

**PAVING OF INTERNAL STREETS IN ANIVA FOR NKOMAZI LOCAL
MUNICIPALITY**

BID NO: NKO: 20/2025

**NKOMAZI LOCAL MUNICIPALITY
PRIVATE BAG x 101
MALELANE
1320**

**The Municipal Manager
Mr X T Mabila**

**TEL.: 013 – 790 0245
FAX.: 013 – 790 0886**

VAT Registration No: 4300102938

**PLEASE NOTE THAT THIS DOCUMENT MUST ACCOMPANY YOUR PROPOSAL AND RELEVANT
DOCUMENTATION**

Name of Bidder	
Address	
Contact Numbers	
Telephone No. or Cell phone No.	
Fax No.	
E-mail Address	
Tendered Amount (VAT INC)	

CLOSING DATE: 12h00 on 17/06/2025

CLOSING DATE & TIME: 17 JUNE 2025 AT 12H00

TENDER DOCUMENT

CONTENT

DESCRIPTION		COLOUR
<u>PORTION 1: TENDER</u>		
PART T1	TENDERING PROCEDURES	
	T1.1 TENDER NOTICE AND INVITATION TO TENDER	White
	T1.2 TENDER DATA	Pink
PART T2	RETURNABLE SCHEDULES	Yellow
	T2.1: LIST OF RETURNABLE DOCUMENTS	Yellow
<u>PORTION 2: CONTRACT</u>		
PART C1	AGREEMENTS AND CONTRACT DATA	
	C1.1 FORM OF OFFER AND ACCEPTANCE	Yellow
	C1.2 CONTRACT DATA	Yellow
	C1.3 FORM OF GUARANTEE	Yellow
	C1.4 AGREEMENT WITH ADJUDICATOR	Yellow
	C1.5 OCCUPATIONAL HEALTH AND SAFETY AGREEMENT	Yellow
PART C2	PRICING DATA	
	C2.1 PRICE INSTRUCTIONS	Yellow
	C2.2 BILL OF QUANTITIES	Yellow
PART C3	SCOPE OF WORK	
	C3.1 STANDARD SPECIFICATIONS	Blue
	C3.2 PROJECT SPECIFICATIONS	Blue
	C3.3 PARTICULAR SPECIFICATIONS	Blue
PART C4	SITE INFORMATION	
	C4.1 TENDER DRAWINGS	Green

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--



9 Park Street - Malalane
Private Bag X101
Malalane,
1320
Tel: (013) 790 0245
Fax: (013) 790 0886
Customer Care No. (013) 790 0990

www.nkomazi.gov.za

BID NO: NKO:20/2025: PAVING OF INTERNAL STREETS IN ANIVA FOR NKOMAZI LOCAL MUNICIPALITY.

The Nkomazi Local Municipality invites interested parties who are registered as CIDB grade 7CE or higher for Paving of internal streets in Aniva. Tender documentation with complete details is available upon the payment of a non-refundable amount of **R1 635.36** on each tender document or can be downloaded for free on the e-Tender portal. Tender document(s) will be available as from **08/05/2025** and to be obtained at Nkomazi Local Municipality: Budget and Treasury office (Old Malalane Taxi Rank), 22 Impala Street from the Cashiers Desk from **07h45 to 15H30** (Monday-Friday).

A non-compulsory tenderer briefing session will be held on **15/05/2025 at 10h00** at the Municipal Town Hall (Kobwa Hall) at Fish Eagle. Bidders are advised not to commit fraudulent activities or forgery to document. All abusers of the SCM system, including or faking of returnable documents, may be reported to SAPS and restricted from doing business with any public institution for a period not exceeding 10 years in line with section 28 and 29 of the prevention and combating of corrupt activities Act 12 of 2004.

A preferential system shall apply whereby this contract will be allocated to a bidder in accordance with the Preferential Procurement Policy Framework Act, no 5 of 2000 and as defined in the bid document, read in conjunction with the Preferential Procurement Regulation, 2022 where 80 points will be allocated in respect of price and 20 points in respect of targeted goals.

Completed bid documentation must be deposited on/before **12h00 on 17/06/2025** in the Tender Box situated at the main entrance of the municipality (Civic Centre), 9 Park Street, Malalane.

Tenders/Bids must be submitted in a sealed envelope or container on which the tender/bid number and addressee is clearly marked. No bids transmitted by fax or e-mail will be accepted. It must be noted that the municipality is not bound to accept the lowest on any other tender. Tender/bid documentation which is incomplete or filled incorrectly, not filled in the official bid documentation or which is received after the closing of the bids, will be ignored. It must also be noted the tender submitted in a wrong tender box will not be considered.

For Supply Chain enquiries contact Mr. R. Mabuza at 013 790 0386, and for technical enquiries contact Mr. Moses Sibuye at 013 790 0145, between 07H15 – 16H00 on working weekdays.

Mr. XT MABILA
MUNICIPAL MANAGER

25.04.2025
Date

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

**PART A:
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NKOMAZI LOCAL MUNICIPALITY)

BID NUMBER:	NKO: 20/2025	CLOSING DATE:	17/06/2025	CLOSING TIME:	12:00 PM
-------------	--------------	---------------	------------	---------------	----------

DESCRIPTION	PAVING OF INTERNAL STREETS IN ANIVA FOR NKOMAZI LOCAL MUNICIPALITY
-------------	---

THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (9 Park Street - Malalane Private Bag X101

SUPPLIER INFORMATION

NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN-BASED SUPPLIER FOR THE GOODS /SERVICES OFFERED? <input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3]		
TOTAL NUMBER OF ITEMS OFFERED			TOTAL BID PRICE		N/A
SIGNATURE OF BIDDER	.....		DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	PMU	CONTACT PERSON	Mr Moses Sibuyi
CONTACT PERSON	Richard Mabuza	TELEPHONE NUMBER	(013) 790 0145
TELEPHONE NUMBER	(013) 790 0386	FACSIMILE NUMBER	
FACSIMILE NUMBER		E-MAIL ADDRESS	
E-MAIL ADDRESS	richard.mabuza@nkomazi.gov.za		Sibuyim@nkomazi.gov.za

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

1. BID SUBMISSION:**2.**

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED (NOT TO BE RE-TYPED) OR ONLINE**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

3. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR 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 PART B:3.
- 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.

4. 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.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PART B TERMS AND CONDITIONS FOR BIDDING

**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.**

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

1.2 TENDER SUBMISSION, TERMS AND CONDITIONS

General

- Bids must be in South African rands, fixed price basis including VAT;
- The Nkomazi Local Municipality reserves the right to call interviews with short-listed bidder before final selection;
- The Nkomazi Local Municipality reserves the right to negotiate price with preferred bidder in terms of Clause F.1.6.2;
- Bidders must provide details of physical address and contact numbers to enable the Nkomazi Local Municipality to assess the ability of the bidder to deliver on the submission made;
- A bidder must submit a comprehensive tender and cannot tender for portions of the scope;
- The Nkomazi Local Municipality is not compelled to accept the lowest price offer or any other tender.

Bid Instructions

1. The tender document(s) have been drafted to ensure that essential information is furnished upon the correct completion of the document(s). Where there is insufficient space, or additional particulars are required to be furnished, such must be provided on a separate annexure, clearly indicated.
2. Tender document(s) may not be retyped or redrafted. Also, no photocopies of the original document(s) may be used.
3. Tender document(s) may be completed by mechanical devices such as typewriters; alternatively black ink must be used to fill in the document(s).
4. Tenderer must ensure that no pages are missing from the bid document(s), and that the pages of the bid are numbered consecutively. Nkomazi Local Municipality shall not be held liable with regard to claims arising from the fact that pages are missing or duplicated.
5. Firm tender prices (rates) and delivery periods are preferred, and tenders must clearly state whether prices and delivery periods will remain firm for the duration of the contract or not.
6. Tenderer must be strictly to specification. In cases where items are not to specification, deviations must be clearly indicated. It must also be noted that supplier/tenderer may quote for other items other than the one indicated on the schedule of quantity on a separate sheet, but it would not form part of items to be evaluated for.
7. Tender prices must be quoted in South African currency and in the specified units, unless the contrary is clearly indicated.
8. All the documents herewith form part of the bid and failure to comply with any part thereof may invalidate a bid.
9. Nkomazi Local Municipality may issue Briefing Notes during the briefing session which may contain amendments or information that may assist bidders in articulating their bids.
10. Nkomazi Local Municipality require as a condition of the bid that the compulsory explanatory meeting be attended by prospective bidders. This requirement will be clearly stated in the tender advertisement as well as in the documentation.
11. Nkomazi Local Municipality requires the furnishing of a non-refundable bid deposit together with the drawing of bid documentation (if applicable). Where such a non-refundable bid deposit is requested in the bid documentation, no bid will be accepted unless such a deposit (or cash) is submitted in the form of a bank cheque payable to Nkomazi Local Municipality before submission of the bid.
12. Tenders must be submitted to the addressee before the closing time. Bids submitted after the closing time shall be considered late, and will not be admitted for consideration.
13. The contractor/Service provider shall not abandon, transfer, assign or sublet a contract or part thereof without prior written consent of the council.
14. It is an irrefutable condition of this contract that the successful tenderer will have to negotiate and conclude a service level agreement with the council.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

Bidders will be evaluated on the following administrative compliance. Therefore, the undermentioned documents must be complied with, and where an attachment is required, it should be attached.

PART A

The following conditions must be complied with failure to adhere to any of these conditions will lead to immediate disqualification:

- a. All pages must be submitted, and all pages that require completion must be completed in the tender document. Therefore, no page removal is allowed.
- b. Painting over rates/use of correcting fluid is not allowed.
- c. Failure to submit documents required in this tender documentation.
- d. Form of offer not filled (it should be completed in words and numbers).
- e. Certified COIDA
- f. Initial or sign all pages of the tender documents.
- g. Certified copies of documentation must not be older than three (3) months to be regarded as valid. Copies of "certified copies" will not be accepted as true copies of original documents.
- h. All declarations and authorisation forms must be duly signed.
- i. Price amendment without initials and signature of authorised personnel in the bills of quantity is not allowed.
- j. Original certified copy of company registration certificate (CK) and all pages certified.
- k. Original certified copies of ID's all Directors/members/board members.
- l. Copy of the SARS Tax PIN or tax clearance certificate.
- m. Original certified copy of current municipal account for the company s' address that appear on the CSD report (not older than 3 months and not in arrears for more than three months) or copy of valid Lease Agreement of the **business**. If the rates and taxes account are not in the names of the company, the attached municipal rates and taxes statement must be submitted together with an original affidavit from the property owner whose names are reflected on the municipal rates and taxes statement to confirm that the company operates from their property. If the business is situated in an area in which the respective municipality does not bill, attach the proof of residence issued by the municipality stating that the area in question is not billed.
- n. Original certified copies of current municipal account for all addresses that appear on the CSD report (not older than 3 months and not in arrears for more than three months) or copy of valid Lease Agreement for **all directors and/or board members** of the company. If the rates and taxes account are not in the names of the directors/members of the company, the attached municipal rates and taxes statement must be submitted together with an original affidavit from the property owner whose name is reflected on the municipal rates and taxes statement. If the directors and/or board members reside in an area where the respective municipality does not bill, attach the proof of residence issued by the municipality stating that the area in question is not billed.
- o. Signed Letter of Authority on the company letterhead
- p. CSD detailed report (printed after the tender advert and on or before tender closing date)
- q. Joint Venture Agreement (In case of a Joint Venture) must be submitted
- r. Joint Ventures must be registered on CSD as Joint Venture.
- s. Sign all applicable pages.
- t. Full completed bill of quantity.
- u. Alterations to the bid document or submission of a copy of the original bid document is not allowed.
- v. Completion of the bid document using pencil is not allowed
- w. Minimum Bank rating of code C.
- x. The bid must be submitted on the closing date and time.
- y. Certified Copy of CIDB grading
- z. Copy of Authority for signatory (Must be in the company letter head)

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

Any contract awarded on false information furnished by the bidder, may, without derogating from other remedies available to Nkomazi Local Municipality, be cancelled at the sole discretion of Nkomazi Local Municipality

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

T1.4 RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable documents and submit with the complete tender document.

NO	DOCUMENT NAME	RETURNABLE / INCLUDED IN THE BID DOCUMENT (Mark)		
		Included in Bid Doc	Returnable	Required Documents from Supplier
1.	All declarations and authorization forms must be duly signed	No		Yes
2.	Failure to submit documents required in this tender documentation.	No		Yes
3.	The bid has been submitted after the closing date and time	No		Yes
4.	Initial or sign all pages of the tender documents.	No		Yes
5.	Certified copies of documentation must not be older than three (3) months to be regarded as valid. Copies of "certified copies" will not be accepted as true copies of original documents	No		Yes
6.	Original certified copy of company registration certificate (CK) and all pages certified.	No		Yes
7.	Original certified copies of ID's all Directors/members/board members.	No		Yes
8.	Copy of the SARS Tax PIN or tax clearance certificate.	No		Yes
9.	Joint Venture Agreement (In case of a Joint Venture) must be submitted	No		Yes
10.	Joint Ventures must be registered on CSD as Joint Venture.	No		Yes
11.	Alterations to the bid document or submission of a copy of the original bid document is not allowed.	No		Yes
12.	Completion of the bid document using pencil is not allowed	Yes		No
13.	Proof of professional Indemnity Insurance	No		Yes
14.	Certified Municipality Rates and Taxes – Business (Must not be in arrears for over 90 days)	No		Yes
15.	Certified Municipality Rates and Taxes – Company Directors (Must not be in arrears for over 90 days)	No		Yes

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

16.	Comprehensive Methodology on how the tenderer is planning to invest back to the community of Nkomazi Local Municipality, refer to specific goals on MBD 6.1	No		Yes
17.	Proof of municipal account/lease agreement or proof of residential address by Traditional Authority, not older than 3 months	No		Yes
18.	Central Supplier Database (CSD) Report not older than 3 months	No		Yes
19.	Signed Letter of Authority on the company letterhead	No		Yes
20.	Bill of quantity	Yes		Yes

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

T1.5 TENDER DATA

1.5.1 GENERAL

The Conditions of Tender reproduced are the Standard Conditions of Tender as contained in Annex F of SANS 294 – Construction Procurement Processes, Methods and Procedures which contain references to the Tender Data for details that apply specifically to this tender.

The Tender Data shall be read with the Standard Conditions of Tender in order to expand on the Tenderer's obligations and the Employer's undertakings in administering the tender process in respect of the project under consideration.

The Tender Data contained hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of Tender Data given below is cross-referenced to the relevant clause in the standard Conditions of Tender.

1.5.2 TENDER DATA APPLICABLE TO THIS TENDER

F.1.1 The Employer for this Contract is: **NKOMAZI LOCAL MUNICIPALITY**

F.1.2 Tender Documents

(a) **The Tender Document** consists of the following:

TENDER

T1: Tendering Procedures

T1.1: Tender Notice and Invitation to Tender

T1.2: Tender Data

T2: Returnable Documents

T2.1: List of Returnable Documents

T2.2: Returnable schedules and forms

CONTRACT

Part 1: Agreements and Contract Data

C1.1: Form of Offer and Acceptance

C1.2: Contract Data

Part 2: Pricing Data

C2.1: Pricing Instructions

C2.2: Bill of Quantities

Part 3: Scope of Work

C3: Scope of Work

Part 4: Site Information

C4: Site information

The Tender Document shall be obtained from the Employer or his authorized representative at the physical addresses stated in the Tender Notice, upon payment of the deposit stated in the Tender Notice.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

F.1.4 The Employer's Agent is:

Name : **MZOLO CONSULTING ENGINEERS**
 Address : 4 Coronation Road Scottville, PMB 3201
 Telephone : 031 001 8932
 Fax : 086 425 6243
 E-Mail : admin@mzoloconsulting.co.za

F.1.5 The Employer's right to accept or reject any tender offer

The Employer is not obliged to accept the lowest or any tender offer.

F.2.1 Eligibility

A Tenderer will not be eligible to submit a tender if:

- (a) the contractor submitting the tender is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices;
 - (b) the Tenderer does not have the legal capacity to enter into the contract;
 - (c) the contractor submitting the tender is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing;
 - (d) The Tenderer does not comply with the legal requirements stated in the Employer's procurement policy;
 - (e) The Tenderer who cannot demonstrate that he possesses the necessary technical qualifications and competencies, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract; or
- TENDERERS TO TAKE PARTICULAR NOTICE OF THIS CLAUSE AS TENDERERS WHO DO NOT COMPLY HERewith WILL NOT BE CONSIDERED ELIGIBLE.**
- (f) The Tenderer who cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.

F.2.7 Site visit and clarification meeting

The arrangements for the non compulsory site inspection visit and clarification meeting are as follows:

Location: Municipal Town Hall, MALELANE (Kobwa Hall) at Fish Eagle
Date : 15 May 2025
Starting time: 10: 00AM

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

F.2.12 Alternative tenders

If a Tenderer wishes to submit an alternative tender offer, the only criteria permitted for such an alternative tender offer are:

(a) Individual items

Individual items offered as alternatives to items in the Bill of Quantities will only be considered if listed and priced in Form G: *Amendments, Qualifications and Alternatives* in Part 2 of the Contract Document, accompanied by a detailed statement as necessary.

(b) Alternative designs

Where a Tenderer desires to submit an alternative tender involving modifications to the design or method of construction that would alter the character of the tender, the following procedure must be observed:

- (i) The alternative offer must be accompanied by supporting information, drawings, calculations and a priced alternative Bill of Quantities to enable its technical acceptability, construction time and price to be fully assessed. Such information, drawings and Bill of Quantities must be sufficient for the proper evaluation of the tendered alternative, otherwise the offer will not be considered;
- (ii) Any alternative tender involving modifications to the design will be assessed on its merits and may be accepted. An accepted alternative design will become the design for the purpose of the contract.
- (iii) If an alternative design with its priced Bill of Quantities has been accepted, the sum thus tendered for the alternative will not be subject to re-measurement and will be the final amount payable to the Contractor, except only for variations arising from:
 - Changes in design parameters ordered by the Engineer;
 - Changes not arising from any failure or fault of the Contractor, but from modifications requested by the Engineer.
- (iv) A decision whether or not to adopt a technically acceptable modified design will be governed by the amount of the overall saving and the advantages to the Employer which the modified design can be reliably expected to achieve. Matters to be considered in arriving at the overall saving will include the effect of any deferment in starting date arising from extra time needed for the preparation of an amended contract for signature.
- (v) The priced alternative Bill of Quantities must include an amount equal to 5% of the amount tendered therein to cover the Employer's costs of checking the alternative design offered.

F.2.13 Submitting a Tender Offer**F.2.13.5** Tender offers shall be submitted as an original only.

Under no circumstances whatsoever may the tender forms be retyped or redrafted. Photocopies of the original tender documentation may be used, but an original signature must appear on such photocopies.

F.2.13.6 A two-envelope procedure will not be followed.**F.2.15 Closing Time**

The closing time for submission of Tender Offers is as per the Tender Bulletin. Telephonic, telegraphic, facsimile, telex, electronic or e-mailed tenders will **not** be accepted.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

F.2.16 Tender Validity

All tenders shall remain valid for a period of ninety (90) days after the time and date set for the opening of tenders, or until the Tenderer is relieved of this obligation by the Employer, in writing, at an earlier date. However, the Tenderer may be requested in writing, not later than fourteen (14) days before this validity period will lapse, to extend the validity of this tender for a specific period. The written approval of the Tenderer must then be received before the lapsing of the original validity period, in order to remain valid.

Should a Tenderer –

- Withdraw his tender during the period of its validity; or
- give notice of his inability to execute the contract or fail to execute the contract; or
- fail to sign the contract agreement or furnish the required security within the period fixed in the Contract Data or any extended time agreed to by the Employer;

then he shall be liable for and pay to the Employer –

- all expenses incurred in calling for fresh tenders, if it should be necessary;
- the difference between his tender and any less favourable tender accepted either by fresh tenders being called or by another tender being accepted from those already received;
- any escalation of the final contract price resulting from any delay caused in calling for fresh tenders;

Provided always that the Employer may exempt a Tenderer from the provisions hereof, if it is of the opinion that the circumstances justify such exemption.

F.2.19 Access

Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.

F.2.22 Return of Tender Documents

Not applicable.

F.2.23 Certificates

The following certified certificates must be provided with the tender (Compulsory):

- Joint Venture Agreement and Power of Attorney in case of Joint Ventures;
- Workman's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993);
- Company/CC/Trust/Partnership registration certificates; and
- Certified Copies of Identity Document of company owner/directors.

F.3.5 The two-envelope system **will not** apply to this tender.

F.3.11 Evaluation of Tender Offers

The Mpumalanga Department of Public Works, Roads & Transport has adopted a policy in the legislation applicable to procurement of tenders and management of Construction Contracts. To achieve the Government's community empowerment policies, an environment conducive to emerging and SMME's Contractors has to be created. Therefore the procurement policy adopted by Mpumalanga Department of Public Works, Roads and Transport will be implemented in this contract to give effect to Section 217(2) of the Constitution and as published in Government Gazette no 16085, dated 23 November 1994.

F.3.11.2 Tenders will be evaluated in a single stage in accordance with the standard tender evaluation Method 2: Financial Offer and preference:

STAGE 1: TEST FOR RESPONSIVENESS/ELIGIBILITY

In order for a tender to be considered responsive, it must comply with **ALL** of the following criteria:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

- a) The tender documentation must be completed and signed in all respects;
- b) The Contractor must have the required CIDB grading;
- c) The tender documentation must include all necessary and applicable documentation as listed in F.2.23 above; and
- d) The tender must comply with the eligibility criteria noted in F.2.1.

The responsiveness of a tender will be assessed by scoring the bid according to the criteria detailed in the table overleaf.

It is incumbent on the Tenderer to ensure that the returnable documents in T2 are completed in sufficient detail to enable the score to be properly assessed. If the information provided renders a specific criterion not being fully complied with, then the bid will be scored on the next criterion down.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

Annex F: Standard Conditions of Tender

(As contained in Annexure F of Board Notice 12 of 2009: Standards for Uniformity in Construction Procurement)

F.1 General

F.1.1 Actions

F.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note:

- 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
- 2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

F.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

F.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

F.1.3 Interpretation

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

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

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

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.
- b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

be made between offers on a comparative basis;

- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process; and
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body
- f) **quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

F.1.4 Communication and employer's agent

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

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

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

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

F.1.6 Procurement procedures

F.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submission that are received at the closing time for tenders.

F.1.6.2 Competitive negotiation procedure

F.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenders shall not apply.

F.1.6.2.2 All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

F.1.6.2.4 The contract shall be awarded in accordance with the provisions of F.3.11 and F.3.13 after tenderers have been requested to submit their best and final offer.

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

F.1.6.3.2 Option 2

F.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

F.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

F.2 Tenderer's obligations

F.2.1 Eligibility

F.2.1.1 Submit a tender offer only if the tenderer complies with the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

F.2.2 Cost of tendering

Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with the requirements.

F.2.3 Check documents

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

F.2.4 Confidentiality and copyright of documents

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

F.2.5 Reference documents

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

F.2.6 Acknowledge addenda

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

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

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

F.2.7 Clarification meeting

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

F.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data.

F.2.9 Insurance

Insurance for this contract is to be supplied by contractor as per the contract data. The tenderer is advised to seek qualified advice regarding insurance.

F.2.10 Pricing the tender offer

F.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

F.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

F.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

F.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

F.2.11 Alterations to documents

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

F.2.12 Alternative tender offers

F.2.12.1 Unless stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

F.2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

F.2.13 Submitting a tender offer

F.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

F.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

F.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

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

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

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

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

F.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

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

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

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

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

F.2.16 Tender offer validity

F.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

F.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.

F.2.16.4 Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with packages clearly marked as "SUBSTITUTE".

F.2.17 Clarification of tender offer after submission

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the total of the prices or substance of the tender offer is sought, offered, or permitted.

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

F.2.18 Provide other material

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

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

F.2.19 Inspections, tests and analysis

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

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

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

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

F.2.24 Contract Price Adjustment.

The tender price given is fixed and will not be adjusted for escalation, unless provided for in the contract data. Fluctuations in the foreign currency exchange rate, however, shall be dealt with in the following manner:

1. No change in the tendered rates shall be allowed if the foreign currency (Rand versus US dollar) exchange rate on the date of letter of acceptance, by the client, of this contract has fluctuated up or down by less than or equal to 5% of the base exchange rate. (Refer to note 3 below)

2. Should the foreign currency (Rand versus US Dollar) exchange rate on the date of letter of acceptance, by the client, of this contract have fluctuated up or down by more than 5% of the base exchange rate (See note 3 below), the tendered rates for Section 2 in the Schedule of Quantities shall be adjusted up or down by an amount equal to the difference between the exchange rate on the date of letter of acceptance and the base exchange rate plus or minus 5 %, whichever is applicable.

3. The base foreign currency (Rand versus US dollar) exchange rate shall be the exchange rate determined by the Johannesburg Stock Exchange (JSE) at **4h00 pm** on the Monday before the tender closing date.

F.3 The Employer's undertakings

F.3.1 Respond to requests from the tenderer

F.3.1.1 Unless otherwise stated in the tender data, respond to a request for clarification received up to five working

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to pre-qualify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not pre-qualified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date of the Tender Notice until three days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.

F.3.3 Return late tender offers

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

F.3.4 Opening of tender submissions

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

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

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

F.3.5 Two-envelope system

F.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

F.3.5.2 Evaluate the quality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

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

F.3.8 Test for responsiveness

F.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

F.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

F.3.9 Arithmetical errors, omissions or discrepancies

F.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

F.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
 - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) the summation of the prices.

F.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

F.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

F.3.10 Clarification of a tender offer

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

F.3.11 Evaluation of tender offers

F.3.11.1 General

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

Appoint an evaluation of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Financial offer

In the case of a financial offer:

- a) Rank tender offers from the most favourable to the least favourable comparative offer.
- b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

F.3.11.3 Method 2: Financial offer and preference

In the case of a financial offer and preferences:

- a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.
- b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P$$

Where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
 N_P is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

- c) Rank tender offers from the highest number of evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

F.3.11.4 Method 3: Financial offer and quality

In the case of a financial offer and quality:

- a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any
- b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_Q$$

Where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
 N_Q is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

F.3.11.5 Method 4: Financial offer, quality and preferences

In the case of a financial offer, quality and preferences:

- Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any
- Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P + N_Q$$

Where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
 N_P is the number of tender evaluation points awarded for preference claimed in accordance with F.3.11.8.
 N_Q is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- Rank tender offers from the highest number of evaluation points to the lowest.
- Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

F.3.11.6 Decimal places

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

Score the financial offers of remaining responsive tender offers using the following formula:

$$N_{FO} = W_1 \times A$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer.
 W_1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.
 A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a
1	Highest price or discount	$A = (1 + \frac{(P - P_m)}{P_m})$	$A = P / P_m$
2	Lowest price or percentage commission / fee	$A = (1 - \frac{(P - P_m)}{P_m})$	$A = P_m / P$
^a P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.			

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring quality

Score each of the criteria and sub criteria for quality in accordance with the provisions of the Tender Data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$N_Q = W_2 \times S_o / M_s$$

where: S_o is the score for quality allocated to the submission under consideration;
 M_s is the maximum possible score for quality in respect of a submission.
 W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

F.3.13 Acceptance of tender offer

Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

F.3.15 Complete adjudicator's contract

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.3.17 Provide copies of the contracts

Provide to the successful tenderer the number of copies sated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

F.3.18 Provide written reasons for actions taken

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

T2 Returnable Documents

T2.1 List of Returnable Documents

The Tenderer must complete the following returnable documents and submit with the complete tender document.

DOCUMENT REF.	DESCRIPTION	ACTION
RETURNABLE SCHEDULES AND CERTIFICATES		
A	Proof of Registration on the National Treasury Centralised Supplier Database (CSD)	Attach
B	Proof of tax compliance status and a valid SARS PIN	Complete/ Attach
C	Bank Rating Letter	Complete/ Attach
D	BBBEE Verification Certificate. In case of Joint Venture (JV); B-BBEE must be SANAS approved	Attach
FAILURE TO SUBMIT/FULLY COMPLETE THE BELOW DOCUMENTS WILL RENDER THE TENDER SUBMISSION NON-RESPONSIVE (COMPULSORY RETURNABLES)		
E	Certificate of Attendance at a Tender Site Meeting	Complete
F	Record of Addenda to Tender Documents (If applicable)	Complete
G	Amendments, Qualifications and Alternatives (If applicable)	Attach
H	Certificate of Authority for Signature	Complete
I	Copy Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Disease Act No. 130 of 1993)	Attach
J	Fully Completed MBD Forms: MBD 1, MBD2, MBD3.2, MBD3.3, MBD4, MBD5, MBD6.1, MBD7.1, MBD7.2, MBD7.3, MBD8, MBD9	Complete
K	Municipal Declaration	Complete
INFORMATION REQUIRED FOR EVALUATION PURPOSES		
L	Key Personnel	Attach
M	Qualifications and Relevant Experience of the Site Agent/Contracts Manager (Curriculum Vitae Format)	Attach
N	Qualifications and Relevant Experience of the Foreman (Curriculum Vitae Format)	Attach
O	Relevant Experience of the Safety Officer (Curriculum Vitae Format)	Attach

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

DOCUMENT REF.	DESCRIPTION	ACTION
P	Relevant Experience of the Plant Operator (Curriculum Vitae Format)	Attach
Q	Summary of Tendering Firms Experience (Similar Work and Environment)	Attach
R	Provisional Programme	Attach
S	Schedule of Plant and Equipment/Letter of Intent to Hire	Attach
T	Occupational Health & Safety Plan	Attach
U	Certified CIDB Grading Certificate	Attach

A: CENTRAL SUPPLIER DATABASE REGISTRATION NUMBER

IMPORTANT NOTES:

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

Central Supplier Database Registration Number

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

VALID CSD REPORT:

[Valid CSD report to be attached to this page]

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

B: PROOF OF TAX COMPLIANCE STATUS AND A VALID SARS PIN

IMPORTANT NOTES:

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

"Valid Tax clearance certificate / Central Supplier Database Registration Number

16. No contract may be awarded to a person who has failed to submit an original Tax Clearance Certificate from the South African Revenue Service ("SARS") certifying the taxes of that person to be in order or that suitable arrangement have been made with SARS."

2. The ST 5.1 form, Application for Tax Clearance Certificate (in respect of tenders), must be **completed by the tenderer in every detail and submitted to the Receiver of Revenue** where the tenderer is registered for income tax purposes. The Receiver of Revenue will then furnish the tenderer with a Tax Clearance Certificate that will be valid for 6 months from date of issue.

Each party to a Consortium/Joint Venture/Sub-contractors must complete a separate Tax Clearance Certificate.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

TAX CLEARANCE CERTIFICATE / SARS PIN

[Tax Clearance Certificate obtained/ PIN from SARS to be attached to this page]

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

C: BANK RATING AND CONFIRMATION OF BANKING DETAILS

Tenderers financial capacity to finance and undertake a contract of this nature will also be checked and consequently it is a requirement that the details below be provided.

NAME OF TENDERER					
NAME OF ACCOUNT HOLDER AT BANK					
TYPE OF ACCOUNT (Please tick)	CURRENT/CHEQUE	<input type="checkbox"/>	SAVINGS	<input type="checkbox"/>	TRANSMISSION
BANK					
BRANCH NAME					
ACCOUNT NUMBER					
BRANCH CODE					
BANK RANKING CODE					
BANK TELEPHONE NO					
BANK ADDRESS					
NAME OF BANK MANAGER					
TELEPHONE NUMBER					
FAX NUMBER					
NO OF YEARS ABOVE ACCOUNT HAS BEEN WITH BANK					
CREDIT FACILITIES AVAILABLE (State Amount)					

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

D: REGISTRATION CERTIFICATES OF AN ENTITY**ENTITY REGISTRATION:**

[Important note to Tenderer: Registration Certificates for Companies, Close Corporations and Partnerships and ID documents for Sole Proprietors, must be inserted here. In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement clearly setting out the roles and responsibilities of the parties must be included with particular reference to the guarantees required in terms of the Contract Data. The Joint Venture Agreement must also clearly indicate how payment is to be effected to the entity and distributed to the parties]

CIDB REGISTRATION:

Tenderer's must also indicate their CIDB registration details in the space provided.

(If not registered, attach proof that the enterprise can be registered with the CIDB within 10 days)

Registered Name	Registration Number

BBBEE CERTIFICATION:

The Tenderer must also attach hereto a certified copy of their B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS).

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

E: CERTIFICATE OF ATTENDANCE AT 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 on TBA

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

Particulars of person(s) attending the meeting:

Name: Signature:

Capacity:

Name: Signature:

Capacity:

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

Name: Signature:

Capacity:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

F: RECORD OF ADDENDA TO TENDER DOCUMENTS

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

ADD. No.	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

G: AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

Notes: (1) Amendments to the General and Special Conditions of Contract are not acceptable;

(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

Notes: (1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.

(2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.

(3) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

Note: The tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

H: CERTIFICATE OF AUTHORITY FOR SIGNATURE OF AN ENTITY

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

(I) Company	(II) Close Corporation	(III) Partnership	(IV) Joint Venture	(V) Sole Proprietor

(I) CERTIFICATE FOR COMPANY

I, chairperson of the Board of Directors of
, hereby confirm by resolution of the Board (copy
 attached) taken on 20....., that
 Mr/Ms, acting in the capacity of
, was authorised to sign all documents in
 connection with this tender and any contract resulting from it on behalf of the company.

Signature of Chairman:

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

(II) CERTIFICATE FOR CLOSE CORPORATION

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

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME	ADDRESS	SIGNATURE	DATE
		
		
		
		
		

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

(III) CERTIFICATE FOR PARTNERSHIP

We, the undersigned, being the key partners in the business trading as,

.....hereby authorise

Mr/Ms..... acting in the capacity of

....., to sign all documents in connection

with the tender for Contract No and any contract resulting from it on our behalf.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME	ADDRESS	SIGNATURE	DATE

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.*

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

(IV) CERTIFICATE FOR 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 Noand any contract resulting from it on our behalf.

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

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME AND CAPACITY
Lead partner		

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.*

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

(V) CERTIFICATE FOR SOLE PROPRIETOR

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

Signature of Sole owner:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

I: WORKMANS' COMPENSATION REGISTRATION CERTIFICATE (OR PROOF OF PAYMENT OF CONTRIBUTIONS IN TERMS OF THE COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT NO. 130 OF 1993)

[Certified Copy of the Certificate or Proof of Payment thereof obtained from the Workmen's Compensation Commissioner to be inserted here]

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

J: RETURNABLE SCHEDULE REQUIRED ONLY FOR TENDER EVALUATION PURPOSES, FORMS (MBD Forms)

MBD2:	Tax Clearance Certificate Requirements
MBD3:	Pricing Schedule-Non-firm prices
MBD4:	Declaration of Interest
MBD5:	Declaration for procurement above R10m (all applicable taxes included)
MBD6.1:	Preference Points claim form in terms of the preferential procurement regulations 2011
MBD7.1:	Contract form-purchase of goods/works
MBD7.2:	Contract Form-rendering of services
MBD7.3:	Contract Form-Sale of Goods/Works
MBD8:	Declaration of bidder's past Supply Chain Management Practices
MBD9:	Certificate of Independent bid determination

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 the attached 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 Tax Clearance Certificate must be submitted together with the bid. Failure to submit the Tax Clearance Certificate will result in the invalidation of the bid.
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.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

**PRICING SCHEDULE – FIRM PRICES
(PURCHASES)**

NOTE: ONLY FIRM PRICES WILL BE ACCEPTED. NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATES OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder.....	Bid Number.....
Closing Time	Closing Date

OFFER TO BE VALID FOR.....DAYS FROM THE CLOSING DATE OF BID.

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)
----------	----------	-------------	--

- | | | |
|---|--|--------------------------|
| - | Required by: | ..... |
| - | At: | ..... |
| | | |
| - | Brand and Model | ..... |
| - | Country of Origin | ..... |
| - | Does the offer comply with the specification(s)? | *YES/NO |
| - | If not to specification, indicate deviation(s) | ..... |
| - | Period required for delivery | ..... |
| | | *Delivery: Firm/Not firm |
| - | Delivery basis | ..... |

Note: All delivery costs must be included in the bid price, for delivery at the prescribed destination.

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

*Delete if not applicable

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

**PRICING SCHEDULE – NON-FIRM PRICES
(PURCHASES)**

NOTE: PRICE ADJUSTMENTS WILL BE ALLOWED AT THE PERIODS AND TIMES SPECIFIED IN THE BIDDING DOCUMENTS.

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder.....	Bid number.....
Closing Time	Closing Date

OFFER TO BE VALID FOR.....DAYS FROM THE CLOSING DATE OF BID.

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)

-	Required by:	.....
-	At:	.....
-	Brand and model	.....
-	Country of origin	.....
-	Does the offer comply with the specification(s)?	*YES/NO	
-	If not to specification, indicate deviation(s)	.....
-	Period required for delivery	.....
-	Delivery:	*Firm/Not firm	

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

*Delete if not applicable

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PRICE ADJUSTMENTS**A NON-FIRM PRICES SUBJECT TO ESCALATION**

1. IN CASES OF PERIOD CONTRACTS, NON FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES

2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$Pa = (1 - V)Pt \left(D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + D4 \frac{R4t}{R4o} \right) + VPt$$

Where:

- Pa = The new escalated price to be calculated.
 (1-V) Pt = 85% of the original bid price. **Note that Pt must always be the original bid price and not an escalated price.**
 D1, D2... = Each factor of the bid price eg. labour, transport, clothing, footwear, etc. The total of the various factors D1,D2...etc. must add up to 100%.
 R1t, R2t..... = Index figure obtained from new index (depends on the number of factors used).
 R1o, R2o = Index figure at time of bidding.
 VPt = 15% of the original bid price. This portion of the bid price remains firm i.e. it is not subject to any price escalations.

3. The following index/indices must be used to calculate your bid price:

Index..... Dated..... Index..... Dated..... Index..... Dated.....

Index..... Dated..... Index..... Dated..... Index..... Dated.....

4. FURNISH A BREAKDOWN OF YOUR PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTOR (D1, D2 etc. eg. Labour, transport etc.)	PERCENTAGE OF BID PRICE

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

B PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price QUOTATION, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-

- the bidder is employed by the state; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

2.1 Full Name of bidder or his or her representative:

2.2 Identity Number:

2.3 Position occupied in the Company (director, trustee, shareholder²):

2.4 Company Registration Number:

2.5 Tax Reference Number:

2.2 VAT Registration Number:

- 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

¹"State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

²"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

- 2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

- 2.2.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

Name of state institution at which you or the person connected to the bidder is employed :

Position occupied in the state institution:

Any other particulars:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

-
-
-
- 2.2.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**
- 2.2.2.1 If yes, did you attached proof of such authority to the bid document? **YES / NO**
- (Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.
- 2.2.2.2 If no, furnish reasons for non-submission of such proof:
-
-
-
- 2.3 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**
- 2.3.1 If so, furnish particulars:
-
-
-
- 2.4 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**
- 2.9.1 If so, furnish particulars.
-
-
-
- 2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? **YES/NO**
- 2.10.1 If so, furnish particulars.
-
-
-
- 2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? **YES/NO**
- 2.11.1 If so, furnish particulars:
-
-
-

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

3 Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Personal Reference Number	Tax Number	State Number	Employee / Persal Number

4 DECLARATIONS

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

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....

Signature

.....

Position

.....

Date

.....

Name of bidder

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes 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. *YES / NO

.....

.....

2. Do you have any outstanding undisputed commitments for? municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

.....

.....

.....

.....

* Delete if not applicable

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

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

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

.....
 Position

.....
 Name of Bidder

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

MBD 6.1

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT
REGULATIONS 2022**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

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).

1.2 To be completed by the organ of state

- a) The applicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

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

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5 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.

1.6 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

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

required by the organ of state.

2. DEFINITIONS

- (a) **“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;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“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
- (e) **“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 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

$$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) \text{ or } Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

- Ps = Points scored for price of tender under consideration
 Pt = Price of tender under consideration
 Pmax = Price of highest 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 organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

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

POINTS FOR CONTRACTING AN ENTERPRISE OWNED BY HISTORICALLY DISADVANTAGED PERSONS OR INDIVIDUALS		
A total of 8 preference points shall be allocated on a proportional or pro rata basis for contracting an enterprise owned by historically disadvantaged persons or individuals who meet the following requirements -		
HISTORICALLY DISADVANTAGED PERSONS OR INDIVIDUALS	POINTS ALLOCATION	SOURCE DOCUMENTS REQUIRED TO CLAIM POINTS
100% black person or people owned enterprise	2	A copy of a Full CSD report not older than 3 months
More than 30% woman or women shareholding or owned enterprise	2	
more than 30% youth shareholding or owned enterprise	2	
More than 30% people living with disability shareholding or owned enterprise	2	A copy of a Medical Certificate to confirm disability

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

POINTS FOR IMPLEMENTING OF RDP PROGRAMMES

A total of 12 preference points shall be allocated on a proportional or pro rata basis for implementing of programmes for RDP -

Enterprises regarded as *EMEs located within the Ehlanzeni District Municipality area of jurisdiction	2	<ul style="list-style-type: none"> ➤ A copy of a Full CSD report not older than 3 months NB: Points will only be awarded if the CSD physical address is the same as the address for the proof of residence required in 1.9 above.
Enterprise who will sub-contract minimum of 30% of the contract value to EMEs in the ward or local communities where the services of work to be rendered will be undertaken;	2	<ul style="list-style-type: none"> ➤ Joint venture requirements as per the tender document and all relevant legislations pertaining to joint ventures
Points for Corporate Social Investment (CSI) or Social Labour Plan proposition	5	<p>Comprehensive Methodology on how the tenderer is planning to invest back to the community of Nkomazi Local Municipality:</p> <ul style="list-style-type: none"> • Community development grounded on the principles of empowerment, social justice, collective action to mention but a few. • These undertakings shall form part of the service level agreements SLA and be managed as such.
Points for valid B-BBEE level 1 contribution (SANAS accredited B-BBEE certificate for generic enterprise, and for EME and SME a sworn affidavit or CIPC issued certificate confirming annual turnover and level of Black Ownership).	3	<ul style="list-style-type: none"> ➤ Certified Valid BBBEE certificate ➤ or Certified Valid EME and SME a sworn affidavit ➤ or Certified Valid CIPC issued certificate confirming annual turnover and level of Black Ownership
TOTAL PREFERENCE POINTS TO BE CLAIMED	20	

All certified copies must not be older than three months.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

TENDERER'S MUST SCORE A MINIMUM OF 70 POINTS IN ORDER FOR THE BID TO BE ELIGIBLE IN TERMS OF F.2.1 (e).

TECHNICAL EVALUATION CRITERIA

Criterion	Assessment	Points Awarded	Max Score
Construction Team Key Personnel (Forms L, M, N,O)	Site Agent/Contract manager has Certified N.D Civil Engineering or relevant B – degree in Civil Eng (4); NQF 5 (Labour Intensive) Qualification (2); Completed minimum of 5 projects (2), five years' experience (2).	10	30
	General Foreman has Certified Civil Engineering Trade Qualification (4); NQF level 2 Labour intensive Qualification (2); Completed minimum of 3 projects (2); Three years' experience (2).	10	
	Safety Agent with a Certified relevant safety qualification (3); Completed min of 2 projects (1); Three years' experience (1).	05	
	Plant Operator with a Certified relevant trade certificate (2.5); Three years' experience (2.5).	05	
Experience of similar work and environment (Form P)	Company Experience of similar work in the past 7 years; (10 point for each similar successfully completed project with value of R20 million to R30 Million). 5 points for each similar completed project with value of R10 Million to R20 million) 2 points for each similar completed project with value of less than R10 Million Certified Appointment letters and Completion Certificates to be submitted as proof.	10 5 2	50
Company financial Capacity (Form C)	Bank Rating of: C or better - 5; D - 0; E or Lower - 0;		05
Plant and Equipment (Form R)	TLB (Own/Hired) – 4 Excavator - (Own/Hired) 4 Water Tanker (Own/Hired) - 2 6m3 or 10 m3 Tipper Truck (Own/Hired) – 2 Plate Compactor - (Own/Hired) 3		15
MAXIMUM SCORE:			100

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

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

1.1 Name of company/firm.....

1.2 Company registration number:

TYPE OF COMPANY/ FIRM [TICK APPLICABLE BOX]

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

1.3 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 the 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.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

.....

SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:

.....

.....

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

CONTRACT FORM - PURCHASE OF GOODS/WORKS

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SUCCESSFUL BIDDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SUCCESSFUL BIDDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)..... in accordance with the requirements and specifications stipulated in bid number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

- (i) Bidding documents, viz
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Technical Specification(s);
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
 - Declaration of interest;
 - Declaration of bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
- (ii) General Conditions of Contract; and
- (iii) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

PACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES

1

2.

DATE:

CONTRACT FORM - PURCHASE OF GOODS/WORKS**PART 2 (TO BE FILLED IN BY THE PURCHASER)**

1. I..... in my capacity as..... accept your bid under reference numberdated.....for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating delivery instructions is forthcoming.
3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	PRICE (ALL APPLICABLE TAXES INCLUDED)	BRAND	DELIVERY PERIOD	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)

4. I confirm that I am duly authorized to sign this contract.

SIGNED ATON.....

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES

1.

2.

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

CONTRACT FORM - RENDERING OF SERVICES

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution)..... in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

- (iv) Bidding documents, viz
- Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Filled in task directive/proposal;
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
- (v) General Conditions of Contract; and
- (vi) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES

1

2

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

CONTRACT FORM - RENDERING OF SERVICES**PART 2 (TO BE FILLED IN BY THE PURCHASER)**

1. I..... in my capacity as..... accept your bid under reference numberdated.....for the rendering of services indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating service delivery instructions is forthcoming.
3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)

4. I confirm that I am duly authorised to sign this contract.

SIGNED AT ON

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES

1

2

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

CONTRACT FORM - SALE OF GOODS/WORKS

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SUCCESSFUL BIDDER (PART 1) AND THE SELLER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SUCCESSFUL BIDDER AND THE SELLER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to purchase all or any of the goods and/or works described in the attached bidding documents from (name of institution)..... in accordance with the requirements stipulated in (bid number)..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the seller during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

- (vii) Bidding documents, viz
- Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Special Conditions of Contract;
- (viii) General Conditions of Contract; and
- (ix) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) cover all my obligations and I accept that any mistakes regarding price(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I undertake to make payment for the goods/works as specified in the bidding documents.

6. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

7. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES

1.

2.

DATE:.....

CONTRACT FORM - SALE OF GOODS/WORKS**PART 2 (TO BE FILLED IN BY THE SELLER)**

4. I..... in my capacity as.....
accept your bid under reference numberdated.....for the purchase of goods/works
indicated hereunder and/or further specified in the annexure(s).

5. I undertake to make the goods/works available in accordance with the terms and conditions of the contract.

ITEM NO.	DESCRIPTION	PRICE (ALL APPLICABLE TAXES INCLUDED)		

4. I confirm that I am duly authorized to sign this contract.

SIGNED ATON.....

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP



WITNESSES

3.

4.

DATE

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Standard Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by institutions 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 disregarded if that bidder, or any of its directors have-
 - a. abused the institution's supply chain management system;
 - b. committed fraud or any other improper conduct in relation to such system; or
 - c. failed to perform on any previous contract.
- 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 of Restricted Suppliers as companies or persons 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 Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
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)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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 outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

4.3.1	If so, furnish particulars:		
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		

CERTIFICATION

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

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS 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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
 - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD 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 (SBD 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 purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Institution)

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

I certify, on behalf of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or 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)

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

- (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

2

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.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

AUTHORISATION CERTIFICATE**T 8**

1. I/We hereby bid to supply all or any of the supplies and/or to bid all or any of the services as described and required in the bid documentation to Nkomazi Local Municipality, on the terms and conditions and in accordance with the specifications as stipulated in the bid documentation (which bid documentation shall be taken as part of, and incorporated into, this bid) at the prices and delivery periods as required therein.
2. I/We agree that –
the offer herein contained shall remain binding on me/us and open for acceptance by Nkomazi Local Municipality during the validity period indicated in the bid documentation, which period shall be calculated from the closing time of the bid;
3. this bid and its acceptance shall be subject to the Standard Terms and Conditions of Bid [T 5] which are contained in this bid documentation and with which contents I am/we are fully acquainted with;
4. if I/we withdraw my/our bid within the validity period of the bid for which I/we have agreed that the bid shall remain open for acceptance, or fail to fulfil the contract when called upon to do so, Nkomazi Local Municipality may, without prejudice to any other remedies at its disposal, agree to the withdrawal or cancellation of the bid or contract that may have been entered into and I/we will then pay to Nkomazi Local Municipality any additional expense incurred by Nkomazi Local Municipality having to either accept any less favourable bid, or if fresh bids have to be invited, the additional expenditure incurred by the invitation of fresh bids and by the subsequent acceptance of any less favourable bid;
5. if my/our bid is accepted the acceptance may be communicated to me/us by letter by ordinary post or registered post and that the Post Office shall be regarded as my/our agent, and delivery of such acceptance to the Post Office shall be treated as a delivery to me/us;
6. The law of the Republic of South Africa shall govern the contract created by the acceptance of my/our bid and that I/we choose our *domicilium citandi et executandi* in the Republic at:

.....
7. I/We furthermore confirm that I/we have satisfied myself/ourselves as to the correctness and validity of my/our bid and that the prices and scope of work bided cover all my/our obligations in terms of the bid documentation and that I/we accept that any mistakes regarding prices or calculations will be at my/our risk.
8. I/We hereby accept full responsibility for the proper execution and due fulfilment of all obligations and conditions devolving on me/us under this contract as the principal bidder liable for the contract.
9. I/We agree that any action arising from this contract may in all respects be instituted against me/us and I/we hereby undertake to satisfy fully any judgment obtained against me/us as a result of such action.

Signature Tender/Bid no.....

Capacity

Duly authorised to sign on behalf of

.....

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

K: MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS

The following particulars must be furnished in relation to tenders for municipalities and municipal entities where:

- a) consultancy services are required; and
- b) goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT.

In the case of a joint venture, separate municipal declarations and returnable documents shall be submitted in respect of each partner.

Section 1: Enterprise Details

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

Section 2: Declaration for consultancy services:

The enterprise has been awarded the following consultancy services by an organ of state during the last five years.

Name of organ of state	Estimated number of contracts	Nature of service, e.g, quantity surveying	Service similar to required service (yes / no) ?

Attach separate page as necessary

Section 3 Goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT

I / we certify that

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

1) (tick one of the boxes):

- ☐ the enterprise **is not** required by law to prepare annual financial statements for auditing
- ☐ the enterprise **is** required by law to have audited annual financial statements and attached the audited financial statements for the past three financial years, or since the establishment as the enterprise was established within the past three years.

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

3) source of goods and / or services :

(tick one of the boxes and insert percentages if applicable):

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

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

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

Attach separate page as necessary

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

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

Signed _____

Date _____

Name _____

Position _____

Enterprise name _____

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

L: KEY PERSONNEL

In terms of the Project Specification, all unskilled workers are to be locally sourced.

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

Category of Employee	Number of Persons					
	Key Personnel, Part of the Contractor's Organisation		Key Personnel to be imported if not available locally		Unskilled Personnel to be recruited from local community	
	PDI	NON-PDI	PDI	NON-PDI	PDI	NON-PDI

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

M: CURRICULUM VITAE OF KEY PERSONNEL – SITE AGENT / CONTRACTS MANAGER

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.

Site Agent / Contracts Manager:	Years with firm:
Qualifications:	
<u>Employment Record:</u>	
<u>Experience Record Pertinent to Required Service:</u>	
(Indicate no of years' experience)	

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

N: CURRICULUM VITAE OF KEY PERSONNEL – FOREMAN

Site Agent:	Years with firm:
Qualifications:	
<u>Employment Record:</u>	
<u>Experience Record Pertinent to Required Service:</u>	
(Indicate no of years' experience)	

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

Foreman:	Years with firm:
Qualifications:	
<u>Employment Record:</u>	
<u>Experience Record Pertinent to Required Service:</u>	
(Indicate no of years' experience)	

DATE:

Q: SCHEDULE OF TENDERING FIRM'S EXPERIENCE (SIMILAR WORK AND ENVIRONMENT)*[REFER TO THE TENDER DATA FOR THE SCOPE OF WORK]*

PROJECT NAME	DESCRIPTION	VALUE	REFERENCE

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

R: PROVISIONAL PROGRAMME

The Tenderer shall detail below or attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this tender.

The programme must indicate all key activities, time frames and must clearly demonstrate the Tenderer's understanding of the scope of works.

The competency and clarity of the programme will help to inform the Employer's assessment of the Tenderer's eligibility to execute the contract.

PROGRAMME**ACTIVITY****WEEKS / MONTHS**

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

S: SCHEDULE OF PLANT AND EQUIPMENT

It is important that the Tenderer be able to demonstrate that he/she has adequate plant and equipment to efficiently execute the proposed scope of works.

The Tenderer's response to this section will be used in assessing the eligibility of the tender offer.

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

Quantity	Description	Size	Capacity

Attach additional pages if more space is required.

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

Quantity	Description	Size	Capacity

Attach additional pages if more space is required.

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

DATE:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

T: CONTRACTOR/SERVICE PROVIDER'S HEALTH AND SAFETY DECLARATION

In terms of the Occupational Health and Safety Act No 85 of 1993 a Contractor may only be appointed to perform key services if the *Purchaser* is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the provisions of the Act.

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

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993) herein after referred to as the "Act"
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the services specified under this contract in compliance with the Employer's Health and Safety Specifications.
3. I propose to achieve compliance with the Regulations by one of the following:

(a)	From my own competent resources	*Yes / No
(b)	From my own resources still to be appointed or trained until competency is achieved	*Yes / No
(c)	From outside sources by appointment of competent specialist subcontractors	*Yes / No

(* = *delete whatever is not applicable*)

4. I confirm that copies of my company's approved Health and Safety Plan, will at all times be available for inspection by the *Purchaser's* personnel, Nkomazi Local Municipality officials and inspectors of the Department of Labour.
5. I hereby confirm that adequate provision has been made in my tendered rates and prices in the schedule of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the Act and that I will be liable for any penalties that may be applied for failure to comply with the provisions of the Act.
6. I agree that my failure to complete and execute this declaration to the satisfaction of the *Purchaser* will mean that I am unable to comply with the requirements of the Act and accept that my tender will be prejudiced and may as a result be rejected at the discretion of the *Purchaser*.

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

DATE:

U: CERTIFIED CIDB GRADING CERTIFICATE

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

PART C2: PRICING DATA

PART C3: SCOPE OF WORK

PART C4: SITE INFORMATION

PAVING OF INTERNAL STREETS IN ANIVA FOR NKOMAZI LOCAL MUNICIPALITY

TABLE OF CONTENT

PART C1: AGREEMENTS AND CONTRACT DATA (YELLOW COLOUR)

C1.1: FORM OF OFFER AND ACCEPTANCE

C1.2: CONTRACT DATA

C1.2.1: CONDITIONS OF CONTRACT

C1.2.2: PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER

PART B: CONTRACT DATA PROVIDED BY THE CONTRACTOR

C1.3: FORM OF GUARANTEE

C1.4: AGREEMENT WITH ADJUDICATOR

**C1.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE
OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993**

PART C2: PRICING DATA (YELLOW COLOUR)

C2.1: PRICING INSTRUCTIONS

C2.2: BILL OF QUANTITIES

PART C3: SCOPE OF WORK (BLUE COLOUR)

TABLE OF CONTENTS

C3.1: STANDARD SPECIFICATIONS

C3.2: PROJECT SPECIFICATIONS

C3.3: PARTICULAR SPECIFICATIONS

PART C 4: SITE INFORMATION (GREEN COLOUR)

C4.1: LOCALITY PLAN

C4.2: CONSTRUCTION NOTICE BOARD

C4.3: TENDER DRAWINGS

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA IN NKOMAZI LOCAL MUNICIPALITY**C1.1 Form of Offer and Acceptance****Offer**

The Employer, identified in the acceptance signature block, has solicited offers to enter into a Contract for the procurement of:

BID NUMBER: NKO 20/2025

PAVING OF INTERNAL STREETS IN ANIVA IN NKOMAZI LOCAL MUNICIPALITY

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

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

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

.....

..... Rand (in words);

R (in figures)

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

Signature Block: Tenderer

Signature Date

Name

Capacity

Name of organization.

Address of organization

.....

Signature of witness Date

Name of witness

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C1.1 Form of Offer and Acceptance (Continued)**Acceptance**

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

The terms of the Contract, are contained in:

Part C1: Agreements and Contract Data, (which includes this agreement).

