shall be the ton of bituminous binder used in approved mixes. The tendered rate shall include full compensation for the additional cost of the supply of base bitumen from an alternative source to CALREF in Cape Town.

MJ: SEGMENTED PAVING

MJ 3: MATERIAL

SD MJ 3.3: Sand for bedding and jointing

Replace the content of this subclause with the following:

"Sand for bedding and jointing shall be free from substances that may be deleterious to blocks. In addition, the grading of the sand shall conform to that given (a) or (b) below, as applicable.

a) Bedding sand

Normal sieve size (mm)	% passing
9,52	100
4,75	95-100
2,36	80-100
1,18	50-85
0,600	25-60
0,300	10-30
0,150	5-15
0,075	0-10

b) Jointing sand shall pass a 1,18 mm sieve and shall contain 10-50 %(m/m) of material that passes a 0,075 mm sieve."

MJ 8: MEASUREMENT AND PAYMENT

Add the following new paragraph

MJ 8.2: Scheduled items

SD MJ 8.2.3: Cutting Units to Fit Edge Restraints **Unit: m**

Substitute MJ 8.2.3 with the following:

The length measured will be the length of the part of the edge restraint where it is necessary to cut the unit to fit. The rate shall cover the cost of straight, ranking and circular cutting, waste of material, delays and disruption of the program.

MK: KERBING AND CHANNELLING

MK 3: MATERIALS

MK 3.2: Precast kerbing and channelling

SD MK 3.2.3: Strength

Substitute MK 3.2.3 with the following:

Precast kerbs, edging and channels shall be of grade 25 MPa/19 mm concrete.

SD MK 3.9: Bedding material

Substitute MK 3.9 with the following:

The material on which concrete kerbs, channels and edging are bedded, shall be in accordance with the dimensions shown on the drawings and shall consist of a 15 MPa concrete mix with a 6.7 mm single size coarse aggregate, placed on a minimum 100mm thick G5 subbase compacted to 95% MOD AASHTO density.

MK 5: CONSTRUCTION

SD MK 5.1: Excavation and bedding

Substitute "90%" in MK 5.1 with "93% (100% for sand)".

SD MK 5.2: Precast concrete kerbing and channelling

Substitute the first sentence of MK 5.2 with the following:

Precast concrete kerbing and channelling shall be laid and bedded on a concrete bedding complying with the requirements of SD MK 3.9 and to the dimensions shown on the drawings.

SD MK 5.10: Protection

Substitute the word "bad" in the second sentence with the following:

"no chipped or patched kerbs will be accepted"

SD MK 5.11: Transition sections and inlet and outlet structures

Substitute the first sentence of the second paragraph of MK 5.11 with the following:

Inlet and outlet structures shall be in accordance with the details shown on the drawings.

SD MK 5.13: Street name, kerbs

Street name kerbs as detailed in the drawings must be installed in the positions as shown on the drawings. The recessed letters must be painted with an approved paint.

The street names will be supplied by the Engineer.

MK 7: TESTING

Add the following paragraph:

SD MK 7.2: Water testing of kerbs

A water test must be done on all kerbs, inlets and channels after installation to ensure good drainage. This test must be done after the application of the prime coat but before the placing of asphalt or a bituminous surface treatment. The channels and inlets must be cleaned before the water test is done. All alterations to kerbs, channels and inlets must be done before the placing of the final layer. No payment will be made for the water testing of kerbs.

MK 8: MEASUREMENT AND PAYMENT

SD MK 8.1: Basic principles

Substitute the second sentence of MK 8.1.1 with the following:

Deductions will be made for catchpits, etc.

Add the following to MK 8.1.1:

Payment shall include the provision of expansion joints as specified. Payment shall also include the additional excavation and spoil of material (at a site identified by the contractor) for levelling purposes and for placement of the G5 layer underneath the kerb. The cost of the G5 minimum gravel layer and compaction thereof shall be included in the rates.

MK 8.2: Scheduled items

SD MK 8.2.1: Concrete kerbing Unit: m

Add the following to MK 8.2.1(b):

The tendered rate includes the supply, from site within freehaul distance, and placing of material of upper selected layer quality for backfill behind the kerbs.

SD MK 8.2.2: Concrete kerbing and channelling combined Unit: m

Add the following to MK 8.2.2:

The rate also covers the cost of transport of kerbs and channels from stacks.

SD MK 8.2.14: Transition kerbs Unit: no

Where a transition is at a catchpit, and/or street name kerbs it will not be regarded as a transition and therefore no extra payment will be made.

MM: ANCILLARY ROADWORKS

MM 3: MATERIALS

MM 3.2: Road signs

SD MM 3.2.1: General

Add the following to MM 3.2.1:

All road signs and road markings shall be in accordance with the SA Road Traffic Signs Manual and as shown on the drawings.

No special breakaway devices are required.

SD MM 3.2.2: Structural steel

Substitute the second paragraph of MM 3.2.2 with the following:

All structural steel, including steel tubes, shall have a hot-dip (galvanized) zinc coating that complies with the requirements of SANS 763 for coatings of type A1 or B1 articles, as applicable.

MM 5: CONSTRUCTION

MM 5.2: Road signs

SD MM 5.2.1.6: Galvanizing

Substitute the second paragraph of MM 5.2.1.6 with the following:

Galvanized mild steel support for road signs shall be painted in accordance with SD MM 5.2.2.4.

MM 5.2.2: Painting

SD MM 5.2.2.4: Painting of structural steelwork

The provisions of MM 5.2.2.4 shall apply mutatis mutandis to the painting of galvanized surfaces, except for the following:

Surface preparation

Galvanized surfaces shall be thoroughly scrubbed down using an approved galvanized iron cleaning agent to remove all traces of the resin protective coating.

The surface shall be washed down and scrubbed to remove all traces of grease, oil, dirt, etc.;

Priming

Two coats of calcium plumbate primer shall be applied to a dry film thickness of at least 25 microns. The undercoat shall follow within one week after the priming.

Finishing coat

The colour of the finishing coat shall be dark grey, as specified in MM 3.2.8.2.

SD MM 5.3.2: Surface Preparation

Substitute "48 h" in MM 5.3.2 with "7 days (168 h)".

MM 8: MEASUREMENT AND PAYMENT

SD MM 8.3.1: Road signs with painted background and symbols and with signboard constructed with aluminium sheeting Unit: no

Add the following to MM 8.3.1:

No additional payment shall be made for the aluminium extrusions for road signs and all relevant costs shall be deemed to be covered by the tendered rates for such road signs.

SD MM 8.3.9: Supply and install Street name plate complete to drawing R21 including sign supports Unit: no

The rate tendered shall be an all-inclusive rate for the supply and the installation of the Street name board as indicated on drawing R21. No additional payment will be made on this item and all costs will be deemed to be included in the rate tendered.

MM 8.4: Scheduled items for road markings

SD MM 8.4.1: Non-reflectorized paint applied at nominal rate of 0.42 l/m Unit: km or m2

All markings (except for parking markings) shall be of the Non-reflectorized Brick and Concrete marking paint – Plascon BTP1 (white) & BTP2 (yellow) or similar approved, applied at a rate as per suppliers specification.

PART C: ENVIRONMENTAL MANAGEMENT PLAN

Refer to Annexure 3.

PART D: HEALTH AND SAFETY PLAN

Also refer to Annexure 4.

Health and Safety Requirements

Before starting work on site the Contractor shall present to the Engineer or his agent his Health and Safety Plan for approval. He shall also appoint a Health and Safety Officer in writing and give a copy of the letter of appointment to the Employer.

The Health and Safety Specifications are included in Part D and must be referred to when compiling the Health and Safety Plan.

The Contractor is to implement measures and adhere to these conditions for the duration of the contract. The tendered rates shall be an all-inclusive sum for adhering to the Health and Safety Specification and Health and Safety Plan.

Safety

The Contractor must take the safety of the residents and their property into account during the planning and execution of the works. All open trenches, services, material and machines must be protected and clearly marked.

Access to Site by Public

The contractor shall erect fences and employ sufficient security personnel to prevent unauthorised access to the site by members of the public. Notices prohibiting access to the site shall be clearly displayed at all access points.

The notice shall be in English, Afrikaans and the most commonly used local language.

Barricades and Lighting

All excavations and openings in walls and slabs into or through which a person may fall shall be securely barricaded at all times in accordance with the requirements of the applicable Occupational Health and Safety Regulations.

C3.5 Management

CONTENTS	PAGE
3.5.1 CONTRACT ADMINISTRATION.....	68
3.5.2 PARTICIPATION OF TARGETED ENTERPRISES.....	68
3.5.3 PLANNING AND PROGRAMMING	69
3.5.4 METHOD AND PRECAUTIONS	71

3.5.1. CONTRACT ADMINISTRATION

The Contractor shall submit with each monthly statement for payment, the following returns – the format of which are: are included in C3.6 : Annexes.

Annex 1: B-BBEE Sub-contract Expenditure Report

Annex 2: Project Labour Report

The Project Labour Report must include details of all labour (including that of sub-contractors) that earns less than R250 per day (excluding any benefits) employed from within the Langeberg Municipal Area on this contract in the month in question.

3.5.2. PARTICIPATION OF TARGETED ENTERPRISES

It is a requirement of this contract that enterprises located within the target area, as defined, be engaged by the Contractor for the provision of supplies, services or works necessary for the performance of this contract.

3.5.2.1 Minimum Targeted Enterprises contract participation

To this end, a minimum targeted enterprises contract participation goal (CPG_{2E}) set by the Employer for this Contract is specified in Section 3.3.1 of Part C3.3 : Procurement in the Scope of Work, which shall be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied.

The Contractor shall engage targeted enterprises directly or indirectly in the performance of the contract to the extent that the total monetary value of such engagements (exclusive of VAT), expressed as a percentage of the value of the contract, is sufficient to achieve the specified minimum targeted enterprises contract participation (CPG_{2E}). The Contractor shall, within 5 working days of being requested by the Engineer to do so, submit details of his/her plan to achieve the minimum targeted enterprises contract participation (CPG_{2E}).

3.5.2.2 Records

Credits towards achieving the minimum targeted enterprises contract participation goal (CPG_{2E}) shall be granted by converting the total monetary value (exclusive of VAT) of the agreements between the Contractor, or Contractor's sub-contractors, and targeted enterprises, to a percentage of the value of the contract.

No credits shall be accorded should the Contractor (or sub-contractors):

- a) make direct payment to third parties in connection with the contract on behalf of targeted enterprises, when such payment is recovered by making deductions from payments due to the targeted enterprise;
- b) fail to enter into written contractual agreements with the relevant targeted enterprises.

Credits claimed towards the contract participation goal shall be denied where such written contractual agreements contain any of the following:

- i) conditions which are more onerous than those that exist in the prime contract (this contract);
- ii) payment procedures based on a pay when paid system;
- iii) authoritarian rights given to the employing contractor, with no recourse to independent adjudication in the event of a dispute arising.

No credits may be claimed in respect of targeted enterprises that do not adhere to statutory labour practices. No credits shall be accorded in respect of targeted enterprises engaged on work in respect of provisional sums or prime cost items.

In the event that a targeted enterprise sub-contracts to another targeted enterprise, only the value of the higher level sub-contract shall be granted as credit towards achieving the specified minimum CPG2E.

In addition to the form required for contract administration (the Targeted Enterprises Contract Participation Expenditure Report), the Contractor shall furnish the Engineer, upon written request, with documentary evidence that the targeted enterprises have their base of operations in the target area, copies of the contractual agreements with the various targeted enterprises, as well as documentary proof of payments made to the various targeted enterprises.

C3.5.3 PLANNING AND PROGRAMMING

C3.5.3.1 Programming

The Contractor must submit his construction programme within the time stated in the Contract Data and the Engineer shall be empowered to withhold all payment certificates until the Contractor has complied with his obligations in terms of this clause.

The programme is subject to the Engineers approval and remains so for the duration of the contract. If necessary, the Engineer may instruct the contractor to adjust his programme to suit other activities.

This programme shall be in the form of a sloping bar chart or other time/activity form acceptable to the Engineer. The programme shall clearly show the anticipated quantities and values of works performed each month.

