MUNICIPAL NOTICE No: 254/2026
TENDER NO: 03/2027

UPGRADE OF EMAROMENI ACCESS ROAD (WARD 14)

CIDB CLASSIFICATION 6CE OR HIGHER

Name of Tenderer: **Email address:** **Telephone number:** **Address:** **CSD Nu:**
This tender closes at 12h00 PM on 09 September 2026 at the offices of the Umdoni Municipality located at CNR BRAMFISCHER & WILLIAMSON, SCOTTBURGH, 4180 **NO LATE SUBMISSIONS WILL BE CONSIDERED**

BID AMOUNT R_____

Issued by:	**Prepared By:**
UMDONI MUNICIPALITY **CNR BRAMFISCHER & WILLIAMSON** **SCOTTBURGH** **4180** Tel: 039 976 1202 Fax: 039 976 2044	**TGC ENGINEERS** 4 The Crescent, Suite 6, Westway Office Park Westville 3635 Tel: 031 265 1777 Fax: -

MBD1

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE UMDONI MUNICIPALITY					
BID NUMBER:	03/2027	CLOSING DATE:	09-09-2026	CLOSING TIME:	12H00
DESCRIPTION	UPGRADE OF EMAROMENI ACCESS ROAD (WARD14)				
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 *(STREET ADDRESS)*

CNR BRAMFISCHER & WILLIAMSON
SCOTTBURGH
4180

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 /WORKS OFFERED?**	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		**TOTAL BID PRICE**	**R**
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	SUPPLYCHAIN MANAGEMENT	DEPARTMENT	TECHNICAL PMU
CONTACT PERSON	Mr D Nyathi	CONTACT PERSON	Sandile Xulu
TELEPHONE NUMBER	039 976 1202	TELEPHONE NUMBER	039 976 1202
E-MAIL ADDRESS	Davidn@umdoni.gov.za	E-MAIL ADDRESS	sandileX@umdoni.gov.za

PART B
TERMS AND CONDITIONS FOR BIDDING

1.	**BID SUBMISSION:**
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2.	**ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED– (NOT TO BE RE-TYPED) OR ONLINE**
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2.	**TAX COMPLIANCE REQUIREMENTS**
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE 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.
3.	**QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS**
3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA) ☐ YES ☐ NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO
	IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER……

CAPACITY UNDER WHICH THIS BID IS SIGNED……

DATE……

UMDONI MUNICIPALITY

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GENERAL TENDER INFORMATION

TENDER ADVERTISED	:	Tuesday, 25 August 2026
ESTIMATED CIDB CONTRACTOR GRADING	:	6CE OR HIGHER
CLARIFICATION MEETING	:	Compulsory site briefing meeting Monday,31 August 2026 AT 10H00
VENUE FOR CLARIFICATION MEETING	:	On site as per co-ordinates
CLOSING DATE	:	Thursday,09 September 2026
CLOSING TIME	:	12H00 pm
CLOSING VENUE	:	CNR BRAMFISCHER & WILLIAMSON, SCOTTBURGH

UMDONI MUNICIPALITY

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

APPOINTMENT OF SERVICE PROVIDERS FOR THE FOLLOWING SERVICES/PROJECTS:

BID NU & MN	PROJECT	TECHNICAL ISSUES	Minimum points	Validity Period	START DATE	COMPULSORY SITE BRIEFING	CLOSING DATE
02/2027 MN245/2026	APPOINTMENT OF A CONTRACTOR FOR THE PROPOSED UPGRADE OF EMAROMENI ACCESS ROAD (WARD 14)	Mr S Xulu – PMU Manager Email: sandilex@umdoni.gov.za Tell: 084 409 2017 SCM ISSUES Mr D Nyathi: SCM Manager Email: davidn@umdoni.gov.za Tell: 039 976 1202	70 points	120 days	26-08-2026	Monday,31 August 2026 AT 10H00	09-09-2026 At 12:00 pm
03/2027 MN254/2026	APPOINTMENT OF A CONTRACTOR FOR THE PROPOSED UPGRADE OF EMAROMENI ACCESS ROAD (WARD 14)	Mr S Xulu – PMU Manager Email: sandilex@umdoni.gov.za Tell: 084 409 2017 SCM ISSUES Mr D Nyathi: SCM Manager Email: davidn@umdoni.gov.za Tell: 039 976 1202	70 points	120 days	26-08-2026	Monday,31 August 2026 AT 12H00	09-09-2026 At 12:00 pm

MANDATORY DOCUMENTS TO BE SUBMITTED, FAILURE TO DO SO WILL LEAD TO THE TENDER BEING REGARDED AS NON-RESPONSIVE.

Tender documents will be available in the Etender Publication Portal which can be obtained through the following website: www.etenders.gov.za from the 26 August 2026.

Umdoni Local Municipality subscribes to the Preferential Procurement Policy Framework Act, 2000, (Act No.5 of 2000).

Bid documents, clearly marked with bid name and bid number must be deposited in the tender box inside the reception area of UMDONI MUNICIPALITY situated at Cnr of Bram Fischer and Williamson Street, Scottburgh, where bids will be opened in public. The name and address of the bidder must be clearly written on the sealed envelope containing the bid. Umdoni Municipality will not take responsibility for documents delivered or collected via corrier services. Late bids or Bids received by way of facsimile or e-mail will under no circumstances be considered.

Failure to comply in submitting the required documents shall result in the tender being considered non-responsive and shall be rejected.
The municipality serves the right to withdraw any invitation / advertisement to tender and / or to re-advertise or reject any tender or accept a part of it.
The municipality does not bind itself to accepting the lowest tender or award a contract to the bidder scoring the highest number of points.

Mr D D NAIDOO

Acting MUNICIPAL MANAGER

NOTE TO BIDDERS ON BID CONDITIONS:

- The Supply Chain Management Policy of UMDONI MUNICIPALITY will apply. The Council reserves the right not to accept the lowest bid or any bid and reserves the right to accept the whole or part of the bid, or to reject all bids and cancel the notice to bid.
- Service providers are required to download bid documents before the clarification meeting and present them in meeting on a specified date if any.
- A compulsory site clarification meeting will held as per details provided on tender notice.
- Bids that are submitted late, incomplete, unsigned or by facsimile, electronically or not completed in black ink will be rejected and not accepted for further evaluation.
- Only service providers registered in the Central Supplier Database (CSD) will be considered, attach proof of registration failure to attach will result in your bid not evaluated further.
- Members or Directors of Companies or Service Providers who are state employees are not allowed to bid or quote.
- Unsuccessful bidders will be informed of the tender outcome through Municipal website. Aggrieved unsuccessful bidders will be allowed to lodge, within fourteen (14) days of the decision or action, a written objection or complaint to the Office of the Municipal Manager through email, mmoffice@umdoni.gov.za / masis@umdoni.gov.za Complaints or objections received after fourteen (14) days of the date of the notice **will not** be entertained.
- Municipal clearance certificate certifying that no municipal rates or services are owed by the bidder or any of its directors to Umdoni Local Municipality or to any other municipality. If you do not pay any rates, you must submit an affidavit stating that you do not pay rates and proof of residence from the ward councilor. A signed lease agreement will be accepted for bidders that do not own property and not liable for municipal rates.
- Bids submitted are to be valid for a period of **120 days.**

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MUNICIPAL MANAGER

Umdoni Municipality
CNR BRAMFISCHER & WILLIAMSON
SCOTTBURGH
4180

UMDONI MUNICIPALITY

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T1.2 TENDER DATA

T1.2.1 Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in of Board Notice 136 of 2016 in GoveUMent Gazette No 38960 of 10 July 2016, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see www.cidb.org.za). Annexure F and Table G1 of that notice are reproduced without amendment or alteration for the convenience of tenderers in the following pages:

Standard Conditions of Tender

Note: 1 These Standard Conditions of Tender are identical to that contained in Annex F of SANS 294: 2004, Construction Procurement Processes, Procedures and Methods.

2. Annex E of SANS 294, Construction Procurement Processes, Procedures and Methods, and SAICE's Practice Manual #1, The use of South African National Standards in Construction Procurement, provides guidance on referencing these Standard Conditions of Tender in procurement documents.

F.1 *GENERAL*

F.1.1. *Actions*

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.

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.1.1.1. *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 of tender, 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 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 readily read, copied and recorded. Communications 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 submissions 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 tenderers 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 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 satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with the 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 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*
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.

F.2.7. ***Clarification Meeting***

Attend, where required, a clarification meeting at which tenderers may familiarise 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***

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

F.2.10. ***Pricing the Tender Offer***

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.

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

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.

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***

Do 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***

Unless otherwise 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.

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***

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.

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.

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.

Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

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.

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.

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.

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.

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 the 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 competitive position of tenderers 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.

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 notarised 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.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 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 a 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 or 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 that tender documents are available 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 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***

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 and Discrepancies***

F.3.9.1. *Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a 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. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

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*

Appoint an evaluation panel 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.*

F.3.11.3 *Method 2: Financial Offer and Preferences*

In the case of a Financial Offer and Preferences:

a) *Score tender evaluation points for each Financial Offer.*
b) *Confirm that tenderers are eligible for the preferences claimed and, if so, score tender evaluation points for preferencing.*
c) *Calculate total number of tender evaluation points (TEV) in accordance with the following formula:*

TEV = NFO + NP
where:

- *NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.5.1;*
- *NP is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.5.2.*

d) *Rank Tender Offers from the highest number of tender evaluation points to the lowest.*
e) *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.*

F.3.11.4 *Method 3: Financial Offer and Quality*

In the case of a Financial Offer and Quality:

a) *Score quality, rejecting all Tender Offers that fail to score the minimum number of points for quality stated in the Tender Data, if any.*
b) *Score tender evaluation points for each financial offer.*
c) *Calculate total number of tender evaluation points (TEV) in accordance with the following formula:*

TEV = NFO + NQ
where:

- *NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.5.1;*
- *NQ is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.5.3.*

d) *Rank Tender Offers from the highest number of tender evaluation points to the lowest.*
e) *Recommend the Tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons no to do so.*

F.3.11.5 *Method 4: Financial Offer, Quality and Preferences*

In the case of a Financial Offer, Quality and Preferences:

a) *Score quality, rejecting all Tender Offers that fail to score the minimum number of points for quality stated in the Tender Data, if any.*
b) *Score tender evaluation points for each financial offer.*
c) *Confirm that Tenderers are eligible for the preferences claimed and, if so, score tender evaluation points for preferencing.*
d) *Calculate total number of tender evaluation points (TEV) in accordance with the following formula:*

TEV = NFO + NP + NQ
where:

- *NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.5.1;*
- *NP is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.5.2.*
- *NQ is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.5.3.*

e) Rank Tender Offers from the highest number of tender evaluation points to the lowest.
f) Recommend the Tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million.

1) (a)(i) The following formula must be used to calculate the points for price in respect of tenders with a rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included):

$$Ps = 80(1 - \frac{Pt - Pmin}{Pmin})$$

Where:
Ps = Points scored for price of tender or offer under consideration;
Pt = Price of tender or offer under consideration; and
Pmin = Price of lowest acceptable tender or offer

2) The following table must be used to calculate the score out of 20 for Specific Goals:

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)	Supporting Documents
1. OWNERSHIP CATEGORIES			**Sworn Affidavit**
An EME or SME which is 100% Black owned	10		
An EME or SME which is 51% Black owned	5		
2. Promotion of Local Business - RDP			**Utilities, POR and SAPS affidavit**
Enterprise located within Umdoni Municipality	10		
Enterprise located within the District Municipality	5		
Enterprise located within the Province of KZN	2		
TOTAL POINTS			

3) The points scored by a tenderer of Specific Goals in terms of sub regulation (2) must be added to the points scored for price under sub regulation (1).
4) The points scored must be rounded off to the nearest two decimal places.
5) Subject to sub regulation (9) and regulation (11), the contract must be awarded to the tenderer scoring the highest points.
6) (a)If the price offered by a tenderer scoring the highest points is not market related, the organ of state may not award the contract to that tenderer.
(b)The organ of state may –
(i) negotiate a market related price with the tender scoring the highest points or cancel the tender;

(ii) if the tenderer does not agree to a market related price, negotiate a market related price with the tenderer scoring the second highest points or cancel the tender.
(iii) if the tenderer scoring the second highest points does not agree to a market related price, negotiate a market related price with the tenderer scoring the third highest points or cancel the tender.
(c) If a market related price is not agreed as envisaged in paragraph (b)(iii), the organ of state must cancel the tender.

The 90/10 preference points system for acquisition of services, works or goods with a Rand value above R 50 million

1) *a)(i) The following formula must be used to calculate the points for price in respect of tenders with a rand value above R 50 000 000 (all applicable taxes included):*

$$Ps = 90(1 - \frac{Pt - Pmin}{Pmin})$$

Where:
Ps = Points scored for price of tender or offer under consideration;
Pt = Price of tender or offer under consideration; and
Pmin = Price of lowest acceptable tender or offer

2) *The points for Specific Goals out of 10 shall be calculated as specified in the Tender Data.*
3) *The points scored by a tenderer of Specific Goals in terms of sub regulation (2) must be added to the points scored for price under sub regulation (1).*
4) *The points scored must be rounded off to the nearest two decimal places.*
5) *Subject to sub regulation (9) and regulation (11), the contract must be awarded to the tenderer scoring the highest points.*
6) *(a)If the price offered by a tenderer scoring the highest points is not market related, the organ of state may not award the contract to that tenderer.*
(b)The organ of state may –
(i) negotiate a market related price with the tender scoring the highest points or cancel the tender;
(ii) if the tenderer does not agree to a market related price, negotiate a market related price with the tenderer scoring the second highest points or cancel the tender.
(iii) if the tenderer scoring the second highest points does not agree to a market related price, negotiate a market related price with the tenderer scoring the third highest points or cancel the tender.
(c) If a market related price is not agreed as envisaged in paragraph (b)(iii), the organ of state must cancel the tender.

F3.11.6 ***Decimal Places***
Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.7 ***Scoring Price***
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.11.8 ***Scoring Preferences***
Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the 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 Functionality***
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:

$NQ = W_2 \times S_o/M_s$

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; and*
- 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 participation 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***

F.3.14.1. *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.3.14.2. *Complete the Schedule of Deviations attached to the Form of Offer and Acceptance, if any.*

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.*

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 stated 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.

Alpha-numerics associated with the Contractor Grading Designations

TABLE G1: CONTRACTOR GRADING DESIGNATIONS AND ASSOCIATED PARAMETERS

Contractor Grading Designation	***Tender Value Range designation***	***Maximum Value of Contract that a Contractor is considered capable of performing (R)***
1 (class of construction works)	*1*	*500 000*
2 (class of construction works)	*2*	*1 000 000*
3 (class of construction works)	*3*	*3 000 000*
4 (class of construction works)	*4*	*6 000 000*
5 (class of construction works)	*5*	*10 000 000*
6 (class of construction works)	*6*	*20 000 000*
7 (class of construction works)	*7*	*60 000 000*
8 (class of construction works)	*8*	*200 000 000*
9 (class of construction works)	*9*	*No limit*

TABLE G2: CLASSES OF CONSTRUCTION WORK, sets out detailed description of the various Designations (types) of construction work.

CIDB Class of Construction	
CE	*Civil Engineering*
EB	*Electrical Engineering Work - Building*
EP	*Electrical Engineering Work - Infrastructure*
ME	*Mechanical Engineering*
GB	*General Building*
SB	*Asphalt Works (Supply and Lay)*
SC	*Building Excavations, Shaft Sinking and Lateral Earth Support*
SD	*Corrosion Protection (Cathodic, Anodic and Electrolytic)*
SE	*Demolition and Blasting*
SF	*Fire Preventions and Protection Systems*
SG	*Glazing, Curtain Walls and Shop Fronts*
SH	*Landscaping and Horticulture Works*
SI	*Lifts, Escalators and Travellators (installation, commissioning and maintenance)*
SJ	*Piling and specialized foundations for buildings and structures*
SK	*Road Marking and Signage*
SL	*Structural Steel Fabrication and Erection*
SM	*Timber Buildings and Structures*
SN	*Waterproofing of basements, roofs and walls using specialist equipment*
SO	*Water Supply and Drainage for buildings (wet services, plumbing)*
SQ	*The development, extension, installation, repair, removal, alteration, dismantling or demolition of precast concrete or steel security fencing.*

T1.2.2 Variations to the Standard Conditions of Tender

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender shall apply to this tender.

Clause No. Variation, Amendment or Addition

F.1 General

F.1.1 Actions

Add the following:

"The Employer is UMDONI MUNICIPALITY, represented by Mr Sandile Xulu (email: sandileX@umdoni.gov.za."

F.1.2 Tender Documents

Add the following:

"The following documents form part of this tender and not issued to Tenderer's, but available from the issuing bodies as applicable:

1. CIDB, "The Standard for Uniformity in Construction Procurement Annex F, Standard Conditions of Tender", Board Notice 136 of 2016 of GoveUMent Gazette 38960 of 10 July 2016.
2. GCC 2015 "General Conditions of Contract for Construction Works", Third Edition 2015 published by the South African Institute of Civil Engineering (SAICE)
3. The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).
4. SANS 1921 (2004) Construction and Management Requirements for Works Contracts: Part 6.
5. SANS 1914 (2002): Targeted Construction Procurement: Parts 1 – 6.
6. The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (November 2022).

The tender documents issued by the Employer comprise:

VOLUME 1: The Tender Document (this document), in which is bound:

The Tender

Part T1: Tendering Procedures
T1.1 Tender Notice And Invitation To Tender
T1.2 Tender Data

Part T2: Returnable Documents
T2.1 List Of Returnable Documents
T2.2 Returnable Schedules

The Contract

Part C1: Agreements and Contract Data
C1.1 Form of Offer and Acceptance
C1.2 Contract Data
C1.3 Performance Guarantee
C1.4 Occupational Health And Safety Agreement

Part C2: Pricing Data
C2.1 Pricing Instructions
C2.2 Bill Of Quantities

Part C3: Scope Of Work
C.3.1 Description Of The Works
C3.2 Engineering
C3.3. Construction
C3.4. Management
C3.5 Particular Specifications
C3.6 Construction and Standard Drawings

Part C4: Site Information
C4.1 Geotechnical Investigation

VOLUME 2: Drawings (listed in C3.6.4 – Scope of Work)

Volume 1 is deemed the "Returnable Documents" which must be returned to the Employer in terms of submitting a tender offer."

F.1.4 Communication and Employer's Agent

Add the following:

"Attention is drawn to the fact that verbal information, given by the Employer's Agent during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer. Only information issued formally by the Employer in writing to tenderers will be regarded as amending the Tender Documents.

The Employer's Agent is:

Name	:	TGC Engineers
Address	:	4 The Crescent, Westway Office Park
	:	Westville
	:	3635
Telephone No.	:	031 265 1777
Email	:	tgc@tgcengineers.co.za
Contact Person	:	Mr. Megan Moodley

F.2 Tenderer's obligations

F.2.1 Eligibility

Add the following after F.2.1.2:

"Only those tenderers who satisfy the following criteria are eligible to submit tenders:

A. Construction Industry Development Board (CIDB) Registration

Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, for a **6CE OR HIGHER** class of construction work, are eligible to have their tenders evaluated.

B. Joint ventures are eligible to submit tenders provided that:

1. Every member of the joint venture is registered with the CIDB;
2. The lead partner has a contractor grading designation in the GB class of construction work;
3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Board Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 6CE class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations; and
4. Tenders submitted by joint ventures of two or more firms must be accompanied by the document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which is defines precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning.
5. The Tenderer, if a Joint Venture, must submit a signed JV Agreement with the tender specific to the tendered Contract and showing clearly the percentage contribution of each partner to the Joint Venture. The value of work to be undertaken by each partner must be within their CIDB grading limit.

C. National Treasury Central Supplier Database Registration

Only Tenderers who are eligible to be registered on the National Treasury Central Supplier (CSD) Database and have provided proof of their registration will be eligible to submit a tender offer. Proof of registration must be in the form of the Tenderers CSD registration number. Tenderers who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture.

Tenderers who wish to register as service providers on the CSD can register online at https://secure.csd.gov.za/Account/Register."

F.2.7 Clarification Meeting

Add the following:

"The arrangement for a compulsory clarification meeting is as stated in the Tender Notice and Invitation to Tender is as follows:

Date	:	31 August 2026
Time	:	12h00 am
Venue	:	On site as per co-ordinates

Tenderers should be represented at the clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.

F2.10.3 Pricing the Tender Offer

This tender is **NOT** subject to contract price adjustments.

F.2.12 Alternative Tender Offers

*Delete the contents of **Clause F.2.12** and replace with the following:*

Alternative tender offers do not apply.

F.2.13 Submitting a Tender Offer

A. Add the following at the end of 0:

"Parts of each tender offer communicated on paper shall be submitted as an **original**."

B. Add the following after the first sentence of 0:

"The tender shall be signed by a person duly authorised to do so. Tenders submitted by joint ventures of two or more firms shall be accompanied by the document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which is defined precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning."

C. Add the following after the first sentence of 0:
D. CNR BRAMFISCHER & WILLIAMSON
E. SCOTTBURGH

"The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:

Location of tender box	:	CNR BRAMFISCHER & WILLIAMSON, SCOTTBURGH
Identification details	:	**Tender Number 03/2027**
	:	**Notice No 254/2026**

Sealed tenders with the Tenderer's name and address and the **endorsement "TENDER NO. 03/2027 Notice No. 254/2026 Upgrade of Emaromeni Access Road (ward 14)** on the envelope, must be placed in the appropriate official tender box at the abovementioned address."

F.2.15 Closing Time

F.2.15.1 "The closing time for submission of tender offers is 09 September 2026 at 12h00 pm, as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted."

F.2.16 Tender Offer Validity

F.2.16.1 "The tender offer validity period is **120 days**."

F.2.17 Clarification of Tender Offer after Submission

"A tender may be rejected as non-responsive if the tenderer fails to provide any clarification requested by the employer, or confirmation of registration with CIDB within the time for submission stated in the employer's written request for such clarification or confirmation. A tender may be rejected if the unit rates or lump sums for some of the items in the bills/schedules of quantities are, in the opinion of the Employer, unreasonable or out of proportion, and the tenderer fails, within the time stated in writing by the Employer to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged."

F.2.23 Certificates

Add the following:

"The tenderer is required to submit the following certificates with the tender:

A. Certificate of Contractor Registration (CIDB)
Either certified copy of the Certificate of Contractor Registration issued by the Construction Industry Development Board or of the Application Form for registration in terms of the Construction Industry Development Board Act (Form F006).

Where a tenderer satisfies CIDB contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.

B. Tax compliance pin
Tenderers shall be registered and in good standing with the South African Revenue Services (SARS) and shall submit/append documentary evidence/proof in the form of an original or certified copy of valid Tax compliance pin issued by SARS. Failure to provide a valid Tax compliance pin will result in the tender being rejected.

Each party to a Consortium/Joint Venture shall submit a separate Tax compliance pin.

C. Company Registration
Certified Copies of company registration documents.

Each party to a Consortium/Joint Venture shall submit separate company registration documents.

D. Ownership
Proof of Preference Points Claimed

Each party to a Consortium/Joint Venture shall submit separate certified copies in the above regard.

F.3 *The Employer's Undertakings*

F.3.1 *Respond to Requests from the Tenderer*

F.3.1.1 Respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.4 Opening of Tender Submissions

F.3.4.1 "The time and location for opening of the tender offers is:

Time : **12H00, Wednesday 09 September 2026**
Location : **Tender Box, uMdoni Municipality Offices, CNR BRAMFISCHER & WILLIAMSON, SCOTTBURGH**
Tenders will be opened immediately after the closing time for tenders at **12H00 pm**."

F.3.85 Test for Responsiveness

F.3.8.21: "Tenders will be considered non-responsive if:

- The tenderer has not completed and/or signed the Offer portion of C1.1 Form of Offer and Acceptance.
- The tenderer does not comply with the Contractor's CIDB grading designation specified in F.2.1 above.
- The tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the employer's written request for the supporting documentation."

F.3.116 Evaluation of Tender Offers

F.3.11.1 ***General***
"The Procedure for the evaluation of responsive tenders is ***Method 4: Financial Offer, Quality and Preferences.*** *Quality (functionality) will also be used as a pre-qualifying criterion, with tenderers required to meet a minimum quality score of 60 points in order to qualify for further evaluation."*

F.3.7 Scoring Price
F.3.7.1 *"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 = 40.*
- *A is a number calculated using the formula and option described in Table F.1 (Formula 2 & Option 1[a]).*"

F.3.8 Scoring Preferences: Specific Goals

F.3.8.1 Up to **20 points** (for financial values up to R50 000 000) or 10 points (for financial values over R50 000 000) will be awarded to tenderers who are found to be eligible for the preference claimed.

Points will be awarded to qualifying Tenderers for meeting the Specific Goals criteria as per the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022 as detailed below.

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)	Supporting Documents
1. OWNERSHIP CATEGORIES			**Sworn Affidavit**
An EME or SME which is 100% Black owned	10		
An EME or SME which is 51% Black owned	5		
2. Promotion of Local Business - RDP			**Utilities, POR and SAPS affidavit**
Enterprise located within Umdoni Municipality	10		
Enterprise located within the District Municipality	5		
Enterprise located within the Province of KZN	2		
TOTAL POINTS			

F.3.9 Scoring Functionality

F.3.9.1 *"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:

$NQ = W_2 \times S_o/M_s$

where:
- S_o *is the score for quality allocated to the submission under consideration.*
- AM_s *is the maximum possible score for quality in respect of a submission; and*
- W_2 *is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data = 40*

Functionality will be applied as a prequalifying criterion to determine the tenderers that qualify for further evaluation. Functionality shall be scored as per the table below. Points will be allocated only where the required supporting documentation has been submitted by the tenderer."

FUNCTIONALITY SCORING CRITERIA

Bidders are to obtain a minimum of 70% of the total functionality points as tabled below:

EVALUATION CRITERIA DESCRIPTION	**POINTS**
Experience of the bidder (Company)	20
Qualification and experience of the site agent	20
Qualification and experience of the foreman	20
Methodology (Construction Program)	20
Plant and equipment	14
Financial resources to execute the works	6
TOTAL	**100**

8.2.1 Experience of the bidder (Company)

Projects Experience	**Points**
Number of completed paved (tar) roads projects with traceable references and completed within the past 5 years (1 January 2021 to date) – minimum value of R5 million.	
5 or more completed paved (tar) roads projects	20
4 completed paved (tar) roads projects	15
3 completed paved (tar) roads projects	10
Less than 3 completed paved (tar) roads projects	0
Maximum Points	**20**

NOTES: a. A fully signed copy of the Completion Certificate or Final Approval Certificate on a company letterhead with traceable references for each project MUST be submitted.
b. Appointment letters for the claimed projects MUST be provided.
c. Failure to submit the required documents will result in no points being allocated.
d. All documentation provided will be verified by the municipality.

8.2.2 Qualification and experience of the site agent

Qualifications and experience	**Points**
Site agent must have a minimum qualification of a National Diploma (NQF 6) or equivalent in Civil Engineering, LIC (NQF 7) and years of relevant experience of completing similar projects.	
5 or more years of experience in similar projects	20
3 - 4 years of experience in similar projects	15
2 years of experience in similar projects	10
Less than 2 years of experience in similar projects	0
Maximum Points	**20**

NOTES: a. Certified copies of required qualification certificates, certified copy of ID document and a signed CV detailing nature and years of experience of the personnel.
b. Failure to submit the required documents will result in no points being allocated.
c. Qualifications obtained from outside South Africa to be accompanied by SAQA certification.
d. Similar projects listed must have start and end date for experience calculations.

8.2.3 Qualifications and experience of the foreman

Qualifications and experience	**Points**
Foreman must have a minimum qualification of NQF Level 4 in Civil Construction, LIC (NQF 5) and years of relevant experience of completing similar projects.	
5 or more years of experience in similar projects	20
3 - 4 years of experience in similar projects	15
Less than 2 years of experience in similar projects	0
Maximum Points	**20**

NOTES: a. Certified copies of required qualification certificates, certified copy of ID document and a signed CV detailing nature and years of experience per personnel.
b. Failure to submit the required documents will result in no points being allocated.
c. Qualifications obtained from outside South Africa to be accompanied by SAQA certification.
d. Similar projects listed must have start and end date for experience calculations.

8.2.4 Methodology (Construction Program and Method Statement)

Criteria	**Points**
Methodology shall be presented in the form of a detailed method statement, construction program in Gantt chart or other format indicating a clear sequencing of project activities, timelines, critical path and labour demand. Detailed Method statement to include > Time frames, Contract Administration, Plant & Equipment, Organogram, Quality management, Traffic Accommodation, Environmental, Health & Safety.	
Correct sequencing, critical path, labour demand and a detailed method statement	20
Correct sequencing with critical path or labour demand or detailed method statement	15
Correct sequencing only and method statement not detailed	10
No program submitted or submitted program incorrect and no method statement	0
Maximum Points	**20**

8.2.5 Plant and equipment

Criteria	**Points**
Plant and equipment shall be based on number of different types of plant owned as enlisted.	
Owning plant total of 7 and above	14
Owning plant total of 5 - 6	10
Owning plant total of 3 - 4	7
Owning plant total less than 1 - 2	3
Owning nothing	0
Maximum Points	**14**

Plant	**Number of Owned Plant and Equipment**
Tractor Loader Backhoe/TLB (max 1)	
Motor Grader (max 1)	
Excavator (max 1)	
Min. 10-ton Grid/Pad foot roller (max 1)	
Min. 10-ton Smooth Drum Roller (max 1)	
Water Tanker (max 1)	
Min. 10 cube Tipper Truck (max 3)	

NOTES: 1. The Tenderers should provide proof of ownership.
2. Where documents are not submitted or are incorrect, no points will be allocated.
3. Verification method will be based on attached Finance Asset Register/Proof of Purchase (Excavator and Roller). Natis Documents for TLB, Water Tanker and Tipper Trucks, Grader (Bidder to Include copies of license disk).
4. Hired Plant will not be awarded points.

8.2.6 Financial resources to execute the works

NOTE: The Tenderer **must** enclose with his tender an official bank rating letter issued by his/her banker failing which no Points will be awarded.

NB: It is compulsory for a bidder to score not less than 50% per segment/evaluation criteria in the above table. Even if the bidder has scored more than 70% on Functionality, but scores less than 50% on one or more of the segments/evaluation criteria above, the bidder will be non-responsive.

Financial Resources	**Points**
Bank recommendation relating to the financial capability of the contractor to finance the proposed contract. Rating "A" – undoubted/ excellent	6
Bank recommendation relating to the financial capability of the contractor to finance the proposed contract. Rating "B" – good for amount quoted.	4
Bank recommendation relating to the financial capability of the contractor to finance the proposed contract. Rating "C" – average/good if strictly in line of business.	3
Bank recommendation relating to the financial capability of the contractor to finance the proposed contract. Rating below "C"	0
Maximum Points	**6**

F.3.1310 Acceptance of Tender Offer

F.3.1310.1 "Tender offers will only be accepted if:

a) the tenderer has in his or her possession an original valid Tax compliance pin issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations;
b) the tenderer is registered with the CIDB with an appropriate category of registration; by the tender closing date
c) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
d) the tenderer has not:
   i) abused the Employer's Supply Chain Management System; or
   ii) failed to pay municipal rates and taxes or service charges and such rates, taxes and charges are in arrears for more than three months;
   iii) failed to perform on any previous contract and has been given a written notice to this effect;
e) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.
f) the tenderer is not in arrears for more than 3 months with the municipal rates and taxes and municipal services charges."

F.3.171 Provide Copies of the Contracts

F.3.171.1 **"**The number of paper copies of the signed contract to be provided by the employer is one (1) original."

T1.2.3 Additional Conditions of Tender

The additional conditions of tender are:

T1.2.3.1 Compliance with Occupational Health and Safety Act 1993 and Construction Regulations (as amended 2014)

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

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

The Contractor shall prepare and maintain a Health and Safety File in respect of the project, which shall be available for inspection on Site at all times and handed over to the Employer on Final Completion of the project.

The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included in C1.4 of the Contract Document) and a letter of good standing from the Compensation Commissioner, or a licensed compensation insurer, within 14 days after the Commencement Date of the contract.

T1.2.3.2 Eligibility with Respect to Expanded Public Works Programme

This Contract does not qualify for consideration as an Expanded Public Works Programme project.

T1.2.3.3 Claims Arising after Submission of Tender

No claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Contract Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer/Employer's Agent after the submission of any tender and the Tenderer shall be deemed to have:

1) Inspected the Contract Drawings and read and fully understood the Conditions of Contract.

2) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.

3) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and plant to and from the site and made the necessary provisions for any additional costs involved thereby.

4) Requested the Employer or his duly authorised agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.

Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the tenderer must apply to the Employer/Employer's Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.

T1.2.3.4 Imbalance in Tendered Rates

In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are either excessively low or high or not in proper balance with other rates or lump sums, the Tenderer may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the tenderer to amend these rates and lump sums along the lines indicated by it.

The Tenderer will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the Contract Price.

Should the Tenderer fail to amend the Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

T1.2.3.5 Community Liaison Officer

Democratically elected village members who in turn have representation on the overall Project Steering Committee (PSC) represents the residents being served by the project. The Contractor will be required to liaise through the CLO for any matters to do with the community. The CLO shall be paid an amount of **R7200per month** throughout the contract Labour rate R200 per day.

T1.2.3.6 Labour Intensive Construction/Use of Local Labour

This project does not qualify as EPWP. The contractor is encouraged to make use of local labour in order to promote labour intensive construction, the labour-intensive works to be done under the contract is as stated below:

- Clearing and Grubbing of the site;
- The supply of plant, labour, tools, equipment and material necessary to complete the work;
- Setting out of the works;
- Accommodation of traffic and maintaining temporary deviations;
- Construction of drainage facilities;
- Sourcing of borrow material including haulage;
- Mass earthworks;
- Construction of pavement layers as specified;
- Laying of prefabricated culvert and storm-water pipes;
- Construction of gabion protection works and guardrails;
- Asphalt Surfacing;
- Concrete pavement slab surfacing;
- Installation of kerbs and channel and walk ways;
- Erection of road signs and road marking;
- Finishing of road signs and road marking;
- General cleaning;

The latest gazetted government labour rate for the Construction industry or the Municipality stipulated rate will to be used in the contract for remuneration of local labour. Currently the Municipality stipulated rates as follows:

- Labour rate : R200.00 per day CLO R 7200 per month

The Contractor shall be required to fill in all posts for labourers, from the Umdoni Municipality and Ugu District Jurisdiction respectively. The target beneficiaries are, but not limited to:

- Unemployed people, of whom, in aggregate, at least 54% women, and 4% should be people with disabilities
- People who have recently been the victims of natural or social disasters
- Retrenched workers
- Young people

T1.2.3.7 Invalid Tenders

Tenders shall be considered invalid and shall be endorsed and recorded as such in the tender opening record, by the responsible official who opened the tender, in the following circumstances:

a) if the tender offer is not submitted on the Form of Offer and Acceptance bound into this tender document (form C1.1 Form of Offer and Acceptance);
b) if the tender is not completed in non-erasable ink;
c) if the offer has not been signed;
d) if the offer is signed, but the name of the tenderer is not stated or is indecipherable;

T1.2.3.8 Negotiations with Preferred Tenderers

The Employer may negotiate the final terms of a contract with tenderers identified through a competitive tendering process as preferred tenderers provided that such negotiation:

a) does not allow any preferred tenderer a second or unfair opportunity.
b) is not to the detriment of any other tenderer; and
c) does not lead to a higher price than the tender as submitted.
d) Minutes of any such negotiations shall be kept for record purposes.

T1.2.3.9 Subcontracting

The successful Bidder may be expected to subcontract a portion of the works to local subcontractor

Part T2: Returnable Documents

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T2.1	List Of Returnable Documents	29
T2.2	Returnable Schedules	31 - 75

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T2.1 LIST OF RETURNABLE DOCUMENTS

Failure to submit the following documents will invalidate your bid:

- Either a Certificate of Contractor Registration issued by the Construction Industry Development Board (CIDB Grade 6 CE or higher)
- A valid Tax Compliance Status Pin Sheet (with VAT Registration number)
- Copy of company registration documents
- Joint Venture Agreement and Power of Attorney (in case of Joint Ventures)
- Certified copies of ID documents of Shareholders/Members/Directors of the business enterprises
- Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993)
- A copy of BBBEE certificate or Sworn Affidavit
- Valid company Lease Agreement, Proof of Address or Rates Letter (not older than 3 months)
- Latest CSD Summary Report

The tenderer must complete and return documents A1 to A23; B1 to B2; C1.1 and C2 as listed below as part of his/her tender submission:

SCHEDULE	DESCRIPTION Returnable documents required for tender evaluation purposes	PAGE
Schedule A	**Documents incorporated in this tender document that must be completed and signed by all tenderers**	
UM	Certificate of attendance at clarification meeting	31
A1	Authority to Sign Documents	32
A2	Letter of Good Standing with the Workmen's Compensation Commissioner	33
A3	Certificate Of Authority For Joint Ventures (only if Tenderer is a JV)	34
A4	Schedule Of Work Carried Out By The Tenderer	35
A5	Current And Recent Projects For Umdoni Municipality (UM/MBD5.2)	37
A6	Letter of Intent for performance guarantee	38
A7	Schedule Of Estimated Monthly Expenditure	39
A8	Schedule Contract Form – Past Experience (UM/MBD5.1)	40
A9	Details Of Key Personnel	41
A10	Proof Of Address	43
A11	Pricing Schedule – Firm Prices (Purchases) (UM/MBD3.1)	44
A12	Pricing Adjustments (Um/Mbd3.2)	45
A13	Schedule Of Daywork Rates	46
A14	Record Of Addenda To Tender Documents	48
A15	Company Registration Documents and Sworn Affidavit	49
A16	Identity Documents of Shareholders/Directors/Members	50
A17	Joint Venture Disclosure Form	51

SCHEDULE	DESCRIPTION Returnable documents required for tender evaluation purposes	PAGE
A18	Declaration of Interest (UM/MBD4)	59
A19	Declaration of Bidder's Past Supply Chain Management Practices (UM/MBD8)	62
A20	Certificate of Independent Tender Determination (UM/MBD9)	64
A21	Form Concerning Fulfilment Of The Construction Regulations	67
A22	Central Supplier Database Registration (CSD)	69
A23	Preference Points Claim Form in Terms of the Preferential Procurement Regulations (UM/MBD 6.1)	70
Schedule B	**Additional Documents to be provided by the Tenderer and attached to his/her tender**	
B1	CIDB Contractor Registration Certificate	74
B2	Tax Pin Requirements (UM/MBD2)	75
Schedule C	**Other Documents that will form part of The Contract**	
C1.1	Form Of Offer And Acceptance	77
C1.2	Contract Data	82
C1.3	Performance Guarantee	88
C1.4	Occupational Health And Safety Agreement	91
C2	Pricing Data and Bill of Quantities	93
C3	Scope of Work	116
C4	Site Information	155

NB: TENDERERS MUST COMPLETE THESE DOCUMENTS / DATA SHEETS / FORMS IN <u>BLACK INK</u>

T2.2 RETURNABLE SCHEDULES

UM 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 clarification meeting held for all tenderers at the Upgrade of Emaromeni Access Road (ward 14), on **Monday 31 August 2026.**

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

Particulars of person attending the meeting:

Name: ..... Signature: .....

Capacity: .....

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

Name: ..... Signature: .....

Capacity: ..... Date and Time: .....

Municipal Stamp

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A1. AUTHORITY TO SIGN DOCUMENTS

Signatories for firms must establish their authority thereto by attaching a duly signed and dated copy of the relevant resolution of the (1) Directors/Partners/Members to this form, or by the completion of this form.

RESOLUTION

By resolution of the (1) Board of Directors / Partners / Members passed at a meeting held on……. (Date),

at …….....…….....… (Place)

……..... (Name of signatory)

whose signature appears below, has been duly authorised to sign all documents in connection with the Tender for;

TENDER NO: ..... and any contract which may arise therefrom on behalf of :-

….....……..…
(Name of Tenderer in Block Capitals)

SIGNED ON BEHALF OF THE FIRM (Director/Partner/Member)**:-**

1.			
	NAME	**SIGNATURE**	**DATE**
2.			
	NAME	**SIGNATURE**	**DATE**
3.			
	NAME	**SIGNATURE**	**DATE**

SIGNATURE OF AUTHORISED SIGNATORY:

NAME	**SIGNATURE**	**DATE**

Tenderers are to note that failure to comply with this requirement will render their tender invalid.

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A2. LETTER OF GOOD STANDING WITH THE WORKMEN'S COMPENSATION COMMISSIONER

Tenderers shall attach hereto a copy of the Letter of Good Standing issued by the Workmen's Compensation Commissioner.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A3. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed only if the Tenderer is a joint venture.

We, the undersigned, are submitting this tender offer in joint venture and hereby authorise

Mr/Ms ....., authorised signatory of the company, close corporation or partnership..... acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

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

Note: A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partner to the Joint Venture shall be attached to this Schedule. The agreement should reflect the following information;

i) Company registration number for each partner.
ii) Authorised signature for each partner.
iii) % share for each partner.
iv) Address for each partner.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A4. SCHEDULE OF WORK CARRIED OUT BY THE TENDERER

Tenderers shall insert in the schedule hereunder details of work successfully carried out by them, of a similar nature to that for which their tender is submitted. The tenderer's relevant experience must be supported by attaching to this schedule the appointment letters and completion certificates for previous projects.

Failure to complete this schedule and submit both appointment letters and completion certificates, will result in the tenderer scoring zero (0) points for previous experience. Non submission of appointment letters and completion certificates will be taken to indicate that the tenderer has no experience in this class of work.

COMPLETED CONTRACTS				
Employer (Name, Tel, Fax, Email)	**Consulting Engineer (Name, Tel, Fax, Email)**	**Nature Of Work**	**Value of Work R(M)**	**Date Completed**
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

CURRENT CONTRACTS				
Employer (Name, Tel, Fax, Email)	**Consulting Engineer (Name, Tel, Fax, Email)**	**Nature Of Work**	**Value of Work R(M)**	**Anticipated Completion Date**
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				
Name:				
Tel :				
Fax :				
Email :				

If there is insufficient space above, the tenderer may append additional sheets.

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

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A5. CURRENT AND RECENT PROJECTS FOR UMDONI MUNICIPALITY (UM/MBD5.2)

Tenderers must furnish hereunder details of similar works/service, which they have satisfactorily completed in the past for UMDONI MUNICIPALITY. The information shall include a description of the Works, Contract Value and Completion Date.