Part C2: Pricing Data.

Part C3: Scope of Work.

Part C4: Site Information.

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 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 contained in this schedule.

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

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

Signature Block: Employer

Signature Date

Name

Capacity

for the Employer

Signature of witness Date

Name of witness

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C1.1 Form of Offer and Acceptance (continued)**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

Details

.....

.....

2 Subject

Details

.....

.....

3 Subject

Details

.....

.....

4 Subject

Details

.....

.....

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

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C1.1 Form of Offer and Acceptance (continued)

For the Tenderer:

Signature(s) _____
Name(s) _____
Capacity _____

(Name and address of organization)

Name &
signature of
Witness _____

For the Employer:

Signature(s) _____
Name(s) _____
Capacity _____

(Name and address of organization)

Name &
signature of
Witness _____

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

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:

the (day)
of (month)
20. (year)
at (place)

For the Contractor:

.....
Signature

.....
Name

.....
Capacity

Signature and name of witness:

.....
Signature

.....
Name

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN EMJEJANI IN NKOMAZI LOCAL MUNICIPALITY

C1.2 Contract Data

Section 1.01 The General Conditions of Contract for Construction Works (2015) published by the South African Institution of Civil Engineering, is applicable to this Contract. Copies of these conditions of Contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947).

The General Conditions of Contract for Construction Works make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the Contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of Contract.

Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works to which it mainly applies.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA NKOMAZI LOCAL MUNICIPALITY

BID: NKO 20/2025

C1.2.1: CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

1. **GENERAL**
2. **APPENDIX A: TRANSFER OF RIGHTS**

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works - Third Edition, 2015", issued by the South African Institution of Civil Engineering (Short title: "**General Conditions of Contract 2015**") and can be obtained from:

SAICE

Waterfall Park
Howick Gardens
Vorna Valley Halfway House
Becker Street
MIDRAND
1685
Gauteng Province
Tel: (011) 805-5947/8
Fax: (011) 805-5971.

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under "Special Conditions of Contract".

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

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

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

Clause no.	Description
SCC 6.11	Replace the Heading with " VARIATIONS EXCEEDING 20 PERCENT "
SCC 6.11.1.3	Replace the wording: " <i>greater than 15 percent</i> " with " <i>greater than 20 percent</i> ".

APPENDIX A: TRANSFER OF RIGHTS**TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Tenderer only)**

Claim for materials on site, Payment Certificate No. Date:

Contract No: for (contract title)

I, the undersigned (name of signatory) in my capacity as

..... of (name of Contractor)

duly authorized hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer) insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium*.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as materials on site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the Permanent Works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table:

Description of Item	Unit	Quantity	Rate	Amount	Supplier
Total Value of Materials and goods					

Signed by: Date:
for and on behalf of the Contractor.

Witnessed by: Date:

NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 6.10.1.5 of the General Conditions of Contract 2010.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C1.2.2 PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER

The following Contract specific data are applicable to this Contract.

REFERENCE CONTRACT SPECIFIC DATA BY THE EMPLOYER**Clause**

- 1.1.1.13 The Defects Liability Period is **12 months** (*measured from the date of the Certificate of Completion*).
- 1.1.1.14 The time for achieving Practical Completion will be **12 months** (*measured from the Commencement Date*).
- 1.1.1.15 The name of the Employer is: **Nkomazi Local Municipality**
- 1.1.1.16 The Engineer is: **Mzolo Consulting Engineering and Project Managers PTY (LTD)** represented by a Director duly authorized thereto in writing.
- 1.1.1.26 The Pricing Strategy is: Re-measurement Contract
- 1.2.1.2 The Employer's address for receipt of communications is:
- Physical address:
 Telephone: 013 790 0245
 Facsimile: 013 790 0886
 Address (physical): 9 Park Street, Malelane, 1320
 Address (postal): Private Bag X101, Malelane, 1320
- 1.2.1.2 The Engineer's address for receipt of communications is:
- Postal address:
 07 Fairhaven, 04 Coronation road
 Pietermaritzburg
 3201
- Telephone: 031 001 8932
- 5.3.1 The documentation required before commencement with Works execution are:
- Health and Safety Plan (Refer to Clause 4.3)
 Initial programme (Refer to Clause 5.6)
 Security (Refer to Clause 6.2)
 Insurance (Refer to Clause 8.6)
- 3.1.3 The Engineer is required to obtain the specific approval of the Employer before executing any of the following: The Engineer requires the Clients approval in order to authorize any expenditure in excess of the tender sum excluding contingencies as per Clause 6.4.
- 5.3.2 The time to submit the documentation required before commencement with Works execution is fourteen (14) days after appointment.
- 5.4.2 The access and possession of site shall not be exclusive to the Contractor but as set out in the Site Information.
- 5.8.1 The non-working days are Sundays.
 The special non-working days are:

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREET IN ANIVA

- 1 Public holidays and voting days if published prior to the tender closing date.
- 2 The year end break commencing and ending on dates as specified by SAFCEC.

5.13.1 The penalty for failing to complete the Works within the abovementioned time limit, plus approved extensions of time or condonation thereof is 0.1% of the Contract Sum per calendar day.

5.14.1: Practical Completion will be considered when:

- The pipelines are successfully pressure tested and all earthworks are complete.

5.16.3 The latent defect period is ten (10) years for civil engineering works

6.5.1.2.3 The percentage allowance to cover overhead charges is 10%.

6.8.2 Contract Price Adjustment: The Contract shall be subject to Contract Price Adjustment.

The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule included in the General Conditions of Contract.

The value of "x" is 0.15

The values of the coefficients are:

a = 0.2 Labour
b = 0.35 Contractor's equipment
c = 0.35 Material
d = 0.1 Fuel

Clause:

The Province wherein the larger part of the site is located is: Mpumalanga.

The applicable industry for the Producer Price Index for material is Diesel

The area for the Producer Price Index for fuel is: **Belfast, Mpumalanga.** (or closest listed location)

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

6.8.3 Price adjustments for variations in the cost of special materials are allowed.

6.10.1.5 The percentage advance on materials not yet built into the Permanent Work is 80%.

6.10.3 The limit of retention money is 10% of the Contract Sum.

8.2.2 The safekeeping of all material paid as material on site not yet built into the works remains the responsibility of the contractor, although ownership rest with the client as per clause 6.10.1.5.

8.6.1.1.2 The value of Plant and materials supplied by the Employer to be included in the insurance sum is R Nil.

8.6.1.1.3 The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 5,000,000.

8.6.1.3 The limit of indemnity for liability insurance is R 10 000 000 for any single claim, the number of claims to be unlimited during construction and Defects Liability Period.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREET IN ANIVA

- 8.6.1.5 No additional insurance is required
- 10.5.2 Dispute resolution is to be by means of ad-hoc adjudication
- 10.5.3 The number of Adjudication Board Members to be appointed is three.
- 10.7.1 Disputes to be referred for final settlement to arbitration

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PART B: DATA PROVIDED BY THE CONTRACTOR

Clause

1.1.1.9 Name of Contractor:

1.2.1.2 The Contractor's address for receipt of communications is:

Physical address: Postal address:

.....

.....

.....

.....

Telephone:

Fax:

E-mail:

6.2.1 The security to be provided by the Contractor shall be:

Performance guarantee of 10% of the Contract Sum plus retention of 10% of the value of the Works

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

C1.3 Form of Guarantee - Pro Forma

Appendix C:

General Conditions of Contract for Construction Works, Third Edition (2015)

PRO FORMA PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition (2015).

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means:

"Contractor" means:

"Employer's Agent" means:
.....

"Works" means:

"Site" means:

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

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

Amount in words:

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

Amount in words:

Type of Performance Guarantee: (*Insert Variable or Fixed*)

"Expiry Date" means: (*Give date*) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

1. VARIABLE PERFORMANCE GUARANTEE

1.1 Where a Variable Performance Guarantee has been selected, the Guarantor's liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:

1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:

R.....

(Amount in words)

1.1.2 From the day following the date of the said interim payment certificate up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, whichever occurs first:

R.....

(Amount in words)

1.2 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

2. FIXED PERFORMANCE GUARANTEE

2.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.

2.3 The Employer's Agent 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. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES

3.1 The Guarantor hereby acknowledges that:

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

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

3.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:

3.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in 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 3.2.2;

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

- 3.2.2 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 3.2.1 and the sum certified has still not been paid;
- 3.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.
- 3.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, 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:
- 3.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
- 3.3.2 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 3.3; and
- 3.3.3 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.
- 3.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 3.5 Where the Guarantor has made payment in terms of 3.3, 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.
- 3.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 3.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 3.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, 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.
- 3.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

3.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' 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)

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C1.4: Agreement with Adjudicator:

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

and

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

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....
 and known as (Insert Contract number)
 (Contract title).....

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

(* Delete as necessary)

IT IS NOW AGREED as follows:

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

SIGNED by:

(Signature): (Signature): (Signature):
Name: **Name:** **Name:**

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

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

the **Adjudicator** in the
 presence of

Witness:

Witness:

Witness:

PAVING OF INTERNAL STREET IN ANIVA

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

Name: Name: Name:

Address: Address: Address:
.....
.....

Date: Date: Date:

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

C1.5: Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993

THIS AGREEMENT is made between **the Nkomazi Local Municipality**

(hereinafter called the EMPLOYER of the one part, herein represented by:

.....

in his capacity as: ;

AND:

(hereinafter called the CONTRACTOR) of the other part, herein represented by

.....

in his capacity as:

duly authorised to sign on behalf of the Contractor.

WHEREAS:

1. The Municipality and the mandatory entered into a written, alternatively oral agreement on the.....Day of20..... in terms of which the Mandatory undertook to carry out the following work for the Municipality, viz. (give a short description of the type of contract work to be done as well as the address where work will be done)

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

2. The Occupational Health and Safety Act, Act 85 of 1993 as amended (hereinafter referred to as **the Act**) contains amongst others certain provisions with regard to the health and safety of people at work and in connection with the usage of plant and machinery, as well as the protection of other persons than persons at work against hazards to health and safety that originates from or in connection with the activities of persons at work.

3. Section 37(2) of the Act makes provision for the exclusion by the parties, by way of a written agreement, of supposition and accompanying liability of the Municipality as stipulated in section 37(1) of the Act.

4. The parties have reached consensus with regard to the terms and conditions to which they agree in terms of the provisions of section 37(2) of the Act.

THE PARTIES AGREE AS FOLLOWS

1. WRITTEN AGREEMENT

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

2. ACKNOWLEDGEMENT BY THE MANDATORY

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

3. UNDERTAKING BY MANDATORY

(a) The Mandatory hereby undertakes and binds himself to the Municipality to ensure prompt and strict compliance with the provisions of the Act and the said regulations as well as with the provisions included in this Safety Agreement at all times during the execution of the Works

(b) It is hereby recorded that the provisions of this Safety Agreement as set out hereinafter are in no way intended to restrict the duties of the Mandatory, nor to exempt the Mandatory from his obligation in accordance with the Act and the said regulations

4. PERSONAL PROTECTIVE EQUIPMENT

(a) It is compulsory to wear equipment for eye protection when working in an eye protection zone or where the Work requires eye protection.

(b) It is compulsory to wear safety helmets when working in a safety helmet zone or where the Work requires safety helmets.

(c) It is compulsory to wear hearing protection when working in a noise zone or where the Work requires hearing protection.

(d) The wearing of other protective clothing and equipment as prescribed by the Occupational Health and Safety Officer of Nkomazi Municipality is compulsory.

(e) The Mandatory shall ensure that the statutory requirements are complied with at all times.

5. FENCING AND GENERAL MACHINERY PROTECTION

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

6. SCAFFOLDING, LADDERS, TOOLS, ET CETERA

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

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

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

7. SERVICES AND WORKING METHODS

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

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

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

8. EXCAVATIONS

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

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

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

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

9. RESTRICTION TO WORKPLACE

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

10. SUBCONTRACTORS

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

11. OCCUPATIONAL HEALTH AND SAFETY OFFICER AND THE REPORTING OF ALL ACCIDENTS

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

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

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

The Occupational Health and Safety Officer will issue work stop notices to the Mandatory or sub-contractor whenever

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

he is of the opinion that the health and safety of any person at work is threatened or that the contravention notices are not adhered to.

12. FIRST AID

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

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

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

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

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

13. FIRE PREVENTION MEASURES AND STORAGE OF FLAMMABLE MATERIAL

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

14. COMPLETION OF WORK

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

15. SALVAGED MATERIAL AND EQUIPMENT

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

16. BREAKING OF THESE RULES AND POOR CONDUCT

The Mandatory is warned that no behaviour that causes danger to their own employees, to the employees of the Municipality or general public will be tolerated. The Occupational Health and Safety Officer of the Municipality reserves the right of the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any default or breach of the agreement and to order that the completion of the work be stayed, pending compliance with this agreement; alternatively to cancel the agreement referred to in par.2 in which event the Municipality will be entitled to appoint an alternative contractor to complete the work and recover the costs thereof from the mandatory, without prejudice to any alternative or additional right or action or remedy to the Municipality, to recover from the mandatory damages for the default or breach and the cancellation.

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

17. INTOXICATION

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

18. CONFIDENTIALLY

The Mandatory shall at all times treat data and information that have been made known to him or that he requires in connection with his work from the Municipality as confidential and he may not make unauthorized use thereof. He must also ensure that such data and information are not communicated to anybody else that is not an employee of the Mandatory without obtaining prior written approval from the Municipality and he must further ensure that such persons do in fact know that the said information is confidential and that they are obliged to treat it as such.

The Mandatory shall provide for adequate physical protection for any confidential documents, sketches, et cetera that he receives from the Municipality in connection with the work as well as for any copies thereof that he makes. He shall hand back all documents sketches and copies thereof to the Municipality upon completion of the work, or earlier, if so requested by the Municipality. The Mandatory shall inform the Municipality immediately should any such documents or sketches become lost.

19. INDEMNIFICATION BY THE MANDATORY

The following conditions will be applicable to the Mandatory:

(a) The Mandatory is liable and herewith indemnifies the Municipality irrevocably and in full against any claim for loss or damage to property or arising from death or injury of any person and any associated loss or damage suffered, and against all lawsuits, claims, demands, costs, expenses, and charges that may arise when the said occurrences are caused on purpose or through the negligence, violation of legal obligations or failure by the Mandatory or its employees.

(b) Whenever any of the employees of the Municipality is busy with work to, or with the supply of material that will be used during the execution of the work by the Mandatory, or otherwise busy with work under the instruction and supervision of the Mandatory, in as far as they may be negligent or fail to do their duty, they will be regarded as employees of the mandatory

(c) All installations, equipment, hoisting-apparatus and other implements, scaffolding, ladders, material, et cetera that are borrowed from the Municipality by the Mandatory for usage during the execution of the work, will be used entirely at the risk of the Mandatory or employees of the Mandatory and the Mandatory herewith indemnifies the Municipality irrevocably and in full against any liability that may arise from such usage.

20. AMENDMENTS MUST BE IN WRITING

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

21. JURISDICTION AND LEGAL COSTS

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PARTICULARS OF THE MANDATORY

Name (Mandatory) _____

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

ID NO _____

Designation _____

Name of Business _____

Address of Business _____

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

Number of employees employed _____

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

Date allocated _____

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

As witnesses:

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

THE MANDATORY

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREET IN ANIVA

Thus done and signed on this day of 20

As witnesses _____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

(Signature) _____ (Name in print)
THE MUNICIPALITY

Acknowledgement of receipt of the agreement:

THE MANDATORY

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA IN NKOMAZI LOCAL MUNICIPALITY**BID: NKO 20/2025****C2 PRICING DATA****C2.1 Pricing Instructions**

1. Measurement and payment shall be in accordance with the relevant provisions of the SANS1200 Specification as amended in the Scope of Works subject to the variations and amendments contained in the Section C3.5 Project Specifications.

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 Part C3: 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 of Quantities, the Employer's Agent shall direct the applicable requirements.

The clauses in a specification in which further information regarding the listed items in the Bill of Quantities can be obtained appear under "Payment Reference" column.

The reference clauses indicated are not necessarily the only sources of information in respect of billed items. Further information and set specifications may be found in Section C3.5 Project Specifications. Standardised Specifications are identified by the letter or letters which follow "SANS" in the SANS 1200 series of specifications, e.g. G for SABS 1200 G.

Unless otherwise stated, items are measured net in accordance with the drawings and no allowance is made for waste. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due only.

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 various items. The 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. The prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

It will be assumed that prices included in these Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org or www.iso.org for information on standards).

Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items

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 and recorded as zero. A single lump sum will apply should a number of items be grouped together for pricing purposes.

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.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREET IN ANIVA

2. The units of measurement described in these Bills of Quantities are metric units. Abbreviations used in the Bills of Quantities are as follows:

Ha	=	hectare
h	=	hour
kℓ	=	kilolitre
kg	=	kilogram
km	=	kilometre
kW	=	kilowatt
km-pass	=	kilometre pass
MN	=	Mega Newton
kPa	=	kilopascal
MN.m	=	Mega Newton- metre
ℓ	=	litre
%	=	percentage
m	=	metre
PC Sum	=	Prime Cost Sum
mm	=	millimetre
P Sum	=	Provisional Sum
PS/m	=	Provisional Sum per month
PS/d	=	Provisional Sum per day
Sum/wd	=	Sum per working day
m ²	=	square metre
No.	=	number
m ² .pass	=	square metre-pass
R/Only	=	Rate Only
m ³	=	cubic metre
Sum	=	lump sum
m ³ .km	=	cubic metre-kilometre
t	=	ton (1 000 kg)
MPa	=	Mega Pascal
W/day	=	Work day
%	=	percentage
mth	=	month

NOTE: The schedule of quantities shall be completed in **BLACK INK**.

3. For the purpose of these Bills of Quantities, the following words shall have the meanings hereby assigned to them:

Unit:	The unit of measurement for each item of work as defined in the SANS 1200 Standard Specification.
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Amount:	The product of the quantity and the agreed rate for an item.
Lump sum:	An agreed amount for an item, the extent of which is described in the Bills of Quantities but the quantity of work of which is not measured in any units.

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREET IN ANIVA

NKOMAZI LOCAL MUNICIPALITY

BID: NKO: 20/2025

C2.2 Bill of Quantities

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVAKO
NKO20/2025

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1200		GENERAL REQUIREMENTS AND PROVISIONS				
B12.01		PROVISION OF STRUCTURED TRAINING				
		CETA accredited training (As specified in the standard specifications)				
		(a) Generic skills	Prov.sum	1	R150 000.00	R150 000.00
		(b) Entrepreneurial skills	Prov.sum	1	R200 000.00	R200 000.00
		(c) Handling cost and profit in respect of sub-items B12.01(a), (b) above.	%	R350 000.00		
		(d) Training venue and lunch	Lump Sum	1	R35 000.00	R35 000.00
B12.02		Excavation for existing services				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
	LI	(i) 0m up to 2m	m³	50		
	LI	(b) Extra over subitem 12.02(a) for excavation in hard material, irrespective of depth	m³	10		
B12.03		Relocation and/or protection of existing services:				
		(a) By the contractor	Prov.sum	1	R300 000.00	R300 000.00
		(b) By the service provider (including electrical and telkom poles)	Prov.sum	1	R500 000.00	R500 000.00
		(c) Handling cost in respect of B13.05 (b)	%	R800 000.00		
B12.04		Services for Community Liaison Officer				
		(a) Remuneration for community liaison officer	Prov.sum	1	R90 000.00	R90 000.00
		(b) Remuneration of PSC members	Prov.sum	1	R36 000.00	R36 000.00
		(c) Handling cost and profit in respect of sub-items B13.03(a) and (b)	%	R126 000.00		
B12.07		Compensation to house and land owners				
		(a) Allow a Prime Cost Sum as compensation to owner/authority for royalties for land used for gravel borrowpits and relocated home owners approved by the Engineer	PC Sum	1	R500 000.00	R500 000.00
		(b) Handling costs and profit in respect of sub-item B31.04(a) above	%	R500 000.00		
B12.09		Supply, transport to site and erect contract signboards				
		a) As shown on the drawings	No.	2		
B12.10		Construction of new survey beacons and protection of existing survey beacons:				
		(a) Provisional sum for new survey beacons to be constructed, or for existing survey beacons to be protected during construction approved by the Engineer	Prov Sum	1	R350 000.00	R350 000.00
		(b) Handling costs and profit in respect of B12.02(a) above.	%	R350 000.00		
B12.11		Testing (PC Item)				
		(a)Control testing of compaction densities by an acknowledged laboratory approved by the Engineer	Prov Sum	1	R150 000.00	R150 000.00
		(b)Extra-over for previous item for contractor's administration, etc.	%	R150 000.00		
B12.12		Record drawings				
		Provide AS Build details, including all necessary survey, of completed works to Engineer for preparation of record drawings	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY						

TOTAL CARRIED FORWARD TO SUMMARY	
----------------------------------	--

SECTION 1400

TOTAL CARRIED FORWARD TO SUMMARY	
----------------------------------	--

SECTION 1500

TOTAL CARRIED FORWARD	
-----------------------	--

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
17.00		CLEARING AND GRUBBING				
17.01		Clearing and grubbing	ha	4.76		
17.02		Removing and grubbing of large trees and tree stumps				
		(a) Girth exceeding 1m up to and including 2m	No	4		
		(b) Girth exceeding 2m up to and including 3m	No	5		
17.03		Re-clearing of surfaces (on the written instructions of the Engineer only)	ha			Rate only
17.04	LI	Clearing and grubbing at inlets and outlets of hydraulic structures	m²	0		Rate only
17.05		Cleaning out of hydraulic structures				
	LI	(a) Pipes with an internal diameter up to and including 750 mm	m³	0		Rate only
	LI	(b) Pipes with an internal diameter exceeding 750 mm	m³	0		Rate only
	LI	(c) Box culverts up to and including 1,5 m vertical dimension	m³			Rate only
		(d) Box culverts exceeding 1,5 m vertical dimension	m³	0		Rate only
17.06		Removal and storage of selected vegetation				
		(a) Cost of removal, storing, protection and replanting in a protected and fenced-off area of selected vegetation	Prov Sum	1	R100 000.00	R100 000.00
		(b) Charge on provisional sum	%	R100 000.00		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1800	DAYWORKS				
B18.01	Dayworks				
	1) Normal working hours				
	a) Foreman	hour	36		
	b) Artisan	hour	36		
	c) Operator	hour	36		
	d) Labourer - unskilled	hour	36		
	- semi-skilled	hour	36		
	- skilled	hour	36		
	2) Overtime and Saturdays				
	a) Foreman	hour	36		
	b) Artisan	hour	36		
	c) Operator	hour	36		
	d) Labourer - unskilled	hour	36		
	- semi-skilled	hour	36		
	- skilled	hour	36		
	3) Sundays and public holidays				
	a) Foreman	hour	24		
	b) Artisan	hour	24		
	c) Operator	hour	24		
	d) Labourer - unskilled	hour	24		
	- semi-skilled	hour	24		
	- skilled	hour	24		
B18.02	Hire of construction equipment				
	(1) Tipper trucks				
	a) 3 - 5 ton	hour	24		
	b) 5.1 - 10 ton	hour	24		
	(2) Loader (0.5m3)	hour	24		
	(3) Grader CAT 140G or similar	hour	24		
	(4) LDV	hour	24		
	(5) Compaction rollers				
	a) Vibrator roller	hour	24		
	b) Tamping roller	hour	24		
	c) Grid roller	hour	24		
	(6) Hand controlled compactors				
	a) Bomag BW90	hour	24		
	b) Vibratory plate	hour	24		
	c) Rammers	hour	24		
	(7) Water trucks (min 10 000l)	hour	24		
	(8) Dozer (D7 or similar)	hour	24		
	(9) Air compressor	hour	24		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION 2200

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level:				
	LI	(i) 0 m up to 1,5 m	m ³	822		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	2 098		
		(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³	584		
22.02		Backfilling: (a) Using the excavated material	m ³	2 336		
		(b) Using imported selected material	m ³	730		
	LI	(c) Extra over subitems 22.02(a) and (b) for soil cement backfilling with 5% cement of the dry mass	m ³			Rate Only
22.03		Concrete pipe culverts (b) On class B bedding				
		(i) 600 mm dia class 100D concrete pipe culvert	m	615		
		(ii) 675 mm dia class 100D concrete pipe culvert	m	435		
22.04		Portal and rectangular culverts: Class 100s (b) Without prefabricated floor slabs				
		(1) 1200mm x 900mm, portal culvert	m	36		
		(2) 1500mm x 900mm, portal culvert	m	46		
22.05		Cast in situ concrete and formwork (a) In class A bedding, screeds and the encasing for pipes including formwork, Class 25/19 concrete	m ²	75		
		(b) In floor slabs for portal or rectangular culverts, including formwork, joints and class U2 surface finish:				
		(i) Class 30/19 concrete	m ³	2.0		
		(c) In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including class U2 surface:				
		(i) Class 25/19 concrete	m ³	3		
		(d) Formwork of concrete under subitem 22.07(c) above Type and finish indicated (for portals)				
		(i) For Portals	m ²	0		Rate Only
		(ii) rest of inlet and outlet structures	m ²	0		Rate Only
22.06	LI	Steel reinforcement (a) High tensile steel reinforcement	ton	1		
		(c) Welded Mesh Ref 395	kg	150		
		(c) Welded Mesh Ref 617	kg	0		Rate Only
22.07		Dowels for joining old and new concrete	kg			Rate only
22.08		Removing existing concrete (a) Plain concrete	m ³	0		Rate only
		(b) Reinforced concrete	m ³	0		Rate only
22.09		Removing and re-laying existing culverts (on site) (i) 600mm diameter class concrete pipe culvert	m	0		Rate Only
		(ii) 900mm diameter class oncrete pipe culvert	m	0		Rate Only
		(ii) 1200mm diameter class oncrete pipe culvert	m	0		Rate Only
22.10		Removing and stacking existing prefabricated culverts (on site) (i) 600mm diameter class concrete pipe culvert	m	0		
		(ii) 900mm diameter class oncrete pipe culvert	m	10		
		(ii) 1200x 900mm portal culvert	m	12		
22.11	LI	Brickwork (a) 115 mm thick	m ²			Rate only
		(b) 230 mm thick	m ²	0		Rate Only
22.12	LI	Plaster	m ²	0		Rate Only
22/66.05		Expansion joints (a) 1.6mm X 300mm galvanised sheets for expansion joints in portal culverts	m	150		
22/66.08	LI	Sealing joints with (a) Sealant approved by engineer	m	75		Rate Only
		(b) 225mm rubber waterstop	m	250		
22/66.19	LI	Drainage Pipes and weep holes (a) Drainage pipes				
		(i) supply and M65 netlon pipes	m	3		
		(ii) supply and lay DN1 Netlon Drainage strips	m	3		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
21.00		DRAINS				
B21.01		Excavation for open drains:				
		(a) Excavating soft material situated within the following depth ranges below the surfaces level:				
		(i) 0 m up to 1,5 m	m ³	100		
		(b) Extra over subitem 21.01(a) for excavation in hard material, irrespective of depth	m ³	5		
21.02	LI	Clearing and shaping existing open drains	m ³	350		
21.03		Excavation for subsoil drainage systems:				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
	LI	(i) 0 m up to 1,5 m	m ³	240		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	24		
21.04	LI	Impermeable backfilling to subsoil drainage systems	m ³	480		
21.05	LI	Banks and dykes				
		(a) On roadworks	m ³	0		Rate Only
		(b) On river crossing (To create cofferdams by closing existing pipe openings and to regulate water flow through selected existing culverts)	m ³	0		Rate Only
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from approved commercial sources, all haul included:				
		(i) 13.2 mm nominal size aggregate	m ³	60		
		(ii) 6.7mm nominal size aggregate	m ³	60		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from approved commercial sources, all haul included	m ³	540		
21.08	LI	Pipes in subsoil drainage systems:				
		(b) Unplasticised PVC pipes and fittings, normal duty complete with couplings				
		(1) 160mm internal dia. perforated	m	400		
21.09	LI	Polyethylene sheeting 0,15 mm thick, or similar, approved material, for lining subsoil-drainage systems	m ²	480		
21.1	LI	Synthetic-fibre fabric				
		(a) Non-woven Kaymay U24 geotextile or similar approved	m ²	320		
21.12	LI	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:				
		(a) Outlet structures	No	4		
		(b) Manholes boxes	No	2		
		(c) Junction boxes	No	2		
		(d) Cleaning eyes	No	2		
21.13	LI	Concrete caps for subsoil drain pipes	No	4		
21.14	LI	Repairing or replacing existing drainage systems	Prov.Sum	0		Rate Only
21.15		Overhaul for material hauled in excess of 1,0 km free-haul (normal overhaul)	m ³ -km	1 698		
21.17	LI	Test flushing of pipe subsoil drains	No	6		
21.18		Excavation for the clearing of existing drainage systems				
		(a) Manholes and inlet and outlet structures	m ³			Rate Only
	LI	(b) Culvert barrels	m ³			Rate Only
	LI	(c) Concrete side drains	m ³			Rate Only
21.19	LI	Selected backfil material under concrete lined side drains compacted to 93% of modified AASHTO density	m ³	0		Rate Only
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01	LI	Concrete Kerbing (a) Precast kerbing to SABS 927 (1) Figure 8 (mountable) (2) Figure 12 (non mountable)	m m	5 933.00 67.00		
23.02	LI	Concrete kerbing-channelling combination (2) Figure 8 kerb (Semi-Mountable) Type A:	m	135.00		
23.04	LI	Cast in situ concrete chutes: (a) Class 25/19 concrete	m	-		Rate Only
23.05	LI	Inlet,outlet,transition and similar structures Culvert wingwalls, headwalls, aprons and slabs (a) Concrete class (25/19) (b) Formwork (class F2 surface finish) (c) Other components	m ³ m ² No.	10.00 150.00		Rate Only
23.07	LI	Trimming of excavations for concrete-lined open drains (a) In soft material (b) In hard material	m ² m ²	1 000.00 150.00		
23.08	LI	Concrete lining for open drains (a) Cast in situ concrete lining class 25/19 for all types of open drains	m ³	145.00		
	LI	(b) Class U2 surface finish to cast in situ concrete for all types of open drain	m ²	1 426.00		
23.09		Formwork to cast insitu concrete lining for open drains (class F2 surface finish) To sides with formwork on the internal face only	m ²	165.00		
	LI	To sides with formwork on both internal and external faces (each face measured)	m ²			Rate Only
	LI	To ends of slabs	m ²	2.25		
23.10	LI	Sealed joints in concrete linings of open drains (a) Polysulphide sealants and Soft Board	m	22.50		
23.11	LI	Concrete screed or backfill below chutes Concrete class 15/19	m ²	-		Rate Only
23.12	LI	Steel reinforcement Welded steel fabric (Ref 395)	kg	4 884.33		
23.13	LI	Polyethylene sheeting (0,15mm thick) for concrete lined open drains	m ²	1 570.66		
23.14	LI	Cutting bituminous surfacing and pavement layers for concrete kerbing, channelling or concrete-lined drains	m	-		Rate Only
23.15	LI	Precast concrete blocks in outlet structures	no.	40.00		
23.16	LI	Energy dissipators in open drains	no.	30.00		
B23,17		Formwork to cast insitu concrete drifts (class F2 surface finish) To sides with formwork on the internal face only	m ²			Rate Only
	LI	To sides with formwork on both internal and external faces (each face measured)	m ²			Rate Only
	LI	To ends of slabs	m ²			Rate Only
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
31.00		BORROW MATERIALS				
31.01		Excess overburden				
		(a) Depth up to and including 0.5m	m ³	1 667.00		
		(b) Depth exceeding 0.5m and up to 1.0m	m ³	1 667.00		
31.02		Excess overburden in borrow pits for obtaining crushed stone for pavement layers.				
		(a) Excess overburden in soft or intermediate excavation	m ³			Rate Only
		(b) Overburden in hard excavation	m ³			Rate Only
B31.03		Finishing-off borrow areas in:				
		(a) Hard material	ha	0.3		
		(b) Soft material	ha	0.2		
		(d) Unstable spoil material	ha	0.1		
B31.04		Protecting borrow pits:				
		Fence supplied and erected as indicated on the drawing and/or as ordered by the engineer				
	LI	a) Stock proof fencing as per detail, all inclusive	km	0.70		
	LI	b) Corner post as per detail, all inclusive	No.	3.00		
	LI	c) Gates, all inclusive.	No.	2.00		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 3300

TOTAL CARRIED FORWARD TO SUMMARY

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
34.01		Pavement layers constructed from gravel taken from cut or borrow, including free haul up to 1,0km				
		(a) 150 mm Gravel selected layer compacted to:				
		(i) 95% of modified AASHTO density	m ³	3 654.00		
		(b) 150 mm Gravel subbase compacted to:				
		(ii) 97% of modified AASHTO density	m ³	3 654.00		
		(c) 150 mm Gravel base (chemically stabilized material) compacted to:				
		(iii) 98% of modified AASHTO density	m ³	3 654.00		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
35.00		STABILIZATION				
35.01		Chemical stabilization layers				
		(a) 150mm Base	m ³	3 654.00		
		Chemical stabilization unstabilized material				
35.02		Chemical stabilizing agent:				
		(a) Cement CEM II 32.5	t	155.00		
		(b) Stabilising agent - Lime	t			Rate only
35.04		Provision and application of water for curing	kl	319.00		
TOTAL CARRIED FORWARD TO SUMMARY						0.00

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
41.01		Prime coat:				
		(a) Colprime E or similar	litre	289.00		
		(c) MC-30 cut-back bitumen	litre			Rate only
41.02		Aggregate for blinding	m²			
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	litre			
TOTAL CARRIED FORWARD TO SUMMARY						R -

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
42.00		ASPHALT BASE AND SURFACING				
42.02		Asphalt Surfacing (60/70 penetration grade bitumen)				
		(a) 30mm Continuously graded asphalt (medium)	m²	432.60		
42.03		Rolled in chippings (9,5mm)	t			
42.04		Tack coat of 30% stable-grade emulsion	litre	259.56		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
51.00		PITCHING, STONEWORK AND PROTECTION AGAINST EROSION				
51.01	LI	Stone pitching: (b) Grouted stone pitching	m²	250		
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVA
NKO20/2025

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling (measured from riverbed)				
		(a) In all other classes	m ²	400		
52.02	LI	Surface preparation for bedding the gabions using: a) 50 mm thick layer of Crusher-run	m ²	120		
52.03	LI	Gabions a) Galvanized gabion boxes i) 1,0 x 0,5 x 0,5m size and 80 x 100 x 2,7 mm dia. Galvanized wire mesh mm dia. Galvanized wire mesh	m ³	180		
52.04	LI	Filter fabric (polypropene geotextile 0,7mm thick or similar) Kaymat U24 or equal	m ²	320		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
54.00		GUARDRAILS				
54.01	LI	Guardrails on timber posts: (a) Galvanized	m	136		
54.03	LI	End treatments: (a) End wings	no	8		
54.04		Additional guardrail posts: a) Timber	No	40		
54.05	LI	Reflective plates	no	40		
B54,14	LI	Precast concrete railing Erection of precast concrete rail as per drawing complete, excluding strip foundation measured elsewhere	m			Rate only
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVANKO20/2025

SECTION 5600

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
56.00		ROAD SIGNS				
B56.01	LI	Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class III retro-reflective material, where the sign board is constructed from: (c) Prepainted galvanised steel plate (chromadek or approved equivalent) (i) Area not exceeding 2m ² (ii) Area exceeding 2m ² but not 10 m ²	m ² m ²	150.00 -		Rate only
56.02	LI	Extra over item 56.01 for using: (a) Background of retro-reflective material of: (1) Class I (2) Class II	m ² m ²	150.00		Rate only
56.03	LI	Road sign supports (overhead road sign structures excluded): (b) Timber (75mm CCA Treated)	t	1.00		
56.04	LI	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	m ³	100.00		
56.05		Extra over item 56,05 for cement-treated soil backfill	m ³	10.00		
56.06		Dismantling, storing and re-erecting road signs with surface area:				
	LI	(a) up to 2 m ²	No.			
	LI	(b) Exceeding 2 m ² but not exceeding 10 m ²	No.			Rate only
B56.10		Danger Plates				
	LI	(a) W401 and W402	No.	50.00		
B64/56.11	LI	Cast in-situ concrete in footings to signs, Class 15/19	m ³			
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVANKO20/2025

SECTION 5700

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
57.00		ROAD MARKINGS				
57.02		Retro-reflective road marking paint:				
		(a) White lines (broken or unbroken)				
		(1) 100 mm wide	km	4.00		
		(b) Yellow lines (broken or unbroken)				
		(1) 100 mm wide	km	0.20		
	LI	(d) White lettering and symbols	m²	200.00		
	LI	(e) Yellow lettering and symbols	m²	50.00		
		(f) Transverse lines, painted island and arrestor bed markings (any colour)	m²	150.00		
57.06	LI	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	6.00		
57.07		Re-establishing the painting unit at the end of the maintenance period	Lump sum	0.00		
57.08		Removal of existing, temporary or permanent road markings by:				
		(a) Sandblasting	m²	50.00		
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVA NKO20/2025

SECTION 5900

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve:				
		(b) Single carriageway road	km	4.00		
59.02		Treatment of old roads and temporary deviations	km	0.50		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6100		FOUNDATIONS FOR STRUCTURES				
61.02		Excavation: a) Excavating soft material situated within the following successive depth ranges i) 0 m up to 2 m measured below river bed level for: culvert floor and wingwall 1. Culvert floor and wingwall footings	m³	290.5		
61.03		Access and drainage a) Access b) Drainage where no access has been provided	lump sum lump sum	1 1		
61.04		Backfill to excavations utilising: (b) Imported material (c) Soil cement	m³ m³	100		Rate Only
61.05		Fill within a restricted area (extra over items 33.01 and 61.02)	m³			Rate Only
61.06		Foundation fill consisting of: a) Rock fill obtained from commercial source (d) Mass concrete (50 mm x 15MPa blinding)	m³ m³	290.5 10.75		
61.07		Foundation lining Line floor and interior vertical side of cut 500 Micron high density polyethylene sheeting	m²	230		
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVANKO20/2025

SECTION 6200

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6200		FALSEWORK : FORMWORK AND CONCRETE FINISH				
62.02		Vertical formwork to provide :				
		a) Class F1 surface finish to :				
		i) Wing wall bases	m ²	8.2		
		ii) Culvert floor edges	m ²	14		
		iii) Cut-off walls (both sides)	m ²	18		
		iv) External culvert walls (consealed)	m ²			Rate Only
		b) Class F2 surface finish to :				
		i) Culvert walls (Exposed internal face)	m ²			Rate Only
		ii) Wing walls (semi-exposed external face)	m ²	20		
		c) Class F3 surface finish to :				
		i) Wing walls (Exposed internal face)	m ²	25		
		ii) Culvert head walls (both sides)	m ²	18		
62.03		Horizontal formwork to provide				
		a) Class F2 surface finish to :				
		i) Soffit of main structure	m ²			Rate Only
62.04		Surface finishing to inclined formwork and exposed edges to provide:				
		a) Class U1 surface finish to :				
		i) Culvert roof deck	m ²			Rate Only
		b) Class U2 surface finish to :				
		i) Top of inlet and outlet floors	m ²	59		
		ii) Culvert floors	m ²	140		
		c) Class U3 surface finish to :				
		i) Top of elevated edges of wing walls	m ²	10		
		ii) Top of head walls	m ²	20		
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVA NKO20/2025

SECTION 6300

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6300		STEEL REINFORCEMENT FOR STRUCTURES				
63.01		Steel reinforcement for:				
		a) The complete structure				
		(i) Mild steel bars	t			
		(ii) High-yield stress steel bars	t	2.5		
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF INTERNAL STREETS IN ANIVANKO20/2025

SECTION 6400

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6400		CONCRETE FOR STRUCTURES				
64.01		Cast in-situ concrete :				
		a) Class 15/19 in :				
		i) 50 mm Thick mass concrete blinding under all structural members	m³	7.5		
		b) Class 30/19 in steel reinforced box culvert:				
		i) Floors, 175 mm thick	m³	26.25		
		ii) Culvert walls, 250 mm thick	m³			Rate Only
		iii) Culvert roofs, 250 mm thick	m³			Rate Only
		iv) Culvert head walls, 250 mm thick	m³	1.2		
		c) Class 25/19 in steel reinforced inlet and outlet structures:				
		i) Bases, 0.15 mm deep	m³	3		
		ii) Wing walls, 250 mm thick	m³	7.8		
		ii) Cut off walls	m³	1		
		iv) Trapezoidal floors, 150 mm thick	m³	28.5		
64.06		Demolishing existing concrete:				
		a) Plain concrete in:				
		i) Existing pipe culvert head walls.	m³	10		
		b) Reinforced concrete in:				
		i) Existing box culvert.	m³	15		
66.18		Numbers for structures				
		c) Numbers formed in concrete	No.			Rate Only
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
73.00		CONCRETE BLOCK PAVING FOR ROADS				
73.01		Concrete block paving				
	LI	(b) Segmental block paving				
		(1) 80 mm thick TYPE S-A 30MPa	m²	22 366		
	LI	(d) Prefabricated concrete paving blocks for sidewalks				
		(1) 60 mm thick TYPE S-C 25MPa	m²	100		
73.02/51.05	LI	Cast in situ concrete edge and intermediate beams class 25/19 concrete (Formwork and clause U2 surface finish)				
		(1) 300mm x 200mm	m	335		
		(2) 300mm x 300mm	m	300		
73.03/51.06		Provision of approved herbicide and ant poison				
		(a) Provison of materials	PC Sum	1	R50 000.00	R50 000.00
		(b) Contractor's charges and profit added to prime cost sum	%	R50 000.00		
TOTAL CARRIED FORWARD TO SUMMARY						

PAVING OF
NKO20/2025

SECTION 8100

TOTAL CARRIED FORWARD TO SUMMARY

PAVING OF INTERNAL STREETS IN ANIVA
NKO20/2025
SUMMARY OF SCHEDULE OF QUANTITIES

SCHEDULE A: ROAD CONSTRUCTION

1200	GENERAL REQUIREMENTS AND PROVISIONS	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING, OFFICES AND LABORATORY FOR ENGINEER'S SITE PERSONNEL	
1500	ACCOMMODATION OF TRAFFIC	
1700	CLEARING AND GRUBBING	
1800	DAYWORKS	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE CHANNELLING	
3100	BORROW MATERIALS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILISATION	
4100	PRIME COAT	
4200	ASPHALT BASE AND SURFACING	
5100	PITCHING, STONWORK AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5400	GUARDRAILS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
6100	FOUNDATIONS FOR STRUCTURES	
6200	FALSEWORK : FORMWORK AND CONCRETE FINISH	
6300	STEEL REINFORCEMENT FOR STRUCTURES	
6400	CONCRETE FOR STRUCTURES	
7300	CONCRETE BLOCK PAVING FOR ROADS	
8100	TESTING MATERAILS AND WORKMANSHIP	
TOTAL SCHEDULE: ROAD CONSTRUCTION		

CALCULATION OF TENDER SUM

TOTAL OF SCHEDULE: ROAD CONSTRUCTION	
CONTINGENCY AMOUNT 5%	
CPA 7, 5%	
SUB-TOTAL 1	
VALUE ADDED TAX (VAT @ 15%)	
TENDER SUM (CARRIED FORWARD TO FORM OF TENDER)	

C3.1: DESCRIPTION of WORKS

• C3.1 DESCRIPTION OF THE WORKS

EMPLOYER'S OBJECTIVES

The employer's objectives are to deliver public infrastructure using labour-intensive methods with the aim of services delivery, job creation and poverty alleviation. The work entails upgrading of Aniva internal Streets from gravel surface to a formal paved road. As part of the construction of the new road, job creation will occur through the employment of local labourers, local subcontractors.

The Employer desires that the work required be of a high standard and be completed in the shortest practical time whilst creating jobs for local labourers and contractors.

N.B. All labour rates should be as per current SAFCEC rate.

C3.1.2 OVERVIEW OF THE WORKS

The Contract entails the upgrading of internal streets from gravel surface to a formal paved road. The road under consideration is approximately 3.938 km in length and provide access to residential houses located alongside the road. There are no formal cadastral boundaries for this area. The road currently meanders in between existing fences and boundary walls. There is eleven road crossings along the road.

No formal cross section exists with roadway width varying between 6,0 m to 8,0m. The existing road reserve varies in width of approximately 10 m to 20 m for sections of the proposed route. The road reserve is well defined within the existing boundary fences. The road provides direct access to individual properties. The existing stormwater drainage will be upgraded with a completely new system consisting of pipe culverts and open earth lined drains in combination with mountable kerbs and edge beams.

Through traffic will be diverted onto adjacent roads. Local traffic will need to be accommodated within the road reserve providing access to local properties adjacent to the road.

The proposed new road will as far as possible follow the same horizontal alignment of the existing road, although improvements will be made to the road alignment (particularly the vertical alignment).

C3.1.3 EXTENT OF WORKS

The Works to be carried out by the Contractor under this Contract comprise mainly the following:

- (a)..... Contractor's establishment on site
- (b)..... Compliance with EMP requirements
- (c)..... Compliance with OHS act requirements

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

- (d)..... Provisions of temporary workforce (ABE)
- (e)..... Training of temporary workforce
- (f)..... Housing, offices and laboratories for the engineer's personnel
- (g)..... Maintenance of the road reserve including daily dust control
- (h)..... Identifying and relocating of existing services
- (i)..... Construction of bypasses where necessary
- (j)..... Construction of road and access roads
- (k)..... Clearing and grubbing
- (l)..... Construction of 80 mm segmental concrete block paving
- (m)..... Construction of a new stabilized subbase layers
- (n)..... Construction of gravel selected layers
- (o)..... Construction of roadbed layer
- (p)..... Construction of fill where required
- (q)..... Structural strengthening of poor subgrade conditions
- (r)..... Stormwater upgrades
- (s)..... Construction of mountable kerbs
- (t)..... Construction of concrete edge beams
- (u)..... Construction of grouted stone pitching
- (v)..... Installation of road markings
- (w)..... Installation of road signs

Details of the work are shown on the drawings and estimated quantities of the various types of work to be carried out under the contract are given in the Schedule of Quantities.

The Contractor's obligations shall also include strict compliance with any Environmental specifications and/or reports deemed to form part of this contract as well as any Occupation Health and Safety requirements.

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.

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

C3.1.4 LOCATION OF THE WORKS

The township/village of Aniva is located East of Schoemansdal town in the Nkomazi Local Municipality. According to municipality's ward demarcation, Aniva falls under Ward 23. Aniva is approximately 46km from the Municipality's headquarters with closest shopping centre at Schoemandal, 13km away. The Township has the following central coordinates as extracted using Google earth:

Site	Latitude	Longitude
Aniva	25°43'15.49"S	31°36'50.91"E

C3.1.5 TEMPORARY WORKS

The Contractor shall, as relevant,

- a) provide temporary drainage works, temporary pumps and other equipment as might be necessary for the protection, draining and dewatering of the works; and
- b) Construct and maintain haulage, temporary access and construction roads, subject to the approval of the Employer, and permit the Employer, other Contractors, statutory bodies or any other person who might require legitimate access to or through the site for the purpose of executing legitimate business, free and

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

unhindered usage of such roads.

c) Temporary water connections, Contractor's offices, storage sheds, latrines, barricading of Works shall be located in an approved position and subject to the approval of all authorities concerned.

d) Safety and Security of the Contractors' temporary works shall be at the Contractors' discretion.

e) The camp shall be adequately guarded during or outside working hours.

DESCRIPTION OF THE SITE AND ACCESS

PS.2.1 Location of Site

The Projects is located in Aniva, in Nkomazi Local municipality within the Nkomazi Local Municipality, Mpumalanga Province.

PS.2.2 Access to Site

Access to site is per normal vehicle.

PS.2.3 Nature of the Ground and Subsoil Conditions

A multi-disciplinary geotechnical centerline and materials investigation was conducted for the Paving of Aniva Internal Streets. The investigation was undertaken in order to assess the engineering geological character of the area, focusing on the geotechnical properties which will affect the construction of the proposed new road.

The findings of this investigation are elucidated in their report, the summary of which is attached under item C4 of this document. All of the relevant material testing data is included in the report.

PS.2.4 Construction in Confined Areas

It will be necessary for the Contractor to work in confined areas. No additional payment will be made for work in "restricted areas", except in the case of structures as described in Sub clause 6108(d) of the Standard Specifications. In certain areas the width of the fill material and pavement layers may reduce to zero and the working space may be confined. The method of construction in these confined areas depends on the Contractor's Constructional Plant. However, the Contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, irrespective of the methods used to achieve these cross-sections and dimensions, and that the rates and amounts tendered will be deemed to include full compensation for any special equipment or construction methods or for any difficulty encountered in working in confined areas and narrow widths, and at or around obstructions, and that no extra payment will be made nor will any claim for payment be considered on account of these difficulties.

PS.3 CONSTRUCTION AND MANAGEMENT REQUIREMENTS

PS.3.1 General

The Contractor is referred to the relevant provisions of the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition). These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

PS.3.2 Contractor Camp Site

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

The contractor shall make his own arrangements regarding the establishment of a camp site and housing for his construction personnel and all regulations stipulated by the local authority shall be adhered to.

It is anticipated that the contractor's choice of a camp site will be influenced by the availability of telephone and electrical connections as well as the supply of potable water.

This contract is to be executed in an area surrounded rural settlements and as such safety will be paramount. Furthermore, all due courtesy must be exercised in so far as local resources are concerned (labour and materials).

The Engineer will facilitate all communication with the target community.

(a) Water and Electricity

The Contractor is to make his own arrangements in this regard and should note that the Employer shall not be held responsible for any shortages of either water or power due to unforeseen circumstances.

All water required for construction purposes is to be sourced by the Contractor and is to be allowed for in his rates.

(b) Location of Site Office

Suitable sites at each location will be identified once work commences. The contractor will need to make all necessary allowances for his own security, fencing etc.

The contractor is to provide adequate sanitary and waste facilities for his staff and is to ensure that each site camp is kept clean and neat at all times. No littering is to take place at either the camp or on the site.

The site is to be left in a neat, landscaped condition without any improvements on completion of the contract and final retention will not be released until such time as this condition has been complied with.

PS.3.3 Security

The Contractor shall be responsible for the security of his personnel and Constructional Plant on and around the Site of the Works and for the security of his camp, and no claims in this regard will be considered by the Employer. Provision is made in these specifications for **the** erection of a security fence around the site offices.

PS.3.4 Water for Construction Purposes

The Contract will be undertaken in an arid area with scarce water resources. 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.

PS.3.5 Additional Requirements for Construction Activities

- (a) The travelling public shall have the right of way on public roads, and the contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.
- (b) Failure to maintain road signs, warning flashing lights, etc, in a good condition shall constitute ample reason for the engineer to bring the works to a stop until the road signs, etc, have been repaired to his satisfaction.
- (c) The contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

requirements of this document and the South African Road Traffic Signs Manual (SARTSM – Vol 2, Chapter 13).

- (d) The contractor may not proceed with permanent works before the required offices and laboratories of the engineer's site personnel have been erected by him. This includes the provision of electricity, sanitary arrangements, potable water and telephone, e-mail and fax facilities. In the event where the contractor cannot obtain telephone lines timeously from Telkom, a wireless system shall be provided for telephone, e-mail and fax facilities.

PS.3.6 Temporary Latrines

The Contractor shall provide sufficient latrine facilities for the use of his employees. He shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the Engineer and the Employer. Latrines shall be positioned within walking distance from wherever employees or labourers are employed on the Works.

Where required, latrines shall be provided at the rate of one for ten persons and where applicable, the Contractor shall make his own arrangements and pay all charges for the removal of sewage.

PS.3.7 Moving Existing Services

Services belonging to any public or private authority, which require moving, shall be dealt with in the manner specified in clause B1202.

The plans show the positions of services determined from observations and measurement but neither the Employer nor the Engineer accepts responsibility neither for the accuracy of the information nor for the omission of any information. The Contractor shall locate and mark the positions of hidden services in advance of construction and take all reasonable steps to protect existing works against damage, which may arise as a result of his operations on the site.

The Contractor will be held responsible for direct or consequential damage to any existing works including any claims which may arise as a result thereof and the cost of repair of any such damage shall be borne by the Contractor unless it is established by the Engineer that the Contractor exercised reasonable care and damage was unavoidable.

The owners and the Engineer shall be notified immediately of any damage done to existing works.

If so directed by the Engineer, the positions of existing works shall be changed by the Contractor to meet the requirements of the proposed work. The cost of such work shall be paid for at the applicable rates set out in the Schedule of Quantities or, in the absence of such rates, at rates mutually agreed between the Engineer and the Contractor.

Work required on known services has been tabulated in a services schedule. The schedule must be read in conjunction with the services plans.

All communication by the contractor with the relevant authorities in connection with services must be directed through the Engineer.

PS.3.8 Training

Technical skills, generic and management skills training shall be provided with the aim of providing locally employed labour with the technical skills required to undertake the work involved in the Contract, and of furthering small contractor development. Part D of the Project Specifications deals specifically with matters regarding training, and a payment item for that is included in Clause B 1231 of Part B of the Project Specifications.

PS.3.9 Use of Local Resources

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

A major objective of this Contract is the optimum use of local resources. One of the methods to be adopted to achieve this objective is through the implementation of labour-optimising construction methods. Labour-optimising construction is defined in Clause B 1156 of Part B of the Project Specifications.

PS.3.10 Labour-Optimising Construction Activities

(a) General

The portions of the Works listed in Sub clause (b) below shall, unless otherwise instructed by the Engineer, be constructed under this Contract using labour-optimising construction methods only. Payment for works identified in Sub clause (b) below shall be made in accordance with the pay items provided in the bill of quantities.

In respect of those portions of the Works which are not listed in Sub clause (b), the construction methods adopted and Plant used shall be at the discretion of the Contractor, provided always that the construction methods adopted and Plant used by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

(b) Operations to be executed using labour-optimising construction methods

The following portions of the Works shall be executed using labour-optimising construction methods:

- i. Clearing and grubbing at inlets and outlets of hydraulic structures
- ii. Cleaning of hydraulic structures
- iii. Excavating for all open drains, culverts, inlet and outlet structures, concrete structures, fence posts, road sign posts and guardrail posts
- iv. Constructing culvert inlet and outlet structures as well as cast in situ slabs, including all masonry work and minor precast work. All concrete shall be mixed by hand or by hand-driven mixing machines
- v. Removing oversize material
- vi. Block paving

PS.3.11 Restrictions on the Use of Personnel in the Permanent Employ of the Contractor

(a) The Contractor shall limit the use on the Contract Works of his permanently employed personnel to that of key personnel only (as defined in Part C of the Project Specifications) and shall, subject to the further provisions of the following parts of the Project Specifications

- (i) Part C - Provision of the temporary workforce
- (ii) Part D - Provision of structured training

execute and complete the Works using a temporary workforce employed directly by the Contractor and/or by Subcontractors.

- (b) The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor and where he deems the circumstances to warrant, authorise in writing that the Contractor may use in the execution of the Works, workers not being his key personnel but who are in his permanent employ. Without limiting the generality of application of this sub clause, circumstances which may be considered by the Engineer to warrant the authorization of the use of the Contractor's permanent employees not being key personnel, include:
- (i) The unavailability of sufficient numbers of temporary workers and/or Subcontractors to execute the Works, provided always that the Contractor has proven that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient numbers of temporary workers and Subcontractors and has exhausted all reasonable recruitment options

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

- (ii) The unavailability within the temporary worker pool and/or subcontractor sources available to the Contractor in terms of the Contract, of sufficient of the required knowledge and skills necessary for the execution of the Works or specific portions thereof, in cases where the time for completion allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of training as contemplated in this Contract
- (iii) Any other circumstances which the Engineer may deem as constituting a warrant.

PS.3.12 Community Liaison and Community Relations

In all dealings with the various communities and workers employed from within the communities, the Contractor shall take due cognisance of the character, culture and circumstances of the communities involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the Contract.

The Contractor shall at all times keep the Engineer fully informed on all matters affecting the Contract and the communities and shall attend all meetings of the Project Co-ordinating Committee as may be reasonably required by the Engineer. All matters concerning the communities shall be discussed and where possible, resolved at such meetings.

Where any resolution of the Project Co-ordinating Committee shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect to them without a prior written instruction from the Engineer. Where the Contractor is of the opinion that any instruction of the Engineer issued in terms of this clause will result in him incurring additional costs which were not provided for in his tendered rates and prices, and/or that a delay in the progress of the Works will result, he will be entitled to submit a claim in terms of Clause 51 of the Conditions of Contract, provided always that the period of twenty-eight (28) days referred to in Clause 51 shall be reduced to three (3) normal working days in respect of all claims submitted in terms of this clause.