The unit of measurement in respect of the time periods of activities will be a week. The programme shall reflect at least the following information:

- (i) A description of each of the major activities, which are to be carried out during the contract and the sequence in which they will be done.
- (ii) The programmed time for carrying out each activity.
- (iii) The dependencies which exist between the various activities and whether these are time-related or resources-limited or both.
- (iv) The critical path of activities on which final completion of the Works is dependent.
- (v) The amount of slack time for non-critical activities.

The following details shall also accompany the programme:

- (i) Proposed number of working hours per day, working days per week, "pay weekends": if any, and any proposed holiday or other shut down periods.
- (ii) Schedule of proposed labour resources (giving a breakdown of engineers/technicians, foremen, supervisions, artisans, skilled and unskilled labour) for each major activity.
- (iii) Schedule of proposed plant resources (giving a breakdown of description and number of units) for each major activity.

A network-based programme according to the precedence method shall also be provided showing the various activities in such detail as may be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the contractor.

If, during the progress of the work, the quantities of work performed per month fall below those shown on the programme, or if the sequence of operations is altered, or if the programme is deviated from in any other way, the contractor shall, within one week of being notified by the Engineer, submit a revised programme and network.

If the programme has to be revised by reason of the contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the works within the time for completion as defined in Clause 5.12 of the General Conditions of Contract (Third Edition 2015) or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by either providing more labour and plant on site, or using the available labour and plant in a more efficient manner.

Failure on the part of the contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in Clause 9.2 of the General Conditions of Contract (Third Edition 2015).

The approval by the Engineer of any programme shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to such programme and that the contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Engineer to instruct the contractor to vary the programme should circumstances make this necessary.

It is in the Contractor's interest to give as much information as possible about times allowed for construction as well as resource or other limitations on programme times, since this programme will form the basis for any contractual negotiations about extensions of time once the contract is commenced. Failure to comply with any of these requirements will entitle the Engineer to use a programme based on his own assumptions to evaluate claims for extension of time for the completion of the work and/or for additional compensation.

Once approved by the Engineer in writing, this programme shall be known as the contract programme and shall be revised only as described below. Minor revisions to the contract programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer require a major revision to the contract programme for whatever reason, the Contractor shall be notified in writing and such revision shall be submitted for approval to the Engineer within two weeks of receipt of such notification.

If a revised programme is issued, the effect on the initial critical path must be clearly indicated to the Engineer as must the steps required to be taken to ensure the completion of the contract within the stated Time of Completion.

The Contractor shall submit to the Engineer, at least three working days before each monthly site meeting, one paper print of the contract programme with detailed programmes (as described below) duly marked up to reflect the actual progress up to that date.

C.3.5.3.2 Reporting

The Contractor shall submit to the Engineer at least three working days before each monthly site meeting a monthly progress report, which shall include the following:

- (i) A summary of progress on site over the month immediately preceding the monthly site meeting. This shall be in the form of a detailed narrative to the contract programme.
- (ii) Highlight activities running late, indicating what steps have (or will) be taken (e.g. reprogramming), additional plant and/or labour resources, etc.) to ensure that the specified date of completion is not overrun.
- (iii) Status report of all plant employed on site.
- (iv) Status report of all labour resources employed on site.
- (v) Status report of all material on site.

No separate payment will be made for observing these requirements as it is deemed to be included in the amounts tendered for Section A: Preliminary and General

C3.5.4 METHODS AND PRECAUTION

3.5.4.1 Methods

Construction methods must be of such a nature that no person, property or improvements in the vicinity of the works is endangered. The Employer accepts no responsibility for any work executed without written permission outside the site of Works.

C3.5.4.2 Site Instruction Book

A triplicate book supplied by the Engineer to be used for site instructions shall at all times be kept on the site and is only for the use of the Engineer.

C3.5.4.3 Site Correspondence Book

A triplicate book supplied by the Contractor to be used for site correspondence shall at all times be kept on the site and is only for the use of the parties associated with the execution of the Works and that is represented on the monthly contractual meeting.

C3.5.4.4 Dealing with Water

The Contractor is responsible for the control of storm water from adjoining areas, the site and groundwater. No additional payment will be made and it will be deemed to be included in the rates of the relevant items.

C3.5.4.5 Survey Beacons

The Engineer will provide benchmarks with levels and coordinates. The Contractor's attention is drawn to clause 5.1.2 of SANS 1200 A. The Contractor must confirm the correctness and accuracy of the benchmarks provided before the commencement of any construction works and must confirm acceptance of the benchmarks in the site correspondence book. The Employer accepts no responsibility for incorrect benchmarks in the event that the Contractor failed to follow the above checking and acceptance procedure.

C3.5.4.6 Setting out of Work

The Engineer at the commencement of the Contract will show reference and level beacons to the Contractor and the Contractor will be responsible for transferring the data to the Site of Works.

The Contractor shall check the condition and accuracy of all reference and level beacons and satisfy himself that they have not been disturbed and are true with regard to position and level. A beacon that has been disturbed shall not be used until its true position and level have been re-established and the Engineer has certified the new values. The Contractor shall thereafter be held entirely responsible for the protection of all reference and level beacons.

The Contractor shall employ a capable surveyor to set out the Works to the required lines and levels. The Engineer shall be informed immediately should any discrepancy be discovered between the levels or dimensions obtained by the Contractor and those shown on the drawings.

Where a beacon is likely to be disturbed during construction operations, the Contractor shall establish suitable reference beacons at locations where they will not be disturbed during construction. No beacons shall be covered over, disturbed or destroyed before accurate reference beacons have been established and details of the positions and levels of such beacons have been submitted to the Engineer. The Contractor's reference beacons shall be of at least the same accuracy and sturdiness of construction as the existing beacons.

The Contractor shall submit the method of setting out he proposes to employ to the Engineer. The Contractor shall provide accurate control offline and level at all stages of construction.

The Engineer may check work set out by the Contractor and the Contractor at his own expense shall rectify any errors found. The Contractor shall supply any instrument, equipment, material and labour required by the Engineer for this survey work. Any assistance, including checking given to the Contractor by the Engineer or any setting out done by the Engineer for Contractor shall not be held as relieving the Contractor of his responsibility for the accurate construction of the Works.

The Contractor's survey instruments, and survey equipment shall be suitable for the accurate setting out of the Works and shall be subject to the approval of the Engineer. They shall furthermore be checked and correctly adjusted by the authorized agents before the commencement of the contract and subsequently when required by the Engineer and when otherwise necessary.

When required the Contractor shall, at his own expense, provide one labourer to assist the Engineer. The Engineer shall have the sole right of approving of such a labourer.

Survey work shall not be measured and paid for directly and compensation for the work involved in setting out shall be deemed to be covered by the rates tendered and paid for the various items of work included under the contract.

C3.5.4.7 Drawings

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Engineer. The Engineer will supply any figured dimensions, which may have been omitted from the drawings.

C3.5.4.8 Record Drawings

As the Works proceed the Contractor must keep detailed records of all changes to the plans. The actual position of all new and existing services must be indicated on the set of drawings supplied free of charge for this purpose.

Any information in the possession of the Contractor, which is necessary for the Resident Engineer to complete his "record" drawings, must be submitted to the Resident Engineer.

The certificate of completion will only be issued once the Engineer has received the record drawings with data compiled by a registered land surveyor. No separate payment will be made for this and it will be deemed to be included in the rates for the relevant items.

C3.5.4.9 Existing Services

The positions of existing services are shown on the drawings. The Contractor shall note that although the drawings have been prepared using available information they show only the approximate positions of existing services and shall be a guide only. The Contractor's attention is drawn to clause 5.4 of SANS 1200 A.

Before the Contractor commences operations, he must discuss with and have the approval of the Employer, authority or owner concerned regarding the method he proposes to use for relocating or safe-guarding any services and existing works he may encounter during construction.

The positions of existing services shown on the Drawings are given in good faith and no guarantee can be given that:

- these services actually are in the approximate positions indicated.
- that these are the only services in the vicinity, and
- that the nature and description of these services are correct.

The Contractor shall be responsible to locate and safeguard any existing service or work he may encounter during construction and shall obtain clearance from the Employer, authority and the Engineer before commencing work in the proximity of existing services or works.

The Contractor shall be responsible for any damage to such existing services and works in the execution of this contract and shall reimburse the Employer, authority or the owner concerned for any repairs required and for damages.

The Contractor shall be responsible for immediately notifying the Engineer and the authorities concerned regarding any damage caused to public services and existing works.

The Authority concerned shall carry out any alternations to public services unless the Contractor is instructed otherwise.

The Contractor shall provide the necessary assistance during any operations necessary in connection with the removal, alternations or safeguarding of any public service.

C3.5.4.10 Testing and Quality Control

The Contractor shall supply the Engineer with a quality plan within 14 days after being appointed, showing how quality assurance will be managed on site.

The contractor shall engage the services of an approved independent testing laboratory for the testing of materials and the quality testing of layer works, to ensure that his work conforms to the specifications. No separate payment will be made for such testing by an approved laboratory, the costs of which will be deemed to be included in the contractor's tendered rates for the various items of work requiring testing in accordance with the specifications.

C3.5.4.11 Certificates of Payment

The statement to be submitted by the Contractor in terms of clause 6.10 of the General Conditions of Contract (Third Edition 2015) shall be prepared in accordance with the standard payment certificate prescribed by the Engineer and shall consist of at least four sets of A4-sized paper copies.

All costs resulting from the preparation and submission of the statements shall be borne by the contractor.

C3.5.4.12 Construction in Limited Areas

In certain cases working space may be limited. The method of construction in these restricted areas will depend largely on the contractor's plant. However, the contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used to achieve these cross-sections and dimensions, and that the rates and prices tendered shall be deemed to include full compensation for any difficulty encountered while working in limited areas and narrow widths, and that no extra payment will be made, nor will any claim for payment due to these difficulties be considered.

C3.5.4.13 Spoil Material

All spoil material shall be spoil off-site at a site which is to be identified by the Contractor and approved by the Engineer.

C3.5.4.14 Length of Trenches

Where no limitations are imposed by construction stages and unless otherwise permitted in writing by the Engineer, not more than 100m of trench in any one place shall be opened in advance of pipe laying operations.

No trench may be left open over the builders' holidays or weekends.

C3.5.4.15 Samples

The Contractor shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The Engineer reserves to himself the right to submit samples to any test to ensure that the material represented by the sample conforms to the requirements of the specifications.

C3.5.4.16 Manufacturer's Instructions

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed in writing by the Engineer.

C3.5.4.17 Proprietary Materials

Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms "or other approved" or "or approved equivalent" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Engineer.

C3.5.4.18 Notices, Signs, Barricades and Advertisements

The Contractor shall erect the necessary signs, notices and barricades for the duration of the contract

in order to safeguard both the works and the public.

Notice, the Contractor may use signs and barricades as well as advertisements only upon approval, and the Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to have any sign, notice or advertisement moved to another position or to have it removed from the site of the works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

Such notices, signs and barricades shall be provided and erected at the Contractor's own expense.

The standard name board of the South African Association of Consulting Engineers is specified, the cost of which shall be included in the rates tendered for the item Section 1: Preliminaries of the Bill of Quantities

C3.5.4.19 Workmanship and Quality Control

The onus to produce work which 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 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 costs of all supervision and process control, including testing thus carried out by the contractor shall be deemed to be included in the rates tendered 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 that will be required for process control. The contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion of every part of the work and submission thereof to the Engineer for examination, the contractor shall furnish the Engineer with the results of all relevant tests, measurements and levels to indicate compliance with the specifications.

C3.5.4.20 Transport of Material

All costs of transporting material, including overhaul, shall be included in the applicable tendered rates. All references in the specifications to transport, overhaul and haul distances shall be deleted irrespective of whether or not the deletion is included in these Specification Data.

C3.5.4.21 Liaison with Local authorities

The contractor will have to liaise with local authorities regarding the following matters:

- (a) Dealing with traffic.
- (b) Locating of existing underground services.
- (c) Protection of existing services during construction.