CURRENT PROJECTS			
PROJECT NAME	**AWARDED AMOUNT**	**CONTRACT START DATE**	**ANTICIPATED / ACTUAL COMPLETION DATE**
TOTAL AMOUNT OF PROJECTS CURRENT & RECENT FOR UMDONI MUNICIPALITY			**R**

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A6. LETTER OF INTENT FOR PERFOMANCE GUARANTEE

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A7. SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE

The tenderer shall state his estimated expenditure indicating the values of each monthly claim in terms of Clause 6.10 of the General Conditions of Contract, which he/she estimates will arise based on his/her preliminary programme and tendered rates, in the table below. ***The total of the monthly amounts shall be equal to the tender sum.***

MONTH	VALUE
1	R
2	R
3	R
4	R
5	R
6	R
7	R
8	R
9	R
10	R
11	R
12	R
SUBTOTAL CONTINGENCIES (10%)	**R** R
SUBTOTAL VAT (15%)	**R** R
TOTAL (INCLUDING VAT @ 15%)	**R**

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A8. SCHEDULE CONTRACT FORM – PAST EXPERIENCE (UM/MBD5.1)

Bidders must furnish hereunder details of similar works / service, which they have satisfactorily completed in the past. The information shall include a description of the works, the contract value and the name of the Employer.

Employer	Nature of Works	Value of Work	Duration and Completion Date	Employer's Contract No

If there is insufficient space above, the tenderer may append additional sheets.

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

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

UMDONI MUNICIPALITY

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A9. DETAILS OF KEY PERSONNEL

Tenderers shall set out in the Schedule hereunder details of the experience of the Site Agent and Site Foreman for work of a similar nature to that for which this tender is submitted.

Failure to complete this schedule may result in the tender not being considered.

SITE AGENT				
NAME:			NQF LEVEL:	
Contract and Client	Nature Of Work	Position Held	Value Of Work	Year Completed

SITE FOREMAN				
NAME:			NQF LEVEL:	
Contract and Client	Nature Of Work	Position Held	Value Of Work	Year Completed

If there is insufficient space above, the tenderer may append additional sheets.

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

Tenderers are to attach (to this page) the signed CV and certified copies of Qualifications and the relevant NQF Qualifications for the following personnel: NB. Similar projects listed must have start and end date.

- ***Site Agent***
- ***Site Foreman***

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A10. PROOF OF ADDRESS

Municipal clearance certificate certifying that no municipal rates or services are owed by the bidder or any of its directors to Umdoni Local Municipality or to any other municipality. If you do not pay any rates, you must submit an affidavit stating that you do not pay rates and proof of residence from the ward councilor. A signed lease agreement will be accepted for bidders that do not own property and not liable for municipal rates

SIGNED/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A11. PRICING SCHEDULE – FIRM PRICES (PURCHASES) (UM/MBD3.1)

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 ……...

- Required by: …….
- At: …….

  …….
- Brand and Model …….
- Country of Origin …….
- Does offer comply with specification? *YES/NO
- If not to specification, indicate deviation(s) …….
- Period required for delivery …….
  *Delivery: Firm/not firm
- Delivery basis (all delivery costs must be included in the bid price) …….

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 (PAYE), income tax , unemployment insurance fund (UIF) and skills development levies.**

*Delete if not applicable

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A12. PRICING ADJUSTMENTS (UM/MBD3.2)

A NON-FIRM PRICES SUBJECT TO ESCALATION

1. As per GCC 2015 Clause 6.8.2 and detailed on page 86 - 88 of the GCC 2015.

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

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A13. SCHEDULE OF DAYWORK RATES

This Daywork Schedule will be used at the discretion of the Engineer for valuation of extra work which cannot conveniently be valued at rates submitted in the Bill of Quantities. All price rates shall be exclusive of VAT.

The rates entered for labour and materials shall be exclusive of overhead charges and profit, site supervision of staff, insurance, holidays with pay and use and maintenance of small hand tools and non-mechanical plant, travelling allowances, other emoluments and allowances. Provision will be made for the insertion of percentages to cover all these items which are henceforth termed "on-costs", consumable stores, maintenance, etc.

In the case of plant no "on-costs" item is provided. The rate entered shall include any of the above "on-costs" which are pertinent and shall include profit, operator's costs, consumable stores, maintenance, depreciation, etc.

Failure to complete this Schedule may result in the tender not being considered.

A. LABOUR

Normal Working Time:

1	Labourers	R.....	per hour plus	..... %	“On-Cost”
2	Gangers	R.....	per hour plus	..... %	“On-Cost”
3	Tradesmen	R.....	per hour plus	..... %	“On-Cost”
4	Other				
	(a).....	R.....	per hour plus	.....%	“On-Cost”
	(b).....	R.....	per hour plus	..... %	“On-Cost”

Overtime

1	Labourers	R.....	per hour plus	..... %	“On-Cost”
2	Gangers	R.....	per hour plus	..... %	“On-Cost”
3	Tradesmen	R.....	per hour plus	..... %	“On-Cost”
4	Other				
	(a).....	R.....	per hour plus	.....%	“On-Cost”
	(b).....	R.....	per hour plus	..... %	“On-Cost”

B. PLANT

DESCRIPTION	TYPE	ESTABLISHMENT AND DISESTABLISHMENT COST	RATE PER HOUR	
			WORKING	STANDING
Trucks and ADTs				
Bulldozers				
Excavators				
Tractor & Trailer				
Loaders				
Graders				
Tractor – Loader – Backhoe				
Water Pumps and Leadings				
Compressor including Hammers and Hoses				
Other				

C. MATERIAL

The tenderer shall state here the percentage "On-costs" that should be added to the nett cost of materials:

..... %

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A14. RECORD OF ADDENDA TO TENDER DOCUMENTS

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

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

If there is insufficient space above, the tenderer may append additional sheets.

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

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A15. COMPANY REGISTRATION DOCUMENTS & SWORN AFFIDAVIT

Tenderers are to attach certified copies of company registration documents (e.g., CK Documents) to this page. Additionally, each director / principal reflected in the company registration documents must submit an affidavit declaring their % ownership of the entity. The affidavit must be attached hereto.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A16. IDENTITY DOCUMENTS OF SHAREHOLDERS/DIRECTORS/ MEMBERS

Tenderers are to attach certified copies of ID Documents of Members/Directors to this page.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

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A17. JOINT VENTURE DISCLOSURE FORM

GENERAL

i) All the information requested must be filled in the spaces provided. If additional space is required, additional sheets may be used and attached to the original documents.

ii) A copy of the joint venture agreement must be attached to this form, in order to demonstrate the Affirmable, Joint Venture Partner's share in the ownership, control, management responsibilities, risks and profits of the joint venture, the proposed joint venture agreement must include specific details relating to:

a. the contributions of capital and equipment
b. work items to be performed by the Affirmable Joint Venture Partner's own forces
c. work items to be performed under the supervision of the Affirmable Joint Venture Partner.

iii) Copies of all written agreements between partners concerning the contract must be attached to this form including those, which relate to ownership options and to restrictions/limits regarding ownership and control.

iv) ABE partners must complete ABE Declaration Affidavits.

v) The joint venture must be formalised. All pages of the joint venture agreement must be signed by all the parties concerned. A letter/ notice of intention to formalise a joint venture once the contract has been awarded will not be considered.

vi) Should any of the above not be complied with, the joint venture will be deemed null and void and will be considered non-responsive.

1. JOINT VENTURE PARTICULARS

a) Name .....

b) Postal address .....

.....

.....

c) Physical address.....

.....

.....

d) Telephone.....

e) Fax.....

2. IDENTITY OF EACH NON-AFFIRMABLE JOINT VENTURE PARTNER

2.1(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

2.2(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

(Continue as required for further non-Affirmable Joint Venture Partners)

3. <u>IDENTITY OF EACH AFFIRMABLE JOINT VENTURE PARTNER</u>

3.1(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

3.2(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

3.3(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone .....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

4. BRIEF DESCRIPTION OF THE ROLES OF THE AFFIRMABLE JOINT VENTURE PARTNERS IN THE JOINT VENTURE

.....

.....

.....

5. OWNERSHIP OF THE JOINT VENTURE

a) Affirmable Joint Venture Partner ownership percentage(s) .....%

b) Non-Affirmable Joint Venture Partner ownership percentage(s) .....%

c) Affirmable Joint Venture Partner percentages in respect of : *

i) Profit and loss sharing .....

ii) Initial capital contribution in Rands .....

(*Brief descriptions and further particulars should be provided to clarify percentages).

iii) Anticipated on-going capital contributions in Rands .....

iv) Contributions of equipment (specify types, quality, and quantities of equipment) to be provided by each partner.

.....

.....

.....

6. RECENT CONTRACTS EXECUTED BY PARTNERS IN THEIR OWN RIGHT AS PRIME CONTRACTORS OR AS PARTNERS IN OTHER JOINT VENTURES

	NON-AFFIRMABLE JOINT VENTURE PARTNERS	PARTNER NAME
a)		
b)		
c)		
d)		
e)		

	AFFIRMABLE JOINT VENTURE PARTNERS	PARTNER NAME
a)		
b)		
c)		
d)		
e)		

7. CONTROL AND PARTICIPATION IN THE JOINT VENTURE

(Identify by name and firm those individuals who are, or will be, responsible for, and have authority to engage in the relevant management functions and policy and decision making, indicating any limitations in their authority e.g., co-signature requirements and Rand limits).

a) Joint Venture cheque signing

.....

.....

.....

b) Authority to enter into contracts on behalf of the Joint Venture

.....

.....

.....

c) Signing, co-signing and/or collateralising of loans

.....

.....

.....

d) Acquisition of lines of credit

.....

.....

.....

e) Acquisition of performance bonds

.....

.....

.....

f) Negotiating and signing labour agreements

.....

.....

.....

8. MANAGEMENT OF CONTRACT PERFORMANCE
(Fill in the name and firm of the responsible person).

a) Supervision of field operations

.....

b) Major purchasing

.....

c) Estimating

.....

d) Technical management

.....

9. MANAGEMENT AND CONTROL OF JOINT VENTURE

a) Identify the "managing partner", if any,

.....

.....

.....

.....

b) What authority does each partner have to commit or obligate the other to financial institutions, insurance companies, suppliers, subcontractors and/or other parties participating in the execution of the contemplated works?

.....

.....

.....

.....

c) Describe the management structure for the Joint Venture's work under the contract

MANAGEMENT FUNCTION / DESIGNATION	NAME	PARTNER*

(Fill in "ex Affirmable Joint Venture Partner" or "ex non-Affirmable Joint Venture Partner".

10. PERSONNEL

a) State the approximate number of operative personnel (by trade/function/discipline) needed to perform the Joint Venture work under the Contract.

TRADE/FUNCTION/ DISCIPLINE	NUMBER EX AFFIRMABLE JOINT VENTURE PARTNERS	NUMBER EX NON-AFFIRMABLE JOINT VENTURE PARTNERS

(Fill in "ex Affirmable Joint Venture Partner" or "ex non-Affirmable Joint Venture Partner").

b) Number of operative personnel to be employed on the Contract who are currently in the employ of partners.

(i) Number currently employed by Affirmable Joint Venture Partners

.....

(ii) Number currently employed by the Joint Venture

.....

c) Number of operative personnel who are not currently in the employ of the respective partner and will be engaged on the project by the Joint Venture

.....

d) Name of individual(s) who will be responsible for hiring Joint Venture employees

.....

.....

e) Name of partner who will be responsible for the preparation of Joint Venture payrolls

.....

.....

11. CONTROL AND STRUCTURE OF THE JOINT VENTURE

Briefly describe the manner in which the Joint Venture is structured and controlled.

.....

.....

.....

.....

.....

The undersigned warrants that he/she is duly authorised to sign this Joint Venture Disclosure Form and affirms that the foregoing statements are true and correct and include all material information necessary to identify and explain the terms and operations of the Joint Venture and the intended participation of each partner in the undertaking.

The undersigned further covenants and agrees to provide the Employer with complete and accurate information regarding actual Joint Venture work and the payment therefore, and any proposed changes in any provisions of the Joint Venture agreement, and to permit the audit and examination of the books, records and files of the Joint Venture, or those of each partner relevant to the Joint Venture, by duly authorised representatives of the Employer.

Signature .....

Duly authorised to sign on behalf of .....

Name .....

Address .....

Telephone.....

Date .....

Signature .....

Duly authorised to sign on behalf of .....

Name .....

Address .....

Telephone.....

Date .....

Signature .....

Duly authorised to sign on behalf of .....

Name .....

Address .....

Telephone.....

Date .....

Signature .....

Duly authorised to sign on behalf of .....

Name.....

Address .....

Telephone.....

Date.....

(Continue as necessary)

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A18. DECLARATION OF INTEREST (UM/MBD 4)

1. No bid will be accepted from persons in the service of the state[1].

2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

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

3.1 Full Name of bidder or his or her representative……..

3.2 Identity Number: …….

3.3 Position occupied in the Company (director, trustee, shareholder[2]):……..

3.4 Company Registration Number: …….

3.5 Tax Reference Number:……

3.6 VAT Registration Number: ……

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? **YES / NO**

3.8.1 If yes, furnish particulars. ……

……..

[1]MSCM Regulations: "in the service of the state" means to be –
(a) a member of –
(i) any municipal council;
(ii) any provincial legislature; or
(iii) the national Assembly or the national Council of provinces;

(b) a member of the board of directors of any municipal entity;
(c) an official of any municipality or municipal entity;
(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
(e) a member of the accounting authority of any national or provincial public entity; or
(f) an employee of Parliament or a provincial legislature.

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

3.9 Have you been in the service of the state for the past twelve months? ……**YES / NO**

3.9.1 If yes, furnish particulars……..……..

…….

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? …… **YES / NO**

3.10.1 If yes, furnish particulars.
……
……

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.11.1 If yes, furnish particulars
……
……

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars.
……
……

3.13 Are any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.
……
……

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. **YES / NO**

3.14.1 If yes, furnish particulars:
……..
……..

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

Full Name	**Identity Number**	**State Employee Number**

CERTIFICATION

I, _____ THE UNDERSIGNED CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

ACCEPT THAT THE COUNCIL MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

……..	……..
Signature	**Date**
…….	……
Capacity	**Name of Bidder**

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A19. DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (UM/MBD 8)

1 This Municipal Bidding Document must form part of all bids invited.

2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3 The bid of any bidder may be rejected if that bidder, or any of its directors have:

a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;

b) been convicted for fraud or corruption during the past five years;

c) willfully neglected, reneged on or failed to comply with any governmeMent, municipal or other public sector contract during the past five years; or

d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database 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 *Audi alteram partem* 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.**	☐	☐
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.	☐	☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	☐	☐
4.3.1	If so, furnish particulars:		

Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	☐	☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	☐	☐
4.5.1	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**

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A20. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION (UM/MBD 9)

1. This Municipal Bidding Document (MBD) must form part of all bids[1] invited.

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

3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

   (a) take all reasonable steps to prevent such abuse;

   (b) reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and

   (c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

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

5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

(UM/MBD 9)

CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying tender:

_____
(Bid Number and Description)

in response to the invitation for the tender made by:

_____
(Name of Municipality/ Municipality Entity)

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

I certify, on behalf of .....that:
(Name of Bidder)

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

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

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

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

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

   (a) has been requested to submit a bid in response to this bid invitation;

   (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and

   (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.

6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[3] will not be construed as collusive bidding.

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

   (a) prices;

   (b) geographical area where product or service will be rendered (market allocation);

   (c) methods, factors or formulas used to calculate prices;

   (d) the intention or decision to submit or not to submit, a bid;

   (e) the submission of a bid which does not meet the specifications and conditions of the bid; or

   (f) bidding with the intention not to win the bid.

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

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

SIGNATURE	**DATE**
POSITION	**NAME OF BIDDER**

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

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A21. FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS

In terms of regulation 4(3) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated 07 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

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

YES	
NO	

2. Proposed approach to achieve compliance with the Regulations (Tick)

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

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

.....

.....

.....

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

.....

.....

.....

.....

5. Potential key risks identified and measures for addressing risks:

.....

.....

.....

.....

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period. (Tick)

YES	
NO	

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

UMDONI MUNICIPALITY
NOTICE NO: 254/2026
TENDER NO: 03/2027

A22. FULL CENTRAL SUPPLIER DATABASE REGISTRATION

Tenderers are to attach proof of full registration with the Central Supplier Database (CSD) to this page.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

UMDONI MUNICIPALITY

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TENDER NO: 03/2027

A23. PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 (UM/MBD 6.1)

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 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.

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

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

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

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

2. DEFINITIONS

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:

80/20 **or** **90/10**

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

Where

Ps = Points scored for 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:

80/20 **or** **90/10**

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

Where

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.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)	Supporting Documents
1. OWNERSHIP CATEGORIES			**Sworn Affidavit**
An EME or SME which is 100% Black owned	10		
An EME or SME which is 51% Black owned	5		
2. Promotion of Local Business - RDP			**Utilities, POR and SAPS affidavit**
Enterprise located within Umdoni Municipality	10		
Enterprise located within the District Municipality	5		
Enterprise located within the Province of KZN	2		
TOTAL POINTS			

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

5.1 Name of company/firm:…….

5.2 Company registration number:…….

5.3 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

……
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: …….

DATE: ……

ADDRESS: ……

……

……

……

UMDONI MUNICIPALITY
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B1. CIDB CONTRACTOR REGISTRATION CERTIFICATE

A Certificate of the Contractor's Registration issued by the Construction Industry Development Board (CIDB) shall be attached to this page.

Where a tenderer satisfies CIDB Contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.

Alternatively furnish the CIDB registration no. and details in the space provided. This information will be verified with the CIDB via the CIDB website. It is the tenderer/contractor's responsibility to ensure that their details are displayed on the CIDB website. If in joint venture, details of all members require to be furnished.

Name of Contractor or JV Member	CIDB registration No.	Category and class of registration, e.g., 6CE

My/Our failure to submit the certificate(s) or furnish the required details, with my / our tender document will lead to the conclusion that I am / we are not registered with the CIDB and therefore not eligible to tender.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

UMDONI MUNICIPALITY
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B2. TAX PIN REQUIREMENTS (UM/MBD2)

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 Africa Revenue Services (SARS) to meet the bidder's tax obligation.

In order to meet the requirements bidders are required to complete in full the attached TCP1 "Application for a Tax compliance pin" and submit it to any SARS branch office nationally. The Tax compliance pin Requirements are also applicable to foreign bidders / individuals who wish to submit bids.

SARS will then furnish the bidder with a Tax compliance pin that will be valid for a period of 1 (one) year from date of approval / issue.

The copy of a tax certificate with a pin number **must** be submitted together with the bid.

In the bids where consortia / joint ventures / sub-contractors are involved, each party must submit a separate Tax compliance pin.

Copies of the TCP "Application for a "Tax compliance pin" forms are available from any SARS branch office nationally or on the website www.sars/gov/za

Applications for the Tax compliance pin 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.

SIGNED BY/ON BEHALF OF TENDERER:

NAME	**SIGNATURE**	**DATE**

Part C1: Agreements and Contract Data

		Page
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C1.2	Contract Data	82
C1.3	Performance Guarantee	88
C1.4	Occupational Health And Safety Agreement	91

UMDONI MUNICIPALITY
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C1.1. Form of Offer and Acceptance

Offer

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

TENDER NO: 02-2027 – UPGRADE OF EMAROMENI ACCESS ROAD (WARD 14)

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

By the representative of the tenderer, deemed to be duly authorised, 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 Contract shall be completed within Eight (8) Months of the Commencement Date.

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.

SIGNED ON BEHALF OF/BY THE TENDERER:

NAME	**SIGNATURE**
CAPACITY	**DATE**

Name and address of Organisation:

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

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

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

The tenderer shall within two weeks of receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), or when or just after this Agreement comes into effect, contact the employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. 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 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.

SIGNED ON BEHALF OF/BY THE EMPLOYER:

NAME	**SIGNATURE**
CAPACITY	**DATE**

UMDONI MUNICIPALITY

CNR BRAMFISCHER & WILLIAMSON

SCOTTBURGH

4180

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

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 Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Returnable Documents, 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.

SIGNED ON BEHALF OF/BY THE TENDERER:

NAME	**SIGNATURE**
CAPACITY	**DATE**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

SIGNED ON BEHALF OF/BY UMDONI MUNICIPALITY:

NAME	**SIGNATURE**
CAPACITY	**DATE**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

UMDONI MUNICIPALITY

NOTICE NO: 254/2026

TENDER NO: 03/2027

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) ..... (year)

at ..... (place)

SIGNED ON BEHALF OF/BY THE CONTRACTOR:

NAME	**SIGNATURE**	**CAPACITY**

SIGNED BY WITNESS:

NAME	**SIGNATURE**

UMDONI MUNICIPALITY
NOTICE NO: 254/2026
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C1.2. Contract Data

Part 1: Contract Data Provided by the Employer

GENERAL CONDITIONS OF CONTRACT

The following standardised General Conditions of Contract:

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

Prepared by the South African Institution of Civil Engineering (SAICE) shall apply to and form the General Conditions of Contract for this contract. Copies of these Conditions of Contract are obtainable from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, email: civilinfo@saice.org.za.

Copies of the General Conditions of Contract are available for inspection and scrutiny at the offices of the Employer's Agent.

The General Conditions of Contract 2015 makes 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 Specific Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Contract Specific Data below. Each item of data given is cross-referenced to the Clause in the General Conditions of Contract to which it mainly applies.

CONTRACT SPECIFIC DATA

The following Contract specific data is applicable to this Contract:

Clause 1.1.1.13: Defects Liability Period

The Defects Liability Period is a period of 12 months, measured from the date of the Certificate of Completion.

Clause 1.1.1.14: Due Completion Date

The date for achieving Practical Completion is a date Eight (8) months after the Commencement Date.

Clause 1.1.1.15: Employer

The **Employer** is **UMDONI MUNICIPALITY**, represented by Mr Sandile Xulu and/or such person or persons duly authorised thereto by the Employer in writing, and the legal successors in title of this person and is referred to in this Contract Document as "Employer.

Clause 1.1.1.16: Engineer

The **Engineer is TGC ENGINEERS, represented by Mr Megan Moodley**, referred to in the documents, is the firm of Consulting Engineers, TGC Engineers through a Director, an Associate or an official authorised thereto in writing.

The name of the Engineer is: TGC Engineers or their successors duly appointed by the Employer.

Clause 1.1.1.26: Pricing Strategy

The Pricing Strategy is Re-measurement.

Clause 1.1.1.28: Scope of Work
Replace with the following:

"Scope of Work" means the document(s) containing the Standard Specifications, the Project Particular Specifications and the Drawings, that specify and describe the Works which are to be provided, and any other requirements and constraint relating to the manner in which the work is to be carried out.

Clause 1.1.1.34: Writing
Add the following Clause after Clause 1.1.1.34

1.1.1.35 "Drawings" means all drawings, calculations and technical information forming part of the Tender Documents (other than information contained in the Specifications) and any modifications thereof or additions thereto from time to time approved in writing by the Engineer or delivered to the Contractor by the Engineer.

Clause 1.2.1.2: Notices

The name of the Employer is : **UMDONI LOCAL MUNICIPALITY**

The address of the Employer is: **CNR BRAMFISCHER & WILLIAMSON**
SCOTTBURGH
4180

The name of the Engineer is : TGC Engineers

The address of the Engineer is : **Suite 6, 4 The Crescent,**
Westway Office Park
Westville
3635

Clause 1.3.5: Contractor's Copyright
Add the following to Clause 1.3.5:

No part of any document or drawings issued with this enquiry may be copied, photographed or repeated in any manner or by any process without the written consent of the Engineer. Copyright is reserved on all designs, specifications, patents and patentable designs, systems and processes contained in the documents and drawings.

The person, firm, or body to whom these documents are issued or made available shall be held jointly and severally responsible in their personal and corporate capacities for any contravention of the requirements of Clause 1.3.5. The recipients of these documents shall treat the documents as well as the details contained herein as private and confidential.

Clause 3.1.3: Employer's Approval Required

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

1. Providing consent for subcontracting part of the contract in terms of Clause 4.4.
2. The issuing of an instruction to accelerate progress in terms of Clause 5.7.3.
3. Granting permission to work during non-working times in terms of Clause 5.8.1.
4. Suspend the progress of the works in terms of Clause 5.11.2.
5. The reduction of a penalty for delay in terms of Clause 5.13.2.
6. Issuing of instructions to carry out work on a daywork basis in terms of Clause 6.4.1.4.
7. The determination of additional or reduced costs arising from changes in legislation in terms of Clause 6.8.4.
8. The agreeing of the adjustment of the sums for general items in terms of Clause 6.11.
9. Authorizing the Contractor to repair and make good excepted risks in terms of Clause 8.2.2.2.

Clause 4.3: Legal Provisions
Add the following Clauses after Clause 4.3.2:

4.3.3 The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (No. 85 of 1993) and the Construction Regulations promulgated thereunder, as well as any further requirements stipulated in this contract document.

4.3.4 The Contractor shall provide proof to the Employer, within 14 days of the Commencement Date, that he/she has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993).

Clause 5.3: Commencement of Works

The Contractor shall commence executing the Works within 14 days from the Commencement Date.

Notwithstanding the above, the Contractor will not be permitted to commence executing the Works before the Form of Guarantee and required insurances and other specified items have been submitted and approved.

Clause 5.4: Access to the Site
Add the following clause after Clause 5.4.3:

5.4.4 The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his/her own cost any additional facilities outside the Site required by him/her for the purposes of the Works.

Clause 5.5.1: Time for Practical Completion

The Works shall be completed within the time frame stipulated or tendered (as applicable) on the Summary of the Bill of Quantities, exclusive of the special non-working days and the year-end break and inclusive of the 14-day period referred to in Clause **5.3** above.

Clause 5.6.1: Programme of Works

The Contractor shall deliver the programme of work within 14 days of the Commencement Date. The programme shall clearly show the order in which the Contractor proposes to carry out the work, including the critical path, the proposed rate of progress and a linked cash flow forecast. The programme shall be updated monthly.

Clause 5.8: Non-Working Times
The non-working days are Saturday and Sunday. The special non-working days are the days falling in the year-end break and all gazetted public holidays falling outside the year end break.

The year-end break commences on 15 December 2026 and ends on 12 January 2027.

Clause 5.9: Instructions
Add the following Clauses after Clause 5.9.7:

5.9.8 Tender Drawings shall be used for tender purposes only and shall not be used for construction.

The Engineer shall have full power and authority to supply to the Contractor from time to time during the progress of the Works copies of such further drawings and such instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the Works, which the Contractor shall carry out and be bound by.

Clause 5.12.2.2: Extension of Time
Regardless of the cause of any delay an extension of time will only be considered if it can be shown that the activity delayed is on the critical path indicated on the Programme of Works (Clause 5.6.1).

No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal Climatic Conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that Clause.

The number of days quoted below shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts work on the critical path.

January	12 days	May	4 days	September	7 days
February	11 days	June	3 days	October	11 days
March	10 days	July	3 days	November	14 days
April	7days	August	4 days	December	13 days

Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced. Should an extension of time be granted by the Engineer such extension of time will be added to the Time for Completion or set against any over-provision that may have occurred in the abovementioned schedule.

It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained.

Clause 5.12.3: Adjustment to General Items
Add the following to Clause 5.12.3

The cost of time related general items will be calculated on the basis of the number of days in Clause **5.5.1**.

Clause 5.13.1: Penalty for Delay

The penalty for failing to complete the Works on time is 0.025% of the total Tender Sum per calendar day.

Clause 6.2: Security

The Deed of Guarantee is to be delivered to the Employer within 14 days of the Commencement Date.
The Performance Guarantee shall be worded as set out in the document included in C1.3.
The liability of the guarantee shall be for 10% of the Contract Price.

Clause 6.8.2: Contract Price Adjustment
Add the following to Clause 6.8.2:

The Contract Price shall not be subject to contract price adjustment.

Clause 6.8.3: Variation in Cost of Special Materials

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

Clause 6.10.1.5: Interim Payments – Materials on Site

The percentage advance on materials on site but not yet built into the Permanent Works is 80% (eighty percent).

Clause 6.10.3: Retention Money

The percentage retention on the amounts due to the Contractor is 10% (ten percent). The limit of retention is 5% of the Contract Price, including allowances for contingencies.

Clause 6.10.5: Payment of Retention Money
In the second line, delete the words " .. one half of the retention money shall become due and paid to the Contractor when the Engineer shall have issued a Certificate of Completion in terms of Clause 5.14.4 and the other half when the Engineer .." *and replace with the words* ".. the full limit of retention money shall be held until the Engineer .. "

Clause 6.10.5.1
In the sixth line, delete the words " .. of the second half .."

Clause 6.10.6: Set-Off and Delayed Payments

A guarantee in lieu of retention is not permitted.

Clause 8.6.1: Insurances
Clause 8.6.1.1.2

The value of the materials supplied by the Employer to be included in the insurance sum is R0.00 -Nil.

Clause 8.6.1.1.3

The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R0.00 -Nil.

Clause 8.6.1.3

The limit of indemnity for liability insurance is R5 000 000.00 for any single claim – the number of claims to be unlimited during the construction.

Clause 8.6.1.5: Additional Insurance

Additional Insurance is required for the following:

a) Insurance of Construction Plant and Equipment (including tools, offices and other temporary structures and contents) and all other items (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.

b) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993.

c) Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability Indemnity.

d) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.

e) The insurance policy held by the Contractor shall cover “wet risks” because a portion of the works will be in the confines of an existing river and stormwater channel.

f) Professional Indemnity Insurance providing cover in an amount of not less than R5 000 000.00 in respect of each and every claim. This insurance shall remain in force after completion of this contract for a period of not less than 1 (one) year.

Clause 8.6.6: Proof of Payment
Add the following:
The contractor shall within 14 days of the Commencement Date provide the Employer/Engineer the relevant policy or policies of insurance.

Clause 9.2.1: Termination by the Employer
Add the following Clauses after Clause 9.2.1.3.7:

9.2.1.3.8 The Contractor fails to provide the required Guarantee and insurances within the prescribed time.

9.2.1.3.9 The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the contract.

9.2.1.3.10 An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited the Contractor.

Clause 10.5 and 10.6: Dispute Resolution

Dispute resolution shall be by standing adjudication panel or ad-hoc adjudication.

ADDITIONAL CONDITIONS OF CONTRACT

The additional Conditions of Contract are:

Clause 11: Contractor to Provide Everything Necessary

The Contractor is to provide all labour, material, workmanship, machinery and everything which is or may be necessary in and for the execution and entire completion of the Contract in accordance with the Conditions of Contract, Drawings and Scope of Work.

Clause 12: Details to be Confidential

The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without prior written consent of the Engineer.

Part 2: Data Provided by the Contractor

Clause 1.2.1: Delivery of Notices

The name of the Contractor is .....

The address of the Contractor is .....

Physical Address	Postal Address
.....	.....
.....	.....
.....	.....
.....	.....
Telephone:.....	Fax:.....

Email: .....

SIGNED ON BEHALF OF/BY THE TENDERER:

NAME	**SIGNATURE**
CAPACITY	**DATE**

UMDONI MUNICIPALITY
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C1.3. Performance Guarantee

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor: means: .....

Physical address: .....

"Employer" means: **UMDONI MUNICIPALITY**

"Contractor" means:" .....

"Engineer" means: **TGC Engineers**

"Works" means: .....

"Site" means: .....

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

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

Amount in words:.....

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

Amount in words:.....

"Expiry Date" means:.....

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

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

3. The Guarantor hereby acknowledges that:

3.1. 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;

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

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

4.1. A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer 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 4.2;

4.2. A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3. A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1. the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2. a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3. the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10. The Employer shall have the absolute right to arrange his/her affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his/her release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14. Where this Performance Guarantee is issued in the Republic of South Africa, the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

SIGNED AT:.....

GUARANTOR (1)	**SIGNATURE**
DATE	**CAPACITY**

GUARANTOR (2)	**SIGNATURE**
DATE	**CAPACITY**
WITNESS (1)	**SIGNATURE**
WITNESS (2)	**SIGNATURE**

UMDONI MUNICIPALITY

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C1.4. Occupational Health and Safety Agreement

AGREEMENT MADE AND ENTERED INTO BETWEEN UMDONI MUNICIPALITY (HEREINAFTER CALLED THE "EMPLOYER") AND

.....
(Contractor/Mandatory/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, ACT No. 85 OF 1993 AS AMENDED.

I, ...

Representing……, as an employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated thereunder.

I furthermore confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/We are insured with an approved licensed compensation insurer.

COID ACT Registration Number: .....

OR Compensation Insurer: ..... Policy No.: .....

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an Occupational Health and Safety Agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the appended Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed at ..... on the ..... day of ..... 20……

SIGNED BY/ON BEHALF OF CONTRACTOR - MANDATORY

NAME	**SIGNATURE**	**DATE**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

Signed at ..... on the ..... day of ..... 20.....

SIGNED BY/ON BEHALF OF UMDONI MUNICIPALITY

NAME	**SIGNATURE**	**DATE**

SIGNED BY WITNESS:

NAME	**SIGNATURE**	**DATE**

Occupational Health and Safety Conditions

1. The Chief Executive Officer of the Contractor shall assume the responsibility in terms of Section 16(1) of the Occupational Health and Safety Act (as amended). Should the Contractor assign any duty in terms of Section 16(2), a copy of such assignment shall immediately be provided to the representative of the Employer as defined in the Contract.

2. All work performed on the Employer's premises shall be performed under the supervision of the construction supervisor who understand the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2014.

3. The Contractor shall appoint a Competent Person who shall be trained on any occupational health and safety aspect pertaining to them or to the work that is to be performed.

4. The Contractor shall ensure that he familiarises himself with the requirements of the Occupational Health and Safety Act and that he/she, his/her employees, and any sub-contractors, comply with them.

5. Discipline in the interests of occupational health and safety shall be strictly enforced.

6. Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.

7. Written safe work procedures and appropriate precautionary measures shall be available and enforced, and all employees shall be made conversant with the contents of these practices.

8. No substandard equipment/machinery/articles or substances shall be used on the site.

9. All incidents referred to in terms of Section 24 of the Occupational Health and Safety Act shall be reported by the Contractor to the Department of Labour and the Employer.

10. The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Occupational Health and Safety Act and into any incident involving a Contractor and/or his/her employees and/or his/her sub-contractor/s.

11. No use shall be made of any of the Employer's machinery/plant/equipment/substance/personal protective equipment or any other article without prior arrangement and written approval.

12. No alcohol or any other intoxicating substance shall be allowed on the site. Any person suspected of being under the influence of alcohol or any other intoxicating substance shall not be permitted access to, or allowed to remain on the site.

13. Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

Part C2: Pricing Data and Bill of Quantities

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C2.1	Pricing Instructions	93
C2.2	Bill Of Quantities	94

C2.1. Pricing Instructions

1. Measurement and payment shall be in accordance with the relevant provisions of the latest SANS Specifications for Civil Engineering Construction referred to in the Scope of Work. The Preliminary and General items shall be measures in accordance with the provisions of SANS 1200-A, General.

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

%	=	per cent	m^2.pass	=	square metre-pass
h	=	hour	m^3	=	cubic metre
ha	=	hectare	m^3.km	=	cubic metre-kilometre
kg	=	kilogram	MN	=	meganewton
kℓ	=	kilolitre	MN.m	=	meganewton-metre
km	=	kilometre	MPa	=	megapascal
km-pass	=	kilometre-pass	No.	=	number
kPa	=	kiloposcal	Prov sum	=	Provisional sum
kW	=	kilowatt	P C sum	=	Prime Cost sum
ℓ	=	litre	sum	=	lump sum
m	=	metre	t	=	ton (1 000 kg)
mm	=	millimetre	W/day	=	Work day
m^2	=	square metre			

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

4. 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 items. Such prices and rates shall cover all costs and expenses that may be required in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices shall be used as a basis for assessment of payment for additional work that may have to be carried out.

5. It will be assumed that prices included in the 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.sabs.co.za** or **www.iso.org** for information on standards).

6. 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 for such items.

7. 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. A single lump sum will apply should a number of items be grouped together for pricing purposes.

8. 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 and not the quantities given in the Bills of Quantities.

9. Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.

10. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.

11. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the COTO Standardised Specifications for Road and Bridge Works for South Africa Road Authorities (Draft Standard October 2020 edition), issued by the Committee of Transport Officials are applicable.