PS.3.13 Construction Programme

(a) Preliminary Programme

The Contractor shall include with his tender a preliminary programme on the prescribed form. to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

(b) Programme in terms of Clause 5.6 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the tender shall be used as basis for this programme.

PS.3.14 Drawings

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

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense produce all further paper prints required for the construction of the work.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

Any information which the Contractor has control over and which is required by the Engineer to complete the drawings of record shall be made available to the Engineer before the Completion Certificate is issued.

Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Engineer. The Engineer will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site.

PS.3.15 Quality Assurance (QA)

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

PS.3.16 Health and Safety

The Works will be constructed in an area inhabited by people including many children.

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHS 1993 Construction Regulations 2003 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in Section C1.2.2

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

PS.3.17 Management of the Environment

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

(a) Natural Vegetation

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

(c) Environmental Management Plan

In addition to the above, all requirements of the Environmental Management Plan (EMP) as detailed in C3.3, Particular Specifications, will be adhered to.

PS.3.18 Climatic Conditions

- *The following are the most reliable climatic information available and shall be used unless other values are mutually agreed upon beforehand:*

Month	Average Rainfall (mm)	Ave Rain Days (Nn)
JAN	192.5	8
FEB	153.4	7
MAR	109.5	6
APR	52.4	3
MAY	16.1	1
JUN	7.6	1
JUL	6.7	1
AUG	12.8	1
SEP	24.8	2
OCT	75.1	5
NOV	99.1	6
DEC	145.1	8
Total	895.1	49

Rainfall gauging will be taken and recorded by the Contractor at his Site Office and agreed with the Engineer on a daily basis.

PS.3.19 Drawings of Record

Any information in the possession of the Contractor, which is necessary for the Engineer's Representative to complete his "drawings of record", must be submitted to the Engineer's Representative before a final payment certificate and a certificate of completion will be issued.

PS.3.20 Borrow Pit Investigation

A borrow pit investigation was undertaken of a proposed material source in close vicinity of the road. An investigation was undertaken in order to assess the engineering geological character of the material source, focusing on the geotechnical properties which will affect the construction of the proposed new road.

The findings of this investigation are elucidated in their report, the summary of which is attached under item C4 of this document. All of the relevant material testing data is included in the report.

- **C3.1.5 TEMPORARY WORKS**

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

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

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

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

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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

C3.2: ENGINEERING

C3.2 ENGINEERING

C3.2.1 DESIGN

- (a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- (b) The Contractor is responsible for the design of the temporary Works (if applicable) and their compatibility with the permanent Works.
- (c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the record drawings.

C3.2.2 EMPLOYER'S DESIGN

The Employer's Design is contained in the Tender Documentation and Drawings. Amendments to the design, if necessary, will be issued during the construction phase.

C3.2.3 CONTRACTOR'S DESIGN

Where the Contractor is to supply the design of designated parts of the permanent Works or temporary Works, he shall supply full working drawings supported by a professional engineer's design certificate.

C3.2.4 DRAWINGS

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

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends, and all other underground infrastructure shall be given by 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 Employer's Agent's Representative on a regular basis.

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

The Drawings prepared by the Employer for the permanent Works are listed below and are bound in a separate document or is attached at the back of this volume. The Employer reserves the right to issue and/or amended additional drawings during the Contract.

C3.2.5 DESIGN PROCEDURES

Not applicable.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

C3.3: PROCUREMENT

- C3.3 PROCUREMENT

- C3.3.1 PREFERENTIAL PROCUREMENT

- C3.3.1.1 Requirements

Tenders will be evaluated in terms of the City of Mbombela Preferential Procurement Policy. Points will be awarded for price and specific contract participation goals as contained in the Tender Data.

- C3.3.1.2 Resource standard pertaining to targeted procurement

The Preferential Procurement Policy (PPP) of the City of Mbombela is applicable to this project. Refer to the Tender Data.

- C3.3.2 SUBCONTRACTING

- C3.3.2.1 Scope of mandatory subcontract works for LI items (Labour Rates)

- a) Paving - R65/ m²
- b) Kerbing – R65 / m
- c) V – Drains - R80-R100 /m³ (15% -20% of total price
- d) Gabions – R250/M³
- e) Water lines - R
- f) Erect diamond fences – R60/m
- g) Brick wall – R80/m
- h) Speed humps – R2,650/ Speed hump
- i) Relocation of Pit toilets – R 1200/Toilet
- j) Hiring of Mobile toilets – R2500/month

However, local subcontractors should be considered provided they are capable.

- C3.3.2.2 Preferred subcontractors/suppliers

Where possible, local subcontractors should be considered for subcontract work provided they are capable.

- C3.3.2.3 Subcontracting procedures

The contractor is solely responsible for negotiating with local subcontractors.

- C3.3.2.4 Attendance on subcontractors

Not applicable.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

C3.4: CONSTRUCTION

- **C3.4 CONSTRUCTION**

- **C3.4.1 WORKS SPECIFICATIONS**

The following specifications shall apply for the construction of the Works.

- **C3.4.1.1 Standard Specifications**

The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998 Edition) shall apply for the construction of the Works.

The term "project specification" must be replaced by "scope of works" wherever it appears in these standardized specifications.

The term "Engineer" must be replaced by "Employer's Agent" wherever it appears in these standardized specifications.

- **C3.4.1.2 National and International Standards**

The SANS or BS Specifications and Codes of Practice shall apply for the construction of the Works.

Wherever any reference is made to the South African National Standards (SANS) and the British Standards Specification (BSS) in either these Bill of Quantities or the Specification of Materials and Methods to be used (OOG-001E), this reference shall be deemed to read "SANS or equivalent standard" and BS or equivalent standard" respectively.

- **C3.4.1.3 Particular Specifications**

The following particular specifications shall apply for the construction of the Works.

Various other specifications specified in the COLTO Standard Specifications or the Project Specifications.

Latest Sabita Manual, Manual 25 entitled "*Quality Management in the Handling and Transport of Bituminous Binders*".

TG2 Second Edition May 2009, "*Technical Guideline for Bitumen Stabilised Materials (BSM)*" issued by the Asphalt Academy.

SANS 1058/2012, *Concrete Paving Blocks* – specifications for interlocking paving blocks.

- **C3.4.1.4 Variations and Additions to the COLTO 1998 Edition Standardized Specifications**

The references to the General Conditions of Contract appearing in the COLTO Standard Specifications refer to the COLTO General Conditions of Contract which is superseded in this contract by the General Conditions of Contract for Construction Works 2015. The corresponding clause in the latter document pertaining to the reference in the COLTO Standard Specifications is listed in the table below.

Clause No. in the Standard Specifications	Clause No. in COLTO GCC 1998	Equivalent Clause No. in GCC 2015
1202	15	5.6.1
1206	14	Deleted
1209	52	6.10.1
1210	54	5.14.1
1212(1)	49	6.8
1215	45	5.5.1
1217	35	8.2.1
1303	49	6.8
1303	53	6.11.1

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

1303	12	5.3.1
1303	45	5.5.1
1403	40(1)	6.4.1

Clause No. in the Standard Specifications	Clause No. in COLTO GCC 1998	Equivalent Clause No. in GCC 2015
1505	40	6.4.1
31.03	40	6.4.1
3204(b)	40	6.4.1
3303(b)	2	3.2.1
5803(c)	40	6.4.1
5805(d)	40	6.4.1
6103(c)	40	6.4.1
Item 83.03	22	5.15.1
ALL SECTIONS	48	6.6

Variations and additions to the COLTO 1998 Standardized Specifications are listed in section C3.4.1.1 of this document.

• C3.4.1.5 Amendments to the COLTO 1998 Edition Standardized Specifications

There are no amendments to the Standard Specifications as issued by the Committee of Land Transport Officials (COLTO).

• C3.4.2 PROJECT SPECIFICATIONS RELATING TO STANDARD SPECIFICATIONS

This part of the project specifications deals with matters relating to the standard specifications. Where reference is made in the standard specifications to the project specifications this part shall also contain the relevant information e.g. the requirements where a choice of materials or construction methods are provided for the standard specifications.

In certain clauses, the Standardized Specifications allow a choice to be specified in the Specification Data between alternative material 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 Specification Data. It also contains such additional specifications as are 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 "B" followed by a number corresponding to the number of the relevant clause or payment item in the Standardized Specifications. New clauses and payment items not covered by clauses or payment items in the Standardized Specifications if included here are also designated "B", followed by a number. The new numbers follow on the last clause or item number used in the relevant section of the Standardized Specifications.

Clauses and pay items referring to labor intensive methods are prefixed by "L" in the project specifications.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(A) SECTION 1300: CONTRACTOR'S SITE ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**B1301 PAYMENT**

Add the following at the end of Item 13.01(1).

" and provided the Contractor has fulfilled his obligations as far as the Engineer's

office, laboratory and housing accommodation is concerned".

Add the following new pay item:-

Item Unit

B13.01(a) Services for Community Liaison Officer (provisional Sum) Months

The CLO will be paid **R8 738.17/pm**. Contractor will only claim

Handling fee under item B13.01 (b)

B13.01(b) Handling cost and profit in respect of sub-items B13.01(a)..... %B13.02.....Training:

- | | | |
|------------|---|----|
| (a) | Provisional sum for training allowance to targeted labour undergoing training | |
| (i) | Technical Skills | No |
| (ii) | Generic Skills | No |
| (iii) | Entrepreneurial skills | No |
| (iv) | Remuneration of labours undergoing technical skills training. | No |
| (v) | Training Venue | No |

Payment of items will be based on acceptable quote from at least three accredited training service providers. Payment will be as invoiced from nominated service provider after completion of training.

Contractor will claim handling fee under item B13.03 (b)

- | | | |
|------------|---|-----------|
| (b) | Contractors handling costs, profit and all other charges in respect | % of sub- |
| | item B13.03 (a) | |

B13.03(a) Contractors time related obligation in OHS:

All staff and compliance in respect of occupational health and safety Act, construction regulations and **COVID-19 (C19 OHS), 2020** will be paid by the contractor..... Months

B13.03(b) Contractors time related obligation EMP:

All staff and compliance in respect of Environmental Management Plan regulation will be paid by the contractor . Months

B13.04. Relocation and/or protection of existing services:

- (a) By the contractor

Payment of the item will be based on actual length of relocation and or Protection of Services Including equipment to carry out the required relocation and/or protection of services.

Any materials to be used must be approved by the Engineer on site.

- (b) By the service provider (provisional Sum)

Invoice of nominated and approved service provider will be certified for payment after work done. Contractor will claim handling fee under item B13.02 (c).

- (c) Handling cost in respect of B13.05 (b) %

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

B13.05

Information Board

Supply, transport to site and erect contract signboardNumber (No.)
as indicated on drawing.

B13.06. Hand excavation to determine the position of existing
service in soft material..... m³

Payment for excavation in soft material by hand as directed By Engineer on site

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

(B) SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL**B1401 OFFICES AND LABORATORIES****(a) General**

Delete the fourth sentence in the first paragraph of Sub-clause 1402 (a) and replace with:

Office buildings shall have timber or concrete floors covered with edge-to-edge foam-backed needle-punched carpeting, and laboratory buildings shall have concrete floors.

Add the following new paragraph at the end of this sub-clause:

The offices, laboratory and stores shall, unless otherwise agreed, be erected in close proximity to the contractor's offices and laboratory, and the entire area shall be fenced with security fencing and provided with a gate. The contractor shall take all reasonable precautions to prevent unauthorised entry to the Engineer's offices and laboratories and to ensure the general security of the offices and laboratories.

B1401 MEASUREMENT AND PAYMENT

Amend the following pay items under item:

Item . Unit

B14.01 Office and laboratory accommodation

(a) Office accommodation for the Engineer Month

Payment will be provision of renting the office of the Engineer from local office parks or rental of mobile office space.

(b) Handling cost and profits in respect of sub-item B1401 (a) %

B14.03 (b) Prime cost items and items paid for in a lump sum:
Add the following sub-items

(d) Provisional Sums items

(i) Provision for use by the Engineer for an independent Geotechnical laboratory No

Payment will be as invoice by the independent laboratory for test conducted on instruction of Engineer

(ii) Handling cost and profits in respect of sub-item B1403 (d) (i) %

(iii) Provision for Training of Engineering Technician Month

Payment will be made monthly for the remuneration of Engineering Technician appointed by Client/Engineer for on-site Training.

(iv) Handling cost and profits in respect of sub-item B1403 (d) (iii) %

(v) Provision for use by Engineer of Surveyor No

Payment will be as invoiced by the Surveyor for work conducted on instruction of Engineer

(vi) Handling costs and profit in respect of sub item B14.03 (d)(v) above %

(vii) Provision for use by Engineer of Environmental Specialist No

Payment will be as invoiced by the Environmental Specialist for work conducted on

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

instruction of Engineer

(viii) Handling costs and profit in respect of sub item B14.03(d)(vx) above %

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

- (ix) Provision of a direct independent telephone line for the Engineer Month
 , including the cost of calls in connection with contract administration and telephone rental
- (x) Handling costs and profit in respect of sub item B14.03(d)(ix) above %
- (xi) Provision of Site Monitoring Fees- Resident Engineer Month
- (xii) Provision of Site Monitoring Fees- Assistant Resident Engineer Month
 Payment will be as invoiced by the Engineer for work conducted
- (xiii) Handling costs and profit in respect of sub item
 B14.03(d)(xi) and (xii) above %
- (xiv) Provision of safety consultant Month
 Payment will be as invoiced by the Safety Consultant for work conducted on instruction of Engineer
- (xv) Handling costs and profit in respect of sub item %
 B14.03(d)(xiv) above
- (xvi) Provision of social facilitator Month
 Payment will be as invoiced by the Social Facilitator for work conducted on instruction of Engineer
- (xvii) Handling costs and profit in respect of sub item
 B14.03(d)(xvi) above %
- (xviii) Provision for Independent Engineer for Design Reviews Month will
 be as invoiced by the Independent Engineer for work conducted on instruction of Engineer
- (xix) Handling costs and profit in respect of sub item (xviii) above %

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(C) SECTION 1500: ACCOMMODATION OF TRAFFIC**B1502 GENERAL REQUIREMENTS****(e) Access to properties**

Add the following:

"Where the alignment of the new road coincides with the alignment of the existing road, a number of accesses to private properties will have to be operational and maintained during the constructional period. No separate payment will be made for providing acceptable and safe access across the new road at all times during construction of the road."

- (i) Traffic safety officer**

Add the following after subclause (viii):

"(ix) Be responsible for contacting all the relevant authorities in the event of an accident on the site of the Works

(vi) Arrange for the removal of broken down vehicles that obstruct the normal traffic flow

The Contractor shall provide the traffic safety officer with all the necessary resources to carry out his duties as specified, inter alia, light delivery van (LDV), personnel, warning signs and revolving amber flashing lights. A warning sign with the words "CONTRACTOR TRAFFIC CONTROL" and/or "AANNEMER VERKEERSBEHEER" in clearly legible letters shall be mounted on the vehicle at least 1,5m above ground level to be clearly visible. The vehicle shall be equipped with two revolving amber-coloured flashing lights with a minimum intensity of 55W. The flashing lights shall always be switched on and the warning sign be displayed when the vehicle is used on the site.

No separate payment will be made for the traffic safety officer, his vehicle, personnel and equipment and the cost thereof shall be included in the Contractor's cost for his establishment and general obligations (Section 1300)."

Add the following new sub clauses:

- (j) Handing over the site**

The total extent of the site between the limits of construction as described in this document and indicated on the drawings will be handed over to the contractor at the commencement of the contract period. The engineer however reserves the right to adjust this arrangement should progress or safe passage of traffic warrant such a change.

- (k) Use of explosives in close proximity of temporary deviations**

The contractor shall arrange all necessary traffic control and other requirements to safeguard the traffic on temporary deviations during blasting operations.

- (l) Land taken up for deviations**

Negotiations with landowners to obtain the land taken up by temporary deviations will be undertaken by the employer. A prime cost sum is allowed in the bill of quantities for payment of compensation to affected landowners. All other negotiations regarding temporary access to properties, land-use, fencing requirements etc. shall be dealt with by the contractor in conjunction with the engineer and be confirmed in writing and be kept on record by the contractor.

- (m) Maximum lengths of construction areas**

A temporary deviation, where the proposed road follows the existing route shall be constructed along the length of existing road. Traffic shall generally be accommodated as follows:

On a two-way two lane gravel deviation (Class 1) constructed partially outside or adjacent to the existing road reserve boundaries of road.

(i) On one-way single lane gravel deviation (Class 2) constructed inside the existing road reserve boundaries and on either side of road. In this instance special cognisance shall be taken to accommodate traffic to private properties.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

A maximum length of one section of approximately 5,0km or two sections of 3,0km each of deviation (Class 1 or 2) shall be operational at a time and no relieve of this limitation shall be considered by the engineer except where the programme necessitates such at the construction of bridges."

- B1503 TEMPORARY TRAFFIC CONTROL FACILITIES

Add the following after the first paragraph:

"All temporary road signs, devices, sequences, layouts and spacing shall comply with the requirements of the Road Traffic Act, 1996 (Act 93 of 1996), the National Road Traffic Regulations, 2000, the South African Road Traffic Signs Manual, the requirements of the relevant road authority and the drawings. All temporary traffic control facilities shall comply with the guidelines set in SA Road Traffic Signs Manual, Volume 2, and Chapter 13: Roadwork Signing, (SARTSM, June 1999, obtainable from the Government Printer, Pretoria)."

(b) Road signs and barricades

Add the following:

"All the temporary road signs are to be mounted on posts as specified in section 5600 of the specifications. Provision shall be made for the supply and erection of the signs and the maintenance of the signs during the construction period. Provisions shall also be made for the removal of the temporary road signs on completion of the construction work when such signs are no longer required.

Temporary road signs and channelization devices shall be manufactured in accordance with the latest edition of the South African Road Traffic Signs Manual (June 1999) and placed as shown on the drawings and in Road Signs Note 13. Delineators shall be manufactured from a non-metal material and shall be mounted on a base section also manufactured of non-metal material. Single as well as back-to-back mounted delineators are required.

The obligation to arrange safe passage of traffic shall always be vested with the contractor regardless what is indicated on the drawings of the engineer."

(c) Channelization devices and barricades

Add the following:

"Drums shall not be used as channelization devices.

TW 401 and TW 402 delineators shall comply with the following requirements:

a) It shall be manufactured from a flexible material and shall comply with SABS 1555. The blade portion of the delineator shall be positively affixed to a base unit which in turn shall be stable on its own or be stabilized by means of sandbags when used on the road.

ii) The blade shall be retro-reflectorized, with class 1 yellow sheeting on the side facing oncoming traffic.

iii) It shall nominally be 1000mm high x 250mm wide and the bottom edge of the delineator shall not be more than 200mm above the road surface.

iv) It shall be subject to the approval of the Engineer.

The maximum spacing between centres of delineators shall be as shown on the drawings or as directed by the Engineer."

- (e) Warning devices

Add the following:

"It is a requirement of this contract that all construction vehicles and plant used on the works will be equipped with rotating amber flashing lights and warning boards as specified in the standard specifications. Construction vehicles travelling outside the limits of construction areas shall however, not operate the warning lights.

The warning lights shall have a base diameter of at least 170mm and the amber bulb cover a height of at least 150mm high. It shall be a requirement that the contractor also provides the engineer's site personnel with warning lights for their vehicles (a maximum of two lights are required) without any payment applicable.

- B1514 TEMPORARY FENCING AND GATES

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

Replace the contents of this clause with the following:

"Where temporary fencing is ordered by the engineer, it shall be paid for under item 55.06 of the standard specifications. The temporary fencing shall be new fencing material, which shall subsequently be dismantled and removed and erected at an alternative position as directed by the engineer. When ordered by the engineer, temporary fences and gates shall be moved to new locations or either left in place or when no longer required be dismantled and removed from site if so directed. Allowance is made in the bill of quantities for moving existing fences and gates."

Add the following clause:

• **B1517 RETRO-REFLECTIVE MATERIAL**

"Retro-reflective material for temporary signs shall comply with the requirements of SABS 1519-1 for weathered material. Tests shall be carried out with a field retro-reflectometer and the testing procedure and classification are described in Clause B 8118. The value of the coefficient of Retro- Reflection shall be at least 60% of the values indicated in Table B 8118/1."

• **B1518 MEASUREMENT AND PAYMENT**

Renumber item 15.01 as B15.01 and add the following:

"The tendered rate shall also include for all measures necessary to safeguard traffic on temporary deviations during blasting operations."

Renumber item 15.03 as B15.03 Add the following sub-item:

"ITEM	UNIT
B15.14	The provision and maintenance of rotating lights, etc. for the use of the Engineer and his staff

(a) Rotating Amber lights

number
(No)

(b) Safety vests

number
(No)

The unit of measurement shall be the number of Rotating Amber lights and Safety Vests supplied to the supervisory staff.

The tendered rate shall include full compensation for providing and maintaining hats and the jackets equipped with high visibility retro-reflective and/or fluorescent panels in red, yellow and white for the duration of the contract".

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(D) SECTION 1700: CLEARING AND GRUBBING

B1702:	DESCRIPTION OF WORK a) Clearing Add the following: Clearing as described shall in all cases be undertaken in such a manner that the topsoil is preserved and not contaminated with other debris or rubbish. Cross- sections for the determination of earthworks quantities shall be taken after clearing (topsoil or unsuitable roadbed material) and roadbed preparation if applicable. Payment for gabion boxes and mattresses which have to be removed and the material sorted and stacked shall be made under section 5200.		
B1704:	MEASUREMENT AND PAYMENT		
	Item		Unit
	B17.07	Removal of topsoil material and temporary stockpiling thereof in:	
	a) Topsoil in windrows alongside the work area		cubic metre (m ³)
	b) Topsoil in windrows on the edges of borrow pits or spoil areas		cubic metre (m ³)
	<p>The unit of measurement for items (a) and (b) shall be the cubic metre of topsoil removed to windrow or temporary stockpile. The volume of topsoil removed shall be measured in cut, calculated from the difference in cross-sections of the natural ground level before the commencement of clearing to cross-sections taken after the removal of the topsoil.</p> <p>The contractor shall constantly liaise and agree with the Engineer as to the depth of topsoil to be removed. Where, in the opinion of the Engineer, material that would not normally be classed as topsoil to be removed. Where, in the opinion of the Engineer, material that would normally be classed as topsoil has also been excavated, the excavation shall be backfilled and compacted with selected material at the contractor' expense. Should material that is deemed by the Engineer not to be topsoil, be removed and stockpiled together with material classed as topsoil, the contractor shall be responsible for the removal of this unsuitable soil from the stockpile and the replacement of the quantity of topsoil contaminated by the unsuitable material at his cost. The quantity of topsoil to be replaced shall be determined by the Engineer.</p> <p>The rates tendered shall include for the excavation of the topsoil and where required, the loading and hauling thereof to temporary stockpile as well as the maintenance of the stockpile until re-use of the material. The rates tendered shall also include for all supervision required to ensure that only topsoil is removed.</p>		

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(E) SECTION 2100: DRAINS**B2101: SCOPE**

Amend the first paragraph to read:

"This section covers all work both rehabilitative and new work in connection with the excavation and construction of open drains, subsoil drainage and banks and dykes at the locations and to the sizes, shapes, grades and dimensions as shown on the drawings or as directed by the Engineers, and the test flushing of subsoil drains."

B2104: SUBSOIL DRAINAGE

(a) Materials

(ii) Natural permeable material

Add the following to the 2nd paragraph:

"The crushed stone shall be coarse (19mm nominal) and shall be washed clean of all fines", conforms to the following specification:

Percentage passing through a 26,5mm sieve: 100 %. Percentage passing through a 19,0mm sieve: 60-85 %.

(iii) Synthetic-fibre filter fabric

Under item (4) Selection, of this sub-clause, replace the 1st paragraph with the following:

"The filter-fabric used for subsoil drains shall be grade 2 and shall satisfy the criteria for a grade 2 geotextile as given in Table 2104/2."

(b) Construction of subsoil drainage systems Add the following sub-clause:

"(v) Proving of pipes in subsoil drainage systems

On completion of the pipe laying and prior to backfilling, all pipe joints shall be surveyed as proof of their installation to line and level. After backfilling the pipes shall be proved by pulling through a cylindrical cleaning brush followed by a wooden mandrill \pm 400mm long and 5mm in diameter less than the bore of the pipe. Proving of pipes shall not be paid for separately and the cost thereof shall be deemed to be included in the rate tendered for laying the pipe."

B2107: MEASUREMENT AND PAYMENT

Item

Unit

B21.01 Excavation for open drains

Add the following to the penultimate paragraph:

"The tendered rate shall also include full compensation for trimming the open drains" "This item does not include the excavations for the earth channel along the road profile as per typical cross section, which is deemed included in the mass earthworks (Section 3300). This item is specifically for additional open drains leading away from the road profile, like mitre drains, etc."

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA`

(F) SECTION 2200: PREFABRICATED CULVERTS**B2203 MATERIALS****d) Fine granular material**

Add the following:

"In addition to clause 22.03(d) the Engineer may allow approved selected fine material to be used as bedding material."

- **B2204 CONSTRUCTION METHODS**

Replace the third paragraph with the following:

"All culverts shall be constructed by the 'trench method'."

- **B2207 UNSUITABLE FOUNDING CONDITIONS**

Substitute the second paragraph of Clause 2207 with the following:

"The width of the excavation and cushion to be as shown on the drawings."

- **B2211 BACKFILLING OF PREFABRICATED CULVERTS**

Substitute the second sentence in the ninth paragraph with the following:

"The cement/soil mixture shall consist of CEM II 32,5 cement and of an approved gravel of sub-base quality (G5) mixed in proportion of 1:10."

- **B2215 SERVICE DUCTS**

Substitute the fourth paragraph with the following paragraph:

"The depth of the excavation shall be such that a minimum coverage of 1,0 m is allowed for between the road surface/shoulders or any part of the road formation surface. The excavation for service ducts will further be done to ensure that the duct is 600 mm below any part of the natural ground and will allow for the thickness of the pipe bedding. All service ducts will be placed in a 1:10 cement/soil mixture, at least 75 mm thick on either side of the pipe. Service ducts shall extend 1m outside the road reserve."

- **B2218 MEASUREMENT AND PAYMENT**

Add the following clauses:

- **"B2219 CONSTRUCTION TOLERANCES**

The installation of prefabricated pipes, portal and rectangular culverts and ducts shall comply with the requirements stated below:

(a) Level

The permissible deviation from the specified level shall be ± 25 mm.

(b) Alignment and grade

The permissible deviation of the alignment and grade of each culvert and pipeline shall be ± 20 mm from the specified line and level, or from the line between culvert or pipe inverts at successive

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA`

manholes or catchpits, as applicable, when measured over any 6 m length, and all such deviations shall be gradual. Reverse falls are unacceptable.”

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

(G) SECTION 2300: CONCRETE KERBING, CONCRETE CHANNELLING, OPEN CONCRETE CHUTES AND CONCRETE LININGS FOR OPEN DRAINS

B2302 MATERIALS

(b) Kerbing and channeling

Add to Sub-clause 2302(b) the following:

Precast kerbs shall preferably be factory produced by a reputable manufacture of the articles and shall comply with the requirements of SABS 927.

• **B2304 CONSTRUCTION**

(b) Prefabricated concrete Kerbing and channeling

Add to Sub-clause 2304(b) the following:

All precast kerbs shall be provided with continuous in-situ concrete backing (haunching), the cost of which shall be included in the tendered rate.

Dimensions of the triangular-shaped (in cross-section) haunching shall be calculated as follows: If the difference in levels between the top of the kerbs and the sub base on which the kerb is laid is (h), then the height of the haunch is $2/3h$ and the width of the haunch is h.

• **(e) Cast in-situ kerbs and channels**

Add to Sub-clause 2304(e) the following:

Where new Kerbing and channeling has to be laid in an existing bitumen surface, the surface shall be neatly cut to a straight line with an angle grinder or similar approved means along the edge of the channel. The existing road foundation shall then be carefully removed over the width and depth required to construct the new kerbs and channel.

During the construction of the in-situ channel, the contractor shall take care not to stain or damage the existing road surface. Any damage, excess overbreak, undermining or staining shall be repaired by the Contractor at his own expense.

Add the following new Sub-clauses to Clause 2304:

• **(m) Formwork and finish**

All visible edges of cast in-situ channels shall be rounded with a rounding tool.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

(H) SECTION 3300: MASS EARTHWORKS**B3303: CLASSIFICATION OF CUT AND BORROW**

(a) Classes of excavation

Add to Sub-clause 3303(a) the following:

(i) Soft excavation

Add the following at the end:

Or

"Soft excavation shall be excavation in material which can be efficiently ripped by a bulldozer with a mass of at least 35 tons when fitted with single tine ripper and an engine developing approximately 220 kW at the flywheel".

Remove item 3303 (a) (ii) Intermediate excavation. There will be no intermediate material measured in this contract and except from hard excavations all excavations must be considered as soft excavation.

(iii) Hard Excavation Add the following:

- A full survey including proto report of all dwellings within a radius of 200m of a blasting area needs to be conducted before blasting operations commence. The Contractor is liable for any damage that occurs to any structure, cable, sewer, pipe, etc. and immediately notifies the Employer's Agent of any such damage. The Employer's Agent arranges for the damage to be repaired by the owners of the damaged service and the cost of such repairs is deducted from any monies due to the Contractor.

B3306: CUT AND BORROW

(a) Dimensions of Cuts

Delete the third paragraph from Clause 3306(a), apart from the first sentence thereof. Add the following:

Cut and borrow to fill will be measured under Item 33.01. The Contractor shall take note of the nature of the earthworks alongside the existing road. No extra over payments will be made in respect of the nature of the site or due to the dimensions of a particular cutting.

B3307: FILLS

(d) Benching

Add the following:

"Benching of fill and pavement layer material is required to be undertaken into the existing fill embankments and pavement layers. No additional payment shall be made over and above the normal pay items applicable to earthworks and pavement layers where benching is required for widening of the existing road formation. Benching shall be undertaken as shown on the drawings. It is a requirement that benching shall always be started at the bottom of the existing fill progressing to the top of the formation. The dimensions and details of benching are shown on the drawings."

(i) Widening of fills

In the eight paragraph of Sub-clause 3307(i), delete the sentence "An extra over payment for the widening of existing fills will apply under Item 13.16."

Add the following:

- No extra over payments will be made in respect of the nature of the site or due to the dimensions of the fills being widened or constructed.

B3312: MEASUREMENT AND PAYMENT

General directions

Delete Note (3) Work in Restricted Areas and replace with the following:

- On this Contract, no extra over payment will be made due to the nature of the site or the size of

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

the work area available. All costs associated with carrying out the works are deemed to be included in the tendered rates for the items in the Schedule of Quantities.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

Item

B33.01: Cut and borrow to fill, including free-haul up to 1,0 km:**B33.04:** Cut to spoil, including free-haul up to 1,0 km:

•

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(I) **SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL**

B3402:	MATERIALS (a) General All layers shall comply with the requirements of Tables 3402/1, 3402/2, 3402/4 and 3402/5 of the Standard Specification. The requirements of Section 3500: Stabilization shall also apply to the relevant layers. Material requirements for gravel pavement layers are in accordance with TRH4 and shall be indicated on the drawings. There shall be no measurement of Intermediate class excavation. All excavation that is not Hard shall be deemed as Soft.		
B3406:	QUALITY OF MATERIALS AND WORKMANSHIP Add to Clause 3406 the following: Test results and re-measurements shall be assessed in accordance with the provisions of Section 8200: Quality Control (Scheme 1) of the standard specifications, as amended in these project specifications.		
B3407:	MEASUREMENT AND PAYMENT Delete the note at the start of the measurement and payment clause dealing with work in restricted areas. On this Contract, no extra over payment will be made due to the nature of the site or the size of the work area available. All costs associated with carrying out the works are deemed to be included in the tendered rates for the items in the Schedule of Quantities.		
	B34.04:	In-situ reconstruction of existing pavement layers as:	
	(a) Gravel selected layer compacted to 93% of modified AASHTO density using		
	ii) Non cemented material, 150mm thick		(m ³)
	The unit of measurement shall be the cubic meter of compacted pavement layer, and the quantity shall be calculated from the authorized dimensions of the completed layer.		
	B34.06:	Extra over item 34.04 for adding extra material as specified	
	(a) Gravel selected layer (neat G7 or better commercially sourced)		m ³)
	The unit of measurement shall be the cubic meter of compacted pavement layer, and the quantity shall be calculated from the authorized dimensions of the completed layer. The tendered rates shall provide full compensation for procuring from commercial sources, furnishing and placing all materials and compacting of the material, over an unlimited free haul distance where material is obtained from commercial sources, and for the testing, protecting and maintaining of layers as specified.		

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

SECTION 3500: STABILIZATION B3502 MATERIALS**(a) Chemical Stabilising Agents**

Add the following after the first paragraph:

"The Contractor must receive confirmation from the Engineer on the type and quality of stabilising agent before ordering."

Replace sub clause (ii) with the following:

"(ii) Common Cement

Common Cements shall comply with the requirements of SANS EN 197-1 as specified in Clause B1229. CEM II cements shall be utilised."

- **(e) Water**

Add the following:

"Water used in the compaction and curing of stabilised layers shall comply with the criteria specified in Table 8116/1."

- **B3503 CHEMICAL STABILISATION**

- a) Preparing the layer**

Add the following:

"The surface of the layer to be stabilized shall be watered and rolled to obtain a smooth compacted surface without loose or coarse patches in order to ensure a uniform application of stabilizing agent or agents.

Payment for preparing the layer surface to these standards shall be deemed to be included in the tendered rates of sections 3400 and 3500."

- (b) Applying the stabilizing agent**

Add the following:

"The minimum rate of application shall be 2,0% by mass of the specified stabilizing agents. The engineer may order a variation in the rate of application. The spreading of stabilizing agent/s shall be done by placing bags along the road and spreading by hand using rubber squeegees to obtain a uniform layer of stabilizing agent/s. Bags which have become damaged or wet shall not be used and such bags shall be replaced at the contractor's cost. No additional payment other than the scheduled payment items shall be considered if more than one type of stabilizing agent is used for the stabilization of a layer."

- (d) Mixing in the stabilizing agent**

Add the following:

"Where chemically stabilized pavement layers are constructed, no stabilizing agent may be spread or mixed beyond the specified width. The contractor shall not mix material for stabilization on adjacent bituminous surfaces.

Where existing and new works are joined (longitudinal joints and others), the material shall be satisfactorily mixed and compacted without any permeable or loose patches."

- (e) Watering**

Add the following paragraph after the third paragraph:

"The contractor's attention is drawn to the provisions of the third paragraph of this standard clause, especially the second sentence, which states:

The moisture content of the material during compaction shall never exceed 80% of the saturated moisture content of the natural material without stabilizing agents.

This requirement will be rigorously enforced on site to reduce the occurrence and magnitude of shrinkage cracks."

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(f) Compaction

Add the following:

"The entire layer, regardless of its thickness, shall be processed within the time limitations stipulated in sub-clause B3503(i).

"The preparation of the stabilised materials for Modified AASHTO compaction testing shall be in accordance with the requirements of TMH1, Method A16T and the compaction thereof to TMH1, Method A7."

(g) Finishing at junctions

In the first sentence after "damage to" add the following:

".....the existing pavement or...."

(h) Curing the Stabilised Work

Replace the first paragraph with the following:

"The stabilized layer shall be protected against rapid drying out by being kept continuously wet or damp by watering at frequent intervals until one of the methods of protection listed below is put into effect. Stabilized layers which are not kept continuously wet or damp but is subjected to consecutive wet-dry cycles, may be rejected by the engineer should he consider the layer to have been adversely affected. Method (iii) and (iv) shall not be applicable."

Amend the final paragraph to read:

"No additional payment will be made for curing as described above."

(i) Construction Limitations

In Table 3503/1, delete "8 hours" for ordinary Portland cements and cement blends and replace with: "6 hours"

Amend the last paragraph to read as follows:

"No traffic or plant not actually used for processing or curing the layer shall be allowed to pass over the treated layers for a period of at least 5 days after compaction is completed. Thereafter tipping and spreading of the overlaying layer may proceed. Construction of the overlaying layer shall only proceed after a minimum period of 7 days after compaction of the treated layers is completed."

Add the following:

"No stabilisation shall be done with falling air temperatures when the air temperature falls to below 7 °C, or during rising air temperatures, when the air temperature is below 3 °C.

Moisture content tests shall not be undertaken more than one day in advance of in-situ stabilisation operations. Care shall be taken to ensure that samples are representative of the in-situ material. Checks shall be conducted when wet weather occurs between initial testing and work commencing on any section."

• **B3505 BITUMINOUS STABILISING**

(b) Mixing in the additive

In the third line, change "sub-clause 3503(b)" to "sub-clause B3503(b)".

(e) Compaction

In the first line of the first paragraph, change "sub-clause 3503(f)" to "sub-clause B3503(f)".

(f) Finishing at junctions

In the second line change "sub-clause 3503(g)" to "sub-clause B3503(g)".

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(g) Construction limitations

In the second paragraph, delete the word "Limited".

- B3506 TOLERANCES

- (a) **Rate of application**

- (i) Chemical stabilizing agents Add the following:

"Stabilizer content after construction shall be determined by TMH 1 test method A 15(d). The coefficient of variation for each lot shall not exceed the following:

30% for in place mixing, and

20% for plant mixing (in situ recyclers shall be considered plant mixers) Where:

Coefficient of variation = $\frac{S_n}{X_n} \times 100$

X_n

S_n = Standard deviation of "n" determinations of stabilizing agent content, and

X_n = Mean of "n" determinations of stabilizing agent content, with n = 4 minimum"

- B3509 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the second paragraph with the following:

"The test results and measurements shall be judged in accordance with the provisions of Section 8300."

Add the following after the fourth paragraph:

"The stabilized material sampled from the layer for the compaction of Modified AASHTO briquettes, shall be prepared according to TMH 1 method A16 T i.e. discard materials coarser than a 37,5 mm test sieve, and compact according to TMH 1 method A7. The compacted specimens are used for the determination of unconfined compressive strength, indirect tensile strength, wet/dry durability and maximum dry density / optimum moisture content relationship."

- B3510 MEASUREMENT AND PAYMENT

Amend the following payment item.

- | | |
|-------------|-------------|
| <u>ITEM</u> | <u>UNIT</u> |
|-------------|-------------|

- B35.02 Chemical Stabilizing Agents**

Replace subitem (a) with the following:

(a) Common cements to SANS EN 197-1 (CEM II 32,5) ton (t)"

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(J) SECTION 4100: PRIME COAT B4102 MATERIALS**(a) Priming Material**

Add the following priming material:

“MSP1 or Colprime E complying with SABS 307.”

- **B4104 WEATHER AND OTHER LIMITATIONS**

Replace paragraph (g) with the following:

“(g) when the moisture content of the upper 50 mm of the layer is higher than 50% of the optimum moisture content determined according to TMH1 method A7.”

- **B4106 APPLICATION OF THE PRIME COAT**

AdMd the following to paragraph (b):

“The temperatures for storage and spraying of MSP1 or Colprime E shall be in accordance with the supplier’s specification.”

Add the following sub-clause:

“(j) The nominal rate of application of the prime coat shall be 0,7 l/m².”

- **B4110 MEASUREMENT AND PAYMENT**

ITEM**UNIT****B41.01 Prime coat:**

Add the following sub item:

“(e)..... Emulsion prime, “Colprime E” or similar . litre (/)

”

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA
SECTION 4200: ASPHALT BASE AND SURFACING B4202 MATERIALS

(b) Bituminous binders

Add the following:

"The bitumen binder for the manufacturing of the continuously graded asphalt surfacing shall be 60/70 penetration grade bitumen. The bitumen binder for the manufacturing of the continuously graded asphalt base shall be 40/50 penetration grade bitumen"

(c) Aggregates

(i) Grading Add the following:

"The aggregate grading for the continuously graded asphalt surfacing shall be as specified for a medium grading as per Table 4202/7 in the standard specifications.

The use of crushed stone base material shall not be permitted. The mix shall be manufactured using single size coarse aggregate fractions. The use of natural sands will not be permitted. The engineer may request a reconsideration of the blend to achieve any grading within the given envelope."

(d) Fillers

Add the following:

"All asphalt mixes specified for use in the works shall contain at least 1% by mass of CEM I 32,5 active filler."

• **B4203 COMPOSITION OF ASPHALT BASE AND SURFACING MIXTURES**

Delete the fifth paragraph and replace with the following:

"The design of the asphalt mixes shall be in accordance with "Interim Guidelines for the Design of Hot-Mix Asphalt in South Africa (June 2001)", and appropriate research results. The mix properties and requirements shall be as specified in the project specifications.

The relevant asphalt mixes for the base and surfacing layers shall comply with the requirements in table B4203/2."

• **TABLE B4203/2: ASPHALT MIX REQUIREMENTS: BASE AND SURFACING**

Property	Continuously graded base mixes	Continuously graded surfacing mixes	Stone mastic asphalt mixes
Marshall stability (Kn)	8 – 18	8 – 18	-
Marshall Flow (mm)	2 – 6	2 – 6	-
Stability /Flow (Kn/mm)	>2,5	> 2,5	-
VMA (%)	> 14	> 15	> 17
VFB (%)	65 – 75	65 – 75	
Air voids (%)	4 – 6	4 – 6	3 – 5
Indirect tensile strength @ 25°C (kPa)	> 1000	> 1000	> 400
Dynamic Creep Modules @ 40°C (Mpa)	> 20	> 20	-
Modified lottmann* (TSR)	> 0,7	> 0, 8	> 0,7
Air permeability @ 7% voids (cm ²)	< 1 x 10 ⁻⁸	< 1 x 10 ⁻⁸	<1 x 10 ⁻⁸
Binder film thickness (microns)	5,5 – 8,0	5,5 – 8,0	-
Filler bitumen ratio	1 – 1,5	1 – 1,5	-

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STOCKPILING OF MIXED MATERIAL**(c) Surface Requirements**

(iii)..... Tack Coat

Add the following new paragraph:

"Hand spraying shall only be permitted on areas approved by the engineer. The binder distribution shall be capable to apply the binder evenly over the full area. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush."

B4206 PRODUCING AND TRANSPORTING THE MIXTURE**(b) Production of the mixture**

(ii)..... Using drum-type mixer plants:

Add the following:

"Pre blending of aggregate fractions shall not be permitted and the Contractor shall ensure that sufficient cold-feed bins are installed to accommodate each individual aggregate fraction, including the filler."

(c) Transporting the mixture

Add the following paragraph:

"Special precautions shall be taken by the Contractor to ensure that the temperature of the total mass of asphalt does not decrease by more than 10°C from point of dispatch to the point where it is to be paved. The use of the thermal blankets is obligatory."

Add the following sub-clause:

- "(f) Approval of asphalt mixture

Before any asphalt is placed on the road, the Engineer shall approve the mix design. The approval process shall be as follows:

The Contractor shall prepare and submit a laboratory design mix with test results at four different bitumen contents. The design mix shall be submitted on the prescribed form D3 of TMH 10: "Instruction for the completion of as-built materials data sheets" with all the necessary test results completed. In addition, the proposed asphalt mixture shall be subjected to gyratory testing. All the expenses in preparing and submitting the laboratory design mix shall be to the Contractors cost.

Samples of all aggregate and bitumen shall be submitted with the laboratory design mix to enable the Engineer to carry out check design testing as necessary. The above design and aggregate shall be submitted to the Engineer at least six weeks before it is intended to commence with any asphalt production."

B4208 JOINTS

Add the following to this clause:

"Where the difference in level between the new work and the existing road surface exceeds 25 mm, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with clause 4208 of the specification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

between the old and new work.

All costs involved in the provision and removal of these temporary ramps shall be deemed to have been included in the rates tendered for the relevant asphalt pay item."

B4214 QUALITY OF MATERIAL AND WORKMANSHIP**(b) Coring of asphalt layers**

Add the following:

"A suitable coring machine shall be available when asphalt paving is taking place. Cores shall only be drilled after a minimum period of 24 hours after placement of the asphalt layer and when the road temperature is 20 °C or less. Core holes shall be filled with hot mix asphalt and compacted, all within 24 hours of the core being drilled. Coring shall be carried out within 48 hours after the paving has been completed and supplied to the Engineer. The test results of cores shall be submitted to the Engineer within 24 hours after coring."

(c) Routine inspection and tests

Add the following paragraph:

"The Contractor shall keep accurate records of:

- (i) The position where every truckload of asphalt is paved (chainage, lane, time and date).
- (ii) The temperatures of the asphalt in the trucks both at the mixing plant and at the paving equipment immediately prior to discharging the load.
- (iii) The truck number from which control samples are taken. All samples taken shall be appropriately numbered."

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(K) SECTION 5100: PITCHING, STONEMASONRY AND PROTECTION AGAINST EROSION**B5101 SCOPE**

Add to Clause 5101 the following;

The section also covers the saw cutting of various types of in-situ material with a mechanical saw cutting machine.

• **B5102 MATERIALS**

Add new Sub-Clause to Clause 5102 5102 (i) Mechanical Saw Cutting

(a) plant

Saw cutting machines shall be power driven saws suitable and capable to cut accurately to required depths and alignment in various materials as specified. Skill operator shall be required for operating sawing machines. Operators shall be equipped with suitable safety equipment (e.g. industrial goggles, suitable boots as well as clothing) for operating the sawing machines.

(b) Preparation to saw cutting

Before saw cutting may commence, the cut line shall be accurately pre-marked to the specified dimensions in term of the drawings or as instructed by the engineer.

(C) CONSTRUCTION TOLERANCE

Mechanical saw cutting shall be undertaken within the following dimensional tolerances:

(a) Horizontally

Mechanical deviation from the specified line shall not be more than 5mm

(b) Vertically

The cut depth shall never be less than the specified depth but shall not exceed the specified depth by more than 15mm.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(L) **SECTION 5200: GABIONS**

B5202:	MATERIALS Add the following new sub-clause: (g) Concrete Concrete work shall be carried out in accordance with the provisions of Sections 6200, 6300 and 6400.
B5203:	CONSTRUCTION OF GABION CAGES (a) General Add the following new sub-clause: “(iii) Reno mattresses or similar may be used as alternative to gabion boxes. These Reno mattresses are to be manufactured of 80mm x 100mm mesh (2,5mm diameter wires, diaphragm spacing 0,6m).”

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

B5204: CONSTRUCTING GABIONS

(c) Assembly

Delete and substitute with:

(c) Assembly, erection and stretching

(i) Assembly

"Prior to assembly, the gabion material shall be opened out flat on the ground and stretched to remove any kinks and bends. The gabion boxes shall then be assembled individually by raising the sides, ends and diaphragms ensuring that all creases are in the correct position and that the tops of all four sides are even. The four corners of the gabion boxes shall be laced first followed by the edges of internal diaphragms to the sides. In all cases lacing shall commence at the top of the box by twisting the end of the lacing wire around the selvages. It shall then be passed round two edges being joined, through each mesh in turn and securely tied off at the bottom. The ends of all lacing wire shall be turned to the inside of the box on completion of each lacing operation.

Gabion mattresses may be cut and rejoined to form a curved shape, or any other appropriate shape. An extra over rate shall apply when mattresses have to be cut and joined on instruction from the Engineer.

(ii) Erection

Only assembled boxes, or groups of boxes, shall be positioned in the structure. The side, or end, from which work is to proceed, shall be secured to either completed work or by rods or stakes driven into the ground at the corners. These must be secured and reach at least to the top of the gabion box. Further gabions shall then be positioned in the structure as required, each being securely laced to the preceding one at all corners and diaphragm points.

(iii) Stretching

On completion of erection of a suitable length of gabion, the gabion boxes shall be stretched using a wire strainer or winch of at least one ton capacity firmly secured to the free end of the assembled gabion boxes.

Whilst under tension the gabion boxes shall be securely laced along edges (top, bottom and sides) and at diaphragm points, to all adjacent boxes and shall thereafter be filled."

(d) Rock filling

Add the following new sub-sub-clause:

(iii) General

"Filling shall be carried out only whilst gabion boxes are under tension. Filling material shall consist of rock of size not less than 120mm and not greater than 250mm so placed to produce a neat face and line with a minimum of voids.

Internal horizontal bracing wire shall be provided at 500mm vertical centres or such spacing to ensure a ratio of four to every 1m³ of filling. These bracing wires shall be wrapped around two mesh wires and extended from front to back so positioned to ensure a neat face and line free of excessive bulges and depressions. Gabion boxes shall be filled in stages and horizontal bracing wires inserted as filling is brought up. Similar bracing wires used vertically shall be provided in 0,5mm deep gabions at 330mm horizontal centres where water falls directly onto gabions or where a neat face is required.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

Tension on the gabion boxes shall be released only when sufficiently full to prevent the mesh from slackening.

Gabion boxes shall be overfilled by 20 to 50mm above their tops to allow subsequent settlement of the filling."

Add the following new sub-clauses:

(e) Final wiring

"Closing and wiring down of lids shall proceed as soon as possible after filling operations and certainly in the likelihood of storms or floods during construction. The wiring down shall consist of wrapping around wire at such intervals as required or specified.

Lids shall be stretched tight over the filling with bars and wired down securely through each mesh along all edges, ends and diaphragms. The ends of all tying and bracing wires shall be turned into the gabion box on completion of all lacing operations.

Tightness of mesh, well packed filling and secure lacing is essential in all structures."

(f) Removal, dismantling and stacking of gabions

"Existing gabions, either damaged or not, that require to be removed or moved to a new location shall be dismantled. Material not required for re-assembly or unsuitable for re-use shall be neatly stacked at approved locations in accordance with the Engineer's instructions. Payment will be made only for gabions removed in accordance with the written instruction of the Engineer.

Where gabions require moving, or as declared suitable by the Engineer are re-usable, the contractor shall re-use all the material, plus supply such new materials as may be required to re-assemble the gabion again to the standard specification for new gabions."

(g) Blinding Layer

Where indicated on the drawings, a blinding layer of 15MPa concrete 75mm thick shall be laid as a surface on which to place the gabions. The surface of the concrete shall be properly compacted and screeded to form a Class U1 surface finish as specified in Clause 6209 of the standard specification.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(M) SECTION 5600: ROAD SIGNS B5601 SCOPE

Replace “South African Road Traffic Signs Manual” in the second paragraph with:

“SADC Road Traffic Signs Manual and the Road Traffic Act No. 29 of 19137 and Regulations”

Add the following:

“This section also covers the supply and erection of permanent danger plates at culverts and bridges at the locations indicated on the drawings or as directed by the engineer.”

- B5603 MANUFACTURING OF ROAD SIGN BOARDS AND SUPPORTS

- (a) **Road signboards**

Add the following:

“The contractor shall make every effort to ensure that signboards are correct in all respect and before dispatching the boards from the manufacturer’s factory shall provide the Engineer with a 100 mm x 150 mm colour photograph of each sign face for approval of the correctness of the legend. Such approval will not imply final acceptance of the board. If the Contractor is in any doubt as to the correctness of the sign detail, the sign designer shall be contacted for verification.”

- (a)(ii) Steel profile road signboards

Add the following:

“Where the letter or legends cross the horizontal joints of the sign panels, the letter shall be cut on the joint and both ends folded around the radius.

Retro-reflective material to adjoining Chromadek panels on a sign shall be practical visual match of the specified colour.”

- B5604 ROAD SIGN FACES AND PAINTING

Add the following new sub-clause:

- “(e) Application of retro-reflective material

All sign faces shall be faced with diamond grade retro-reflective material. Painted front sign faces shall not be used.

Where applied to Chromadek sections, retro-reflective material shall be applied as specified for aluminium section in Clause 5603(d) of the Standard Specification, and of Clause B5603(a)(ii) of this project Specification.”

- B5605 STORAGE AND HANDLING

Add the following:

“The following shall not be allowed on the sign face:

Drilling of holes, except for the fastening of overlays Application of any form of adhesive

Cleaning with any chemicals that are not specifically approved by the manufacturer of the retro-reflective material

Covering the sign face with an impermeable material that does not allow free circulation of air.”

- B5606 ERECTING ROAD SIGNS

- (c) **Erection**

Add the following:

“After erection the signboard shall be thoroughly cleaned with a cleaning agent approved by the retro-reflective material’s manufacturer.

All vegetation obstructing the new or replaced sign board shall be removed and disposed of as

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

instructed by the Engineer.”

• B5608 DISMANTLING, STORING AND RE-ERECTING EXISTING ROAD SIGNS

Add the following:

“Existing overhead and ground mounted road signs that are being replaced by new signs shall be dismantled and disposed of by the Contractor. Where possible the dismantling of the signs shall not be before the replacement sign is erected and displayed. Where dismantling of the sign is required before erection of the replacement sign, the dismantling shall not take place until immediately before work is to commence on the replacement, and the replacement shall be completed and the new sign displayed as soon as possible thereafter (within 72 hours).

Dismantling shall include sign panels and ground mounted sign supports.

Ground mounted sign supports shall be cut off just below ground level. Material excavated for removal of buried poles shall be replaced, and any depression made good using excess material from excavation for new signs.

Pay items are provided in the Bill of Quantities. Payment will differentiate between different types of sign panels.”

• B5609 MEASUREMENT AND PAYMENT

Amend the following payment item:

• ‘ITEM _____ UNIT

B56.01 Road sign boards with painted or coloured semi-matt background. Symbols, lettering, and borders in diamond grade retro-reflective material, where the sign board is constructed from:” m²

Amend the last two lines of the second paragraph to read:

“completion, delivery, installation of the road sign board complete as specified, and the removal and disposal of all vegetation obstructing the motorists’ view of the new or replaced sign board.”

Add the following payment item:

- ‘B56.10 Hazard plates at culverts
(a) Provision and erection of hazard plates at culvert structures
as per drawing No

The tendered rate shall include full compensation for all the labour and material, painting, lettering posts, excavation, backfilling with soil-cement, etc. as may be necessary for completing the work in accordance with the details shown on the drawing.’

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(N) SECTION 5700: ROAD MARKINGS**B5701 SCOPE**

Replace “South African Road Traffic Signs Manual” in the second paragraph with: “SADC Road Traffic Signs Manual”

- **B5702 MATERIALS**

Add the following sub-clause to item 5702(a):

“(v) **Retro-reflective Glass beads**

The retro-reflective beads shall be glass beads that comply with the requirements for glass beads specified in CKS 192.

The beads shall be delivered to the site in sealed bags, marked with the name of the manufacturer, the batch number and an inspection seal of the SABS, confirming that the beads form part of a lot tested by the SABS and comply with the requirements of CKS 192. Alternatively, the Contractor shall at all times have a SABS certificate on the site, identifying the batches to which the inspection seals apply and certifying that they have been tested by the SABS, and comply with the requirement of CKS 192.”

- **B5704 MECHANICAL EQUIPMENT FOR PAINTING**

Add the following sentence at the end of the first paragraph:

“The Road-marking machine shall be fitted with a device to guide the operator to the centre of the line to be painted. This device shall be used at all times of operation.”

- **B5706 SETTING OUT THE ROAD MARKINGS**

Add the following:

“Where road markings are to be replaced after milling/overlay seal, it is essential that all existing barrier lines and other road marking lines be accurately referenced before commencement of milling or other operations which will obliterate the existing road markings. The position of barrier lines shall be re-assessed on site by the Engineer before the Contractor commences with the road marking.”

- **B5707 APPLYING THE PAINT**

Add the following:

“The Contractor’s establishment on site and general obligations shall be deemed to fully include the establishment of the road-marking team, irrespective of the number of times the road-marking team is required to be onsite or is required to move within the site.”

- **B5710 TOLERANCES**

(c) Alignment of markings

Add the following paragraphs:

“When an unbroken line and a broken line are painted alongside each other, the beginning and the end of the unbroken line shall coincide with the beginning of one broken line and the end of another broken line. When existing lines are repainted, the new markings shall not deviate more than 100 mm in the longitudinal direction nor 10 mm in the transverse direction from the existing marking.

The alignment of the road studs shall not deviate from the true alignment by more than 10 mm and shall be positioned so that the reflective faces are within 5° of a right angle to the centre line of the road.”

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

Add the following sub-clause:

- “(e) Testing

- (i) Plant

Before painting any permanent road markings, the Contractor shall satisfy himself and the Engineer, by painting test lines on a section of pavement other than the section required to be marked:

- (1) that the painting machine is in good working order and properly adjusted;
- (2) that the operator is fully experienced; and
- (3) that the machine sprays at the specified rate of paint application.

The Contractor shall bear the cost of all materials and workmanship required for the above plant tests.

In addition, the Contractor shall conduct random paint thickness tests and dip/spread tests as required by the Engineer.”