All the relevant authorities were notified of above operations. It is then the contractor's onus to immediately contact all these authorities and to accommodate their involvement in his programme of work. The contractor should also warn the authorities at least 48 hours before the actual work commence. Compensation for delays, losses or accidents will not be considered should the contractor at any time have failed to keep the local authorities informed.

The engineer or employer must immediately be notified, should the contractor experience any problem regarding work, which involves a local authority.

C3.5.4.22 Format of communication

All communication regarding the contract shall be channelled through the Engineer and / or his duly authorised representative.

C3.5.4.23 Management meeting

Management meetings shall be held once a month for the duration of the contract on dates and times to be agreed.

C3.5.4.24 Daily records

Daily records of site activities must be kept accurately. This would include record of plant, personnel, site and weather conditions.

C3.5.4.25 Interference with Municipal staff and operations

The Contractor shall ensure that none of his staff interfere in any way with any municipal staff member or their functions.

Any member of the Contractor's staff found to be interfering with municipal staff or operations in any way shall be removed from the site and shall not be allowed to return.

C3.6 Annexes

CONTENTS

Annexure 1:	B-BBEE Sub-contractor Expenditure Report
Annexure 2:	Project Labour Report
Annexure 3:	Environmental Management Plan
Annexure 4:	Health and Safety Plan

ANNEXURE 1

CONTRACT NO. AND NAME: _____

CONTRACTOR: _____

B-BBEE SUB-CONTRACT EXPENDITURE REPORT BASED ON PAYMENT CERTIFICATE NO.

Value of the contract (as defined in Schedule 21: Preferencing Schedule) (P*)	R	B-BBEE Status Level of Prime Contractor	
---	---	---	--

Name of Sub-contractor (list all Sub-contractors)	B-BBEE Status Level of Sub-contractor ¹	Total Value of Sub-contract (Excl VAT) ¹	Value of Sub-contract work to date (Excl VAT)	Value of Sub-contract work to Sub-contractors with a lower B-BBEE Status Level than Prime Contractor
Sub-contractor A				
Sub-contractor B				
Sub-contractor C				
¹ Documentary evidence to be provided			Total: Expressed as a percentage of P*	
				%

Signatures
Contractor: _____

Date:

Engineer/
Engineer's
Representative: _____

Date:

ANNEXURE 2

Project Labour Report

Project/Contract Name:						Budget: (tick one)		Capital	☒	Operating	
Project/Contract Number:						WBS No./Cost Centre No.:					
Contractor:						Project/Contract Start Date:					
Consultant:						Project/Contract End Date:					
CLO Name:			CLO ID Number:			Project/Contract Value (incl. allowance for escalation/excl. VAT):					
Month:						Project Labour Intensity Target/ Specified Minimum Targeted Labour Contract Participation Goal:					
Total value of work done to date (incl. escalation/excl. VAT):											
Number of workers	Name	Surname	ID Number/DOB	Targeted Labour (Y/N)	Daily Rate	Number of days worked this month (incl. training)	Disabled (Y/N)	Number of training days this month	Course Name	Training Service Provider	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
Totals for sheet											
Sheet of											

Signatures

Contractor: _____
 Consultant/Project Manager: _____

Date: _____
 Date: _____

ANNEXURE 3: ENVIRONMENTAL MANAGEMENT PLAN

ENVIRONMENTAL MANAGEMENT SPECIFICATION

EM 1 SCOPE

This specification covers the requirements for controlling the impact on the environment of construction activities.

EM 2 DEFINITIONS

EM 2.1 Environment means the surroundings within which humans exist and that are made up of –

- (i) the land, water and atmosphere of the earth
- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

EM 2.2 Potentially hazardous substance is a substance, which, in the reasonable opinion of the Engineer, can have a deleterious effect on the environment.

EM 2.3 Method Statement: a written submission by the Contractor to the Engineer following a request by the Engineer, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, identified by the Engineer when requesting the Method Statement, in such detail that the Engineer is enabled to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications.

The Method Statement shall cover applicable details with regard to :

construction procedures,
materials and equipment to be used,
getting the equipment to and from site,
how the equipment/material will be moved while on site,
how and where material will be stored,
the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
timing and location of activities,
compliance/non-compliance with the Specifications and
any other information deemed necessary by the Engineer.

EM 2.4 **Reasonable** means, unless the context indicates otherwise, reasonable in the opinion of the Engineer after he has consulted with a person, not an employee of the Employer, suitably experienced in "environmental implementation plans" and "environmental management plans" (both as defined in Act No. 107, 1998).

EM 2.5 **Solid waste** means all solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

EM 2.6 **Contract** means the General Conditions of Contract and Special Conditions, Specifications, Drawings, Tender, written records of matters agreed after the submission of the Contractor's tender, Letter of Acceptance and Agreement, together with order documents which the parties have agreed in writing shall form part of the Contract and such amendments or additions to the Contract as may be agreed in writing between the parties.

EM 2.7 **Contaminated** water means water contaminated by the Contractor's activities.

EM 3 ENVIRONMENTAL MANAGEMENT PLAN

EM 3.1 Demarcation of the site

For the purpose of the EMP, the site shall be divided into two areas identified by the Engineer and the Contractor:

The construction camp comprising all offices, lay down yards, vehicle wash areas, fuel and material storage areas, batching areas and other infrastructure that is required for the running of the job.

The working area in which construction activity is permitted to take place. No infrastructure, permanent lay down or storage areas shall be established in this working area unless specified in the project specification or prior approval is obtained from the Engineer.

EM 3.1 Construction camp

The Contractor shall provide the Engineer with a plan showing the positions of all buildings, yards, vehicle wash areas, batching areas and other infrastructure for approval by the Engineer at least ten (10) days prior to the commencement date. The construction site shall be planned in such away so as to affect as small an area as practically possible. The Engineer shall approve the location and layout of the construction camp prior to establishment.

EM 3.2 Fencing of the site

IF a temporary fence is required, the Contractor shall erect and maintain such a fence (demarcating) the boundary of the working area, construction camp and access roads) to the satisfaction of the Engineer. The erection of this fence shall be one of the first tasks undertaken by the Contractor after the commencement date. The boundaries between the construction camp area and the working area within the site shall also be fenced.

The contractor shall ensure that the erection of the fencing causes minimal disturbance to flora, fauna, natural, historical and culture features. A method statement shall be submitted to the Engineer prior to erection to ensure proper positioning of the fence.

All material left over from fencing operations shall be collected after the fence has been erected and removed from site. Fences shall not be moved or removed without the written consent of the Engineer. The Contractor throughout the construction period shall maintain all fences.

EM 3.3 Workshop

Any workshop shall be located inside the demarcated construction camp area. The exact location and design of the workshop shall be as approved by the Engineer prior to establishment. The workshop shall have a smooth impermeable (concrete) floor. The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil). When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. All waste material shall be disposed of in accordance with national, regional and local laws, regulations and by-laws. The waste material shall be regularly removed off site and disposed of at an approved waste site.

EM 3.4 Eating areas

The Contractor's employees shall eat in the designated eating area indicated on the Contractor's drawing of the construction camp that has been approved by the Engineer. No changes to the eating area shall be made without the approval of the Engineer. The Contractor shall provide shade and adequate scavenger-proof and weatherproof refuse bins in this area.

Any cooking on site shall only be undertaken in the eating area and be done on well maintained gas cookers with fire extinguishers present. No cooking shall be done anywhere else on site and no fires are permitted.

EM 3.5 Ablution facilities

The exact location of the toilets shall be as approved by the Engineer. The Contractor shall provide toilets and shall be responsible for the maintenance and servicing on a daily basis. The contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied. Burial of waste from toilets on site is strictly prohibited. The toilets shall be maintained in a clean state. Performing ablutions anywhere other than in toilets is strictly prohibited. Leaking toilets shall be repaired immediately or removed from site.

EM 3.6 Solid waste collection

"Solid waste" refers to all solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

The Contractor shall set up a waste control and removal system. The Contractor shall submit a method statement for waste control and removal to the Engineer for approval prior to commencement. Bins shall be closed, weatherproof and scavenger-proof.

Waste shall be collected from these bins on a daily basis and shall be stored in a central collection area prior to removal off-site. This central collection area shall have appropriate storage containers (closed and weatherproof) bunded and lined with plastic or concrete. The waste from this central collection area shall be disposed off-site at an approved waste site. Waste shall be removed from site on a regular basis as approved by the Engineer. Waste shall not be burnt or buried on site or in the surrounding area. Where possible, appropriate material shall be reused or recycled.

EM 3.7 Fuel storage area

Fuels required for use during construction shall be stored in a depot at the construction camp at a location as agreed upon by the Engineer. The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in tanks with lids, which are kept firmly shut. The tanks shall be situated on a smooth impermeable (plastic or concrete) base with an earth bund. The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 1,5 x the total capacity of the storage tank. The bunded area shall be emptied of water following rainfall events. The floor of the bund shall be sloped towards an oil trap or sump to enable any spilled fuel and / or fuel-soaked water to be removed.

EM 3.8 Concrete batching area

Cement and concrete are regarded as hazardous to the environment due to the high pH of the material and the chemicals it contains.

The Contractor shall submit a method statement for mixing of concrete for approval by the Engineer indicating where the mixing will take place and the method to ensure that wastewater and materials are contained in the batching area and disposed of correctly. Concrete shall not be mixed directly on the ground.

EM 3.9 Equipment maintenance area

All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking Equipment shall be repaired immediately or removed from site. Where practical, all maintenance of equipment and vehicles on Site shall be performed in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Engineer prior to commencing activities.

The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Engineer's approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil or vegetation.

When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. Drip trays shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles).

The washing of equipment shall be restricted to urgent maintenance requirements only. All washing shall be undertaken in the workshop or maintenance areas, and these areas must be equipped with a suitable impermeable floor and sump/oil trap. The use of detergents for washing shall be restricted to low phosphate and nitrate containing, low sudsing type detergents.

EM 3.10 Materials

EM 3.10.1 Material handling, use and storage

The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (e.g. which access roads to use, including "no go" areas, speed limits, dust control, etc.) required to comply with the EMP before they arrive at site and off load any materials. The Contractor shall ensure that these delivery drivers are supervised during off loading, by someone with an adequate understanding of the requirements of the EMP, so as to ensure that all relevant requirements of the EMP are followed.

Materials shall be appropriately secured to ensure safe passage between destinations. Loads including, but not limited to sand, stone chip, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.

All manufactured and/or imported material shall be stored within the Contractor's camp, and if so required by the Project Specification, out of the rain. All lay down areas outside of the construction camp shall be subject to the Engineer's approval and shall not unreasonably be withheld.

EM 3.10.2 Hazardous Substances

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous materials.

The contractor shall provide the Engineer with a list of all hazardous materials to be used on site, together with the storage, handling and disposal procedures of the materials. This information shall be available to all personnel on site.

Hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances) used during construction shall be stored in secondary containers within the demarcated construction camp area. The relevant Material Safety Data Sheets (MPSS) shall be available on Site. Procedures detailed in the MPSS's shall be followed in the event of an emergency situation.

If potentially hazardous substances are to be stored on site, the Contractor shall provide a Method Statement detailing the substances/materials to be used, together with the storage handling and disposal procedures of the materials.

EM 3.10.3 Fuel (Petrol and Diesel) and Oil

Where reasonably practical, plant shall be refuelled at the depot or at the workshop as applicable. If it is not reasonably practical then the surface under the refuelling area shall be protected against pollution to the reasonable satisfaction of the engineer prior to any refuelling activities. Enretech or similar products approved by the Engineer shall be available during any refuelling of maintenance activities.

EM 3.11 Fire control

No fires may be lit on site. Any fires that occur shall be reported to the Engineer immediately. Smoking shall not be permitted in those areas where it is a fire hazard which areas shall include the workshop and fuel storage areas and any areas where the vegetation or other material is such as to make liable the rapid spread of an initial flame.

The Contractor shall appoint a Fire Officer who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedure to be followed.

The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times. This shall include at least rubber beaters when working in urban open spaces and fynbos areas, and at least one fire extinguisher of the appropriate type when welding activities are undertaken.