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C2.2. Bill of Quantities

CONTENTS **PAGE**

BILL 1 94-113

Upgrade of Emaromeni Access Road (Ward 14) from Gravel to Asphalt Surface

SECTION 1: FIXED CHARGE AND VALUE RELATED ITEMS

Item	Description	Unit	QTY	Rate	Amount R
C1.0	**GENERAL**				
C1.2	**GENERAL REQUIREMENTS AND PROVISIONS**				
C1.2.3.11	Other road maintenance work ordered by the Engineer	Prov Sum	1.00	10 000.00	10 000.00
C1.2.3.12	Handling cost, profit and all other charges in respect of item C1.2.3.11	%	10 000	0.05	10 000.00
C1.2.5	**Safety:**				
C1.2.5.1	Health and safety plan	Lump Sum	1	15 000.00	15 000.00
C1.2.5.2	Implementation of health and safety plan	month	8.00		
	Audit ordered by Engineers for Health and Safety	Prov Sum	1.00	48 000.00	48 000.00
C1.2.1	Environmental Management				
C1.2.1.1	Monitoring of compliance with and reporting on the EMP	month	8		
C1.2.1.2	Audit ordered by Engineers for Environmental	Prov Sum	1	64 000.00	64 000.00
C1.2.8	Dayworks				
C1.2.8.1	Personnel				
	(a) Unskilled labour	h	350		
	(b) Semi-skilled labour	h	150		
	(c) Skilled labour	h	100		
	(d) Gang leader	h	25		
	(e) Foreman	h	50		
C1.2.8.2	Construction Equipment				
	(a) Grader (CAT 140G or similar approved)	h	450		

Item	Description	Unit	QTY	Rate	Amount R
	(b) Vibratory Roller (Bomag 212 or similar approved)	h	350		
	(c) Pneumatic Roller (Bomag BW 90 or similar approved)	h	250		
	(e) Backhoe TLB type (CAT 428 or equivalent)	h	200		
	(f) Excavator	h	400		
	(g) Compressor	h	375		
	(l) Water truck (5000 litres)	h	100		
	(i) Tipper truck, 6.0m3	h	200		
C1.2.8.4	Materials				
	(a) Procurement of materials	P C Sum	1	20 000.00	20 000.00
	(b) Contractor's handling cost, profit and all other charges in respect of subitem C1.2.8.4(a)	%	20 000	0.025	
C1.2.10	**Compensation for Community Liaison Officer**				
	(a) Provisional sum for the payment of the Community Liaison Officer	Prov Sum	8	7 200.00	57 600.00
	(b) Handling cost and profit in respect of B12.03(a) above	~~%~~	57 600	0.05	
Total Carried Forward To Summary					
C1.3	**CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**				
C1.3.1	Contractor's general obligations:				
C1.3.1.1	(a) Fixed obligations	L Sum	1	100 000.00	100 000.00
C1.3.1.2	(b) Value-related obligations	L Sum	1	75 000.00	75 000.00
C1.3.1.3	(c) Time-related obligations	Month	8		
C1.3.2	Contract sign boards	No	2		
PSC1.3.3	Provision of As Built Survey	Prov Sum	1	25 000.00	25 000.00
Total Carried Forward To Summary					

Item	Description	Unit	QTY	Rate	Amount R
C1.4	**FACILITIES FOR THE ENGINEER**				
C1.4.1	Site Accommodation				
C1.4.1.1	Offices and conference room	m²	20	1 500.00	30 000.00
C1.4.1.6	Car ports	No	2	2 500.00	5 000.00
C1.4.1.7	Ablution unit (VIP flushing)	No	2	10 00.00	20 000.00
C1.4.2	**Items measured by area**				
C1.4.2.9	White boards	m²	2.5	1 000.00	2 500.00
C1.4.2.11	Galvanised wire mesh storeroom gate with a padlock	m²	0		
C1.4.3	**Items measured by number**				
C1.4.3.1	Office swivel chair	No	1	1 200.00	1 200.00
C1.4.3.2	Office chair (plastic)	No	5	400.00	2 000.00
C1.4.3.3	Office desk with 3 drawers (at least one lockable drawer)	No	1	2 000.00	2 000.00
C1.4.3.8	Conference table	No	1	3 000.00	3 000.00
C1.4.3.11	General purpose steel cabinet with shelves	No	1	3 000.00	3 000.00
C1.4.3.13	220/250-volt power outlet plug point	No	3	300.00	900.00
C1.4.3.15	Single 1 500 mm, 58-watt fluorescent tube ceiling light	No	3	200.00	600.00
C1.4.3.23	Fire extinguisher 9,0 kg, dry powder type	No	2	1 400.00	2 800.00
C1.4.3.24	Air-conditioning unit	No	1	10 000.00	10 000.00
C1.4.3.28	UPS / Voltage stabiliser	No	2	5 000.00	10 000.00
C1.4.3.29	A3 / A4 colour printer, copier, scanner	No	1	8 000.00	8 000.00
C1.4.3.30	A4 colour printer, copier, scanner	No	0		
C1.4.3.31	Rain gauge	No	1	300.00	300.00
C1.4.3.36	Measuring wheel	No	1	2 000.00	2 000.00
C1.4.3.37	First aid kit	No	1	1 000.00	1 000.00
C1.4.4	**Prime cost items**				
C1.4.4.5	The provision of server, internet connectivity and WIFI data for Engineer's site staff	P/Sum	1	7 000.00	R7 000 .00
C1.4.4.6	Handling cost and profit in respect of item C1.4.4.5	%	7 000	0.025	

Item	Description	Unit	QTY	Rate	Amount R
C1.4.5	**Services at site offices, laboratories and site accommodation**				
C1.4.5.1	Fixed costs	L/Sum	1	25 000.00	25 000.00
C1.4.5.2	Running costs	Month	8	5 000.00	40 000.00
C1.4.6	Office Staff				
C1.4.6.2	Technical assistant (ARE)	Prov Sum	8	12 500.00	100 000.00
Total Carried Forward To Summary					
C1.5	**ACCOMMODATION OF TRAFFIC**				
C1.5.2	Accommodation of vehicular traffic	month	8		
C1.5.11	Provision of safety equipment for visitors				
	(a) Rotating amber flashing lights magnetically attached to vehicles	No	5		
C1.5.11.1	Provision of reflective safety vests for visitors	No	10		
C1.5.11.2	Provision of hard hats for visitors	No	5		
C1.5.7	Temporary traffic control facilities:				
C1.5.7.1	Delineators including mounting bases and ballast:				
C1.5.7.1 (a)	Single sided, reversible left or right (size indicated)	No	50		
C1.5.7.1 (b)	Double sided, reversible left or right (size indicated)	No	50		
C1.5.7.2	Traffic cones, minimum height 750 mm	No	20		
C1.5.7.3	Flagmen	man-shift	1300		
Total Carried Forward To Summary					
C2.0	**SERVICES**				
C2.1	**GENERAL REQUIREMENTS AND TRENCHING FOR SERVICES**				
C2.1.1	Location, identification, protection and relocation of existing services:				
C2.1.1.4	Permanent services relocation or protection work by the Contractor	Prov Sum	1	325 000.00	325 000.00
Total Carried Forward To Summary					

Item	Description	Unit	QTY	Rate	Amount R
C20.1	**TESTING MATERIALS AND JUDGEMENT OF WORKMANSHIP**				
C20.1.2	Special tests requested by the Engineer				
C20.1.2.2	Employer's contribution to other special tests				
	(a)Specify test	PC Sum	1	20 000.00	R20 000.00
	(a.i) Handling costs and profit in respect of item C20.1.2.2(a)	%	20 000	0.05	
	i) Acceptance testing	Prov Sum	1	50 000.00	R50 000.00
C20.1.3	Providing testing equipment				
	(c) Straight edge – 3m long	No	1		
	(e) Electronic minimum and maximum thermometer	No	1		
PSC20.1.4	Quality Control Testing of materials by the Contractor	Sum	1	50 000.00	R50 000.00
Total Carried Forward To Summary					

Section 2 Emaromeni Access Road

Item	Description	Unit	QTY	Rate	Amount R
C1.0	**GENERAL**				
C1.6	**CLEARING AND GRUBBING**				
C1.6.1	Clearing:				
C1.6.1.1	Clearing with machines and some hand labour where necessary	ha	1.5		
C1.6.2	Grubbing:				
C1.6.2.1	Grubbing with machines and some hand labour where necessary	ha	1.5		
C1.6.3	Removal and grubbing of large trees and tree stumps:				
C1.6.3.1	Girth equal to or exceeding 1,0 m up to and including 2,0 m	No	3		
	i) Removal of shrubs and bushes	m	200		
C1.6.4	Removal of buildings and structures				
	i. Break out concrete surfacing on driveway and reinstate	Lump Sum	1	3 000.00	3 000.00
	ii. Demolish existing culvert headwalls (230mm thick) and remove from site	No	5		
	iii. Dismantle, store and reinstall existing bus shelter	No	1		

Item	Description	Unit	QTY	Rate	Amount R
	iv. Remove existing DoT Road Marker	No	1		
C1.6.9	Conservation of topsoil:				
C1.6.9.1	Stockpiling topsoil	m³	900		
	Removal of Topsoil 150mm depth	m³	900		
Total Carried Forward To Summary					
C1.7	**LOADING AND HAULING**				
C1.7.1	Loading				
C1.7.1.1	Loading from stockpile using machines and some hand labour where necessary	m^3	1000		
C1.7.2.1	Hauling material for use in the Works and off-loading it on the site of the Works:	m^3.km	500		
Total Carried Forward To Summary					
C2.0	**SERVICES**				
C2.1	**GENERAL REQUIREMENTS AND TRENCHING FOR SERVICES**				
C2.1.6 C2.1.6.1	Trench excavation (in soft material) Trenches up to 1,0 m wide				
	(a) Up to 1,0 m deep	m³	100		
	i) For proving of services	m³	25		
Total Carried Forward To Summary					
C2.2	**DRY SERVICES**				
C2.2.1	Supply, lay and prove ducts				
C2.2.1.1	(a) 160mm class 6 uPVC ducts for water & electrical connections	m	180		
	(b) 110mm class 6 uPVC ducts for Telkom & security	m	80		
C2.2.4	Bedding for ducts compacted to 90 % of MDD (100 % for sand) using material:				
C2.2.4.1	Selected from the excavated trench material	m³	35		
C2.4.3	Cable laying accessories (warning tape, protection slabs, markers etc.)				
C2.4.3.3	Cable markers- Electrical ducts	No.	14		
Total Carried Forward To Summary					

Item	Description	Unit	QTY	Rate	Amount R
C3.0	**DRAINAGE**				
C3.1	**DRAINS**				
C3.1.1	Excavation for open drains:				
C3.1.1.1	Excavating all material situated within the following depth ranges below the surface level using conventional methods: for open drains				
	(a)(i) 0 m to 1,5 m for subsoils	m³	100		
	(a)(ii) 0 m to 1,5 m for 600mm wide concrete lined V-drain	m³	270		
	(a)(iii) 0 m to 1,5 m for 600mm wide concrete lined V-drain Ch350 to CH520	m³	150		
	(a)(iv) 0 m to 1,5 m for 1300mm wide concrete channel	m³	100		
	i) Excavating and shaping of earth drains	m	200		
	ii) Formalisation of driveways	m	100		
	iii) Excaving unsuitable materials from trench bottom and dispose (prov quantity)	m³	2.5		
C3.1.1.2	Extra over sub-item C3.1.1.1 for excavation in hard and boulder material irrespective of depth	m³	10		
C3.1.3	Excavation, clearing and disposal of accumulated sediment in existing lined drains and drainage systems:				
C3.1.3.1	Using conventional methods (up to 1,5 m):				
	(a) Manholes and inlet and outlet structures	m³	6		
	(b) Culvert barrels	m³	14		
C3.1.3.3	Using labour enhanced construction methods:				
	(c) Concrete or other lined side drains	m³	5		
C3.1.4	Excavation and disposal of material for subsoil drainage systems:				
C3.1.4.1	Excavating in all material situated within the following depth ranges below the surface:				
	(a) 0 m to 1,5 m	m³	35		
C3.1.5	Impermeable backfilling to subsoil drainage systems				
C3.1.5.1	Un-stabilised natural gravel obtained from approved sources on the site	m³	10		
C3.1.7	Natural permeable material in subsoil drainage systems (approved crushed stone):				

Item	Description	Unit	QTY	Rate	Amount R
C3.1.7.2	Crushed stone obtained from commercial sources (coarse grade 19mm nominal size)	m³	32		
C3.1.8	Natural permeable material in subsoil drainage systems (approved natural sand):				
C3.1.8.2	Natural sand from commercial sources (coarse grade, 5mm nominal size)	m³	27		
C3.1.9	Pipes in subsoil drainage systems:				
C3.1.9.1	U-PVC pipes and fittings, normal duty, complete with couplings:				
	(i) 110 mm internal dia. Slotted	m	300		
C3.1.11	Geotextiles (synthetic-fibre filter fabric, grade A3)	m²	460		
C3.1.15	Repairing or replacing existing drainage systems	No	2		
C3.1.22	Test flushing of subsoil drain pipe systems	No	7		
C3.1.23	Subsoil drain outlet marker (type or drawing specified)	No	7		
Total Carried Forward To Summary					
C3.2	**CULVERTS**				
C3.2.1	Excavation for culvert structures:				
C3.2.1.1	Excavating in all material situated within the following depth ranges below the surface level:				
	(a) 0 m to 1,5 m	m³	300		
C3.2.1.5	Extra over sub-item C3.2.1.1 for excavation in stabilised existing road layers, irrespective of depth	m³	30		
	De-silt and clean existing pipe culverts and inlet/outlet structures				
	i) 450mm dia. with spigot and socket joints	m	10		
	ii) 600mm dia. with spigot and socket joints	m	15		
	iii) 900mm dia. with spigot and socket joints	m	20		
C3.2.2	Backfilling:				
C3.2.2.1	Using the excavated material	m³	250		
C3.2.2.2	Using imported selected material:				
	(a) From commercial sources (clean coarse sand)	m³	20		
C3.2.3	Concrete pipe culverts:				

Item	Description	Unit	QTY	Rate	Amount R
C3.2.3.3	On Class C bedding (type and diameter indicated)				
	(a) 450mm dia. Class 100D with spigot and socket joints for driveway crossings	m	30		
	(b) 600mm dia. Class 100D with spigot and socket joints	m	61		
	(c) 900mm dia. Class 100D with spigot and socket joints	m	25		
C3.2.7	Cast-in-situ concrete and formwork:				
C3.2.7.5	In inlet and outlet structures including kerbs, chutes and downpipes, skewed ends, catchpits, manholes, thrust and anchor blocks, including formwork but including Class U2 surfacing finish, class 30/20 concrete	m³	10		
C3.2.9	Prefabricated concrete inlets and outlets to culverts (size and type indicated)				
	ii) Energy disapators as per detail	No	90		
	iii) Inlet/outlet structure for a 450mm dia single pipe culvert for driveways as shown on layout plans	No	8		
	iv) Inlet/outlet structure for a 600mm dia single pipe culvert as shown on layout plans	No	7		
	v) Inlet/outlet structure for a 900mm dia single pipe culvert as shown on layout plans	No	2		
C3.2.10	Reinforcement:				
C3.2.10.1	Mild steel bars	t	1		
C3.2.13	Removing and re-laying existing culverts:				
C3.2.13.2	Removing and re-laying existing culverts without stacking (600mm dia single pipe)	m	20		
PSC3.2.28	Demolish existing Inlet/outlet structure for a 600mm dia single pipe culvert as shown on layout plans	No	4		
C3.2.15	Manholes and catch pits, with prefabricated elements				
	Manholes				
	i) Construct brick manholes complete as per detailed up to 2.0m deep	No.	6		
	Catchpits				
	i) Construct catchpit complete as per detailed				
	a) Type S2 single splay	No.	6		
	a) Type D3 double splay	No.	1		

Item	Description	Unit	QTY	Rate	Amount R
C3.2.16	Brickwork (Engineering bricks):				
C3.2.16.2	230 mm thick - Headwall for 450mm dia Class 100D pipe Culverts	No.	8		
C3.2.16.2	230 mm thick - Headwall for 600mm dia Class 100D pipe Culverts	No.	7		
C3.2.16.3	345 mm thick - Headwall for 900mm dia Class 100D pipe Culverts	No.	2		
C3.2.23	Breaking into existing drainage structures and building in pipes or culverts of the following size (600mm dia)				
	(i) Existing brickwork manholes	No	4		
Total Carried Forward To Summary					
C3.3	**CONCRETE KERBING AND CHANNELING, ASPHALT BERMS, CHUTES, DOWNPIPES, CONCRETE, STONE PITCHED AND GABION LININGS FOR OPEN DRAINS**				
C3.3.1	Concrete kerbing:				
C3.3.1.1	Prefabricated kerbing (reference to drawing as per KZN DOT SD SD0701/A):				
	(a) Figure 12 kerb to sidewalk (including sealed silicone joints) class 30/20 concrete	m	1100		
C3.3.2	Concrete kerbing-channeling combination:				
C3.3.2.1	Prefabricated kerbing-channeling combination (including sealed silicone joints class 25/20 concrete):				
	(a) Type B barrier kerb (Figure 6) class 30/20 with 400mm wide channel	m	900		
	(b) Type B barrier kerb (Figure 6) class 30/20 with 500mm wide channel	m	70		
	(c) Type B barrier kerb (Figure 6) class 30/20 with 1000mm wide channel to tie-into existing DOT kerb and channel	m	90		
	(d) Mountable kerb (Figure 6) class 30/20 concrete	m	1000		
	(e) Transition kerbs (Figure 6) class 30/20 concrete	m	80		
C3.3.3	Extra over items C3.3.1 and C3.3.2 for concrete kerbing or concrete kerbing and channeling on curves:				
C3.3.3.1	On curves of radii more than or equal to 5,0 m but less than 20,0 m	m	70		
C3.3.3.2	On curves with radii more than or equal to 1,0 m but less than 5,0 m	m	50		

Item	Description	Unit	QTY	Rate	Amount R
C3.3.4	Extra over item C3.3.2 for drop kerbs at pedestrian crossings and driveways	m	20		
C3.3.6	Concrete chutes (open chutes):				
C3.3.6.2	Cast in situ concrete chutes (Type 1365U as per KZN DOT SD 0605/A)	m	110		
C3.3.8	Linings for open drains:				
C3.3.8.1	Cast-in-situ concrete lining class 30/20 for V-drain:				
	(a) 600mm wide Concrete lined V-drain as per standard detail	m³	23.5		
	(a) 600mm wide Concrete lined V-drain (Ch350 to Ch520) as per standard detail	m³	10		
	(b) 1300mm wide Concrete lined channel as per standard detail	m³	6		
C3.3.8.2	Class U2 surface finish to cast-in-situ concrete for 600mm wide V-drain	m²	180		
	Class U2 surface finish to cast-in-situ concrete for 600mm wide V-drain (Ch350 to Ch520)	m²	100		
	Class U2 surface finish to cast-in-situ concrete for 1300mm wide Concrete lined channel	m²	52		
C3.3.9	Formwork to cast-in-situ concrete lining for open drains (Class F2 surface finish):				
C3.3.9.2	i) To sides with formwork on both internal and external faces (each face measured) for 600mm wide Concrete lined V-drain	m²	153		
	i) To sides with formwork on both internal and external faces (each face measured) for 600mm wide Concrete lined V-drain (Ch350 to Ch520)	m²	100		
	ii) To sides with formwork on both internal and external faces (each face measured) for 1300mm wide Concrete lined channel	m²	52		
C3.3.9.3	i) To ends of slabs for 600mm wide Concrete lined V-drain	m²	18		
	i) To ends of slabs for 600mm wide Concrete lined V-drain (Ch350 to Ch520)	m²	10		
	ii) To ends of slabs for 1300mm wide Concrete lined channel	m²	6		
C3.3.10	Sealed joints in concrete linings of open drains				
	(a) 10mm thick expansion joints sealed with a closed cell polyethylene jointing material at 12m centres - SD0601 for 600mm wide Concrete lined V-drain	m	24		

Item	Description	Unit	QTY	Rate	Amount R
	(a) 10mm thick expansion joints sealed with a closed cell polyethylene jointing material at 12m centres - SD0601 for 600mm wide Concrete lined V-drain (Ch350 to Ch520)	m	10		
	(a) 10mm thick expansion joints sealed with a closed cell polyethylene jointing material at 12m centres - SD0601 for 1300mm wide Concrete lined channel	m	6		
C3.3.11	Concrete screed or backfill below chutes (75mm thickness, class 20/20 concrete)	m³	80		
C3.3.12	Reinforcement:				
C3.3.12.3	i) Welded steel fabric (mesh ref.193) for 600mm wide Concrete lined V-drain	m²	180		
	i) Welded steel fabric (mesh ref.193) for 600mm wide Concrete lined V-drain (Ch350 to Ch520)	m²	100		
	i) Welded steel fabric (mesh ref.193) for 1300mm wide Concrete lined channel	m²	52		
C3.3.14	Cutting bituminous surfacing and pavement layers for concrete kerbing, channeling or concrete-lined drains	m	30		
C3.3.15	Energy dissipaters in outlet structures				
C3.3.15.1	Precast concrete blocks in outlet structures	No	4		
C3.3.15.2	Stones set in outlet structures	m²	10		
Total Carried Forward To Summary					
C4.0	**EARTHWORKS AND PAVEMENT LAYERS: MATERIALS**				
C4.2	**CUT MATERIALS**				
C4.2.3	Excavating of materials in cuttings, material obtained from:				
C4.2.3.1	Soft excavation	m³	208		
C4.2.4.2	Boulder excavation class A	m³	5		
C4.2.3.4	Hard excavation (other than by blasting)	m³	27		
C4.2.7	Removal of unsuitable stable cut material to spoil:				
C4.2.7.1	In layer thicknesses of 200 mm and less	m³	7		
PSC4.2.13	Subgrade improvement using G7 material	m³	200		
Total Carried Forward To Summary					

Item	Description	Unit	QTY	Rate	Amount R
C4.3	**EXISTING ROAD MATERIALS**				
C4.3.4	Saw-cutting existing materials within the following average depth ranges:				
C4.3.4.1	Asphalt material:				
	(a) Up to 50 mm	m	100		
C4.3.9	Excavating material by using conventional road construction equipment:				
C4.3.9.2	Crushed stone materials	m³	15		
C4.3.9.4	Natural gravel and sand materials	m³	30		
	i) Suitable existing G5 material from site	m³	100		
C4.3.14.1	Removing of existing road edging using construction equipment:				
	(a) Kerbing and edge beams:				
	(i) Damaged In-situ concrete kerbing and edge beams	m³	40		
	(iii) Precast concrete kerbing (fig.6) and situ concrete channel (300mm wide)	m	65		
C4.3.15	Stockpiling of road layer materials:				
C4.3.15.2	Crushed stone material	m³	6		
C4.3.15.4	Natural gravel material	m³	15		
	i) Suitable existing G5 material from site	m³	90		
Total Carried Forward To Summary					
C4.4	**COMMERCIAL MATERIALS**				
C4.4.2	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers				
C4.4.2.1	Pavement layer material:				
	(b)(i) Type G2 material (for road base)	m³	1175		
	(b)(ii) Type G2 material (for sidewalk base)	m³	160		
	(c) Type G5A material (for subbase)	m³	1180		
	(d) Type G7 material for selected layer	m³	1365		
PSC4.4.8	i) Reuse suitable existing G5 material from site	m³	100		

Item	Description	Unit	QTY	Rate	Amount R
C4.4.2.5	Fill material in the earthworks:				
	(c) Sand-Coarse graded sand to subgrade improvement (prov quantity)	m³	210		
Total Carried Forward To Summary					
C5.0	**EARTHWORKS & PAVEMENT LAYERS CONSTRUCTION**				
C5.1	**ROADBED**				
C5.1.1	Roadbed construction and compaction:				
C5.1.1.2	Compaction of in-situ material to 93 % of MDD (depth 150mm)	m³	1565		
C5.1.3	Excavate material to spoil sites designated by the Contractor:				
C5.1.3.1	Excavate material to spoil from roadbed construction, material obtained from:				
	(a) Soft excavation	m³	306		
	i) For boxing out of layerworks	m³	5500		
Total Carried Forward To Summary					
C5.2	**FILL**				
C5.2.2	Fill construction:				
C5.2.2.1	Normal fill material in compacted layer thicknesses of 200 mm and less:				
	(b) Compacted to 95% of MDD	m³	4955		
	(i) Imported fill and compact to 95% MDD	m³	830		
Total Carried Forward To Summary					
C5.3	**ROAD PAVEMENT LAYERS**				
C5.3.2	Construction of pavement layers:				
C5.3.2.1	Construction of layers using conventional construction methods:				
	(g) G7 Gravel wearing course layer (150mm thickness) compacted to 93% of MDD	m³	1365		
	(o) G5A crushed rock/boulder subbase layer (150mm thickness) compacted to 95% of MDD	m³	1270		
	(X) i) G2 crushed stone base layer (150mm thickness) compacted to 98% of BD (Road Section)	m³	1175		

Item	Description	Unit	QTY	Rate	Amount R
	(X) i) G2 crushed stone base layer (150mm thickness) compacted to 98% of BD (For Sidwalk)	m³	160		
	(X) i) G2 crushed stone base layer (120mm thickness) compacted to 98% of MDD (For driveway access)	m³	90		
PSC5.3.13	Reuse existing G5 from site	m³	10		
Total Carried Forward To Summary					
C8.0	**PRETREATMENT AND REPAIR EXISTING LAYERS**				
C8.1	**PRIME COAT**				
C8.1.1	Prime coat:				
C8.1.1.2	MC - 30 cut-back bitumen emulsion @ 0.8l/m³ Type MSP1	ℓ	5950		
C8.1.3	Extra over item C8.1.1 for applying the prime coat accessible only to hand-held or light equipment	ℓ	595		
C8.1.2	Aggregate for blinding				
C8.1.2.1	Natural sand	m³	7		
Total Carried Forward To Summary					
C9.0	**ASPHALT LAYERS**				
C9.1	**ASPHALT LAYERS**				
C9.1.1	Asphalt mix designs				
C9.1.1	Stone skeletal mixes:				
C9.1.1 (a)	Continuously graded base MC - 30 cut-back bitumen (40mm - 100mm thickness, binder content 5.0 to 6.5%. 26.5mm maximum aggregate size using 50/70 penetration grade bitumen (Incl. haulage)	Lump Sum	1	20 000.00	20 000.00
C9.1.3	Application of bond coat:				
C9.1.3.1	Stable – grade 30 % net bitumen emulsion as specified. Applied with a calibrated distributer	ℓ	5950		
C9.1.5	Asphalt surfacing:				
C9.1.5.1	New construction:				
	(e) Continuously graded asphalt wearing course MC - 30 cut-back bitumen (40mm thick, binder content 5.0 to 6.5%)	m²	6850		
	(e) Continuously graded asphalt wearing course MC - 30 cut-back bitumen (30mm thick, binder content 5.0 to 6.5%) for driveway access	m²	560		

Item	Description	Unit	QTY	Rate	Amount R
	(e) Continuously graded asphalt wearing course MC - 30 cut-back bitumen for sidewalk (25mm thick,binder content 5.0 to 6.5%)	m²	1060		
PSC9.1.17	Speed hump as per detail	No.	10		
Total Carried Forward To Summary					
C11.0	**ANCILLARY ROAD WORKS**				
C11.1	**PITCHING, STONEWORK, CAST IN SITU CONCRETE FOR PROTECTION AGAINST EROSION**				
C11.1.1.1	Excavating foundation trenches in soft material using labour enhanced construction methods 0 m to 1,0 m depth	m³	10		
C11.1.2	Stone pitching:				
C11.1.2.2	Grouted stone pitching with mortar	m²	50		
C11.1.6	Concrete edge beams (Class 15/30)	m³	50		
Total Carried Forward To Summary					
C11.2	**NON-STRUCTURAL GABIONS**				
C11.2.1	Foundation trench excavation:				
C11.2.1.1	Excavating all material situated within the following depth ranges below the surface level:				
	(a) 0 m to 1,5 m	m³	130		
C11.2.2	Surface preparation for bedding the gabion boxes and mattresses	m²	330		
C11.2.3	Gabion boxes and mattresses:				
C11.2.3.2	PVC coated gabion boxes				
	(b) 1 m wide by 1,0 m deep, mesh size 80 x 100, 2,7mm diameter mesh wire and diaphragms at 1m c/c				
	(i) 2.0 m long	m³	80		
C11.2.3.4	PVC-coated gabion mattresses (mesh size 60 x 80, 2,5mm diameter mesh wire and diaphragms at 1m c/c)				
	(i) 1,0m diaphragm spacing, 6,0m long by 2,0m wide by 0,3m deep	m³	50		
C11.2.4	Geotextile (Grade A3)	m²	350		
Total Carried Forward To Summary					

Item	Description	Unit	QTY	Rate	Amount R
C11.4	**ROAD RESTRAINT SYSTEMS**				
C11.4.1	Erecting of guardrails at 3,81 m spacing:				
C11.4.1.1	Complete galvanized system compliant to SANS 1350:				
	(a) On timber posts	m	200		
	(d) Extra over C11.4.1.1(a) and C11.4.1.1(b) for excavating holes of posts using labour enhanced methods (soft and intermediate)	m	20		
C11.4.1.2	Terminal sections for 3,81 guardrails comprising of:				
	(a) End wings to SANS 1350	No	10		
C11.4.5.3	Extra over C11.4.5.1 and C11.4.5.2 for excavating holes of posts using labour enhanced methods	No	5		
C11.4.6	Reflective plates:				
C11.4.6.2	Plastic plates	No	20		
Total Carried Forward To Summary					
C11.5	**FENCING**				
C11.5.3	Moving and relocating existing fences and gates:				
C11.5.3.1	Fences:				
	(d) Security fences (Boundary fence)	km	0.35		
	(d) Security fences (wire fence)	km	0.5		
C11.5.3.2	Gates (driveway gate 3.6m wide by 1.2m high)	No	5		
Total Carried Forward To Summary					
C11.6	**ROAD SIGNS**				
C11.6.1	Road signboards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class I retro-reflective material, where the sign board is constructed from:				
C11.6.1.1	Aluminium sheet (2,0 mm thick):				
	(a) Area 0 to 0,5 m²	m²	11		
	(b) Area exceeding 0,5 m² but not 2,0 m²	m²	10.5		
C11.6.3	Road sign supports (overhead road sign structures excluded):				
C11.6.3.2	Timber Posts treaded (100-125mm dia, 3.6mm long each) including instal	No	23		

Item	Description	Unit	QTY	Rate	Amount R
C11.6.5	Excavation and backfilling for road sign supports (not applicable to kilometre posts):				
C11.6.5.1	Excavating soft material and backfilling	m³	12		
C11.6.5.3	Extra over item C11.6.5.1 for cement-treated soil backfill	m³	3.5		
C11.6.7.1	Dismantling, storing and re-erecting road signs with a surface area of:				
	(b) Area exceeding 0,5 m2 but not 2,0 m²	No	4		
C11.6.8	Danger plates at culverts/structures				
C11.6.8.2	(c) 800 mm x 200 mm	No	22		
	(b) Double sided delineator, reversible left or right (800mm high x 200mm wide) for speed humps (TW401 & TW402) as per KZN DOT SD1303/B	No	20		
PSC11.6.12	Reinstall existing DoT Road Marker	No	1		
Total Carried Forward To Summary					
C11.7	**ROAD MARKINGS AND ROAD STUDS**				
C11.7.2	Retro-reflective road marking:				
C11.7.2.1	White lines broken or unbroken (paint type and width of line indicated)				
	(a) White lines				
	(i) 100 mm wide	km	1.02		
	(ii) 150 mm wide	km	0.05		
	(iii) 500 mm wide STOP lines	km	0.01		
C11.7.2.4	White lettering and symbols (paint type indicated)	m²	50		
C11.7.2.7	Transverse lines, painted island and arrestor bed markings (any colour)	m²	12		
C11.7.5	Variations in rate of application:				
C11.7.5.1	White paint	l	4		
C11.7.7	Road studs:				
C11.7.7.1	Permanent road studs				
	(i) Yellow/Red shanked (SANS 1463-1 and 1463-2 approved)	No	160		

Item	Description	Unit	QTY	Rate	Amount R
C11.7.7.7	Installation only of surface bonded road studs with anchor shanks	No	160		
C11.7.8	Setting out and premarking the lines (excluding traffic island markings, lettering and symbols)	km	1.03		
PSC11.7.12	Setting out and premarking the lines (including traffic island markings, lettering and symbols)	m²	52		
C11.7.9	Re-establishing the painting unit during the defects notification period and at other instances on instruction of the Engineer	No	6		
Total Carried Forward To Summary					
C11.8	**LANDSCAPING AND PLANTING PLANTS**				
C11.8.3	Preparing the areas for grassing:				
C11.8.3.3	Topsoiling within the road reserve where the following materials are used:				
	(a) Topsoil obtained from within the road reserve or borrow areas	m²	550		
C11.8.4	Grassing:				
C11.8.4.5	Hand sowing				
	(a) Hand planting (Runners)	m²	1100		
Total Carried Forward To Summary					
C11.9	**FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS**				
C11.9.1	Finishing the road and road reserve:				
C11.9.1.2	Single carriageway road	km	1.1		
Total Carried Forward To Summary					

Summary of Bill of Quantities

UMDONI LOCAL MUNICIPALITY

SUMMARY OF SECTIONS

CHAPTER	DESCRIPTION	AMOUNT
SECTION 1: FIXED CHARGE AND VALUE RELATED ITEMS		
C1.2	GENERAL REQUIREMENTS AND PROVISIONS	
C1.3	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
C1.4	FACILITIES FOR THE ENGINEER	
C1.5	ACCOMMODATION OF TRAFFIC	
C2.1	GENERAL REQUIREMENTS AND TRENCHING FOR SERVICES	
C20.1	TESTING MATERIALS AND JUDGEMENT OF WORKMANSHIP	
	SUB TOTAL A	
SECTION 2: EMAROMENI ACCESS ROAD		
C1.6	CLEARING AND GRUBBING	
C1.7	LOADING AND HAULING	
C2.1	GENERAL REQUIREMENTS AND TRENCHING FOR SERVICES	
C2.2	DRY SERVICES	
C3.1	DRAINS	
C3.2	CULVERTS	
C3.3	CONCRETE KERBING AND CHANNELING, ASPHALT BERMS, CHUTES, DOWNPIPES, CONCRETE, STONE PITCHED AND GABION LININGS FOR OPEN DRAINS	
C4.2	CUT MATERIALS	
C4.3	PRETREATMENT AND REPAIR EXISTING LAYERS	
C4.4	COMMERCIAL MATERIALS	
C5.1	ROADBED	
C5.2	FILL	
C5.3	ROAD PAVEMENT LAYERS	
C8.1	PRIME COAT	
C9.1	ASPHALT LAYERS	
C11.1	PITCHING, STONEWORK, CAST IN SITU CONCRETE FOR PROTECTION AGAINST EROSION	
C11.2	NON-STRUCTURAL GABIONS	
C11.4	ROAD RESTRAINT SYSTEMS	
C11.5	FENCING	
C11.6	ROAD SIGNS	
C11.7	ROAD MARKINGS AND ROAD STUDS	
C11.8	LANDSCAPING AND PLANTING PLANTS	
C11.9	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
	SUB TOTAL B	
	NETT TENDER VALUE (A & B)	
Add:	10% CONTINGENCIES	
	NETT TENDER VALUE (INCL CONTINGENCIES)	
Add:	VAT @ 15%	
	TENDER SUM TOTAL	

SIGNED BY/ON BEHALF OF TENDERER

NAME	**SIGNATURE**	**DATE**

COMPANY STAMP

UMDONI MUNICIPALITY
NOTICE NO: 254/2026
TENDER NO: 03/2027

Declaration

(In respect of completeness of Tender)

UMDONI MUNICIPALITY
CNR BRAMFISCHER & WILLIAMSON
SCOTTBURGH
4180

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part C2.2 of this Contract Document comprising 164 pages + the Bill of Quantities comprising 20 pages in consecutive order upon which my/our tender for the **TENDER NO: 03/2027 – UPGRADE OF EMAROMENI ACCESS ROAD (WARD14)**has been based.

SIGNED BY/ON BEHALF OF TENDERER

NAME	**SIGNATURE**	**DATE**

Part C3: Scope of Work

		Page
C.3.1	Description of the Works	117
C3.2	Engineering	124
C3.3	Construction	125
C3.4	Management	134
C3.5	Particular Specifications	137
C3.6	Contract Data and Standard Drawings	154

Status

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Specification(s) forming part of this contract or any drawings, the order of precedence, unless otherwise specified, is:

Drawings
Scope of Work
Specifications

UMDONI MUNICIPALITY

NOTICE NO: 254/2026

TENDER NO: 03/2027

C.3.1 Description of the Works

C.3.1.1 Employer's Objectives

The UMDONI MUNICIPALITY intends to Upgrade Emaromeni access road from a gravel surface to black top standard. The objective of the project is to improve life of Emaromeni community. The works are to be partly executed using labour intensive methods by making use of local resources, where possible.

C.3.1.2 Overview of the Works

The project is located in a rural area of ward 14 Emaromeni area and most of the surrounding buildings are used for residential purposes. The general scope of works includes the following:

- Site clearance
- Site Clearing and grubbing
- Roadbed preparation;
- Construction of drainage facilities;
- Accommodation of traffic;
- Sourcing of borrow material including haulage.
- Mass Earth works;
- Construction of pavement layers as specified;
- Laying of perfricated Culvert and stormwater pipes;
- Construction of gabions protection works;
- Asphalt surfacing;
- Construction of v-drains,
- Construction of walkways.
- Erection of road signs and road marking.

C.3.1.3 Location of the Works

The project is located within Ward 14 of Emaromeni under UMDONI MUNICIPALITY, which is within the Ugu District Municipality in the KwaZulu-Natal region. The site coordinates are:

- 30°15'34.79"S, 30°42'33.26"E
- 30°15'45.12"S, 30°42'42.90"E

C.3.1.4 Description of Site and Access

Access from Durban is off the N3 via exist 110 to Dududu & Scottburgh. Turn right at the stop and go eastward inland along the R102 (Dududu Road) to where the road intersects with Provincial Main Road P197-3. Turn left at the stop and go 1.1km southwards to the start of Emaromeni Road.

Emaromeni Road is a Class 5 rural local residential road off Provincial Main Road P197-3 which is classified as an interurban collector Roads/Bus Route. It is a gravel road with varying widths of between 4 to 6m that extends approximately 1000m from Provincial Main Road P197-3 to Gugulesizwe Road.

See site locality in Annexure C4.1

C.3.1.5 Temporary Works

All design and the construction of any temporary works must be approved by the Engineer.

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C3.1.7: CONTRACT DATA

C3.1.7.1: CONDITIONS OF CONTRACT

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3.1.7 CONDITIONS OF CONTRACT

C3.1.7.1 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 Employer's Agenting (abbreviated title: "GCC 2015").

It is agreed that the only variations from the GCC 2015 are those set out hereafter under "C3.2.1.2 SPECIAL CONDITIONS OF CONTRACT".

C3.1.7.2 SPECIAL CONDITIONS OF CONTRACT

C3.1.7.2.1 GENERAL

These Special Conditions of Contract (GCC) form an integral part of the Contract. The Special Conditions of Contract shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2010 to the extent specified below, and shall take precedence and shall govern.

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

C3.1.7.2.2 AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

The following are variations to the General Conditions of Contract for Construction Works, Second Edition(2015)

Ref. Clause

GCC1.1 **Definitions, Interpretations and General Provisions**

GCC1.1.1.1 Re-word the sub-clause as follows:
"Agreed" means agreed by the Employer, or the Employer's Agent acting on behalf of the Employer and the Contractor.

GCC1.2 **Delivery of Notices**
Add the following to the sub-clause:

GCC1.2.3 Sent by facsimile or e-mail or any like communication

GCC1.2.4 Posted to the addressee and delivered by the Postal Authorities

GCC1.2.5 Delivered by a courier

Ref. Clause

GCC4.6 **Copyright**

Delete the second paragraph in its entirety. (4.6.2)

GCC4.7 **Fossils, etc**

Add the words "or traditional importance (such as burial sites)" between the words "interest" and "discovered" in the second line.

GCC7.6.3. Removal of Improper Work and Materials

Add new sub-clause 7.6.3.3

Where the Employer's Agent considers that either or both sub-clauses above apply to an event of a serious nature, he shall have the right to involve the Employer in the matter, In which case he will arrange a joint meeting between the Employer, the Employer's Agent and the Contractor before giving any instructions to the Contractor"

GCC4.4 Subcontracting

Add new sub-clause 4.4.7

The Contractor shall be required to subcontract a portion of the works to local subcontractors' from **UMDONI MUNICIPALITY** Jurisdiction. Failure to find suitable subcontractors in this region will lead to recruiting from the required subcontractors from the Ugu District Jurisdiction. Further be advised that the applicable labour rate for local labour are as follows

	Rate/Month	Rate/ Day
LABOUR		200
CLO	7200	

Add new sub-clause 4.4.8
The Contractor shall be required to fill in all posts for unskilled labourers, first from the WARD 32 Madlala Informal Settlement and proceed to recruit from Umdoni Municipalityand Ugu District Jurisdiction respectively.

Add new sub-clause 4.4.9
The Contractor shall enforce clause 4.4.8 on all his subcontractors and be liable for compliance.

Add new sub-clause 4.4.10
Notwithstanding Clause 4.4.7, the Contractor shall request a list of subcontractors from the UMDONI MUNICIPALITY for selection and identifying suitable subcontractors. All subcontractoctors including the local unregisterd subcontractors should be assessed by the Contractor for suitability for the Works, as the Contractor shall remain liable for the same.

Add new sub-clause 4.4.11
Facilitation of all the above clauses must be done in liason with the Employer's Agent and relevent Social Facilitation Structures put in place.

C3.1.7.2.3 AMENDMENTS TO THE GCC 2015

GCC 6.8.2 Application of Contract Price Adjustment Factor

Add the following to the end of subclause 6.8.2:

"Referring to the "CONTRACT PRICE ADJUSTMENT SCHEDULE" *on page 93 of the GCC 2015, delete the four consecutive paragraphs describing the symbols* "L", "P", "M" and "F" *respectively, and replace them with the following:*

"L" is the "Labour Index" and shall be the Consumer Price Index for the province and applicable area as stated in the Contract Data as published in Table 14 of the "Additional tables" of the Statistical release P0141 of Statistics South Africa.

"P" is the "Plant Index" and shall be the Producer Price Index for "Civil Employer's Agenting plant" as published in Table 4 of the Statistical release P0151 of Statistics South Africa.

"M" is the "Materials Index" and shall be the Producer Price Index for the "Building and construction - Civil Employer's Agenting" industry as published in Table 3 of the Statistical release P0151 of Statistics South Africa.

"F" is the "Fuel Index" and shall be the Producer Price Index for "Diesel fuel - Coast and Witwatersrand" as published in Table 4 of the Statistical release P0151 of Statistics South Africa."

C3.1.8: CONTRACT DATA (Applicable to this contract)

PART A: DATA PROVIDED BY THE EMPLOYER

The following contract specific data are applicable to this contract.

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
1.	**GENERAL**
Clause 1.1.1.13:	The Defects Liability Period is **12 months.**
Clause 1.1.1.14:	The time for Completing the Contract is 8 **Months** from the Commencement Date, including non-working days and special non-working days.
Clause 1.1.1.26:	Pricing Strategy: The Contract is to be a Re-measurement Contract.
Clause 1.1.1.15:	**Name of Employer:** UMDONI MUNICIPALITY
Clause 1.1.1.16:	**Name of Employer's Agent:** TGC Engineers
Clause 1.2.1.2:	**Address of Engineer:** Physical: Postal: Suite 6, 4 The Crescent, Westway Office Park Westville,3635 — P.O. Box 446 Pavillion, 3611 E-Mail: tgc@tgcenineers.co.za Telephone No: (031) 265 1777 — Fax No: -
3.	**EMPLOYER'S AGENT**
Clause 3.1.3:	The Employer's Agent is required to obtain the specific approval of the Employer for any expenditure in excess of the Contract Price.

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
5.	**TIME AND RELATED MATTERS**
Clause 5.3.1:	The Contractor shall commence executing the Works within 28 days of the Commencement Date. The documents 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) • Form C1.4 'Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993' to be signed by the Contractor and the Employer (refer to Clause 4.3 of the GCC 2010 and to paragraph E9. CONTRACTOR'S RESPONSIBILITIES in Part E of C3.3 Particular Specifications in the project specifications) • Cash Flow in correlation with programme • Environmental Management Plan • Proof of current vendor license with UMDONI MUNICIPALITY
Clause 5.3.2:	The abovementioned documentation required before commencement with Works execution is to be submitted within **14 days** of the Commencement Date.
Clause 5.8.1	The non-working days are Sundays. The special non-working days are the construction industry year end break and the following statutory public holidays as declared by National GoveUMent: New Year's Day, Human Rights Day, Good Friday, Family Day, Freedom Day, Workers' Day, Youth Day, National Women's Day, Heritage Day, Day of Reconciliation, Christmas Day and the Day of Goodwill. The construction industry year end break commences on the first working day after 15 December and ends on the first working day after 5 January of the following year.
Clause 5.13.1:	The penalty for failing to complete the Works is 0,05% of the total Tender Sum per day, up to a maximum limit of twenty-five thousand rand per day (R25000,00 per day).
Clause 5.16.3:	The latent defects period is 10 years.

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
6.	**PAYMENT AND RELATED MATTERS**
Clause 6.2.1:	The security / Surety to be provided by the Contractor shall be: 10% of the Accepted Contract Price.
Clause 6.5.1.2.3:	The percentage allowance to cover overhead charges is 15%.
Clause 6.8.2:	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule
Clause 6.8.3:	Price adjustments for variations in the costs of special materials are not allowed.
Clause 6.10.1.5:	The percentage advance on materials not yet built into the Permanent Works is 80%.
Clause 6.10.3:	The percentage retention on the amounts due to the Contractor is 10%. Deducted from interim claims for work done. A Retention Money Guarantee is not permitted.
8.	**RISKS AND RELATED MATTERS**
Clause 8.6.1.1.2:	The value of materials supplied by the Employer to be included in the insurance sum is nil.
Clause 8.6.1.1.3:	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is nil.
Clause 8.6.1.2:	Special Risks Insurance issued by SASRIA is required.
Clause 8.6.1.3:	The limit of indemnity for liability insurance is R5 000 000,00 (five million rands only) for any single liability claim. Liability insurance shall include spread of fire risk.
10.	**CLAIMS AND DISPUTES**
Clause 10.4.2, 10.7.1:	Failing Amicable Settlement, unresolved Disputes shall be referred to Arbitration.

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C3.2 Engineering

C3.2.1 Design Services and Activity Matrix

The responsibilities for design are as follows:

Permanent works :

Concept, feasibility and overall process	Employer
Basic engineering and detail layouts to tender stage	Employer
Final design to approved for construction stage	Employer
Temporary works	Contractor
Preparation of as-built drawings	Contractor

- The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.
- The Contractor shall supply all details necessary to assist the Engineer in the compilation of the record drawings

C3.2.2 Employer's Design

The entire Permanent Works have been designed by the Employers representative, i.e., the Engineer.

C3.2.3 Design Brief

The Contractor will supply a typical layout for accommodation of traffic. Any alterations to this layout need to be approved by the Engineer and Employer.

C3.2.4 Drawings

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

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

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

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

C3.2.5 Design Procedures

All statutory requirements shall be taken into consideration.

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C3.3. Construction

C3.3.1 Works Specifications

C3.3.1.1 Applicable Specification

The following SANS 2001 standards for construction works are applicable to the contract:

- SANS 2001-BE1 Construction works Part BE1 : Earthworks (general)
- SANS 2001-BS1 Construction works Part BS1 : Site clearance
- SANS 2001-CC2 Construction works Part CC2 : Concrete works (minor works)
- SANS 2001-DP1 Construction works Part DP1 : Earthworks for buried pipelines and prefabricated culverts
- SANS 2001-DP5 Construction works Part DP5 : Stormwater drainage
- SANS 2001-EM1 Construction works Part EM1 : Cement plaster

C3.3.1.1.1 Applicable COTO Standardised Specifications

The following COTO Standardised Specifications for Road and Bridge Works for South Africa Road Authorities (Draft Standard October 2020 edition), issued by the Committee of Transport Officials are applicable:

C3.3.1.1.2 Other Applicable SANS Specifications

- SANS 10252-2 Drainage Installations

C3.3.1.2 Particular Specifications

Refer to C3.6.

C3.3.1.3 Certification by Recognised Bodies

Registration with the CIDB is a compulsory requirement.

C3.3.2 Plant and Materials

C3.3.2.1 Plant and Materials Supplied by the Employer

None.

C3.3.2.2 Materials, Samples and Shop Drawings

All materials are to be tested by a commercial laboratory.