- B5711 GENERAL

Insert the following into the last sentence of the last paragraph between “black paint” and “or chemical paint remover”:

“, bituminous emulsion, slurry”

Add the following to the last paragraph:

“Where black paint is used, it shall be matt.” Add the following new clause:

- “B5715 REMOVAL OF EXISTING ROAD STUDS

The existing road studs shall be removed from the road surface prior to milling.”

- B5714 MEASUREMENT AND PAYMENT

- ITEM UNIT

B57.06 Setting out and pre-marking the lines (excluding traffic island markings, lettering and symbols)

Add the following:

“Referencing of existing barrier lines and other road marking lines prior to milling and other operations, shall be included in the tendered rate for setting out and pre-marking.”

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

(O) SECTION 6400: CONCRETE FOR STRUCTURES

• B6402 MATERIALS

(a) **Cement**

Replace this sub-section with the following:

"Refer to section 1142 for specification of cement."

CEM I 42,5, CEM II A-S 32,5, CEM II/A-V 32,5, or CEM III A may be used for the manufacture of reinforced concrete members.

• B6404 CONCRETE QUALITY

(b) **Strength concrete**

Add the following paragraph:

"The cement content for any class of structural concrete or mass concrete used in structures shall not be less than 300 kg/m³ of concrete.

The contractor must provide the engineer with complete mix designs and materials for strength concrete at least six (6) weeks before the first concrete is cast on the project".

• B6405 MEASURING THE MATERIALS

(c) **Aggregates**

Add the following:

"All concrete for structures shall be manufactured by mechanical mass batching unless authorised otherwise by the engineer for minor concrete structures or for labour-intensive methods."

• B6407 PLACING AND COMPACTING

(a) **General**

Add the following after the third paragraph:

"Concrete shall only be placed up to 20:00 at the latest. Under exceptional circumstances the Engineer may allow night work on condition that proper lighting arrangements can be made and a new and rested shift for night work is provided and ambient temperatures are such as to not adversely affect the setting of the concrete."

• B6408 CONSTRUCTION JOINTS

(a) **General**

Add the following:

"No construction joints other than those indicated on the drawings will be permitted without the written approval of the engineer".

• B6409 CURING AND PROTECTING

Add the following:

"The surface area of bridge and culvert floor slabs and decks shall be cured as follows:

- (i) The area of freshly cast and finished concrete surface shall be immediately covered as specified in clause 6409(e).
- (ii) After the concrete has set sufficiently the entire area shall be treated with an approved curing compound as specified in clause 6409(f)."

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

- B6414 QUALITY OF MATERIALS AND WORKMANSHIP

- (a) **Criteria for compliance with the requirements**

Add the following:

"Quality control shall be carried out by the engineer as specified in Section 8200: Quality Control (Scheme 1)."

Add the following new paragraph:

- (d) Concrete cores - strength requirements

"Cores will only be drilled if authorised by the engineer. This will only be considered if the contractor's own cubes, when crushed by the engineer, attained the required 28-day cube strength."

- B6414 QUALITY OF MATERIALS AND WORKMANSHIP

- (a) **Criteria for compliance with the requirements**

Add the following sentence:

'Judgement plan B of Section 8200 shall apply.'

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

(P) SECTION 7300: CONCRETE BLOCK PAVING FOR ROADS

B7302 MATERIALS

(c) Concrete Paving Blocks

Replace “SABS” in the second line with “SANS” and “Portland Cement Institute’s” with “Concrete Institute’s”.

The block shall be Class 2 with a minimum average ITS of 2.8 MPa and a minimum individual ITS of 2.5 MPa – all in accordance with SANS 1058 – 2007.

• B7303 CONSTRUCTION

(c) Concrete Paving Blocks

The blocks shall be laid *herringbone* pattern.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(Q) SECTION 8100: TESTING MATERIALS AND WORKMANSHIP B8103 THE COSTS OF TESTING

Add the following sub clauses:

- “(a) Testing as required by the Engineer

Testing required by the Engineer shall be conducted by an approved commercial laboratory on all materials and workmanship to ensure compliance with the requirements of the specifications.

- “(b) Quality control

The tests, frequency of tests and lot sizes shall be in accordance with TMH5.”

- B8105 TESTING OF AGGREGATES

Add the following sub-clause:

“(g) Ethylene Glycol Weathering Test for durability of aggregates used in seals and asphalt

- (i) Method

Selected 100 number single sized chippings from a representative sample retained on the 13.2 mm sieve but passing the 19 mm sieve. The selected aggregate chippings shall be oven dried for 12 hours and the mass of the chippings shall then be determined to the nearest 0.001 kilogram. The chippings shall then be immersed in ethylene glycol contained in a glass container for 28 days. After 28 days the chippings shall be removed from the ethylene glycol and oven dried for 12 hours. The mass of the chippings shall then be determined and the percentage weathering loss shall be calculated from the results.

- (ii) Acceptance Criteria

Only aggregate that shows a breakdown after 28 days in ethylene glycol of less than 2% shall be used in seals or in asphalt.”

- B8110 TESTS RELATING TO CHEMICAL STABILIZATION

Add the following sub-clause:

“(d)..... The wet-dry durability test for cement-treated materials using the hand brushing method.”

- (i) Scope

This method covers the procedure for determining the soil-cement losses obtained by repeated wetting, drying and hand brushing of hardened soil-cement specimens (see note (3)).

- (ii) Apparatus

- (1) A moisture curing room capable of maintaining a relative humidity of 95 to 100 percent and a temperature of 22 °C to 25 °C, or suitable plastic bags capable of holding specimens and carriers in a airtight condition in a water bath as described in (2) below.
- (2) A suitable water bath with thermostatic control capable of maintaining a temperature of 22 °C to 25 °C.
- (3) A balance to weigh up to 10 kg, accurate to 0,5 g.
- (4) A drying oven capable of maintaining temperatures of 71°C ± 3 °C and 110 °C ± 5 °C.
- (5) A wire scratch brush made of 50 mm by 1,6 mm flat 26 gauge wire bristles assembled in 50 groups of 10 bristles and mounted to form five longitudinal rows and 10 transverse rows on a 200 by 65 mm wooden block.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(iii) Method

(1) Preparation of specimens

Prepare specimens in accordance with the procedure described in method A19 in TMH1 with the following exceptions:

Use the material passing the 37,5 mm sieve and discard the material remaining on the sieve.

Use the apparatus and compaction method as described in method A7 (modified AASHTO) in TMH1.

(2) Curing of specimens

Cure the specimens for seven days at a relative humidity of 95 to 100 percent and a temperature of 22 °C to 25 °C in a suitable curing room or in plastic bags and a suitable water bath. Alternative the specimens may be rapid cured (see note (5)).

(3) Wetting, drying and brushing

After curing, remove the specimens from the curing room or plastic bag, allow to cool if necessary, and submerge them in water at room temperature for a period of five hours. Remove the specimens from the water and place them in an oven at 71 °C for 42 hours. Remove the specimens from the oven. Give each specimen two firm strokes on all areas with the wire scratch brush. The brush must be held parallel to the long axis of the specimen or parallel to the ends as required to cover all areas of the specimen. Apply these strokes to the full height and width of each specimen with a firm stroke corresponding to approximately 13,5 kN force (see note (4)).

The procedure described so far constitutes one cycle (48 hours) of the wet-dry durability test. After brushing the specimens are again submerged in water and the procedure repeated for a total of 12 cycles (see note (2)).

(4) Determination of soil-cement losses

After 12 cycles, dry the specimens to constant mass at 110 °C and determine the oven-dry mass of the specimens. The data collected will permit the calculation of the soil-cement losses of the specimens after the prescribed 12-cycle test.

(iv) Calculations

(1) Calculate the soil-cement loss of the specimens as a percentage of the original oven-dry mass of the specimens as follows:

$$L \text{} = \frac{W - M}{W} \times 100$$

Where

L = soil-cement loss (%)

W = original calculated oven-dry mass (g) (calculated according

paragraph 3.5 in method A19 in TMH1)

M = final oven-dry mass (g)

(2) The percentage loss shall be calculated and reported to the nearest 0.1 percent. These results are normally required for designing a mix and are reported graphically against relevant cement content.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

UP PAVING OF INTERNAL STREETS IN ANIVA

(v) Notes

1. Mass determination of the specimens before and after brushing are usually made at the end of each cycle during research or special investigations.
2. If it is not possible to run the cycle continuously because of Sundays or holidays or for any other reason, the specimens should be held in the oven during the lay-over period.
3. The test was originally developed to determine the wet-dry durability of cement-treated material. It can, however, be used with equal success on material treated with other chemical stabilisers, for example lime, or mixes of lime and milled blast furnace slag, or cement and milled blast furnace slag.
4. The pressure is measured as follows:

Clamp a specimen in a vertical position on the edge of a platform scale and zero the scale. Apply vertical brushing strokes to the specimen and note the force necessary to register approximately 1,36 kg.
5. Rapid curing

Seal each specimen airtight in a suitable container or plastic bag. Carefully place the briquettes on suitable holders or in pans and place in the oven at the relevant temperature and period given below:

Stabilizing agent	Temp (°C)	Time (hours)
Cement	70 – 75	24 ± 0.5
PBFC	70 – 75	24 ± 0.5
Lime	60 ± 2	45 ± 1
Lime/FA	60 ± 2	45 ± 1
Lime/MBFS	60 ± 2	45 ± 1

B8117 MEASUREMENT AND PAYMENT

Amend the following payment item:

“ITEM

UNI”

B81.02 Testing of materials

- | | | |
|-----|-------------------------------------|----------|
| (a) | Testing as required by the engineer | Prov Sun |
| (b) | Handling cost and profit | 9 |

Payment will be done in accordance with Clause 45 of the GCC.”

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(R) **SECTION 8200: QUALITY CONTROL B8302 JUDGEMENT PLANS: GENERAL** Add the following paragraph:

“Where it is not specified in the Standard Specifications or the Project Specifications which judgement plan will be used by the Engineer for quality control, Judgment Plan B shall be use.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

C3.5: MANAGEMENT• **C3.5 MANAGEMENT****C3.5.1 MANAGEMENT OF THE WORKS****C3.5.1.1 Applicable SANS and SABS Standards**

The COLTO (1998 Edition) Standardized Specifications listed in C3.4.1.1 are applicable.

• **C3.5.1.2 Particular/Generic Specifications**

Not applicable.

• **C3.5.1.3 Methods and Procedures****(a) Maintenance of access and streets**

The operation of construction vehicles on existing roads or streets, or streets that have been completed to the level of subbase, base or surfaced treatment, shall be limited to the traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof. Hauling is strictly forbidden on sections of road or streets that have been completed as described above. The Contractor shall make use of a temporary haul road, or where not practically possible, program his work in such a manner that the haulage materials shall be restricted to that required for the particular section of street. No additional payment shall be made for the use of temporary haul roads and all relevant costs shall be deemed covered by the appropriate rates.

No additional payment will be made for the construction of temporary access roads to the construction site, borrow areas or the spoil sites, except for payment made under payment item 15.01 in the Bill of Quantities.

Should the Contractor make use of existing roads or streets for haulage, he shall be held responsible to clear the road or street of any spillage caused by his activities within one (1) day after such spillage occurred. No additional payment will be made for the cleaning of the spillage.

(b) Blasting operation

All blasting shall be carried out by a competent, registered blaster. The blaster shall furnish to the Engineer copies of all the permits required to purchase, transport, use and dispose of unused blasting material. The Contractor shall inform the commander of the local SAPS at least 1 day prior to the date and time blasting is about to take place.

No blasting operations shall take place on weekends or holidays or weekdays after 17h00.

The Contractor shall ensure that sufficient suitable material, to the satisfaction of the blaster, is available and in place before the blast is initiated.

(c) Normal working hours

Normal working hours shall be from 07h00 until 17h00 on weekdays from Monday to Friday. It shall be from 07h00 until 13h00 on Saturdays.

Work on other days will only be allowed after written approval has been granted by the Engineer.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

(d) 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 person ignoring this shall be removed permanently from site, all at the expense of the Contractor.

(e) Access for other contractors

The Contractor shall provide reasonable access to other Contractors carrying out work on the site from time to time, as and when such access is required. The Contractor is entitled to request reasonable notification of at least 24 hours before access by others is required.

The contractual responsibilities of the Contractor shall remain in full force in spite of the other Contractors having access to the site.

(f) Giving notice of work to be covered up

The Contractor shall give the Engineer at least 24 hours' notice prior to a request for examination of materials or work to be covered up. This request must be made in the request book on site.

Should such a request be made and upon inspection the Engineer found that the works or materials are not yet ready for inspection, the Contractor shall reimburse the Engineer within 30 days of invoice for all expenses incurred as a result.

(g) Sequence of the works

The Contractor shall execute the Works in accordance with the approved programme.

- C3.5.1.4 Quality plans and control (Testing)

Refer to Section C3.4.2.5(b).

- C3.5.1.5 Environmental Management Plan (EMP)

(a) Demarcation of the site

For the purpose of the EMP, the site shall be demarcated into two distinct areas, viz.;

- (i) The construction camp comprising all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel and material storage area, batching areas and other infrastructure that is required for the running of the job.
- (ii) The working area in which construction activities are 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.

(b) 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.

(c) Fencing of 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

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PAVING OF INTERNAL STREETS IN ANIVA

satisfaction of the Engineer.

This fence shall be erected before the commencement of any other work on site. The fence shall be removed after completion of the project and the site reinstated to its original state.

(d) Workshops

All workshops shall be located inside the demarcated construction camp area as approved by the Engineer prior to establishment. The workshop shall have a smooth impermeable concrete floor sloped to one side where oil is trapped in an oil trap or sump to contain any spillages of substances such as oil.

Waste material shall be disposed of in accordance with the national, regional and local by-laws regulations and by-laws. The waste shall be regularly removed and disposed of at an approved site.

(e) Eating areas

The Contractor's employees shall eat in a designated eating area indicated on the drawing approved by the Engineer. The Contractor shall provide adequate shade and provide scavenger proof and waterproof refuse bins. Cooking will only take place in this area on well-maintained gas cookers with fire extinguishers present. Open fires other than the gas cookers shall not be allowed.

(f) Watchmen

The Contractor shall have a watchman present on site during non-working hours and on holidays to ensure the safety of plant and materials on site.

(g) Ablution facilities

The exact location of toilets shall be approved by the Engineer. The Contractor shall provide the toilets and maintain and service it on a daily basis. The toilets shall be kept clean. Regular inspections shall be conducted by the Engineer. Burial of waste on site is strictly forbidden. Leaking or broken toilets shall be removed and replaced immediately by the Contractor.

(h) Solid waste

"Solid waste" refers to construction debris, chemical waste, tins, cans, paper, wrappers, excess concrete, waste timber, etc.

The Contractor shall establish a waste control and removal system. He shall submit a method statement to the Engineer for approval prior to commencement.

Appropriate solid waste containers shall be provided for the storage of waste. The containers shall be water proof. The waste shall be removed on a regular basis to prevent the accumulation of waste on site and disposed of at an approved waste site.

(i) Wastewater

Water shall be used sparingly on site. Where possible, wastewater shall be recycled. A wastewater management plan shall be submitted to the Engineer for approval 10 days prior to the commencement date.

The management plan shall detail the expected extent of the contamination of each wastewater stream and how the Contractor plans to deal with it.

Wastewater shall be prevented from flowing into the Olifants River.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

(j) Fuel storage area

Fuel shall be stored on site in a depot at a location as agreed with the Engineer. The Contractor shall ensure that liquid fuels are stored in tanks with lids. The tanks shall be placed on a sloped smooth concrete surface with an oil trap on the lower end to collect any spillage.

Fuel shall be kept under lock at all times.

(k) Concrete batching area

Cement and concrete is hazardous to the environment due to the high pH of the material and the chemicals it contains.

The Contractor shall furnish to the Engineer for approval a method statement for the mixing of concrete. Concrete shall not be mixed directly on the ground. Care must be taken to ensure that wastewater and contaminated material is collected and disposed of correctly.

(l) Equipment maintenance and storage

All equipment and vehicles shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from site. Where possible, maintenance and service shall take place only in the workshop. Permission must be obtained from the Engineer if the aforementioned cannot be adhered to.

The Contractor shall demarcate an area in which the equipment and vehicles may be stored. The location shall be approved by the Engineer.

(m) Materials handling, use and storage

The Contractor is responsible to ensure that all material suppliers are aware of the EMP's restrictions and conditions. The Contractor shall be held responsible should deliveries not comply with the EMP requirements.

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous material.

The Contractor shall furnish to the Engineer a list of all hazardous materials to be used on site, together with the handling, storage and disposal procedures of the materials. This information shall be available to all personnel on site.

The location of the hazardous material store shall be within the demarcated construction camp area. The location shall be approved by the Engineer.

Where possible, the Contractor shall ensure that the refueling of vehicles takes place only at the fuel storage area in the construction camp. If this is not possible, the Contractor shall obtain permission from the Engineer to refuel at any other place. Contaminated material and wastewater at the refueling area shall be contained and disposed of correctly.

(n) Emergency procedures

The Contractor shall ensure that emergency procedures for the following situations are submitted for approval to the Engineer;

Fire – the Contractor shall inform the relevant authority immediately as soon as a fire starts. The Contractor shall ensure that his staff and subcontractors are fully aware of the procedures

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

to be followed in the event of a fire.

Spillages – the Contractor shall ensure that his staff and subcontractors are fully aware of the procedures to be followed in the event of a spillage. The Engineer must be informed immediately about a spill. The Contractor shall ensure that the necessary materials and equipment is on site to deal with spills and leaks. The cleanup of spills and leaks shall be for the account of the Contractor.

(o) Care of surrounding areas

The Contractor shall ensure that no contamination of or damage to the surrounding areas or watercourses shall occur as a result of any of his activities during construction.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF INTERNAL STREETS IN ANIVA

- C3.5.1.6 Planning and programming

The programme to be furnished by the Contractor to the Engineer for approval shall be in the form of a Gantt chart. The critical path shall be indicated in red.

- C3.5.1.7 Other Contractors on site

No other road construction contractors will be on site during the implementation of the project.

- C3.5.1.8 Recording of weather

The Contractor shall record the weather conditions on a daily basis in the site diary. Rainfall figures and strong wind which could delay the Works shall be noted and recorded.

- C3.5.1.9 Format of communications

All communication regarding the Contract shall be channelled through the Engineer or his representative.

- C3.5.1.10 Planning and programming

Management meeting shall be held monthly on site for the duration of the project on dates to be agreed upon.

- C3.5.1.11 Daily records

Daily records of plant, personnel, materials, etc., shall be kept daily by the Contractor and noted in the site diary to be supplied by the Contractor before commencement date of the project.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

PART C4 **SITE INFORMATION**

A multi-disciplinary geotechnical centerline and materials investigation was conducted for the Paving of Internal Streets in ANIVA. The investigation was undertaken in order to assess the engineering geological character of the area, focusing on the geotechnical properties which will affect the construction of the proposed new road.

The findings of this investigation are elucidated in their report, the summary of which is attached under item C4 of this document. All of the relevant material testing data is included in the report.

The onus rests with the Contractor to acquaint him with the nature of the ground.

- **C4.1.2 SUBSOIL CONDITIONS**

No Ground water permeability was encountered during geotechnical investigating. It can be however being expected that ground water seepage may occur at interface between the residual soils and parent bedrock during heavy rainfalls

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PART C4: SITE INFORMATION

ANNEXURE A: DRAWINGS FOR TENDER PURPOSES

BID NO:

NKO 20 / 2025

INITIALS

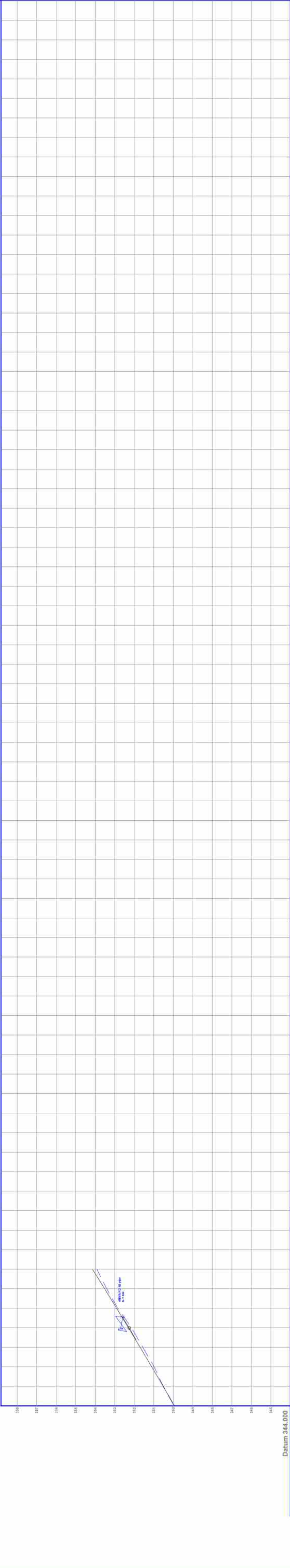


Chainage	Centreline Peg Levels	Left Edge	Centre Line	Right Edge	0+000	340.000	340.000	340.000	Direction 75.44.38	Elev 5.681
					0+010	340.010	340.010	340.010		
					0+020	340.020	340.020	340.020		
					0+030	340.030	340.030	340.030		
					0+040	340.040	340.040	340.040		
					0+050	340.050	340.050	340.050		
					0+060	340.060	340.060	340.060		
					0+070	340.070	340.070	340.070		
					0+080	340.080	340.080	340.080		
					0+090	340.090	340.090	340.090		
Vertical Alignment	Des Road Levels	Left Edge	Centre Line	Right Edge	0+100	340.100	340.100	340.100	Direction 75.44.38	Elev 5.681
					0+110	340.110	340.110	340.110		
					0+120	340.120	340.120	340.120		
					0+130	340.130	340.130	340.130		
					0+140	340.140	340.140	340.140		
					0+150	340.150	340.150	340.150		
					0+160	340.160	340.160	340.160		
					0+170	340.170	340.170	340.170		
					0+180	340.180	340.180	340.180		
					0+190	340.190	340.190	340.190		
Grades	Vertical Curves	Left Edge	Centre Line	Right Edge	0+200	340.200	340.200	340.200	Direction 75.44.38	Elev 5.681
					0+210	340.210	340.210	340.210		
					0+220	340.220	340.220	340.220		
					0+230	340.230	340.230	340.230		
					0+240	340.240	340.240	340.240		
					0+250	340.250	340.250	340.250		
					0+260	340.260	340.260	340.260		
					0+270	340.270	340.270	340.270		
					0+280	340.280	340.280	340.280		
					0+290	340.290	340.290	340.290		
Superelevation	Vertical Curves	Left Edge	Centre Line	Right Edge	0+300	340.300	340.300	340.300	Direction 75.44.38	Elev 5.681
					0+310	340.310	340.310	340.310		
					0+320	340.320	340.320	340.320		
					0+330	340.330	340.330	340.330		
					0+340	340.340	340.340	340.340		
					0+350	340.350	340.350	340.350		
					0+360	340.360	340.360	340.360		
					0+370	340.370	340.370	340.370		
					0+380	340.380	340.380	340.380		
					0+390	340.390	340.390	340.390		
Horizontal Curves	Vertical Curves	Left Edge	Centre Line	Right Edge	0+400	340.400	340.400	340.400	Direction 75.44.38	Elev 5.681
					0+410	340.410	340.410	340.410		
					0+420	340.420	340.420	340.420		
					0+430	340.430	340.430	340.430		
					0+440	340.440	340.440	340.440		
					0+450	340.450	340.450	340.450		
					0+460	340.460	340.460	340.460		
					0+470	340.470	340.470	340.470		
					0+480	340.480	340.480	340.480		
					0+490	340.490	340.490	340.490		

DRAWING CHECKED		SMK, Pr Technl Eng (ECSA 2019600317)	NO.		AMENDMENTS	DRAWN		APPROVED	DATE	PROJECT NUMBER		NKO 28/2021	SCALES		HORIZONTAL SCALE: 1000 VERTICAL SCALE :100
DRAWN BY		WM	MZOLO CONSULTING ENGINEERS & PROJECT MANAGERS		07 FAIRHAVEN PIETERMARITZBURG 3201	PROJECT DESCRIPTION		PAVING OF INTERNAL STREETS AT ANIVA	PROJECT STAGE		CONCEPT AND VIABILITY	DRAWING NO.		CONCEPT AND VIABILITY	NKO28/2021/RD1V/L501
DESIGN CHECKED		SMK, Pr Technl Eng (ECSA 2019600317)	TEL : (082) 953 9347 mzoloengineering@gmail.com			DRAWING		LONG SECTION	DRAWING		ANIVA RD 1B	DRAWING NO.		CONCEPT AND VIABILITY	NKO28/2021/RD1V/L501
DESIGNED BY		MM													



Road List				
Station	SV	X-Coord	Y-Coord	Radius
0+000	0+000.00	2846100.00	52100.00	0.00
0+020	0+020.00	2846100.00	52100.00	0.00
0+040	0+040.00	2846100.00	52100.00	0.00
0+060	0+060.00	2846100.00	52100.00	0.00
0+080	0+080.00	2846100.00	52100.00	0.00
0+100	0+100.00	2846100.00	52100.00	0.00
0+120	0+120.00	2846100.00	52100.00	0.00
0+140	0+140.00	2846100.00	52100.00	0.00
0+160	0+160.00	2846100.00	52100.00	0.00
0+180	0+180.00	2846100.00	52100.00	0.00
0+200	0+200.00	2846100.00	52100.00	0.00
0+220	0+220.00	2846100.00	52100.00	0.00
0+240	0+240.00	2846100.00	52100.00	0.00
0+260	0+260.00	2846100.00	52100.00	0.00
0+280	0+280.00	2846100.00	52100.00	0.00
0+300	0+300.00	2846100.00	52100.00	0.00
0+320	0+320.00	2846100.00	52100.00	0.00
0+340	0+340.00	2846100.00	52100.00	0.00
0+360	0+360.00	2846100.00	52100.00	0.00
0+380	0+380.00	2846100.00	52100.00	0.00
0+400	0+400.00	2846100.00	52100.00	0.00
0+420	0+420.00	2846100.00	52100.00	0.00
0+440	0+440.00	2846100.00	52100.00	0.00
0+460	0+460.00	2846100.00	52100.00	0.00
0+480	0+480.00	2846100.00	52100.00	0.00
0+500	0+500.00	2846100.00	52100.00	0.00

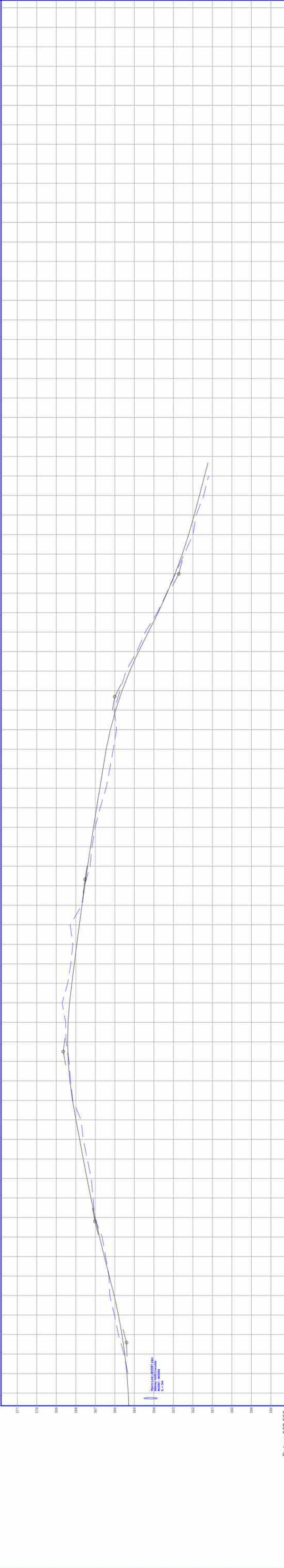


Chainage		Datum 344.000	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500
Vertical Alignment	Centreline Peg Levels		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
	Left Edge		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
	Centre Line		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
	Right Edg Levels		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Grades			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Vertical Curves			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Superelevation			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Horizontal Curves			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

DRAWING CHECKED	SMK, Pr Technl Eng (ECSA 2019600317)	MZOLO CONSULTING ENGINEERS & PROJECT MANAGERS				NO.	AMENDMENTS	DRAWN	APPROVED	DATE	<div> TEL : (013) 790 0245/6/7 FAX : (013) 790 0886</div>	PROJECT NUMBER	NKO 28/2021	SCALES
	DRAWN BY	WM	07 FAIRHAVEN PIETERMARITZBURG 3201				PROJECT DESCRIPTION	PAVING OF INTERNAL STREETS AT ANIVA	HORIZONTAL SCALE: 1000 VERTICAL SCALE :100					
	DESIGN CHECKED	SMK, Pr Technl Eng (ECSA 2019600317)	TEL : (082) 953 9347 mzoloengineering@gmail.com				PROJECT STAGE	CONCEPT AND VIABILITY	DRAWING NO.					
	DESIGNED BY	MM					DRAWING	LONG SECTION	NKO28/2021/RD1C/LS01					

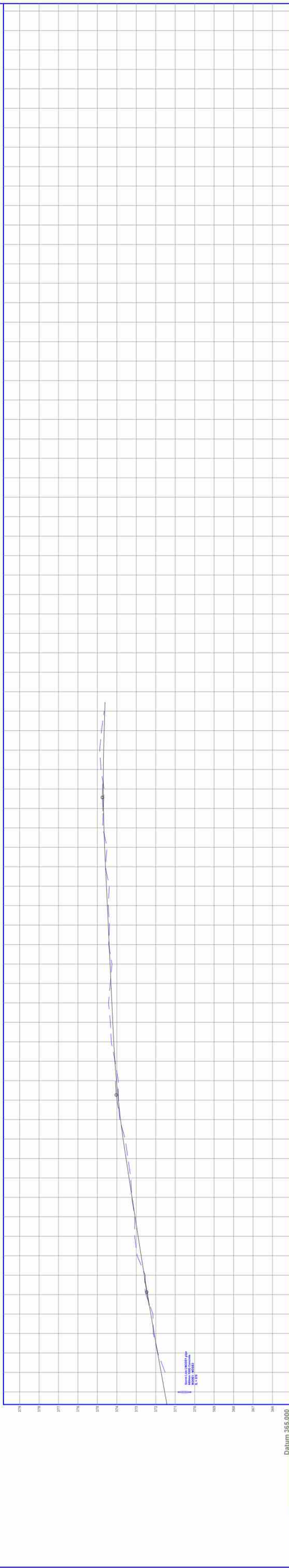
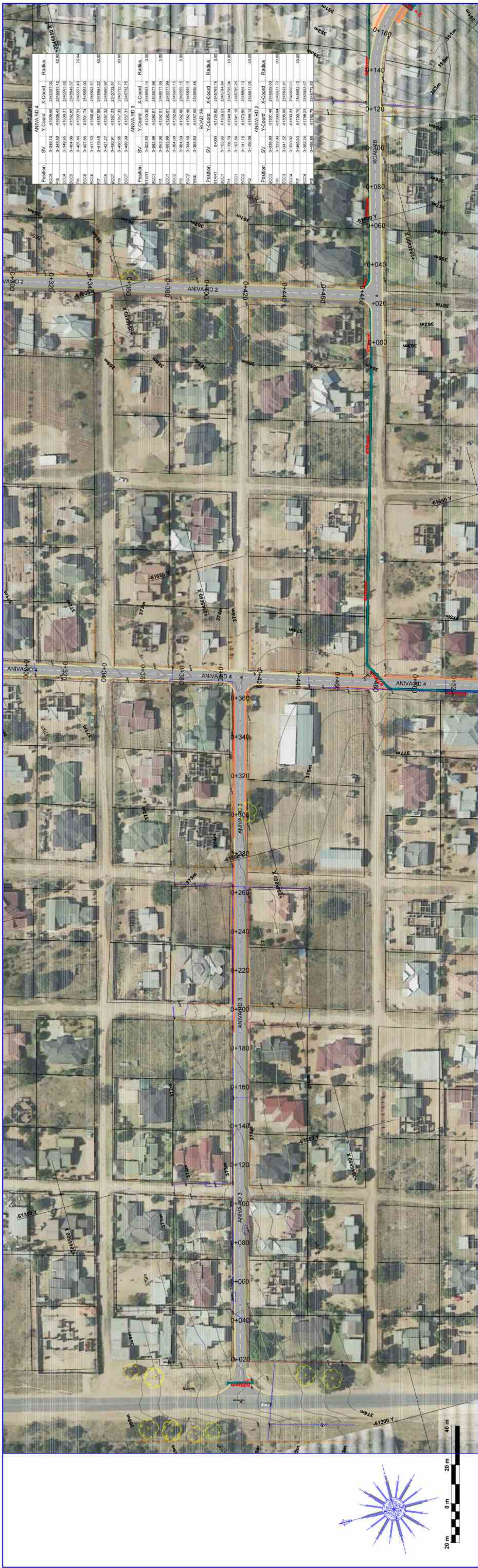


Road 2B				
Position	SV	Y-Coord	X-Coord	Radius
START	0+000	-6178.52	244739.14	0.00
CC1	0+035.53	-618734.54	244734.54	85.00
CC2	0+067.54	-61841.15	244729.26	85.00
CC3	0+141.16	-61873.59	244804.16	85.00
CC4	0+196.86	-61854.52	244646.24	85.00
CC5	0+239.86	-61806.84	244591.77	85.00
CC6	0+289.52	-61802.53	244560.81	85.00
CC7	0+350.63	-61796.03	244555.13	85.00
CC8	0+402.24	-61795.25	244553.87	85.00
END	0+487.00	-61792.78	244577.23	85.00



Chainage	Centreline Peg Levels			Vertical Curves	Superelevation	Horizontal Curves
	Des Road Levels					
	Left Edge	Centre Line	Right Edge			
Grades	356.879	356.879	356.879	2.60 %	60.00m VC K = 30.00	Direction 11.83.38
	356.879	356.879	356.879	2.60 %		
Vertical Curves	356.879	356.879	356.879	2.60 %	60.00m VC K = 30.00	Direction 11.83.38
	356.879	356.879	356.879	2.60 %		
Superelevation	356.879	356.879	356.879	2.60 %	60.00m VC K = 30.00	Direction 11.83.38
	356.879	356.879	356.879	2.60 %		
Horizontal Curves	356.879	356.879	356.879	2.60 %	60.00m VC K = 30.00	Direction 11.83.38
	356.879	356.879	356.879	2.60 %		

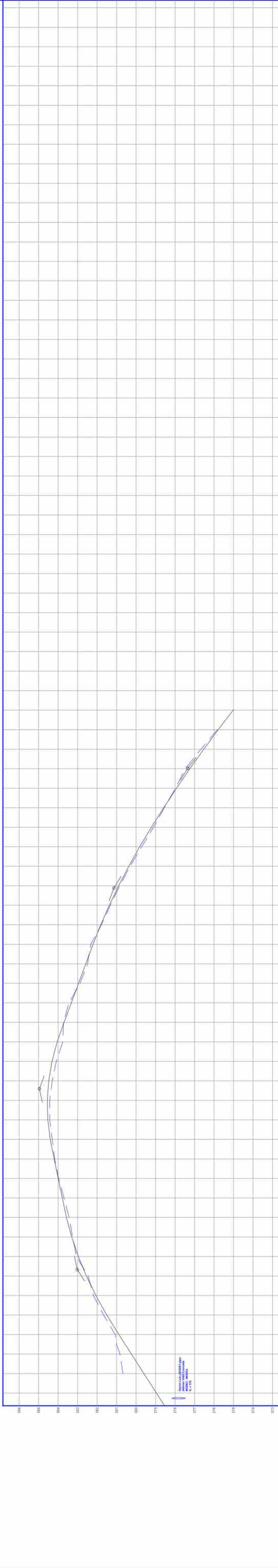
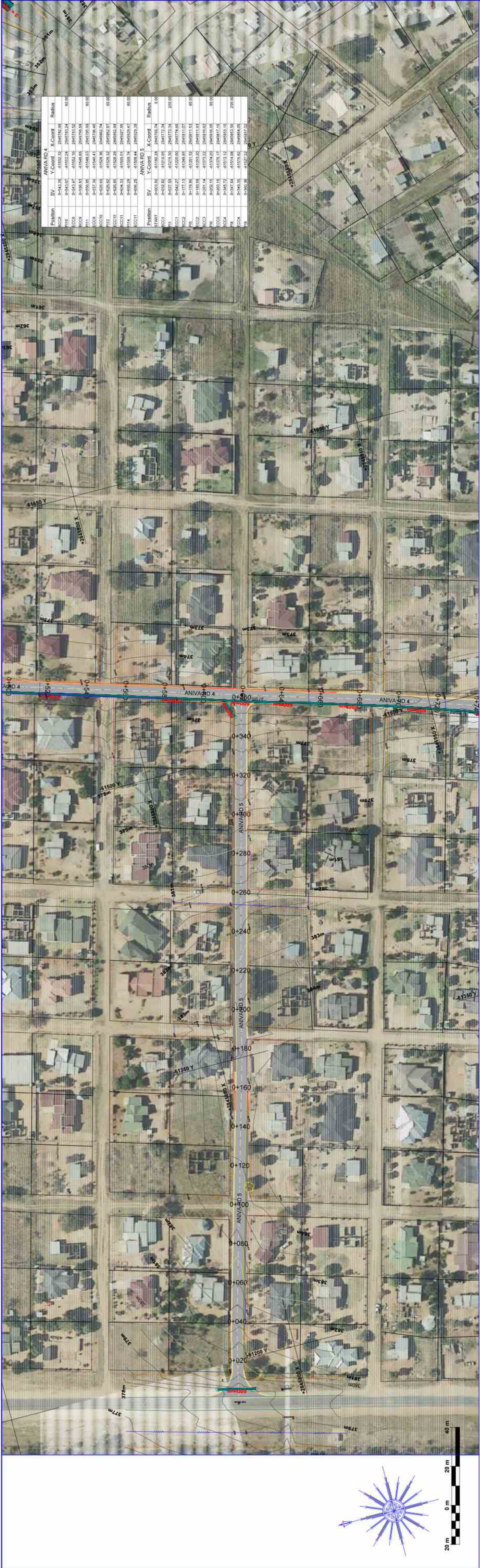
DRAWING CHECKED	SMK, Pr Technl Eng (ECSA 2019600317)	MZOLO CONSULTING ENGINEERS & PROJECT MANAGERS				NO.	AMENDMENTS			DRAWN	APPROVED	DATE	 NKOMAZI LOCAL MUNICIPALITY 09 PARK STREET PRIVATE BAG X101 MALELANE 1320 TEL : (013) 790 0245/6/7 FAX : (013) 790 0886	PROJECT NUMBER	NKO 28/2021	SCALES HORIZONTAL SCALE: 1000 VERTICAL SCALE : 100
DRAWN BY	WM	07 FAIRHAVEN PIETERMARITZBURG 3201								PROJECT DESCRIPTION	PAVING OF INTERNAL STREETS AT ANIVA					
DESIGN CHECKED	SMK, Pr Technl Eng (ECSA 2019600317)									PROJECT STAGE	CONCEPT AND VIABILITY					
DESIGNED BY	WM									DRAWING	LONG SECTION	DRAWING NO. NKO28/2021/RD2/LS01				
											ANIVA RD 2					

[illegible]

Chainage 0+004 to 0+365 - Horizontal Scale 1:1000 & Vertical Scale 1:100									
DRAWING CHECKED	SMK, Pr Technl Eng (ECSA 2019600317)	MZOLO CONSULTING ENGINEERS & PROJECT MANAGERS			NO.	AMENDMENTS	DRAWN	APPROVED	DATE
DRAWN BY	WM	<div> 07 FAIRHAVEN PIETERMARITZBURG 3201 TEL : (082) 953 9347 mzoloengineering@gmail.com</div>			<div> NKOMAZI LOCAL MUNICIPALITY 09 PARK STREET PRIVATE BAG X101 MALELANE 1320 TEL : (013) 790 0245/6/7 FAX : (013) 790 0886</div>	PROJECT NUMBER	PROJECT DESCRIPTION	PAVING OF INTERNAL STREETS AT ANIVA	
DESIGN CHECKED	SMK, Pr Technl Eng (ECSA 2019600317)								PROJECT STAGE	CONCEPT AND VIABILITY
DESIGNED BY	MM						DRAWING		LONG SECTION
							ANIVA RD 3		
									SCALES
									HORIZONTAL SCALE: 1000 VERTICAL SCALE : 100
									DRAWING NO. NKO28/2021/RD3/LS01

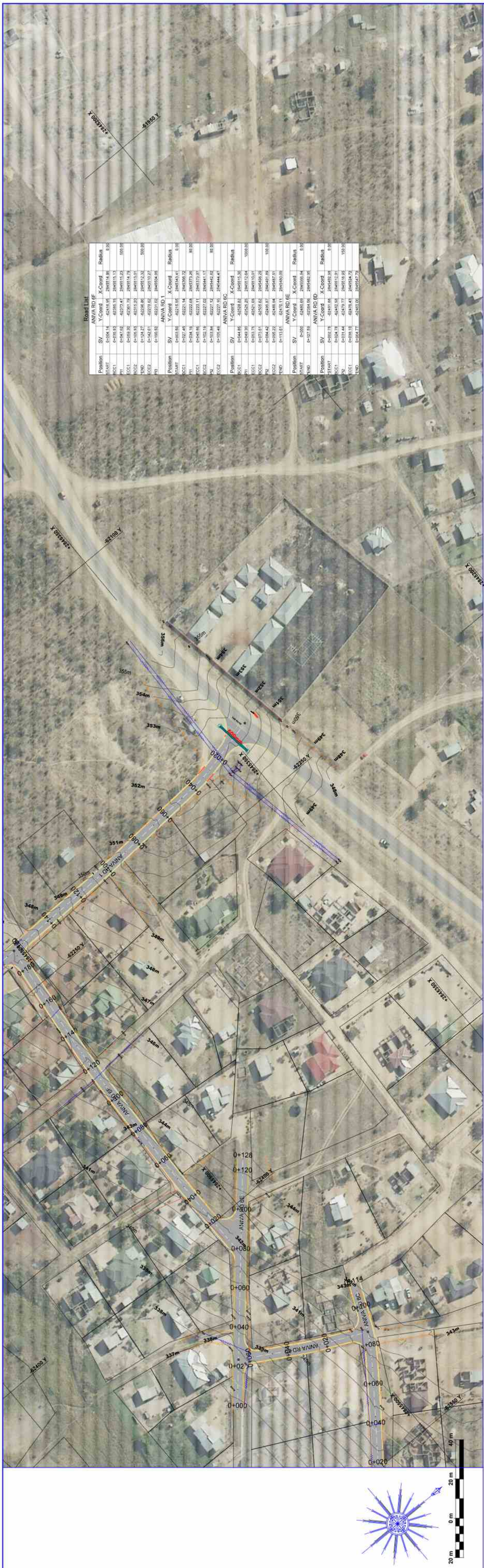


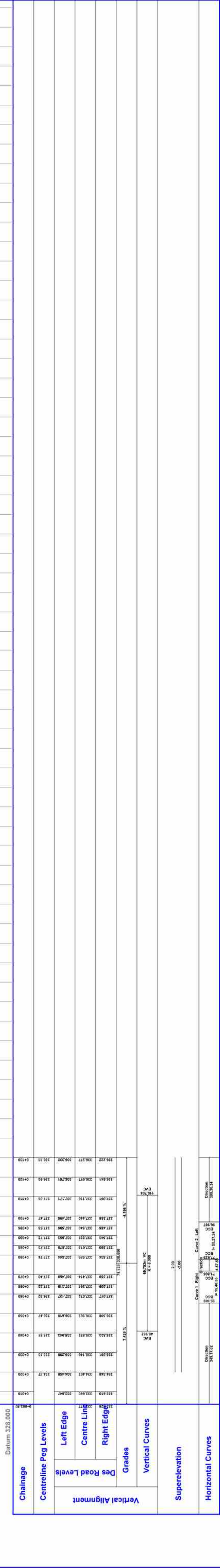
Road List			
Position	SV	Y-Coord	Radius
PC25	0+221.14	-11017.70	244520.16
PT	0+229.11	-11016.16	244520.16
SC25	0+231.11	-11013.36	244520.16
SC26	0+233.11	-11010.56	244520.16
SC27	0+235.11	-11007.76	244520.16
SC28	0+237.11	-11004.96	244520.16
SC29	0+239.11	-11002.16	244520.16
SC30	0+241.11	-10999.36	244520.16
SC31	0+243.11	-10996.56	244520.16
SC32	0+245.11	-10993.76	244520.16
SC33	0+247.11	-10990.96	244520.16
SC34	0+249.11	-10988.16	244520.16
SC35	0+251.11	-10985.36	244520.16
SC36	0+253.11	-10982.56	244520.16
SC37	0+255.11	-10979.76	244520.16
SC38	0+257.11	-10976.96	244520.16
SC39	0+259.11	-10974.16	244520.16
SC40	0+261.11	-10971.36	244520.16
SC41	0+263.11	-10968.56	244520.16
SC42	0+265.11	-10965.76	244520.16
SC43	0+267.11	-10962.96	244520.16
SC44	0+269.11	-10960.16	244520.16
SC45	0+271.11	-10957.36	244520.16
SC46	0+273.11	-10954.56	244520.16
SC47	0+275.11	-10951.76	244520.16
SC48	0+277.11	-10948.96	244520.16
SC49	0+279.11	-10946.16	244520.16
SC50	0+281.11	-10943.36	244520.16
SC51	0+283.11	-10940.56	244520.16
SC52	0+285.11	-10937.76	244520.16
SC53	0+287.11	-10934.96	244520.16
SC54	0+289.11	-10932.16	244520.16
SC55	0+291.11	-10929.36	244520.16
SC56	0+293.11	-10926.56	244520.16
SC57	0+295.11	-10923.76	244520.16
SC58	0+297.11	-10920.96	244520.16
SC59	0+299.11	-10918.16	244520.16
SC60	0+301.11	-10915.36	244520.16
SC61	0+303.11	-10912.56	244520.16
SC62	0+305.11	-10909.76	244520.16
SC63	0+307.11	-10906.96	244520.16
SC64	0+309.11	-10904.16	244520.16
SC65	0+311.11	-10901.36	244520.16
SC66	0+313.11	-10898.56	244520.16
SC67	0+315.11	-10895.76	244520.16
SC68	0+317.11	-10892.96	244520.16
SC69	0+319.11	-10890.16	244520.16
SC70	0+321.11	-10887.36	244520.16
SC71	0+323.11	-10884.56	244520.16
SC72	0+325.11	-10881.76	244520.16
SC73	0+327.11	-10878.96	244520.16
SC74	0+329.11	-10876.16	244520.16
SC75	0+331.11	-10873.36	244520.16
SC76	0+333.11	-10870.56	244520.16
SC77	0+335.11	-10867.76	244520.16
SC78	0+337.11	-10864.96	244520.16
SC79	0+339.11	-10862.16	244520.16
SC80	0+341.11	-10859.36	244520.16
SC81	0+343.11	-10856.56	244520.16
SC82	0+345.11	-10853.76	244520.16
SC83	0+347.11	-10850.96	244520.16
SC84	0+349.11	-10848.16	244520.16
SC85	0+351.11	-10845.36	244520.16
SC86	0+353.11	-10842.56	244520.16
SC87	0+355.11	-10839.76	244520.16
SC88	0+357.11	-10836.96	244520.16
SC89	0+359.11	-10834.16	244520.16
SC90	0+361.11	-10831.36	244520.16
SC91	0+363.11	-10828.56	244520.16
SC92	0+365.11	-10825.76	244520.16
SC93	0+367.11	-10822.96	244520.16
SC94	0+369.11	-10820.16	244520.16
SC95	0+371.11	-10817.36	244520.16
SC96	0+373.11	-10814.56	244520.16
SC97	0+375.11	-10811.76	244520.16
SC98	0+377.11	-10808.96	244520.16
SC99	0+379.11	-10806.16	244520.16
SC100	0+381.11	-10803.36	244520.16
SC101	0+383.11	-10800.56	244520.16
SC102	0+385.11	-10797.76	244520.16
SC103	0+387.11	-10794.96	244520.16
SC104	0+389.11	-10792.16	244520.16
SC105	0+391.11	-10789.36	244520.16
SC106	0+393.11	-10786.56	244520.16
SC107	0+395.11	-10783.76	244520.16
SC108	0+397.11	-10780.96	244520.16
SC109	0+399.11	-10778.16	244520.16
SC110	0+401.11	-10775.36	244520.16
SC111	0+403.11	-10772.56	244520.16
SC112	0+405.11	-10769.76	244520.16
SC113	0+407.11	-10766.96	244520.16
SC114	0+409.11	-10764.16	244520.16
SC115	0+411.11	-10761.36	244520.16
SC116	0+413.11	-10758.56	244520.16
SC117	0+415.11	-10755.76	244520.16
SC118	0+417.11	-10752.96	244520.16
SC119	0+419.11	-10750.16	244520.16
SC120	0+421.11	-10747.36	244520.16
SC121	0+423.11	-10744.56	244520.16
SC122	0+425.11	-10741.76	244520.16
SC123	0+427.11	-10738.96	244520.16
SC124	0+429.11	-10736.16	244520.16
SC125	0+431.11	-10733.36	244520.16
SC126	0+433.11	-10730.56	244520.16
SC127	0+435.11	-10727.76	244520.16
SC128	0+437.11	-10724.96	244520.16
SC129	0+439.11	-10722.16	244520.16
SC130	0+441.11	-10719.36	244520.16
SC131	0+443.11	-10716.56	244520.16
SC132	0+445.11	-10713.76	244520.16
SC133	0+447.11	-10710.96	244520.16
SC134	0+449.11	-10708.16	244520.16
SC135	0+451.11	-10705.36	244520.16
SC136	0+453.11	-10702.56	244520.16
SC137	0+455.11	-10699.76	244520.16
SC138	0+457.11	-10696.96	244520.16
SC139	0+459.11	-10694.16	244520.16
SC140	0+461.11	-10691.36	244520.16
SC141	0+463.11	-10688.56	244520.16
SC142	0+465.11	-10685.76	244520.16
SC143	0+467.11	-10682.96	244520.16
SC144	0+469.11	-10680.16	244520.16
SC145	0+471.11	-10677.36	244520.16
SC146	0+473.11	-10674.56	244520.16
SC147	0+475.11	-10671.76	244520.16
SC148	0+477.11	-10668.96	244520.16
SC149	0+479.11	-10666.16	244520.16
SC150	0+481.11	-10663.36	244520.16
SC151	0+483.11	-10660.56	244520.16
SC152	0+485.11	-10657.76	244520.16
SC153	0+487.11	-10654.96	244520.16
SC154	0+489.11	-10652.16	244520.16
SC155	0+491.11	-10649.36	244520.16
SC156	0+493.11	-10646.56	244520.16
SC157	0+495.11	-10643.76	244520.16
SC158	0+497.11	-10640.96	244520.16
SC159	0+499.11	-10638.16	244520.16
SC160	0+501.11	-10635.36	244520.16
SC161	0+503.11	-10632.56	244520.16
SC162	0+505.11	-10629.76	244520.16
SC163	0+507.11	-10626.96	244520.16
SC164	0+509.11	-10624.16	244520.16
SC165	0+511.11	-10621.36	244520.16
SC166	0+513.11	-10618.56	244520.16
SC167	0+515.11	-10615.76	244520.16
SC168	0+517.11	-10612.96	244520.16
SC169	0+519.11	-10610.16	244520.16
SC170	0+521.11	-10607.36	244520.16
SC171	0+523.11	-10604.56	244520.16
SC172	0+525.11	-10601.76	244520.16
SC173	0+527.11	-10598.96	244520.16
SC174	0+529.11	-10596.16	244520.16
SC175	0+531.11	-10593.36	244520.16
SC176	0+533.11	-10590.56	244520.16
SC177	0+535.11	-10587.76	244520.16
SC178	0+537.11	-10584.96	244520.16
SC179	0+539.11	-10582.16	244520.16
SC180	0+541.11	-10579.36	244520.16
SC181	0+543.11	-10576.56	244520.16
SC182	0+545.11	-10573.76	244520.16
SC183	0+547.11	-10570.96	244520.16
SC184	0+549.11	-10568.16	244520.16
SC185	0+551.11	-10565.36	244520.16
SC186	0+553.11	-10562.56	244520.16
SC187	0+555.11	-10559.76	244520.16
SC188	0+557.11	-10556.96	244520.16
SC189	0+559.11	-10554.16	244520.16
SC190	0+561.11	-10551.36	244520.16
SC191	0+563.11	-10548.56	244520.16
SC192	0+565.11	-10545.76	244520.16
SC193	0+567.11	-10542.96	244520.16
SC194	0+569.11	-10540.16	244520.16
SC195	0+571.11	-10537.36	244520.16
SC196	0+573.11	-10534.56	244520.16
SC197	0+575.11	-10531.76	244520.16
SC198	0+577.11	-10528.96	244520.16
SC199	0+579.11	-10526.16	244520.16
SC200	0+581.11	-10523.36	244520.16
SC201	0+583.11	-10520.56	244520.16
SC202	0+585.11	-10517.76	244520.16
SC203	0+587.11	-10514.96	244520.16
SC204	0+589.11	-10512.16	244520.16
SC205	0+591.11	-10509.36	244520.16
SC206	0+593.11	-10506.56	244520.16
SC207	0+595.11	-10503.76	244520.16
SC208	0+597.11	-10500.96	244520.16
SC209	0+599.11	-10498.16	244520.16
SC210	0+601.11	-10495.36	244520.16
SC211	0+603.11	-10492.56	244520.16
SC212	0+605.11	-10489.76	244520.16
SC213	0+607.11	-10486.96	244520.16
SC214	0+609.11	-10484.16	244520.16
SC215	0+611.11	-10481.36	244520.16
SC216	0+613.11	-10478.56	244520.16
SC217	0+615.11	-10475.76	244520.16
SC218	0+617.11	-10472.96	244520.16
SC219	0+619.11	-10470.16	244520.16
SC220	0+621.11	-10467.36	244520.16
SC221	0+623.11	-10464.56	244520.16
SC222	0+625.11	-10461.76	244520.16
SC223	0+627.11	-10458.96	244520.16
SC224	0+629.11	-10456.16	244520.16
SC225	0+631.11	-10453.36	244520.16
SC226	0+633.11	-10450.56	244520.16
SC227	0+635.11	-10447.76	244520.16
SC228	0+637.11	-10444.96	244520.16
SC229	0+639.11	-10442.16	244520.16
SC230	0+641.11	-10439.36	244520.16
SC231	0+643.11	-10436.56	244520.16
SC232	0+645.11	-10433.76	244520.16
SC233	0+647.11	-10430.96	244520.16
SC234	0+649.11	-10428.16	244520.16
SC235	0+651.11	-10425.36	244520.16
SC236	0+653.11	-10422.56	244520.16
SC237	0+655.11	-10419.76	244520.16
SC238	0+657.11	-10416.96	244520.16
SC239	0+659.11	-10414.16	244520.16
SC240	0+661.11	-10411.36	244520.16
SC241	0+663.11	-10408.56	244520.16
SC242	0+665.11	-10405.76	244520.16
SC243	0+667.11	-10402.96	244520.16
SC244	0+669.11	-10399.36	244520.16
SC245	0+671.11	-10396.56	244520.16
SC246	0+673.11	-10393.76	244520.16
SC247	0+675.11	-10390.96	244520.16
SC248	0+677.11	-10388.16	244520.16
SC249	0+679.11	-10385.36	244520.16
SC250	0+681.11	-10382.56	244520.16
SC251	0+683.11	-10379.76	244520.16
SC252	0+685.11	-10376.96	244520.16
SC253	0+687.11	-10374.16	244520.16
SC254	0+689.11	-10371.36	