EM 3.12 Emergency procedures

The Contractor shall submit Method Statements covering the procedures for the following emergencies :

EM 3.12.1 Fire

The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he/she can no longer control it. The Contractor shall ensure that his employees are aware of the procedure to be followed in the event of a fire.

EM 3.12.2 Accidental leaks and spillages

The Contractor shall ensure that his employees are aware of the procedure to be followed for dealing with spills and leaks, which shall include notifying the Engineer, CMC Scientific Services and the relevant authorities. The Contractor shall ensure that the necessary materials and equipment for dealing with spills and leaks is available on Site at all times. Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Engineer.

In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb and where possible be designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to absorb/deal with a minimum of 200 l of hydrocarbon liquid spill.

- EM 3.13 **Care of surrounding areas**
The Contractor shall ensure that no contamination of or damage to the surrounding area or watercourses shall occur as a result of any of his activities during construction.
- Care shall be taken to ensure no accidental spillage or leakage occurs. Should any spillage or leakage occur the Contractor shall immediately stop his operation and clean up the spillage. He shall then rectify the cause of the spillage or leakage before proceeding further to ensure that no further spillages occur.
- The cleanup of spillage and any damage caused by the spillage or leakage shall be for the Contractor's account. The Contractor shall submit a method statement for management of accidental leaks and spillages to the Engineer for approval.
- EM 3.14 **Erosion And Sedimentation Control**
The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall, in addition, comply with such detailed measures as may be required by the Project Specification. Where erosion and/or sedimentation, whether on or off the Site, occurs despite the Contractor complying with the foregoing, rectification shall be carried out in accordance with details specified by the Engineer. Where erosion and/or sedimentation occurs due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Engineer.
- EM 3.15 **Tolerances**
Environmental management is concerned not only with the final results of the Contractor's operations to carry out the Works but also with the control of how those operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product but also to the standard of the day-to-day operations required to complete the Works.
- It is thus required that the Contractor shall comply with the environmental requirements on an ongoing basis and any failure on his part to do so will entitle the Engineer to certify the imposition of a fine subject to the conditions in the Pro Forms : Protection of the Environment and the details set out in the Project Specification.

ANNEXURE 4: HEALTH AND SAFETY PLAN



Project Health and Safety Specification

In terms of Construction Regulations 2014

Project Client

LANGEBERG MUNICIPALITY

Description of Project Works

**ROADS PRECINCT
ROBERTSON**

Project Location

AS ABOVE

Preparation Date

MARCH 2026

Project Health and Safety Specification developed by:

Mark Winter PrCHSA, (SACPCMP)
Safe Working Practice (Cape Town) Pty Ltd
Cell: 071 603 2213
Tel: 021 701 0470
Email: markw@safeppractice.co.za



PROJECT HEALTH AND SAFETY SPECIFICATION

TABLE OF CONTENTS

1. Specific Project Information

- 1.1 Introduction and Definitions
- 1.2 Background to the Health and Safety Specification
- 1.3 Purpose of the Health and Safety Specification
- 1.4 Implementation of the Health and Safety Specification
- 1.5 Project Directory
- 1.6 Project Details
- 1.7 Existing Environment
- 1.8 Available Drawings
- 1.9 Project Health and Safety Requirements
- 1.10 Interface and Restrictions by Client
- 1.11 Project Close Out
- 1.12 Safety File Return to Client

2. Further Requirements

- 2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014
- 2.2 Management and Supervision of Construction Work
- 2.3 Notification of Intention to Commence Construction Work
- 2.4 Construction Work Permit
- 2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site
- 2.6 Competency for Contractor's Responsible Persons
- 2.7 Compensation of Occupational Injuries Act 130 of 1993 (COIDA)
- 2.8 Occupational Health and Safety Policy
- 2.9 Health and Safety Organogram
- 2.10 Risk Assessments
- 2.11 Health and Safety Representative(s)
- 2.12 Health and Safety Committee
- 2.13 Medical Certificate of Fitness
- 2.14 Health and Safety Training
 - 2.14.1 Induction
 - 2.14.2 Awareness
- 2.15 Competency
- 2.16 General Record Keeping
- 2.17 General Inspection, Monitoring and Reporting
- 2.18 Emergency Procedures
- 2.19 First Aid Box and First Aid Equipment
- 2.20 Accident / Incident Reporting and Investigation
- 2.21 Hazards and Potential Situations
- 2.22 Occupational Health and Safety Signage
- 2.23 Management of Contractors by Principal Contractor
- 2.24 Stacking of Materials
- 2.25 Housekeeping and General Safeguarding on Construction Sites
- 2.26 Construction Vehicles and Mobile Plant
- 2.27 Electrical Installations and Machinery on Construction Sites
- 2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites
- 2.29 Water Environments



- 2.30 Fire Precautions on Construction Sites
- 2.31 Construction Employees' Facilities
- 2.32 Fall Protection
- 2.33 Temporary Works
- 2.34 Excavation
- 2.35 Demolition Work
- 2.36 Tunnelling
- 2.37 Scaffolding
- 2.38 Bulk Mixing Plant
- 2.39 Rope Access Work
- 2.40 Hazardous Chemical Substances (HCS)
- 2.41 Noise Induced Hearing Loss
- 2.42 Explosives and Blasting
- 2.43 Personal Protective Equipment (PPE)
- 2.44 Asbestos
- 2.45 Pressure Vessels (Including Gas Bottles)
- 2.46 Fire Extinguishers and Fire Fighting Equipment
- 2.47 Lifting Machinery and Tackle
- 2.48 Ladders and Ladder Work
- 2.49 General Machinery
- 2.50 Portable Electrical Tools
- 2.51 High Voltage Electrical Equipment
- 2.52 Public Health and Safety
- 2.53 Night Work
- 2.54 Environmental Conditions and Flora and Fauna
- 2.55 Occupational Health
- 2.56 Suspended Platforms
- 2.57 Material Hoists
- 2.58 Explosive Actuating Fastening Devices
- 2.59 Confined Spaces
- 2.60 Alcohol and Drugs
- 2.61 General Practices when Working at Heights
- 2.62 Traffic Accommodation
- 2.63 Ventilation and Lighting in the Work Place
- 2.64 Nuclear Density Gauge (Troxler)
- 2.65 Ergonomics Regulation of 2019

Annexure A Requirements for the Safety Plan Assessment

Annexure B Legal Appointments

Annexure C Baseline Risk Assessment

Annexure D Safety Specification and Baseline Risk Assessment Issue Register



1.0 SPECIFIC PROJECT INFORMATION

1.1 INTRODUCTION AND DEFINITIONS

THE REQUIREMENTS OF THE CONSTRUCTION REGULATIONS 2014 (AND GUIDANCE NOTES OF 2017) HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE REGULATIONS PLACE LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THE REGULATIONS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND OTHER ASSOCIATED HEALTH AND SAFETY REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

PLEASE NOTE THAT THE TERMS "CONTRACTOR" AND "PRINCIPAL CONTRACTOR" HAVE THE SAME MEANING AS THAT IN THE CONSTRUCTION REGULATIONS AND ARE USED INTERCHANGEABLY IN THIS DOCUMENT, I.E., REFERENCES TO "CONTRACTOR" REFER TO PRINCIPAL CONTRACTOR AND/OR CONTRACTOR AS THE REGULATIONS PERTAIN TO THEIR FUNCTIONS.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to work on site. Compliance to the requirements of the Occupational Health and Safety Act 1993 is an additional requirement of this Health and Safety Specification and is part of the Contractor's responsibility. The Client, and/or their agents, will monitor that all Contractors comply with the requirements of such legislation.

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

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

"agent" means a competent person who acts as a representative for a Client;

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

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

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

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

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

"construction site" means a workplace where construction work is being performed;



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

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

"construction work" means any work in connection with -

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

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

"contractor" means an employer who performs construction work;

Note:

a) Includes organisations and or self-employed person that contracts with a client, principal contractor, or a contractor to carry out construction work.

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

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

"designer" means a competent person who-

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

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance;

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

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

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

"falsework" means a combined system of formwork and support work;

"formwork" means temporary or permanent shutters used to form wet concrete into elements of a structure, and includes both horizontally and vertically placed shutters;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;



"fall protection plan" means a documented plan, which includes and provides for -

- all risks relating to working from a fall risk position, considering the nature of work undertaken;
- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file" means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the Client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the Client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the Client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning, or dismantling and where any construction work involves a risk of a person falling;



"support work" means the temporary structure erected to support the formwork before the casting of a concrete element of a structure.

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"tunnelling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings, and reports):

- Tender documents
- Drawings

IMPORTANT NOTE:

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents, and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has arranged for the preparation of this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.

Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.

Failure to comply with the requirements of this Safety Specification will result in severe sanction and the severity of the sanction will depend on the severity of the noncompliance.



The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will arrange for Health and Safety audits to be conducted on site on their behalf to monitor health and safety compliance by contractors.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

The purpose of this site-specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Safety Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards, and expectations that the contractor must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities. Please note that a detailed OHS bill of quantities must be provided by the contractor on all Construction Work Permit projects. The Bill of Quantities will form part of the Construction Work Permit appellation presented to Department of Labour for approval.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with other Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all Contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client (or their appointed safety agent) prior to commencement with construction work.



1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to “definitions” section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to “Client” will apply to their appointed “Safety Agent”, where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented, and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the Client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor’s safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor’s health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor’s health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the Client requires additional work to be performed as a result of a design change or error in construction due to the actions of the Client, the Client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the Client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Safety Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to “definitions” section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.



1.5 PROJECT DIRECTORY		
Project Client	Langeberg Municipality	Tel: TBA
Contact Person	Neil Albertyn	Cell: 082 894 7906 e-mail: NAlbertyn@langeberg.gov.za
Project Manager	Invictus Engineering Services	Tel: TBA
Contact Person	Francois Ryke	Cell: 082 372 8644 e-mail: francoisr@invictuseng.co.za
Civil Engineer	Invictus Engineering Services	Tel: TBA
Contact Person	John Sherriff	Cell: 084 610 0061 e-mail: johns@invictuseng.co.za
Electrical Engineer	Invictus Engineering Services	Tel: TBA
Contact Person	Wouter van der Toorn	Cell: 083 293 4089 e-mail: woutervdt@invictuseng.co.za
Construction Safety Agent	Safe Working Practice	Tel: 021 701 0470
Contact Person	Mark Winter	Cell: 071 603 2213 e-mail: markw@safeppractice.co.za

OTHER PARTIES DIRECTORY	
Department of Labour WESTERN CAPE – Fezeka Ngalo	Tel: 021 441 8158 e-mail: fezeka.ngalo@labour.gov.za Cell: 083 365 0681
Telecommunications, Gas, Water and Electricity Contractor to apply for and refer to wayleave information from service providers for the nature and location of services. Refer all queries Project Manager.	



1.6 PROJECT DETAILS

Description of Works

Establishment on site by the Contractor
The supply of labour, tools, equipment, materials and supervision to complete the work
Setting out of the Works

- Cluster 1:
 - Upgrades to road and pedestrian infrastructure in Johan de Jongh Drive;
 - Upgrades to road and pedestrian infrastructure in Wesley Street.
- Cluster 2:
 - New walkway from Church Street to Main Road;
 - Raised Intersection on R60.
- Cluster 3:
 - Upgrades to roads and pedestrian infrastructure in Paddy Street;
 - Upgrades to roads and pedestrian infrastructure in May Street;
 - Upgrades to roads and pedestrian infrastructure in Qhanqiso Street.

This description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

Anticipated Construction Duration

Cluster 1 – 10 months
Cluster 2 – 3 months
Cluster 3 – 8 months

Provisional Start Date

September 2026

Provisional Completion Date

August 2029

Construction Work Permit Required for the Project?

Yes

1.7 EXISTING ENVIRONMENT

Hazards particular to this project by virtue of location:

- Works taking place in close proximity to a stream in places.
- Members of the public present.
- Pedestrian and vehicle traffic with peak times.
- Working in/next to existing roadways.
- May be safety and security issues on site.
- Both residential and commercial property in area of works.
- Live services present.

Overhead, Above Ground and Underground Services crossing the site:

Overhead: Principal Contractor to check area and take precautions against damage to services and risk of injury to employees. Adjacent overhead electrical reticulation in sections.