C3.3.3 Construction Equipment

C3.3.3.1 Requirements for Equipment

The Contractor is required to use plant and equipment that is sufficient for the construction of the works.

C3.3.3.2 Equipment Provided by the Employer

None.

C3.3.4 Existing Services

C3.3.4.1 Known Services

All known services are shown on the Construction Drawings. However, all existing service should be proven prior to construction. The onus still lies with the Main Contractor to ensure that no services are damaged during the construction period.

C3.3.4.2 Treatment of Existing Services

It is envisaged that some of the existing services may require temporary or permanent relocation. The relevant local authorities should be contacted before relocating any services.

Existing services indicated on the Contract drawings show the approximate positions of main existing services. The accuracy of/or completeness of this information is not guaranteed. The Contractor shall make efforts to verify details, positions and levels of existing connection points to the satisfaction of the Engineer, well in advance of undertaking related works to prevent any possible delay if such services are not as indicated or assumed. No claims related to delays resulting from unidentified services shall be entertained.

C3.3.4.3 Use of Detection Equipment for the Location of Underground Services

This clause must be read in conjunction with Clause C2.1., the requirements of which shall be extended to cover all earthworks operations whether for trenching or bulk earthworks, in the vicinity of underground services.

The contractor, where it is deemed necessary may use detection equipment to locate existing services located below ground level.

It is stressed that all services in a particular area must be proven before commencing work in that area.

Insofar as bulk earthworks are concerned, where services are indicated on the drawings or where from site observations can reasonably be expected that such services are likely to exist where excavations are to take place, the Contractor shall without instructions from the Employer’s Agent carefully excavate by hand to expose and prove their positions.

The cost of the proving trenches is to be included in the work covered by Clause C2.0.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Employer’s Agent who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly. The cost of this additional searching shall be to the Council's cost and shall be paid for under DB.8.19 - Proving Existing Services.

When electrical cables are not in the positions shown on drawings and cannot be found after proving trenches have been put down, assistance may be obtained by calling an official of the Eskom Telephone No. 08600 37566 during after office hours.

It should be noted that 33,000 Volt and 132,000 Volt cables may only be exposed by the Eskom personnel. The cables are usually protected by concrete covering slabs, and therefore if the slabs are inadvertently exposed, excavation work must stop, and the Eskom shall be contacted immediately on the above telephone numbers.

Proving of services shall be completed at least two weeks in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Employer's Agent’s Representative.

The requirements of this clause do not relieve the Contractor of any obligations as detailed in the Conditions of Contract or under Clause 4.17 of SANS 1921-1.

C3.3.4.4 Damage To Services

It is the responsibility of the Contractor to ensure that no services are damaged during the construction process. In case the known services indicated on the drawings are damaged, the main Contractor shall be responsible for the repair off the services to the original state before it was damaged, as well as all cost associated with the damaged service.

C3.3.4.5 Reinstatement of Services and Structures Damaged During Construction

In the event of damages to existing services occur, the contractor shall at own cost make repairs. Where it is not possible to make the necessary repairs, the contractor shall contact the responsible authority and the Engineer to arrange for repairs of damages. The Contractor is to note that allowance must be made under this item and / or the appropriate rates, for all costs incurred as a result of complying with these clauses. It shall also cover liaison with the services organisations and accommodation of their work gangs / contractors on site.

This clause shall be read in conjunction with Clause C3.3.1.3.

Relocation of services shall generally be carried out by the relevant services organisation. Generally their work shall include the excavating and bedding the service which will include backfilling to a depth of approximately 300 mm above the service. The remainder of the backfilling shall be carried out by the Contractor.

Services affected by the contract are described as follows:

- PS.4 : Watermains; (Refer C3.3.1.3.)
- PS.7 : Electrical Cables; (Refer C3.3.1.3.)

Further to the above, tenderers are referred to the services drawing and are to note that several minor cables / pipes may be encountered during excavation works which may require to be relocated to some extent. It is anticipated that the two week period required under PS.2.2 will allow sufficient time for these relocations.

C3.3.5 Site Establishment

C3.3.5.1 Services and Facilities Provided by the Employer

(a) Water Source

A potable water supply is available in the vicinity of the Site. Should the Contractor wish to utilise such water supply, he/she shall be responsible for making his own arrangements with the responsible water supply authority for the supply of all water that he may require from such reticulation network for construction purposes as well as for domestic consumption.

If so required by the responsible water supply authority, the Contractor shall further be responsible, at his own cost, for making or otherwise providing metered connections to the available services at the positions specified by the water authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water supply will necessarily be adequate for the Contractor's purposes nor that such supply is in any way guaranteed.

All charges as may be levied by the responsible water supply authority in respect of water consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall be deemed to be included in the sums tendered by the Contractor for the various items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various other items listed in the Bill of Quantities which require the consumption of water.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible water authority have been promptly paid in full.

(b) Electricity supply

An electrical power supply is available in the vicinity of the Site. Should the Contractor wish to avail himself of such supply, he shall, in accordance with the provisions of the relevant sub clause, and at his own cost, be responsible for making his own arrangements with the responsible electricity supply authority for the supply of all electrical power he may require from such reticulation network for construction purposes as well as for domestic consumption.

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

No warranty is offered or given by the Employer that the existing available reticulated electrical power supply will necessarily be adequate for the Contractor's purposes nor that its supply is in any way guaranteed.

All charges as may be levied by the responsible water supply authority in respect of water consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall be deemed to be included in the sums tendered by the Contractor for the various items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various other items listed in the Bill of Quantities which require the consumption of electricity.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible electricity supply authority have been promptly paid in full.

(c) Area for Contractor's site establishment

The Contractor may erect his site offices and storage depot within the boundaries of the area indicated by the Engineer at the clarification meeting or during the site handover meeting.

The Contractor shall submit a general layout drawing to a scale of not less than 1:200 to the Engineer for approval before any work on the camp or offices is commenced.

No housing is available and the Contractor shall make his own arrangements to house his employees and transport them to and from the site. All arrangements for housing workmen shall be made in accordance with and subject to applicable regulations and requirements.

The Contractor shall use this area only for the purposes of erecting his site offices, workshops, stores and other facilities required for the execution of the Contract. The Contractor shall not use the area nor allow it to be used for any purposes not directly associated with the execution of the Contract.

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

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

C3.3.5.2 Facilities Provided by the Contractor

(a) Facilities for the Engineer

The Contractor shall provide on the Site, for the duration of the Contract and for the exclusive use of the Engineer and/or his Representative (as applicable), the various facilities described hereunder. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Engineer to withhold payment of the Contractor's tendered items until the facility has been provided or restored as the case may be.

The following are typical facilities to be provided:

- Office accommodation;
- Site meeting venue;
- Contract nameboards;
- Survey equipment and assistants;
- Electricity supply for the Engineer;
- Site diary.

(b) Water

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

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

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

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

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of water, the costs of which will be deemed to be included in the Contractor's tendered rates.

(c) Electricity

The Contractor shall, at his own expense, be responsible for obtaining and distributing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

C3.3.5.3 Stormwater – Blocked Stormwater System

Contractor shall be responsible for ensuring that cementitious sludge, sand and rubble from the works do not enter the stormwater reticulation system. The Contractor shall be liable for any costs incurred by the Council or others as a result of blockages in the reticulation system attributed to failure to comply with the above requirement.

C3.3.5.4 Storage And Laboratory Facilities

No requirements are specified. A commercial laboratory will be utilised.

C3.3.5.5 Vehicles and Equipment

No requirements are specified.

C3.3.5.6 Advertising Rights

It is the Main Contractor's responsibility that no suppliers advertise on site. Any advertisement from suppliers shall be removed at the cost of the Main Contractor.

C3.3.5.7 Notice Boards

The main Contractor is allowed to place a Notice board on site. The maximum allowed size of this board should be as per the attached notice board drawing.

C3.3.6 Site Usage

The Contractors are not allowed to work outside the allowed working hours, as agreed with the Employer's Agent. The disturbance to the residence should be kept at a minimum.

C3.3.7 Permits and Way Leaves

Before construction of the Works, or any phase of the Works, the Contractor shall contact all relevant parties and authority officials to establish the existence of existing services on site. The Contractor shall be responsible for obtaining permission to proceed. No claims shall be lodged by the Contractor for delays in obtaining these permissions

C3.3.8 Water for Construction Purposes

The onus lies with the Main Contractor to source and pay for construction water. The quality of the construction water should be as specified in SANS.

C3.3.9 Management of the Environment

i. **Natural Vegetation:** The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works. Only those trees and shrubs directly affected by the works and such others as the Employer's Agent 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.

ii. **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.

C3.3.9 Survey Control and Setting Out of the Works

The survey control points and setting out data is provided by the Employer. It is the Contractor's responsibility to ensure that the survey control points are correct and to use these control points for setting out.

C3.3.10 Extension of Time

(a) Regardless of the cause of any delay an extension of time will only be considered if it can be shown that the activity delayed is on the critical path indicated on the Works Programme.

(b) No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal Climatic Conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed in clause **5.12.2.2** of the Contract Data, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that Clause.

(c) Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced. Should an extension of time be granted by the Engineer such extension of time will be added to the Time for Completion or set against any over-provision that may have occurred in the abovementioned schedule.

(d) It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained.

(e) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of the Conditions of Contract.

C3.3.11 Features Requiring Special Attention

(a) Site Maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

(b) Subcontractors

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Engineer and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Engineer will not liaise directly with any Subcontractors nor will he issue instructions concerning the subcontract works directly to any Subcontractor.

All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the Subcontractors and the Engineer will not become involved.

(c) Site Security

The Contractor shall, for the duration of the contract, provide sufficient security and watchmen to adequately ensure the safety and protection of the works, the Contractor's staff, including local labour and subcontractors, and all site plant and construction equipment required for the works.

Site Security, in conjunction with the SAPS (where necessary), shall be responsible for removal of disruptive elements, that may interrupt the progress of the contract through acts such as, but not limited to, intimidation, threats of disruption, violent disruption, or criminal and illegal activity by the local community or independent organisations or entities that may result in slowing down or partial or total stoppage of the works.

Payment for this item shall be made under Chapter 1, of the Bill of Quantities.

(d) Access to Properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the a foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(e) Existing Residential Areas

Electricity and water supply interruptions in existing residential areas shall be kept to a minimum. The Engineer's approval shall be obtained prior to such interruptions and residents shall be notified in writing at least **24 hours** but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

(f) Employment of Local Labour

The Tenderer shall limit the utilisation of his permanently employed personnel to Key Personnel, such as Contracts Managers, Site Agents, Foremen, Supervisors, Plant Operators, Materials and Survey Technicians, Artisans, Trainers, Buyers, Storemen and the like should such expertise not be available out of the community.

The Tenderer shall make maximum use of the human resources existing in the local community. The Tenderers shall apply to the employment labour desk, conveyed by the Project Steering Committee for details of those labourers who are available in the area of work and he shall provide preference to those labourers identified by the Steering Committee.

The employment of labour from outside the local area will only be considered and permitted by the Engineer in the event of:

- the unavailability of sufficient numbers of local labourers to execute the work;
- the unavailability within the local community of the required skills necessary for the execution of specific portion of work, and where the completion period does not permit the creation of the necessary skills through training.

In both cases the Tenderer shall prove to the satisfaction of the Engineer that he has exercised his best endeavours and taken all reasonable actions to recruit local labour.

The Tenderer shall maintain accurate and comprehensive daily records of all labour engaged on the tender and shall submit to the Engineer at two weekly intervals detailed labour returns substantiating the actual numbers of labourers employed, the amounts actually paid in respect thereof, and details of the various activities undertaken by the labourers.

The employment of casual labour will be done in co-operation with community leaders and local structures. The Tenderer shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, as determined by the Department of Labour.

(g) Monthly Statements and Payment Certificates

The statement to be submitted by the Contractor in terms of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal workings days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

(h) Construction in Restricted Areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment or any claim for payment due to these difficulties will be considered.

(i) Notices, Signs, Barricades and Advertisements

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

(j) Workmanship and Quality Control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

(k) Survey Control and Setting Out of the Works

Before commencement of work, the Contractor shall liaise with the Engineer to establish and verify the position and level of benchmarks, and the status of all boundary pegs. The Contractor shall record the exact position of all erf pegs on a marked-up print of the site.

On Completion of the contract, the pegs that have been unavoidably disturbed will be replaced by the Employer. Pegs which have, in the opinion of the Engineer, been disturbed due to the negligence of the Contactor, will be replaced at the Contractor's cost.

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C3.4 Management

C3.4.1 Management of the Works

C3.4.1 Applicable Specification

As specified under Clause C3.4.1.1.

C3.4.1.1 Particular Specifications

As specified under Clause C3.6.

C3.4.1.2 Planning and Programming

If, during the progress of the Works, the quantities of work performed per week fall below those shown on the approved Contractor's programme, or if the sequence of operations is altered, or if the programme is deviated from in any other way, the Contractor shall, within one week after being notified by the Engineer, submit a revised programme clearly indicating how he intends to regain lost time to ensure completion of the Works within the period defined in term of Conditions of Contract or any extended time granted.

Proposal to increase the tempo of work must incorporate positive steps to increase production either by more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as set out in the Conditions of Contract.

The approval of a programme by the Engineer shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to the programme. The said approval shall not limit the right of the Engineer to instruct the Contractor to vary the programme if necessary. The Tenderer's attention is drawn to the fact that a number of factors will affect the programming of and method of carrying out the works. The more important of these are:

(1) Services: The site is reasonably developed with existing services i.e. Electricity (Eskom) are overhead and Watermains (Municipality) run alongside the existing road, however no as-built information is available for said services. Electrical cables which are laid underground in the vicinity of the and crossings will need to be sleeved. Wayleave proposals are anticipated, as the proposed works may encroach within the Electricity servitude. Watermains are laid along the roadway and we only propose that the roadway crossings be sleeved. Water leaks from the existing pipelines and adjacent properties will need to be reported to the local municipal water department to expedite repairs. It is anticipated that some services may require relocation in isolated areas to accommodate the road works. It is essential that all services be proven as early as possible in the contract period so that planning can be undertaken to accommodate them before bulk works commence. As such, due allowance has been made in the Bill of Quantities for the proving of services and relocations where directed by the Engineer.

(2) Expropriations: Encroachments into adjacent properties can be expected, hence expropriation measures may be required.

(3) Traffic Accommodation: A traffic accommodation study will need to be conducted prior to the road rehabilitation process. Due to the magnitude of the required road works, it is anticipated that one (1) lane of the road will remain open to traffic at all times during the construction period allow traffic in and out of the area. The contractor shall plan the accommodation of traffic and keep the local community and municipality appraised of the situation at all times. An allowance has been made in the BOQ for traffic accommodation during construction.

C3.4.1.4 Sequence Of the Works

As specified elsewhere. (Refer also C3.5.1.3 and the Contract Data)

C3.4.1.5 Software Application For Programming

Not applicable.

C3.4.1.5 Methods And Procedures

The Works shall be executed in terms of the various and applicable SANS specifications, the EMP, the general Health and Safety Specifications and subsequent Health and Safety Plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.4.1.7 Quality Plans and Control

Refer to the various and applicable SANS specifications, the EMP, the general Health and Safety Specifications and subsequent Health and Safety Plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.4.1.8 Environment

The Contractor shall, for the duration of the contract, take appropriate measures to control the dust and soil movement which may arise due to his operations.

C3.4.1.9 Accommodation of Traffic on Public Roads Occupied by the Contractor

Refer to the various and applicable SANS specifications (SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor), the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

Clause 4.10.4 of SANS 1921-2: 2004 shall be replaced with the following:

"Road signs and markings shall comply with the requirements of "The South African Road Traffic Signs Manual - Volume 2 : Roadworks Signing".

C3.4.1.9.1 Basic Requirements

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.

The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Employer's Agent to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations. The Contractor shall ensure that the existing property accesses are maintained at all times. Where necessary the Contractor shall make allowance in the rates for completing the work required to the accesses out of normal hours.

C3.4.1.9.2 Pedestrian movement

The Contractor shall make provision for accommodating all pedestrian movements in the area of the works. Allowance shall be made in the relevant rates for any barricades and signs required.

C3.4.1.9.3 Other Contractors on Site

Refer to the various and applicable SANS and COTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.4.1.9.4 Testing, Completion, Commissioning and Correction of Defects

Refer to the various and applicable SANS and COTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.4.1.9.5 Recording of Weather

A rain gauge in good working condition shall be provided at site by the Contractor for measurement of rainfall.

C3.4.1.9.6 Format of Communications

All contractual communication shall be in writing.

The Contractor shall, for the full duration of the Contract Period, supply and maintain the following documentation:

(a) Site Diary and Instruction Book.
(b) Safety File containing all relevant safety data.
(c) Daily register of all labour, plant and equipment.
(d) Quality Control file containing all quality control/assurance forms and records.
(e) One full set of Contract Drawings and documents.
(f) Latest revision of the Construction Programme.

The above-mentioned shall be kept on Site and shall be accessible to the Engineer at all times.

C3.4.1.9.7 Key Personnel

Key personnel shall be on site at all times to control and supervise construction activities.

C3.4.1.9.8 Traffic Safety Officer

Where warranted by traffic conditions on or near the site, the Contractor shall nominate a suitable member of his staff as traffic safety officer to be responsible for the arrangement and maintenance of all the measures for the accommodation of traffic for the duration of the project. Duties of the traffic safety officer shall be in compliance with the Occupational Health and Safety Act 1993 and the Construction Regulations 2014.

C3.4.1.9.9 Management Meetings

The Contractor shall have regular site management meeting to coordinate and manage the Works.
Monthly Contract Meeting shall be held on site. This meeting shall be chaired by the Engineer.

C3.4.1.9.10 Forms for Contract Administration

The Employer, the Contractor and the Engineer shall operate and maintain their own individual contract administration systems.

C3.4.1.9.11 Daily Records

Refer to the various and applicable SANS and COTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.4.1.9.12 Payment Certificates

Refer to the various and applicable SANS and COTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered. Where extension of time is approved, payment for time-related items shall only be applicable to working days as defined in the Contract.

C3.4.1.9.13 Proof of Compliance with the Law

Refer to the various and applicable SANS and COTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.4.1.9.14 Insurance Provided by the Employer

Refer to the various and applicable SANS and COTO specifications, the EMP, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

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C3.5 Particular Specifications

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C3.5.1 Variations and Additions to Standard Specifications

Notes to tenderer:

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

2. 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 standard specifications. The number of a new clause or a new payment item which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.

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

3. ***Schedule of Quantities:*** Items which are designated as provisional quantities or provisional in the Bill of Quantities are intended to provide for works, the need or extent of which cannot be forecast. Work scheduled as such shall only be undertaken on the written instruction of the Engineer and, where applicable, shall be paid for at the tendered rate or in the absence of rates shall be valued in accordance with Clause 6.4.1 of the General Conditions of Contract 2010.

The Bill of Quantities shall not be used for ordering purposes and no liability or responsibility shall be admitted by the Engineer in respect of materials ordered or procured by the Contractor on the basis of the Bill of Quantities.

4. ***Material Quality:*** The Engineer will take samples from stockpiles of proposed construction materials on site and from the completed works. Approval will not be granted for samples delivered direct to the Engineer's office. The Contractor shall be responsible for the cost of all failures on test samples and control testing.

Large items not normally stored in a building shall be neatly stacked or laid out on suitable cleared areas on the Site. Grass or vegetation shall not be allowed to grow long in the storage areas and the material shall be kept free of dust and mud and be protected from Stormwater.

Every precaution shall be taken to keep cement dry and prevent access of moisture to it from the time it leaves the place of manufacture until it is required for use on the Site. Bags of cement which show any degree of hydration and setting shall be removed from the site of the Works and replaced at the Contractor's own expense.

Materials shall be handled with proper care at all times. Under no circumstances may materials be dropped from vehicles. Large pipes shall be lifted or lowered only by means of suitable hoisting equipment.

5. ***Site Instructions*****:** The Engineer shall supply a site instruction book for specific use on the Site. All instructions given by the Engineer's Representative must be confirmed and countersigned by the Engineer.

The Contractor shall supply a triplicate book for site correspondence and inspection requests to the Engineer's Representative. Reasonable notice time shall be allowed prior to inspections. All inspections request and approval/disapproval thereof shall be recorded by the Site staff in writing.

6. ***Tachometric Survey*****:** The Contractor will be required to complete tachometric survey of the works at project completion of the defined areas with an appropriate grid spacing to capture all terrain detail and give accurate contours at contours at 0.1 m intervals on flat areas and at 0.5 m intervals on slopes with a grade of more than 1 to 3. Levels of existing services will be to a tolerance of less than 20 mm. Where possible the survey should extend beyond the road reserve. The survey will be done to the WGS 84 Co-ordinate System, unless specified differently and all heights will be to MSL in metres.

The survey must incorporate the identification of any encroachment by existing fences, walls and other structures. The survey must also identify all above and below ground existing services on the site, within the road reserve and defined survey area. These include water, sanitation, stormwater, electrical and telecommunications information such as pipe sizes, inverts, flow direction, kerb inlets, details and cable duct markers, valve boxes and any other visible service identifiers, etc.

Drawings will be submitted in DXF format as well as the standard format of the drafting program used by the surveyor. Full description of all codes and descriptions must accompany the survey data.

A seven-day lead time is required for the engineer to analyse the survey data; compare quantities with the Contractor and production of amended construction drawings, if necessary.

6.1. Survey Equipment:

The Contractor shall upon request provide the following survey equipment on the Site from the commencement to the completion of the Works.

1 tachometer capable of reading to 20 seconds of arc or total survey station.
1 engineers' level and levelling staff.
2 tachometer staves graduated metrically.
1 steel tape of 100 m length.
Wooden and steel pegs and hammers as required.

The equipment may by arrangement be shared between the Contractor and the Engineer's Representative, but the remaining instruments shall be provided for the exclusive use of the Engineer's Representative. The Contractor shall keep the equipment continuously insured against any loss, damage or breakage, and he shall indemnify the Engineer and the Employer against any claims in this regard. The Contractor shall also maintain the equipment in good working order throughout the Contract period. Upon completion of the whole of the Works, ownership of the equipment shall revert to the Contractor.

7. ***Free Haul:*** The movement of material to and from any source within a 0.5km radius of the site will be taken as free haul, with no additional payment for loading, handling, haulage and placement in the final position.

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

COTO CHAPTER 1: GENERAL

PSC1.3.3 PROVISION OF ASBUILT SURVEY BY THE CONTRACTOR

This scope of the specification is extended to include Provision of asbuilt Survey by the Contractor

The unit of measurement for Provision of Asbuilt survey by the Contractor is Provisional Sum. The rate shall include a full comprehensive asbuilt survey of all completed works forming part of the contract. The survey shall accurately record the final horizontal and vertical positions, dimensions, levels amd extents of all constructed infrastructure. The contractor shall prepare asbuilt drawings showing the final constructed works.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

COTO CHAPTER 3: Drainage

PSC3.2.28 CULVERTS

This scope of the specification is extended to include Demolish existing Inlet/outlet structure for a 600mm diameter single pipe culvert as shown on layout plans.

The unit of measure shall be per Number No. of existing Inlet/outlet structure to be demolished for a 600mm diameter single pipe culvert as shown on layout plans. The tendered rates shall include site inspection, setting out, controlled demolition, temporary support and stormwater diversion (if required), loading, transport and disposal of the removed material. Protection of existing culvert pipes and adjacent infrastructure. Backfilling, labour, plant and all necessary requirements to complete the works.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

COTO CHAPTER 4: EARTHWORKS AND PAVEMENT LAYERS: MATERIALS

PSC4.2.13 CUT MATERIALS

This scope of the specification is extended to include subgrade improvement.

The unit of measurement shall be the cubic metre of material in the compacted layer, calculated using the layer work dimensions given in the Contract Documentation.

The tendered rates shall include excavation of unsuitable material, supply and placement of improvement material, where applicable, Scarifying, mixing, shaping and compaction, quality control testing, labour, plant and all necessary requirements to complete the works.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

PSC4.4.8 ROAD PAVEMENT LAYERS

This scope of the specification is extended to include reuse of suitable existing G5 material from site.

The unit of measurement shall be the cubic metre of material in the compacted layer, calculated using the layer work dimensions given in the Contract Documentation.

The tendered rates shall include full compensation for excavating and recovery, loading hauling, stockpiling of material, processing, quality control testing, labour plant and equipment and all necessary requirements to complete the works. Temporary stockpiling of the material after procurement by the Contractor shall not be paid for. The tendered rates for materials shall also include full compensation for procuring the material. Additional crushing, screening and stockpiling of material shall not be measured and paid for separately.

COTO CHAPTER 5: EARTHWORKS AND PAVEMENT LAYERS: CONSTRUCTION

PSC5.1.1.7 ROAD PAVEMENT LAYERS

This scope of the specification is extended to include reuse of existing G5 material from site.

The unit of measurement shall be the cubic metre of material in the compacted layer, calculated using the layer work dimensions given in the Contract Documentation.

The tendered rates shall include full compensation for spreading the material, for breaking down oversize gravel material using one normal grid rolling operation or an equivalent operation, for removal of up to 5 % of the compacted layer volume of oversize material that cannot be broken down, for adding water for compaction purposes, for mixing, for levelling, for compacting to the specified density, for slush-compaction of G1 material layers or other layer that may be specified to receive slush-compaction and for finishing the layers in accordance with the specifications and the Contract Documentation. The tendered rates shall also include for the removal of all material in the windrow after the compaction of the layer has been completed.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

COTO CHAPTER 9: ASPHALT LAYERS

PSC9.1.17 ASPHALT LAYERS

This scope of the specification is extended to include construction of asphalt speed bumps.

The unit of measure shall be per Number No. of completed asphalt speed bumps. The rate shall cover the construction, all preparation, tack coat, asphalt, compaction, road markings, labour, plant and all necessary requirements to complete the works as per the standard detail.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

COTO CHAPTER 11: ANCILLARY ROAD WORKS

PSC11.6.12 ROAD SIGNS

This scope of the specification is extended to include removal and reinstallation of Existing DoT Road Marker.

The unit of measure shall be per Number No. of successfully removed and reinstalled DoT Road markers. The rate shall cover the removal of the existing marker and support structure, transportation and storage, supply of replacement posts (if required), concrete foundations, excavations, backfilling, installation, labour, plant and all necessary requirements to complete the works as per the standard detail.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

PSC11.7.12 ROAD MARKING AND ROAD STUDS

This scope of the specification is extended to include Setting out and premarking the lines (including traffic island markings, lettering and symbols)

The unit of measurement for setting out lines shall be the m² of lines set out and marked. Where two or three lines are to be premarked for painted next to each other, and where the centre-to-centre distance between adjacent lines does not exceed 500 mm, the setting-out of all these lines shall be measured only once. The tendered rate shall include full compensation for establishing specialist teams and equipment, and for setting out and premarking the lines as specified, including all necessary equipment, labour and materials.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

COTO CHAPTER 20: QUALITY ASSURANCE

PSC20.1.4 TESTING MATERIALS AND JUDGEMENT OF WORKMANSHIP

This scope of the specification is extended to include Quality Control Testing of material by the Contractor to demonstrate that all materials, workmanship and completed works comply with the requirements of the contract and applicable standards.

The unit of measurement for Quality Control Testing of material by the Contractor shall Provisional Sum. The rate shall include all quality control testing, sampling, reporting, approved laboratory services, labour, equipment, transport and all necessary requirements to complete the works.

Test results and reports shall be submitted to the Engineer for approval within the specified period in the contract. Sampling shall be undertaken in the presence of the Engineer or Engineer's representative where required. The Engineer requires twenty-four hours' notice from the Contractor in order to perform the relevant acceptance test.

Failure by the Contractor to notify the Engineer or to provide the required information or, where specified, to perform the required test, will be grounds to exempt the Employer from payment for the associated work and for all subsequent work which would be affected by the failure of the Work to be tested.

The Engineer will be under no obligation to the Contractor to perform the tests. If the Engineer elects not to perform a particular test after notification by the Contractor, the Contractor will be issued with a written instruction to proceed with the relevant works without the acceptance test being performed.

Nothing contained in this clause will relieve the Contractor of any responsibilities under the specification or in any way limit the tests, which the Engineer may call for or perform in terms of the specification.

The above-mentioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid. The tendered rates shall be industry related and will be used in the sensitivity analysis during the adjudication of the tender.

PS-12 ADVERSE WEATHER CONDITIONS

In terms of Clause 5.12 of the General Conditions of Contract 2015, extension of time will be considered for **abnormal rainfall**. The numbers of days per month on which work is expected not to be possible as a result of **normal rainfall**, and for which the Contractor shall make provision in his tendered rates, prices and programme, are listed in Table PS-12.1 hereafter. Only the number of days lost as a result of adverse weather conditions, exceeding the number of days listed in Table PS-12.1, will qualify for consideration of extension of time.
During the execution of the Works, the Employer's Agent's Representative will certify a day lost due to abnormal rainfall and adverse weather conditions only:

- if no work was possible on the relevant working day on any item which is on the critical path according to the latest approved construction programme; or
- if less than 30% of the work force and plant on site could work during that specific working day.

Extension of time as a result of abnormal rainfall and adverse weather conditions shall be calculated monthly being equal to the number of working days certified by the Employer's Agent's Representative as lost due to rainfall and adverse weather conditions, less the number of days allowed for as in Table PS-12.1, which could result in a negative figure for certain months. The total extension of time as a result of abnormal climatic conditions for which the Contractor may apply, shall be the cumulative algebraic sum of the monthly extensions. Should the sum thus obtained be negative, the extension of time shall be taken as nil."

TABLE PS-12.1: Expected Number of Working Days Lost Per Month Due to Normal Rainfall

MONTH	Expected number of working days lost as result of normal rainfall
January	*12*
February	*11*
March	10
April	7
May	4
June	3
July	3
August	4
September	7
October	11
November	14
December	13
TOTAL	*99 days*

(The figures in Table PS-12.1 are based on information obtained from the Weather Bureau, Department of Environment Affairs, Durban. The average monthly rainfall

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C3.5.2 Health and Safety Specifications by the Employer

1. Interpretations

1.1 Application

This specification is a compliance document drawn up in terms of South African legislation and is therefore binding. It must be read in conjunction with relevant legislation as noted previously.

1.1 Definitions

The definitions as listed in the Occupational Health & Safety Act 85/1993 and Construction Regulations (2014) shall apply.

2. MINIMUM ADMINISTRATIVE REQUIREMENTS

2.1 Asbestos Regulations

When considering the safety on site the Contractor's attention is drawn to the following:
Describe issues relating to OH&S and the Regulations:

(1) Traffic: Vehicular traffic flows in and out the area, with the road frequently trafficked by Minibus Taxis. There is moderate foot traffic by pedestrians along the verges and roadside. Full signage must be provided to warn motorist and provide protection to pedestrians and workers.

(2) Trench Excavations: Deep Excavation are required as part of the works. The sides of the trenches must be supported by shoring and or battering back.

(3) Heavy Plant/Machinery: Heavy plant and machinery are required to implement the works. At times they will be working in close proximity to existing roadways.

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 OHSA 1993 Construction Regulations 2014 issued on 7 February 2014 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 Section 37(2) of the Occupational Health and Safety Act.

2.2 Asbestos Regulations

The project scope of work will entail the removal of the existing asbestos roof sheeting and the replacement thereof, with galvanised steel sheeting. The removal and disposal of the asbestos roof sheeting will be undertaken by a Registered Asbestos Contractor. In light of the foregoing the project will be subject to the Asbestos Regulations (2002) and Asbestos Abatement Regulations, 2020, which were promulgated in terms of the Occupational Health and Safety Act 85 of 1993.

In line with the aforementioned regulatory prescripts, the following requirements should be complied with;

- Notification of the Provincial Director of the Department of Labour prior to commencement of the work. This item shall be undertaken by the AIA.
- The asbestos demolition work and disposal should be carried out by a registered asbestos contractor.
- All asbestos materials likely to become airborne should be identified.
- A plan of work should be submitted at least thirty (30) days prior to the commencement of that work, to an approved inspection authority. This item shall be undertaken by the AIA.
- During and after the completion of demolition work, steps should be taken to ensure that;
  - All asbestos and materials containing asbestos are handled and disposed of in accordance with the Asbestos Regulations (2002).
  - All persons exposed to or likely to be exposed to asbestos are issued with appropriate personal protective equipment (PPE) and that such equipment is used properly.

- The premises, structures or area are thoroughly checked to ensure that all asbestos waste has been removed.

2.3 Health and Safety Plan

The Principal Contractor shall prepare a documented Health and Safety Plan as per Construction Regulations 7(1) (a) based on the information / requirements contained in this specification and the baseline risk assessment for the project and demonstrate to us how he is going to implement Health and Safety on site.

2.4 Health and Safety File

The Principal Contractor must, as required by Construction Regulation 7(2)(b) compile and keep a health and safety file on site at all times that must include all documentation required in terms of The Act and Regulations and this specification. It must also include a list of all Sub Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. The Principal Contractor health and safety file must after compilation be submitted to the Health and Safety Agent for approval before any work commencement on site.

The health and safety file must contain the following documentation:

- Notification of Construction Work
- Proof of registration and good standing with the Compensation Commissioner or a COID Insurer
- Safety, Health and Environment Policies
- Health and safety plan agreed with the Client's Agent
- Legal Appointments
- Certificates of medical fitness
- Risk assessment(s) and method statements
- Material Safety Data Sheets (MSDS)
- Traffic Management Plan
- Emergency Preparedness Plan
- Training Records
- Personal Protective Equipment (PPE) records
- A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor
- The following registers:
  - Accident and/or incident register (Annexure 1 of the General Administrative Regulations)
  - Occupational Health and Safety representative's inspection register
  - Daily inspections of vehicles, plant and other equipment by the operator, driver and/or user
  - Inspection of hand tools
  - Inspection and maintenance of explosive powered tools
  - Inspection of electrical installations (including inspection of portable electrical tools, electrical equipment and other electrical appliances)
  - Inspection for temporal electrical installations
  - First-aid box content
  - Record of first-aid treatment
  - Fire equipment inspections and maintenance
  - Record of hazardous chemical substances (HCS) kept and used on site
  - Machine safety inspections (including machine guards, lock-outs etc.)
  - Inspection registers and logbooks for lifting machines and – tackle (including daily inspections by drivers/operators)
  - Inspection of stacking and storage
- The OHS Act and its Regulations (Construction Regulations 2014)
- Meeting records
- Internal Audits records
- Client's Audits records
- Other records relating to health and safety management on site

The Client's Agent will conduct an evaluation of the Principal Contractor's health and safety file from time to time during a month, but at least once a month.

2.5 Mandataries and Contractors Safety File

It is a requirement that the Principal Contractor, when he appoints Contractors, includes an OHS Act Section 37(2) agreement (i.e., Agreement with Mandatary) in his agreement with such Contractor.

Each Contractor must keep his/her health and safety file updated for the Principal Contractor, on a weekly basis. The Subcontractor must agree to comply with the terms of the Provisions of Section 37(2) of the Occupational & Safety Act, Act No. 85 of 1993 together with the Construction Regulations 2014.

The Principal Contractor must conduct an evaluation of the Contractor's health and safety file from time to time during a month, but at least once a month.

2.6 Notification of Intention to Commence Construction Work

The Principal Contractor must notify Department of Labour in writing of construction work as per section 4 of Construction Regulations and keep the stamped copy in the file.

3. STRUCTURE AND RESPONSIBILITIES

3.1 Overall Supervisions and Responsibility for Health and Safety

It is the Principal Contractor's responsibility to implement and maintain the health and safety plan approved by the Client.

The Chief Executive Officer (in terms of Section 16(1) of the OHS Act) of the Principal Contractor is to ensure that the Employer (as defined in the OHS Act) complies with the OHS Act.

The Principal Contractor's Chief Executive Officer may appoint any person reporting to him/her as Designated Person in terms of Section 16(2) of the OHS Act. Such Designated Person is responsible to assist the Chief Executive Officer to ensure that the Employer complies with the requirements of the OHS Act.

3.2 Operational Responsibilities for Health and Safety

The Principal Contractor must appoint designated competent employees and/or other competent persons to assist with the operational responsibilities for health and safety during the works. Appointments shall be guided/ structured by the legislation requirements and the scope of works to be performed by the contractor. It is acknowledged that the Principal Contractor may need to allocate more than one appointment to certain staff members. This practice may only take place if Health and Safety Standards would not be negatively affected. Should the Health and Safety Agent deem such practice as having a negative effect on Health and Safety Standards; then alternative arrangements will have to be made.

A part time Health and Safety Officer shall be appointed by the Principal Contractor subject to the following conditions:

- The person must either have completed a SAMTRAC (Safety Management Training Course), which is administered by NOSA, a 3 Week Health and Safety Management Course, which is administered by Lexis Nexus, National Diploma in Safety Management or another course approved by Client's Agent as a minimum requirement.
- The Health and Safety Officer must be registered with the South African Council for Project and Construction Management Professions (SACPCMP) or have proof of application for registration.

3.3 Appointment of Health and Safety Representative

Where the Principal Contractor employs more than 20 persons [including the employees of other contractors (sub-contractors)] he shall appoint one Health and Safety representative for every 50 employees or part thereof. General Administrative Regulation 6 requires that the election, appointment and subsequent designation of the Occupational Health and Safety representatives be executed in consultation with employee representatives or employees.

Occupational Health and Safety representatives shall be designated in writing and the designation must include the area of responsibility of the person and term of the designation.
Should the appointed representatives require any training, assistance or facilities, the Principal Contractor must provide these.

Health and Safety Representatives shall carry out his/ her duties as per Section 18 of the OHS Act. The Principal Contractor must ensure that the designated Occupational Health and Safety representatives conduct a weekly inspection of their respective areas of responsibility, using a checklist, and report thereon to the Principal Contractor.

Occupational Health and Safety representatives must be included in accident and/or incident investigations.
Occupational Health and Safety representatives must attend all Occupational Health and Safety committee meetings.

3.4 Health and Safety Committees

The Principal Contractor must establish an Occupational Health and Safety committee consisting of all the designated Occupational Health and Safety representatives together with a number of management representatives. The members of the Occupational Health and Safety committee must be appointed in writing and copies of the appointments included in the Occupational Health and Safety file.
The Health and Safety committee shall be made up of the following:

- Contracts Director
- Construction Manager
- Construction Safety Officer
- Health and Safety Representatives (Own and Contractors)
- Management Members and Client Representatives
- Contractors Managers

The Occupational Health and Safety committee must meet as a minimum on a monthly basis and consider, at least, the following agenda items:

- Opening and welcome
- Members present, apologies and absent
- Minutes of previous meeting
- Matters arising from the previous meeting
- Occupational Health and Safety representatives' reports
- Incident and/or accident reports and investigations
- Incident, accident and/or injury statistics
- Other matters
- Endorsement of registers and other statutory documents by a duly authorised representative of the Principal Contractor
- Training:
  - Employee competence
  - Induction training
  - Certified skills
  - Toolbox talks
  - Emergency procedures
  - Any specific training needs
- General issues:
  - Traffic Management
  - Fire precautions
  - First aid
  - Welfare, etc

Minutes of the meetings shall detail the actions arising from the meeting, action by, completion dates, be copied to all attendees and to be displayed on the safety notice board/s for the information of all the employees. A copy of the Safety Committee Meeting minutes shall be forwarded to the Client if the Client cannot attend the meetings.

3.5 Occupational Health and Safety Policy

The Principal Contractor must prepare a health and safety policy which should be signed by the Chief Executive Officer must form a part of the Safety Plan. The policy must outline objectives and set out how they will be achieved and implemented. The health and safety policy should also be displayed at the site office.

3.6 Health and Safety Organogram

An organogram outlining the health and safety management as per appointments under the OHS Act and the Regulations must be provided by the Principal Contractor and be kept in the health and safety file. The Contractor must maintain the health and safety management organogram up-to-date.

3.7 Preliminary Hazard Identification and Risk Assessment

The Principal Contractor must allow for and cause a Site-Specific Hazard Identification and Risk Assessment exercise to be performed by a Competent Person before commencement of construction work based on the projects Baseline Hazard Identification and Risk Assessment. The risks assessed must form part of the Construction Phase Health and Safety Plan to be submitted by the contractor for approval by the Health and Safety Agent. The Risk Assessment must include:

a) A list of hazards identified for the works;

b) Health and safety effects from exposure to hazards;
c) Risk rating and its methodology / matrix;
d) Control / mitigation measures to identified hazards;
e) Safe working procedures for the high-risk tasks intended to eliminate, reduce and/or control the risks assessed;

The Principal Contractor must ensure that all Sub-Contractors are informed, instructed and trained by a Competent Person/s regarding hazards, risks and related safe work procedures before any work commences and thereafter at regular intervals as the risks change and as new risks develop.

The Principal Contractor shall allow for and be responsible for ensuring that all persons who could be negatively affected by construction operations are informed and trained according to the hazards and risks and are conversant with the Safe Work Procedures, control measures and other related rules (for example "tool box talk" strategy to be implemented).

Should the Health and Safety Agent or other Clients Representative identify alternative hazardous activities performed by the Principal Contractor or its Sub-Contractors on site for which a Risk Assessment was not performed, then the Principal Contractor will be required to perform such an exercise before continuing such work.

The risk assessment must be reviewed where changes are effected to the design and or construction that result in a change to the risk profile and when an incident has occurred.

3.8 Medical Fitness

The Principal Contractor and all Sub-Contractors must ensure that every employee on site has a valid medical certificate of fitness specific to the construction work to be performed and issued by an Occupational Health Practitioner in the form of Annexure 3 of Construction Regulations 2014.

3.9 Health and Safety Training

3.9.1 Induction

The Principal Contractor shall allow for and ensure that all site personnel undergo a site-specific health and safety induction training session before starting work. A record of attendance shall be kept in the health and safety file. Induction training shall also include training on the risks associated with the works to be executed, safe work procedures and emergency procedures.

All visitors to the site must also be subjected to site-specific induction training highlighting items such as site safety and health risks, steps to follow in the event of emergency, restricted areas and on the site health and safety rules.