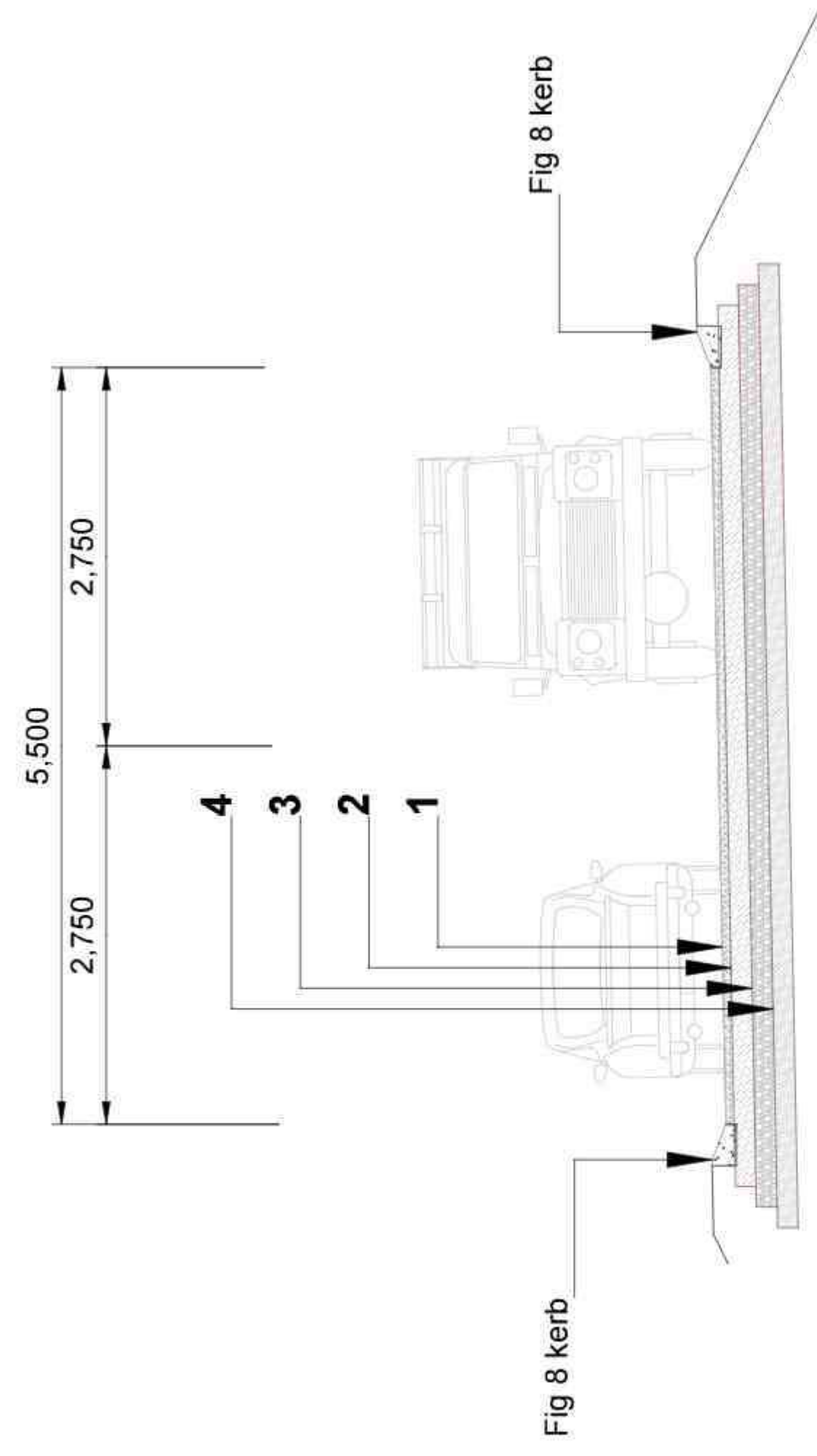
Chainage	Centreline Peg Levels			Left Edge			Centre Line			Right Edge		
	Des Road Levels			Grades			Vertical Curves			Superelevation		
	Vertical Alignment			Grades			Vertical Curves			Superelevation		
	Horizontal Curves			Superelevation			Horizontal Curves			Superelevation		
0+000.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+010.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+020.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+030.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+040.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+050.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+060.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+070.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+080.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+090.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+100.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+110.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+120.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+130.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+140.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+150.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+160.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+170.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+180.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+190.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+200.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+210.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+220.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+230.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+240.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+250.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+260.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+270.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+280.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+290.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+300.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+310.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+320.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+330.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+340.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+350.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205
0+360.00	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205	278.205

P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P: 24642 Project: 24642 Revision: 001		P	
---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--

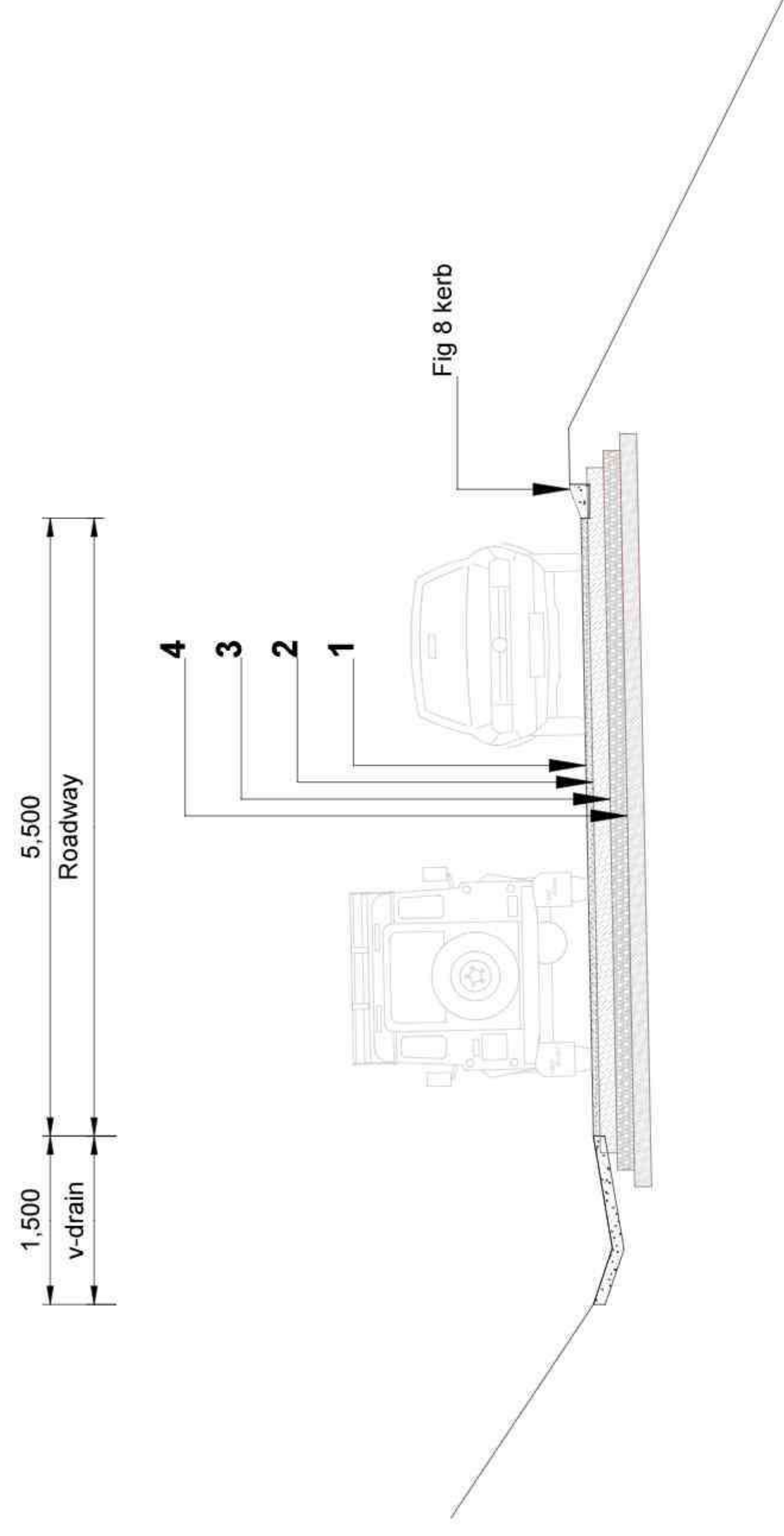
[illegible][illegible]



Chainage 0+004 to 0+130 - Horizontal Scale 1:1000 & Vertical Scale 1:100																																
DRAWING CHECKED		SMK, Pr Technl Eng (ECSA 2019600317)		MZOLO CONSULTING ENGINEERS & PROJECT MANAGERS					NO.		AMENDMENTS		DRAWN		APPROVED		DATE		<div><div>REPUBLIC OF SOUTH AFRICA Butterfly Life</div><div>NKOMAZI LOCAL MUNICIPALITY 09 PARK STREET PRIVATE BAG X101 MALELANE 1320 TEL : (013) 790 0245/6/7 FAX : (013) 790 0886</div></div>					PROJECT NUMBER		NKO 28/2021		SCALES HORIZONTAL SCALE: 1000 VERTICAL SCALE: 100				
DRAWN BY		WM		07 FAIRHAVEN PIETERMARITZBURG 3201 TEL : (082) 953 9347 mzoloengineering@gmail.com					PROJECT DESCRIPTION		PAVING OF INTERNAL STREETS AT ANIVA																					
DESIGN CHECKED		SMK, Pr Technl Eng (ECSA 2019600317)							PROJECT STAGE		CONCEPT AND VIABILITY																					
DESIGNED BY		MM							DRAWING		LONG SECTION		DRAWING NO. NKO28/2021/RD6/LS01																			
															ANIVA RD 6																	



TYPICAL CROSS SECTION - 1



TYPICAL CROSS SECTION - 2

Material Requirements		
Layer No.	Description	Depth (m)
1	60mm interlocking paving	0.060
2	150 C4 Base Layer	0.150
3	150 G7 Subbase Layer	0.150
4	150 G9 Selected Layer	0.150

PAVEMENT STRUCTURE

[illegible]

ANNEXURE B: GEOTECHNICAL REPORT

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD

**REPORT ON GEOTECHNICAL AND MATERIAL
INVESTIGATION FOR THE PROPOSED UPGRADE
AND REFURBISHMENT OF ROADS AND CULVERTS
LOCATED AT ANIVA/BOSCHFONTEIN WITHIN
NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI
DISTRICT MUNICIPALITY IN THE MPUMALANGA**

Conducted on Behalf:

**Mzolo Consulting Engineers & Project
Managers (Pty) Ltd**



07 Fairhaven
04 Coronation Road
Scottsville
Pietermaritzburg
3201
Tel: +27 (0)64 534 9233
Mobile: +27 (0)82 953 9347
E-mail: mandlak@mzoloconsulting.co.za



Prepared By:

**Geo-Caluzza Consulting
(Pty) Ltd**

54 Bosse Street
New Germany
Pinetown
3610
Tel: +27 (0)31 701 1532
Fax: +27 (0)86 618 7349
Cell: +27 (0)73 649 4391
E-mail: info@geocaluza.co.za

ANIVA/BOSCHFONTEIN ROADS GEOTECHNICAL INVESTIGATION REPORT				
REFERENCE NO. 2024-012 Aniva/Boschfontein Roads		DATE: FEBRUARY 2024		
PREPARED BY: Geo-Caluza Consulting Engineers (Pty) Ltd 54 Bosse Street New Germany Pinetown 3610 Tel: +27 (0)31 701 1532 Fax: +27 (0)86 618 7349 E-mail: info@geocaluza.co.za		PREPARED FOR: Mzolo Consulting Engineers & Project Managers (Pty) Ltd 07 Fairhaven 04 Coronation Road Scottsville Pietermaritzburg 3201 Tel: +27 (0)64 534 9233 Mobile: +27 (0)82 953 9347 E-mail: mandlak@mzoloconsulting.co.za		
AUTHOR: Gugu Ndlangamandla		CLIENT CONTACT PERSON: Mandla Kunene		
SYNOPSIS: REPORT ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA				
VERIFICATION	CAPACITY	NAME	SIGNATURE	DATE
AUTHOR AND REVIEW BY	Senior Engineering Geologist / Director	Gugu Ndlangamandla		05 February 2024

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

CONTENTS

1. INTRODUCTION	1
1.1. Preamble	1
1.2. Database	1
1.3. Objectives	1
2. FACTUAL REPORT	2
2.1. Programme of work	2
2.1.1. Literary review	2
2.2. Field work	2
2.2.1. Walk-over Mapping Survey	2
2.2.2. Inspection pits	2
2.2.3. CBR Dynamic Cone Penetrometer Tests	3
2.2.4. Dynamic Cone Penetrometer Tests	4
2.3. Site Description	4
2.4. General Geology	4
2.5. Groundwater	4
2.6. Observations	5
2.6.1. Fill / Gravel Wearing Course	5
2.6.2. Transported Materials	5
3. LABORATORY AND FIELD-TESTING RESULTS	6
4. MATERIAL CLASSIFICATION	9
5.1. Existing Pavement Structure	9
6. INTERPRETIVE REPORT	9
7. FOUNDATION RECOMMENDATIONS FOR THE PROPOSED CULVERT STRUCTURES	10
8. CONCLUSIONS	10
9. REFERENCES	11
10. APPENDIX A: PLANS	12
11. APPENDIX B: GEOLOGICAL SOIL PROFILES	13
12. APPENDIX C: DYNAMIC CONE PENETROMETER TESTS	14
13. APPENDIX D: LABORATORY TEST RESULTS	15

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein
Roads

Date: 05 February 2024

1. INTRODUCTION

1.1. Preamble

Geo-Caluzza Consulting Engineers (Pty) Ltd were requested by Mr s Nqabakazi Mandla Kunene on behalf of Mzolo Consulting Engineers and Project Managers (Pty) Ltd to provide a quotation to undertake geotechnical and material investigation for the proposed upgrade and refurbishment of roads and culvert structures located in Aniva also known as Boschfontein within Nkomazi Local Municipality under Ehlanzeni District Municipality in the Mpumalanga Province of South Africa. Geo-Caluzza Consulting Engineers (Pty) Ltd were subsequently appointed by Mr Kunene in an email dated 15th January 2024 to proceed with the investigation as requested. This geotechnical report presents the results of the investigation conducted on site.

The investigation was undertaken on the 22nd of January 2024 and entailed general mapping of the area within which the proposed roads to be upgraded and refurbished and proposed culvert structures are located, the digging of fourteen inspection pits and conducting twelve CBR Dynamic Cone Penetrometer, DCP, tests adjacent the inspection pits and four Dynamic Cone Penetrometer, Light, DPL, Tests. Disturbed soil samples were also retrieved from the inspection pits for later laboratory testing.

This report presents the results of the geotechnical and material investigation undertaken for the detailed design of the road, entailing an assessment of the subgrade conditions along the route alignments and excavation conditions.

1.2. Database

Information available to Geo-Caluzza Consulting Engineers (Pty) Ltd during the time of the investigation comprised the following:

- A Google Earth Images indicating the site and road alignments for the proposed roads,
- A 1:250 000 scaled 2530 Barberton Geological Map Series, and
- A 1:250 000 scaled 2530 Barberton Topographical Map Series.

1.3. Objectives

The objectives of the investigation were to conduct an investigation along the proposed roads and entailed the following:

- The soil/rock profiles to approximately 1.30m depth in fourteen excavated inspection pits at the positions located along the proposed route alignments.
- Twelve No. CBR Dynamic Cone Penetrometer, DCP, tests to a depth of 1m below existing ground level located adjacent the inspection pit positions.
- Four No. Dynamic Cone Penetrometer, Light, DPL, Tests adjacent to the inspection pits located at the proposed culvert structure locations.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

- An assessment of the near surface soils, for use in earthworks and road pavement layers.
- Comments on any perceived geotechnical problems which may affect either the design or the construction of the roads.

It must be noted that the recommendations and conclusions made in this report are based upon results and information obtained at specific investigation points. The assessment of the overall geotechnical conditions along the respective routes and culvert structures has been inferred by professional judgement made from interpolation and extrapolation of the point information gained from the inspection pits, dynamic cone penetrometer tests as well as visual assessment of the surface features. Although considered unlikely, should significant variations from the inferred conditions become apparent during construction, the advice of a geotechnical professional must be sought after.

2. FACTUAL REPORT

2.1. Programme of work

2.1.1. Literary review

Prior to the commencement of field work, a literary review was conducted on the data obtained from previous investigations by both Geo-Caluza Consulting Engineers (Pty) and other consultants in the area.

2.2. Field work

The investigation was undertaken on the 22nd January 2024 and comprised the following:

2.2.1. Walk-over Mapping Survey

A walk-over mapping survey was carried out on site as part of the investigation to obtain as much information as possible of the subsurface conditions from existing soil and rock exposures. This was carried out at the same time as the other field tests discussed below.

2.2.2. Inspection pits

A total of fourteen inspection pits, designated IP1 through to IP14 were excavated at approximate positions along the proposed route alignments and culvert structures as indicated in Figure 2 attached in Appendix A. These were taken down to depths ranging between 1.10 and 1.70m below existing ground level. The inspection pits were set out in the field using a hand-held Garmin eTrex GPS.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

The soils were profiled by an Engineering Geologists in accordance with the method of Jennings *et al.*, (2002). The detailed profiles are provided in Appendix B of this report.

Representative disturbed samples of the materials were taken from selected horizons for later laboratory testing.

2.2.3. CBR Dynamic Cone Penetrometer Tests

A total of fourteen CBR Dynamic Cone Penetrometer tests, designated DCP1 through to DCP14, were conducted from the surface adjacent the inspection pits to a depth of 1m below existing ground level or earlier refusal on the proposed routes as indicated in Figure 2 of this report.

The results of the tests giving inferred shear strength parameters and in situ CBR values associated with the in-situ soils are provided in Appendix C of this report.

While the DCP results is giving an indication of the inferred shear strength, and therefore CBR, and strengths of in situ materials, it is important to note that these values are associated with the in situ or undisturbed soils and not the compacted materials. The in situ shear strength parameters are affected by the following soil properties:-

- Cohesion (clayey soils),
- Soil consistency, Grain size variations, and
- Moisture content.

It is therefore important to note that the in situ CBR strengths relate to the undisturbed, in situ condition of the subgrade soils. In the case of granular soils, reworking of these soils by ripping and compaction will generally improve their actual CBR strengths at a given compaction value (as determined from laboratory tests) to above that of the in situ CBR value provided by the DCP results before compaction. However, in the case of clayey soils, reworking will result in them losing their primary cohesion and the shear strength of the soils would then be governed by their residual shear strength, resulting in significantly lower CBR values than the compacted CBR value. It is therefore critical that the in situ CBR values derived from the DCP tests be evaluated in accordance with the soil composition and quality before assessing whether the material is suitable as a subgrade material for road construction in its in-situ state. Failure of road structures can occur when road designs rely on the integrity of subgrade soils as inferred from high in situ CBR values, but which are in effect very poor to poor quality subgrade materials.

The DCP test results are presented in Appendix C.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

2.2.4. Dynamic Cone Penetrometer Tests

Four Dynamic Cone Penetrometer Light (DPL) tests, designated DPL1 through to DPL4 were also undertaken opposite the inspection pits at the vicinity of the stream crossing to determine the material consistency and depth to bedrock across the site. These were driven to refusal depths ranging between 1.2 and 2.4m below existing ground level.

The results of the DPL tests have been used, empirically, to derive the Estimated Allowable Safe Bearing Pressures (EASBP) for the soils. The estimation of the EASBP is based on Terzaghi's settlement chart for 25mm of settlement using SPT values estimated from the DPL test results.

The results of the DPL tests are contained in Appendix C of this report.

2.3. Site Description

The project area is located in an area locally known as Aniva or Boschfontein within Nkomazi Local Municipality under Ehlanzeni District Municipality in the Mpumalanga Province of South Africa. It is located south east of Mbombela or Nelspruit. Access is off the N4 National Road into R570 Road and into the local main road.

The topography along the routes is generally gently sloping.

A locality plan for the proposed development is shown in Figure1 attached in Appendix A.

2.4. General Geology

According to the 2530 Barberton 1:250 000 Geological Map Series, the general area around which the site is located is largely underlain by potassic gneiss and magmatite with some phenocrysts, strongly porphyroblastic vein by granodiorite of the Nelspruit Suite that is intruded by diabase sill/dyke of the Vaalian Age both on regional and local scale.

The investigation indicated the site to be underlain by fill or gravel wearing course, transported and residual soils overlying weathered gneiss bedrocks.

A Geological Plan is attached as Figure 3 in Appendix A of the report indicates the inferred geology of the area.

2.5. Groundwater

There was only one groundwater seepage encountered in IP8 of all the inspection pits put down for the investigation. However, it is very likely that during or after wetter seasons, far more prolific shallow groundwater activity, in the form of temporary perched seepage zones can be expected.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

2.6. Observations

The main soil horizons observed along the routes are gravel wearing course and/or fill materials, transported materials comprising alluvial, colluvial and pedogenic materials overlying residual and weathered gneiss bedrock of the Nelspruit Suite.

2.6.1. Fill / Gravel Wearing Course

The gravel wearing course were encountered occurring from the surface level and extending to depths ranging between 0.17 and 0.9m below existing material. These materials were described as dry to slightly moist, yellowish brown, speckled dark greyish brown, medium dense to dense, coarse grained, silty sands derived from the decomposed gneiss.

2.6.2. Transported Materials

Transported materials identified as alluvial, colluvial and pedogenic materials occur from the surface level or below the fill or gravel wearing course.

2.6.2.1. Alluvial Soils

These soils were encountered at the water course locations and are described as slightly moist, dark greyish brown to brown, very loose, clayey silty sands.

2.6.1.2. Colluvial Soils

The area within which the proposed roads to be upgraded are underlain by colluvial soils occurring from the surface level and below the fill or gravel wearing course at a depth of 0.4m below existing ground level. They are described as slightly moist, greyish brown to light greyish brown, very dense / firm to stiff, fine to medium grained, silty sands and sandy silty clays containing roots.

2.6.1.3. Pedogenic Horizon

Pedogenic horizon was poorly represented on site and was only encountered in IP3 at a depth of 0.9m below existing ground level. It is described as slightly moist, dark greyish brown to black and greyish brown, generally dense, coarse grained, silty sands containing ferruginised nodules.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

2.6.3. Residual Gneiss and Weathered Gneiss Bedrock of the Nelspruit Suite

The residual gneiss to completely weathered gneiss soils as derived from the complete in situ weathering of the underlying gneiss bedrock occur from the surface and below the transported and fill materials at depths ranging between 0.17 and 0.60m below existing ground level. They are described as slightly moist, dark brown to dark reddish brown, speckled light grey, mottled black, medium dense to dense, medium to coarse grained, silty sands to gravelly micaceous silty sands and clayey gravelly sands which outshine sands and become gravellier.

The underlying weathered gneiss bedrock was encountered at a depth of 1.7m below existing ground level and is described as yellowish brown, streaked grey and black, highly weathered, coarse to very coarse grained, very soft to medium hard rock strength, gneiss bedrock.

3. LABORATORY AND FIELD-TESTING RESULTS

In order to assess more accurately the engineering properties of the various materials encountered on site and to provide information on their potential behavior on the proposed upgrade the following material classification tests were carried out on selected samples collected during the investigation:-

- Particle Size Distribution,
- Atterberg Limit and Linear Shrinkage Determinations and,
- MOD AASTHO and CBR tests.

The results of the laboratory tests will be given in Table 1 below for ease of reference and result sheets attached to Appendix D.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

Table 1
Summary of Results of Particle Size Distribution Analysis,
Atterberg Limit Determinations, MOD AASHTO and CBR Tests

Pit No	Depth (m)	Material Description	Atterberg Limits %			GM	Modified AASHTO		CBR Values (%) Compaction MDD (%)				Classification and Activity
			LL	PI	LS		MDD (kgm3)	OMC %	90	93	95	100	
IP1	0.7-1.00	Dark red, poorly graded silty SAND.	-	NP	0.0	1.90							A-1-b(0).
IP2	0.3-1.00	Dark reddish brown, silty SAND.	-	NP	0.0	1.30	2095	7.1	15	22	28	59	A-2-4(0), G6.
IP3	0.0-0.90	Dark reddish brown, silty SAND.	-	NP	0.0	1.40	2140	6.2	14	22	30	57	A-2-4(0), G6.
IP4	0.17-0.80	Dark brown, poorly graded silty SAND.	-	NP	0.0	1.80							A-1-b(0).
	0.8-1.00	Dark red silty/clayey SAND.	27	6	2.3	1.60							A-1-b(0).
IP5	0.8-1.30	Dark brown, silty SAND.	-	NP	0.0	1.40	1970	7.1	9	13	17	33	A-2-4(0), G8.
IP7	0.4-0.80	Dark reddish orange, clayey SAND.	31	10	4.6	1.20	1977	10.4	4	6	9	16	A-2-4(0), >G10.
IP9	0.6-1.30	Light olive, clayey SAND.	29	9	4.0	1.50	1961	9.8	6	10	14	24	A-2-4(0), G8.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

Pit No	Depth (m)	Material Description	Atterberg Limits %			GM	Modified AASHTO		CBR Values (%) Compaction MDD (%)				Classification and Activity
			LL	PI	LS		MDD (kgm3)	OMC %	90	93	95	100	
IP10	0.4-1.50	Dark brown, poorly graded, silty SAND.	-	NP	0.0	2.00	2069	7.1	20	31	42	85	A-1-b(0), G6.
IP11	0.6-1.00	Dark brown, clayey SAND.	32	14	6.5	0.90							A-6(2).
IP12	0.5-1.00	Dark grey, clayey SAND.	36	15	7.2	1.00							A-6(3).
IP13	0.0-1.00	Dark reddish brown, poorly graded silty SAND.	-	SP	0.3	2.10							A-1-b(0).
IP14	0.2-1.00	Dark reddish orang, poorly graded, silty SAND.	-	NP	0.0	1.90							A-1-b(0).

LL- Liquid Limit
LS - Linear Shrinkage
PI - Plasticity Index

MDD – Maximum Dry Density
OMC – Maximum Moisture Content
GM – Grading Modulus

Classification in terms of AASHTO
TRH14 (1985)

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

4. MATERIAL CLASSIFICATION

The material tested on site qualifies as generally G6/G8 in terms of TRH 14:1985. The G6 materials can be used as subbase while G8 materials used as selected layer in the construction of roads.

5. GENERAL STRUCTURE AND IN SITU STRENGTH OF THE EXISTING ROAD

5.1. Existing Pavement Structure

In general, the structure of the existing roadway comprises a base course placed on compacted fill over the in-situ subgrade. The in-situ subgrade comprised transported, residual and completely weathered gneiss bedrock. The base course layer is missing in some places.

5.2. Inferred In Situ Strength of Road Pavement: DCP test results and visual assessment

The DCP test results undertaken as part of the investigation indicated generally the upper pavement of the road to be very well balanced as determined from in situ CBR values computed from the DCP results.

6. INTERPRETIVE REPORT

6.1. Recommended Subgrade Treatment

As a general indication, subgrade treatment should comprise a simple rip and recompact procedure. The surface of the road should therefore be ripped to at least 300mm depth, wet and recompact to a minimum 95% Modified Dry Density (MDD) and Optimum Moisture Content (OMC).

The general recommendations regarding the subgrade treatment or roadbed preparation are given below. These recommendations assume that the road will remain at its current grade levels with very little alteration to the elevation of road levels.

The recommendations for are as follows:-

- Rip, wet and recompact upper 300mm of subgrade to minimum compaction density 95% MDD and OMC,
- Note wearing course is variable along the proposed routes and may be missing at some locations. To be reviewed during construction and shortfalls of similar gravel to be sourced from commercial sources,
- Create generous side drainage,
- Import new base and black top layers as per Engineers design.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

7. FOUNDATION RECOMMENDATIONS FOR THE PROPOSED CULVERT STRUCTURES

The proposed roads crosses through two streams/erosion dongas. These water courses were serviced by pipe culvert where IP8, DPL1 and DPL2 were conducted and a box culvert where IP11, DPL3 and DPL4 were conducted.

These areas are generally underlain by thick transported materials overlying residual and weathered gneiss bedrock at an average depth of 1.5m below existing ground level.

Culvert structures are proposed on these crossings to cover the complete span of the water courses and also accommodate heavy motor vehicles like buses locally used for funerals. The proposed culvert structures can be founded on weathered gneiss bedrock using reinforced strip footings foundations placed at least 300mm into medium hard gneiss. An Estimated Allowable Safe Bearing Pressure, EASBP, of at least 400kPa is considered suitable on medium hard gneiss bedrock.

7.1. Excavation Classification

The excavation characterization for the access road in terms of SABS 1200D: Earthworks will classify as "SOFT" to an average depth of 1.5m below existing ground level.

7.2. Subsoil Drainage

At the time of investigation there was a lack of groundwater seepage evident in the inspection pits excavated. This situation could be expected to change significantly during and after wet season or sustained rain periods.

However, surface water channels were observed along the routes therefore a surface drainage system will be required along the roads preventing water ingress into the structural layers. Water ingress into road layers destroys the material compaction and result in subgrade softening leading to bearing capacity failure.

7.3. Earthworks

It is recommended that all earthworks be carried out in accordance to SANS 1200D, as amended from time to time.

8. CONCLUSIONS

This report contains the results of a geotechnical and material investigation for the proposed upgrade and refurbishment of roads and culvert structures located in Aniva also known as Boschfontein within Nkomazi Local Municipality under Ehlanzeni District Municipality in the Mpumalanga Province of South Africa.

The geology and materials along the proposed routes are described and evaluated

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

from field descriptions and laboratory test data.

Recommendations for the treatment of road subgrade, re-use of existing road layer material, foundations, excavatability and drainage are provided.

Finally, the ground conditions described in this report refer to those encountered in the inspection pits and dynamic cone penetrometer tests put down on site. It is therefore possible that conditions different to those discussed above can be encountered elsewhere on site.

9. REFERENCES

- Core Logging Committee (1976). A Guide to core logging for rock engineering, Proc Symp. On Exploration for rock engineering, Johannesburg.
- Jennings, J.E., Brink, A.B.A. and Williams, A.A.B. (2002). *Revised Guide to Soil Profiling for Civil Engineering Purposes in Southern Africa*. Transactions of the South African Institution of Civil Engineers, Vol. 15.
- TRH 14, "Guidelines for Road Construction Materials" – NITRR, 1985.
- Draft TRH 20, "The Structural Design, Construction and Maintenance of Unpaved Roads" – NITRR, 1985.
- SABS 1200D: Standardized Specification for Civil Engineering Construction: Earthworks.

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF

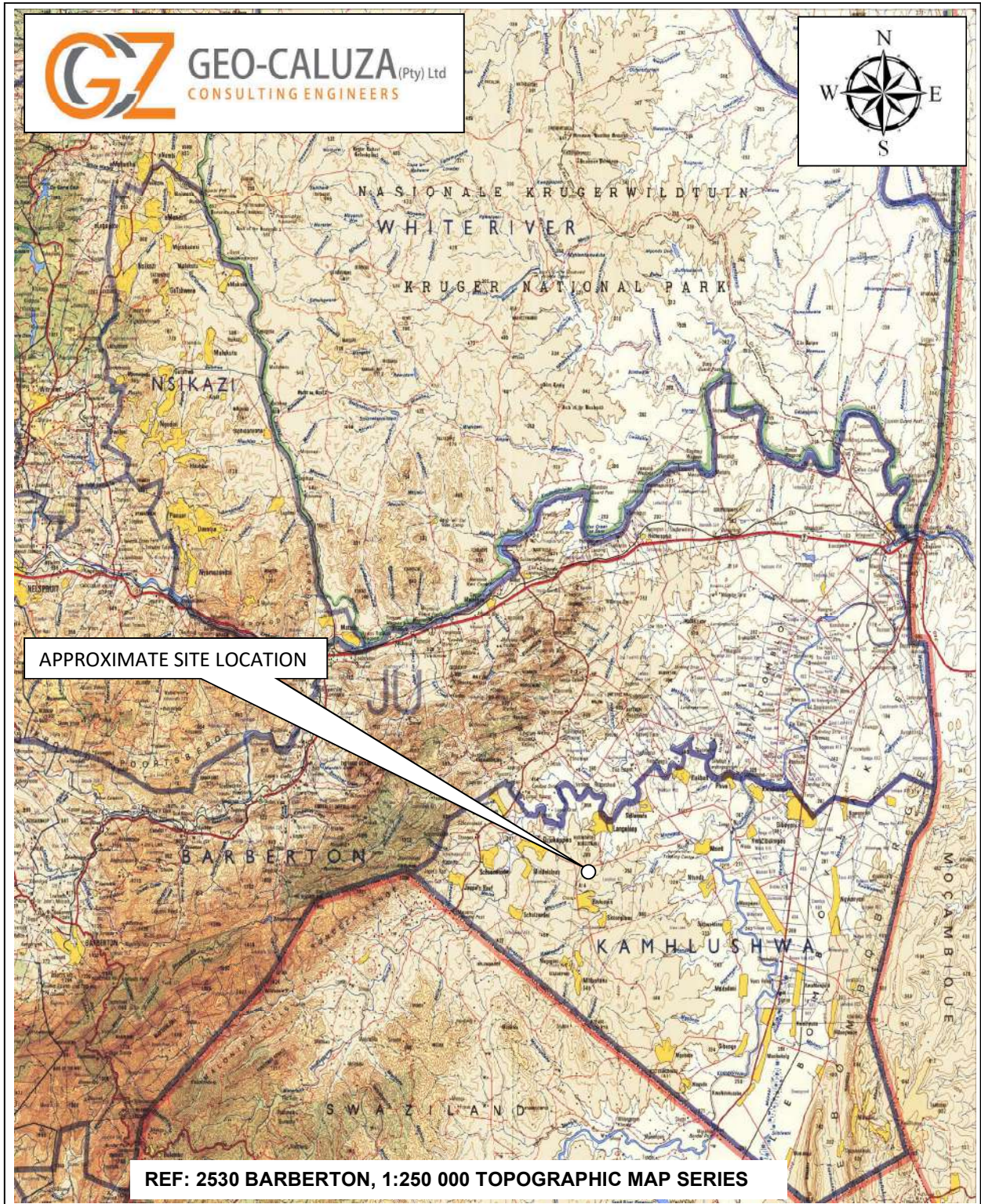
Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

10. APPENDIX A: PLANS

**REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON
GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND
REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN
NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE
MPUMALANGA PROVINCE OF SOUTH AFRICA**

Project Name: 2024-012 Aniva/Boschfontein
Roads

Date: 05 February 2024



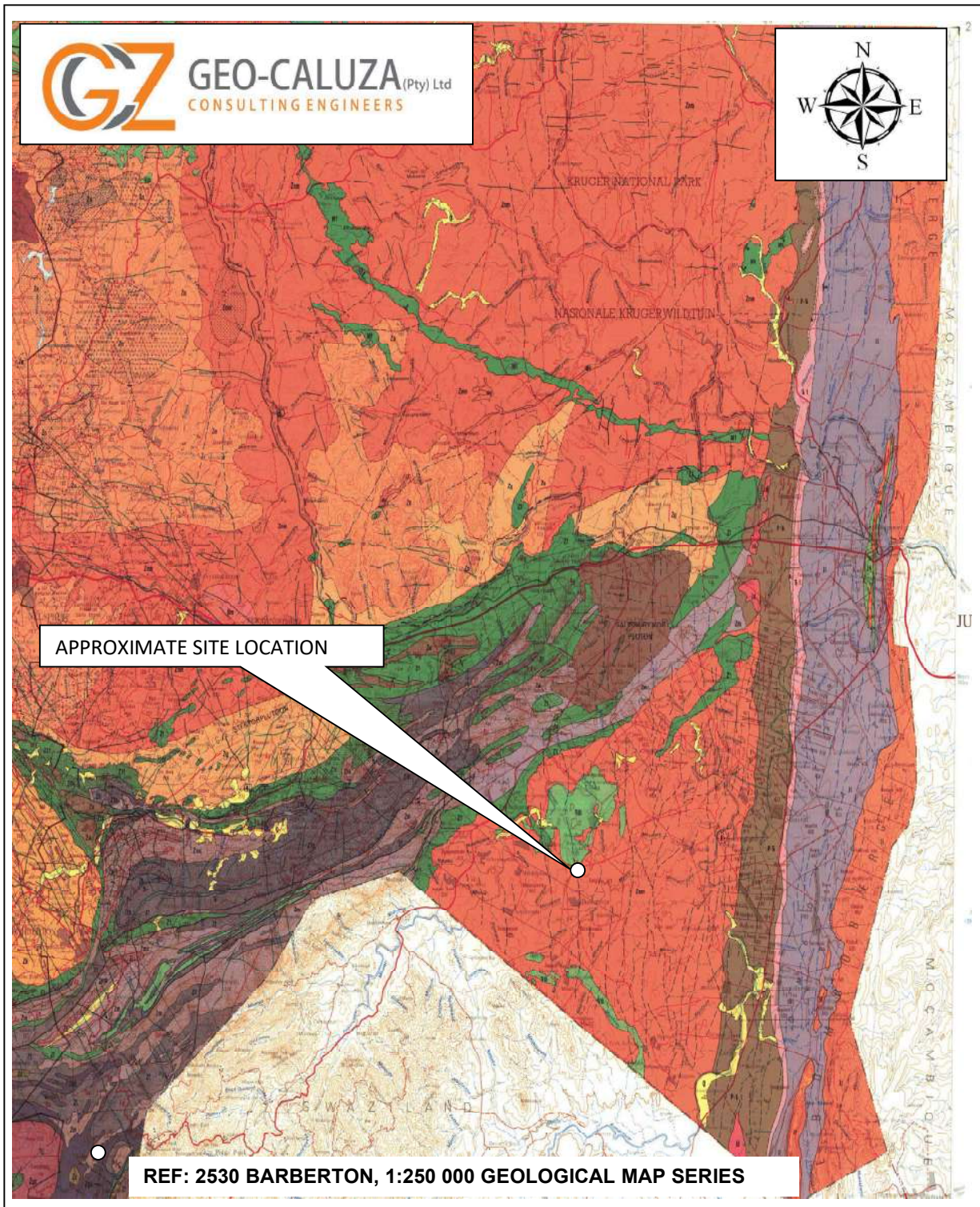
**JOB NAME: ANIVA/BOSCHFONTEIN ROADS
CLIENT: MZOLO CONSULTING ENGINEERS & PROJECT
MANAGERS (PTY) LTD
FIGURE 1: LOCALITY PLAN**



**REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON
GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND
REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN
WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN
THE MPUMALANGA PROVINCE OF SOUTH AFRICA**

Project Name: 2024-012 Aniva/Boschfontein
Roads

Date: 05 February 2024

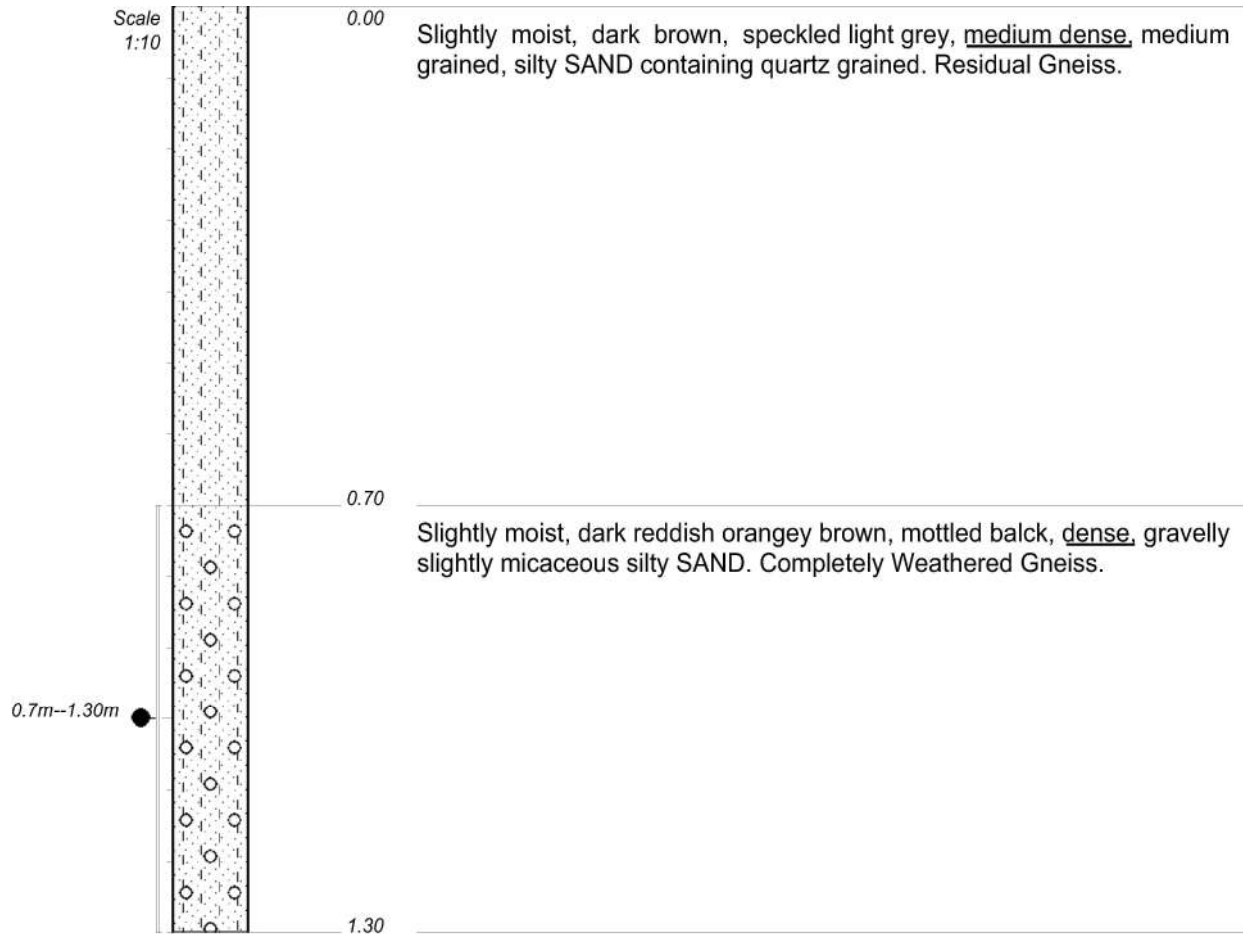


**JOB NAME: ANIVA/BOSCHFONTEIN ROADS
CLIENT: MZOLO CONSULTING ENGINEERS & PROJECT
MANAGERS (PTY) LTD
FIGURE 3: GEOLOGICAL PLAN**

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

11. APPENDIX B: GEOLOGICAL SOIL PROFILES



NOTES

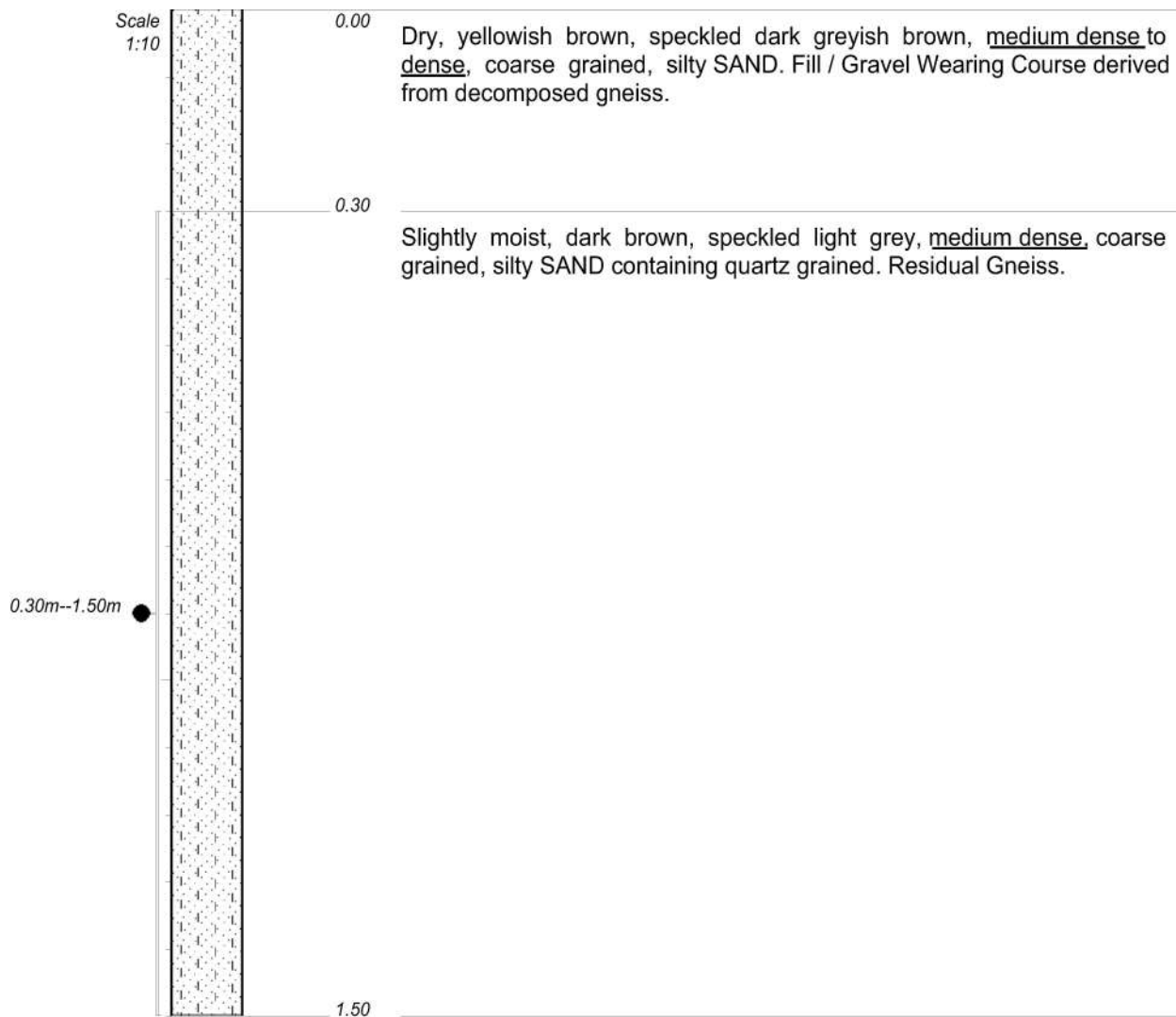
- 1) Final depth at 1.30m weathered gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.7m--1.30m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d42'50.28"S
Y-COORD : 031d36'53.77"E

HOLE No: IP1



NOTES

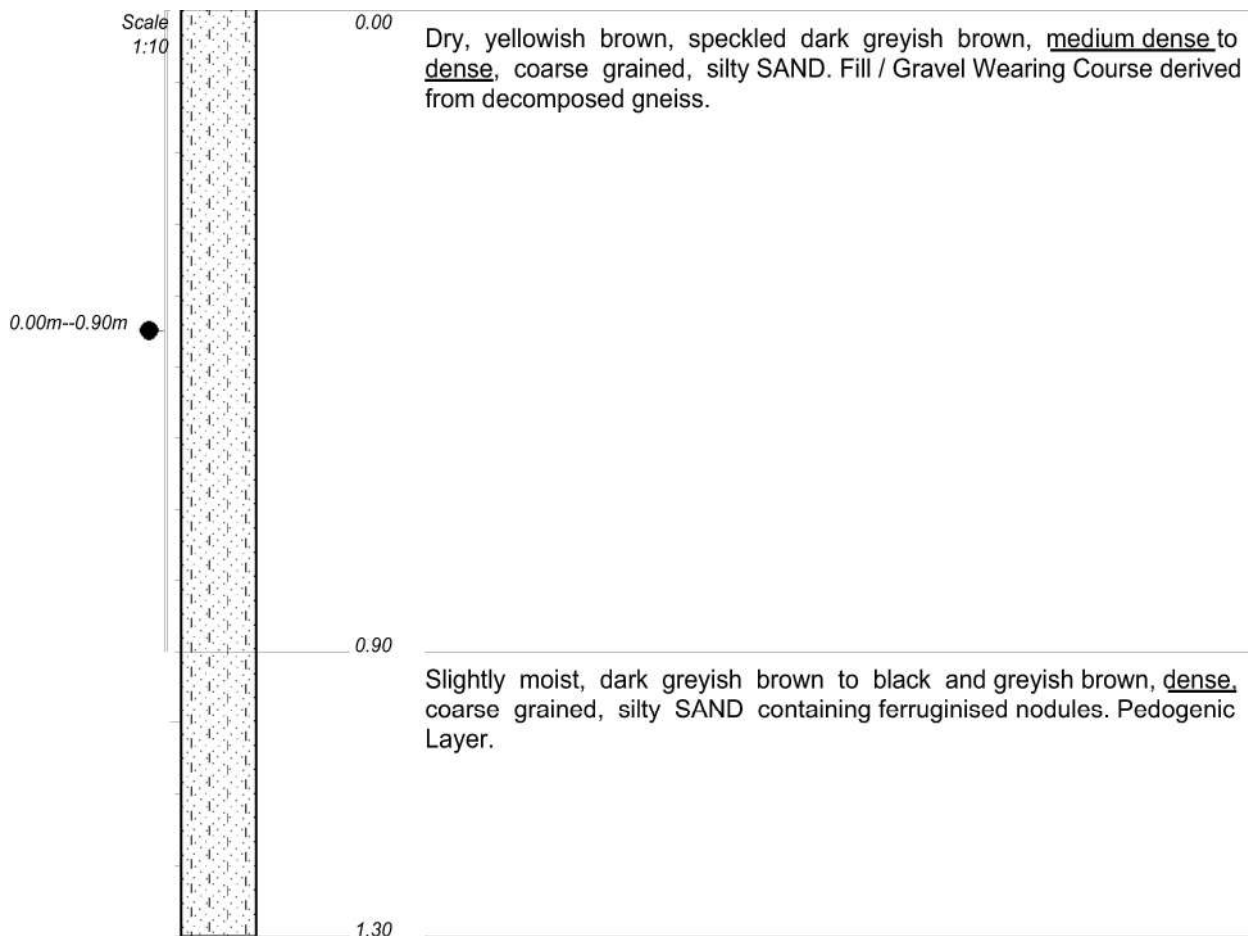
- 1) Final depth at 1.50m on residual gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.30m--1.50m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d42'59.45"S
Y-COORD : 031d36'36.90"E

HOLE No: IP2



NOTES

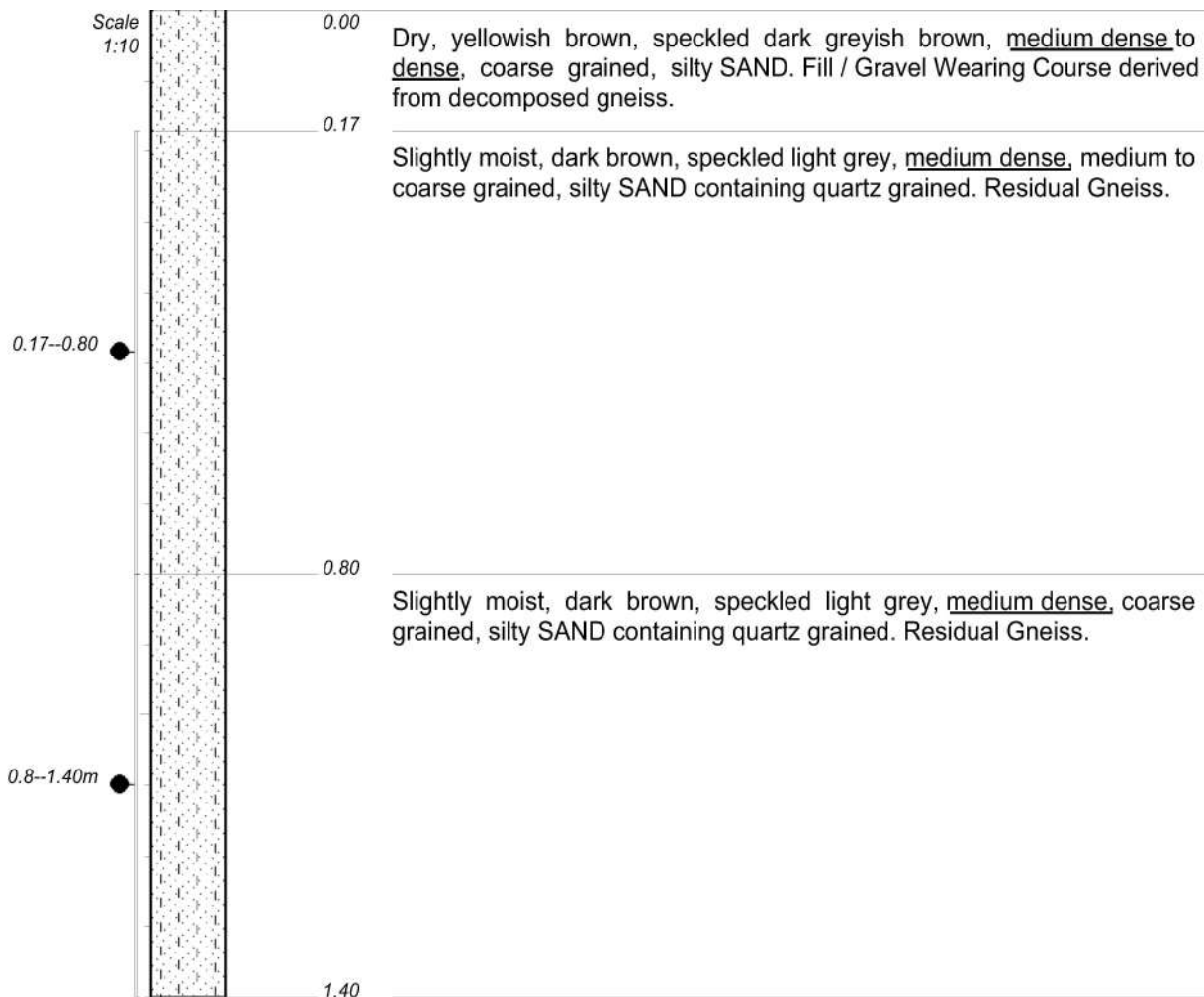
- 1) Final depth at 1.30m on pedogenic layer.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.00m--0.90m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'9.27"S
Y-COORD : 031d36'47.19"E

HOLE No: IP3



NOTES

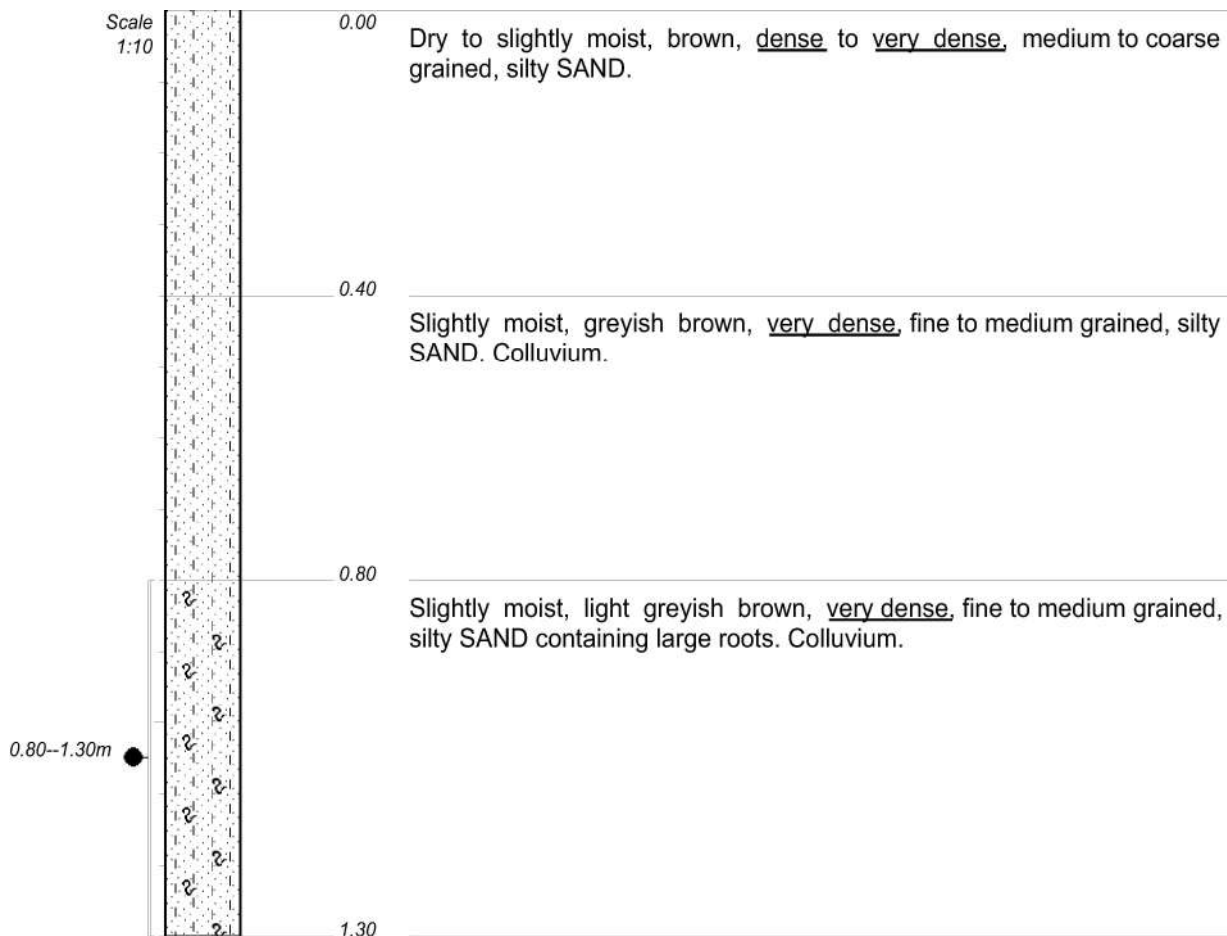
- 1) Final depth at 1.40m on residual gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sampled between 0.17-0.80 and 0.8-1.40m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'19.00"S
Y-COORD : 031d36'31.32"E