Underground: Principal Contractor to check area and take precautions against damage to services and



risk of injury to employees. Various services present - Sewer, stormwater, water, electrical and communication.

Ground level: Principal Contractor to check area and take precautions against damage to services and risk of injury to employees. Services present – Street lights.

Service Drawings available: No.

Wayleaves required: Yes

Isolations required: No

Existing structures on site and surrounding land use (with a significant impact on Health & Safety):

- Works taking place in close proximity to residential and commercial properties and in peri urban areas.

Existing ground conditions and ground survey report: ENGINEER TO PROVIDE INFO

- No Geo tech report available
- Max depth of excavation: 1m
- No dewatering or shoring anticipated
- No known soil contamination issues
- Principal Contractor to discuss any queries with the Project Manager

Existing Traffic Systems

Condition: Existing roads in variable condition.

Restrictions to access: None known.

Speed restrictions: Usual urban speed limits apply, reduced in construction area as per traffic management.

1.8 AVAILABLE DRAWINGS

Refer to tender documentation.

1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS

Significant health and safety hazards identified by Designer and Safety Agent:

Protection of members of public and road users – working from and in the existing roadways – The health and safety of members of public, road users and workers must be a priority at all times and all necessary steps must be taken to protect them. Existing roads will remain at least partially open during works. This is a critical hazard to traffic/members of public and to workers in the road. The Principal Contractor is responsible for directional signage to divert the public and road users. Temporary road signs to specification and works must be visible to road users. Traffic management plan will be required.

Use of delivery or support trucks used for the delivery and removal of material and equipment on open roadways – plant must be effectively separated from members of public and unauthorised



personnel. Trained flag persons wearing high visibility clothing to be in place as required. Exclusion zone to be in operation when the support vehicles are in use next to the roadways.

It is envisioned that **plant** will be moving on the road and must be made visible at all times. Parking of this plant must be strictly monitored by the contractor at all times. Use trained flag persons as applicable. Plant must be effectively separated from members of public and unauthorised personnel.

Noise and Dust control: Measures to be put in place by the appointed contractor to minimize the dust and noise on site. Contractor must take sufficient steps to reduce the production of noise and dust.

Existing services – Contractor to ensure that services are not damaged, or pose risk to workforce.

Hazardous Substances – Wear PPE and work under supervision. MDS for product/s must be available.

Working next to water source – works will take place next to a water source (stream) at one point.

Warning Notices: Construction warning signage must be prominently displayed to avoid access to site areas by unauthorised persons.

Risk of fires caused by construction works and / or Smoking – ensure correct measures are in place for fire control to ensure no fires will break out. Fire extinguishing equipment to be readily available at all times especially during high risk activities. The smoking of cigarettes is also to be monitored and adequate smoking areas and smoking control measures to be put in place.

Local Businesses and Enterprises and Residents: Proper communication between the Principal Contractor and local businesses and enterprises and affected residents will be of utmost importance for this project to be successful. Communication must be managed effectively by the contractor.

Other construction hazards that the contractor can reasonably expect are as follows:

Compacting and Filling
Compactor Operations
Cutting Off Disc
Electric Tools and Electrical Installations
Flammable Liquids / Gas
Hand tools
Manual Handling of General Items
Plant/Vehicle and Equipment Operation

NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these hazards and risks.

ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS (FOR HEALTH AND SAFETY)

Pre-Construction Phase Method Statements

- To be advised

Construction Phase Method Statements

- Traffic management
- Other method statements to be advised.



ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)

Permit to Dig: Refer to wayleaves.

Permit to Enter Excavations: The Principal Contractor is to formally manage all excavation work in a safe manner.

Road Works Permit: To be advised.

Permit to Work with Electricity: n/a.

Confined Space Permit: n/a.

Hot Works Permit: The Principal Contractor is to formally manage all hot work in a safe manner.

Permit to Work under Power Lines: The Principal Contractor is to formally manage all work in vicinity of power lines and overhead services in a safe manner, where applicable.

Blasting: n/a.

Client issued permit for work in restricted areas: To be advised.

Temporary Works: n/a.

CONTRACTOR SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's Safety Officer must be kept on site in the safety file and nonconformances reported by the Safety Officer to the Contractor's management team. All nonconformances identified by the Safety Officer and client's safety agent must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

Please note that as from 7th August 2018 the safety officer must be professionally registered with the SACPCMP. Proof of registration with the SACPCMP must be provided.

If registered as a Candidate proof of mentorship and weekly visits by mentor must be available on site.

The requirement for this site is that a full time Safety Officer be located on site by the Principal Contractor.

MEDICAL CERTIFICATE OF FITNESS (ANNEXURE 3)

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template.

MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate competent person must be appointed by the principal contractor. Proof of an all-inclusive assessment by the Principal Contractor of the Construction Manager's Competency in construction management and health and safety competency must be available in the Safety File.

The Construction Manager, Alternate Construction Managers, Assistant Construction Managers, and designated construction supervisor/s must, as a minimum, have training in Legal Liability, Construction Regulation 2014 and the OHS Act and Regulations.



ENVIRONMENTAL CONDITIONS

Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain, lightning and wind.

The open nature of the site works will not preclude any of the above.

ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC.

Access to site by Construction Vehicles: Via existing roads.

Access to site by Construction Workers and Visitors: Via existing roads.

All service providers must sign a 37.2 Mandatory Agreement and must be inducted before they can be allowed on site.

ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD

Site camp location and set up

- **Restrictions / requirements:** }
 - **Storage areas:** }
 - **Security:** }
- Contractor to advise in consultation
with Engineer / Professional Team

Ablutions and Welfare Arrangements

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Toilets should be provided with built in facilities for hand washing. Please note further that control measures form an important part of ablutions provision on site ref soap and water/hand sanitiser, signage, etc:

- **Toilets:** }
 - **Washing facilities:** }
 - **Drinking Water:** }
 - **Shelter:** }
 - **Showers:** }
- Contractor to provide as per Regulations
- Contractor to provide as per Regulations

Mobile site facilities requirements:

A mobile toilet will be required for sites that cannot facilitate a permanent location for ablution units and must be available for each gender per location.

The use of a mobile toilet must be prepared and setup correctly with additional anchors and available toiletries prior to each working day and to be first priority when changing location of works along a set working path.

Teams are to ensure that the toilets are cleaned correctly and suitable for easy and hygienic uses and recorded on a daily register.



PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC

Excavation Fencing: excavations are to be fenced off to protect the public.

General Fencing of Site: Requirements are to be discussed with the Project Manager.

- Pedestrian foot traffic and vehicular traffic is to be redirected in a safe manner where applicable – Public safety is to be observed. Traffic management required.
- Note that hoarding will be required to be in place by the contractor.

Warning Notices: Construction warning signage must be prominently displayed to avoid unauthorised access to site and to warn of dangers associated with construction works.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:

Overalls: Yes.

Safety Harnesses: n/a.

Hard Hats: As per contractor's risk assessment.

Reflective Vests: Yes.

Goggles / gloves / ear defenders / respiratory protection: Yes – as per contractor's risk assessment.

Safety Footwear: Yes.

Specialist Equipment (e.g. for confined Spaces): As per contractor's risk assessment.

HAZARDOUS SUBSTANCES

The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:

Fuels – oils – solvents – cement - bitumen – asphalt - road marking paint

1.10 INTERFACE AND RESTRICTIONS BY CLIENT

Contractor must note that the following Client activities will continue during construction:

- Roadway area is accessible to the general public.

The following Client safety rules and/or requirements are to be observed:

All workers are to receive induction prior to commencement of work on site.

Other safety rules and requirements to be advised at induction.

Please also refer to tender document.

The following were highlighted by the client:

- PPE to be worn at all times.



- Toilets to be utilized for urinating. Not against poles, structures, in bushes etc. (Fines to be issued for non-compliance)
- Traffic Safety Officer to be present as applicable.
- Traffic accommodation to be as per SARTSM specification and as approved by the Project Manager.
- Housekeeping to be monitored. Site is to be kept clean daily. No Debris to be left outside of designated stockpile area. The contractor shall provide the location for approval of proposed stockpiling area.

Restrictions on times, access or other restrictions by Client

Please refer to tender document.

Other restrictions may be advised at induction.

The following were highlighted by the client:

- Working hours are as per tender.
- Road closure arrangement are to be approved by the Professional Team.
- No work to occur on Saturdays, Sundays, or Public holidays. Permission is to be sought otherwise from the Project Manager.

1.11 Project Close Out

The Health and Safety files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project in the form of a consolidated safety file. The following list is an example of what should be included but is not exhaustive. The Safety Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are responded to. Documentation would include all health and safety related records from the start of the project. All records to be in hard copy or electronic format and submitted to the Safety Agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Consolidated Health and Safety close out file requirements include:

- Health and safety specification (most recent version)
- Principal Contractor's health and safety plan/s
- Site safety organograms
- Legal appointments
- Notification to Department of Labour of commencement of work / Construction Work Permit
- Workman's Compensation Letters of Good Standing for the project
- Full safety files for all contractors as well as their close out reports
- List of all contractors who worked on site
- Letters of safety plan approval of contractors by the Principal Contractor
- Mandatory agreements (section 37.2 agreements)
- Incident and accident records / Occupational Disease records
- Contractor Nonconformance records
- Safety agent's audit reports
- Safety Officer reports
- Method Statements
- Risk assessments
- Safe work procedures
- Medical surveillance certificates of fitness. Medical records are to be kept according to the Occupational Health and Safety Act, as amended.
- All temporary works drawings (suspended beams/scaffolds, etc.)
- Copies of test results, policies, and procedures for environmental monitoring (silica, noise, dusts, etc.)
- Detailed registers of all material used
- Copies of all Checklists completed



1.12 SAFETY FILE RETURN TO CLIENT

The consolidated Health and Safety Files for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in either hard copy or electronic format.

2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the Client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the Client's documented health and safety specifications, *which* plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the Client, the Client's Safety Agent, or a Contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - appoint each contractor in writing for the part of the project on the construction site
 - take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
 - ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
 - stop any contractor from executing construction work which is not in accordance with the Client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;



- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the Client, or the Client's Safety Agent;
- hand over a consolidated health and safety file to the Client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the Client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the Client, the Client's Safety Agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.



A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the Client, the Client's Safety Agent or the Principal Contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor. Proof of all-inclusive assessment of the Construction Manager's Competency in construction management and H & S competency must be available in the Safety File. The Construction Manager must, as a minimum, have a Construction Regulation course. No contractors may be left unsupervised on site by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the Client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive. Requirement on this project is for a full time safety officer for site.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. Proof of all-inclusive assessment of the Construction Supervisor's competency in construction supervision and H&S competency must be available in the Safety File. The Construction Supervisor must, as a minimum, have a supervision course as per Unit Standard 262845 (Civil Engineering), 119080 (Building Construction) and 262884 (Civil Engineering).

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties



as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

2.3 Notification of Intention to Commence Construction Work

Not thought to be applicable to this project.

2.4 Construction Work Permit

A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work on projects that will –

1. exceed 365 days and will involve more than 3600 person days of construction work; or
2. the tender value limit is grade 7, 8 or 9 of the Construction Industry Development Board (CIDB) grading.
 - Grade 7 = R60 000 000
 - Grade 8 = R 200 000 000
 - Grade 9 = No limit

A client may appoint a Construction Health and Safety Agent or Construction Health and Safety Manager to apply for this permit from the Provincial Director and construction work may not commence until the permit has been issued by the Provincial Director.

A copy of this permit will be required to be kept in the principal contractor's safety file, and the site specific number issued by the Provincial Director must be displayed at the site entrance.

A client may appoint a Construction Health and Safety Agent, or Construction Health and Safety Manager based on the scope and risk profile of construction work to represent him/her on matters of health and safety. Provided that, where the question arises as to whether a Construction Health Safety Agent or a Construction Health and Safety Manager is necessary, the decision of an inspector is decisive.