3.9.2 Awareness and Promotion

The Principal Contractor is required to have a promotion and awareness programme in place to create a health and safety culture within employees. The following are some of the methods that may be used:

- Toolbox talks (Weekly)
- Posters
- Notices and Sign

The following notices and signs are, where applicable, compulsory on the construction site as well as the Contractors' yards:

Area and/or activity where notice or sign is required	Notice or sign required in terms of
Display of notices and signs	General Safety Regulation 2B and SABS Code 1186
Entry	General Safety Regulation 2C(2)
First-aid	General Safety Regulation 3(6)
Toilets and change rooms	Facilities Regulation 2(5); 4(2)(f)
Storage of flammable materials	General Safety Regulation 4(8)(a)(i) and (ii) *(10(e) only applicable to Contractor's yards)*
Grinding wheels	Driven Machinery Regulation 8(1)(7)

Machinery	General Machinery Regulation 9 *(Schedule D)*
Explosive powered tools	Construction Regulation 21(2)(f)
Prohibition on smoking and eating or drinking at the workplaces where high risk substances [*FR5 (1)*] are stored or handled	Facilities Regulation 6(b)
Non-potable water	Facilities Regulation 7(b)
Traffic control signs	Department of Transport; Traffic Signs Manual, 2010, Chapter 8

3.9.3 Competency

The Principal Contractor shall ensure that his and other Contractors' employees appointed are competent and that all training required doing the work safely and without risk to health of their or other persons, has been successfully completed before work commences.

The Principal Contractor shall ensure that follow-up and refresher training is conducted on a regular basis as well as the contract work progresses and the work situation changes.

Records of all training must be kept on the health and safety file for auditing purposes.

3.9.4 Rules of conduct

Principal contractors, their sub-contractors and all employees under the control, including any visitor brought onto site must adhere to the following Rules of conduct on site.

YOU MAY NOT:

* Partake, possess or sell drugs or alcoholic beverages on site. Any employee or visitor whose action and demeanour show symptoms of possible narcosis or drunkenness shall be removed from site.
* Indulge in practical jokes, horseplay, fighting or gambling.
* Destroy or tamper with safety devises, symbolic signs or wilfully and unnecessarily discharge fire extinguishers.
* Bring onto site or have in your possession a firearm, lethal weapon.
* Assault, intimidate or abuse any other person.
* Operate construction equipment (vehicles or plant) without the necessary training and authorisation.
* Display insubordination toward any supervisor, foreman or Manager in respect to carrying out of properly issued instructions or orders for health and Safety reasons.
* Enter any area where you have no business unless authorised to do so by the person in charge.
* Negligently, carelessly or wilfully cause damage to property of others.
* Refuse to give evidence or deliberately make false statements during investigations.

3.10 General Record Keeping

The Principal Contractor and all Sub Contractors shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the OHS Act 85/1993; and with the Construction Regulations (2014). The Principal Contractor shall ensure that all records of incidents/accidents, training, inspections; audits, etc. are kept in a health & safety file held in the site office.

Then Principal Contractor must ensure that every Sub Contractor opens its own health & safety file, maintains the file and makes it available on request.

3.11 Construction Vehicles and Mobile Plant

Construction vehicles and mobile plant must be:

- Of acceptable design and construction
- Maintained in good working order
- Used in accordance with their design and intention for which they were designed
- Operated and/or driven by trained, competent and authorised operators/drivers
- Must be driven at the site at a speed limit on site shall be 40 Km/h in normal circumstances and 20Km/h through deviations unless otherwise specified.
- No unauthorised persons to be allowed to drive construction vehicles and mobile plant
- Provided with safe and suitable means of access

- Fitted with amber lights and must be clearly labelled "Construction Vehicle" in a conspicuous position and reflective colour
- Fitted with adequate signalling devices to make movement safe including reversing
- Excavations and other openings must be provided with sufficient barriers to prevent construction vehicles and mobile plant from falling into in
- Provided with roll-over protection
- Fitted with two head and two tail lights that is in good working condition whilst operating under poor visibility conditions; and
- Used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported
- Operators and drivers of construction vehicles and mobile plant must be in possession of a valid medical certificate declaring the operator and/or driver physically and psychologically fit to operate or drive construction vehicles and mobile plant
- No loose tools, material etc. is allowed in the driver and/or operators compartment/cabin nor in the compartment in which any other persons are transported
- No person may ride on construction vehicles and mobile plant except for in a safe place designed and provided for this purpose
- The construction site must be organized to facilitate the movement of construction vehicles and mobile plant in such a manner that pedestrians and other vehicles are not endangered. Traffic routes to be suitable, sufficient in number and adequately demarcated
- Construction vehicles and mobile plant left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights, reflectors or barricades to prevent moving traffic from a sudden emergency, or to come into contact with the parked construction vehicles and mobile plant
- In addition, construction vehicles and mobile plant left unattended after hours must be parked with all buckets, booms etc. full lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely
- Employees near construction vehicles / operators to wear reflective safety vests
- All construction vehicles and mobile plant daily inspection records must be kept in the health and safety file.

3.12 Health & Safety Audits, Monitoring and Reporting

The Client's Health and Safety Agent shall at least once a month during the duration of the contract conduct Health and Safety Audits of the work operations. The audit shall be consisting of a full audit of physical site activities and well as an audit on the administration of health and safety. Copies of the audit reports will be forwarded to the Principal Consultant and the Project Manager and other site stake holders within seven days. It must be kept in the site health and safety file. The Health and Safety Agent may at any time visit the site for an Audit without prior notification to the contractor.

The Principal Contractor must allow for and conduct similar audits on all Sub-Contractors appointed by the Principal Contractor and forward copies of all reports to the Health and Safety Agent within seven working days of completion of the audits and file copies on the site health and safety file.

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C3.5.3 Construction Environmental Management Plan

PES1 General

The Contract shall be conducted in accordance with the principles of Integrated Environmental Management (IEM) "in an environmentally and socially responsible manner" (DEAT 1992). This section details the controls and procedures necessary to achieve this goal.

The Contractor will be required to comply with the Project Environmental Specifications contained in this section. Should any conflict arise between the specifications contained in this section, and any other specification, the Project Environmental Specifications shall prevail.

The specifications detailed in this section relate to those construction activities which could have an adverse impact on the environment and which therefore require mitigation measures.

Items have been included in the Preliminary and General section of the Bill of Quantities to reflect compliance with the Project Environmental Specifications. Where no item is provided in the Bill of Quantities, the Contractors rates will be deemed to be inclusive of any costs incurred for compliance with the Project Environmental Specification.

PES2 Working Area

An area of the site will be defined by the Employer's Agent for use by the contractor. This area will include the designated areas listed below and the contractor will not be permitted access beyond this defined area, except for the security personnel will be required to patrol a wider area to prevent informal settlements.

Within the defined working area mentioned above, certain areas will be specifically designated by the Employer's Agent for the following activities:

- site camp
- stockpiling and storage of construction materials

In order to minimise the potential for erosion, vehicle access between the above-mentioned areas will be restricted to corridors defined by the Employer's Agent, and multiple access tracks across the veld will not be permitted. Should excessive vehicle tracks be made, the Contractor shall be required to rehabilitate the extra tracks at his own cost. Rehabilitation shall involve ripping of the compacted earth to a depth of 150mm to loosen the earth, and grass seeding according to specification.

PES3 Site Camps

Where site camps are to be established the topsoil is to be removed to the base of the A-horizon or to a depth of 150mm, whichever is the greater, and stockpiled according to the SANS specifications.

The site shall be located more than 20m from watercourses. Runoff from the site must be prevented from entering the watercourse or wetland.

Site camps and surrounds are to be maintained in a clean orderly and presentable condition at all times.

Waste water from kitchen and ablution facilities shall be led to soak pits and shall not be discharged to rivers or streams.

Tanks for fuels oils etc. shall be bunded with earth berms adequate to contain any possible spills.

After completion of the Works the contractor shall restore the area used by him to its former condition, including removal of rubble and foundations, and to the satisfaction of the Employer's Agent.

PES4 Sanitation

Adequate toilet facilities are to be provided within 200m of the Works. All toilets shall be maintained by the Contractor in a clean sanitary condition to the satisfaction of the Employer's Agent. Toilets shall not be located on flood plains where the possibility of flooding exists.

Contractors shall instruct their staff and sub-contractors that they must use the toilets provided and not the veld, bush or streams.

PES5 Refuse

The site is to be kept clean, neat and tidy to the Employer's Agent's satisfaction. The Contractor shall provide bins at the Work sites and shall be responsible for disposal of refuse and waste generated by his staff on a daily basis. Domestic litter or construction waste may not be left lying about on site.

Refuse and construction waste shall be disposed of at an approved dump site.

No burning of refuse is permitted.

PES6 Dust

Dust is regarded as a nuisance when it reduces visibility, soils private property or is aesthetically displeasing. Dust also reduces the value of grazing grasses and retards plant growth.

Dust generated by construction related activities must therefore be minimised.

The Contractor shall control dust over the site of the Works, on access roads/tracks, on stockpiles and spoil sites or borrow pits.

Control of dust shall involve spraying with water. The quantities of water used should not be large enough or applied with sufficient force to generate run off which could result in soil erosion. A water cart shall be provided by the Contractor to control dust levels.

PES7 NOISE

Noise levels are to be kept within reasonable norms as determined by the Employer's Agent, taking into account the context of the rural setting.

Silencers shall be fitted to all machinery and vehicles shall be well maintained.

The Contractor shall inform residents of any excessive noise that is anticipated due to construction activities, for example blasting for excavation. This notice shall be given at least 2 days before the event generating higher noise levels.

Any complaints received by the Employer's Agent regarding noise will be recorded and communicated to the Environmental Control Officer.

PES8 Social Disruption

The Contractor's staff shall in no way be a nuisance to residents in the vicinity of construction activities. Any complaints received by the Employer's Agent will be addressed and the relevant persons will face suspension from the project.

No access to private property will be allowed.

PES9 Informal Settlements

The Contractor shall require his security personnel to patrol the entire site (not just the site of current operations as defined in PES3) and report any sign of informal shack development within three hours of commencement of such activity.

PES10 Traffic

Traffic, especially heavy vehicle traffic, has the potential to draw complaints from other road users and neighbours. The Contractor will be expected to address any complaints received.

The Contractor shall instruct his drivers, suppliers, plant operators and any other vehicle operators travelling to and from the site as a result of the construction contract, that vehicles will be expected to comply with all roads ordinances, particularly with regard to;

- Speed limits
- Preventing Overloading
- Roadworthiness
- Securing of loads
- Covering of any loads that could generate dust
- Avoiding spillage of liquids, sand, soil or other material

General consideration and courtesy to other road users will also be expected of drivers.

PES11 Overhead Power Lines

Where work is being carried out in the vicinity of overhead power lines, the Contractor is responsible for ensuring that all persons working in such areas are aware of the relatively large distance that high voltage electricity can 'short' to earth when large masses of steel such as steel pipes or machinery are close to power lines. The Contractor's attention is drawn to OHSA (1993) which gives safe clearances for various voltages.

PES12 Removal of Protected Plants from Site

Certain species of indigenous plants that occur on the site are protected by law. A horticulturist has been designated the responsibility for relocating these plants from the “Working Area” prior to the Contractor moving on site.

No removal of any plants from beyond the Working Area will be permitted. The Contractor shall be responsible to ensure that no unauthorized removal of plants is allowed. In the event of removal of legally protected species, the persons responsible shall be liable for prosecution under the relevant provincial ordinance. Security Staff will report any infringements related to this.

The Contractor shall confirm with the ECO that the horticulturist has removed the said plants from the Working Area before the Contractor moves on site.

PES13 Fire Prevention and Control

The Contractor and his staff are expected to be very conscious of fire risks. The Contractor shall hold fire prevention talks with staff to create an awareness of the risks of fire. Regular reminders to staff on this issue are required.

The Contractor shall at all times ensure that fires do not start or spread within the site or the environs thereof as a result of the Works or the actions of employees. In the event of such fire the Contractor shall immediately employ such plant and labour as is at his disposal and shall take all other necessary action to bring any such fire under control, all at his own cost.

A fire extinguisher must be on hand whenever welding or any other spark generating activity is conducted.

In addition, rubber beaters are to be on hand at all work stations at all times as these represent the quickest form of response to fire.

No fires may be made other than for the purpose of cooking. Cooking fires must be contained in a fire drum and be in a designated area approved by the Employer’s Agent. All fires are to be extinguished with water once they have served their purpose.

No fire is to be left unattended at any time.

No burning of grassland to clear is permitted.

No cutting of timber for firewood will be allowed.

No fires are to be allowed when the Fire Danger Index is high (46 and above) i.e., fire alert stage yellow.

The Contractor shall be liable for all costs and damages resulting from fire and fire fighting.

PES14 Environmental Training

The Contractor shall be responsible for conducting Environmental Training amongst his employees to ensure that they have the necessary knowledge to comply with the Environmental Specifications. Employees should be made aware of the Environmental Specifications and the reasons for them.

PES15 Work Stoppage

The Employer's Agent shall have the right to order work to be stopped in the event of significant infringements of the Environmental Specifications until the situation is rectified in compliance with the specifications. In this event the Contractor shall not be entitled to claim for delays.

This clause shall apply in the case of infringements of a nature whereby full remediation of circumstances arising from the infringement will not be possible at a later date. For example, mixing topsoil with subsoil; activities that are polluting or may cause pollution of water.

PES16 Environmental Monitoring

The Employer's Agent will monitor the Contractor's performance in relation to the Environmental Specifications on a daily basis. He will be assisted in this regard by the Environmental Control Officer.

The ECO shall inspect the site on a regular basis. After each ECO site visit a report will be submitted to the Employer's Agent and UMDONI MUNICIPALITY. The content of these reports will be made known to the Contractor by the Employer's Agent. Any infringement of the Environmental Specification will be indicated in the report. These reports will also aim to anticipate problems which may arise so that the Contractor can be alerted to potential environmental risks and take appropriate action.

PES17 Measurement and Payment

The Tendered rates shall be deemed to cover all costs associated with the compliance with the Environmental Specification.

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C3.6: CONTRACT AND STANDARD DRAWINGS

C3.6.1 Contract Drawings / Details

Drawing Number	Description
51570/01 A	PLAN LAYOUT AND DETAILS (SHEET 1 OF 2)
51570/02 A	PLAN LAYOUT AND DETAILS (SHEET 2 OF 2)
51570/03 A	LONGITUDINAL SECTIONS
51570/04 A	CROSS SECTIONS (CH0 to CH460)
51570/05 A	CROSS SECTIONS (CH480 TO CH 934.55)

C3.6.2 STANDARD DRAWINGS

C3.6.2.1 The Standard Drawings to which these Standard Engineering Specifications refer are listed below.

TGC/03 ..... STORMWATER BRICK MANHOLES
TGC/04 ..... STORMWATER INLETS
TGC/05 ..... STORMWATER PIPE HEADWALLS
TGC/06 ..... KERBS
TGC/07 ..... CONCRETE BOLLARD AND STEEL GUARD RAILS

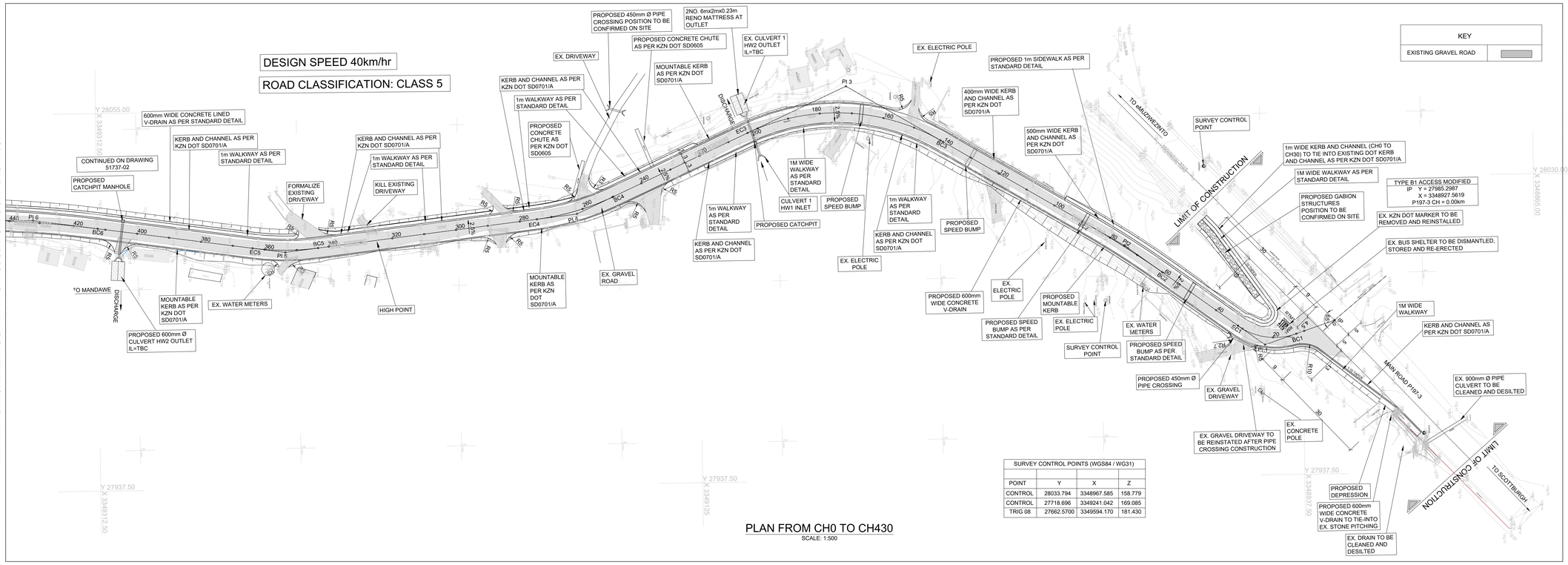
C3.6.2.2 Kwa-Zulu Natal Department of Transport of Transport Standard Details.

SD0303/..... SETTING OUT DETAILS TYPE B1/B3 ACCESS
SD0601/C ..... DRAINAGE IN CUTTING SIDE DRAINS
SD0605/A ..... PIPE CHUTE, OPEN CHUTE AND CATCHWATER BANK DETAILS.
SD0901/A ..... GABION RETAINING WALLS

NOTE:

Originals of reduced drawings are available for inspection at the offices of the Engineer, or copies may be purchased by arrangement with the Engineer. No claims for misunderstanding reduced drawings will be considered.

REFER TO ROAD LAYOUT DRWG NO. 02 FOR CONTINUATION

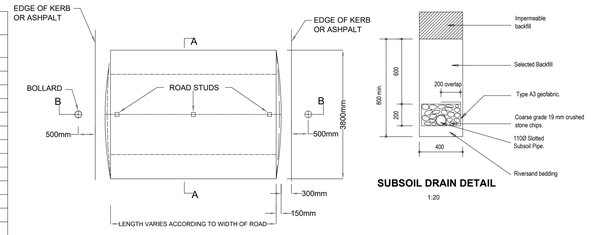


SURVEY CONTROL POINTS (WGS84 / WG31)			
POINT	Y	X	Z
CONTROL	28033.794	3348967.585	158.779
CONTROL	27718.696	3349241.042	169.085
TRIG 08	27662.5700	3349594.170	181.430

PLAN FROM CH0 TO CH430
SCALE: 1:500

ROAD MARKING LEGEND

REF. NO.	DESCRIPTION
REGULATORY:	
RTM1	300mm WHITE 'STOP LINE'
RM1	100mm WHITE SOLID CONTINUOUS 'NO OVERTAKING LINE' AT 'STOP LINE'
RM3	100mm WHITE SOLID CONTINUOUS 'CHANNELISING LINE'
RM4.1	100mm YELLOW SOLID CONTINUOUS 'LEFT EDGE LINE'
RM8.2	100mm YELLOW 'MANDATORY DIRECTION ARROW AHEAD' (LEFT TURN / STRAIGHT)
RM8.3	100mm YELLOW 'MANDATORY DIRECTION ARROW AHEAD' (STRAIGHT)
RM8.5	YELLOW 'MANDATORY DIRECTION ARROW AHEAD' (RIGHT TURN)
RM8.6	100mm YELLOW 'MANDATORY DIRECTION ARROW AHEAD' (STRAIGHT / LEFT TURN / RIGHT TURN)
WARNING:	
WM2	200mm WHITE BROKEN 'CONTINUITY LINE'
	(2m LINE / 4m GAP)
WM2a	100mm WHITE BROKEN 'CONTINUITY LINE'
	(2m LINE / 4m GAP)
WM7.2	100mm WHITE 'MANDATORY DIRECTION ARROW AHEAD' (LEFT TURN / STRAIGHT)
WM7.3	100mm WHITE 'MANDATORY DIRECTION ARROW AHEAD' (STRAIGHT)
WM7.5	WHITE 'MANDATORY DIRECTION ARROW AHEAD' (RIGHT TURN)
WM7.6	100mm WHITE 'MANDATORY DIRECTION ARROW AHEAD' (STRAIGHT / LEFT TURN / RIGHT TURN)
WM3	100mm WHITE BROKEN 'CONTINUITY LINE'
	(4m LINE / 8m GAP)
GUIDANCE:	
GM3.3	WHITE 'BIFURCATION ARROW'



PLAN VIEW
SPEED HUMP DETAIL
SCALE:NTS

SUBSOIL DRAIN DETAIL
1:20

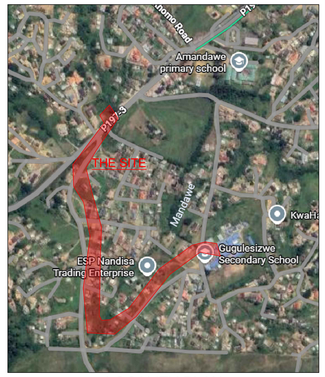
HORIZONTAL ALIGNMENT DATA - P288									
PIno	Name	Y	X	Radius	BC	EC	Defl. Angle (DMS)	Tangent Length (m)	Curve Length (m)
1	START	Y 27985.299	X3348927.562						
2	PI1	Y 27977.964	X3348949.308	20.000	12.614	31.693	(RIGHT)54.39.28	10.336	19.079
3	PI2	Y 28009.448	X3348992.612	300.000	60.558	89.214	(LEFT) -5.28.23	14.339	28.656
4	PI3	Y 28060.241	X3349078.683	65.000	140.891	203.426	(LEFT) -55.07.22	33.925	62.535
5	PI4	Y 28021.663	X3349163.034	80.000	249.663	274.641	(RIGHT 17.53.20	12.591	24.978
6	PI5	Y 28010.999	X3349253.978	80.000	343.319	363.801	(RIGHT)14.40.08	10.297	20.482
7	PI6	Y 28021.993	X3349332.393	350.000	412.405	452.922	(LEFT) -6.37.58	20.281	40.517
8	PI7	Y 28023.986	X3349417.057	110.000	507.139	527.459	(LEFT) -10.35.04	10.189	20.320
9	PI8	Y 28015.822	X3349467.260	20.000	548.555	579.543	(LEFT) -88.46.32	19.577	30.989
10	PI9	Y 27965.571	X3349460.187	60.000	592.424	627.928	(LEFT) -33.54.16	18.289	35.505
11	PI10	Y 27914.956	X3349414.747	150.000	662.351	692.860	(LEFT) -11.39.13	15.307	30.509
12	PI11	Y 27856.502	X3349335.549	110.000	761.016	790.775	(RIGHT)15.30.03	14.971	29.760
13	PI12	Y 27786.924	X3349281.055	300.000	842.997	885.297	(RIGHT) 8.04.43	21.185	42.300
14	PI13	Y 27742.949	X3349255.675	80.000	896.271	932.849	(RIGHT) 26.11.51	18.615	35.579
15	END	Y 27722.679	X3349254.332						

ITEM NO.	DISTANCE (km)	SIZE (mm)	CLASS	BEDDING TYPE	LENGTH (m)	SKEW (°)	GRADE (%)	AREA (ha)	DISCHARGE (m3/s)	CAPACITY (m3/s)	VELOCITY (m/s)	HEADWALL / DROP INLETS	REMARKS
1	CH 200	600 dia.	100D	C	15	0	2	1.25	0.89	0.420	3.10	HEADWALLS	AS PER SD 0401/B
2	CH 405	600 dia.	100D	C	13	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B
3	CH 490	600 dia.	100D	C	12	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B
4	CH 578	900 dia.	100D	C	12	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B
4	CH 578	600 dia.	100D	C	12	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B

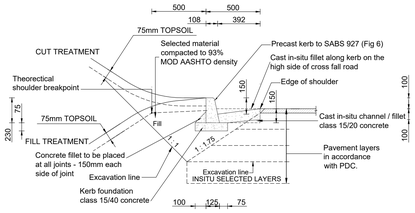
LEGEND

EXISTING ELECTRICAL OVERHEAD POWER LINE	
EXISTING ELECTRICAL UNDERGROUND CABLE	
EXISTING SEWER LINE	
EXISTING WATERMAIN	
EXISTING ROAD RESERVE BOUNDARY	
EXISTING FENCE	
EXISTING ROAD TO BE CLOSED	ACCESS CLOSED
PROPOSED SUBSOIL DRAIN (KZN DOT SD 0501/2)	
PROPOSED GRASSED V-DRAIN (KZN DOT SD 0601/3)	
PROPOSED CULVERT AND HEADWALLS (SD 0406)	
PROPOSED ELECTRICAL UNDERGROUND CABLE	
PROPOSED SEWER LINE	
PROPOSED RENO MATTRESS AT STORMWATER OUTLET	

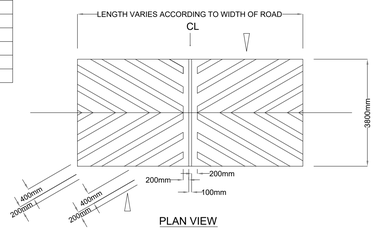
NOTE:
ALL SERVICES TO BE CONFIRMED ON SITE AND AFFECTED SERVICES TO BE RELOCATED IN CONSULTATION WITH THE RELEVANT SERVICE PROVIDERS.



LOCALITY PLAN
SCALE: NTS

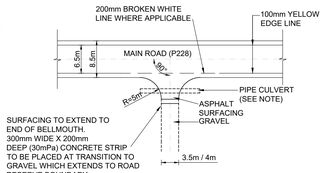


TYPICAL KERB AND CHANNEL DETAIL (MAIN ROAD)
(AS PER KZN DOT SD 0701/A)
MODIFIED TO ALSO SHOW CAST IN-SITU FILLET DETAIL
SCALE 1:20



PLAN VIEW
SPEED HUMP PAINT DETAIL
SCALE:NTS

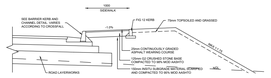
REFER MUNICIPAL TRAFFIC CLAMING STANDARD DETAILS DRAWING NO. 46352

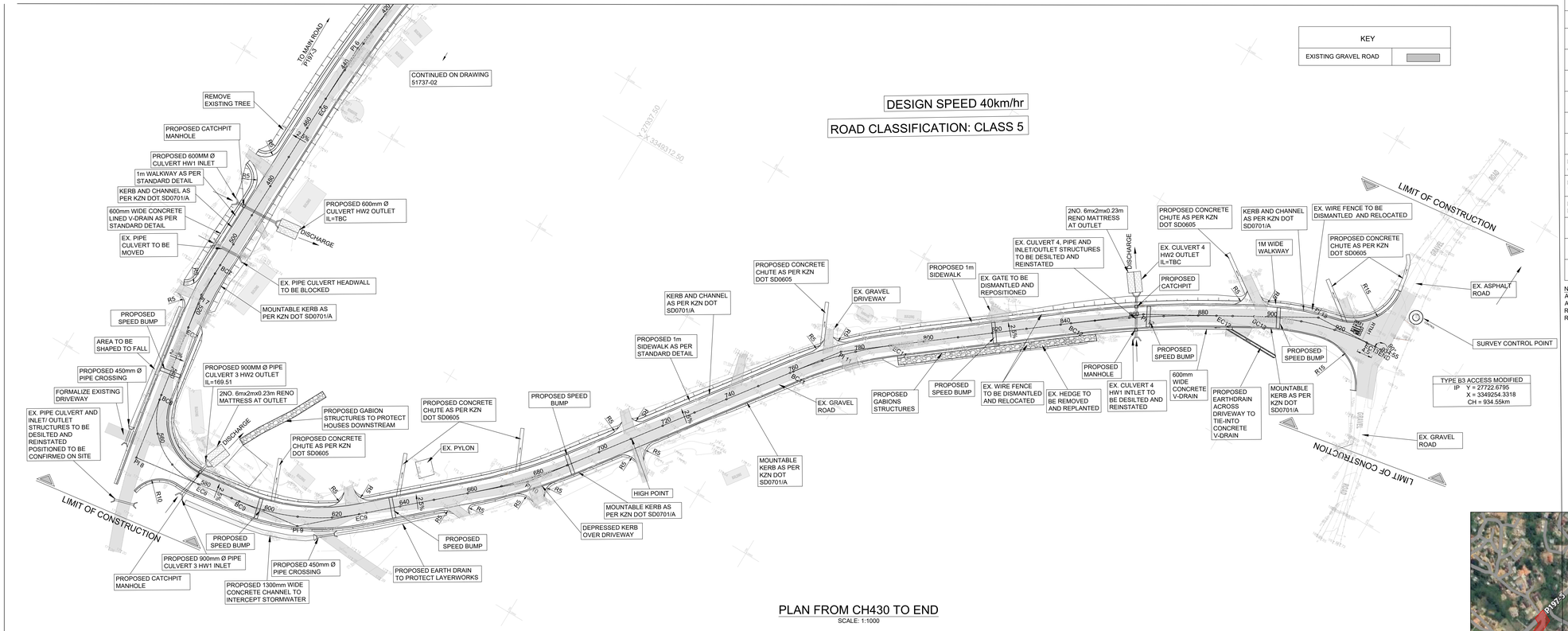


TYPICAL DRIVEWAY
ACCESS DETAIL
SCALE: 1:500

NOTE:
PIPE CULVERTS ARE TO BE PROVIDED WHEN NECESSARY TO MAINTAIN LONGITUDINAL DRAINAGE. THIS PIPE SHALL BE MANUFACTURED OF CONCRETE WITH A MINIMUM DIAMETER OF 450mm. THE PIPE SHALL BE SUFFICIENTLY LONG TO CLEAR THE FILL SLOPES.

SIDE DRAIN SCHEDULE						
LEFT HAND SIDE			RIGHT HAND SIDE			
FROM KM	TO KM	LENGTH (m)	FROM KM	TO KM	LENGTH (m)	COMMENTS
0.000	0.120	150				600mm WIDE CONCRETE V-DRAIN
			0.350	0.470	120	600mm WIDE CONCRETE V-DRAIN
			0.480	0.520	70	600mm WIDE CONCRETE V-DRAIN
			0.580	0.620	40	1300mm WIDE CONCRETE V-DRAIN
			0.790	0.890	100	600mm WIDE CONCRETE V-DRAIN


1000
SIDEWALK
SEE BARRIER KERB AND CHANNEL DETAIL - KERB ACCORDING TO DROSPAL
FIG 12 KERB
75mm TOPSOILED AND GRASSED
1:25
1:25
1:1.5
1:1.5
1:1.5



PLAN FROM CH430 TO END

SCALE: 1:1000

KEY	
EXISTING GRAVEL ROAD	

LEGEND	
EXISTING ELECTRICAL OVERHEAD POWER LINE	
EXISTING ELECTRICAL UNDERGROUND CABLE	
EXISTING SEWER LINE	
EXISTING WATERMAIN	
EXISTING ROAD RESERVE BOUNDARY	
EXISTING FENCE	
EXISTING ROAD TO BE CLOSED	ACCESS CLOSED
PROPOSED SUBSOIL DRAIN (KZN DOT SD 0501/2)	
PROPOSED GRASSED V-DRAIN (KZN DOT SD 0601/3)	
PROPOSED CULVERT AND HEADWALLS (SD 0406)	
PROPOSED ELECTRICAL UNDERGROUND CABLE	
PROPOSED SEWER LINE	
PROPOSED RENO MATTRESS AT STORMWATER OUTLET	

NOTE:
ALL SERVICES TO BE CONFIRMED ON SITE AND AFFECTED SERVICES TO BE RELOCATED IN CONSULTATION WITH THE RELEVANT SERVICE PROVIDERS.

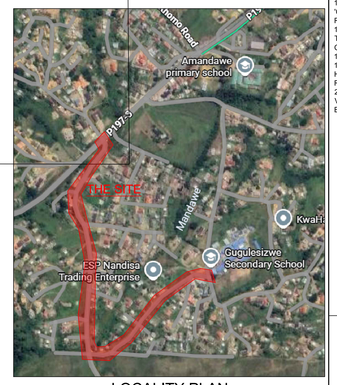
DRAWING REFERENCE

TITLE

NORTH POINT

NOTES

1. ALL LEVELS, DIMENSIONS AND SETTING OUT DETAILS ARE TO BE VERIFIED BY CONSULTANT AND CONTRACTOR ON SITE PRIOR TO CONSTRUCTION.
2. ALL EXISTING DRAINAGE CULVERTS ARE TO BE INSPECTED, AND ANY FOUND IN UNSERVICEABLE CONDITION ARE TO BE REPLACED UNLESS SHOWN OTHERWISE.
3. CULVERT INVERTS ARE TO BE DECIDED BY THE ENGINEER ON SITE UNLESS SHOWN OTHERWISE. MIN COVER = 600mm, MIN. SLOPE = 2%.
4. PIPE CULVERTS ARE TO BE LAID IN ACCORDANCE WITH SD 0401 WITH HEADWALLS AS PER SD 0406. MIN DIA. = 450mm FOR MINOR ACCESS ROADS AND ACCESS BELLMOUTHS, AND MIN. DIA. = 600mm FOR MAJOR ROAD CROSS DRAINAGE.
5. BOX CULVERTS < 1.8m HIGH ARE TO BE CONSTRUCTED IN ACCORDANCE WITH SD 0407.
6. FOR EROSION CONTROL CEMENT GROUTED STONE PITCHING OR GABION MATTRESSES ARE RECOMMENDED AT CULVERT INLETS AND OUTLETS.
7. EARTH BERMS ARE TO BE CONSTRUCTED AT CULVERT INLETS TO DIRECT STORMWATER INTO CULVERTS WHERE NECESSARY.
8. ROCK BOLSTERS ARE TO BE PLACED ACROSS THE INVERT OF DRAINS SUSCEPTIBLE TO EROSION FOR EVERY 2m VERTICAL DROP.
9. GRASSED / CONCRETE LINED V-DRAINS AS PER SD 0601/3 & 4 ARE RECOMMENDED FOR SHALLOW CUTTINGS < 5m MEASURED AT A POINT 6m FROM EDGE OF CARRIAGEWAY.
10. SUBSOIL DRAINS AS PER SD 0501 ARE TO BE INSTALLED WHERE HIGH WATER TABLES ARE ENCOUNTERED.
11. KERB AND CHANNEL DRAINS AS PER SD 0701 ARE TO BE PROVIDED WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT.
12. WHERE SURFACE RUNOFF IS TOWARDS THE ROAD, CATCHWATER BANKS ARE TO BE PROVIDED TO DIVERT STORMWATER TO MAJOR CROSS DRAINAGE STRUCTURES.
13. THE POSITIONS OF ACCESSES ARE TO BE DETERMINED IN CONSULTATION WITH THE LOCAL COMMUNITY. DAYLIGHTING REQUIREMENTS ARE TO BE DECIDED BY THE ENGINEER ON SITE.
14. EXISTING ROAD SIGNS, SERVICES AND FENCING AFFECTED BY CONSTRUCTION ARE TO BE REMOVED / RELOCATED WHERE NECESSARY.
15. UNDERGROUND SERVICE CROSSINGS AND MARKERS ARE TO BE IN ACCORDANCE WITH SD 1001-3.
16. ALL NEW ROAD SIGNS AND ROADMARKING REQUIREMENTS ARE TO CONFORM TO THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL (SARTSM)
17. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE 'COLTO SPECIFICATIONS FOR ROAD AND BRIDGE WORKS FOR STATE ROAD AUTHORITIES'.
18. EXISTING AFFECTED KM MARKER POSTS ARE TO BE RELOCATED TO THEIR NEW POSITION IN RELATION TO THE PROPOSED ROAD CENTRE LINE.
19. GUARDRAILS ARE TO BE INSTALLED IN ACCORDANCE WITH SD 1101 AND SD 1102 WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT OR WHERE HAZARDOUS OBSTRUCTIONS CANNOT BE REMOVED.
20. NEW FILLS AND EXPOSED CUTTINGS ARE TO BE TOP-SOILED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.



LOCALITY PLAN

SCALE: NTS

HORIZONTAL ALIGNMENT DATA - P288									
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ITEM NO.	DISTANCE (km)	SIZE (mm)	CLASS	BEDDING TYPE	LENGTH (m)	SKEW (°)	GRADE (%)	AREA (ha)	DISCHARGE (m3/s)	CAPACITY (m3/s)	VELOCITY (m/s)	HEADWALL / DROP INLETS	REMARKS
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2	CH 405	600 dia.	100D	C	13	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B
3	CH 490	600 dia.	100D	C	12	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B
4	CH 578	900 dia.	100D	C	12	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B
4	CH 578	600 dia.	100D	C	12	0	2	2.12	0.85	0.420	3.10	HEADWALLS	AS PER SD 0401/B

SIDE DRAIN SCHEDULE						
LEFT HAND SIDE			RIGHT HAND SIDE			
FROM KM	TO KM	LENGTH (m)	FROM KM	TO KM	LENGTH (m)	COMMENTS
0.000	0.120	150				600mm WIDE CONCRETE V-DRAIN
			0.350	0.470	120	600mm WIDE CONCRETE V-DRAIN
			0.480	0.520	70	600mm WIDE CONCRETE V-DRAIN
			0.580	0.620	40	1300mm WIDE CONCRETE V-DRAIN
			0.790	0.890	100	600mm WIDE CONCRETE V-DRAIN

ROAD MARKING LEGEND

REF. NO.	DESCRIPTION
REGULATORY:	
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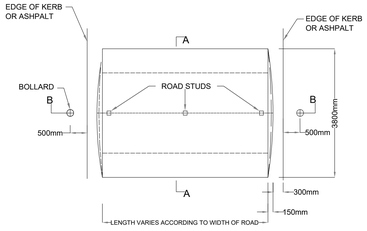
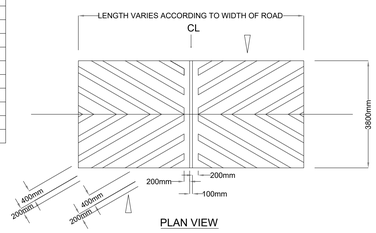
WM3	100mm WHITE BROKEN 'CONTINUITY LINE'
	(4m LINE / 8m GAP)
GUIDANCE:	
GM3.3	WHITE 'BIFURCATION ARROW'



PLAN VIEW
SPEED HUMP DETAIL

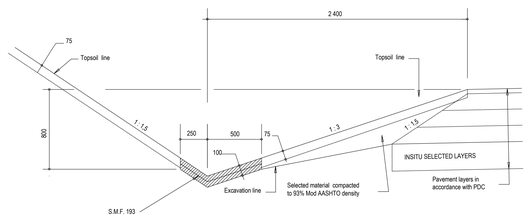
SCALE NTS



PLAN VIEW
SPEED HUMP PAINT DETAIL

SCALE NTS

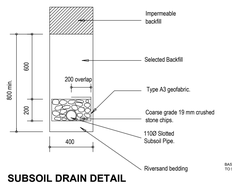
REFER MUNICIPAL TRAFFIC CLAMING STANDARD DETAILS DRAWING NO. 46352



GRASSED V-DRAIN IN SHALLOW CUTTINGS

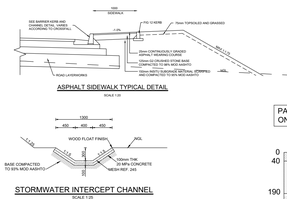
Scale 1 : 20

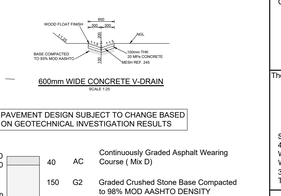
(NOTE : 1. Subsoil drains are not required with this drain detail)
NOTE : 2. Where a grassed drain is used the invert must always be concreted as indicated for maintenance purposes.



SUBSOIL DRAIN DETAIL

1:20



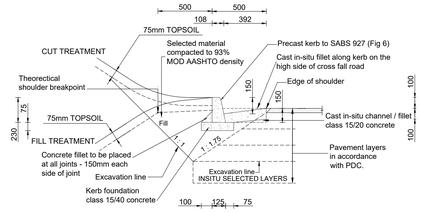


PAVEMENT DESIGN SUBJECT TO CHANGE BASED ON GEOTECHNICAL INVESTIGATION RESULTS

0			
40	40	AC	Continuously Graded Asphalt Wearing Course (Mix D)
190	150	G2	Graded Crushed Stone Base Compacted to 98% MOD AASHTO DENSITY
340	150	G5	Natural Gravel Subbase Compacted TO 95% MOD AASHTO Density
490	150	G7	Selected Layer Compacted to 93% MOD AASHTO Density
640	150	G10	Insitu Subgrade Material Scarified and Recompacted to 93% MOD AASHTO Density

PAVEMENT DESIGN FOR ROAD UPGRADE

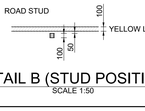
SCALE 1:10



TYPICAL KERB AND CHANNEL DETAIL (MAIN ROAD)
(AS PER KZN DOT SD 0701/A)
MODIFIED TO ALSO SHOW CAST IN-SITU FILLET DETAIL

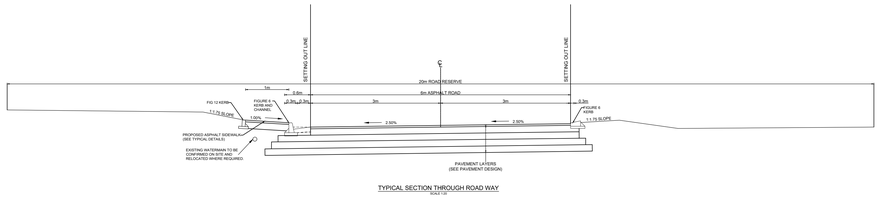
SCALE 1:20

NOTES :
1. Construction joints to be provided in cast in-situ work at 2,00m intervals.
2. Expansion joints consisting of approved preformed joint filler board 13mm thick cut to required shape to be provided where indicated.
3. The 500 Kerb and Channel may be increased to 1000 Kerb and Channel where required.



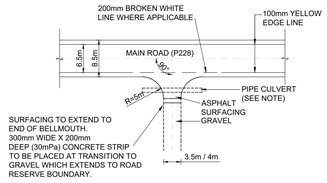
DETAIL B (STUD POSITION)

SCALE 1:50



TYPICAL SECTION THROUGH ROAD WAY

SCALE 1:50



SURFACING TO EXTEND TO END OF BELLMOUTH.
300mm WIDE X 200mm DEEP (30mPa) CONCRETE STRIP TO BE PLACED AT TRANSITION TO GRAVEL WHICH EXTENDS TO ROAD RESERVE BOUNDARY.