HOLE No: IP4



NOTES

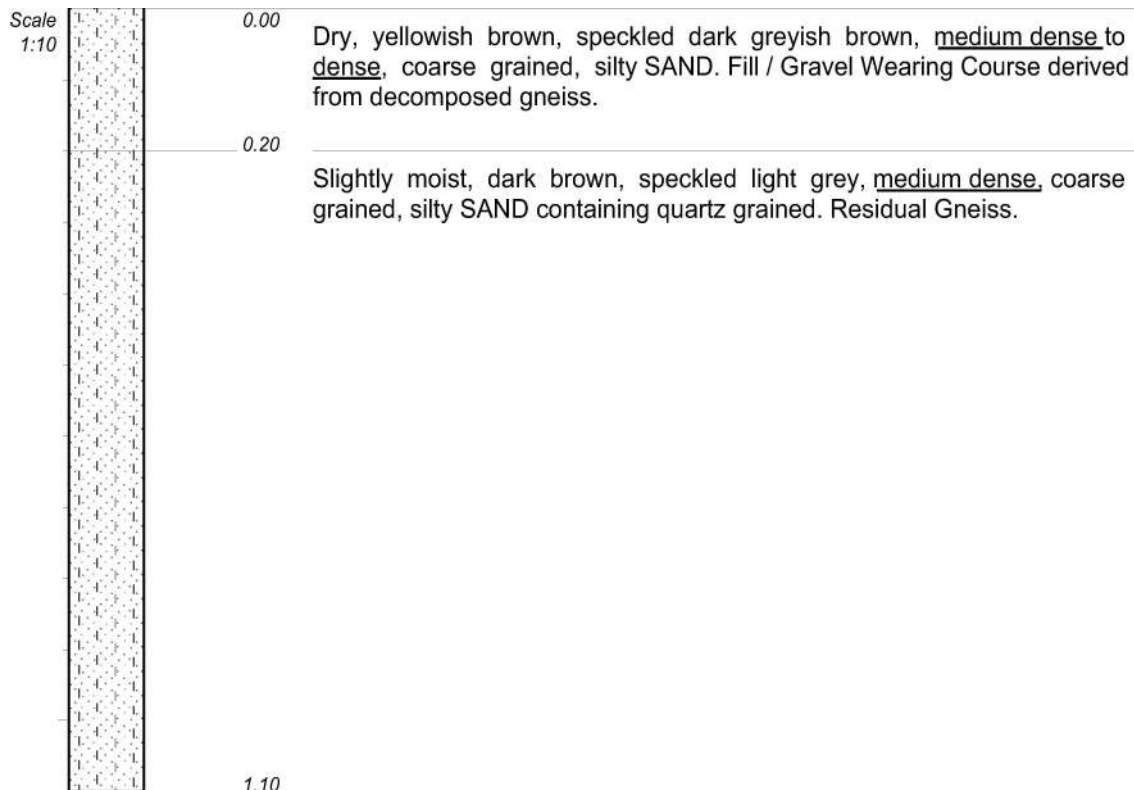
- 1) Final depth at 1.30m.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.80--1.30m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'9.27"S
Y-COORD : 031d36'42.75"E

HOLE No: IP5



NOTES

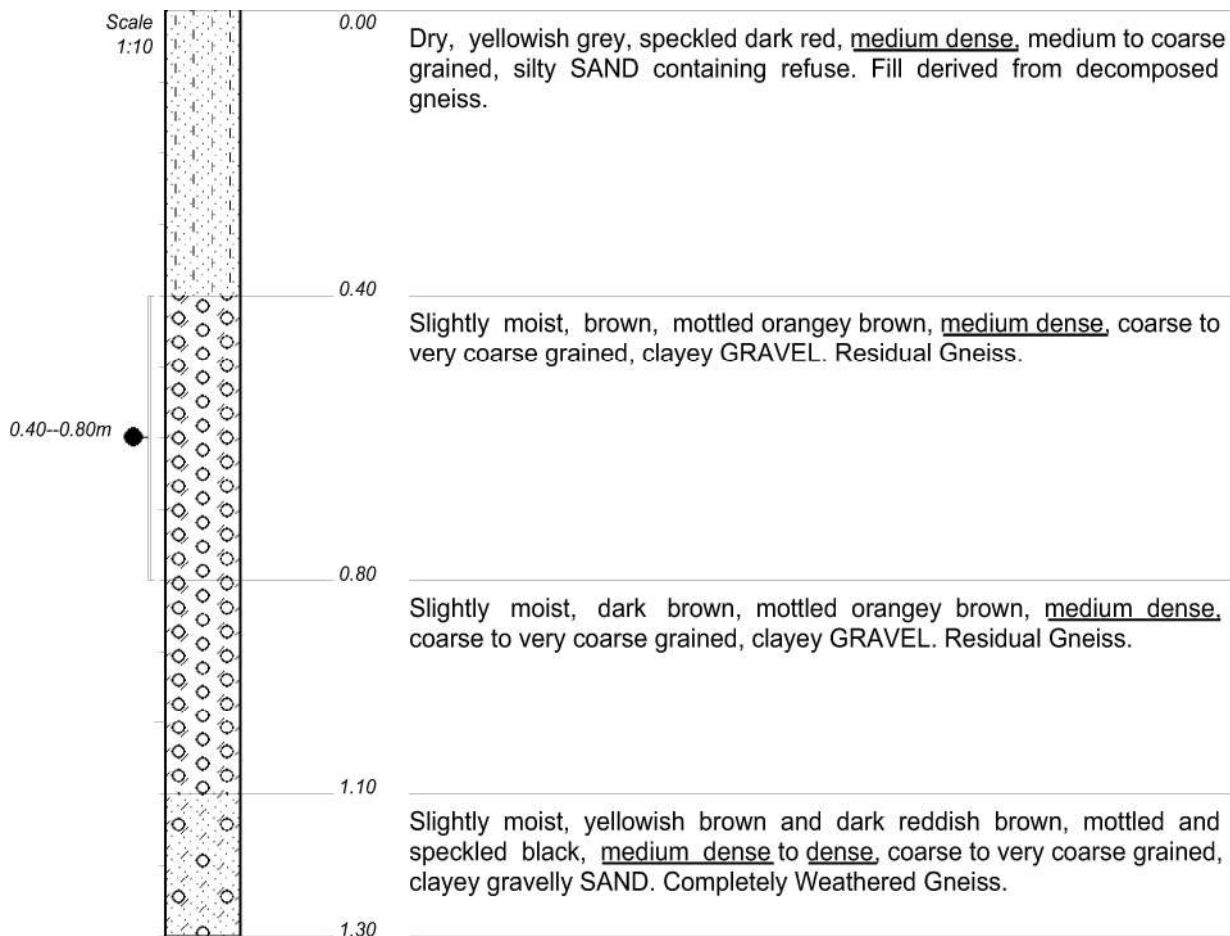
- 1) Final depth at 1.10m on residual gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Underground water pipe encountered at 1.10m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'24.96"S
Y-COORD : 031d36'52.20"E

HOLE No: IP6



NOTES

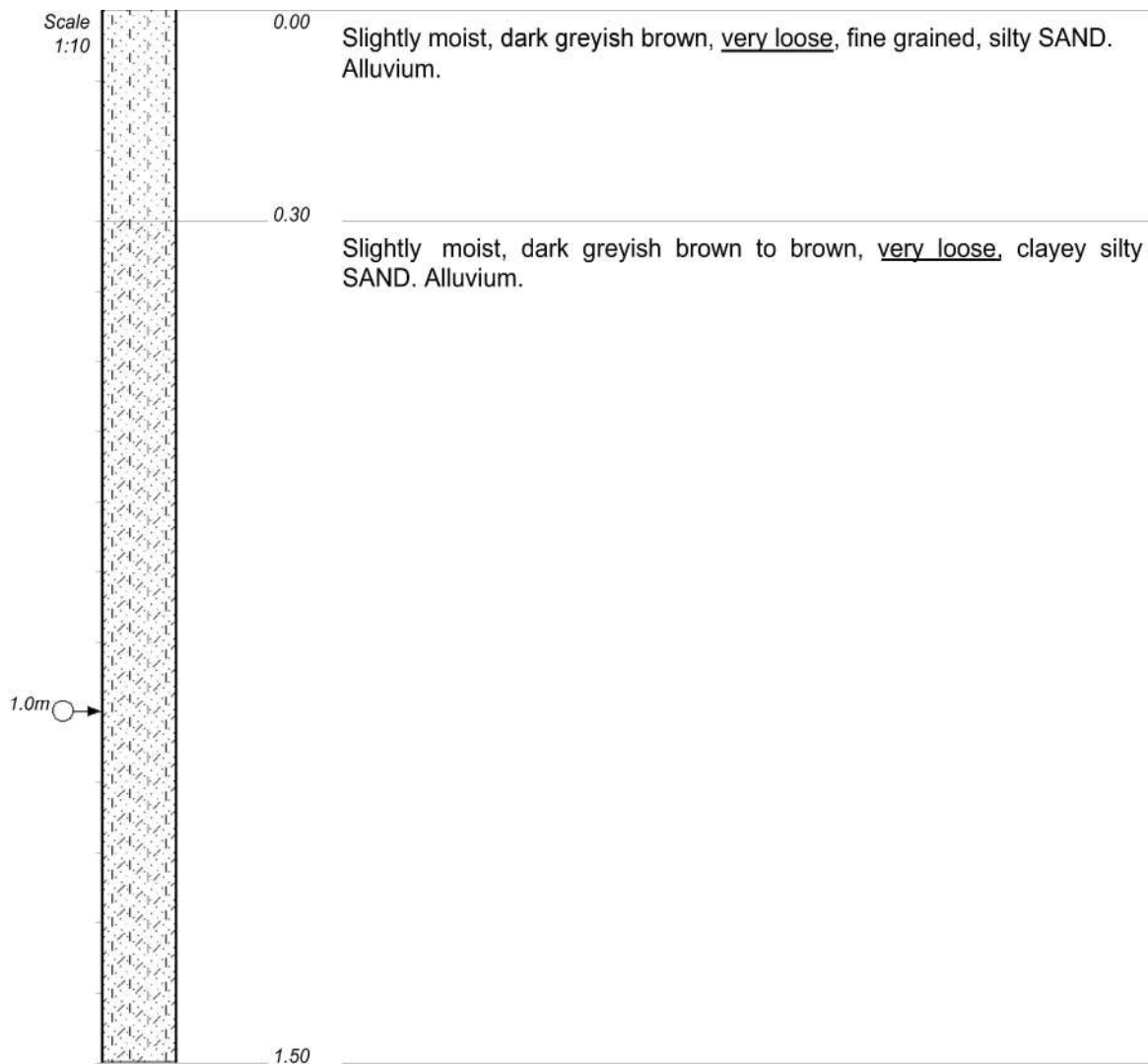
- 1) Final depth at 1.30m on weathered gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.40–0.80m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'17.22"S
Y-COORD : 031d37'3.40"E

HOLE No: IP7



NOTES

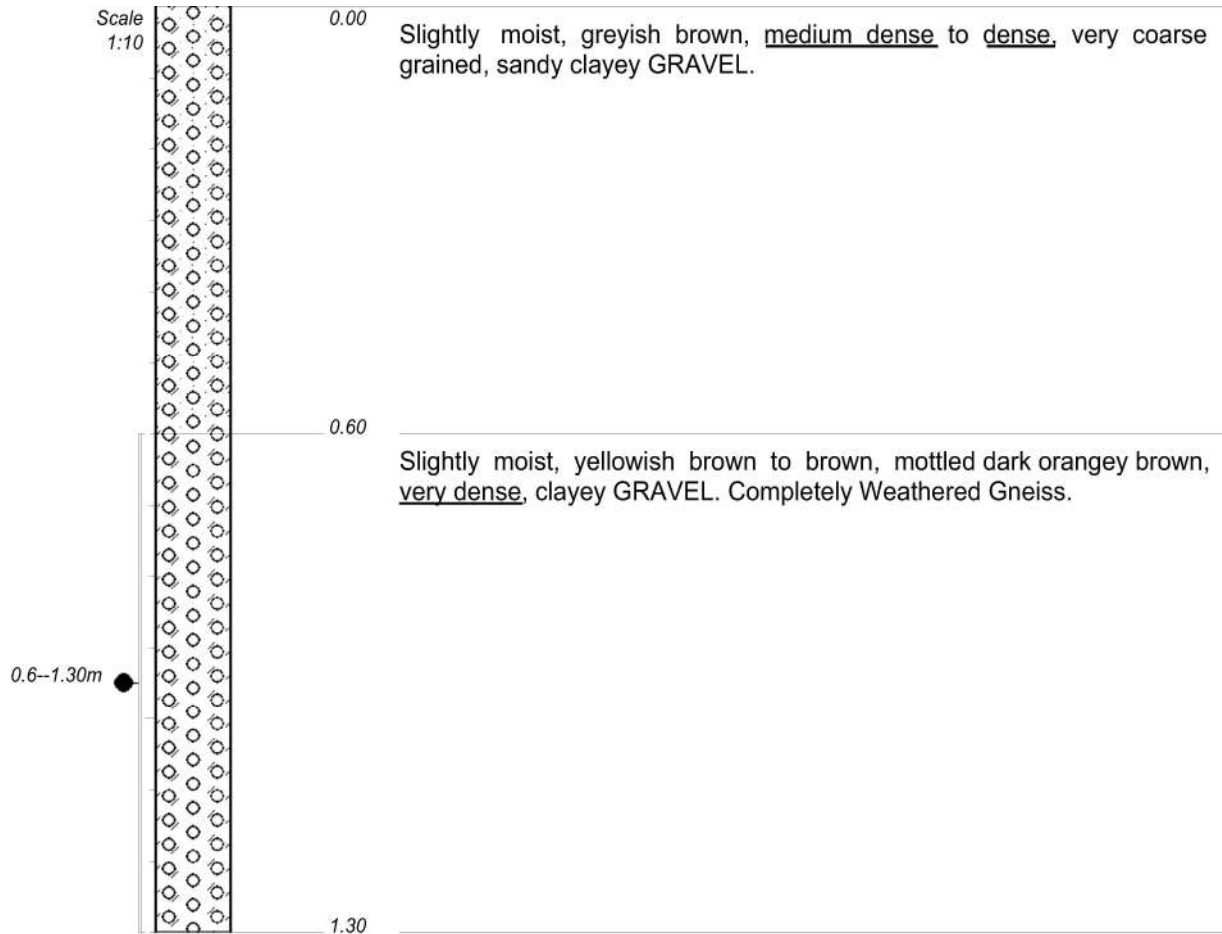
- 1) Final depth at 1.50m on alluvium.
- 2) Sidewall collapse below groundwater seepage.
- 3) Groundwater seepage @ 1.0m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'7.61"S
Y-COORD : 031d37'0.67"E

HOLE No: IP8



NOTES

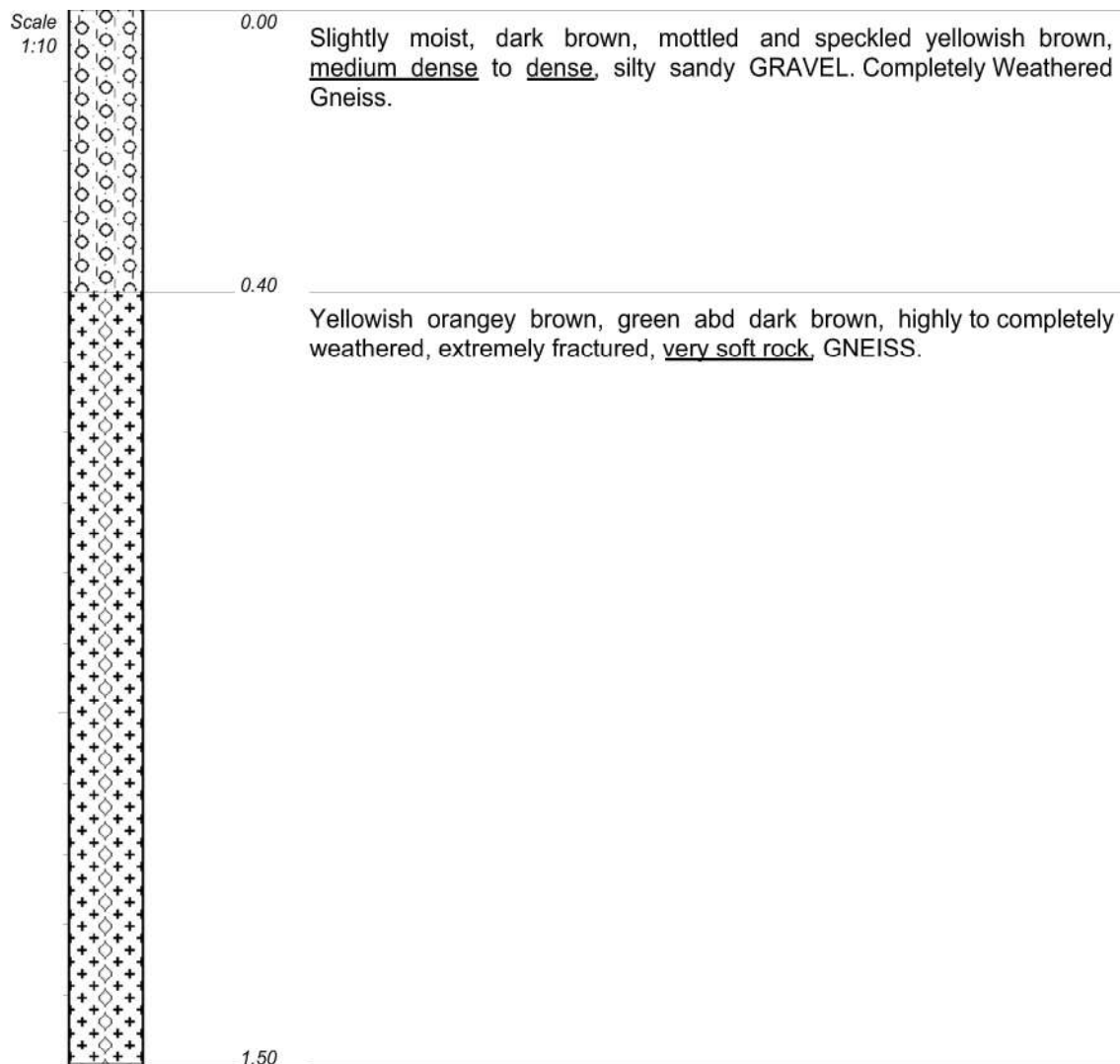
- 1) Final depth at 1.30m on weathered gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.6--1.30m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d42'51.34"S
Y-COORD : 031d37'0.34"E

HOLE No: IP9



NOTES

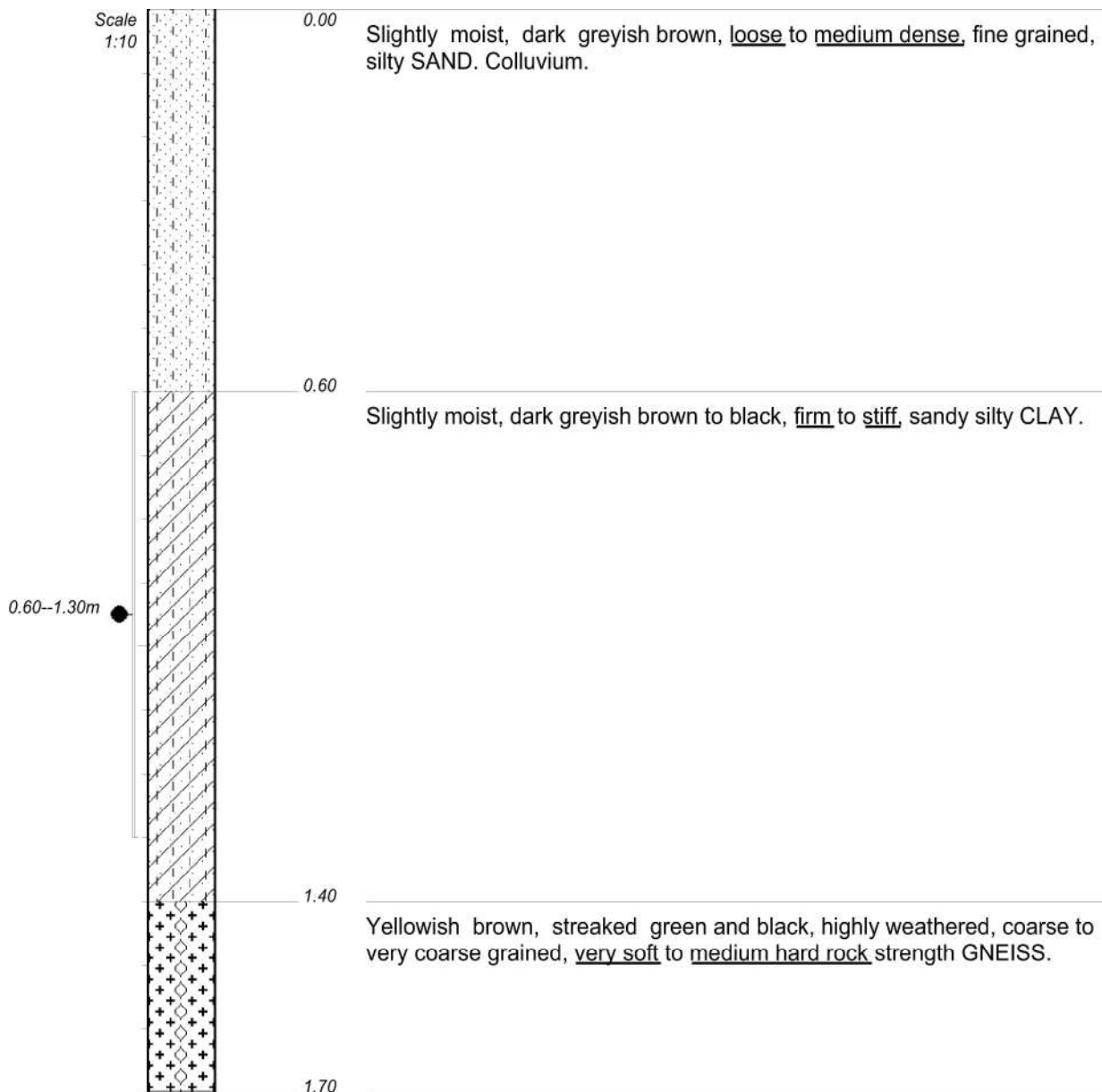
- 1) Final depth at 1.50m on weathered gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Smapled between 1.4--1.50m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d42'52.68"S
Y-COORD : 031d37'11.52"E

HOLE No: IP10



NOTES

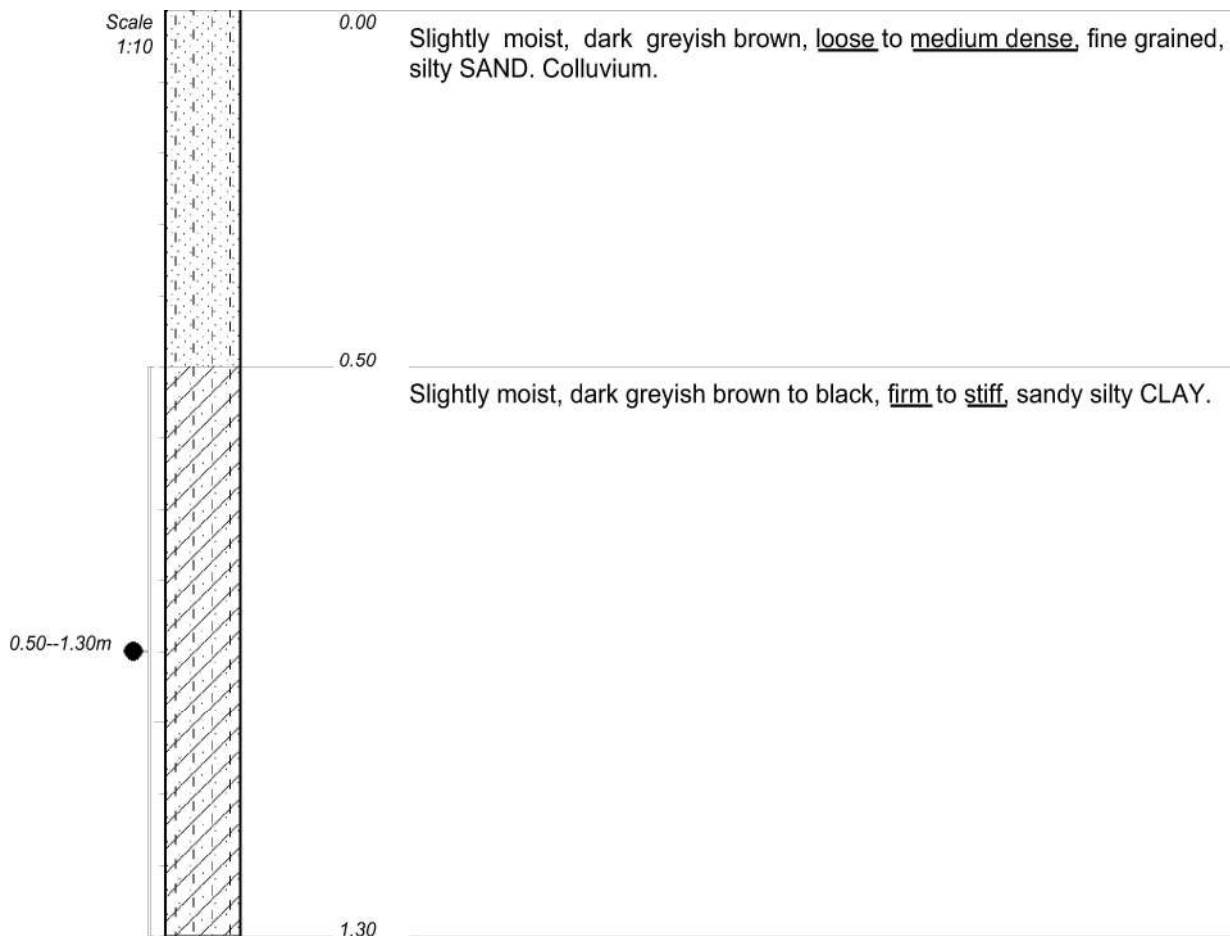
- 1) Refusal of a TLB machine at 1.70 on weathered gneiss.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.60--1.30m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'2.65"S
Y-COORD : 031d37'11.67"E

HOLE No: IP11



NOTES

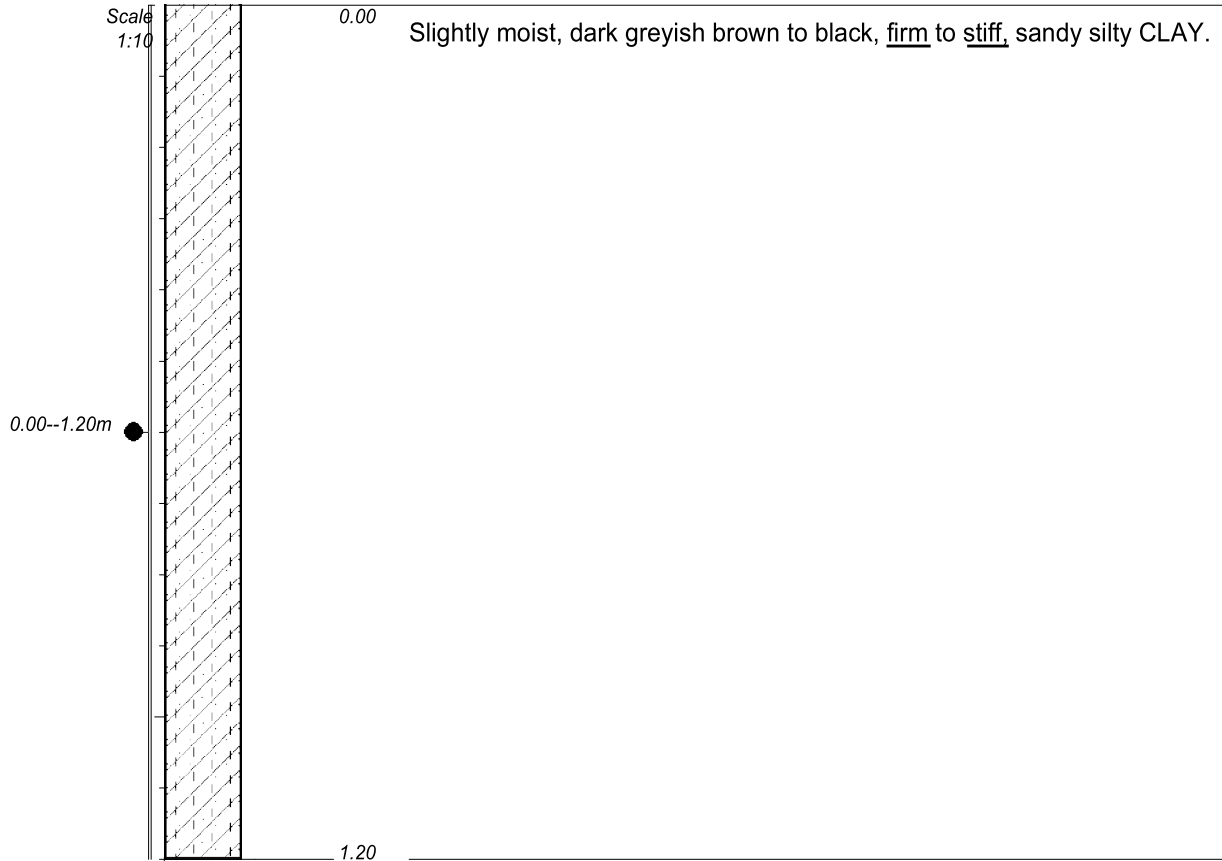
- 1) Final depth at 1.30m.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.50--1.30m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d43'7.51"S
Y-COORD : 031d37'11.96"E

HOLE No: IP12



NOTES

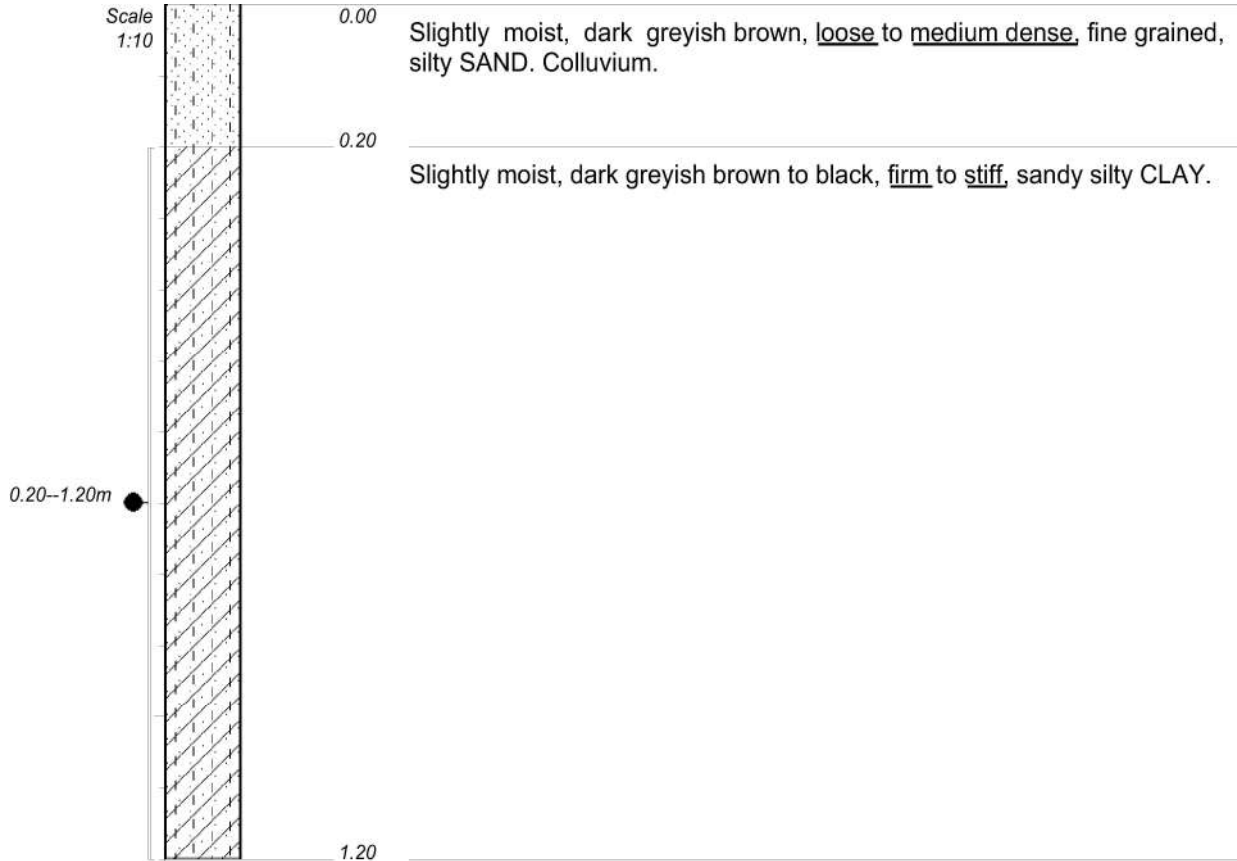
- 1) Final depth at 1.20m.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.00--1.20m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d42'58.59"S
Y-COORD : 031d37'20.78"E

HOLE No: IP13



NOTES

- 1) Final depth at 1.20m.
- 2) No sidewall collapse.
- 3) No groundwater seepage.
- 4) Sample taken between 0.20–1.20m.

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFIED BY : G. Ndlangamandla
TYPE SET BY : G. Ndlangamandla
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE : 22 January 2024
DATE : 05/02/2024 12:13
TEXT : ..oschfonteinRoad\LOGS.txt

ELEVATION :
X-COORD : 25d42'50.14"S
Y-COORD : 031d37'27.17"E

HOLE No: IP14

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

12. APPENDIX C: DYNAMIC CONE PENETROMETER TESTS

Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

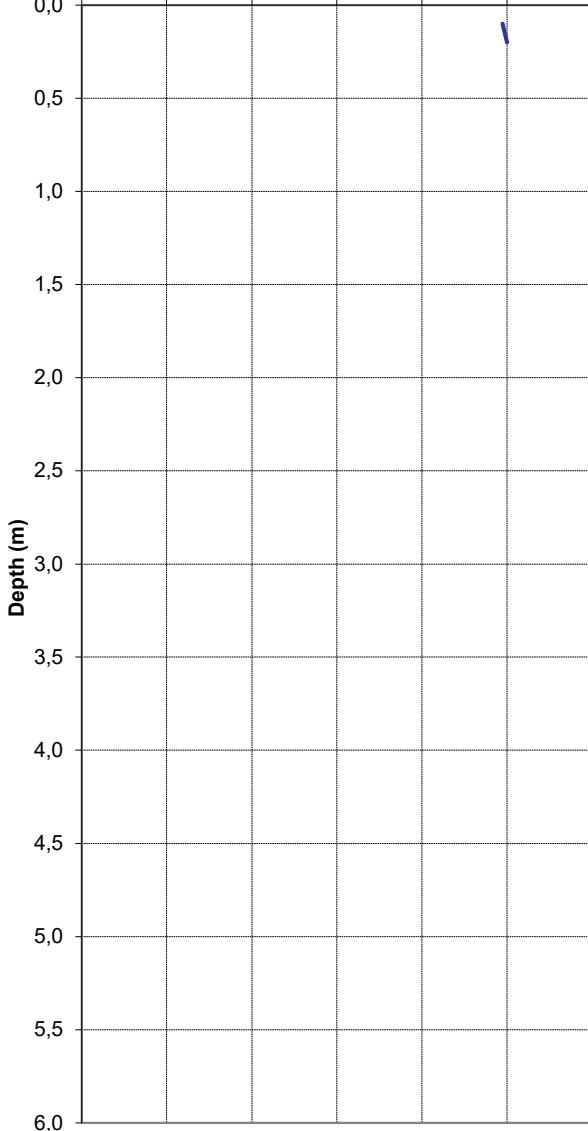
CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 1
--	----------------------


THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	99	V.V.Dense	>40 deg	>55
0,2	100	V.V.Dense	>40 deg	>55

Blows per 100mm

0 20 40 60 80 100 120



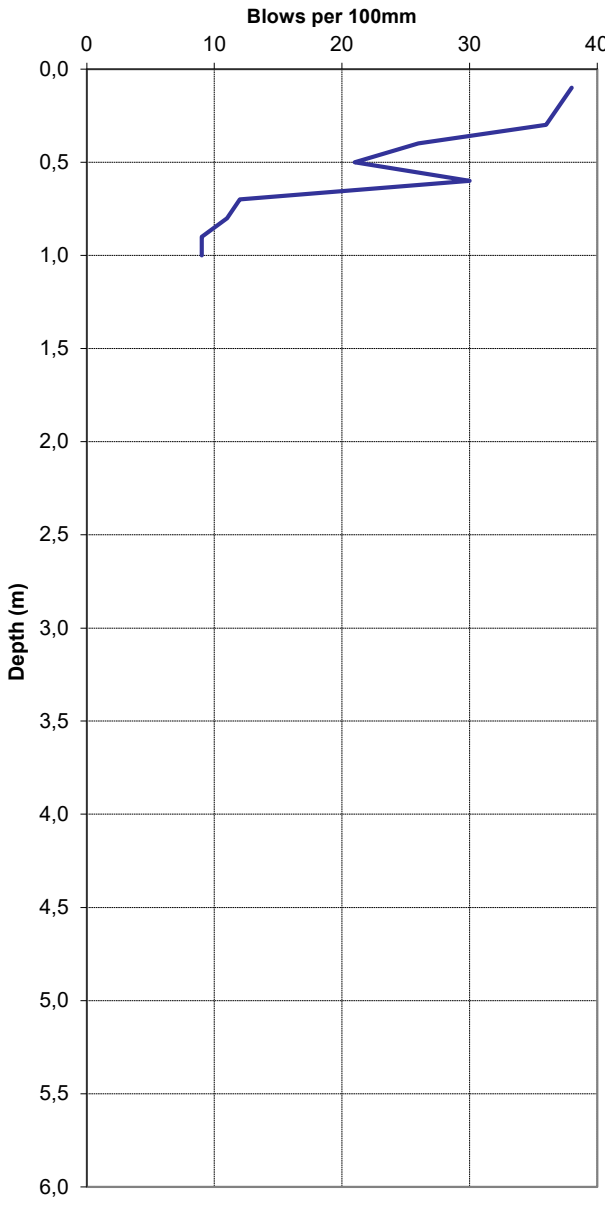
 <p>GEO-CALUZA^{(Pty) Ltd} CONSULTING ENGINEERS</p>	<p>54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349</p>
---	--


Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 2
--	----------------------

THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	38	V.Dense	>38 deg	>55
0,2	37	V.Dense	>38 deg	>55
0,3	36	V.Dense	>38 deg	>55
0,4	26	V.Dense	>38 deg	51
0,5	21	Dense	38 deg	40
0,6	30	V.Dense	>38 deg	>55
0,7	12	Dense	36 deg	21
0,8	11	Dense	36 deg	19
0,9	9	Med.Dense	35 deg	15
1,0	9	Med.Dense	35 deg	15



 GEO-CALUZA ^{(Pty) Ltd} CONSULTING ENGINEERS	54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349
--	--

Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

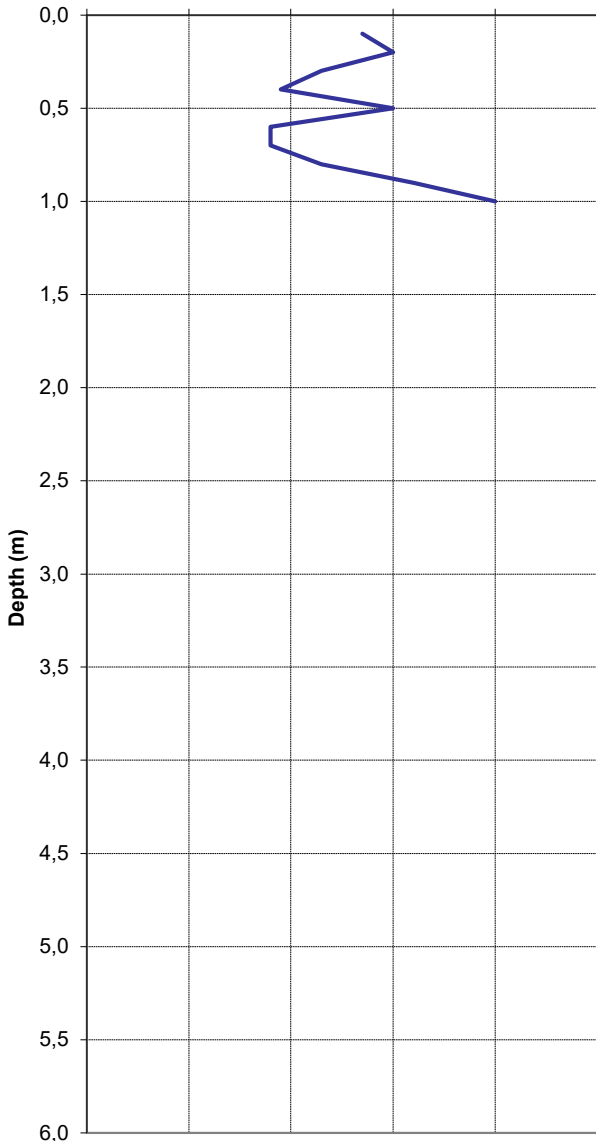
CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 3
--	-------------------------


THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	27	V.Dense	>38 deg	54
0,2	30	V.Dense	>38 deg	>55
0,3	23	Dense	38 deg	44
0,4	19	Dense	37 deg	35
0,5	30	V.Dense	>38 deg	>55
0,6	18	Dense	37 deg	33
0,7	18	Dense	37 deg	33
0,8	23	Dense	38 deg	44
0,9	32	V.Dense	>38 deg	>55
1,0	40	V.Dense	>38 deg	>55

Blows per 100mm

0 10 20 30 40 50



 <p>GEO-CALUZA^{(Pty) Ltd} CONSULTING ENGINEERS</p>	<p>54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349</p>
---	--

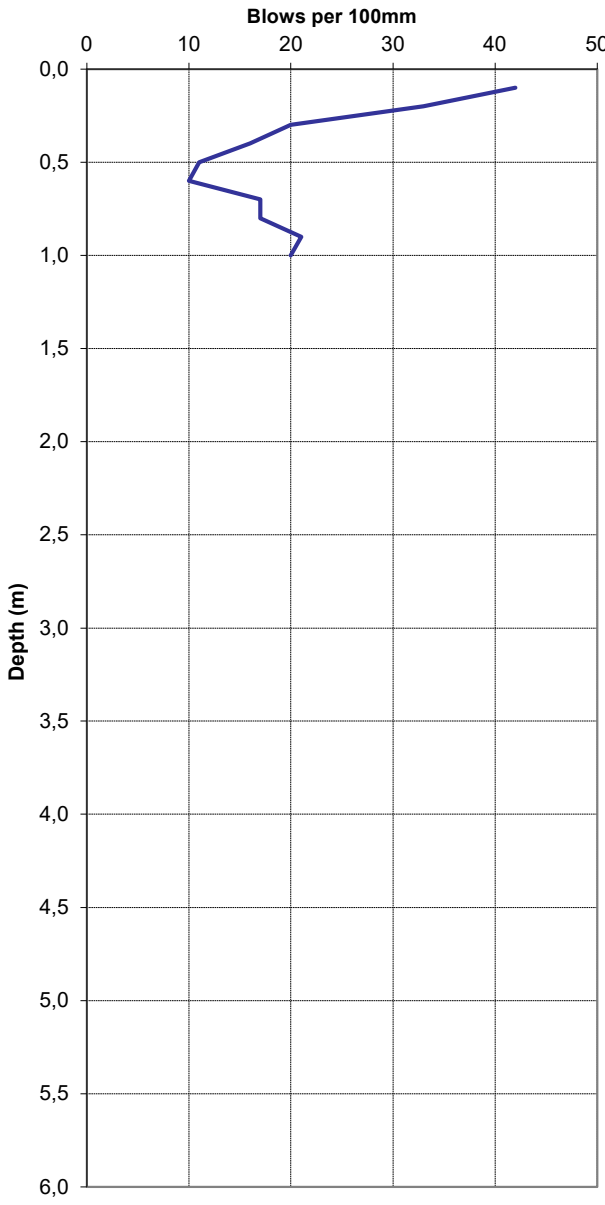
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 4
--	----------------------

THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	42	V.Dense	>38 deg	>55
0,2	33	V.Dense	>38 deg	>55
0,3	20	Dense	38 deg	37
0,4	16	Dense	37 deg	29
0,5	11	Dense	36 deg	19
0,6	10	Med.Dense	36 deg	17
0,7	17	Dense	37 deg	31
0,8	17	Dense	37 deg	31
0,9	21	Dense	38 deg	40
1,0	20	Dense	38 deg	37

Blows per 100mm



Depth (m)

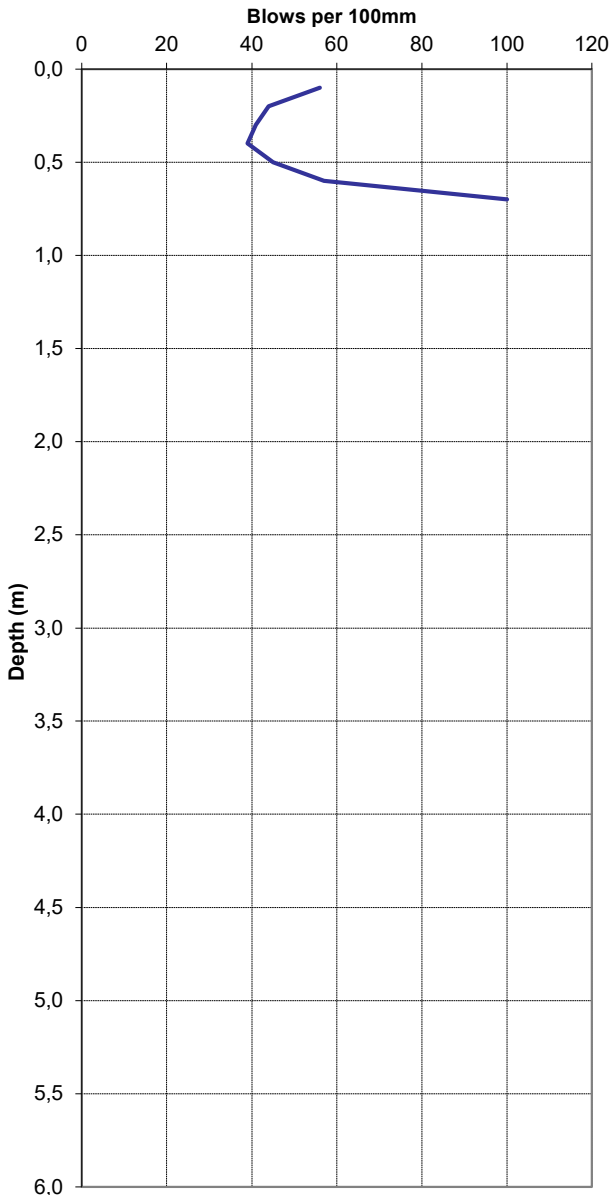
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 5
--	----------------------


THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	56	V.Dense	>38 deg	>55
0,2	44	V.Dense	>38 deg	>55
0,3	41	V.Dense	>38 deg	>55
0,4	39	V.Dense	>38 deg	>55
0,5	45	V.Dense	>38 deg	>55
0,6	57	V.Dense	>38 deg	>55
0,7	100	V.V.Dense	>40 deg	>55

Blows per 100mm



Depth (m)

 <p>GEO-CALUZA^{(Pty) Ltd} CONSULTING ENGINEERS</p>	<p>54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349</p>
---	--

Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamandla

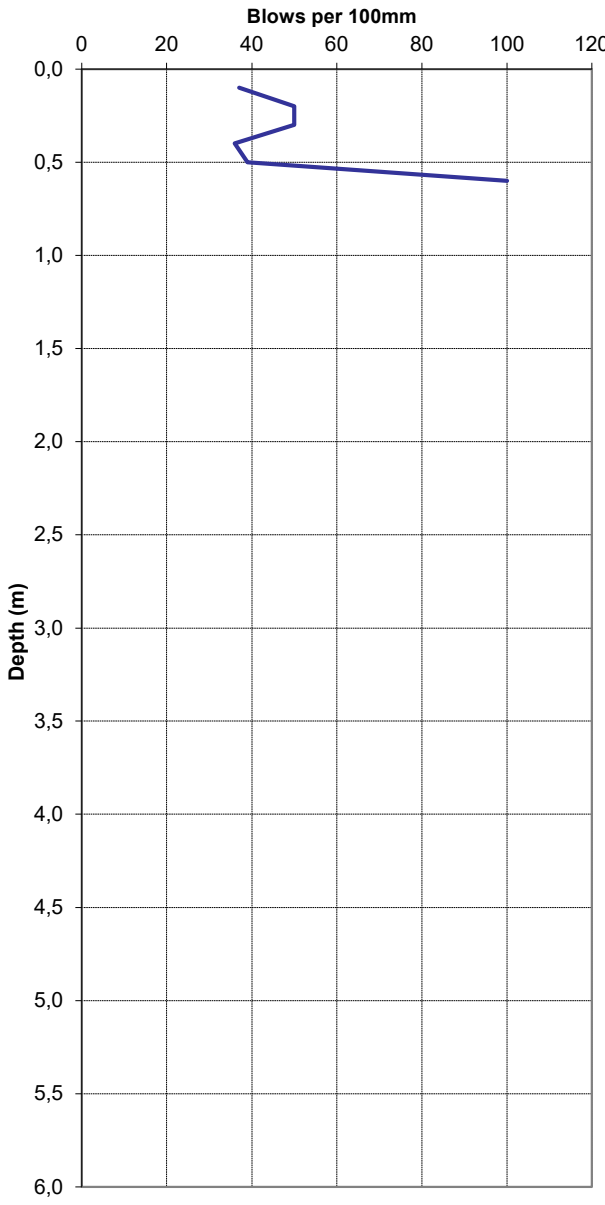
CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 5
--	----------------------

THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	37	V.Dense	>38 deg	>55
0,2	50	V.Dense	>38 deg	>55
0,3	50	V.Dense	>38 deg	>55
0,4	36	V.Dense	>38 deg	>55
0,5	39	V.Dense	>38 deg	>55
0,6	100	V.V.Dense	>40 deg	>55


Blows per 100mm

0 20 40 60 80 100 120



Depth (m)

0,0
0,5
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0

 <p>GEO-CALUZA^{(Pty) Ltd} CONSULTING ENGINEERS</p>	<p>54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349</p>
---	--

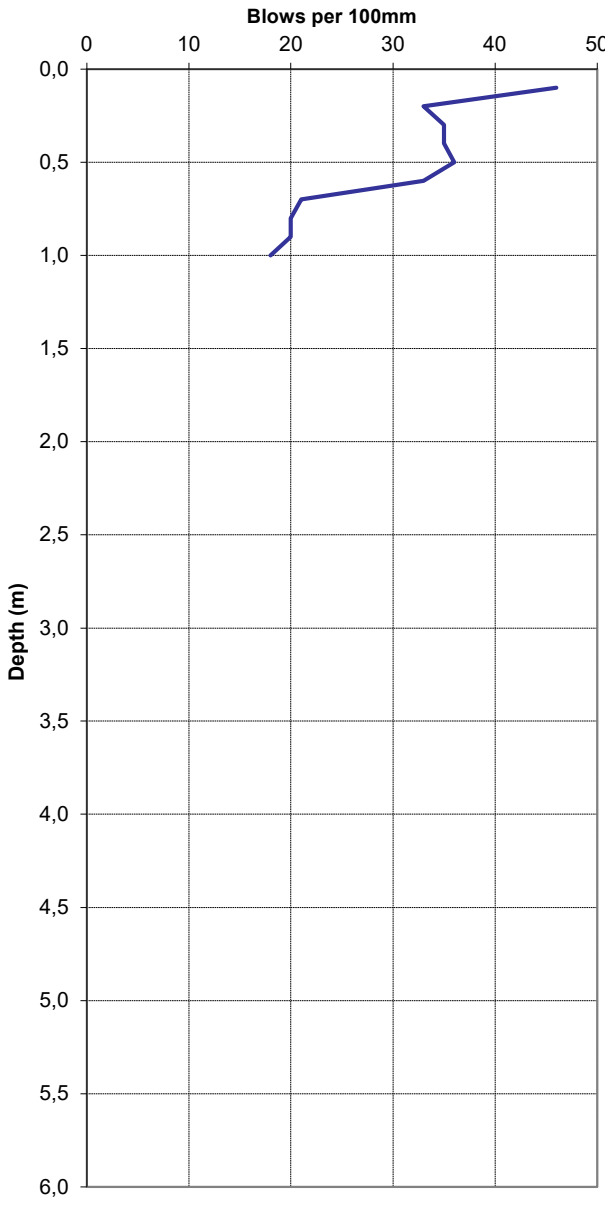
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 7
--	----------------------

THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	46	V.Dense	>38 deg	>55
0,2	33	V.Dense	>38 deg	>55
0,3	35	V.Dense	>38 deg	>55
0,4	35	V.Dense	>38 deg	>55
0,5	36	V.Dense	>38 deg	>55
0,6	33	V.Dense	>38 deg	>55
0,7	21	Dense	38 deg	40
0,8	20	Dense	38 deg	37
0,9	20	Dense	38 deg	37
1,0	18	Dense	37 deg	33

Blows per 100mm



Depth (m)

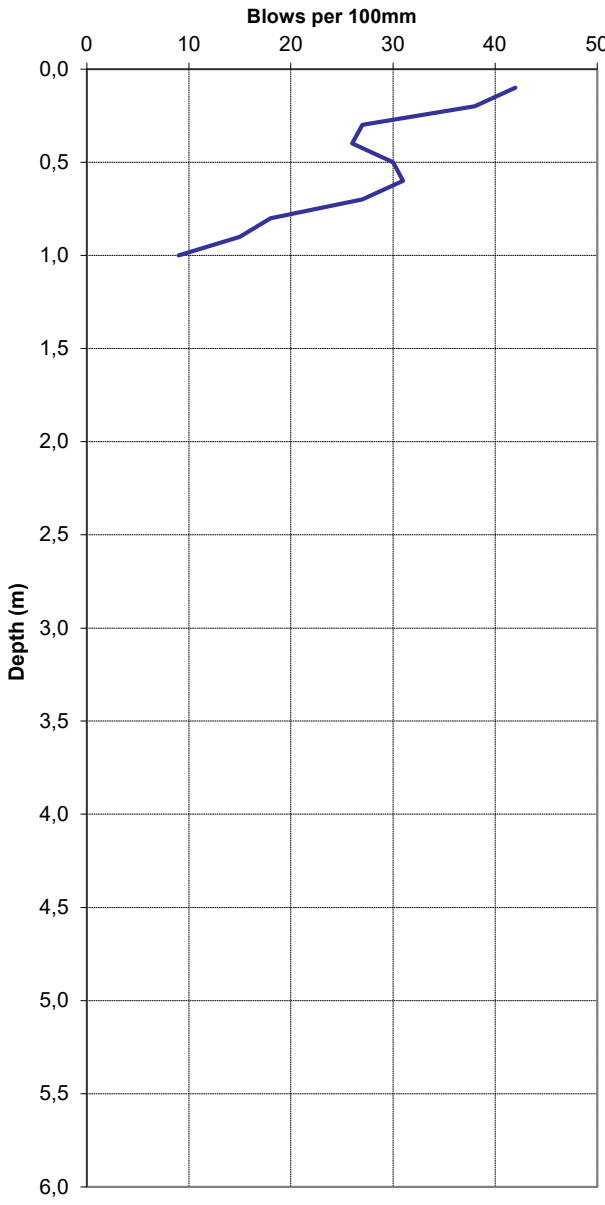
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda


CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 8
--	----------------------

THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	42	V.Dense	>38 deg	>55
0,2	38	V.Dense	>38 deg	>55
0,3	27	V.Dense	>38 deg	54
0,4	26	V.Dense	>38 deg	51
0,5	30	V.Dense	>38 deg	>55
0,6	31	V.Dense	>38 deg	>55
0,7	27	V.Dense	>38 deg	54
0,8	18	Dense	37 deg	33
0,9	15	Dense	37 deg	27
1,0	9	Med.Dense	35 deg	15

Depth (m)



 <p>GEO-CALUZA^{(Pty) Ltd} CONSULTING ENGINEERS</p>	<p>54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349</p>
---	--

Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

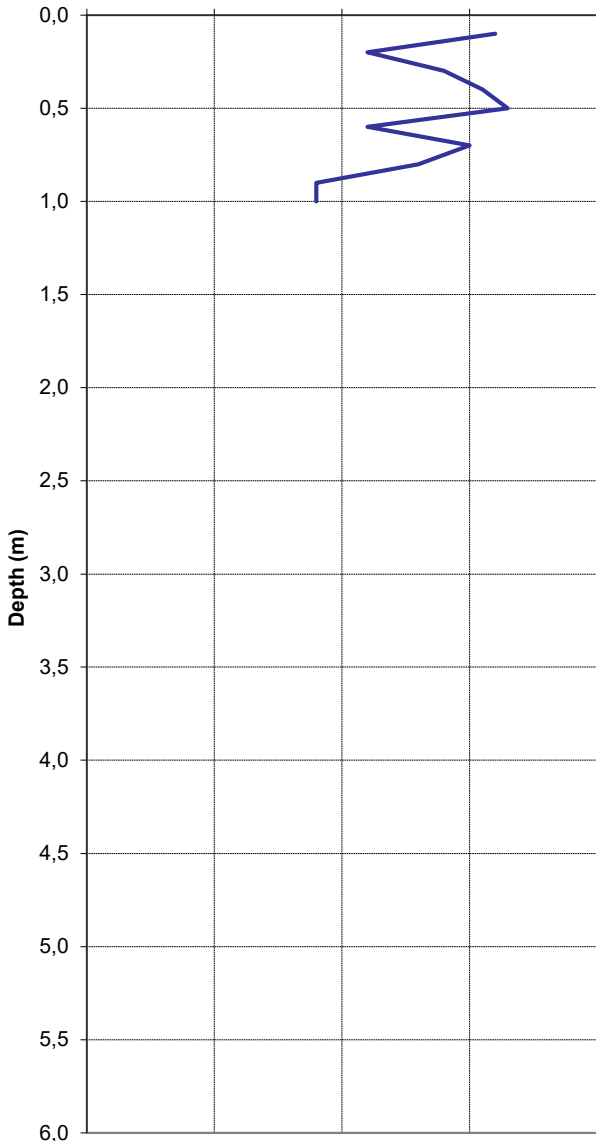
CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 8
--	----------------------


THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	32	V.Dense	>38 deg	>55
0,2	22	Dense	38 deg	42
0,3	28	V.Dense	>38 deg	>55
0,4	31	V.Dense	>38 deg	>55
0,5	33	V.Dense	>38 deg	>55
0,6	22	Dense	38 deg	42
0,7	30	V.Dense	>38 deg	>55
0,8	26	V.Dense	>38 deg	51
0,9	18	Dense	37 deg	33
1,0	18	Dense	37 deg	33

Blows per 100mm

0 10 20 30 40



 GEO-CALUZA ^{(Pty) Ltd} CONSULTING ENGINEERS	54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349
--	--

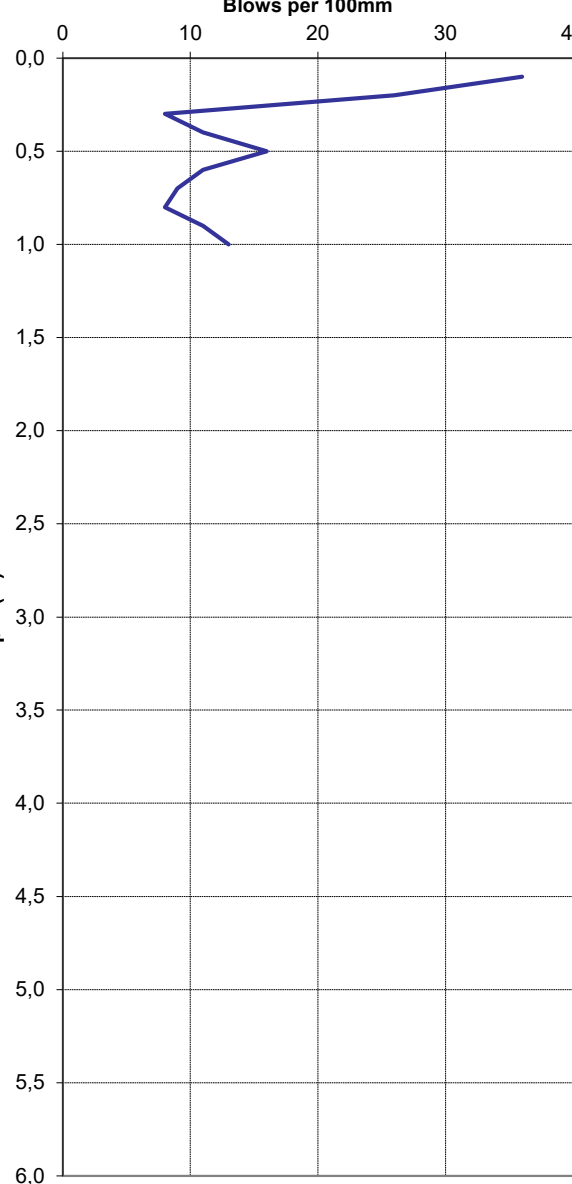
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 10
--	-----------------------


THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	36	V.Dense	>38 deg	>55
0,2	26	V.Dense	>38 deg	51
0,3	8	Med.Dense	35 deg	14
0,4	11	Dense	36 deg	19
0,5	16	Dense	37 deg	29
0,6	11	Dense	36 deg	19
0,7	9	Med.Dense	35 deg	15
0,8	8	Med.Dense	35 deg	14
0,9	11	Dense	36 deg	19
1,0	13	Dense	37 deg	23

Blows per 100mm



Depth (m)

 GEO-CALUZA ^{(Pty) Ltd} CONSULTING ENGINEERS	54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349
--	--

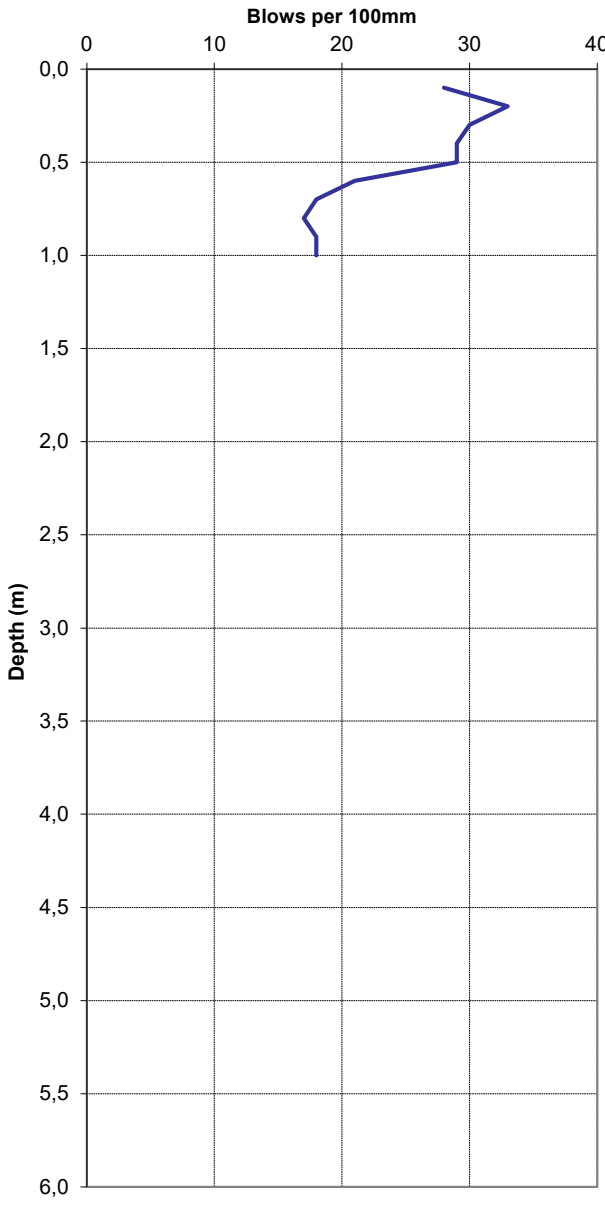
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlangamanda

CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 11
--	-----------------------


THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	28	V.Dense	>38 deg	>55
0,2	33	V.Dense	>38 deg	>55
0,3	30	V.Dense	>38 deg	>55
0,4	29	V.Dense	>38 deg	>55
0,5	29	V.Dense	>38 deg	>55
0,6	21	Dense	38 deg	40
0,7	18	Dense	37 deg	33
0,8	17	Dense	37 deg	31
0,9	18	Dense	37 deg	33
1,0	18	Dense	37 deg	33

Blows per 100mm



Depth (m)

 GEO-CALUZA ^{(Pty) Ltd} CONSULTING ENGINEERS	54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349
--	--

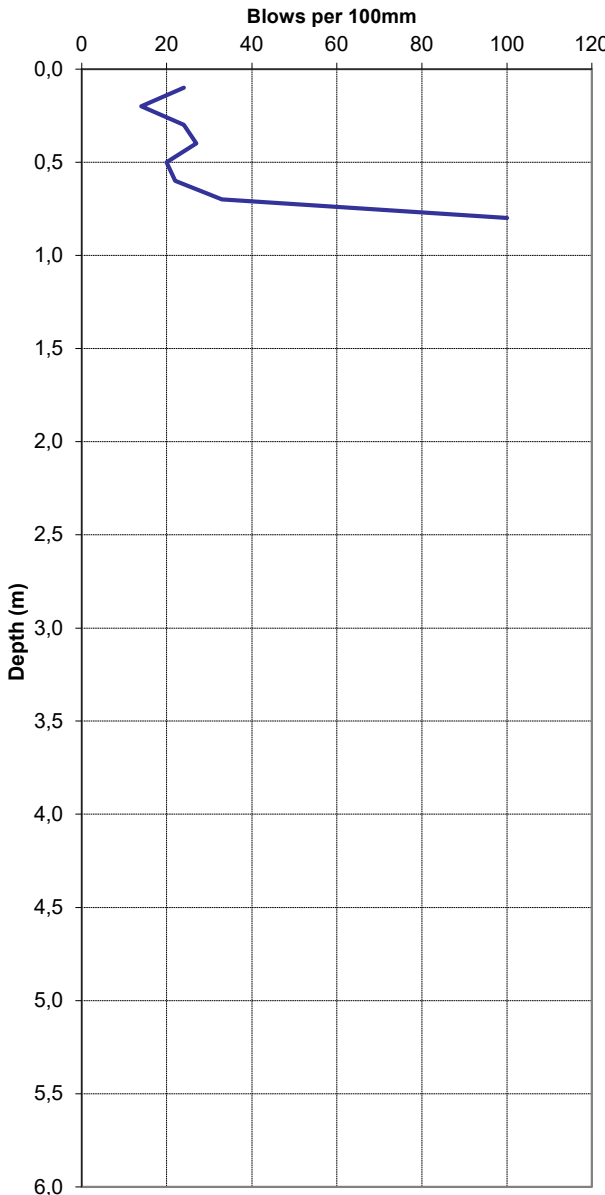
Client:	Mzolo Consulting Engineers & Project Managers	Ref. No.:	2024-012
Project:	Aniva/Boschfontein Roads	Date:	22/01/2024
Section:	Nkomazi Local Municipality	Operator:	G. Ndlamamanda


CBR DYNAMIC CONE PENETROMETER PROBE	TEST No DCP 12
--	-----------------------

THE STRENGTH AND CBR VALUES ARE EMPIRICAL AND DEPEND ON FACTORS SUCH AS MOISTURE CONTENT WHICH HAVE NOT BEEN DETERMINED. THEY ARE THEREFORE INDICATIVE AND SHOULD BE VERIFIED BY TEST OR OBSERVATION.

Depth (m)	Blows/100mm	Inferred Consistency	Shear Strength	CBR %
0,0				
0,1	24	Dense	38 deg	47
0,2	14	Dense	37 deg	25
0,3	24	Dense	38 deg	47
0,4	27	V.Dense	>38 deg	54
0,5	20	Dense	38 deg	37
0,6	22	Dense	38 deg	42
0,7	33	V.Dense	>38 deg	>55
0,8	100	V.V.Dense	>40 deg	>55

Blows per 100mm



 <p>GEO-CALUZA^{(Pty) Ltd} CONSULTING ENGINEERS</p>	<p>54 Bosse Street New Germany Pinetown 3610 Tel: (031) 701 1532 Fax: 086 618 7349</p>
---	--

EASBP FROM DCP, sand

Job Name Aniva/Boschfontein Roads

File No: 1

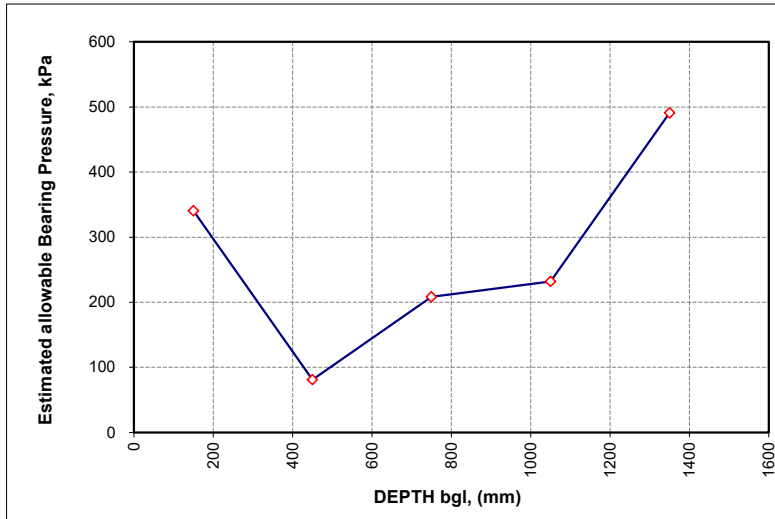
Job No: 2024-012

Date of Test: 22/01/2024



DPL No: 1 Location: Opposite IP8

note: EASBP from Terzaghi & Peck p. for 25mm settlement



Penetration Guide		
SPT mm/blow	DCP DN	Consistency
75-100	132-210	Very Dense
30-75	78-132	Dense
10-30	25-78	Med Dense
4-10	10 25	Loose
<4	<10	Very Loose

NOTE :

Stated consistencies
do not apply to
cohesive materials.
Describe using "stiff
or firm or soft".

Depth of hole in which DCP was taken : 0 mm below NGL

Applied Factor : 1 times Terzaghi's value

Remarks : Refusal depth at 1.5m

Reading No.	Layer From	Layer To	Average Layer Depth	DCP DN blows/300mm	Level Below NGL mm	DCP penetration mm/blow	Equiv. SPT N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	300	150	68	150	4	26	67	340
2	300	600	450	17	450	18	6	11	81
3	600	900	750	40	750	8	15	33	208
4	900	1200	1050	45	1050	7	17	39	232
5	1200	1500	1350	100	1350	3	38	110	491

EASBP FROM DCP, sand

Job Name: Aniva/Boschfontein Roads

File No: 1

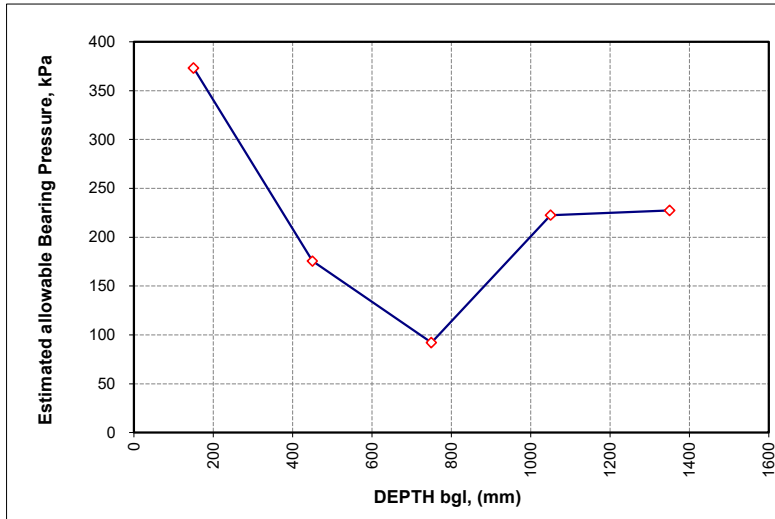
Job No: 2024-012

Date of Test: 22/01/2024



DPL No: Location:

note: **EASBP** from **Terzaghi & Peck p. for 25mm** settlement



Penetration Guide		
SPT mm/blow	DCP DN	Consistency
75-100	132-210	Very Dense
30-75	78-132	Dense
10-30	25-78	Med Dense
4-10	10 25	Loose
<4	<10	Very Loose

NOTE :
Stated consistencies
do not apply to
cohesive materials.
Describe using "stiff
or firm or soft".

Depth of hole in which DCP was taken : mm below NGL

Applied Factor : times Terzaghi's value

Remarks : Refusal depth at 1.5m

Reading No.	Layer From	Layer To	Average Layer Depth	DCP DN blows/300mm	Level Below NGL mm	DCP penetration mm/blow	Equiv. SPT N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	300	150	75	150	4	29	76	373
2	300	600	450	33	450	9	13	26	175
3	600	900	750	20	750	15	8	13	92
4	900	1200	1050	43	1050	7	16	36	223
5	1200	1500	1350	44	1350	7	17	38	227

EASBP FROM DCP, sand

Job Name: Aniva/Boschfontein Roads

File No: 1

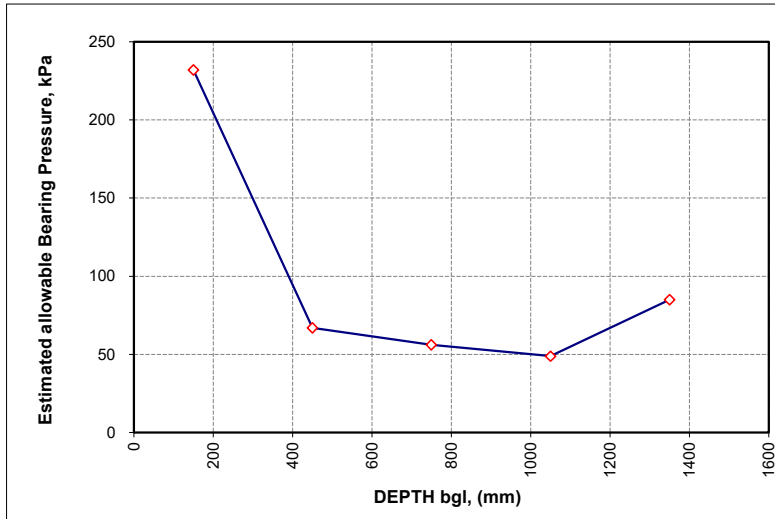
Job No: 2024-012

Date of Test: 22/01/2024



DPL No: 3 Location: Opposite IP11

note: EASBP from Terzaghi & Peck p for 25mm settlement



Penetration Guide		
SPT mm/blow	DCP DN	Consistency
75-100	132-210	Very Dense
30-75	78-132	Dense
10-30	25-78	Med Dense
4-10	10 25	Loose
<4	<10	Very Loose

NOTE :

Stated consistencies
do not apply to
cohesive materials.
Describe using "stiff
or firm or soft".

Depth of hole in which DCP was taken : 0 mm below NGL

Applied Factor : 1 times Terzaghi's value

Remarks : Refusal depth at 2.4m

Reading No.	Layer From	Layer To	Average Layer Depth	DCP DN blows/300mm	Level Below NGL mm	DCP penetration mm/blow	Equiv. SPT N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	300	150	45	150	7	17	39	232
2	300	600	450	13	450	23	5	8	67
3	600	900	750	10	750	30	4	5	56
4	900	1200	1050	8	1050	38	3	4	49
5	1200	1500	1350	18	1350	17	7	12	85
6	1500	1800	1650	15	1650	20	6	9	74
7	1800	2100	1950	30	1950	10	11	23	161
8	2100	2400	2250	100	2250	3	38	110	491

EASBP FROM DCP, sand

Job Name: Aniva/Boschfontein Roads

File No: 1

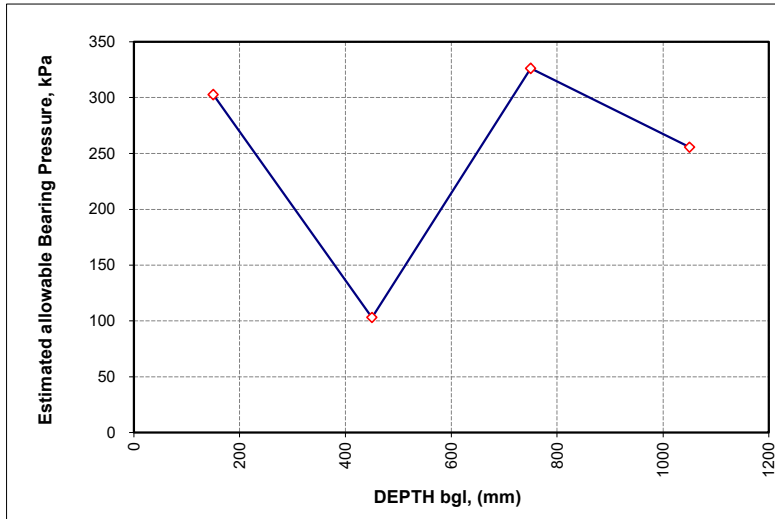
Job No: 2024-012

Date of Test: 22/01/2024



DPL No: 4 Location: Opposite IP11

note: EASBP from Terzaghi & Peck p. for 25mm settlement



Penetration Guide		
SPT mm/blow	DCP DN	Consistency
75-100	132-210	Very Dense
30-75	78-132	Dense
10-30	25-78	Med Dense
4-10	10 25	Loose
<4	<10	Very Loose

NOTE :

Stated consistencies
do not apply to
cohesive materials.
Describe using "stiff
or firm or soft".

Depth of hole in which DCP was taken : 0 mm below NGL

Applied Factor : 1 times Terzaghi's value

Remarks : Refusal depth at 1.2m

Reading No.	Layer From	Layer To	Average Layer Depth	DCP DN ows/300m	Level Below NGL mm	DCP enetratio mm/blow	Equiv. SPT N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	300	150	60	150	5	23	56	303
2	300	600	450	23	450	13	9	16	103
3	600	900	750	65	750	5	25	63	326
4	900	1200	1050	50	1050	6	19	44	256

REPORT TO MZOLO CONSULTING ENGINEERS AND PROJECT MANAGERS (PTY) LTD ON GEOTECHNICAL AND MATERIAL INVESTIGATION FOR THE PROPOSED UPGRADE AND REFURBISHMENT OF ROADS AND CULVERTS LOCATED AT ANIVA/BOSCHFONTEIN WITHIN NKOMAZI LOCAL MUNICIPALITY UNDER EHLANZENI DISTRICT MUNICIPALITY IN THE MPUMALANGA PROVINCE OF

Reference: 2024-012 Aniva/Boschfontein Roads	Date: 05 February 2024
--	------------------------

13. APPENDIX D: LABORATORY TEST RESULTS

PHEZULU GEOTECHNICAL CIVILS								GRAVEL, SOIL AND SAND ANALYSIS SUMMARY					
Client : Geo-Caluza Consulting Engineers										Date : 01-Feb-2024			
Contract : Aniva Street													
Sampled Position		IP 1	IP 2	IP 3	IP 4	IP 4	IP 5	IP 7	IP 9	IP 10	IP 11	IP 12	IP 13
Sample Number		241021/1	241021/2	241021/3	241021/4	241021/5	241021/6	241021/7	241021/8	241021/9	241021/10	241021/11	241021/12
Sample Depth (m)		0.70-1.0	0.30-1.0	0-0.90	0.17-0.80	0.80-1.0	0.80-1.30	0.40-0.80	0.60-1.30	0.40-1.50	0.60-1.0	0.50-1.0	0-1.0
Description (Unified Soil Classification)		drk Red. Orange Poorly graded silty Sand	drk Red. Brown silty Sand	drk Red. Orange silty Sand	drk Brown Poorly graded silty Sand	drk Red. Brown silty/clayey Sand	drk Brown silty Sand	drk Red. Orange clayey Sand	lt Olive clayey Sand	drk Brown Poorly graded silty Sand	drk Brown clayey Sand	drk Grey clayey Sand	drk Red. Brown Poorly graded silty Sand
Sieve Analysis	Sieve Size (mm)	PERCENTAGE PASSING (%)											
	100												
	75.0												100
	63.0				100								97
	50.0				99			100		100			95
	37.5	100		100	97	100		99	100	99			94
	28.0	98		98	95	99		98	98	99			91
	20.0	97		98	93	99		97	97	96			90
	14.0	91	100	94	89	95		95	96	90		100	82
	5.0	75	99	88	78	83	100	85	87	69	100	98	59
	2.0	59	90	81	67	69	99	77	74	54	98	92	47
0.425	40	57	62	39	48	54	68	53	40	74	68	34	
0.075	12	19	19	12	20	13	31	26	9	41	41	10	
Atterberg Limits	Grading Modulus	1.90	1.30	1.40	1.80	1.60	1.40	1.20	1.50	2.00	0.90	1.00	2.10
	Liquid Limit					27		31	29		32	36	
	Plasticity Index	NP	NP	NP	NP	6	NP	10	9	NP	14	15	SP
	Linear Shrinkage	0.0	0.0	0.0	0.0	2.3	0.0	4.6	4.0	0.0	6.5	7.2	0.3
Modified AASHTO		-	2095	2140	-	-	1970	1977	1961	2069	-	-	-
Optimum Moisture Content (%)		-	7.1	6.2	-	-	7.1	10.4	9.8	7.1	-	-	-
CBR Values & UCS	CBR / UCS (Mpa)	-	CBR	CBR	-	-	CBR	CBR	CBR	CBR	-	-	-
	100	-	59	57	-	-	33	16	24	85	-	-	-
	97	-	38	39	-	-	22	11	17	55	-	-	-
	95	-	28	30	-	-	17	9	14	42	-	-	-
	93	-	22	22	-	-	13	6	10	31	-	-	-
	90	-	15	14	-	-	9	4	6	20	-	-	-
Classification	Unified Soil	sp/sm	SM(d)	SM(d)	sp/sm	sm/sc	SM(d)	SC	SC	sp/sm	SC	SC	sp/sm
	COLTO: 1998	N/A	G6	G6	N/A	N/A	G8	<G9	G8	G6	N/A	N/A	N/A
	U.S Highway	A-1-b	A-2-4	A-2-4	A-1-b	A-1-b	A-2-4	A-2-4	A-2-4	A-1-b	A-6	A-6	A-1-b
	Group index	0	0	0	0	0	0	0	0	0	2	3	0

PHEZULU GEOTECHNICAL CIVILS							GRAVEL, SOIL AND SAND ANALYSIS SUMMARY						
Client : Geo-Caluza Consulting Engineers										Date : 01-Feb-2024			
Contract : Aniva Street													
Sampled Position		IP 14	-	-	-	-	-	-	-	-	-	-	-
Sample Number		241021/13	-	-	-	-	-	-	-	-	-	-	-
Sample Depth (m)		0.20-1.0	-	-	-	-	-	-	-	-	-	-	-
Description (Unified Soil Classification)		drk Red. Orange Poorly graded silty Sand	-	-	-	-	-	-	-	-	-	-	-
Sieve Analysis	Sieve Size (mm)	PERCENTAGE PASSING (%)											
	100		-	-	-	-	-	-	-	-	-	-	-
	75.0		-	-	-	-	-	-	-	-	-	-	-
	63.0		-	-	-	-	-	-	-	-	-	-	-
	50.0		-	-	-	-	-	-	-	-	-	-	-
	37.5	100	-	-	-	-	-	-	-	-	-	-	-
	28.0	99	-	-	-	-	-	-	-	-	-	-	-
	20.0	96	-	-	-	-	-	-	-	-	-	-	-
	14.0	93	-	-	-	-	-	-	-	-	-	-	-
	5.0	81	-	-	-	-	-	-	-	-	-	-	-
	2.0	63	-	-	-	-	-	-	-	-	-	-	-
0.425	37	-	-	-	-	-	-	-	-	-	-	-	
0.075	11	-	-	-	-	-	-	-	-	-	-	-	
Atterberg Limits	Grading Modulus	1.90	-	-	-	-	-	-	-	-	-	-	-
	Liquid Limit		-	-	-	-	-	-	-	-	-	-	-
	Plasticity Index	NP	-	-	-	-	-	-	-	-	-	-	-
	Linear Shrinkage	0.0	-	-	-	-	-	-	-	-	-	-	-
Modified AASHTO		-	-	-	-	-	-	-	-	-	-	-	-
Optimum Moisture Content (%)		-	-	-	-	-	-	-	-	-	-	-	-
CBR Values & UCS	CBR / UCS (Mpa)	-	-	-	-	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-	-	-	-	-
	97	-	-	-	-	-	-	-	-	-	-	-	-
	95	-	-	-	-	-	-	-	-	-	-	-	-
	93	-	-	-	-	-	-	-	-	-	-	-	-
	90	-	-	-	-	-	-	-	-	-	-	-	-
Classification	Unified Soil	sp/sm	-	-	-	-	-	-	-	-	-	-	-
	COLTO: 1998	N/A	-	-	-	-	-	-	-	-	-	-	-
	U.S Highway	A-1-b	-	-	-	-	-	-	-	-	-	-	-
	Group index	0	-	-	-	-	-	-	-	-	-	-	-

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

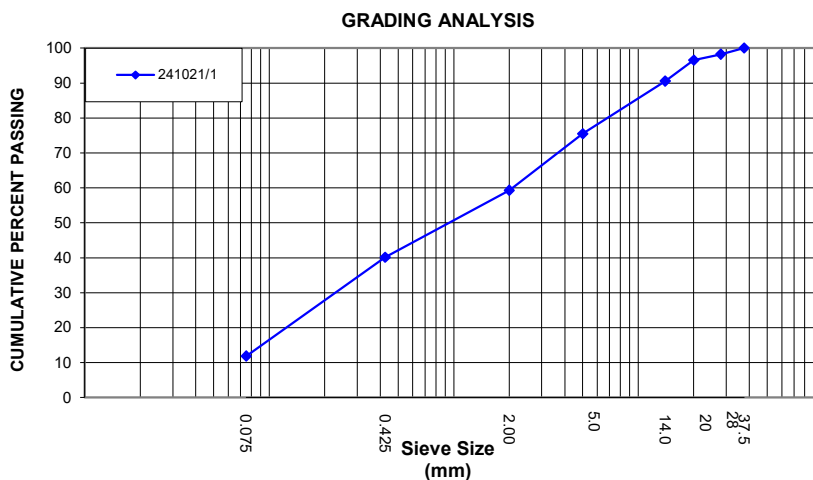
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP1 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.70-1.0		
Sample Number:	241021/1		
Description (Unified Soil Classification)	drk Red. Orange Poorly graded silty Sand	Doc No:	241021/1(i)

Sieve Analysis

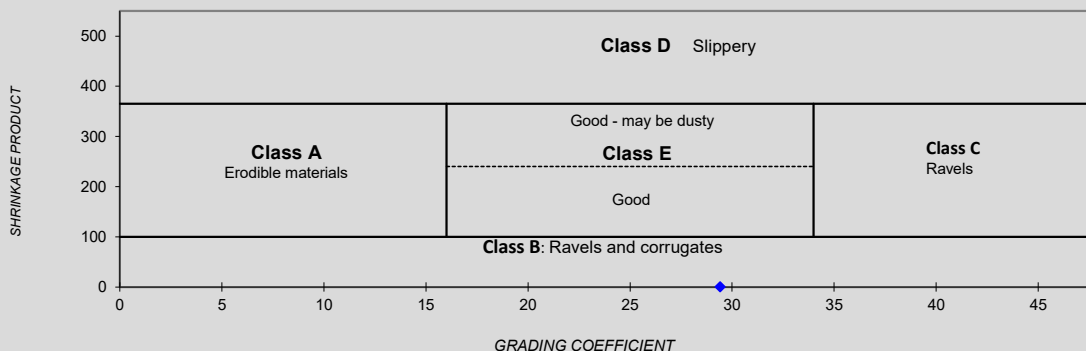
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	100
	28.0	98
	20.0	97
	14.0	91
	5.0	75
	2.0	59
	0.425	40
	0.075	12
Grading Modulus (G.M)		1.9
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	sp/sm
	COLTO: 1998	N/A
	U.S Highway	A-1-b
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	2083	25.0	0	0	29.4

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
32%	48%	20%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlathathi

Signature: [Signature]

Xolani Nhlathathi
co-Xolani Nhlathathi, o-Phezulu Geotechnical Civils, ou-Technical
Department, email=xolani@phezulugc.co.za, c-ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

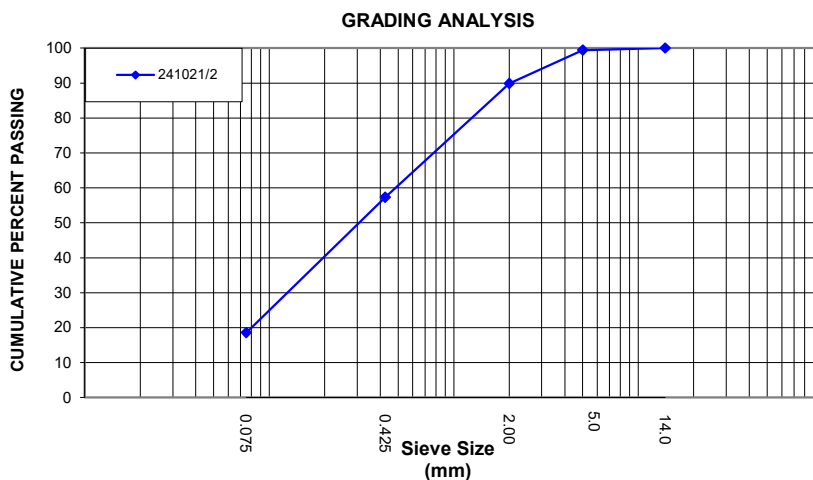
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza Consulting	Date Sampled:	23-Jan-2024
Client Address:	-	Date Recieved:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP2 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.30-1.0		
Sample Number:	241021/2		
Description (Unified Soil Classification)	drk Red. Brown silty Sand	Doc No:	241021/2(i)

Sieve Analysis

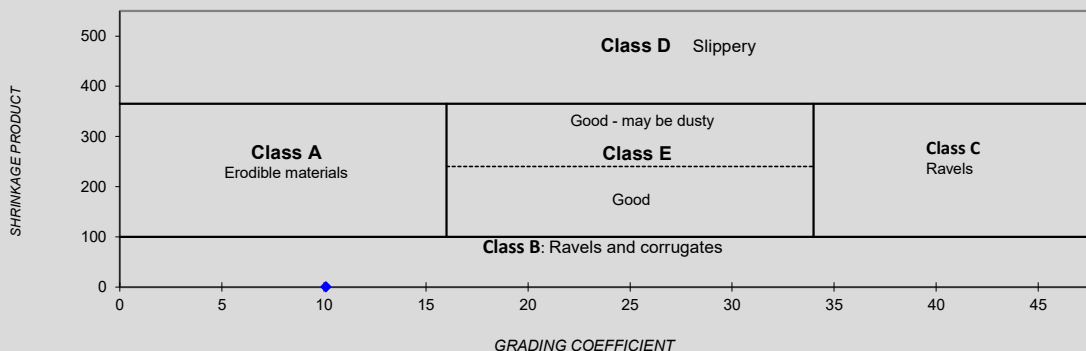
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	
	28.0	
	20.0	
	14.0	100
	5.0	99
	2.0	90
	0.425	57
	0.075	19
Grading Modulus (G.M)		1.3
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	SM(d)
	COLTO: 1998	G6
	U.S Highway	A-2-4
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	483	32.4	0	0	10.1

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
36%	43%	21%

Sample tested at Mbombela (Nelspruit) and prepared using Crushing method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Xolani Nhlabathi
c/o-Kolani Nhlabathi, o-Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



Phezulu Geotechnical Civils



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Client Name: **Geocaluza Consulting**

Contract Name: **Aniva Street**

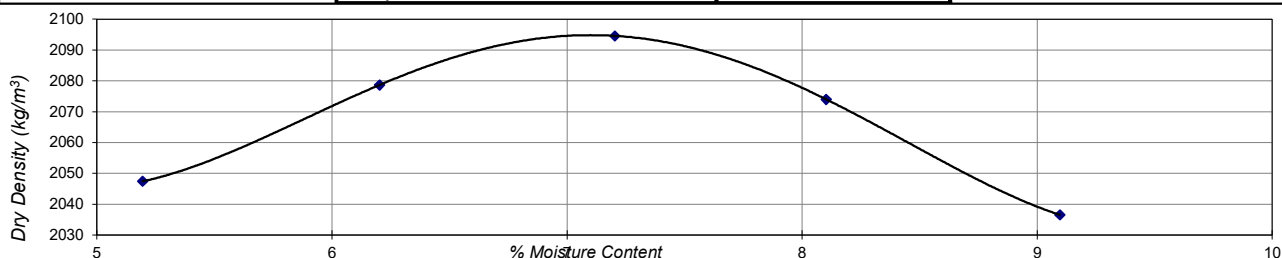
Date Tested: **24-Jan-2024**

Date Received: **23-Jan-2024**

Description: **Material sampled from IP2 sampled by Phezulu Geotechnical Civils**

Sample No: **241021/2**

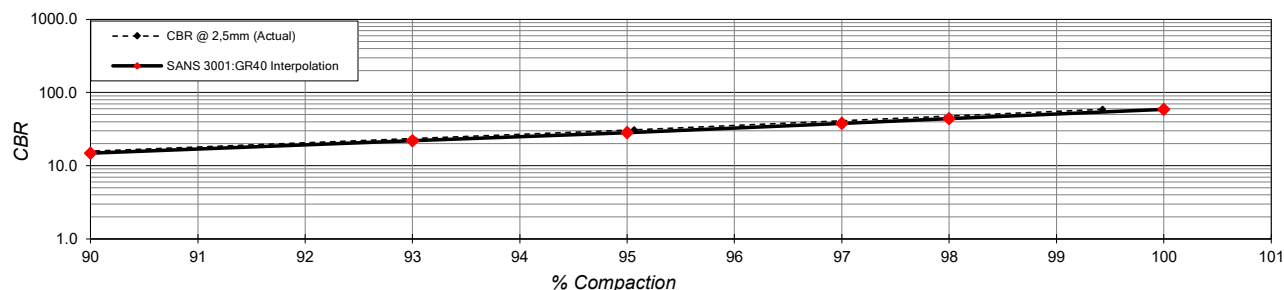
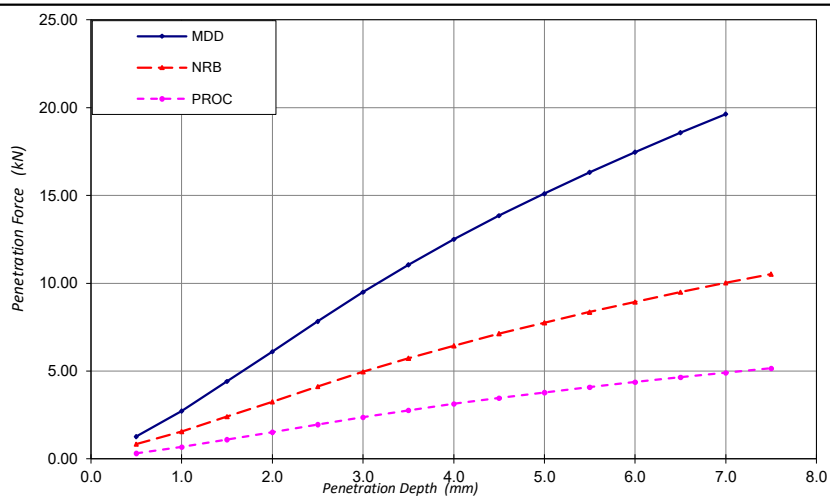
Maximum Dry Density =	2095	kg/m³
Optimum Moisture Content =	7.1	%



CALIFORNIA BEARING RATIO (CBR)

California Bearing Ratio Penetration Readings & Graphs

Pen. Depth (mm)	Penetration (kN)		
	MDD	NRB	PROC
0.5	1.28	0.84	0.32
1.0	2.72	1.56	0.68
1.5	4.41	2.41	1.10
2.0	6.10	3.25	1.53
2.5	7.83	4.12	1.96
3.0	9.49	4.95	2.37
3.5	11.05	5.73	2.76
4.0	12.50	6.45	3.13
4.5	13.85	7.13	3.46
5.0	15.10	7.75	3.78
5.5	16.32	8.36	4.08
6.0	17.47	8.93	4.37
6.5	18.58	9.49	4.65
7.0	19.63	10.02	4.91
7.5	20.63	10.52	5.16
8.0	21.62	10.99	5.41
8.5	22.51	11.46	5.63
9.0	23.29	11.85	5.82



Compaction (%)	CBR of 13,3N
100	59
98	44
97	38
95	28
93	22
90	15

Briquette Analysis

% Compaction of MDD:	99.4%	95.1%	89.5%
Dry Density (kg/m³):	2083	1992	1874
Compaction Moisture (%):	7.2	7.2	7.2
Swell (%):	0.0	0.0	0.1

Sample tested at Mbombela (Nelspruit)
and prepared using Crushing method

REMARKS:

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01

Technical Signatory (Name): X.R Nhlabathi

Signature: _____

Xolani Nhlabathi
c/o-Xolani Nhlabathi, o/Phezulu Geotechnical Civils, o/u-Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

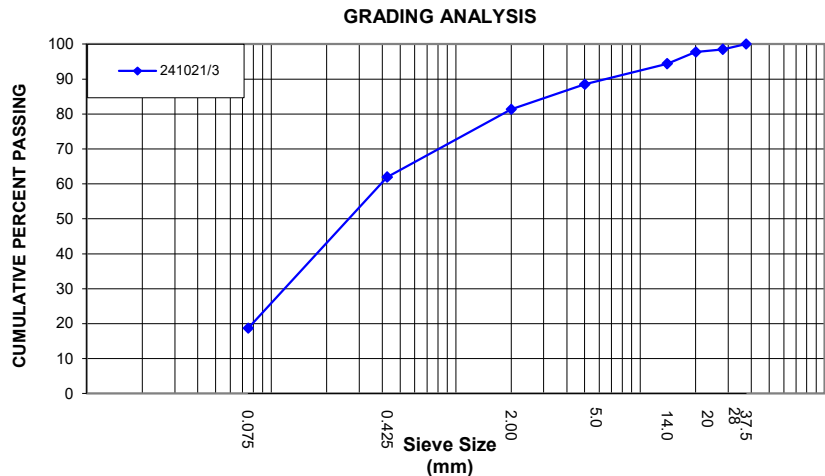
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza Consulting	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP3 sampled by Client		
Sampled Depth:	0-0.90		
Sample Number:	241021/3		
Description (Unified Soil Classification)	drk Red. Orange silty Sand	Doc No:	241021/3(i)

Sieve Analysis

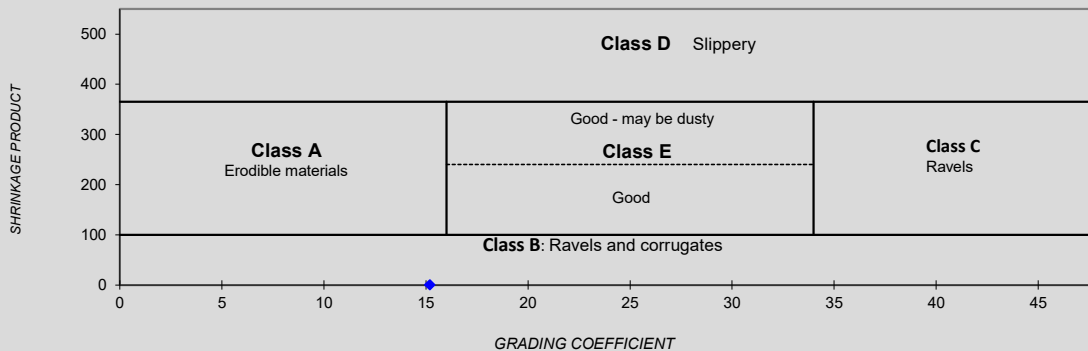
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	100
	28.0	98
	20.0	98
	14.0	94
	5.0	88
	2.0	81
	0.425	62
	0.075	19
Grading Modulus (G.M)		1.4
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	SM(d)
	COLTO: 1998	G6
	U.S Highway	A-2-4
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	393	35.4	0	0	15.2

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
24%	53%	23%

Sample tested at Mbombela (Nelspruit) and prepared using Crushing method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:

Xolani Nhlabathi
c/o-Kolani Nhlabathi, o-Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



Phezulu Geotechnical Civils



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Client Name: **Geocaluza Consulting**

Contract Name: **Aniva Street**

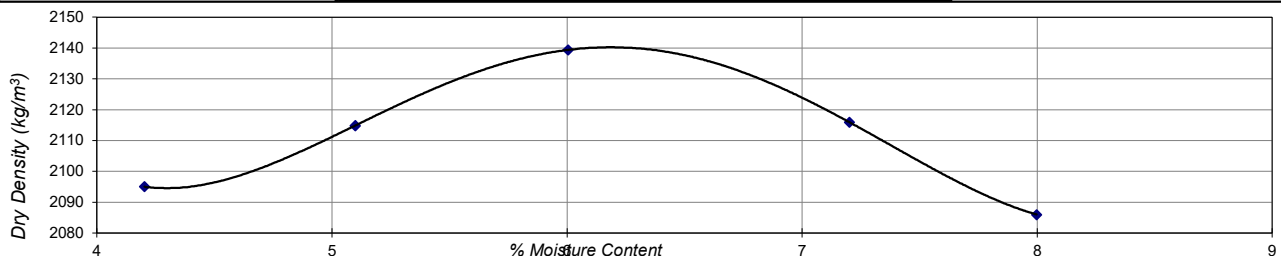
Date Tested: **24-Jan-2024**

Date Received: **23-Jan-2024**

Description: **Material sampled from IP3 sampled by Client**

Sample No: **241021/3**

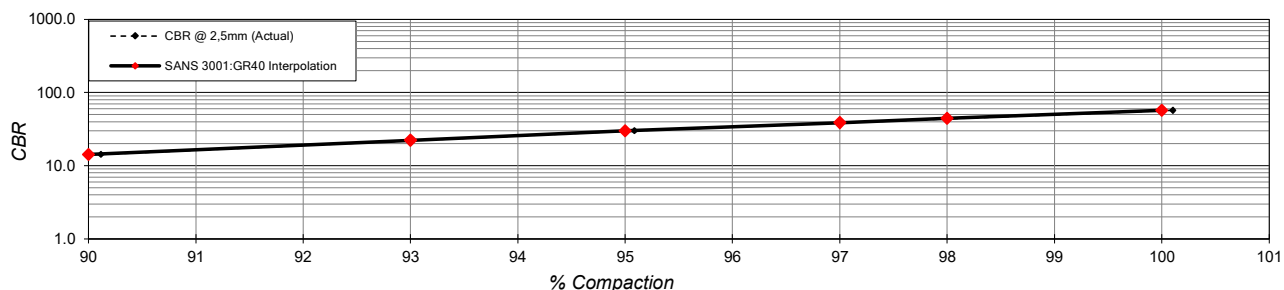
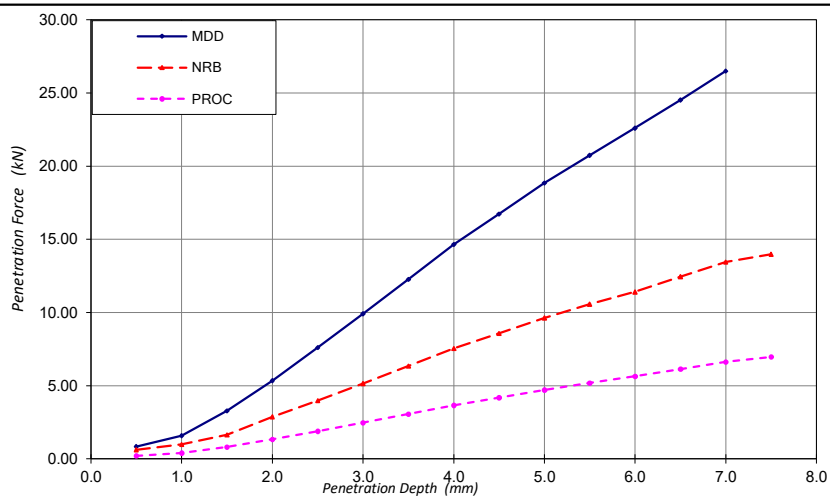
Maximum Dry Density =	2140	kg/m³
Optimum Moisture Content =	6.2	%



CALIFORNIA BEARING RATIO (CBR)

California Bearing Ratio Penetration Readings & Graphs

Pen. Depth (mm)	Penetration (kN)		
	MDD	NRB	PROC
0.5	0.84	0.62	0.21
1.0	1.59	0.99	0.40
1.5	3.28	1.64	0.82
2.0	5.34	2.87	1.34
2.5	7.61	3.99	1.90
3.0	9.93	5.16	2.48
3.5	12.27	6.34	3.07
4.0	14.66	7.54	3.67
4.5	16.74	8.57	4.19
5.0	18.85	9.63	4.71
5.5	20.74	10.57	5.19
6.0	22.61	11.41	5.65
6.5	24.52	12.46	6.13
7.0	26.51	13.46	6.63
7.5	27.89	13.99	6.97
8.0	29.59	14.80	7.39
8.5	31.26	15.63	7.82
9.0	32.76	16.48	8.19



Compaction (%)	CBR of 13,3N
100	57
98	44
97	39
95	30
93	22
90	14

Briquette Analysis

% Compaction of MDD:	100.1%	95.1%	90.1%
Dry Density (kg/m³):	2142	2035	1928
Compaction Moisture (%):	6.2	6.2	6.2
Swell (%):	0.0	0.0	0.0

Sample tested at Mbombela (Nelspruit)
and prepared using Crushing method

REMARKS:

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01

Technical Signatory (Name): X.R Nhlabathi

Signature: _____

Xolani Nhlabathi
on-Xolani Nhlabathi, as-Phezulu Geotechnical Civils, ou-Technical
Department, email-xolani@phezulugc.co.za, c=ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

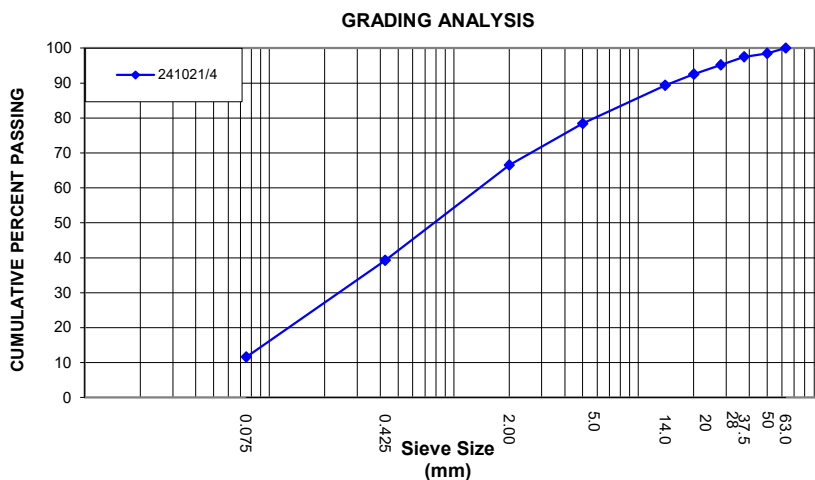
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP4 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.17-0.80		
Sample Number:	241021/4		
Description (Unified Soil Classification)	dkr Brown Poorly graded silty Sand	Doc No:	241021/4(i)

Sieve Analysis

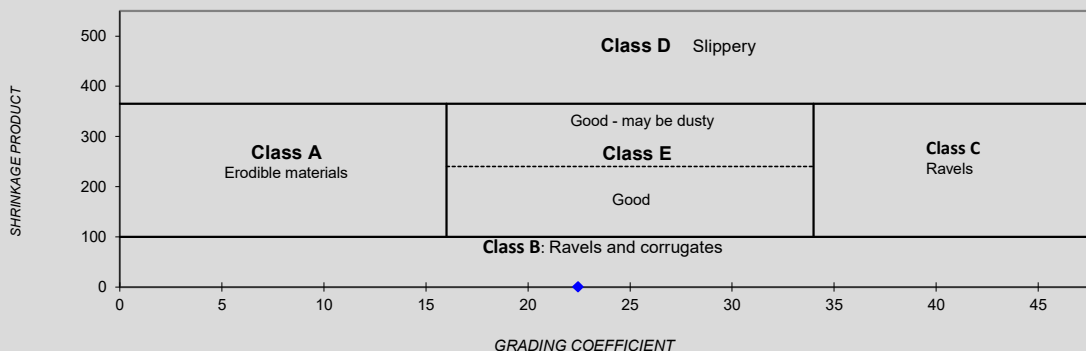
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	100
	50.0	99
	37.5	97
	28.0	95
	20.0	93
	14.0	89
	5.0	78
	2.0	67
	0.425	39
	0.075	12
Grading Modulus (G.M)		1.8
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	sp/sm
	COLTO: 1998	N/A
	U.S Highway	A-1-b
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	1380	41.0	2	0	22.4

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
41%	42%	17%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature: Xolani Nhlabathi

Xolani Nhlabathi
cm-Xolani Nhlabathi, p-Phezulu Geotechnical Civils, ou-Technical
Department, email-xolani@phezulugc.co.za, c-ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

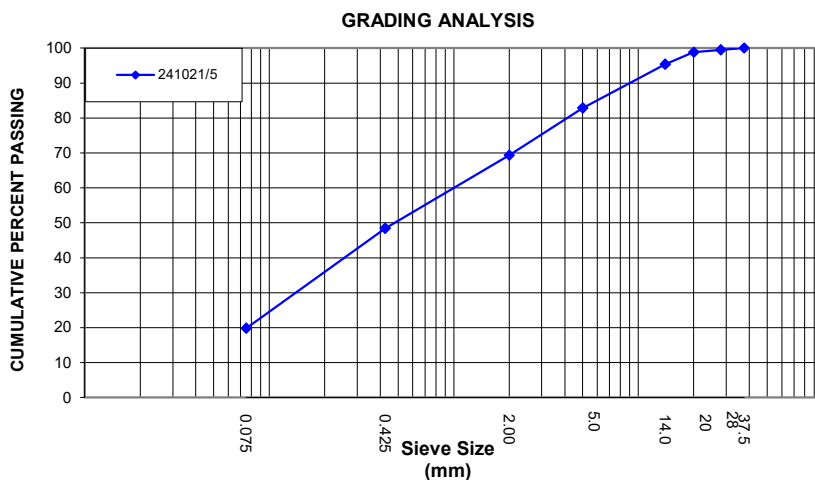
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP4 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.80-1.0		
Sample Number:	241021/5		
Description (Unified Soil Classification)	drk Red. Brown silty/clayey Sand	Doc No:	241021/5(i)

Sieve Analysis

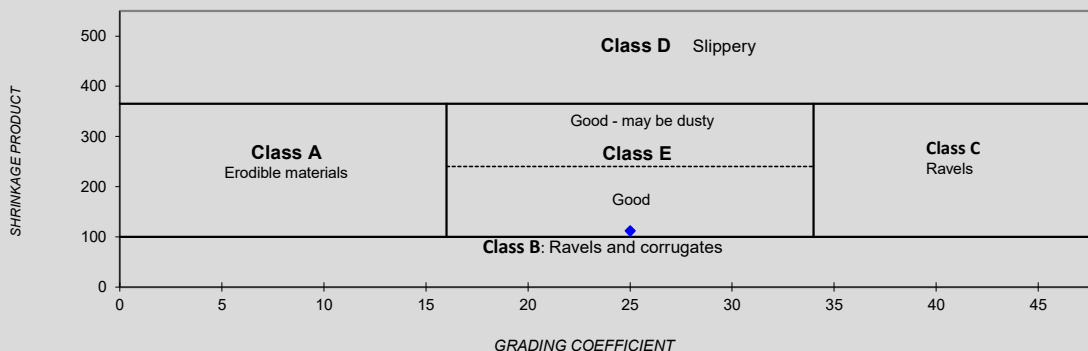
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	100
	28.0	99
	20.0	99
	14.0	95
	5.0	83
	2.0	69
	0.425	48
	0.075	20
Grading Modulus (G.M)		1.6
Atterberg Limits	Liquid Limit	27
	Plasticity Index	6
	Linear Shrinkage	2.3
Classification	Unified Soil	sm/sc
	COLTO: 1998	N/A
	U.S Highway	A-1-b
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	1004	19.2	0	111	25.0