The following minimum documentation will be required during the permit application process:

- Principal Contractor's Health and Safety Plan CR 5(1)(m)
- Baseline Risk Assessment CR 5(1)(a)
- Appointed Principal Contractor's Letter for Good Standing as per CR 5(1)(j)
- Issue Register signed by Designer CR 5 (1)(c)
- Issue Register signed by Principal Contractor
- Declaration signed by Designer CR 5(1)(d) and CV
- Principal Contractor made adequate provision for the cost of health and safety measures (Bill of Quantities) CR 5(1)(g)
- Proof of Principal Contractor's competency and resources to carry out the construction work safely CR 5(1)(h)
- Appointment Letter for Construction Manager, CV, Certificates and List of projects
- Appointment Letter of Safety Officer & Safety Officer's Registration for SACPCMP



- Principal Contractor's Appointment Letter CR 5(1)(k), Company Profile and CIDB grading

After approval of the Construction Work Permit any changes made to the appointed persons on the annexure 1 must be submitted to Department of Labour for approval before the appointed persons are allowed to commence with their tasks.

PLEASE NOTE THAT THE CONSTRUCTION MANAGER (8(1)) NAMED ON THE CONSTRUCTION WORK PERMIT MUST BE THE SAME PERSON THAT ACTS AS THE CONSTRUCTION MANAGER ON SITE. IF THIS WILL NOT BE THE CASE FOR SOME REASON THEN THE SAFETY AGENT MUST BE NOTIFIED OF THE CHANGE BY THE PRINCIPAL CONTRACTOR AT LEAST 7 DAYS BEFORE THE CHANGE IS MADE SO THAT THE SAFETY AGENT CAN AMEND THE CONSTRUCTION WORK PERMIT APPLICATION AND ADVISE THE DEPARTMENT OF EMPLOYMENT AND LABOUR ACCORDINGLY.

2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).

2.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

2.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations. The Policy must be communicated to all employees and proof thereof must be available in the Safety File.

2.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated when there is a change in the site team.

2.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.



The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated, and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site**. The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site**.

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site. The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the Client, Client's Safety Agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved.

In general, the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors, and Contractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The Safety Representative(s) must be democratically nominated, elected, and appointed in writing. The Health and Safety Representative(s) shall carry out regular inspections, keep records and



report to the supervisor to take appropriate action. The Safety Representative(s) shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents, and non-conformances. The Safety Representative(s) must be (a) full time employee(s) who is/are acquainted with conditions and activities at that workplace or section thereof. The Safety Representatives must have Safety Representative training and must be capable of performing their duties.

2.12 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

PLEASE NOTE THAT THE SAFETY AGENT MAY REQUIRE THAT THE PRINCIPAL CONTRACTOR CONVENES A SAFETY COMMITTEE MEETING ON SITE IN THE INTERESTS OF HEALTH AND SAFETY ON SITE. SUCH COMMITTEE MEETING MAY REQUIRE ATTENDANCE OF CONTRACTORS SAFETY OFFICERS/SAFETY REPRESENTATIVES, CONSTRUCTION SUPERVISION AND THE SAFETY AGENT.

2.13 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.14 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

2.14.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health and safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates



of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence. All training must be conducted by an accredited training provider and the certificates must display the applicable unit standards and the expiry dates thereof.

2.16 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training, etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

2.17 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

2.18 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service delivery protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel.

2.19 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

- First Aid box/es must be adequately stocked at all times, accessible and be controlled by a qualified First Aider.
- Perishables to be checked and replaced when expired.
- Stock per content list as per the General Safety Regulations Annexure.
- Signage to be in place.
- To be numbered and sealed with name of first aider on or above the First aid box.
- Dressing logbook to be available in the first aid box.
- If more than 5 employees are present, there must be a first aid box available.
- Register to be checked by a Competent person.

If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.



2.20 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record, and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

2.21 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.22 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 dB; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage. Signage must comply with the requirements of SABS.

2.23 Management of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;



- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water, or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm;
- are equipped with fire extinguishers (2.5 – 4.5 kg); and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms, or similar appendages, fully lowered, or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set, and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material, and equipment are secured and separated by means of a physical barrier in order



- to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working, or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.
- all plant and vehicles are fitted with amber rotating beacons and reverse alarms.
- ALL construction site vehicles must be inspected daily especially if it has dangerous "items" (fuel, explosives, etc.) on vehicle, completed inspection registers must also be available for inspection.
- the vehicles must resemble the original manufacturer's product. Levers, alarms, and amber lights to be fitted to construction vehicle for notification of vehicle.
- fire extinguishers, signage, and licence disc to be correctly mounted and displayed.
- when the vehicle is stationary no key to be left in or on vehicle or plant.
- Drip tray must be present when stationary.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied, or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids
- proper containers are to be used for fuel. Marked and labelled as per the content.
- diesel on site; more than 800 litres must have a certificate, fire safe certificate. Locked in a ventilated, secure area with a drip tray and have a designated, responsible person to use it.



2.29 Water environments

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for –

- preventing persons from falling into water; and
- the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

2.30 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids, and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;
 - there are no flames or similar means of ignition;
 - there are conspicuous notices prohibiting smoking;
 - oily rags, waste, and other substances liable to ignite are without delay removed to a safe place; and
 - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting, and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- Toilets to be within walking distance
- Hygiene registers to be completed
- Proof of safe disposal of effluent waste disposal certificates to be obtained
- changing facilities for each sex;
- and sheltered/shaded eating area.



- Protection from the Elements and raised off the ground.
- Every employer shall provide sanitary facilities at the workplace in accordance with the provisions of Parts F, P and Q of the National Building Regulations.
- Sufficient clean water for all employees. 500ml to each employee every hour.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection

Not thought to be applicable to this project.

2.33 Temporary works

Not thought to be applicable to this project, but see section on working at height.

2.34 Excavation – max 1m

Excavations are to be fenced off to protect the public. Check for existing services and protect them from risk of injury or damage.

2.35 Demolition Work

Not thought to be applicable to this project.

2.36 Tunnelling

Not thought to be applicable to this project.

2.37 Scaffolding

Not thought to be applicable to this project.

2.38 Bulk mixing plant

Not thought to be applicable to this project.

2.39 Rope Access Work

Not thought to be applicable to this project.

2.40 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure



- Substituting the HCS
- Using engineering controls
- Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

2.41 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided on
 - Describe how records are going to be kept for 40 years.

2.42 Explosives and Blasting

Not thought to be applicable to this project.

2.43 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision to keep adequate quantities of appropriate, SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

2.44 Asbestos

Not thought to be applicable to this project.

2.45 Pressure Vessels (Including Gas Bottles)

The Contractor shall comply with Pressure Vessel Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;



- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).
- Under pressure vessels to have the following in place;
 - Service date
 - Seals on valves with no leaks and not broken
 - flash arrestors
 - Should be stored and chained together
 - Oxygen / Acetylene bottles to have clips
 - Signage to be visible
 - Gauges in working condition and be visible
 - Permits for use
 - Pressure equip Regs 6. (1) The user shall ensure that the pressure equipment is operated and maintained within its design and operating parameters.

2.46 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

2.47 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated
- Regular inspection and servicing is carried out
- Records are kept of inspections and of service certificates
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use
- Forklift to be inspected every year and lift plan every 2 years
- Load test certificate to be no older than 6 months
- Sufficient props to be used and max weight to be displayed
- Slings to be checked with regard to integrity, chains, serial numbers, checked for tears, cuts links and all other materials
- Hooks to be oiled, not in a fixed position and closed to prevent materials from slipping/falling off
- Lifting equipment must be used for the scope of work carried out

2.48 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.49 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.



2.50 *Portable Electrical Tools*

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.



The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.51 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

2.52 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.53 Night Work

The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.

2.54 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

2.55 Occupational Health

Exposure of workers to occupational health hazards and risks are quite common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.



All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.56 Suspended Platforms

Not thought to be applicable to this project.

2.57 Material Hoists

Not thought to be applicable to this project.

2.58 Explosive Actuated Fastening Device

Not thought to be applicable to this project.

2.59 Confined Spaces

Not thought to be applicable to this project.

2.60 Alcohol and drugs (GSR 2)

1. A contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a site.
2. No employee shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.
3. An employer or a user, as the case may be, shall, in the case where a person is taking medicines, only allow such person to perform duties at the site if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such site.

2.61 General Practices when Working at Heights

- No Homemade structures or ladders will be permitted on the project.
- Surroundings to be clear of rubble.
- Ladders to be structurally sound and not broken and in accordance to GSR 13A.
- Only competent persons may be allowed to work at heights
- Correct personal protective equipment to be used.
- Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.62 Traffic Accommodation

All traffic signs must be displayed as per the traffic management plan drawings.
Size of signs used must be as per the traffic management drawings and all signs to be visible and in good condition.

- Traffic management Plan issued per Road and Traffic act (chapter 13). Must be approved by the Traffic Chief and professional team.
- Plans for signage deployment must be in order and must be placed correctly.
- Traffic management plan must be submitted and must be suitable for the tasks being performed.
- Traffic plan must be implemented and controlled by the sites Traffic safety officer and flag persons.



- Jersey barriers, where used, to be linked.
- No signs to be obstructed.
- STOP/GO structures must be protected against being struck by vehicles (e.g. new jersey barriers)
- Road marking buggies/vehicles must be protected by escort vehicles front and rear.
- Displayed traffic signs must be maintained in a daily register to be checked morning and evenings after works have been finalised.

Traffic Safety Officer must check signage daily and Engineer must sign it off daily.

2.63 Ventilation and Lighting in the Work Place

Every employer shall cause every workplace in his undertaking to be lighted in accordance with the illuminance values specified in the Schedule to the General Safety Regulations:

Provided that where specialised lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialised lighting is available to and is used by such employees.

The Contractor must ensure that:

- the average illuminance at any floor level in a workplace within five meters of a task is not less than one fifth of the average illuminance on that task;
- glare in any workplace is reduced to a level that does not impair vision;
- lighting on rotating machinery in such that the hazard of stroboscopic effects is eliminated; and
- luminaires and lamps are kept clean and, when defective, are replaced or repaired forthwith.

With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance shall be not less than 20 lux.

The contractor must ensure that the emergency sources of lighting prescribed above:

- are capable of being activated within 15 seconds of the failure of the lighting prescribed by subregulation (1);
- will last long enough to ensure the safe evacuation of all indoor workplaces;
- are kept in good working order and tested for efficient operation at intervals of not more than three months; and
- where directional luminaires are installed, these are mounted at a height of not less than two meters above floor level and are not aimed between 10° above and 45° below the horizontal line on which they are installed.

The contractor must ensure that all rooms, stairways, passageways, gangways, basements, and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

The contractor must ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that –

- the air breathed by employees does not endanger their safety;
- the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;
- the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;
- the prescribed exposure limits for airborne substances therein are not exceeded; and



- the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour, or dust.

2.64 Nuclear Density Gauge (Troxler)

The use of a Troxler on site must be in line with the SANS 3001 of March 2014. The SANS consists of 5 sections

The in-situ density of road construction materials is only determined in civil engineering using indirect methods such as the nuclear density gauge and sand replacement methods.

This method forms part of a set of methods used to operate nuclear gauges, and includes the following:

- a) administration, handling, and maintenance (see SANS 3001-NG1);
- b) validation of standard calibration blocks (see SANS 3001-NG2);
- c) calibration of a nuclear gauge (see SANS 3001-NG3);
- d) verification of a nuclear gauge (see SANS 3001-NG4);
- e) in situ density determination using a nuclear gauge (see SANS 3001-NG5)

When used Troxlers must be:

- Stored in a dedicated, lockable area and must have a warning signage displayed.
- Must only be transported in a dedicated vehicle with the required signage displayed and by an authorised employee that has been appointed in writing.
- Must have a Troxler Calibration Certificate in place.
- Must have a Troxler Technician Appointment on file and signed and proof of competency within the safety file.