TYPICAL DRIVEWAY ACCESS DETAIL

SCALE: 1:500

NOTE:
PIPE CULVERTS ARE TO BE PROVIDED WHEN NECESSARY TO MAINTAIN LONGITUDINAL DRAINAGE. THIS PIPE SHALL BE MANUFACTURED OF CONCRETE WITH A MINIMUM DIAMETER OF 450mm. THE PIPE SHALL BE SUFFICIENTLY LONG TO CLEAR THE FILL SLOPES.

NOTES (PAVEMENT DESIGN)

1. Pavement design in accordance with Draft TRH4 1996.
2. Densities of insitu material and new layers to be approved by the Engineer before placing the following layer.
3. All stormwater drainage and utility service relocation work to be completed before placing of the layerworks.

ISSUED FOR TENDER

NO.	AMENDMENT	APPROVED	DATE
A	LAYOUT REVISED	G.L	JULY 2026

REVISIONS

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PROJECT

UPGRADE OF EMAROMENI ACCESS ROAD (WARD14)

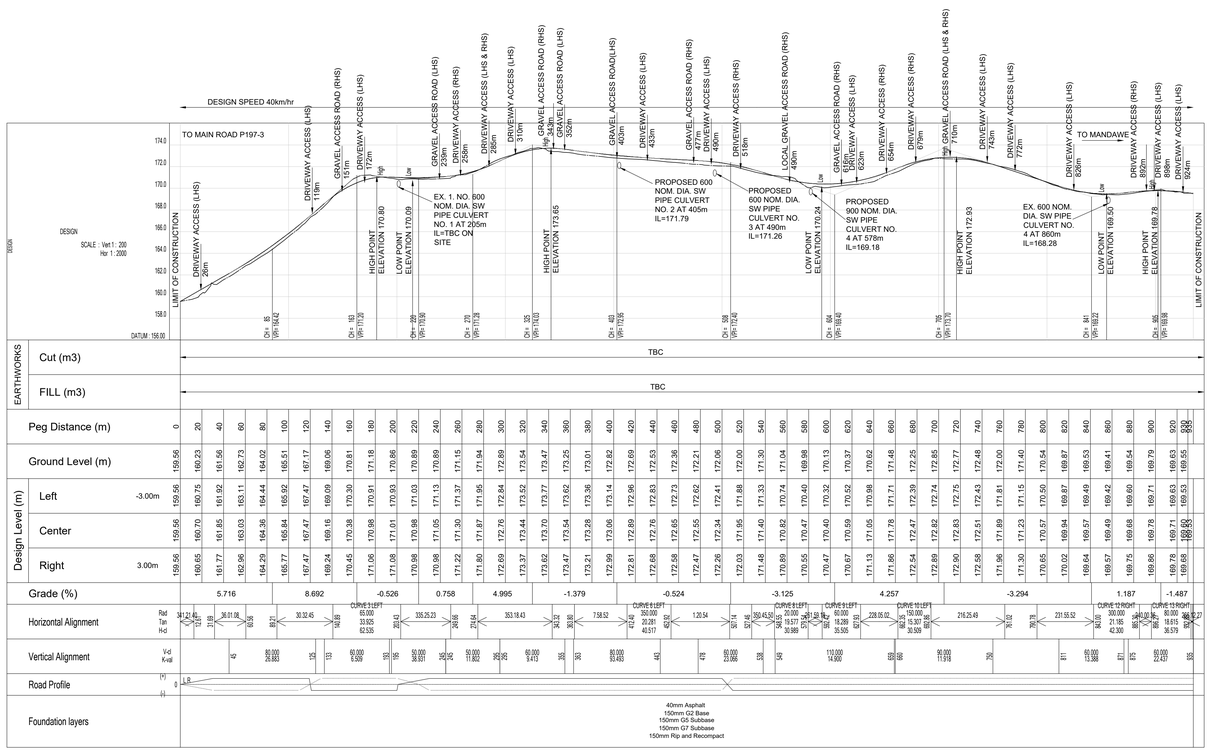
TITLE

PLAN LAYOUT AND DETAILS (CH430 TO END)

CONSULTING ENGINEER	DESIGNED : C.R
SIGNATURE:.....	DRAWN : C.R
PR. NO.:.....20180418	CHECKED : G.L
DATE:.....APRIL 2026	SCALE : AS SHOWN
	DATE : APRIL 2026
	ORIGINAL SIZE: A0

REFERENCE NO.	FIGURE NO.	REVISION
51737-01	02	A

CAD FILE: S/.....



ROAD LONG SECTION

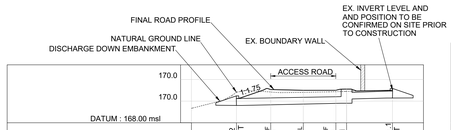
SCALE : VERT 1 : 200
HORI 1 : 2000

HORIZONTAL ALIGNMENT DATA

	Plno	Name	Y	X	Radius	Tr.In	Tr.Out	Defl.
1	START		27985.299	3348927.562	-	-	-	-
2	PI 1		27977.964	3348949.308	20.00	0.00	0.00	Right
3	PI2		28009.448	3348992.612	300.00	0.00	0.00	Left
4	PI 3		28060.241	3349078.683	65.00	0.00	0.00	Left
5	PI 4		28021.663	3349163.034	80.00	0.00	0.00	Right
6	PI 5		28010.999	3349253.978	80.00	0.00	0.00	Right
7	PI 6		28021.993	3349332.393	350.00	0.00	0.00	Left
8	PI 7		28023.986	3349417.057	110.00	0.00	0.00	Left
9	PI 8		28015.822	3349467.260	20.00	0.00	0.00	Left
10	PI 9		27965.571	3349460.187	60.00	0.00	0.00	Left
11	PI 10		27914.956	3349414.747	150.00	0.00	0.00	Left
12	PI 11		27856.502	3349335.549	110.00	0.00	0.00	Right
13	PI 12		27786.924	3349281.055	300.00	0.00	0.00	Right
14	PI 13		27742.949	3349255.675	80.00	0.00	0.00	Right
15	END		27722.679	3349254.332	-	-	-	-

VERTICAL ALIGNMENT DATA

Peg dist.	Elev.	BVc	EVc	CL	Grade(%)
0.000	159.561	0.000	0.000	0.00	5.716
85.000	164.420	45.000	125.000	80.00	8.692
163.000	171.200	133.000	193.000	60.00	-0.526
220.000	170.900	195.000	245.000	50.00	0.758
270.000	171.279	245.000	295.000	50.00	4.995
325.000	174.026	295.000	355.000	60.00	-1.379
403.000	172.950	363.000	443.000	80.00	-0.524
508.000	172.400	478.000	538.000	60.00	-3.125
604.000	169.400	549.000	659.000	110.00	4.257
705.000	173.700	660.000	750.000	90.00	-3.294
841.000	169.220	811.000	871.000	60.00	1.187
905.000	169.980	875.000	935.000	60.00	-1.487
935.000	169.534	935.000	935.000	0.00	0.000



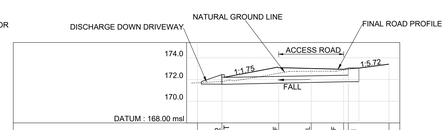
Reference	Start	HW 1.2 OUTLET	EDGE OF ROAD	ROAD CL	EDGE OF ROAD	CP 1.1	EX HW1.1 INTLET
Peg Distance (m)	0.00	4.16	7.33	10.33	13.33	14.32	18.50
Ground level (m)	169.35	170.59	171.07	171.00	171.00	171.11	171.00
Invert Level (m)		169.61	169.67	169.73	169.79	169.81 / 170.20	170.28
Depth (m)		0.99	1.40	1.27	1.21	0.91 / 1.30	0.72
COVER (m)		0.68	1.09	0.97	0.91	0.60 / 0.91	0.41
Grade (%)		2.00		2.00		2.00	
Capacity(80%D) (l/s)		879.21		879.21		879.21	
Pipe description		600mm dia./Class100D - EX CULVERT 1 CH200					

SW PIPE CULVERT No. 1 SECTION AT KM 0.200

SCALE : Vert 1 :200
Hor 1 :200

PIPE DESIGN DATA

Reference	Y	X	IL in	IL out	Depth in	Depth in	Inlet/Outlet Structure
HW 1.2	28052.427	3349110.517	169.606	169.606	0.987	0.987	HEADWALL
CP 1.1	28042.882	3349107.023	170.200	169.809	0.909	1.300	CATCHPIT MANHOLE
EX HW1.1	28038.877	3349105.645	170.285	170.285	0.715	0.715	HEADWALL



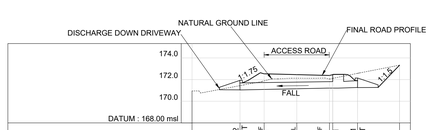
Reference		HW 2.2 OUTLET	EDGE OF ROAD	ROAD CL	EDGE OF ROAD	CP 2.1	
Peg Distance (m)	0.00	2.25	7.49	10.49	13.50	13.91	17.67
Ground level (m)	171.71	171.57	173.10	173.02	172.95	173.04	173.42
Invert Level (m)		171.57	171.67	171.73	171.79	171.80	
Depth (m)		0.00	1.42	1.29	1.15	1.24	
Cover (m)		0.00	1.12	0.98	0.85	0.94	
Grade (%)			2.00				
Capacity(80%D) (l/s)			879.21				
Pipe description		600mm DIA. RC CLASS 100D SW PIPE ON CLASS C BEDDING					

SW PIPE CULVERT No. 2 SECTION AT KM 0.405

SCALE : Vert 1 :200
Hor 1 :200

PIPE DESIGN DATA

Reference	Y	X	IL in/out	Depth in/out	Inlet/Outlet Structure
HW 2.2	28009.949	3349305.811	171.567	-0.026	HEADWALL
CP 2.1	28021.518	3349304.362	171.800	1.245	CATCHPIT MANHOLE



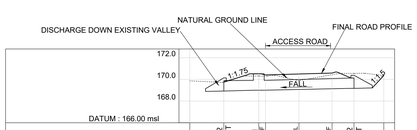
Reference		HW 3.2 OUTLET	EDGE OF ROAD	ROAD CL	EDGE OF ROAD	HW 3.1 INTLET	
Peg Distance (m)	0.00	4.42	6.68	9.67	12.68	14.15	19.15
Ground level (m)	170.95	171.50	172.53	172.46	172.38	172.46	173.33
Invert Level (m)		171.05	171.09	171.15	171.21	171.26	
Depth (m)		0.45	1.44	1.31	1.17	1.20	
Cover (m)		0.15	1.14	1.00	0.86	0.90	
Grade (%)			1.93		2.00		
Capacity(80%D) (l/s)			862.63		879.23		
Pipe description		600mm DIA. RC CLASS 100D SW PIPE ON CLASS C BEDDING					

SW PIPE CULVERT No. 3 SECTION AT KM 0.490

SCALE : Vert 1 :200
Hor 1 :200

PIPE DESIGN DATA

Reference	Y	X	IL in/out	Depth in/out	Inlet/Outlet Structure
HW 3.2	28018.083	3349388.159	171.048	0.452	HEADWALL
CP 3.1	28026.626	3349388.663	171.213	1.240	CATCHPIT MANHOLE
HW 3.1	28028.906	3349388.813	171.259	1.201	HEADWALL



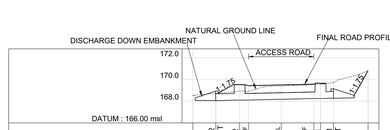
Reference		HW 4.2 OUTLET	CP 4.1 EDGE OF ROAD	ROAD CL	EDGE OF ROAD	HW 4.1 INTLET	
Peg Distance (m)	0.00	3.14	6.37	10.07	13.13	15.15	17.90
Ground level (m)	169.87	169.75	170.52 / 170.42	170.50	170.58	170.56	170.36
Invert Level (m)		168.94	169.00 / 169.01	169.07	169.14	169.18	
Depth (m)		0.82	1.52 / 1.40	1.43	1.45	1.38	
COVER (m)		0.30	1.00 / 0.89	0.91	0.93	0.87	
Grade (%)		2.00		2.00			
Capacity(80%D) (l/s)		2357.07		2357.07			
Pipe description		900mm DIA. RC CLASS 100D SW PIPE ON CLASS C BEDDING					

SW PIPE CULVERT No. 4 SECTION AT KM 0.580

SCALE : Vert 1 :200
Hor 1 :200

PIPE DESIGN DATA

Reference	Y	X	IL in/out	Depth in/out	Inlet/Outlet Structure
HW 4.2	27996.940	3349457.924	168.935	0.818	HEADWALL
CP 4.1	27997.762	3349461.045	169.000	1.516	CATCHPIT MANHOLE
HW 4.1	27999.353	3349469.680	169.176	1.384	HEADWALL



Reference		HW 5.2 OUTLET	CP 5.2 EDGE OF ROAD	ROAD CL	EDGE OF ROAD	CP 5.1	HW 5.1 INTLET	END
Peg Distance (m)	0.00	2.12	4.32	8.18	11.17	12.98	16.17	
Ground level (m)	168.53	168.61	169.53 / 169.43	169.50	169.58 / 169.05	169.73	170.83	
Invert Level (m)		168.06	168.10 / 168.12	168.18	168.24 / 168.25	168.29		
Depth (m)		0.55	1.43 / 1.31	1.32	1.34 / 1.40	1.45		
Bedding Class		0.25	1.13 / 1.00	1.02	1.03 / 1.09	1.15		
Grade (%)		2.00		2.00		2.00		
Capacity(80%D) (l/s)		879.21		879.21		879.21		
Pipe description		600mm DIA. RC CLASS 100D SW PIPE ON CLASS C BEDDING						

SW PIPE CULVERT No. 5 SECTION AT KM 0.860

SCALE : Vert 1 :200
Hor 1 :200

PIPE DESIGN DATA

Reference	Y	X	IL in/out	Depth in/out	Inlet/Outlet Structure
HW 5.2	27791.266	3349277.629	168.058	0.553	HEADWALL
CP 5.2	27790.200	3349279.561	168.102	1.430	CATCHPIT MANHOLE
CP 5.1	27786.428	3349285.998	168.251	1.397	CATCHPIT MANHOLE
HW 5.1	27785.826	3349287.032	168.275	1.455	HEADWALL

ISSUED FOR TENDER

DRAWING REFERENCE

TITLE

NORTH POINT

NOTES

NOTES

1. ALL LEVELS, DIMENSIONS AND SETTING OUT DETAILS ARE TO BE VERIFIED BY CONSULTANT AND CONTRACTOR ON SITE PRIOR TO CONSTRUCTION.
2. ALL EXISTING DRAINAGE CULVERTS ARE TO BE INSPECTED, AND ANY FOUND IN UNSERVICEABLE CONDITION ARE TO BE REPLACED UNLESS SHOWN OTHERWISE.
3. CULVERT INVERTS ARE TO BE DECIDED BY THE ENGINEER ON SITE UNLESS SHOWN OTHERWISE. MIN COVER = 600mm, MIN. SLOPE = 2%.
4. PIPE CULVERTS ARE TO BE LAID IN ACCORDANCE WITH SD 0401 WITH HEADWALLS AS PER SD 0406. MIN DIA. = 450mm FOR MINOR ACCESS ROADS AND ACCESS BELLMOUTHS, AND MIN. DIA. = 600mm FOR MAJOR ROAD CROSS DRAINAGE.
5. BOX CULVERTS < 1.8m HIGH ARE TO BE CONSTRUCTED IN ACCORDANCE WITH SD 0407.
6. FOR EROSION CONTROL CEMENT GROUTED STONE PITCHING OR GABION MATTRESSES ARE RECOMMENDED AT CULVERT INLETS AND OUTLETS.
7. EARTH BERMS ARE TO BE CONSTRUCTED AT CULVERT INLETS TO DIRECT STORMWATER INTO CULVERTS WHERE NECESSARY.
8. ROCK BOLSTERS ARE TO BE PLACED ACROSS THE INVERT OF DRAINS SUSCEPTIBLE TO EROSION FOR EVERY 2m VERTICAL DROP.
9. GRASSED / CONCRETE LINED V-DRAINS AS PER SD 0601/3 & 4 ARE RECOMMENDED FOR SHALLOW CUTTINGS < 5m MEASURED AT A POINT 6m FROM EDGE OF CARRIAGEWAY.
10.SUBSOIL DRAINS AS PER SD 0501 ARE TO BE INSTALLED WHERE HIGH WATER TABLES ARE ENCOUNTERED.
11.KERB AND CHANNEL DRAINS AS PER SD 0701 ARE TO BE PROVIDED WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT.
12.WHERE SURFACE RUNOFF IS TOWARDS THE ROAD, CATCHWATER BANKS ARE TO BE PROVIDED TO DIVERT STORMWATER TO MAJOR CROSS DRAINAGE STRUCTURES.
13.THE POSITIONS OF ACCESSES ARE TO BE DETERMINED IN CONSULTATION WITH THE LOCAL COMMUNITY. DAYLIGHTING REQUIREMENTS ARE TO BE DECIDED BY THE ENGINEER ON SITE.
14.EXISTING ROAD SIGNS, SERVICES AND FENCING AFFECTED BY CONSTRUCTION ARE TO BE REMOVED / RELOCATED WHERE NECESSARY.
15.UNDERGROUND SERVICE CROSSINGS AND MARKERS ARE TO BE IN ACCORDANCE WITH SD 1001-3.
16.ALL NEW ROAD SIGNS AND ROADMARKING REQUIREMENTS ARE TO CONFORM TO THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL (SARTSM)
17.ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE "COLTO SPECIFICATIONS FOR ROAD AND BRIDGE WORKS FOR STATE ROAD AUTHORITIES".
18.EXISTING AFFECTED KM MARKER POSTS ARE TO BE RELOCATED TO THEIR NEW POSITION IN RELATION TO THE PROPOSED ROAD CENTRE LINE.
19.GUARDRAILS ARE TO BE INSTALLED IN ACCORDANCE WITH SD 1101 AND SD 1102 WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT OR WHERE HAZARDOUS OBSTRUCTIONS CANNOT BE REMOVED.
20.NEW FILLS AND EXPOSED CUTTINGS ARE TO BE TOP-SOILED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

NO.	AMENDMENT	APPROVED	DATE
A	SECTIONS REVISED	G.L	JULY 2026

REVISIONS

CLIENT

UMDONI LOCAL MUNICIPALITY

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PROJECT

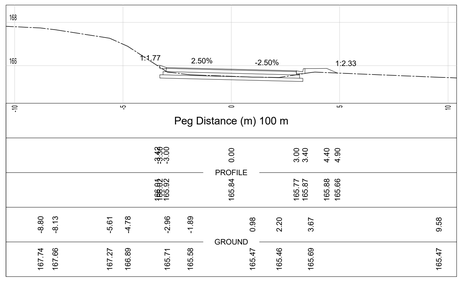
UPGRADE OF EMAROMENI ACCESS ROAD (WARD14)

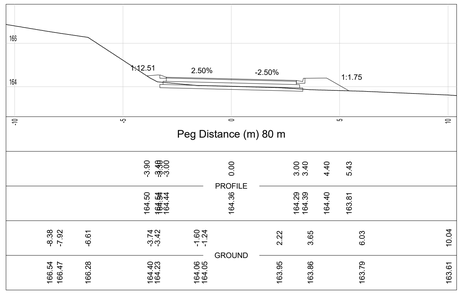
TITLE

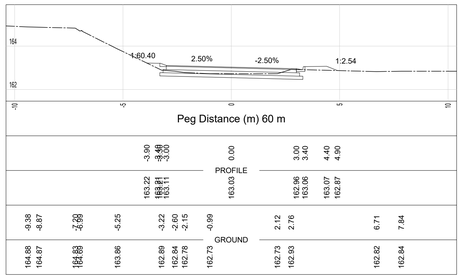
LONGITUDINAL SECTIONS

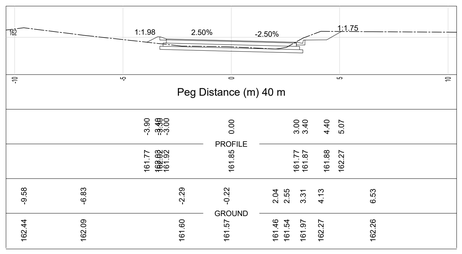
CONSULTING ENGINEER	DESIGNED : C.R
SIGNATURE:.....	DRAWN : C.R
PR. NO.....20180418.....	CHECKED : G.L
	SCALE : AS SHOWN
DATE:.....APRIL 2026.....	DATE : APRIL 2026
	ORIGINAL SIZE: A0
REFERENCE NO. 51737-01	FIGURE NO. 03 / REVISION A

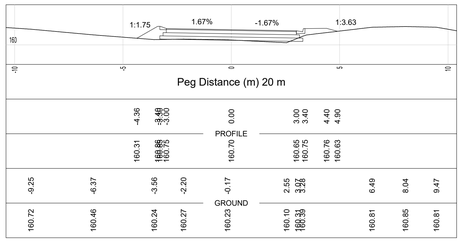
CAD FILE: S/.....

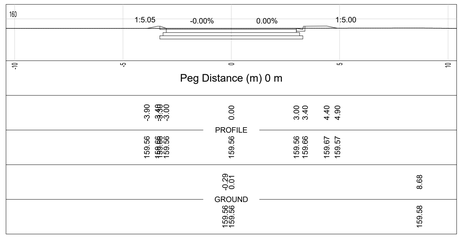


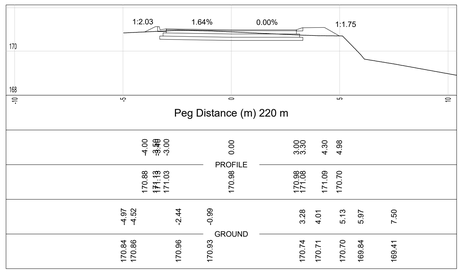


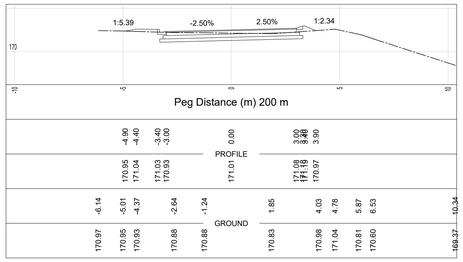


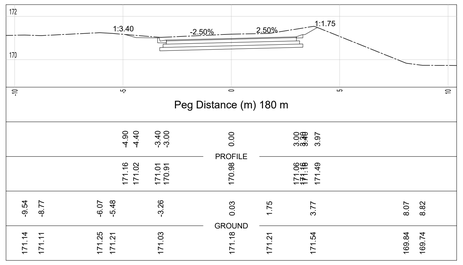


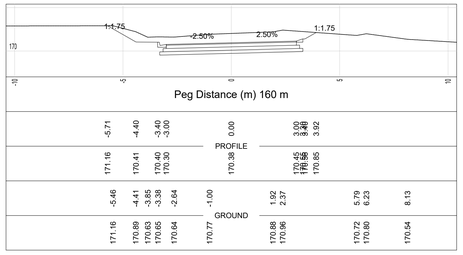


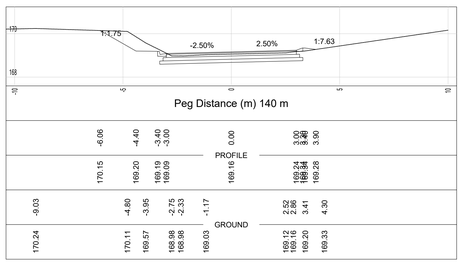


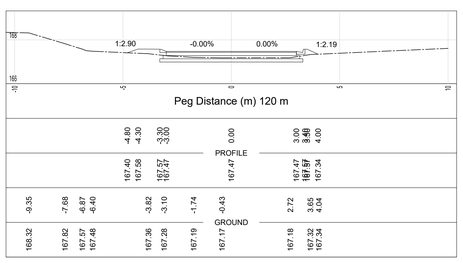


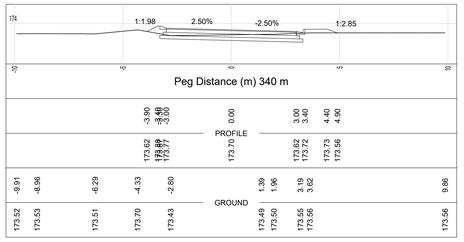


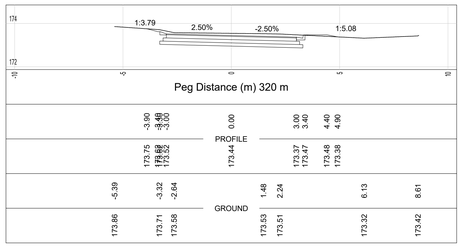


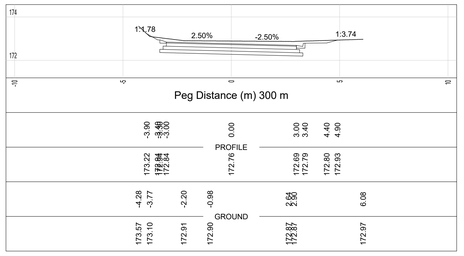


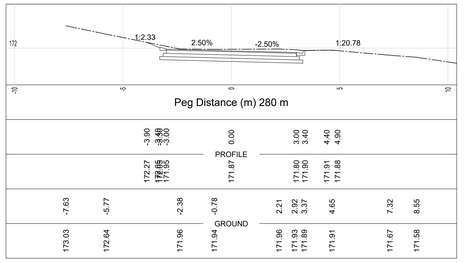


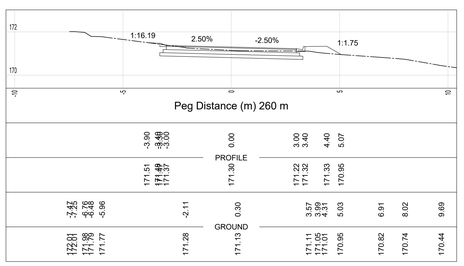


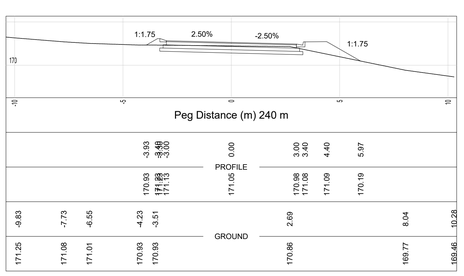


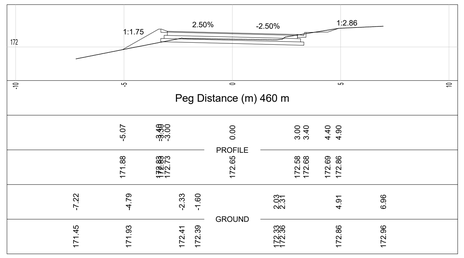


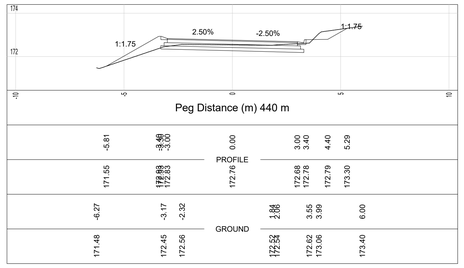


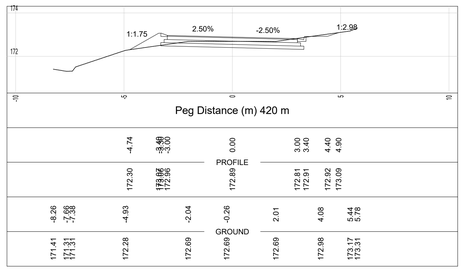


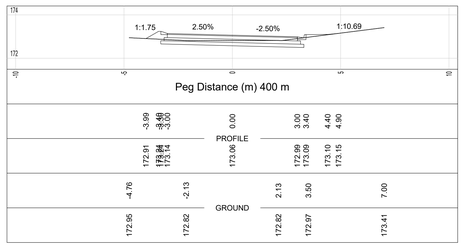


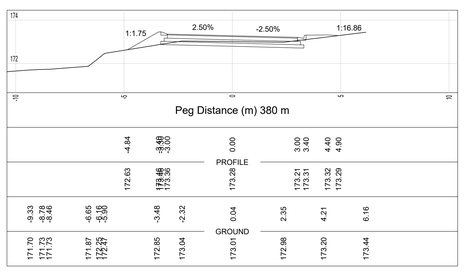


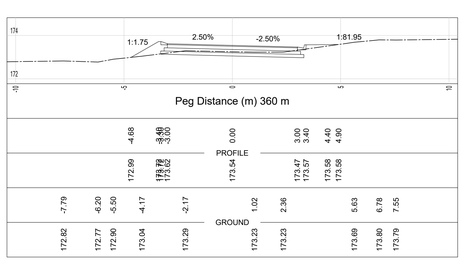












CROSS SECTIONS (CH0-CH460m)

SCALE VERT 1:100
HOR 1:100

ISSUED FOR TENDER

DRAWING REFERENCE

TITLE

NORTH POINT

NOTES

1. ALL LEVELS, DIMENSIONS AND SETTING OUT DETAILS ARE TO BE VERIFIED BY CONSULTANT AND CONTRACTOR ON SITE PRIOR TO CONSTRUCTION.
2. ALL EXISTING DRAINAGE CULVERTS ARE TO BE INSPECTED, AND ANY FOUND IN UNSERVICEABLE CONDITION ARE TO BE REPLACED UNLESS SHOWN OTHERWISE.
3. CULVERT INVERTS ARE TO BE DECIDED BY THE ENGINEER ON SITE UNLESS SHOWN OTHERWISE. MIN COVER = 600mm, MIN. SLOPE = 2%.
4. PIPE CULVERTS ARE TO BE LAID IN ACCORDANCE WITH SD 0401 WITH HEADWALLS AS PER SD 0406. MIN DIA. = 450mm FOR MINOR ACCESS ROADS AND ACCESS BELLMOUTHS, AND MIN. DIA. = 600mm FOR MAJOR ROAD CROSS DRAINAGE.
5. BOX CULVERTS < 1.8m HIGH ARE TO BE CONSTRUCTED IN ACCORDANCE WITH SD 0407.
6. FOR EROSION CONTROL CEMENT GROUTED STONE PITCHING OR GABION MATTRESSES ARE RECOMMENDED AT CULVERT INLETS AND OUTLETS.
7. EARTH BERMS ARE TO BE CONSTRUCTED AT CULVERT INLETS TO DIRECT STORMWATER INTO CULVERTS WHERE NECESSARY.
8. ROCK BOLSTERS ARE TO BE PLACED ACROSS THE INVERT OF DRAINS SUSCEPTIBLE TO EROSION FOR EVERY 2m VERTICAL DROP.
9. GRASSED / CONCRETE LINED V-DRAINS AS PER SD 0601/3 & 4 ARE RECOMMENDED FOR SHALLOW CUTTINGS < 5m MEASURED AT A POINT 5m FROM EDGE OF CARRIAGEWAY.
10.SUBSOIL DRAINS AS PER SD 0501 ARE TO BE INSTALLED WHERE HIGH WATER TABLES ARE ENCOUNTERED.
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19.GUARDRAILS ARE TO BE INSTALLED IN ACCORDANCE WITH SD 1101 AND SD 1102 WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT OR WHERE HAZARDOUS OBSTRUCTIONS CANNOT BE REMOVED.
20.NEW FILLS AND EXPOSED CUTTINGS ARE TO BE TOP-SOILED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

NO.	AMENDMENT	APPROVED	DATE
A	CROSS SECTIONS REVISED	G.L	JUL 2026

REVISIONS

CLIENT

UMDONI LOCAL MUNICIPALITY

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Geotechnical & Civil Engineers
Waste Disposal Consultants ●Project Managers

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PROJECT

UPGRADE OF EMAROMENI ACCESS ROAD (WARD14)

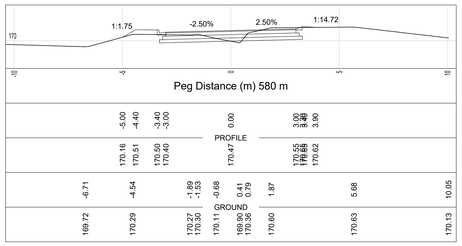
TITLE

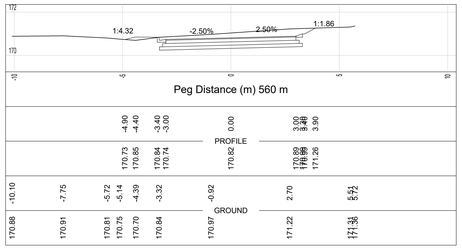
CROSS SECTIONS CH0 TO CH460

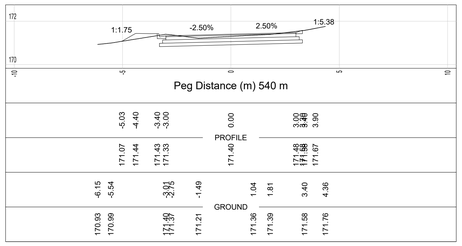
CONSULTING ENGINEER	DESIGNED : C.R
SIGNATURE:.....	DRAWN : C.R
PR. NO.....20180418	CHECKED : G.L
DATE:.....APRIL 2026	SCALE : AS SHOWN
	DATE : APRIL 2026
	ORIGINAL SIZE: A0

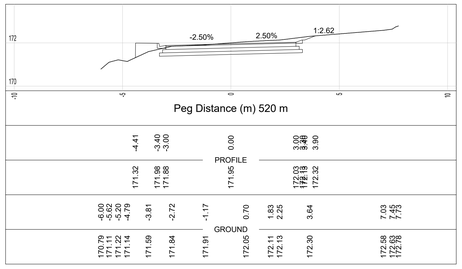
REFERENCE NO.	FIGURE NO.	REVISION
51737-01	04	A

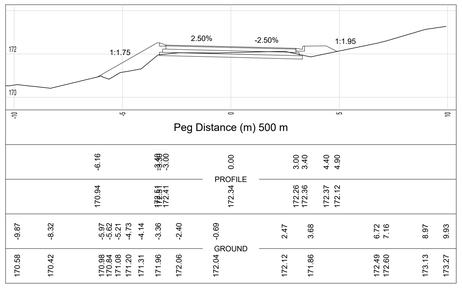
CAD FILE: S:/.....

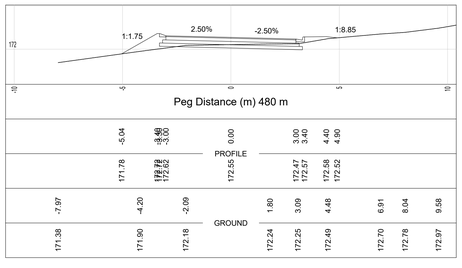


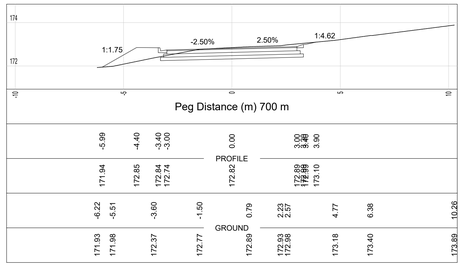


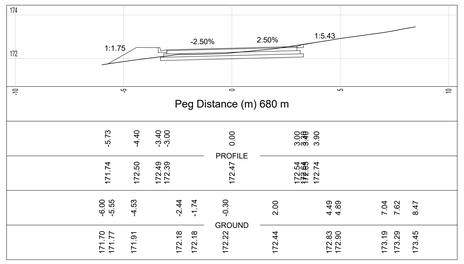


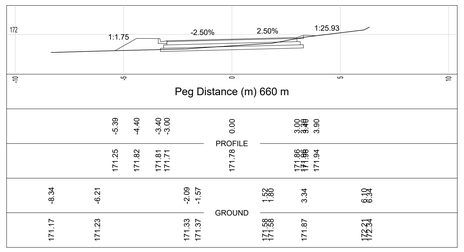


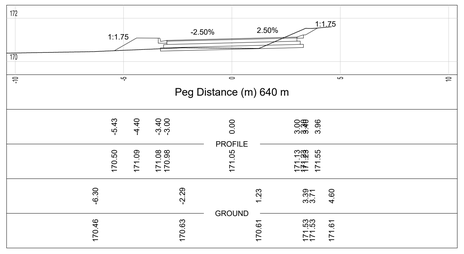


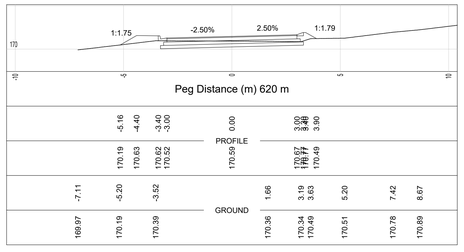


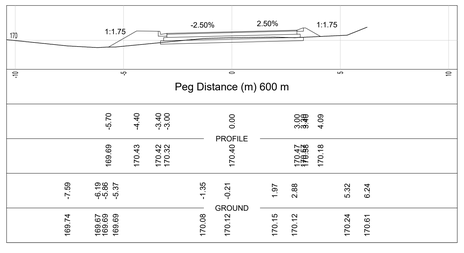


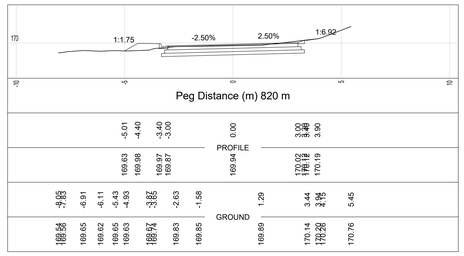


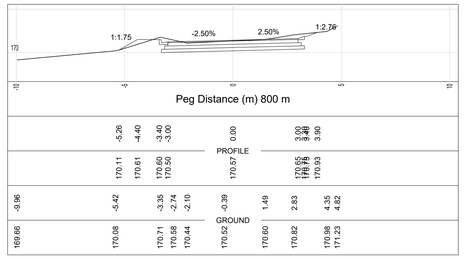


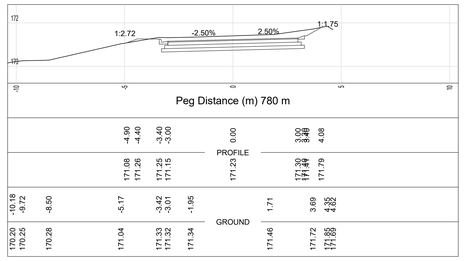


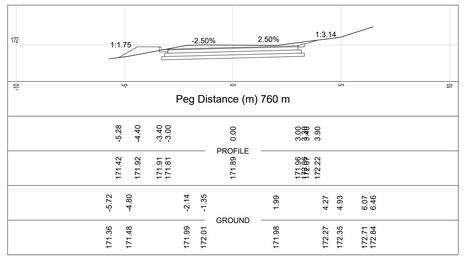


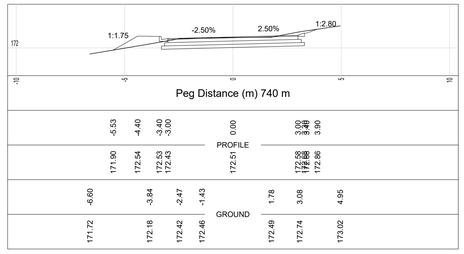


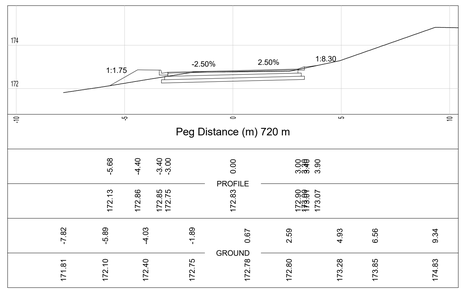


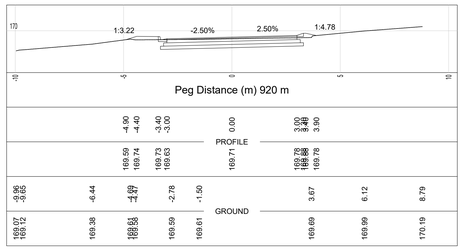


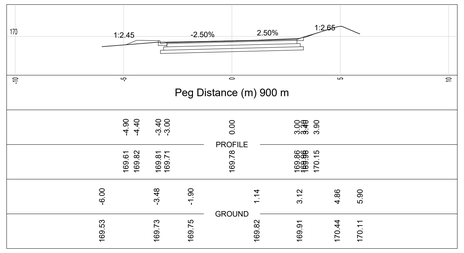


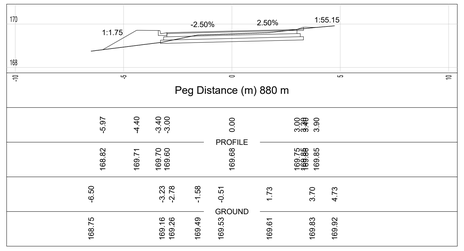


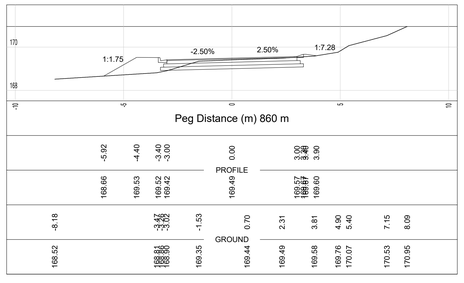


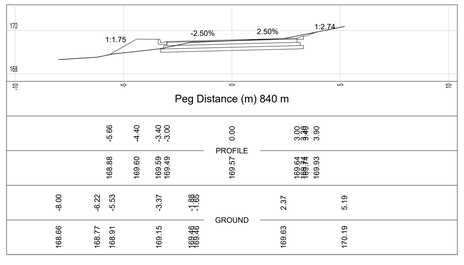












CROSS SECTIONS (CH480-CH920m)

SCALE VERT 1:100
HOR 1:100

ISSUED FOR TENDER

DRAWING REFERENCE

TITLE

NORTH POINT

NOTES

1. ALL LEVELS, DIMENSIONS AND SETTING OUT DETAILS ARE TO BE VERIFIED BY CONSULTANT AND CONTRACTOR ON SITE PRIOR TO CONSTRUCTION.
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3. CULVERT INVERTS ARE TO BE DECIDED BY THE ENGINEER ON SITE UNLESS SHOWN OTHERWISE. MIN COVER = 600mm, MIN. SLOPE = 2%.
4. PIPE CULVERTS ARE TO BE LAID IN ACCORDANCE WITH SD 0401 WITH HEADWALLS AS PER SD 0406. MIN DIA. = 450mm FOR MINOR ACCESS ROADS AND ACCESS BELLMOUTHS, AND MIN. DIA. = 600mm FOR MAJOR ROAD CROSS DRAINAGE.
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NO.	AMENDMENT	APPROVED	DATE
A	CROSS SECTIONS REVISED	G.L	JUL 2026

REVISIONS

CLIENT

UMDONI LOCAL MUNICIPALITY

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Geotechnical & Civil Engineers
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E-mail: tgc@tgcengineers.co.za

PROJECT

UPGRADE OF EMAROMENI ACCESS ROAD (WARD14)

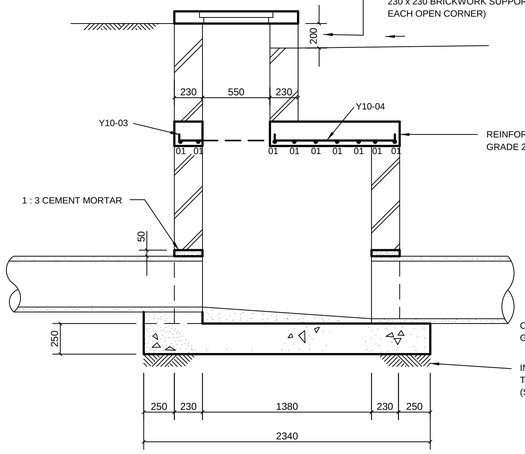
TITLE

CROSS SECTIONS CH460 TO CH920

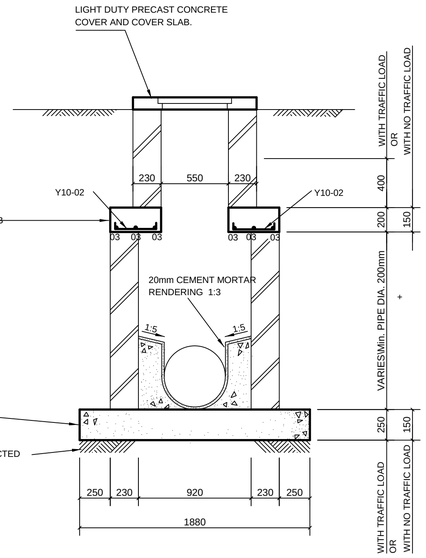
CONSULTING ENGINEER	DESIGNED : C.R
SIGNATURE:.....	DRAWN : C.R
PR. NO.....20180418.....	CHECKED : G.L
	SCALE : AS SHOWN
DATE:.....APRIL 2026.....	DATE : APRIL 2026
	ORIGINAL SIZE: A0

REFERENCE NO.	FIGURE NO.	REVISION
51737-01	05	A

CAD FILE: S/.....