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
30%	41%	29%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Xolani Nhlabathi
cc-Xolani Nhlabathi, o-Phezulu Geotechnical Civils, ou-Technical
Department, email=xolani@phezulugc.co.za, c-ZA
2023.008.20470

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

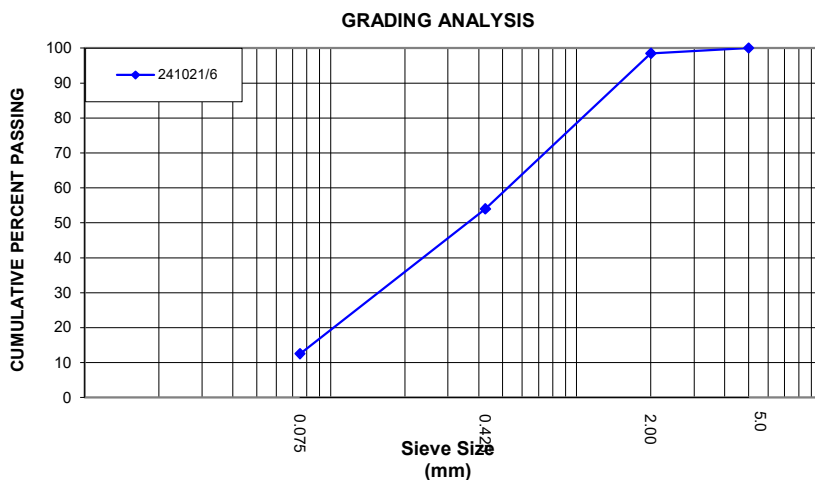
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza Consulting	Date Sampled:	23-Jan-2024
Client Address:	-	Date Recieved:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP5 sampled by Client		
Sampled Depth:	0.80-1.30		
Sample Number:	241021/6		
Description (Unified Soil Classification)	drk Brown silty Sand	Doc No:	241021/6(i)

Sieve Analysis

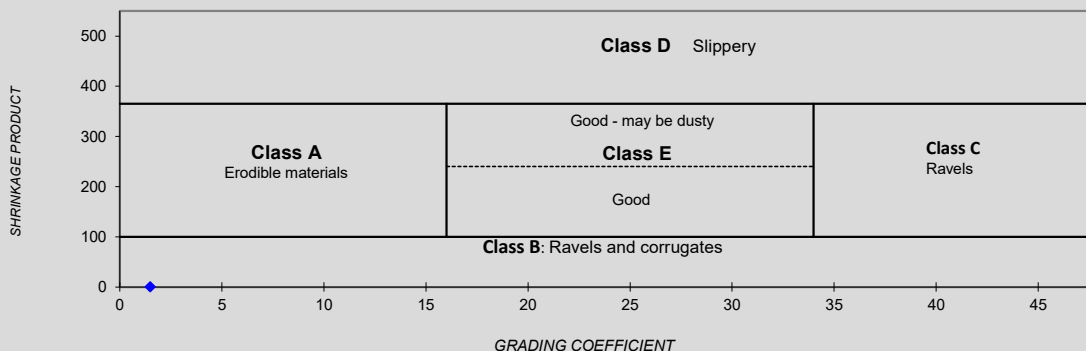
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	
	28.0	
	20.0	
	14.0	
	5.0	100
	2.0	99
	0.425	54
	0.075	13
Grading Modulus (G.M)		1.4
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	SM(d)
	COLTO: 1998	G8
	U.S Highway	A-2-4
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	524	46.4	0	0	1.5

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
45%	42%	13%

Sample tested at Mbombela (Nelspruit) and prepared using Crushing method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlathathi

Signature:

Xolani Nhlathathi
c/o-Kolani Nhlathathi, o/Phezulu Geotechnical Civils, o/u=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



Phezulu Geotechnical Civils



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Client Name: **Geocaluza Consulting**

Contract Name: **Aniva Street**

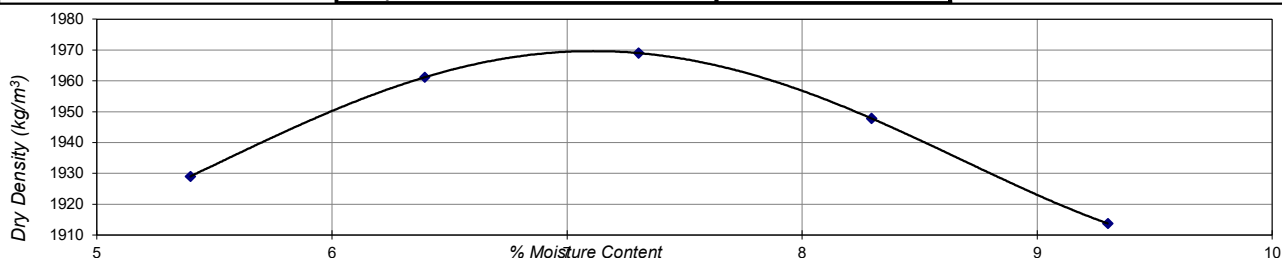
Description: **Material sampled from IP5 sampled by Client**

Date Tested: **24-Jan-2024**

Date Received: **23-Jan-2024**

Sample No: **241021/6**

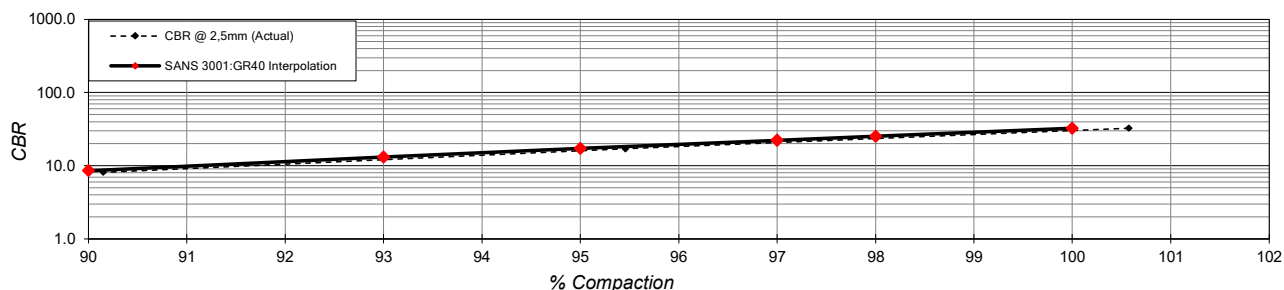
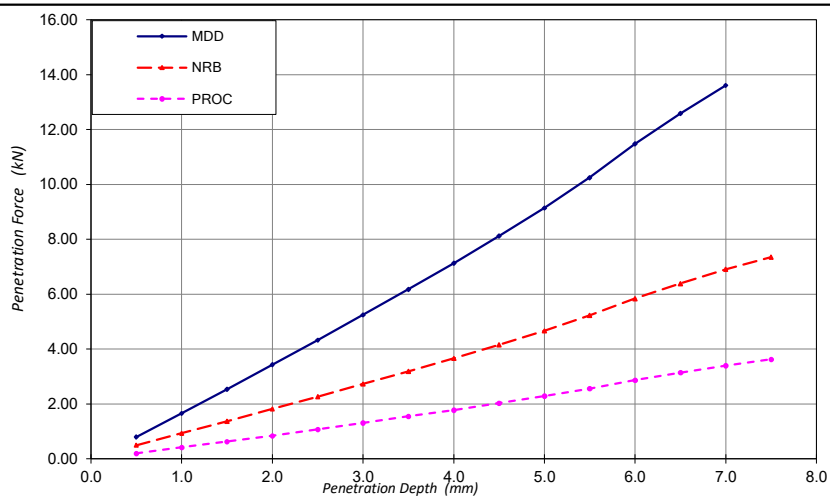
Maximum Dry Density =	1970	kg/m³
Optimum Moisture Content =	7.1	%



CALIFORNIA BEARING RATIO (CBR)

California Bearing Ratio Penetration Readings & Graphs

Pen. Depth (mm)	Penetration (kN)		
	MDD	NRB	PROC
0.5	0.80	0.50	0.20
1.0	1.66	0.93	0.42
1.5	2.54	1.37	0.63
2.0	3.43	1.82	0.84
2.5	4.33	2.27	1.08
3.0	5.25	2.73	1.31
3.5	6.18	3.19	1.55
4.0	7.13	3.66	1.78
4.5	8.12	4.16	2.03
5.0	9.14	4.67	2.29
5.5	10.25	5.23	2.56
6.0	11.48	5.84	2.87
6.5	12.59	6.39	3.15
7.0	13.61	6.91	3.40
7.5	14.50	7.35	3.63
8.0	15.26	7.73	3.82
8.5	15.92	8.06	3.98
9.0	16.47	8.34	4.11



Compaction (%)	CBR of 13,3N
100	33
98	25
97	22
95	17
93	13
90	9

Briquette Analysis

% Compaction of MDD:	100.6%	95.5%	90.1%
Dry Density (kg/m³):	1981	1880	1776
Compaction Moisture (%):	7.1	7.1	7.1
Swell (%):	0.0	0.0	0.1

Sample tested at Mbombela (Nelspruit)
and prepared using Crushing method

REMARKS:

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01

Technical Signatory (Name): X.R Nhlabathi

Signature: _____

Xolani Nhlabathi
c/o: Xolani Nhlabathi, o=Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.006.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

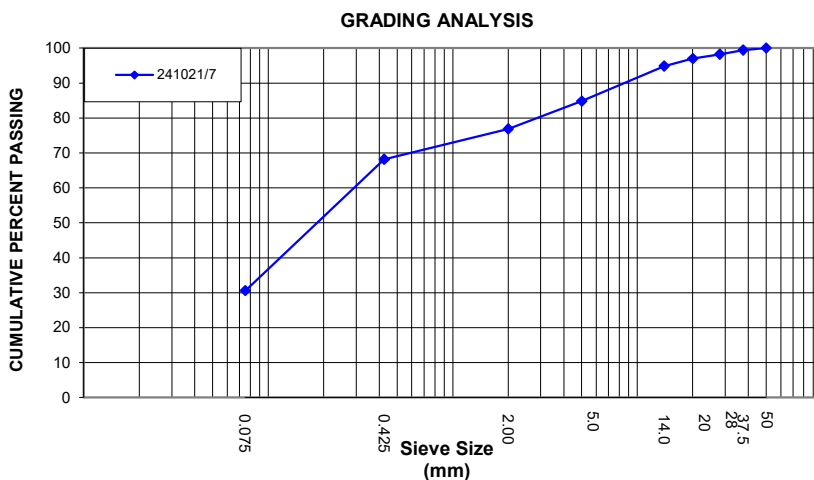
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza Consulting	Date Sampled:	23-Jan-2024
Client Address:	-	Date Recieved:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP7 sampled by Client		
Sampled Depth:	0.40-0.80		
Sample Number:	241021/7		
Description (Unified Soil Classification)	drk Red. Orange clayey Sand	Doc No:	241021/7(i)

Sieve Analysis

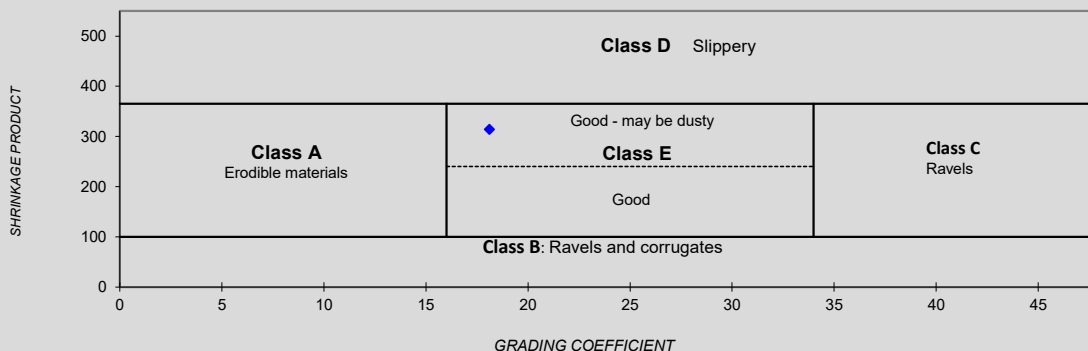
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	100
	37.5	99
	28.0	98
	20.0	97
	14.0	95
	5.0	85
	2.0	77
	0.425	68
	0.075	31
Grading Modulus (G.M)		1.2
Atterberg Limits	Liquid Limit	31
	Plasticity Index	10
	Linear Shrinkage	4.6
Classification	Unified Soil	SC
	COLTO: 1998	<G9
	U.S Highway	A-2-4
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	291	0.3	0	314	18.1

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
11%	49%	40%

Sample tested at Mbombela (Nelspruit) and prepared using Crushing method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature: Xolani Nhlabathi

Xolani Nhlabathi
cm-Xolani Nhlabathi, o-Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



Phezulu Geotechnical Civils



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Client Name: **Geocaluza Consulting**

Contract Name: **Aniva Street**

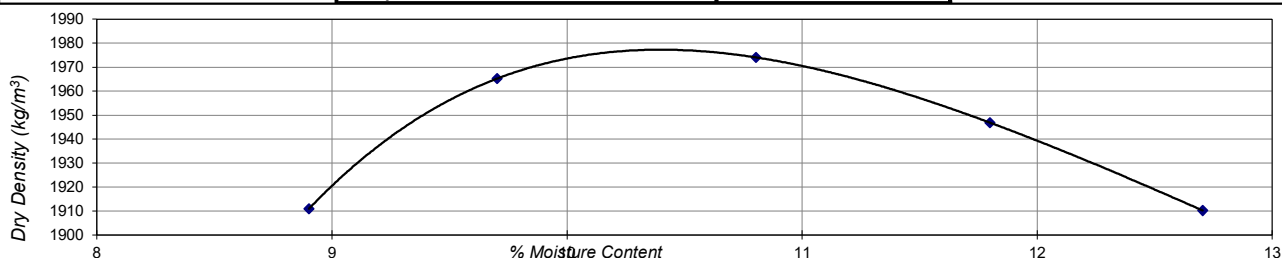
Date Tested: **24-Jan-2024**

Date Received: **23-Jan-2024**

Description: **Material sampled from IP7 sampled by Client**

Sample No: **241021/7**

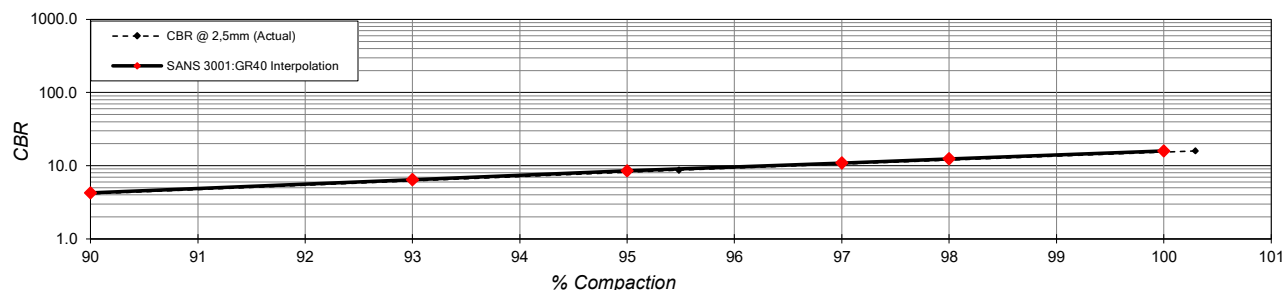
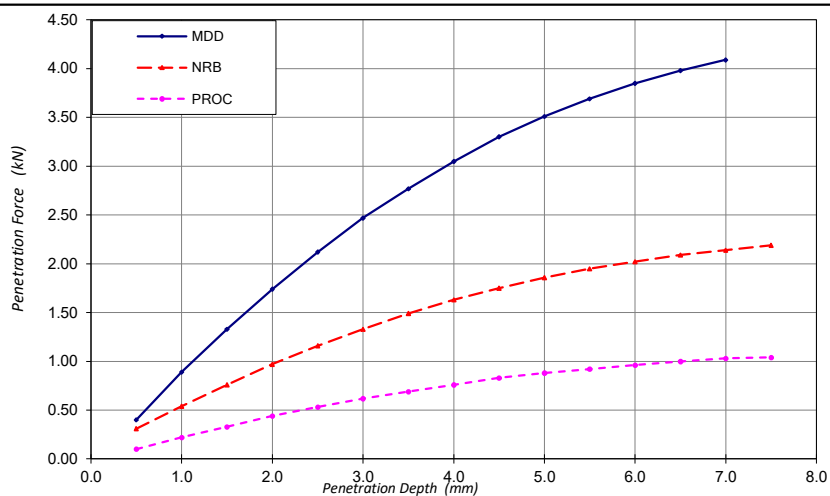
Maximum Dry Density =	1977 kg/m³
Optimum Moisture Content =	10.4 %



CALIFORNIA BEARING RATIO (CBR)

California Bearing Ratio Penetration Readings & Graphs

Pen. Depth (mm)	Penetration (kN)		
	MDD	NRB	PROC
0.5	0.40	0.31	0.10
1.0	0.89	0.54	0.22
1.5	1.33	0.76	0.33
2.0	1.74	0.97	0.44
2.5	2.12	1.16	0.53
3.0	2.47	1.33	0.62
3.5	2.77	1.49	0.69
4.0	3.05	1.63	0.76
4.5	3.30	1.75	0.83
5.0	3.51	1.86	0.88
5.5	3.69	1.95	0.92
6.0	3.85	2.02	0.96
6.5	3.98	2.09	1.00
7.0	4.09	2.14	1.03
7.5	4.17	2.19	1.04
8.0	4.23	2.22	1.06
8.5	4.28	2.24	1.07
9.0	4.32	2.26	1.08



Compaction (%)	CBR of 13,3N
100	16
98	12
97	11
95	9
93	6
90	4

Briquette Analysis

% Compaction of MDD:	100.3%	95.5%	89.8%
Dry Density (kg/m ³):	1983	1888	1775
Compaction Moisture (%):	10.4	10.4	10.4
Swell (%):	0.0	0.0	0.0

Sample tested at Mbombela (Nelspruit)
and prepared using Crushing method

REMARKS:

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01

Technical Signatory (Name): X.R Nhlathathi

Signature: _____

Xolani Nhlathathi
c/o: Xolani Nhlathathi, o/Phezulu Geotechnical Civils, o/u=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

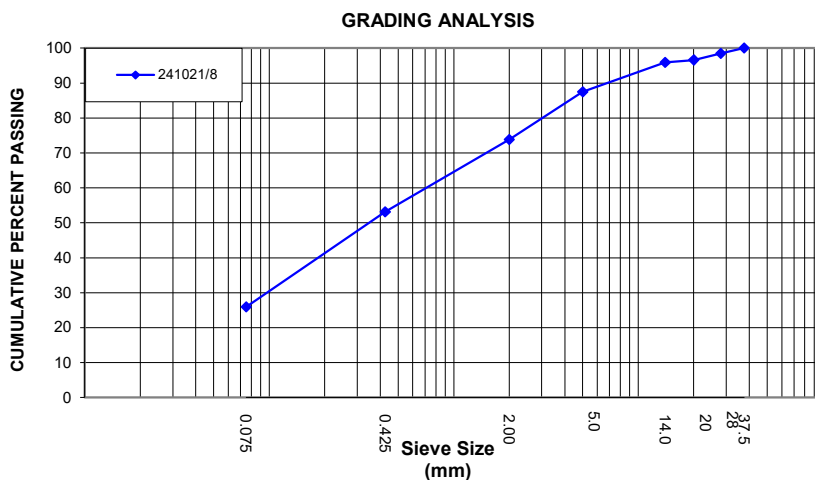
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza Consulting	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP9 sampled by Client		
Sampled Depth:	0.60-1.30		
Sample Number:	241021/8		
Description (Unified Soil Classification)	It Olive clayey Sand	Doc No:	241021/8(i)

Sieve Analysis

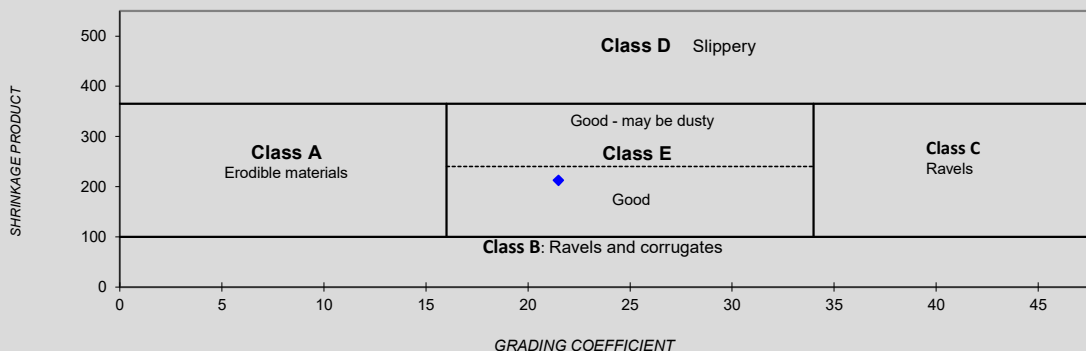
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	100
	28.0	98
	20.0	97
	14.0	96
	5.0	87
	2.0	74
	0.425	53
	0.075	26
Grading Modulus (G.M)		1.5
Atterberg Limits	Liquid Limit	29
	Plasticity Index	9
	Linear Shrinkage	4.0
Classification	Unified Soil	SC
	COLTO: 1998	G8
	U.S Highway	A-2-4
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	711	13.3	0	212	21.5

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
28%	37%	35%

Sample tested at Mbombela (Nelspruit) and prepared using Crushing method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature: Xolani Nhlabathi

Xolani Nhlabathi
c/o: Xolani Nhlabathi, o=Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470



Client Name: **Geocaluza Consulting**

Contract Name: **Aniva Street**

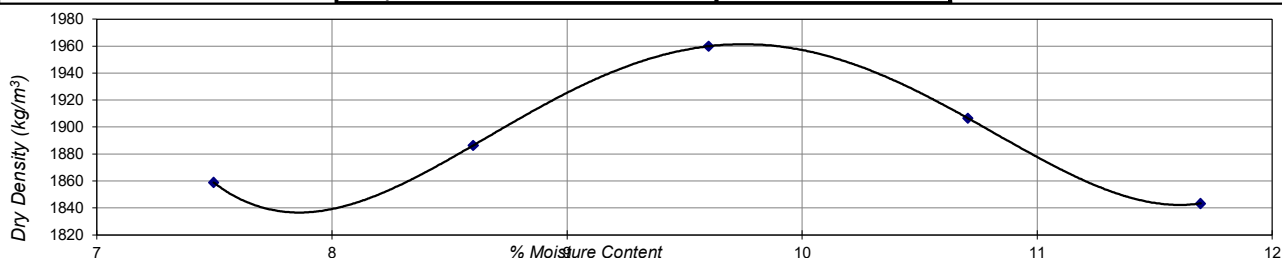
Description: **Material sampled from IP9 sampled by Client**

Date Tested: **24-Jan-2024**

Date Received: **23-Jan-2024**

Sample No: **241021/8**

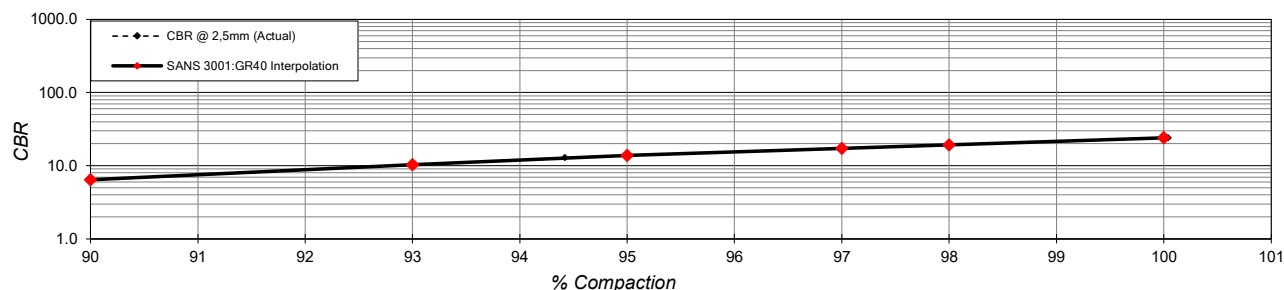
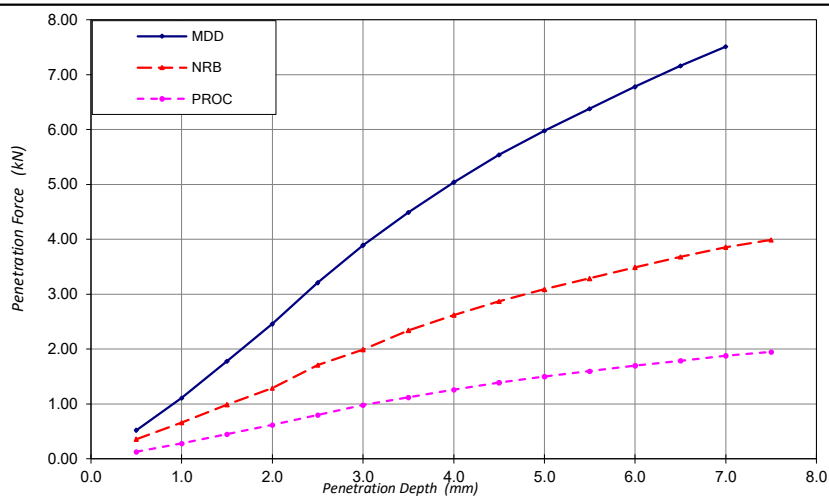
Maximum Dry Density =	1961 kg/m³
Optimum Moisture Content =	9.8 %



CALIFORNIA BEARING RATIO (CBR)

California Bearing Ratio Penetration Readings & Graphs

Pen. Depth (mm)	Penetration (kN)		
	MDD	NRB	PROC
0.5	0.52	0.36	0.13
1.0	1.11	0.66	0.28
1.5	1.78	0.99	0.45
2.0	2.46	1.29	0.62
2.5	3.21	1.71	0.80
3.0	3.89	1.99	0.98
3.5	4.49	2.34	1.12
4.0	5.04	2.62	1.26
4.5	5.54	2.87	1.39
5.0	5.98	3.09	1.50
5.5	6.38	3.29	1.60
6.0	6.78	3.49	1.70
6.5	7.16	3.68	1.79
7.0	7.51	3.86	1.88
7.5	7.81	3.99	1.95
8.0	8.06	4.13	2.02
8.5	8.29	4.25	2.07
9.0	8.51	4.36	2.13



Compaction (%)	CBR of 13,3N
100	24
98	19
97	17
95	14
93	10
90	6

Briquette Analysis

% Compaction of MDD:	100.0%	94.4%	89.6%
Dry Density (kg/m ³):	1962	1852	1758
Compaction Moisture (%):	9.8	9.8	9.8
Swell (%):	0.0	0.0	0.0

Sample tested at Mbombela (Nelspruit)
and prepared using Crushing method

REMARKS:

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01

Technical Signatory (Name): X.R Nhlabathi

Signature:

Xolani Nhlabathi
cc-Xolani Nhlabathi, o-Phezulu Geotechnical Civils, ou-Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470



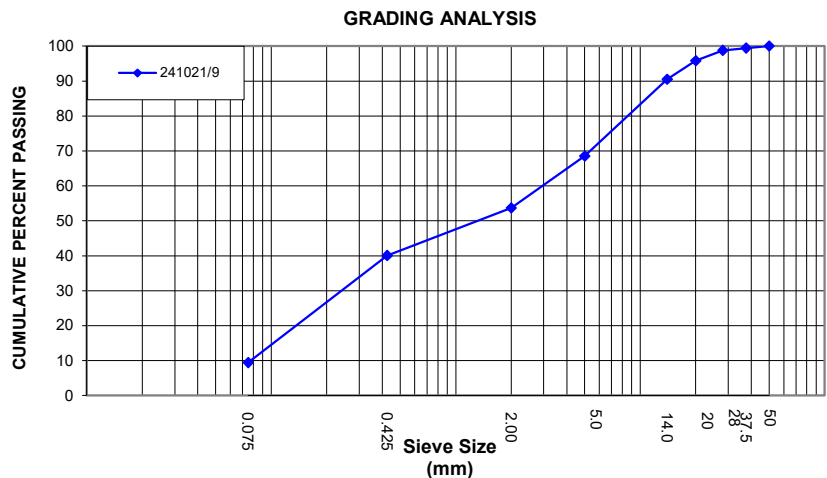
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza Consulting	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP10 sampled by Client		
Sampled Depth:	0.40-1.50		
Sample Number:	241021/9		
Description (Unified Soil Classification)	dkr Brown Poorly graded silty Sand	Doc No:	241021/9(i)

Sieve Analysis

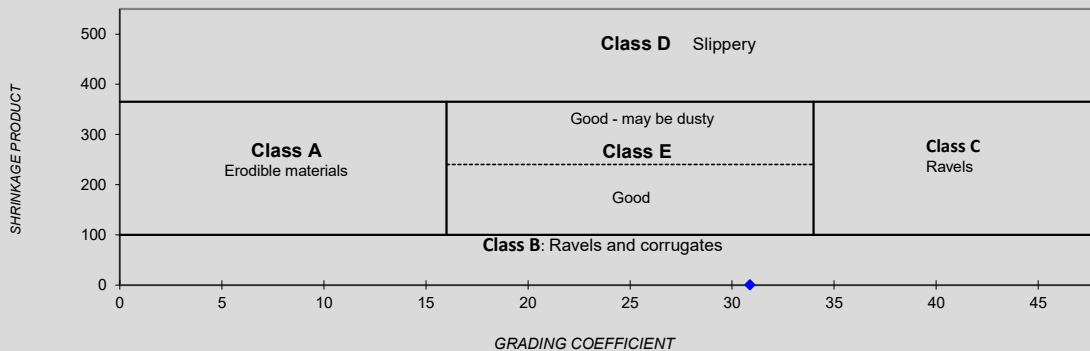
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	100
	37.5	99
	28.0	99
	20.0	96
	14.0	90
	5.0	69
	2.0	54
	0.425	40
	0.075	9
Grading Modulus (G.M)		2.0
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	sp/sm
	COLTO: 1998	G6
	U.S Highway	A-1-b
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
0.077	38	0.3	0	0	30.9

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
25%	57%	18%

Sample tested at Mbombela (Nelspruit) and prepared using Crushing method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Xolani Nhlabathi
c/o-Koloni Nhlabathi, o/Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:



Client Name: **Geocaluza Consulting**

Contract Name: **Aniva Street**

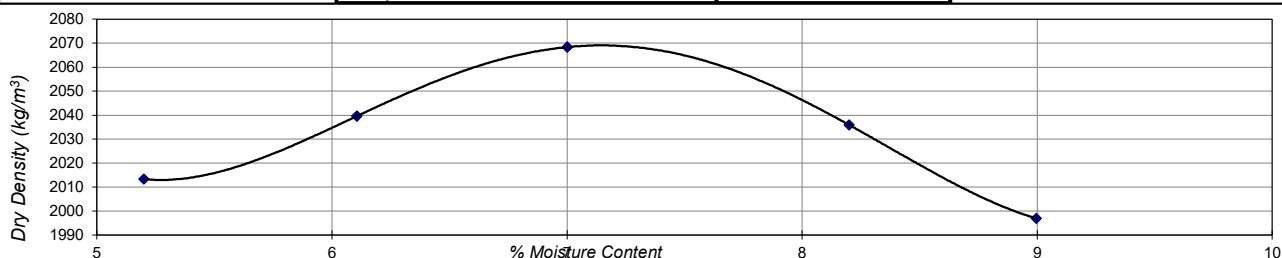
Description: **Material sampled from IP10 sampled by Client**

Date Tested: **24-Jan-2024**

Date Received: **23-Jan-2024**

Sample No: **241021/9**

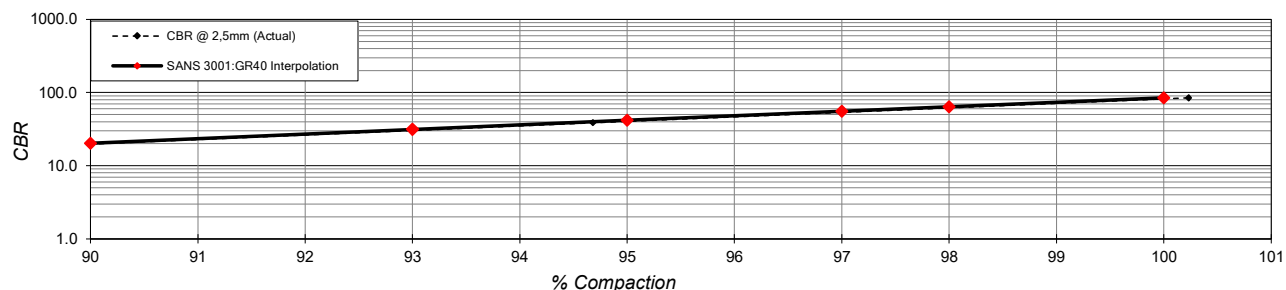
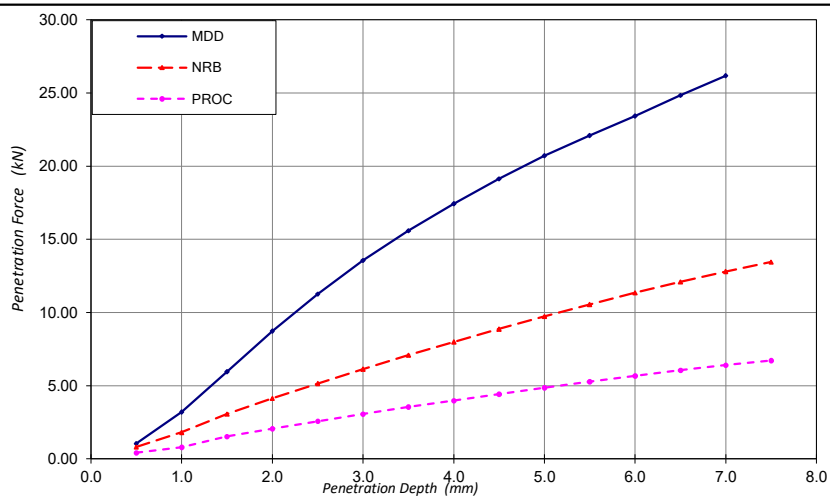
Maximum Dry Density =	2069	kg/m³
Optimum Moisture Content =	7.1	%



CALIFORNIA BEARING RATIO (CBR)

California Bearing Ratio Penetration Readings & Graphs

Pen. Depth (mm)	Penetration (kN)		
	MDD	NRB	PROC
0.5	1.06	0.81	0.42
1.0	3.21	1.82	0.80
1.5	5.97	3.06	1.53
2.0	8.74	4.14	2.07
2.5	11.27	5.15	2.58
3.0	13.56	6.14	3.07
3.5	15.60	7.09	3.55
4.0	17.45	7.99	3.99
4.5	19.14	8.87	4.43
5.0	20.73	9.73	4.87
5.5	22.10	10.55	5.28
6.0	23.44	11.35	5.68
6.5	24.85	12.10	6.06
7.0	26.19	12.80	6.40
7.5	27.28	13.46	6.73
8.0	28.46	14.06	7.03
8.5	29.56	14.58	7.29
9.0	30.70	14.96	7.48



Compaction (%)	CBR of 13,3N
100	85
98	64
97	55
95	42
93	31
90	20

Briquette Analysis

% Compaction of MDD:	100.2%	94.7%	89.9%
Dry Density (kg/m³):	2074	1959	1860
Compaction Moisture (%):	7.1	7.1	7.1
Swell (%):	0.0	0.0	0.0

Sample tested at Mbombela (Nelspruit)
and prepared using Crushing method

REMARKS:

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01

Technical Signatory (Name): X.R Nhlathathi

Signature: _____

Xolani Nhlathathi
cc-Xolani Nhlathathi, o-Phezulu Geotechnical Civils, ou-Technical
Department, email-xolani@phezulugc.co.za, c-ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

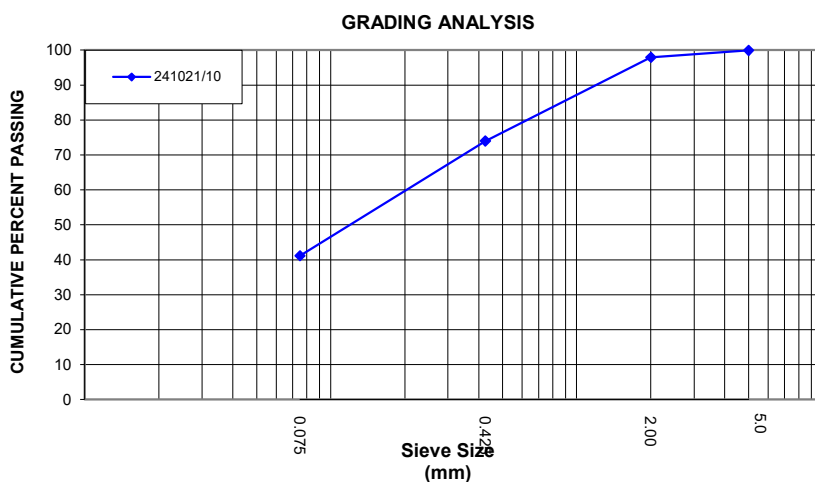
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Recieved:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP11 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.60-1.0		
Sample Number:	241021/10		
Description (Unified Soil Classification)	drk Brown clayey Sand	Doc No:	241021/10(i)

Sieve Analysis

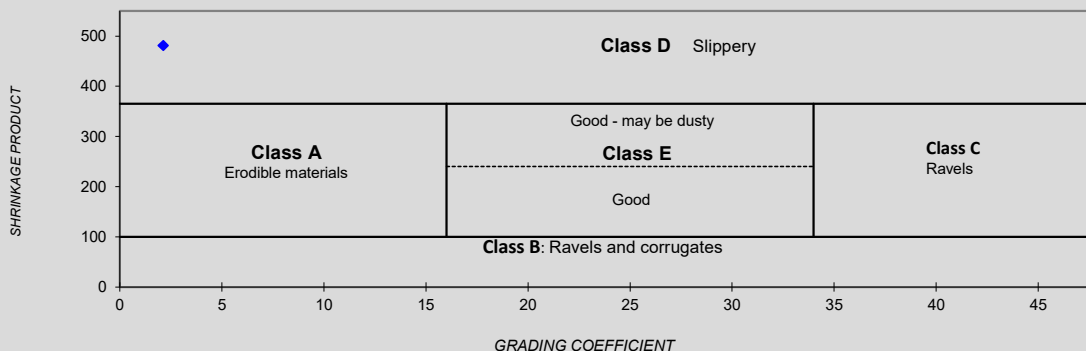
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	
	28.0	
	20.0	
	14.0	
	5.0	100
	2.0	98
	0.425	74
	0.075	41
Grading Modulus (G.M)		0.9
Atterberg Limits	Liquid Limit	32
	Plasticity Index	14
	Linear Shrinkage	6.5
Classification	Unified Soil	SC
	COLTO: 1998	N/A
	U.S Highway	A-6
	Group Index	2



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	203	0.5	0	481	2.1

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
24%	34%	42%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Xolani Nhlabathi
c/o: Xolani Nhlabathi, o/p: Phezulu Geotechnical Civils, o/u: Technical
Department, email: xolani@phezulugc.co.za, c=ZA
2023.008.20470

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

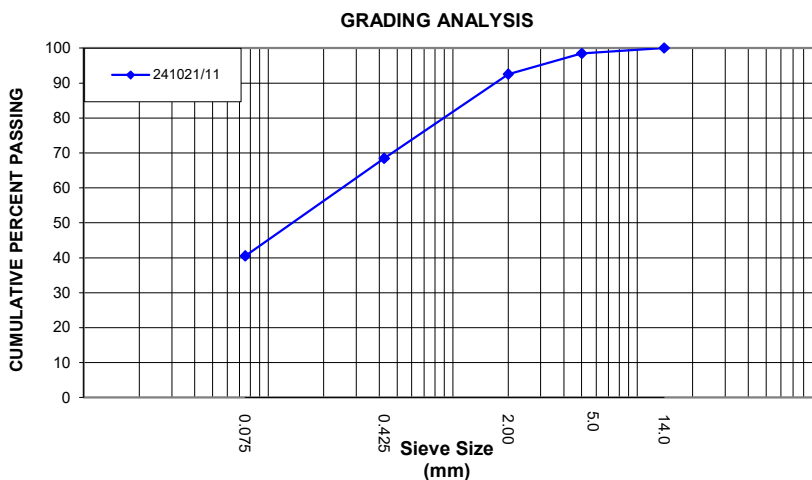
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Recieved:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP12 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.50-1.0		
Sample Number:	241021/11		
Description (Unified Soil Classification)	drk Grey clayey Sand	Doc No:	241021/11(i)

Sieve Analysis

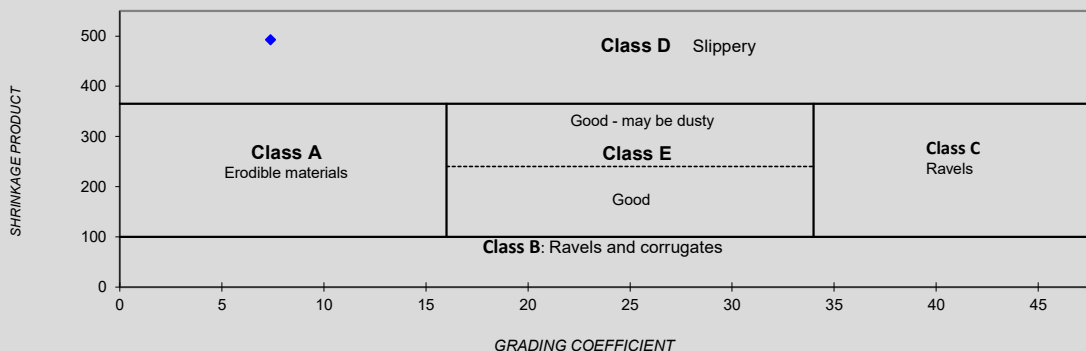
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	
	28.0	
	20.0	
	14.0	100
	5.0	98
	2.0	92
	0.425	68
	0.075	41
Grading Modulus (G.M)		1.0
Atterberg Limits	Liquid Limit	36
	Plasticity Index	15
	Linear Shrinkage	7.2
Classification	Unified Soil	SC
	COLTO: 1998	N/A
	U.S Highway	A-6
	Group Index	3



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	252	0.4	0	493	7.4

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
26%	30%	44%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:

Xolani Nhlabathi
on-Xolani Nhlabathi, o-Phezulu Geotechnical Civils, ou-Technical
Department, email=xolani@phezulugc.co.za, c-ZA
2023.008.20470

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

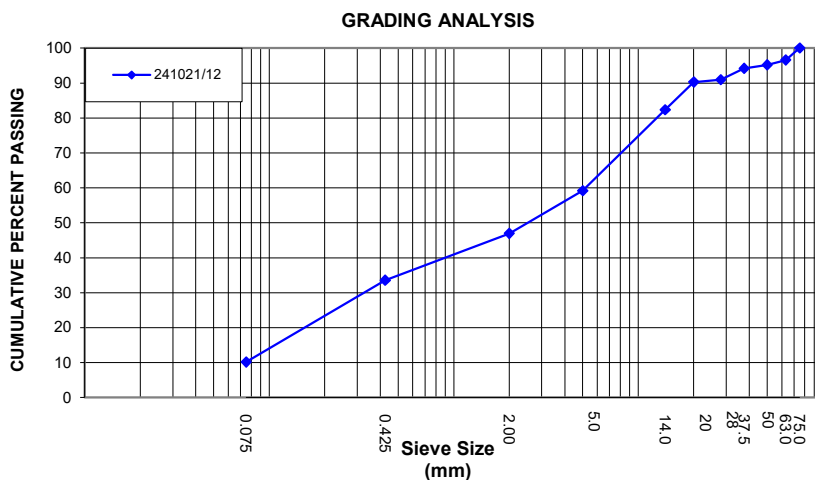
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Recieved:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP13 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0-1.0		
Sample Number:	241021/12		
Description (Unified Soil Classification)	drk Red. Brown Poorly graded silty Sand	Doc No:	241021/12(i)

Sieve Analysis

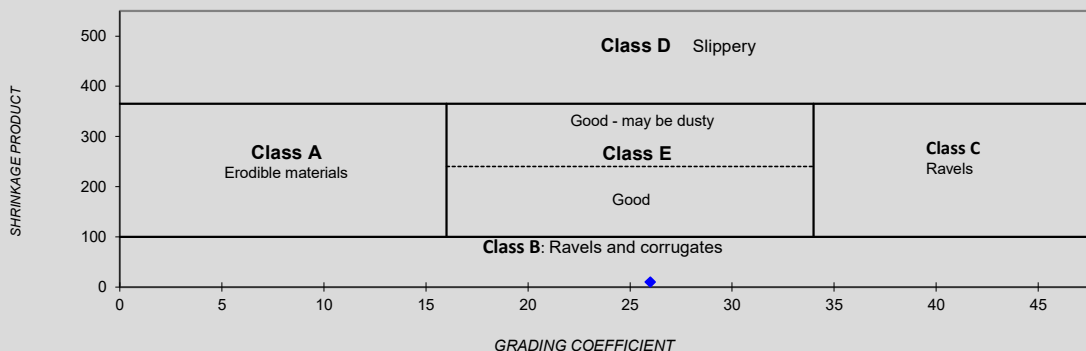
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	100
	63.0	97
	50.0	95
	37.5	94
	28.0	91
	20.0	90
	14.0	82
	5.0	59
	2.0	47
	0.425	34
	0.075	10
Grading Modulus (G.M)		2.1
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	0.3
Classification	Unified Soil	sp/sm
	COLTO: 1998	N/A
	U.S Highway	A-1-b
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	5196	20.5	7	10	26.0

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
29%	50%	22%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Xolani Nhlabathi
c/o-Xolani Nhlabathi, a=Phezulu Geotechnical Civils, ou=Technical
Department, email=xolani@phezulugc.co.za, c=ZA
2023.008.20470

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature:

12 Suikerriet Street
Central Park
Unit 57.1
Mbombela
1200



E-mail: info@phezulugc.co.za
Tel: 013 004 0119
Cell: 071 897 3005
Reg no. 2011/005646/23
Vat no. 4610267686

Phezulu Geotechnical Civils

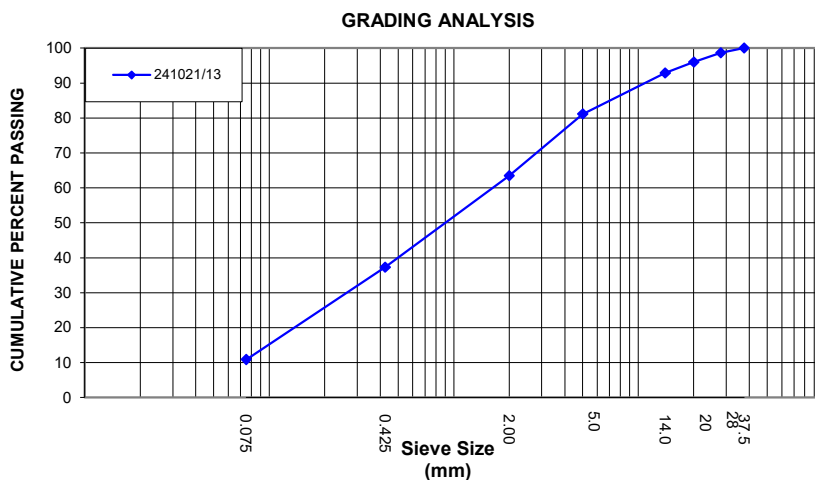
GRAVEL, SOIL AND SAND TEST REPORT

SANS 3001 - GR1, GR5, GR10, GR20, GR30 and GR40

Client Name:	Geocaluza	Date Sampled:	23-Jan-2024
Client Address:	-	Date Received:	23-Jan-2024
Contract Name:	Aniva Street	Date Tested:	24-Jan-2024
Description:	Material sampled from IP14 sampled by Phezulu Geotechnical Civils		
Sampled Depth:	0.20-1.0		
Sample Number:	241021/13		
Description (Unified Soil Classification)	dkr Red, Orange Poorly graded silty Sand	Doc No:	241021/13(i)

Sieve Analysis

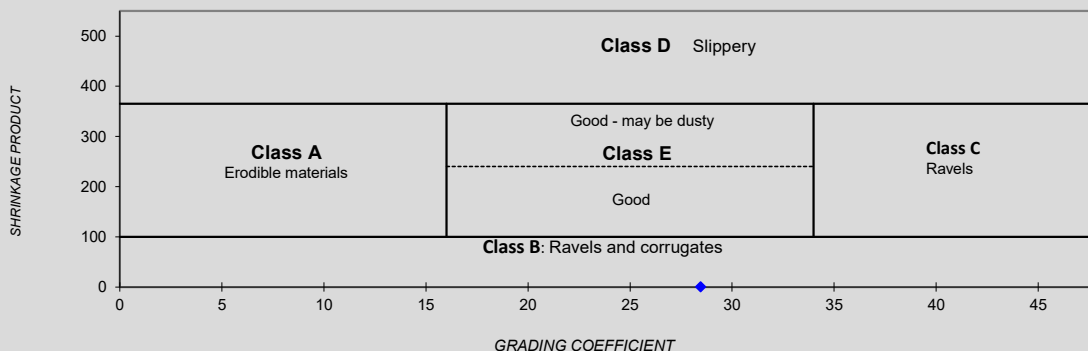
Sieve Size (mm)		Cumulative Percentage Passing
	100	
	75	
	63.0	
	50.0	
	37.5	100
	28.0	99
	20.0	96
	14.0	93
	5.0	81
	2.0	63
	0.425	37
	0.075	11
Grading Modulus (G.M)		1.9
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
Classification	Unified Soil	sp/sm
	COLTO: 1998	N/A
	U.S Highway	A-1-b
	Group Index	0



GENERAL

Effective size (mm)	Uniformity co-efficient	Curvature co-efficient	Oversize Index	Shrinkage Product	Grading co-efficient
<0.075	1627	42.6	0	0	28.5

PERFORMANCE AS GRAVEL WEARING COURSE



Soil Mortar Analysis: SANS 3001-PR5

Coarse Sand (<2.0>0.425mm)	Fine Sand (<0.425>0.075mm)	Silt and Clay <0.075mm
41%	42%	17%

Sample tested at Mbombela (Nelspruit) and prepared using Scalping method

REMARKS: This material was classified as a non-calcretic material
pH and EC tests NOT REQUESTED

The above test results are pertinent only to the samples received and tested at the Laboratory. This report shall not be reproduced or altered without the prior consent of PHEZULU GEOTECHNICAL CIVILS cc, except if copied in full.

Date Issued: 2024/02/01 Technical signatory (Name): X.R Nhlabathi

Signature: Xolani Nhlabathi

Xolani Nhlabathi
c/o-Xolani Nhlabathi, o/Phezulu Geotechnical Civils, o/u-Technical
Department, email:xolani@phezulugc.co.za, c=ZA
2023.008.20470

GENERAL CONDITIONS OF CONTRACT

July 2010

GOVERNMENT PROCUREMENT

GENERAL CONDITIONS OF CONTRACT **July 2010**

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

NOTES

The purpose of this document is to:

- (i) Draw special attention to certain general conditions applicable to government bids, contracts and orders; and (ii) To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government.

In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter.

- The General Conditions of Contract will form part of all bid documents and may not be amended.
- Special Conditions of Contract (SCC) relevant to a specific bid, should be compiled separately for every bid (if applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

TABLE OF CLAUSES

1. Definitions
2. Application
3. General
4. Standards
5. Use of contract documents and information; inspection
6. Patent rights
7. Performance security
8. Inspections, tests and analysis
9. Packing
10. Delivery and documents
11. Insurance
12. Transportation
13. Incidental services
14. Spare parts
15. Warranty
16. Payment
17. Prices
18. Contract amendments
19. Assignment
20. Subcontracts
21. Delays in the supplier's performance
22. Penalties
23. Termination for default
24. Dumping and countervailing duties
25. Force Majeure
26. Termination for insolvency
27. Settlement of disputes
28. Limitation of liability
29. Governing language
30. Applicable law
31. Notices
32. Taxes and duties
33. National Industrial Participation Programme (NIPP)
34. Prohibition of restrictive practices

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

General Conditions of Contract

- 1. Definitions** 1. The following terms shall be interpreted as indicated:

1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.

1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.

1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.

1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.

1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are

produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or

in purpose or utility from its components.

1.7 "Day" means calendar day.

1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.

1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.

1.10 "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.

- 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

1.22 “Republic” means the Republic of South Africa.

1.23 “SCC” means the Special Conditions of Contract.

1.24 “Services” means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.

1.25 “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.

2. Application 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding

immovable property, unless otherwise indicated in the bidding documents.

2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.

2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.

3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za

4. Standards 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of 5.1 The supplier shall not, without the purchaser’s prior written consent, **contract** disclose the contract, or any provision thereof, or any specification, **documents** plan, drawing, pattern, sample, or information furnished by or on **and** behalf of the purchaser in connection therewith, to any person other **information;** than a person employed by the supplier in the performance of the **inspection.** contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The supplier shall not, without the purchaser’s prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.

5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent rights 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

7. Performance 7.1 Within thirty (30) days of receipt of the notification of contract award, **security** the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.

7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.

7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:

- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
- (b) a cashier's or certified cheque

7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the bidder.

8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.

8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract supplies may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. Packing 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

10.2 Documents to be submitted by the supplier are specified in SCC.

11. Insurance 11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

12. Transportation 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. Incidental 13.1 The supplier may be required to provide any or all of the following **services** services, including additional services, if any, specified in SCC:

- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
- (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
- (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts 14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
- (b) in the event of termination of production of the spare parts:
 - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.

16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.

16.4 Payment will be made in Rand unless otherwise stipulated in SCC.

17. Prices 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.

18. Contract 18.1 No variation in or modification of the terms of the contract shall be **amendments** made except by written amendment signed by the parties concerned.

19. Assignment 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the 21.1 Delivery of the goods and performance of services shall be made by **supplier's** the supplier in accordance with the time schedule prescribed by the **performance** purchaser in the contract.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.

21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.

21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.

21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination 23.1 The purchaser, without prejudice to any other remedy for breach of **for default** contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:

- (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
- (b) if the Supplier fails to perform any other obligation(s) under the contract; or

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

- (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.

23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:

- (i) the name and address of the supplier and / or person restricted by the purchaser;
- (ii) the date of commencement of the restriction
- (iii) the period of restriction; and (iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping 24.1 When, after the date of bid, provisional payments are required, or antiand **countervailing** dumping or countervailing duties are imposed, or the amount of a **duties and rights** provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional

payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which

may be due to him

25. Force 25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the **Majeure** supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. Termination 26.1 The purchaser may at any time terminate the contract by giving written **for insolvency** notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. Settlement of 27.1 If any dispute or difference of any kind whatsoever arises between the **Disputes** purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

27.2 If, after thirty (30) days, the parties have failed to resolve their dispute

or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

27.5 Notwithstanding any reference to mediation and/or court proceedings herein,

(a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and (b) the purchaser shall pay the supplier any monies due the supplier.

28. Limitation of

liability

28.1 Except in cases of criminal negligence or willful misconduct, and in

the case of infringement pursuant to Clause 6;

(a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and

(b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. Governing 29.1 The contract shall be written in English. All correspondence and other **language** documents pertaining to the contract that is exchanged by the parties shall also be written in English.

30. Applicable 30.1 The contract shall be interpreted in accordance with South African **law** laws, unless otherwise specified in SCC.

31. Notices 31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice

31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp **duties** duties, license fees, and other such levies imposed outside the

BID NO:	NKO 20 / 2025	INITIALS	
---------	---------------	----------	--

PAVING OF
INTERNAL
STREETS IN
ANIVA

purchaser's country.

32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.

32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

33. National Industrial Participation Programme (NIP)

33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--

Restrictive practices	34.1	In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).	34 Prohibition of
	34.2	If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.	
	34.3	If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.	

Js General Conditions of Contract (revised July 2010)

BID NO:	NKO 20 / 2025	INITIALS	
----------------	----------------------	-----------------	--