2.65 Ergonomics Regulation of 2019

"competent person" in relation to ergonomics, means a person who– (a) has in respect of the work or task to be performed the required knowledge, training and experience in ergonomics and, where applicable, qualifications specific to ergonomics: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and (b) is familiar with the Act and the applicable regulations made under the Act;

"ergonomic risk" means a characteristic or action in the workplace, workplace conditions, or a combination thereof that may impair overall system performance and human well-being;

"ergonomic risk assessment" means a programme, process, or investigation to identify, analyse, evaluate and prioritise any risk from exposure to ergonomic risks associated with the workplace;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance;

The ergonomics regulations will apply to any employer or self-employed person who carries out work at the workplace who may expose any person to an ergonomic risk in the work place and any designer, manufacturer, importer or supplier of machinery, plant, or work systems for the work place.

An employer must, before the commencement of any work that may expose employees to ergonomic risks, have an ergonomic risk assessment performed by a competent person.

The ergonomic risk assessment must be done at intervals not exceeding two years and must include the following;



- a complete hazard identification and all persons who may be affected by the ergonomic risk.
- how employees may be affected by the ergonomic risks;
- the analysis and evaluation of the ergonomic risks;
- the prioritisation of ergonomic risks.

An employer must review the relevant ergonomic risk assessment if:

- such assessment is no longer valid;
- control measures are no longer effective;
- technological or scientific advances allow for more effective control methods;
- there has been a change in –
 - the work methods;
 - the type of work carried out; or
 - the type of equipment used to control the exposure; and
 - an incident occurs or medical surveillance reveals an adverse health effect, where ergonomic risks are identified as a contributing factor.

An employer must ensure that an employee is placed under medical surveillance, which is overseen by an occupational medicine practitioner, if–

- the ergonomic risk assessment referred to in regulation 6 indicates the need for the employee to be placed under medical surveillance; or
- an occupational health practitioner recommends that relevant employees must be under Medical surveillance, in which case the employer may call upon an occupational medicine practitioner to ratify the appropriateness of such recommendation.

An employer must ensure that the medical surveillance consists of–

- in the case of a new employee, an initial health examination before the employee commences employment or within 30 days of commencement of such employment;
- a periodic health examination informed by the ergonomic risk assessment, at intervals specified by an occupational medicine practitioner, but not exceeding two years; and
- an exit health examination informed by the ergonomic risk assessment.

♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦

Both the Client and the Contractor have a duty in terms of health and safety legislation to do all that is reasonably practicable to make members of the public and others being affected by the construction processes aware of possible risks and put preventative measures in place to mitigate the risks. The public and/or visitors shall go through a brief health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks.



OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least weekly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist b) Safety report from Safety Officer and Safety Agent
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non-conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHSA	Report on Health and Safety Specification and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavation
General Inspections	Monthly	Covering: a) Firefighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering: a) General complaints b) Fines c) General incidents d) MSDS e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHSA / Construction Regulations

Key:

OHSA – Occupational Health and Safety Act, 1993



ANNEXURE A – REQUIREMENTS FOR THE SAFETY PLAN ASSESSMENT

The Contractor must note that the information below is pertinent to the compilation of their safety plan response to this site-specific safety specification and it would be preferred if the Safety Plan is written in the order of the assessment documented below.

No	Item	Notes
1	Project Directory	Please state details of Project Client, Project Manager/Principal Agent, Safety Agent, Consulting Engineer, etc. (Name, address, contact details).
2	Contractors Directory	Please indicate if you will be using Contractors on this project, if yes, include their details, trade, and FEM details.
3	Other Parties Directory	Please indicate contact details for any services applicable (electricity, water, etc.) as well as Department of Labour and Emergency Services.
4	Project Safety Statement	The Project Safety Statement must be included in the Safety Plan.
5	Health and Safety standards for the project (OHS Act, construction regulations, basic conditions of employment, etc.)	Health and Safety standards must be included in the Safety Plan.
6	Project Particulars	Scope of works must be included in the Safety Plan. This is critical.
7	Existing environment – Structures and Surroundings, Services (Electrical, Water, Sewerage, etc.), Traffic Arrangements, Parking, Access to Site, Storage of Plant and Materials	Please include these items in the plan. The items must be Site Specific, the location of services and services that will be affected must be mentioned.
8	Management Structure for safety on the Project	A structured organogram with names of the responsible people must be included.
9	Appointed Persons, Supervision	The required appointments must be identified. A list of the appointed persons must be included in the Safety Plan.
10	Security Procedures	Please indicate if a security company will be appointed and include the contact information in the Safety Plan.
11	Registers list and inspection frequency	A list of the Inspection Registers that will be on file must be included in the Safety Plan.
12	Design Co-ordination	Please indicate your procedure for implementation of design changes by designer on the project, and the procedures for liaison and implementation of temporary works design on the project.
13	Contractor Co-ordination	Mention must be made of how Contractors will be co-ordinated on site to ensure that they work together and not adversely affected health and safety.



No	Item	Notes
14	Housekeeping, stacking and storage	Housekeeping policies and procedures must be included in the Safety Plan.
15	Waste Disposal Arrangements	Waste disposal arrangements procedures must be included in the Safety Plan.
16	Noise and dust control	Please indicate if any noisy operations (more than 85 decibels) will be carried out and what measures will be used to reduce noise exposure to workforce.
17	Training Requirements	Training requirements must be identified and recorded.
18	Plant and Equipment	A list of plant and equipment to be used on site must be included in the Safety Plan.
19	Safety Monitoring Arrangements	The name, contact details and SACPCMP registration status of the Safety Officer must be included in the Safety Plan. State how often the Safety officer will be on site (note safety specification requirement in section 1.7).
20	Information for Contractors	State how information will be given to Contractors on site.
21	Consultation/communication arrangements with Employees	State how information will be given to employees e.g. notice board.
22	Selection of Contractors Procedures	Principal contractor must state what health and safety procedures they will use to assess the competence and resources of their contractors on site.
23	Activities with risk to Health and Safety (Risk Assessment)	A Baseline Risk Assessment must be included in the Safety Plan, it must address the Risks identified in the Safety Specification as well as the risk of any other hazards that the Principal Contractor is aware of that are relevant to the site.
24	Hazardous Substances	Must be listed in the Safety Plan and addressed in the Risk Assessment.
25	First Aid and Medical Procedures	Please indicate name of first aider, position of first aid box, location of nearest medical facility and emergency numbers.
26	Fire and Emergency Procedures	List of emergency telephone numbers must be drawn up and included in the Safety Plan. The position of Fire Extinguishers, Assembly Point location, fire drill frequencies, numbers of fire marshals, etc.
27	Accident and Incident Reporting and investigation	State the Accident and Incident Reporting and investigation procedures of your company.
28	Welfare and Site Facilities	Elaborate on toilets and eating areas, water provision, how will workers be protected during wet weather conditions etc.
29	Site Rules	The Site Rules must be included in the Safety Plan.
30	Personal Protective Equipment	The necessity must be identified by Risk Assessments, the required PPE for site risks and control measures.
31	Health & Safety File arrangements	Please indicate arrangements for the return of the Health and Safety File to the safety agent at the end of the project.



No	Item	Notes
32	Method Statements/Safe System of Works	A list of Method Statements/Safe System of Works must be included in Safety Plan for all High-risk activities.
33	Permits and wayleaves	List of activities that Principal Contractor anticipates will require permits and wayleaves (including those stated in the safety specification) to be included.
34	Fall Prevention and Protection Plan and Fall Rescue Plan	A copy of the Fall Prevention and Protection Plan, fall rescue plan and fall risk assessment must be included in the Safety Plan.
35	Demolition method statement	A copy of the Demolition Method Statement must be included in the Safety Plan.
36	Confined spaces	The Principal Contractors' procedures for managing access, egress and work in confined spaces must be specified in the Safety Plan. Includes permit procedures, air monitoring, PPE, etc.
37	Safety Representatives and Safety Committees	When a project has more than 20 employees a designated employee must be chosen by the labourers to represent them. A safety committee must be established if 2 or more safety representatives are appointed. Please note Safety Specification requirements regarding this section (section 2.12).
38	Have the significant hazards from the safety specification been addressed?	See section 1.9 of the Specifications and ensure practical measures have been detailed in the safety plan.
39	Safety File - Safety Policies in File and Signed by 16(1) CEO.	Safety Policies must be signed and explained to employees.
40	Safety File - A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.	A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.
41	Safety File - Signed copy of the 37.2 Mandatary Agreement	A 37.2 Mandatary Agreement needs to be signed between the Client and the Principal Contractor.
42	Safety File - Appointment letter from Client (as well as 5.1.K)	The Client must appoint the Principal Contractor in writing.
43	Safety File – Notification / Permit	A copy of the Annexure 2 Notification (and proof of submission) to Department of Labour must be available. This can be in the form of a Department stamp, email, or copy of Construction Work Permit.



ANNEXURE B – LEGAL APPOINTMENTS	
The contractor shall make the following appointments, as required:	
Chief Executive Officer (OSH Act 16(1))	
Contract Director/Manager (OSH Act 16(2))	
Construction Manager (CR 8(1))	
Construction Supervisor (CR 8(7))	
Assistant Construction Supervisor (CR 8(8))	
Construction Safety Officer (CR 8(5))	
Traffic Safety Officer	
Safety Representative (where > 20 employees on site)	
Temporary work Designer (CR 12(1))	
Temporary work Supervisor (CR12(2))	
Construction risk assessor (CR 9(1))	
Excavation Supervisor (CR13(1)(a))	
Demolition Supervisor (CR14(1))	
Scaffold Supervisor (CR16(1))	
Suspended Platform Supervisor (CR17(1))	
Material Hoist Inspector (CR19(8)(a))	
Material Hoist Operator (CR19(6))	
Bulk Mixing Plant Supervisor (CR20(1))	
Bulk Mixing Plant Operator (CR20(2))	
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))	
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))	
Controller of Temporary Electrical Installations (CR24(c))	
Stacking Supervisor (CR28(a))	
Fire Extinguishing Equipment Inspector (CR29(h))	
Fall Protection Plan Developer (CR 10(1)(a))	
Incident Investigator (OSH Act 9(2))	
Competent Person – Confined Spaces (GAR 5(1))	

ANNEXURE C - BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	MINIMUM CONTROL MEASURES
1.	Compacting and Filling	Contact with tipping materials Contact with moving plant Vehicles/personnel falling into excavations Contact with underground services	- Trained banksman to control vehicles movement - Only trained personnel use plant - Personal Protective Equipment to be worn - Personnel to stand clear as materials are being tipped - Use stop blocks and signs to warn vehicles of excavations, where applicable - Stand clear of plant whilst materials are being compacted - Establish position of underground services and protect services from damage
2.	Compactor Operations	Crushing of feet	- Only trained and competent personnel to use the machine - Ensure operative wears steel toe cap shoes or boots at all times
3.	Crime and security	Injury to employees during protest action, criminality, intimidation	- Workers to be vigilant for signs of security threats - Contractor must have contingency plan in place for emergency evacuation of site - Emergency numbers for police and security to be on hand - Report incidents of vandalism, damage and intimidation on site to site management immediately
4.	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	- Use competent personnel. - Hot works control- fire extinguisher, fire watchman. (Permit may be required) - PPE to include gloves, eye protection, hearing protection - Solid working position. - Clear working area - Correct grade of blade must be used. - Good ventilation to be provided (forced if necessary). - Changing of wheels to be by competent persons only - Cut off discs must not be used for grinding (grinding disc thicker) - Bystanders to wear hearing protection, as applicable
5.	Electric Tools and Electrical Installations	Electric shock Fire	- Electric tools and installations to be in good condition - Inspect electric tools before use - Do not use electric tools in wet/damp conditions - Use personal protective equipment such as insulated gloves - Electrical installations register to be maintained, inspected by competent person
6.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire	- No littering on site which could become fire hazard, maintain site in clean condition. - No fires to be lit on site. Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices
7.	Flammable Liquids and Gases (Use of)	Fire Explosion	- No littering on site which could become fire hazard, maintain site in clean condition. - Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable