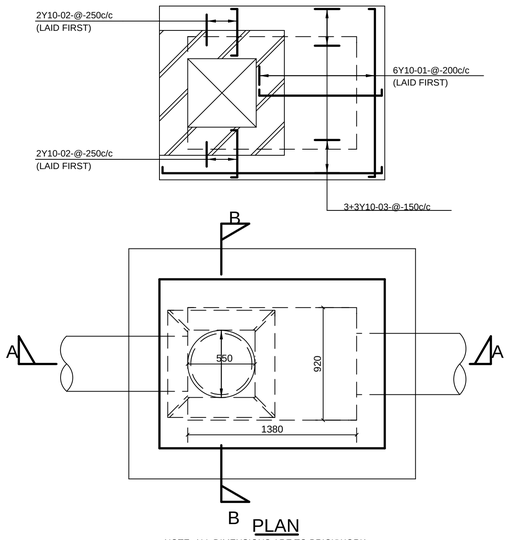


SECTION A - A



SECTION B - B

NOTE WHERE MANHOLE DEPTH IS LESS THAN 2.50m THE MANHOLE SHAFT IS TO BE 150mm AND THE HEIGHT OF CHAMBER IS TO VARY



PLAN

NOTE ALL DIMENSIONS ARE TO BRICKWORK
i.e. PLASTERING IS EXCLUDED.

MANHOLE TYPE A (TOTAL MASS = 16.81 KG)

BARS	MARK	No.	LENGTH		TOTAL LENGTH
					11.60
Y10	01	8	1450	75 1300 01	2.00
Y10	02	4	500	89 330 03	2.00
Y10	03	6	500	75 1750 01	11.40
Y10	04	2	1150	89 980 01	2.30

MANHOLE TYPE B (TOTAL MASS = 36.36)

Y12	01	8	2250	75 2100 03	2.30
Y12	02	3	1000	80 840 01	3.00
Y12	03	7	2250	75 2100 01	15.75
Y12	04	6	700	75 550 01	4.20

NOTES :

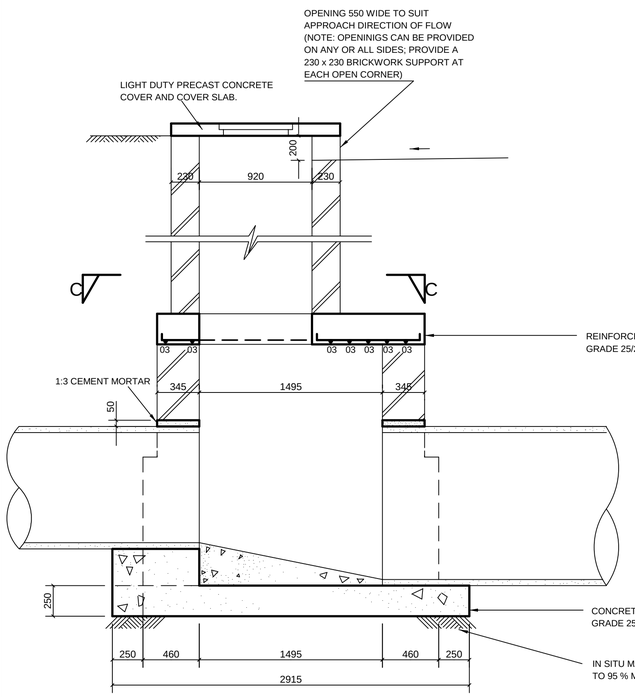
1. STRUCTURAL CONC. TO CONSIST OF GRADE 25/26 WITH CUBE CRUSHING STRENGTH OF 25MPa AT 28 DAYS.
2. BLINDING TO CONSIST OF GRADE 15/26 WITH CUBE CRUSHING STRENGTH OF 15MPa AT 28 DAYS.
3. CLEAR COVER TO MAIN STEEL 40mm.
4. MORTAR TO CONSIST OF 1 CEMENT TO 3 SAND.

TYPE A (< 3m DEEP , PIPES < 900mm Ø)

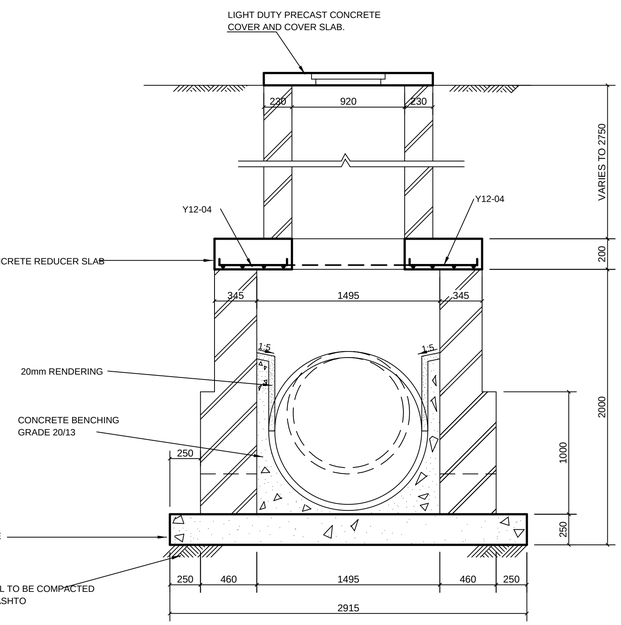
SCALE 1:25

NOTES

IN SITU GROUND MUST BE COMPACTED TO 95 % MOD.AASHTO PRIOR TO MANHOLE BASE SLAB BEING CAST IF THE DENSITY CANNOT BE ATTAINED THE IN SITU MATERIAL MUST BE REMOVED TO A DEPTH OF 300mm AND REPLACED WITH A SELECTED BACKFILL.



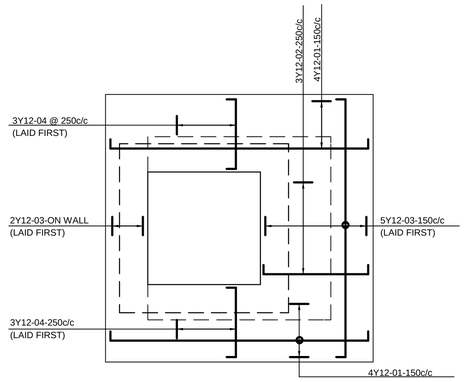
SECTION A - A



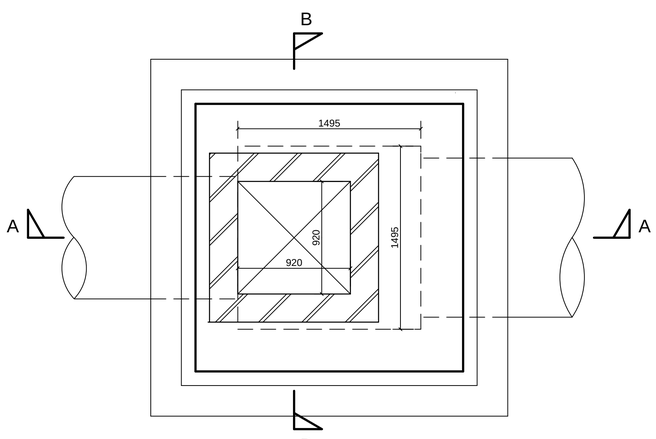
SECTION B - B

TYPE B (3 - 5m DEEP, PIPE < 900mm Ø & 0 - 5m DEEP & PIPE 900 - 1200mmØ)

SCALE 1:25



PLAN SHOWING REINFORCEMENT DETAILS



PLAN SECTION C - C

DRAWING REFERENCE

DRAWING NO.	TITLE

NOTES

NO.	AMENDMENT	APPROVED	DATE

REVISIONS

CLIENT

THEKWINI GEOCIVILS cc
Geotechnical & Civil Engineers
Waste Disposal Consultants Project Managers

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MAYVILLE
4058
Telefax 201-8819

PROJECT

STANDARD DETAILS

TITLE

STORMWATER
BRICK MANHOLES

CONSULTING ENGINEER

SIGNATURE:.....

PR. NO.:.....

DATE:.....

DESIGNED :	G.P.
DRAWN :	K.M.
CHECKED :	G.P.
SCALE :	AS SHOWN
DATE :	06/11/2000

REFERENCE NO. TGC/03

SHEET 1 OF 1

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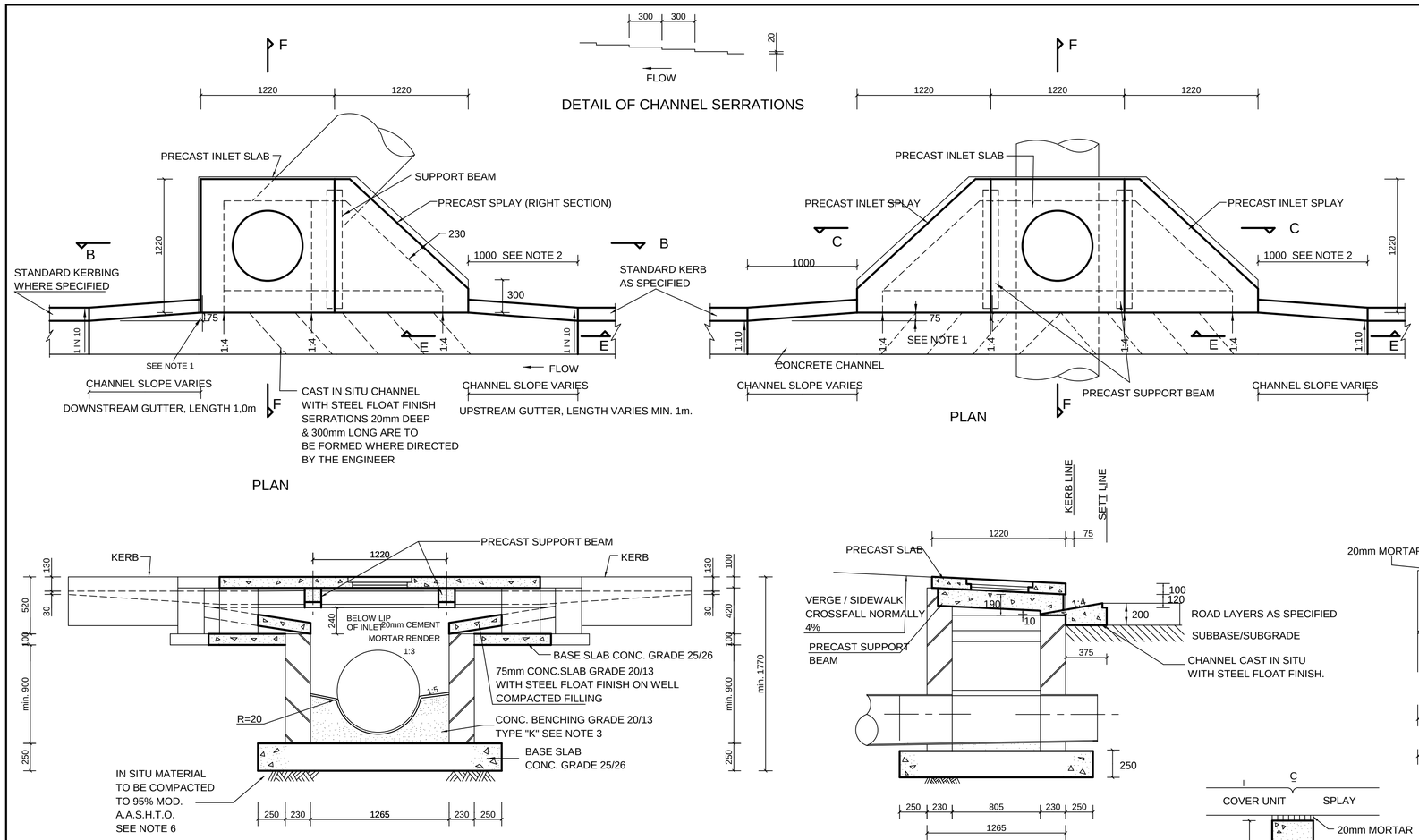
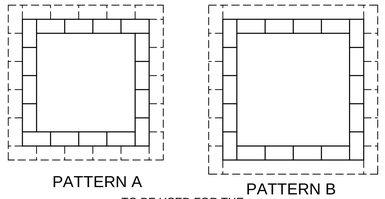


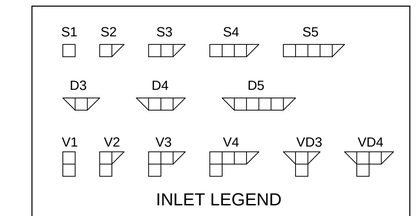


TO BE USED FOR THE FOLLOWING INTERNAL DIMENSIONS

805mm	920mm
1035mm	1150mm
1265mm	1380mm
1495mm	1610mm

BRICK LAYING PATTERNS

SCALE 1:25



INLET LEGEND

Letter indicates type of inlet
Number indicates number of openings

DRAWING REFERENCE

DRAWING NO.	TITLE

NOTES

1. CATCHPIT FACE TO BE SET BACK 75mm FROM KERB LINE.
2. 1,0m TRANSITION FROM KERB LINE TO CATCHPIT LINE.
3. TYPE A BENCHING TO BE USED FOR STORMWATER INLETS ON CONTINUOUS PIPELINES. FOR S.W. INLETS LOCATED AT THE HEAD OF THE PIPELINE, THE BENCHING NEED ONLY BE DISHED AT A GRADE OF 1:10 TO THE OUTLET.
4. MAXIMUM DEPTH OF INLET=2.0m AFTER WHICH A MANHOLE TYPE STRUCTURE IS TO BE DETAILED:
5. DIMENSION D VARIES WITH THE DIAMETER OF THE PIPES. DIMENSION D SHALL BE TO A POINT 50mm ABOVE THE HIGHEST CROWN OF THE PIPES
6. THE INSITU GROUND MUST BE COMPACTED TO 95% MOD. A.A.S.H.T.O. PRIOR TO THE INLET BASE SLAB BEING CAST. IF THIS DENISTY CANNOT BE ATTAINED THE INSITU MATERIAL MUST BE MOVED TO A DEPTH PF 300mm AND REPLACED WITH A SELECTED BACKFILL
7. PRECAST SLABS, SPLAYS AND LIDS TO BE HEAVY DUTY.
8. IN LOCATIONS DEFINED BY THE ENGINEER AS SUBJECT TO FLOODING, C.I. MANHOLE COVERS AND JOINTS SEALED WITH BOSTIC BUTYL TALE OR SIMILAR, SHALL BE USED.

NO.	AMENDMENT	APPROVED	DATE

REVISIONS

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MAYVILLE
4058
Telefax 201-8819

PROJECT

STANDARD DETAILS

TITLE

STORMWATER INLETS

CONSULTING ENGINEER

SIGNATURE:.....

PR. NO.:.....

DATE:.....

DESIGNED :	G.P.
DRAWN :	K.M.
CHECKED :	G.P.
SCALE :	AS SHOWN
DATE :	06/11/2000

REFERENCE NO. TGC/04

SHEET 1 OF 1

REVISION

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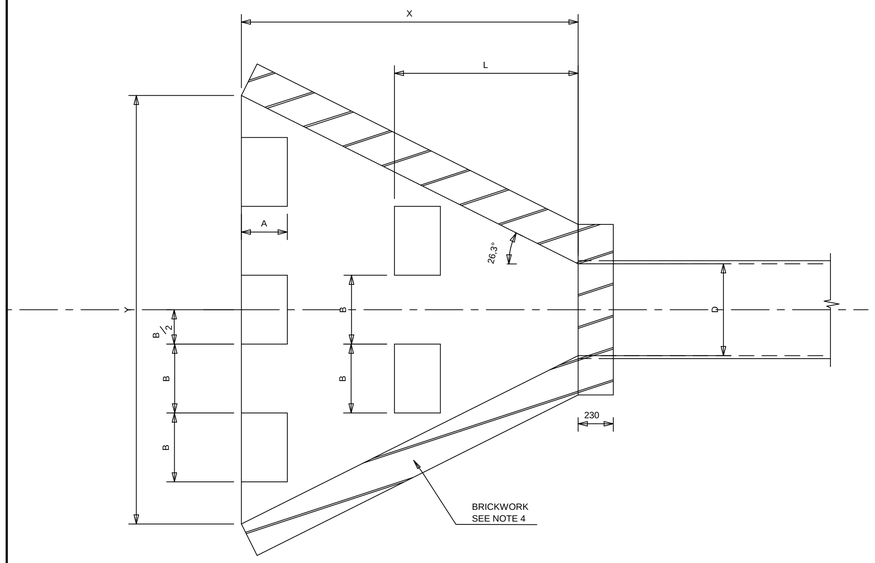
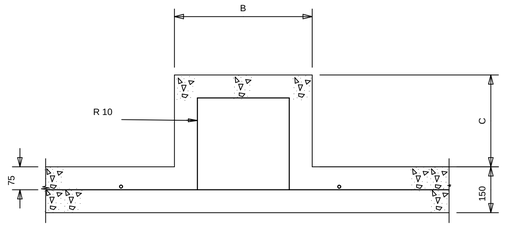
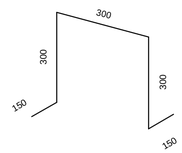


PLAN OF TYPES `A' AND `B' HEADWALLS

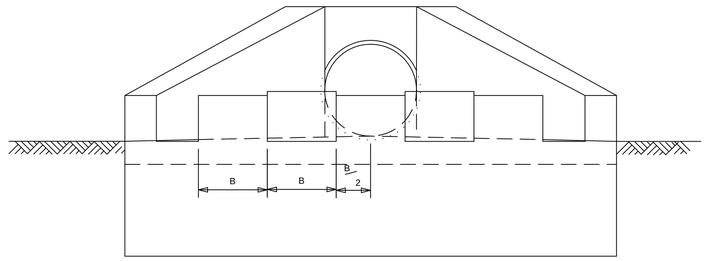


SECTION THROUGH BLOCK

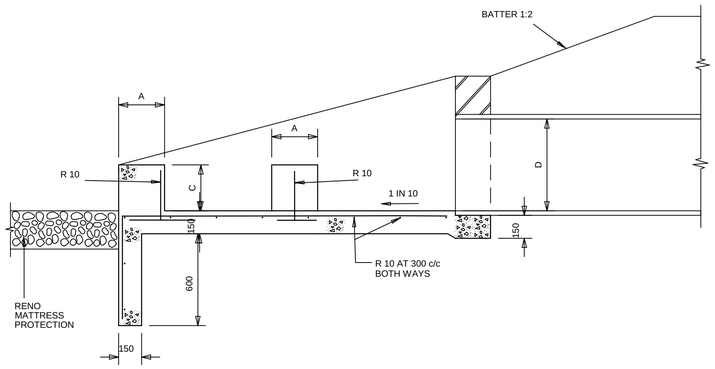


BLOCK REINFORCING (R 10)

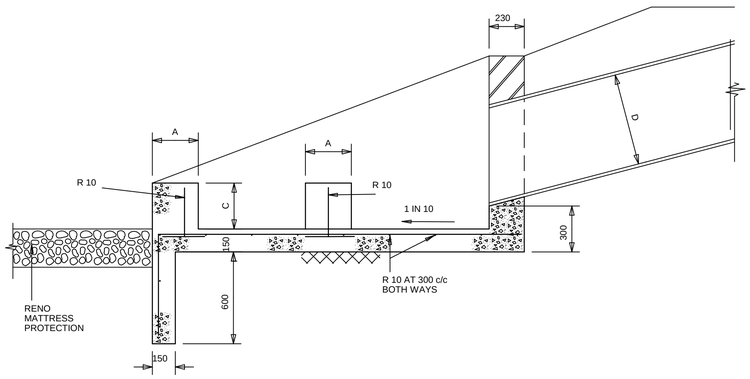
SPLITTER BLOCK DETAILS
SCALE 1:10



TYPE `A' HEADWALL - ELEVATION



TYPE `A' HEADWALL WHERE PIPE GRADE IS LESS THAN 20% (1:5)



TYPE `B' HEADWALL WHERE PIPE GRADE IS GREATER THAN 20% (1:5)

NOM. PIPE DIA.	DIMENSIONS (mm)					
D	A	B	C	L	X	Y
375	250	375	250	750	1800	2175
450	250	375	250	900	1800	2250
525	250	375	250	1050	2000	2525
600	300	450	300	1200	2200	2800
750	300	450	300	1500	2400	3150
825	300	450	300	1650	2600	3425
900	300	450	300	1800	2800	3700
1050	300	450	300	2100	3000	4050
1200	300	450	300	2400	3200	4400

NOTES :

1) CONCRETE GRADE 20/26 MPa
2) COVER TO STEEL 40mm MIN.
3) REINFORCING TO BE CUT AND BENT ON SITE. MIN. LAPS 500mm
4) HEADWALL BRICKWORK SIZES (IN mm):

WALL HEIGHT	BRICKWORK
0-1100	230
1100-1400	345
1400-1800	460

5) ALL EXPOSED BRICKWORK TO BE FACEBRICK.

DRAWING REFERENCE

DRAWING NO.	TITLE

NOTES

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REVISIONS

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PROJECT

STANDARD DETAILS

TITLE

STORMWATER PIPE HEADWALLS

CONSULTING ENGINEER

SIGNATURE:.....

PR. NO.:.....

DATE:.....

DESIGNED :	G.P.
DRAWN :	K.M.
CHECKED :	G.P.
SCALE :	AS SHOWN
DATE :	06/11/2000

REFERENCE NO. TGC/05

SHEET 1 OF 1

REVISION

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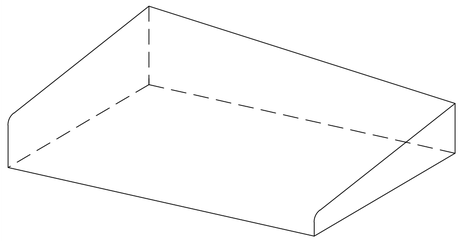
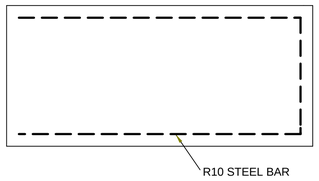
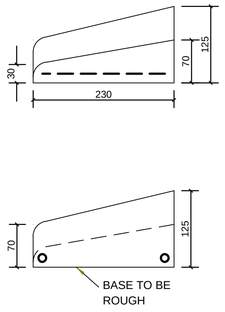


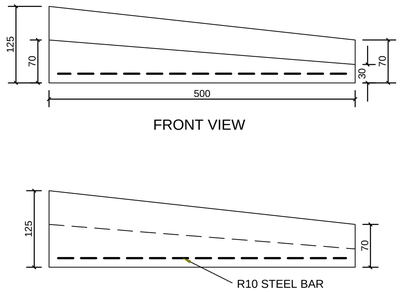
ISOMETRIC VIEW



PLAN



SIDE VIEWS

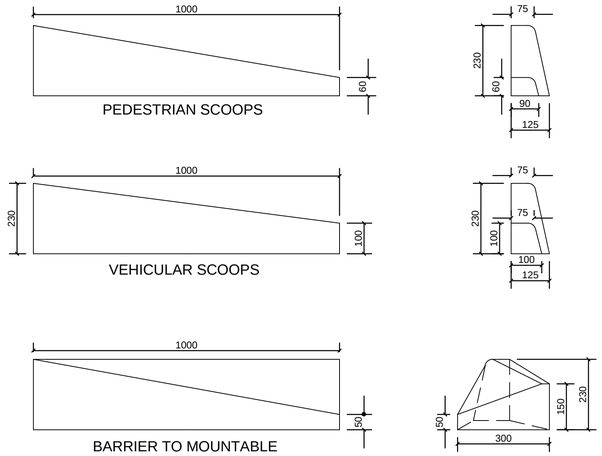


FRONT VIEW

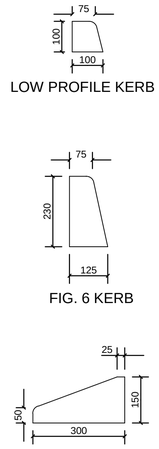
BACK VIEW

REINFORCED PRECAST CONCRETE TRANSITION KERB
USED WITH TYPE "E" KERBING
SCALE:- 1 : 5

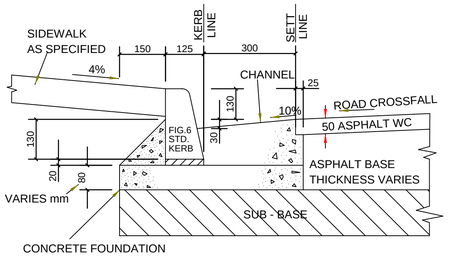
TRANSITION KERBS



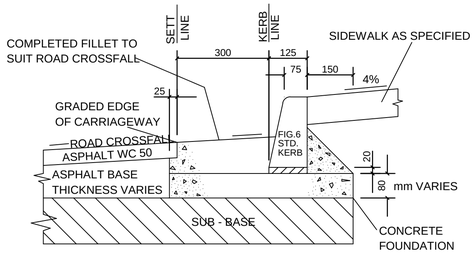
PRECAST CONCRETE STD TRANSITION KERBS USED WITH TYPES A,B,C & D KERBING.
SCALE:- 1 : 10

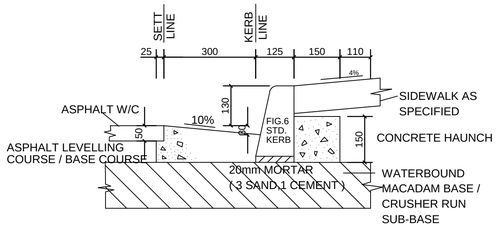


KERB DETAILS



TYPE A : BARRIER KERB AND
CAST IN SITU CHANNEL / FILLET (ARTERIAL ROADS)
SCALE:- 1 : 10

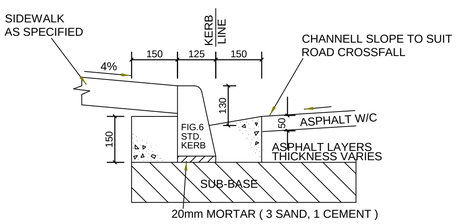


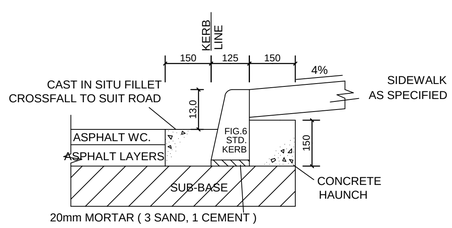


TYPE B : BARRIER KERB AND
CAST IN SITU CHANNEL / FILLET
(Channel section shown)
SCALE:- 1 : 10

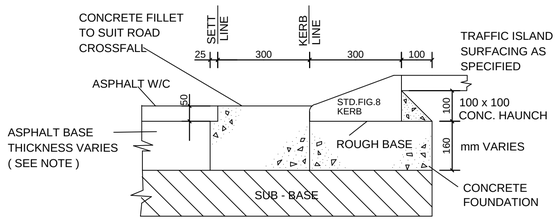
GENERAL NOTES:-

1. ALL CAST IN SITU CONCRETE IS TO BE GRADE 20 / 13.
2. THE SURFACES OF THE CAST IN SITU CHANNEL / FILLET ARE TO HAVE A STEEL FLOAT FINISH.
3. EXPANSION JOINTS TO BE FORMED THROUGH THE KERBING,CHANNEL / FILLET AND FOUNDATION AT INTERVALS NOT EXCEEDING 18.0m.
4. CONTRACTION JOINTS TO BE FORMED THROUGH THE CHANNEL / FILLET AT 20m INTERVALS.
5. WHERE KERB RADIUS IS LESS THAN 25m THE KERB LENGTH SHALL BE 300mm. WHERE THE KERB RADIUS IS LESS THAN 2m THE KERBING SHALL BE CAST IN SITU.
6. PRECAST KERBS ARE TO BE LAID WITH A 13mm GAP BETWEEN KERBS,WHICH SHALL THEN BE FILLED WITH A CEMENT MORTAR.
7. EXTRUDED KERBS.
   a)ASPHALT KERB:
   ASPHALT TO COMPLY WITH THE REQUIREMENTS OF CLUASE EG.3.1
   b)CONCRETE KERB:
   1.THE CONCRETE IS TO HAVE A CUBE STRENGTH OF 20Mpa AT 28 DAYS.
   2.THE CONCRETE MIX DESIGN IS TO BE APPROVED BY THE ENGINEER.
   3.CONTRACTION JOINTS TO BE FORMED AT 2.0m INTERVALS.
   4.EXPANSION JOINTS ARE TO FORMED AT 6.0m INTERVALS ON STRAIGHTS AND 2.0m INTERVALS WHERE THE KERB RADIUS IS LESS THAN 50m.

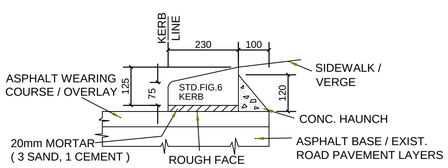




TYPE D : BARRIER KERB WITH CAST IN SITU CHANNEL / FILLET
(MINOR ROADS)
SCALE:- 1 : 10

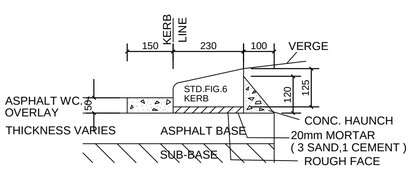


TYPE C : MOUNTABLE KERB &
CAST IN SITU CHANNEL / FILLET
(Fillet section shown)
SCALE:- 1 : 10

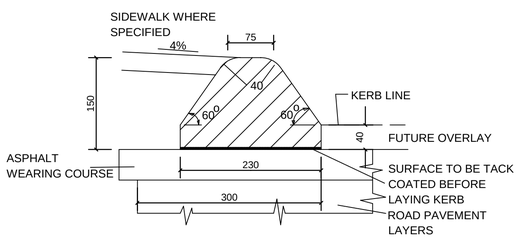


TYPE E: SEMI-MOUNTABLE KERB
PLACED ON ROAD SURFACE
(MINOR ROADS)
SCALE:- 1 : 10

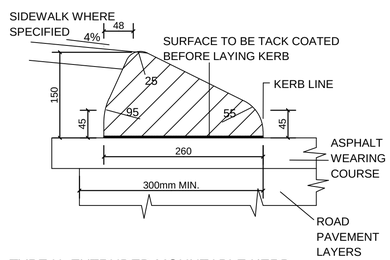
NOTE:- WEARING COURSE LAID & THEN CUT BACK TO 150mm FROM FRONT TO KERB PRIOR TO THE FILLET BEING CAST.



TYPE F: MOUNTABLE KERB WITH
CAST IN SITU FILLET
(MINOR ROADS)
SCALE:- 1 : 10



TYPE G: EXTRUDED BARRIER KERB
SCALE:- 1 : 5



TYPE H: EXTRUDED MOUNTABLE KERB
SCALE:- 1 : 5

DRAWING REFERENCE

DRAWING NO.	TITLE

NOTES

NO.	AMENDMENT	APPROVED	DATE

REVISIONS

CLIENT

THEKWINI GEOCIVILS cc
Geotechnical & Civil Engineers
Waste Disposal Consultants ●roject Managers

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Telephone 201-9929

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MAYVILLE
4058
Telefax 201-8819

PROJECT

STANDARD DETAILS

TITLE

KERBS

CONSULTING ENGINEER

SIGNATURE:.....

PR. NO.:.....

DATE:.....

DESIGNED :	G.P.
DRAWN :	K.M.
CHECKED :	G.P.
SCALE :	AS SHOWN
DATE :	06/11/2000

REFERENCE NO. TGC/06

SHEET 1 OF 1

REVISION

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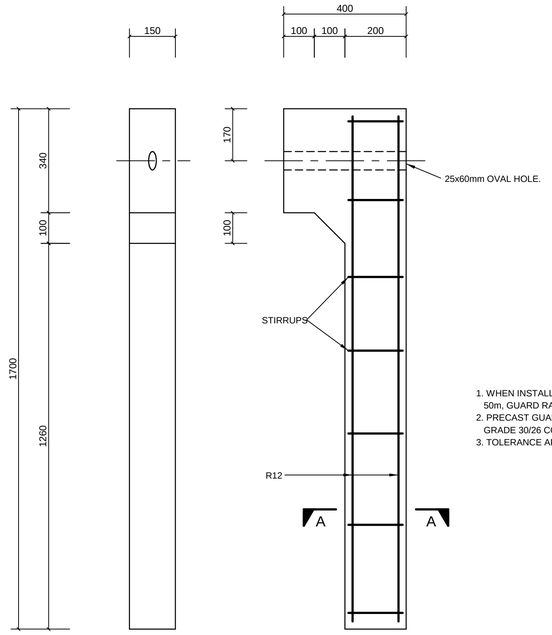
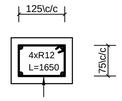


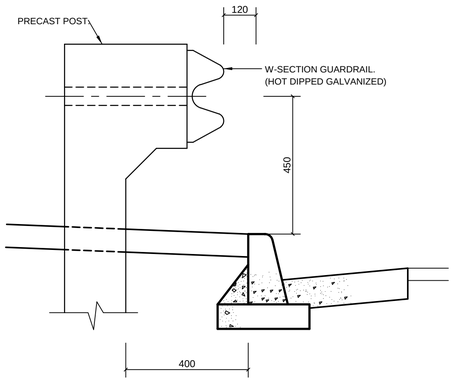


SECTION A-A

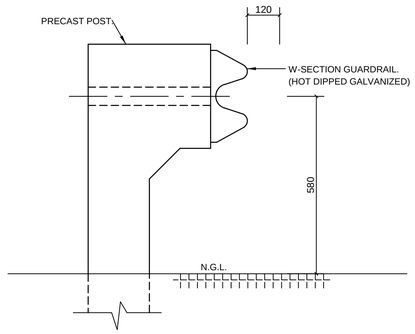
NOTES

1. WHEN INSTALLED ON A CURVE OF A RADIUS LESS THAN 50m, GUARD RAIL LENGTHS SHALL BE PRECURVED.
2. PRECAST GUARD RAIL POSTS ARE TO BE CAST WITH GRADE 30/26 CONCRETE.
3. TOLERANCE APPROX. 3mm.

REINFORCED CONCRETE GUARD POST DETAILS
1:10

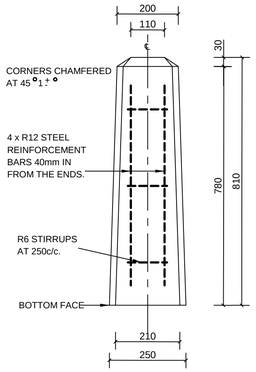


a) BEHIND KERBING



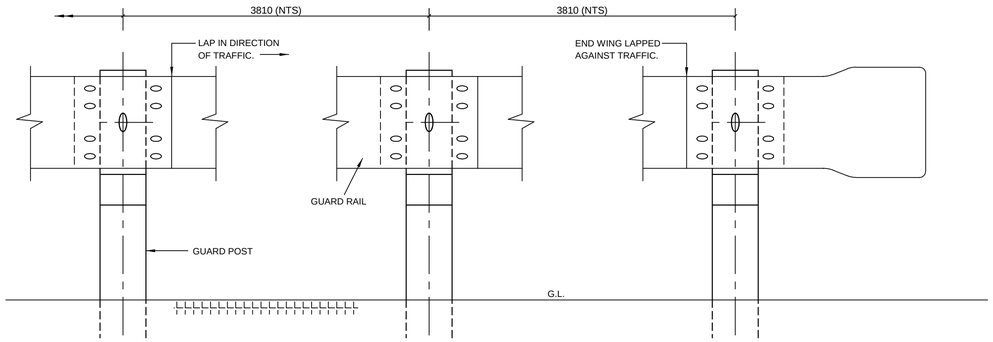
b) WITHOUT KERBING

GUARD RAIL POSITION DETAILS
1:10

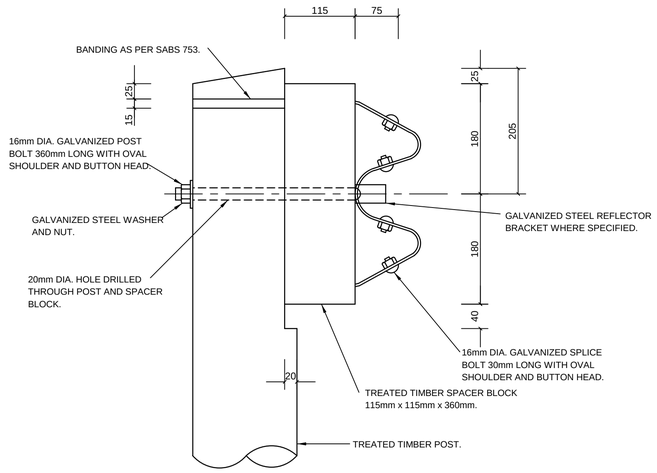


STANDARD BOLLARD
TYPE A
1:10

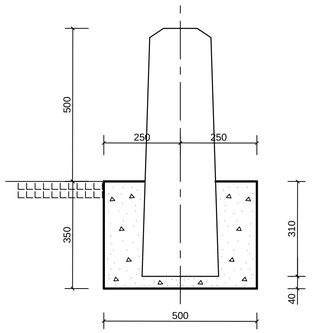
NOTE:
1. CONCRETE GRADE 30/13.
2. FINISH - SMOOTH WITH BOTTOM FACE BRUSHED.
3. FOUNDATION CONCRETE IS TO GRADE 20/13 AND IS TO HAVE A STEEL TROWEL FINISH.
4. TOLERANCE TO ALL DIMENSIONS 3mm.