	HAZARD	RISK	MINIMUM CONTROL MEASURES
			substances – post warning notices - Equipment must be in good condition, maintained - Personnel using substances must be trained in safe use and risks
8.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	- Ensure: - Tool is correct for job - Tool is in good order and suitably sharp - Personnel must be competent/instructed in tool usage and tool safely - Lighting is sufficient - Access is safe, working platform is secure, leading edge is guarded - Operative is wearing all necessary PPE
9.	Hazardous Substances (including laying of hot road material components)	Injuries to workers through use of hazardous substances, e.g. injuries to eyes, skin, etc.	- Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc.) - Know what First Aid measures are - Have welfare facilities available for washing of hands, etc.
10.	Lifting Operations	Falling material Crushing by materials Hand injuries to the slinger Toppling crane	- Check test certificate - Check examination certificate - Check inspection have been carried out - Check certificates for lifting equipment (chains, slings, shackles, etc.) - Ensure lifting gear is rated to carry load (SWL) - Ensure materials being lifted are properly packaged and slung. - Be aware that there should be a minimum clearance of 600mm between any slewing parts of a crane and any fixed installation to prevent being trapped. - Access to the work area during lifting operations is to be restricted to those involved with and trained in the work in hand. Do not allow members of the public to gain access to the area. - Only trained banksmen to be used. - The crane driver and the banksman are to ensure that the signals given are clearly understood.
11.	Manual Handling of General Items	Muscular skeletal injuries if the load is too heavy or awkward Operative falling/ tripping Contamination from the substance being carried Fall of material being carried	- Personnel should be aware of safe manual handling techniques - Personnel to wear Personal Protective Equipment when carrying items, e.g. safety footwear and gloves. - Ensure good housekeeping against tripping/fall hazards. - Operative to get assistance if load too heavy- team lift if necessary. - Utilise mechanical lifting and carrying aids where possible. - Personnel to ensure access equipment, ladders will take weight of operative and load being carried. - Personnel to ensure item being carried is properly bonded or is not be liable to break apart whilst being manually handled.
12.	Members of Public – Protection of	Injury to member of public and road users from site works	- Barriers and signage to be in place - Workers must warn away any members of public from the works - Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public - Traffic turning into site – traffic management and signage as required. - Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible - Refer to plant risk assessment for details on plant



	HAZARD	RISK	MINIMUM CONTROL MEASURES
			safety precautions NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS AND/OR BUSINESSES MUST BE AGREED.
13.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	- Wear respiratory and hearing protection - Dampen down and minimise dust where possible.
14.	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	- Implement traffic protection measures - Trained and competent operators must be used - Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. - Medical certificates of fitness required for construction plant. - Crossing of road by construction vehicles or machines must be limited to the practical minimum - Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. - Wear appropriate protective clothing/equipment, e.g. goggles, gloves, ear defenders, etc. as appropriate.
15.	Road Working – working in or next to road	Injury to workers caused by passing traffic Injury to road users and pedestrians by works	- Flagmen to be used where interface with construction plant with passers-by or where hazard posed by delivery vehicles turning into/out of site. - Traffic management plan to be approved by Municipality and, if necessary, traffic department - No construction activities to commence until adequate provision made to accommodate traffic in accordance with the South African Traffic Signs Manual. - Use safety signage to warn traffic and pedestrians of construction works - Where existing walk ways/pavements affected by works, must direct pedestrian traffic away to safe walking area. - Wear reflective waistcoats when working on or near the road or road shoulder as well as any other required personal protective clothing. - Crossing of road by personnel must be limited to the practical minimum - Use of fencing or other barriers as appropriate
16.	Troxler – use of	Radiation exposure Transportation and storage of nuclear equipment Working in road	Ensure - Training of Troxler gauge operators in basic radiation safety and correct operating procedure to satisfactory level of competence - An enclosed vehicle must be used for transport of the gauge - After use and before storing the gauge, a visual check to be carried out to confirm shutter is properly closed - Warning signage to be displayed at entrance to store indicating presence of radioactive material - Wear reflective vests when working in or near the road or road shoulder as well as any other required personal protective clothing.
17.	Overhead Services (Working near)	Contact with live services causing injury to personnel Damage caused to services	- Maintain safe clearance levels - Establish presence of any services via proper walk through survey of site and/or means of service drawings - Wear personal protective clothing - Ensure height of plant/vehicles does not compromise or exceed clearance levels for overhead services - Obtain information on clearance levels from service provider



	HAZARD	RISK	MINIMUM CONTROL MEASURES
18.	Underground Services	Striking of buried services	• Make all necessary enquiries to establish what services are in the area. Consult drawings and advice from service provider (e.g. Municipality or ESKOM) when planning work. • Assume all service to be live (Unless confirmation is received to confirm that services are isolated or otherwise made safe). Do not work near live services without authorisation from site management. • Comply with the requirements of the safe system of work for underground services. • Where available, locate services with a locator • Hand dig around services
19.	Work over or next to Water	Drowning	• Evaluate depth of water, height above water that work takes place, whether workers can swim or not and then determine safety precautions required: these may include such measures such as barriers, signage, life belts, safety harnesses, • When working on water edge - erect life saving devices and barriers to protect workers and vehicles (stop blocks may also be required). Only trained and competent persons to be used.



**ANNEXURE D – SAFETY SPECIFICATION AND BASELINE RISK ASSESSMENT
ISSUE REGISTER**

Date of Original Safety Specification Compilation	Compiled By	Issue Date
March 2026.	Mark Winter	26 th March 2026.

Revision Summary	Revised By	Revision Date

Acknowledgement:

I, _____ representing
_____(Contractor), have satisfied
myself with the content of this Health and Safety Specification and shall ensure that our employees
and contractors on site comply with the requirements of this document, our safety documentation and
health and safety legislation.

Signature of Contractor

Date

Comments:

C4 Site Information

Site information is discussed in part C3.1

C5 Drawings

The Works shall be carried out in accordance with the following drawings which are included in Volume 4: Drawings and form part of the contract documents:

[illegible]

75 450 75



LANGBERG MUNICIPALITY TENDER No. : T40/2023 UPGRADING OF ROBERTSON PRECINCT ROADS AND SUPPORTING SERVICES



This project is funded by:
NEIGHBOURHOOD DEVELOPEMENT
PARTNERSHIP PROGRAMME



Consulting Engineers:
INVICTUS ENGINEERING SERVICES



Health & Safety Agent:
SAFE WORKING PRACTICE
Agent Contact:

Contractor:

25

3675

3725

3100

25

25

25

NOTES:

1. SIGN MATERIALS
 - 1.1. CONSTRUCTION
 - 1.1.1. SIGN BOARD TO BE MADE OF 1.0mm THICK RUST RESISTANT CHROMADECK WITH SUFFICIENT BRACING TO PREVENT WARPING
 - 1.2. SIGN FACE COLOURING, MADE WITH ADHESIVE MATERIALS AS PER MANUFACTURER'S SPECIFICATIONS
 - 1.2.1. PRIMARY BACKGROUND = OXFORD BLUE MATT FINISH CLASS SM
 - 1.2.2. SECONDARY BACKGROUND = WHITE MATT FINISH CLASS SM
 - 1.2.3. BOARD TITLE LETTERING = WHITE MATT FINISH CLASS SM
 - 1.2.4. OTHER LETTERING = BLACK MATT FINISH CLASS SM
 - 1.3. FONT TYPES
 - 1.3.1. FONT = HELVETICA MEDIUM (SIZES AS SHOWN ON THE LAYOUT)
2. THE SIGN BOARD IS TO BE MOUNTED ON A STRONG SUPPORTING WOODEN OR STEEL STRUCTURE, APPROVED BY THE ENGINEER.
3. THE SIGN MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD TO ENSURE THAT IT REMAIN ERECTED AND CLEAN.

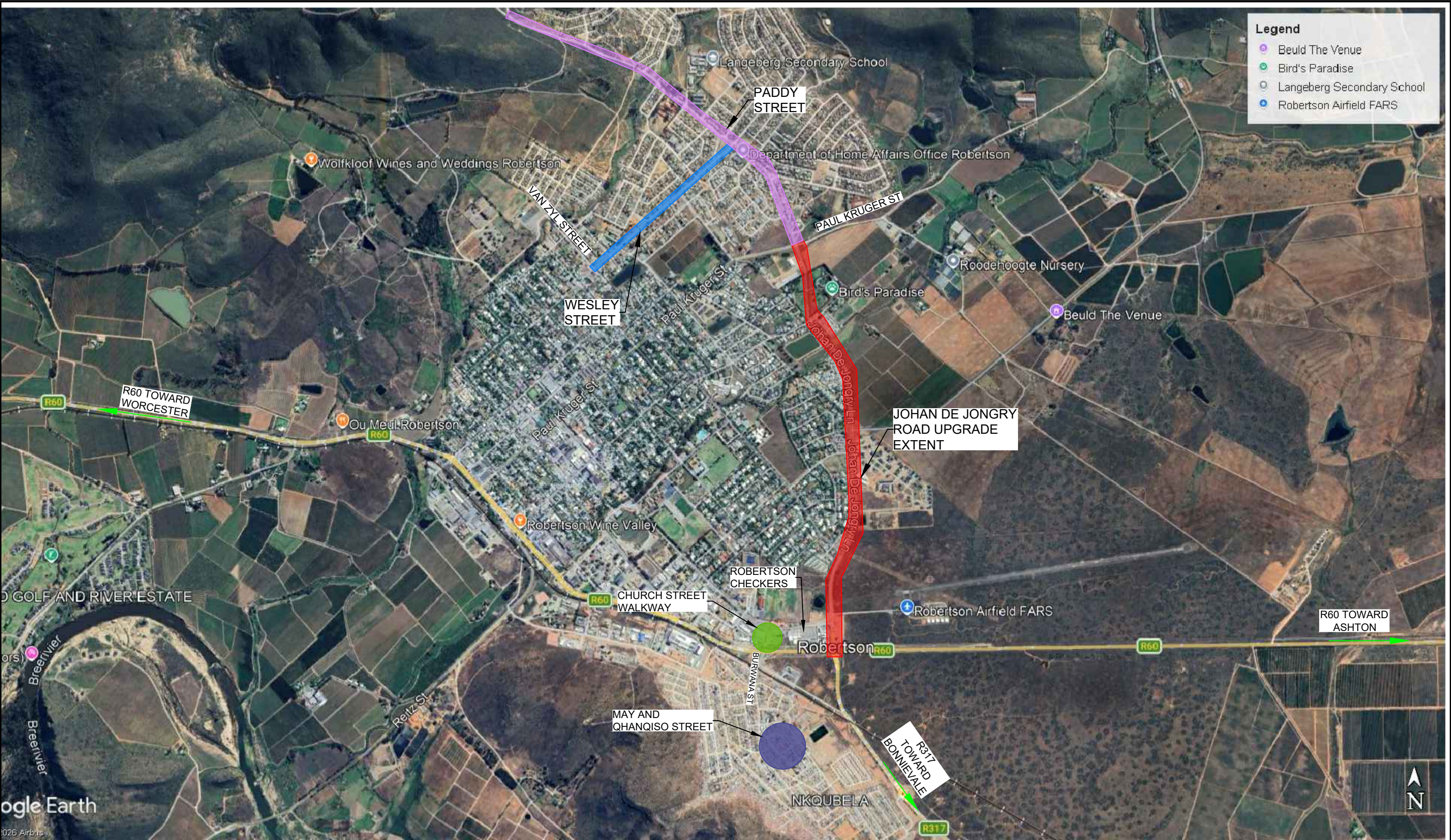
0 5 10 15 20mm

ORIGINAL SIZE A4



Hybrid House, Modena Building
5th Floor, C/o Durbanville & Bella Rosa Rd
Belville 7530
Tel: (021) 975 1718
E-Mail: info@invictuseng.co.za
Website: www.invictuseng.co.za

Client / Employer		Scale
LANGBERG MUNICIPALITY		NTS
Project		Contract No.
UPGRADING OF THE ROBERTSON PRECINCT ROADS		2302587
Plan Description		Drawing No.
NAMEBOARD		2302587/C/001
COPYRIGHT IS VESTED IN INVICTUS ENGINEERING SERVICES (PTY) LTD IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978).		Revision
		A



Client / Employer		LANGEBERG MUNICIPALITY	
Project		UPGRADING OF THE ROBERTSON PRECINCT ROADS	
Plan Description		LOCALITY PLAN	

	Name	Signature	Scale	<	
--	------	-----------	-------	---	--