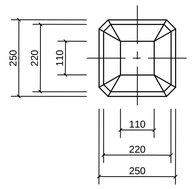
DETAIL OF TERMINAL SECTION
1:10



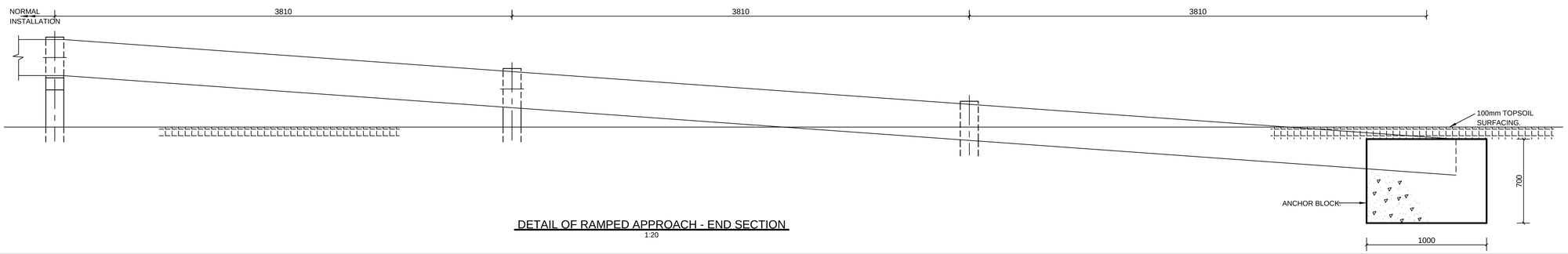
SIDE ELEVATION
OF TYPICAL TIMBER POST GUARD RAIL
1:5



SECTION THROUGH BOLLARD
1:10



END ELEVATION
1:10



DETAIL OF RAMPED APPROACH - END SECTION
1:20

DRAWING REFERENCE

DRAWING NO.	TITLE

NOTES

NO.	AMENDMENT	APPROVED	DATE

REVISIONS

CLIENT

THEKWINI GEOCIVILS cc
Geotechnical & Civil Engineers
Waste Disposal Consultants • Project Managers

1st FLOOR
68 Ridge Road
Tollgate
DURBAN
4001
Telephone 201-9929

P.O. Box 30072
MAYVILLE
4058
Telefax 201-8819

PROJECT

STANDARD DETAILS

TITLE

CONCRETE BOLLARD
AND STEEL GUARD RAIL

CONSULTING ENGINEER	DESIGNED :	G.P.
SIGNATURE:.....	DRAWN :	K.M.
PR. NO.:.....	CHECKED :	G.P.
DATE:.....	SCALE :	AS SHOWN
	DATE :	06/11/2000

REFERENCE NO.	SHEET 1 OF 1	REVISION
TGC/07		

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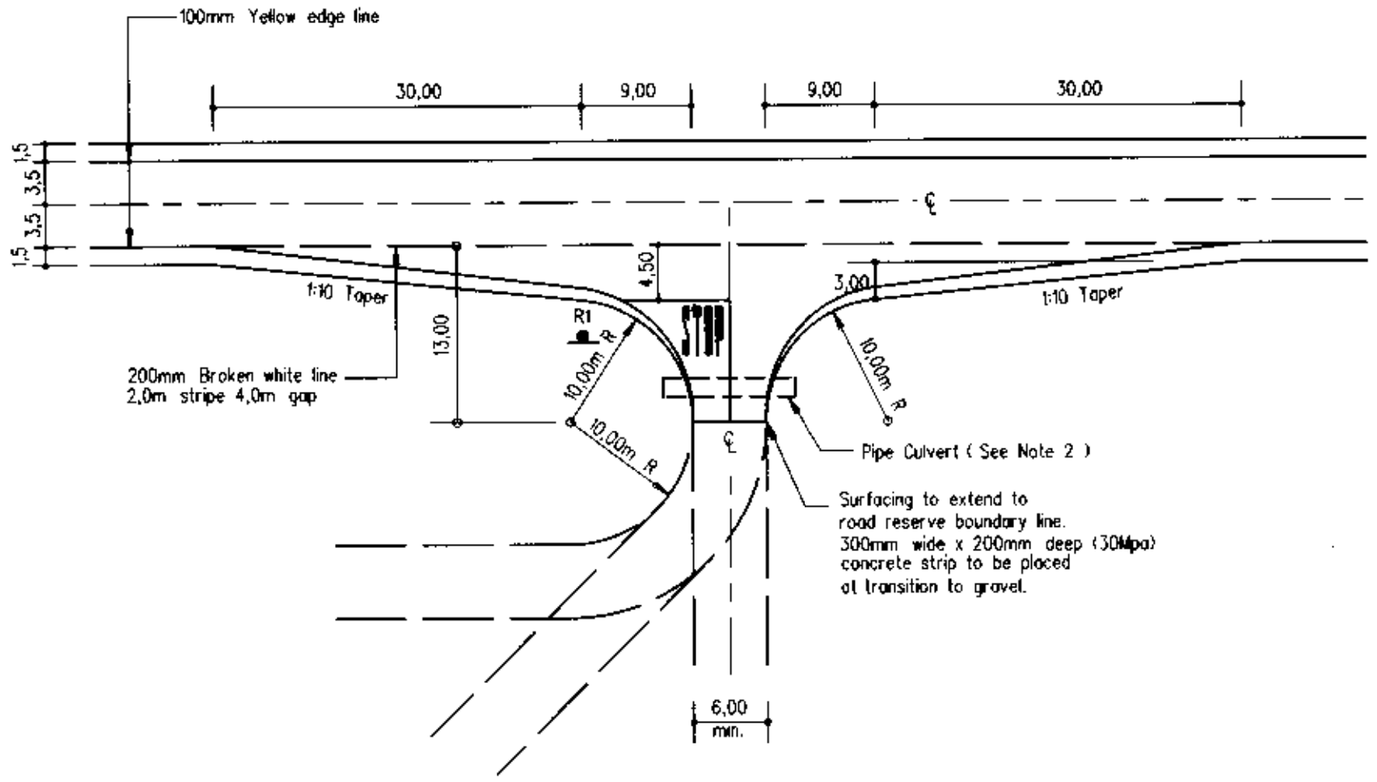
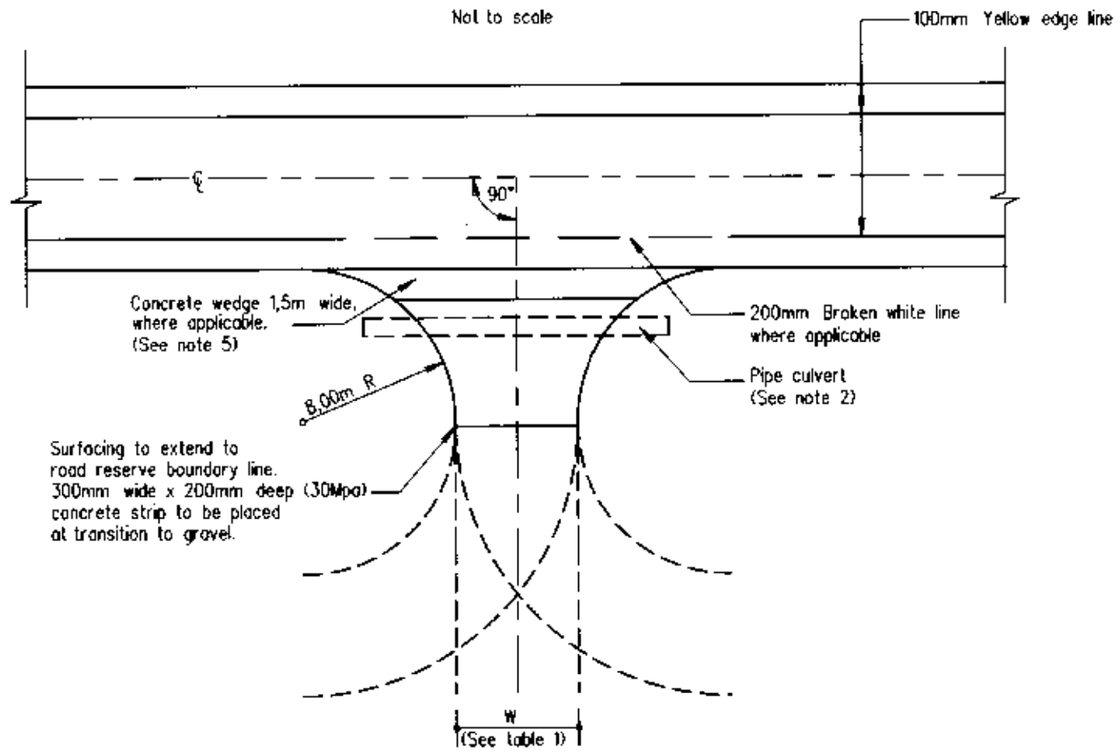


TYPE B1 ACCESS

Not to scale

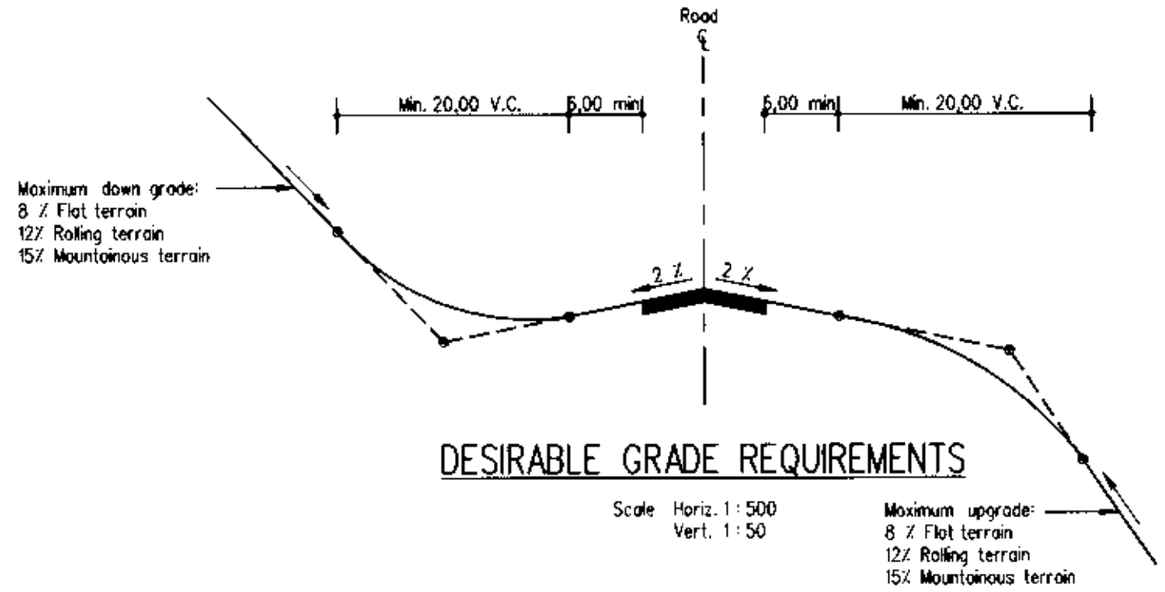


TYPE B3 ACCESS

Not to scale

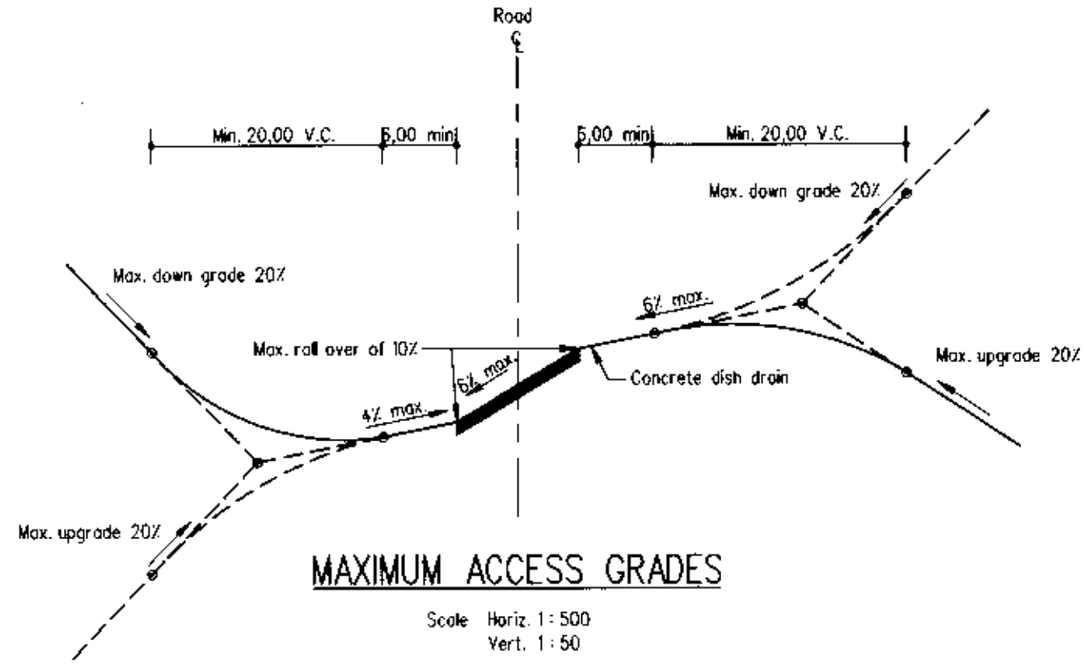
USAGE	MIN. WIDTH (W)	DESIRABLE WIDTH (W)
Predominantly light vehicles < 10vpd.	3,00	5,00
Predominantly light vehicles > 10 vpd.	5,00	7,00
Predominantly heavy vehicles < 10vpd.	5,00	8,00
Predominantly heavy vehicles > 10vpd.	7,00	10,00

TABLE 1: DESIRABLE USAGE AND DIMENSIONS FOR TYPE B1/B3 ACCESS



DESIRABLE GRADE REQUIREMENTS

Scale Horiz. 1 : 500
Vert. 1 : 50



MAXIMUM ACCESS GRADES

Scale Horiz. 1 : 500
Vert. 1 : 50

NOTES:

1. Type B accesses are recommended for secondary and tertiary road intersections and roads serving minor developments.
2. Pipe culverts are to be provided when necessary to maintain longitudinal drainage. The pipe shall be manufactured of concrete or galvanised metal with a minimum diameter of 450mm. The pipe shall be sufficiently long to clear the fill slopes.
3. The access bellmouth shall be designed and constructed such that stormwater from the access will not run onto or across the road surface.
4. The pavement layers shall be constructed as directed by the Engineer.
5. Gravel surfacing is only permited in isolated areas where the cost of surfacing would be unreasonably high. A concrete wedge 1,5m wide shall then be provided to protect the pavement edge.
6. Where two roads intersect, the numerical difference of the gradients (roll over) should not exceed 10% with a maximum super of 6% on the main road.
7. Maximum approach gradient to be 4% upgrade and 6% down grade.

Symbol	Date	Description	Dir.
C	Oct 98	Road marking and signposting details added	
B	Jan 96	Road markings amended	
A	July 94	General updating and revision	

Amendments

PROVINCE OF KWAZULU-NATAL
DEPARTMENT OF TRANSPORT

Deputy Director-General : Transport
1999/05/13
Date

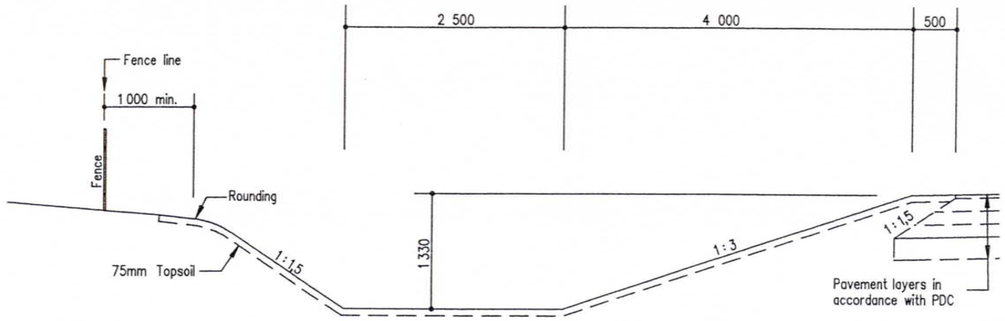
Standard Details

SETTING OUT DETAILS
TYPE B1/B3 ACCESS

Scale
As Shown

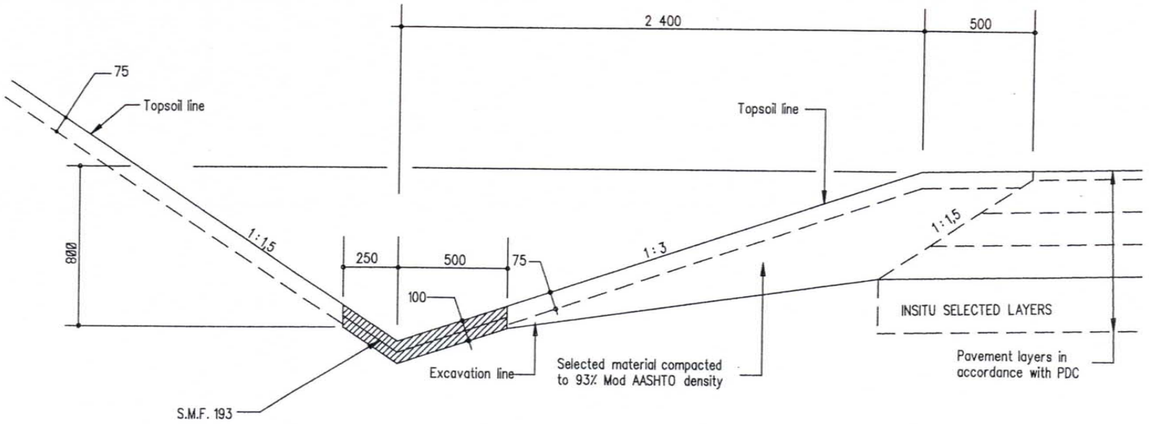
Drawing Number
SD 0303/C

M 2309



SD 0601/1 : MEADOW - DRAIN

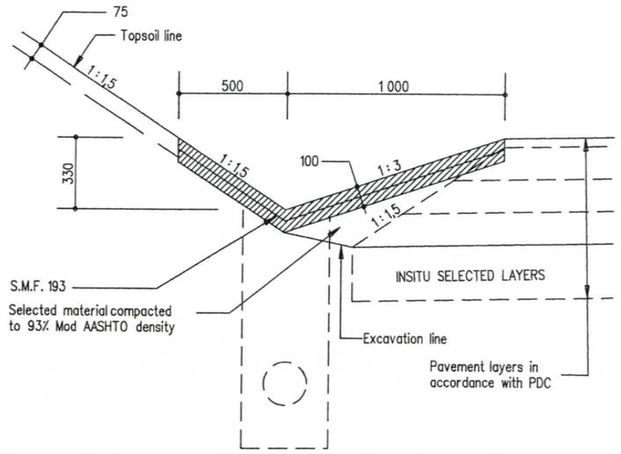
Scale 1 : 50



SD 0601/3 : GRASSED V-DRAIN IN SHALLOW CUTTINGS

(NOTE : 1. Subsoil drains are not required with this drain detail)
NOTE : 2. Where a grassed drain is used the invert must always be concreted as indicated for maintenance purposes.

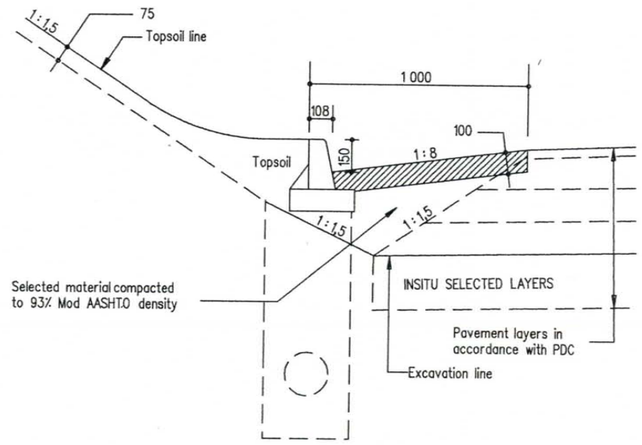
Scale 1 : 20



SD 0601/2 : GRASSED OR CONCRETE-LINED 1000 V - DRAIN

(NOTE : For use with subsoil drains in deep cuttings)

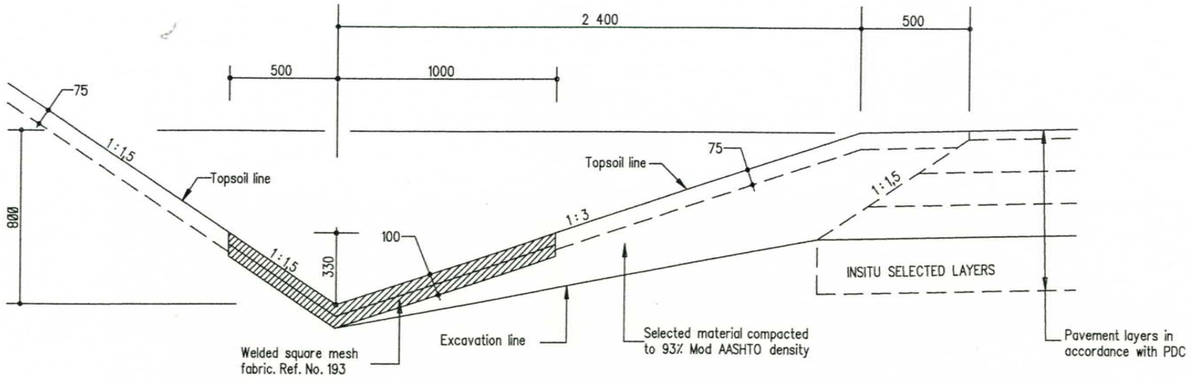
Scale 1 : 20



SD 0601/5 : KERB AND CHANNEL SIDE DRAIN IN CUT

(Alternative to concrete lined 1000 V - Drain in deep cuttings)

Scale 1 : 20



SD 0601/4 : CONCRETE-LINED V-DRAIN IN SHALLOW CUTTINGS.

(NOTE : 1. Subsoil drains are not required with this drain detail)
(NOTE : 2. Concrete dimensions may be increased as required)

Scale 1 : 20

NOTES :

1. A V-drain as detailed on SD 0601/3 & 4 is recommended for shallow cuttings of depth not exceeding 5,00m measured at a point 6,00m from edge of carriageway.
2. The 1000 V-drain is concrete lined and recommended for deep cuttings of depth greater than 5,00m measured at a point 6,00m from edge of carriageway.
3. Construction joints shall be provided at 4,00m intervals All panel ends shall be painted with a coat of approved bituminous emulsion containing 60% pure bitumen by mass before any adjoining panels are cast. 10mm wide expansion joints sealed with a closed cell expanded polyethylene joint filler over the full panel depth shall be provided every 12,00m
4. The meadow drain is recommended for use in flat terrain.
5. See SD 0501 for subsoil drain details.
6. See SD 0701 for kerb details.
7. Concrete to be 20MPa minimum.

Symbol	Date	Description	Dir.
C	Oct 06	Unsurfaced shoulder for 2,4m v-drain & meadow-drain added	
B	Jan 96	Details of concrete lining amended	
A	July 94	General updating and revision	

Amendments

PROVINCE OF KWAZULU-NATAL

DEPARTMENT OF TRANSPORT

Head: Transport

01.06.2007.

Date

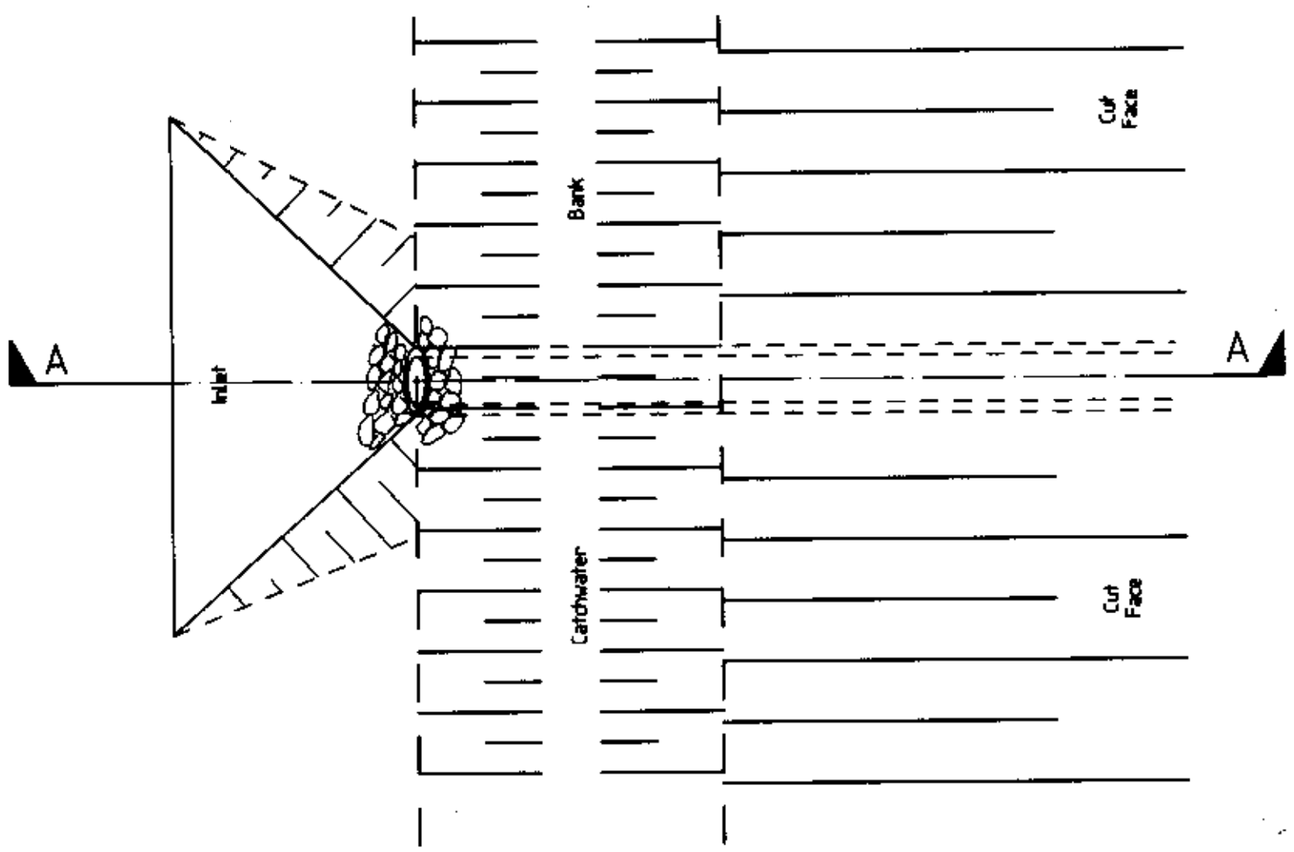
Standard Details

DRAINAGE IN CUTTING
SIDE DRAINS

Scale
As Shown

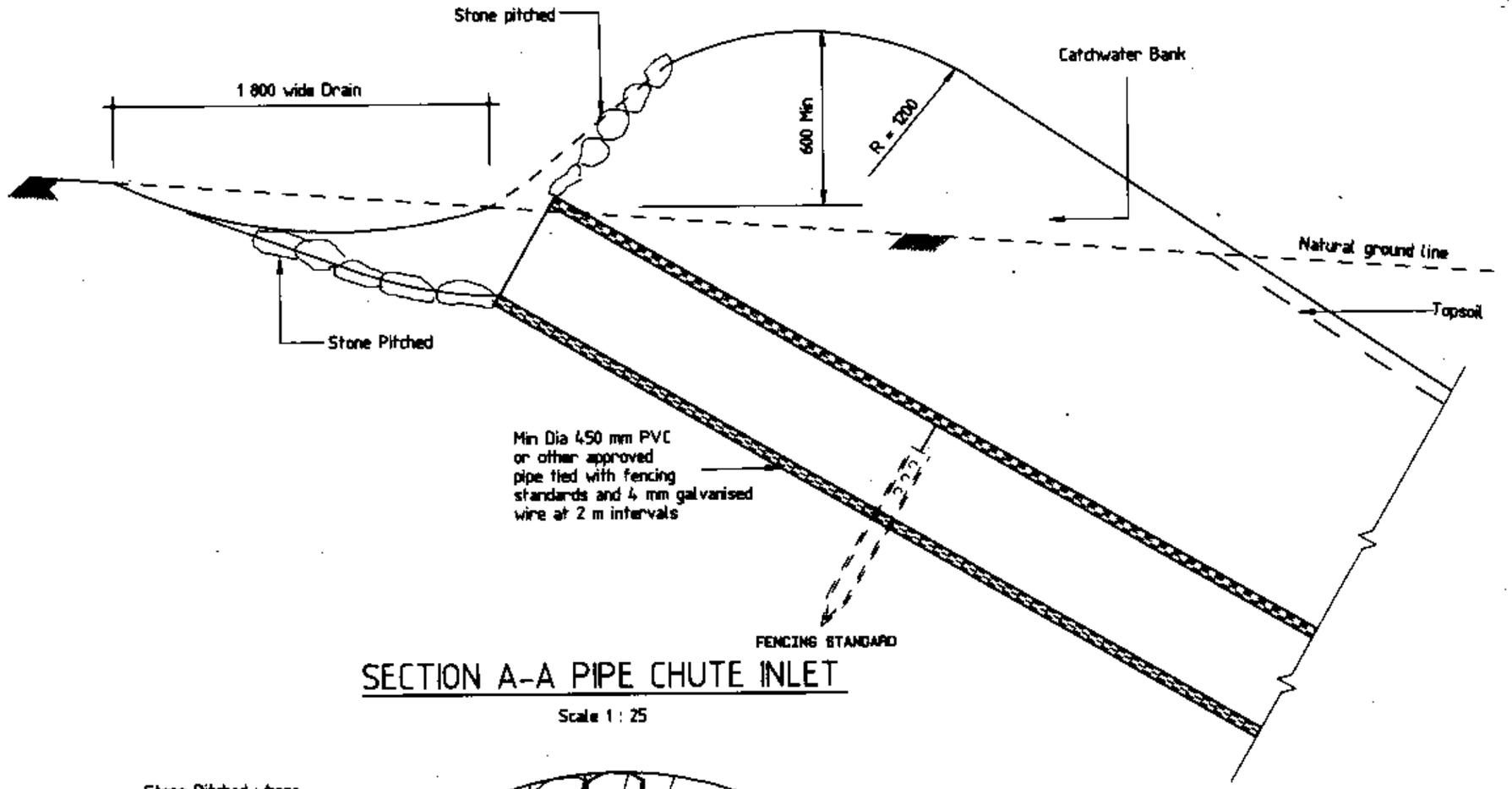
Drawing Number
SD 0601/C

M 2325



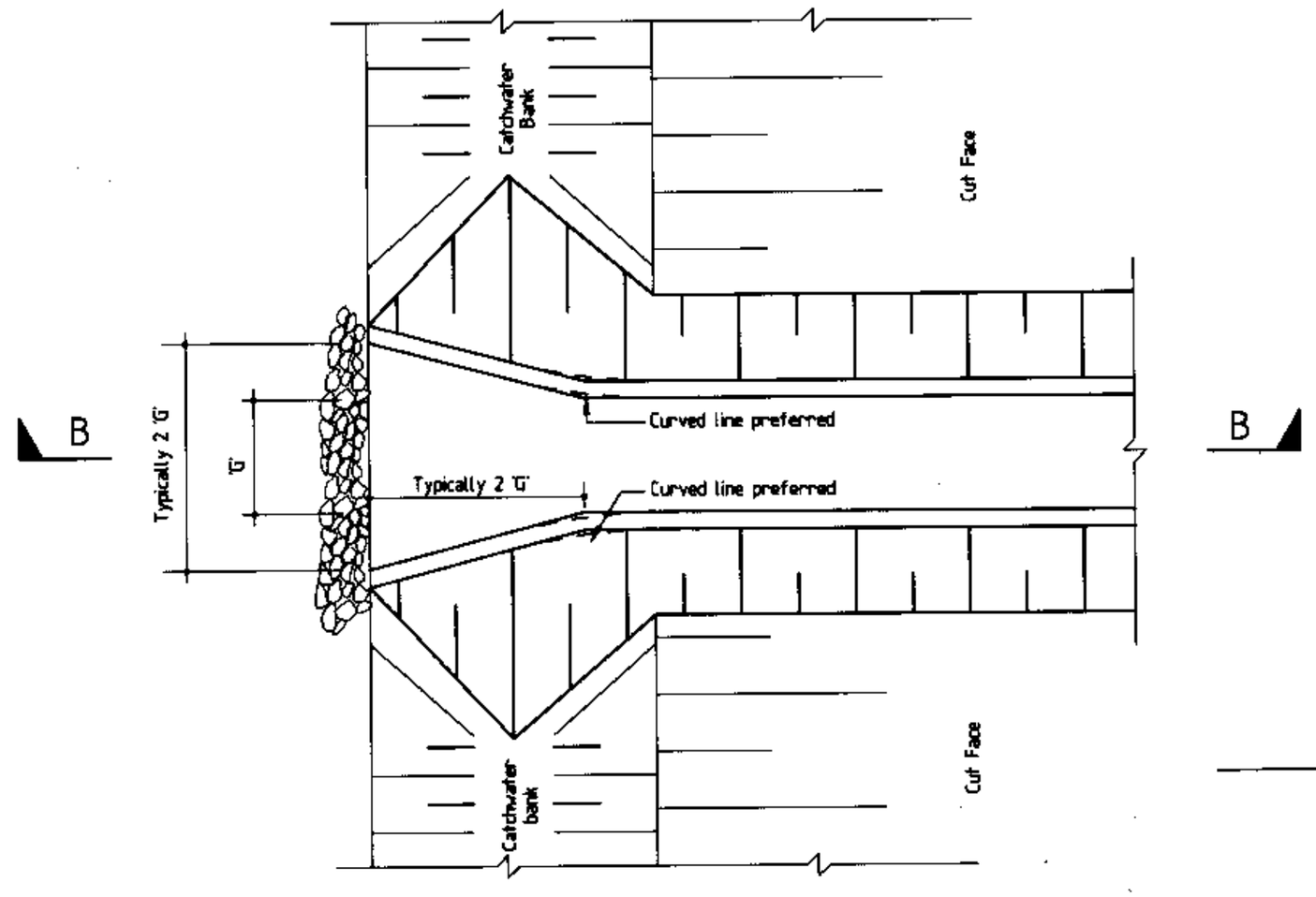
PIPE CHUTE INLET (SD 0605/1)

Scale 1 : 50



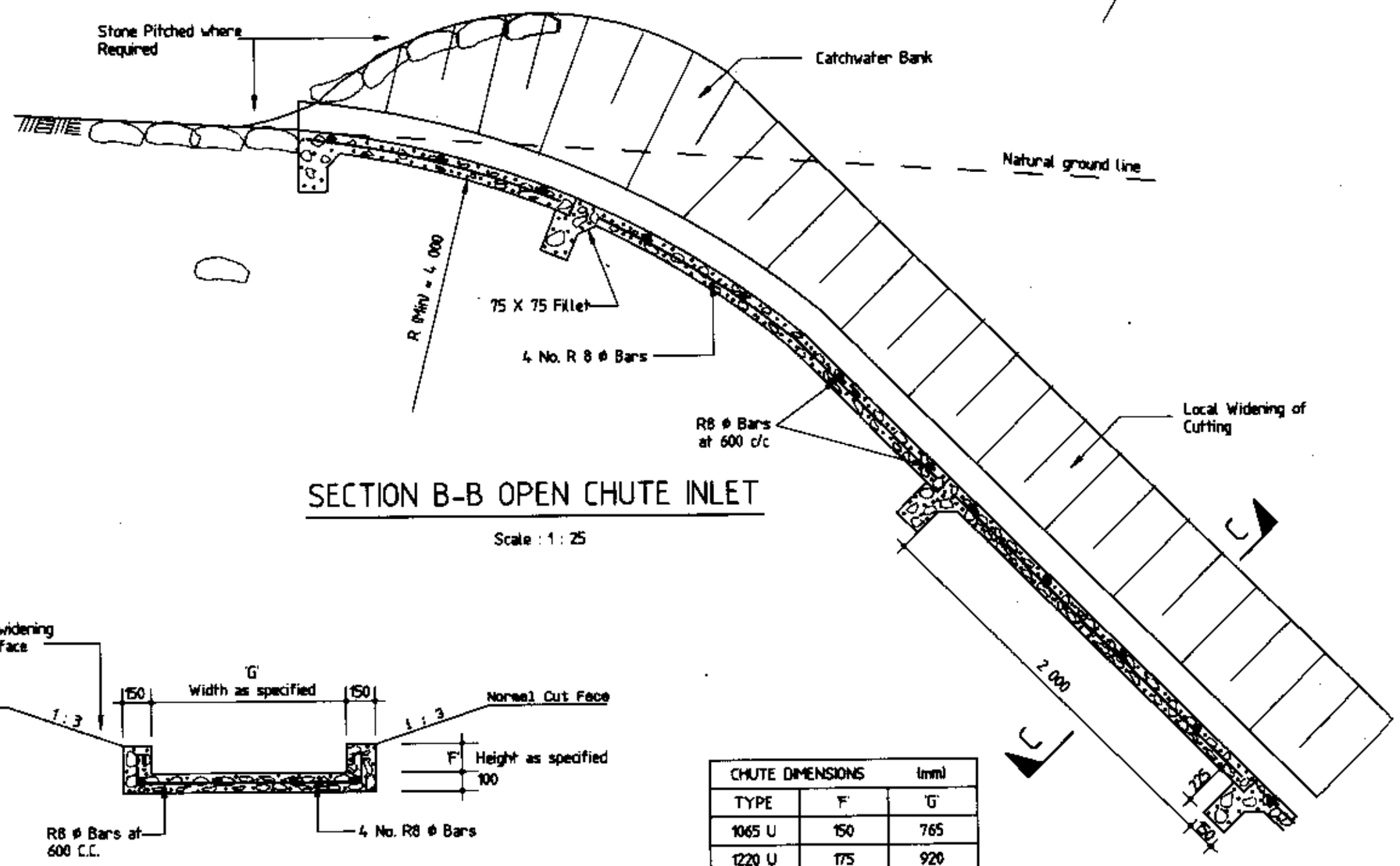
SECTION A-A PIPE CHUTE INLET

Scale 1 : 25



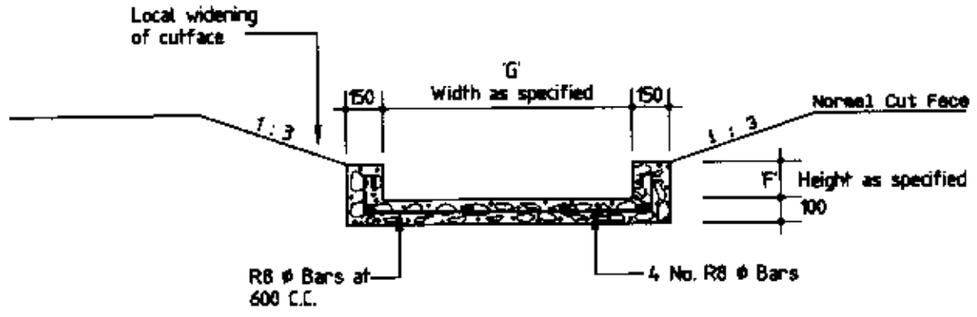
OPEN CHUTE INLET (SD 0605/2)

Scale 1 : 50



SECTION B-B OPEN CHUTE INLET

Scale : 1 : 25



SECTION C - C

Scale 1 : 25

CHUTE DIMENSIONS		(mm)
TYPE	'F'	'G'
1065 U	150	765
1220 U	175	920
1365 U	200	1065

NOTE :

1. Concrete strength to be 20Mpa minimum.

Symbol	Date	Description	Dir.
A	July 94	General updating and revision	

Amendments

PROVINCE OF KWAZULU-NATAL
DEPARTMENT OF TRANSPORT

Secretary / Transport

Date

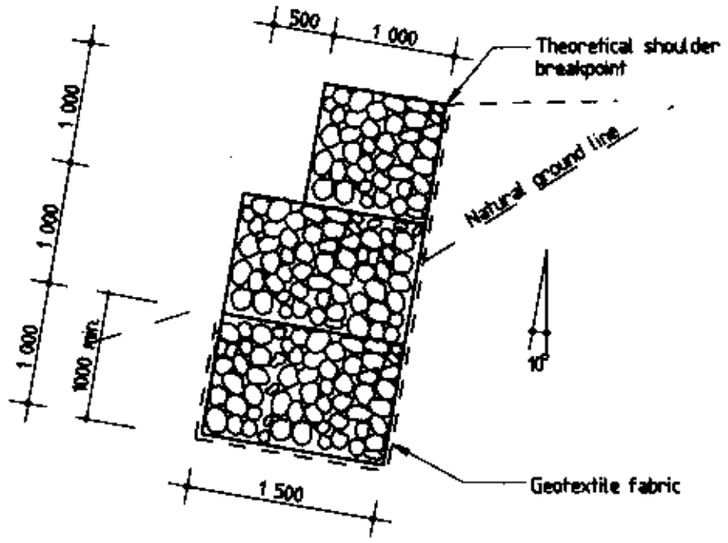
Standard Details

PIPE CHUTE, OPEN CHUTE AND CATCHWATER BANK DETAILS

Scale: As shown

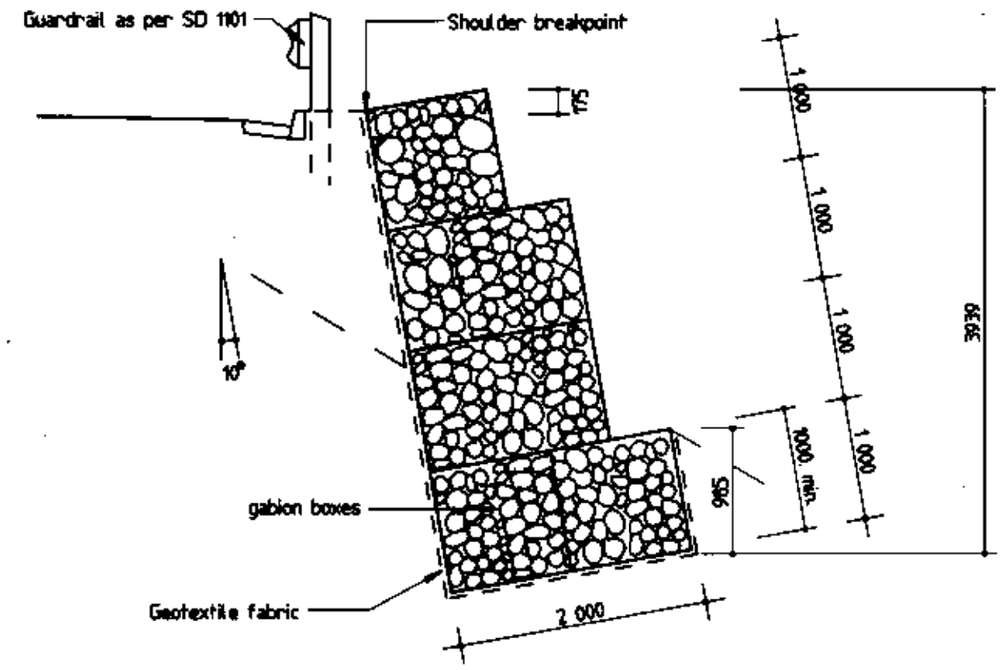
Drawing Number: SD 0605/A

M 2329



3m GABION RETAINING WALL

Scale 1 : 50



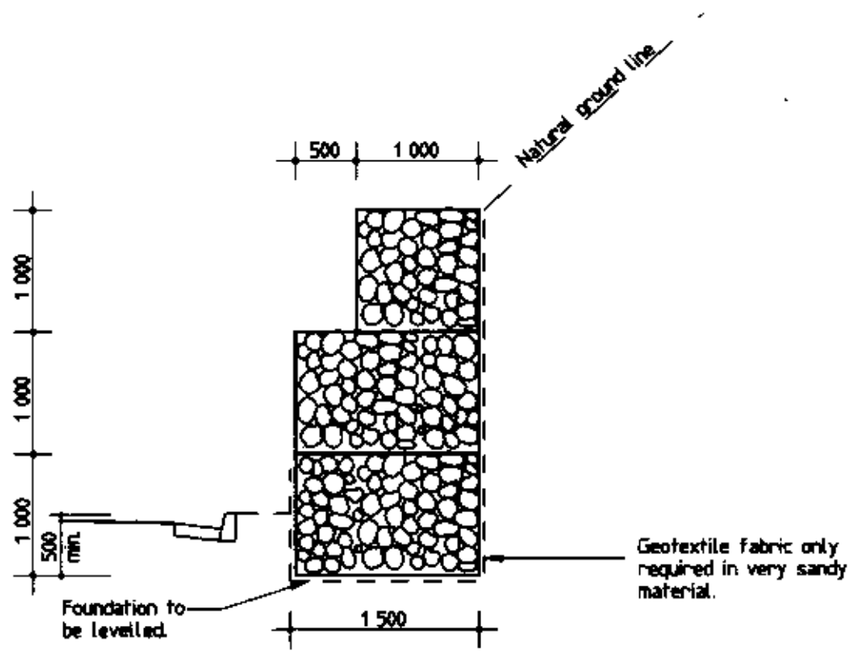
4m GABION RETAINING WALL

Scale 1 : 50

NOTES:

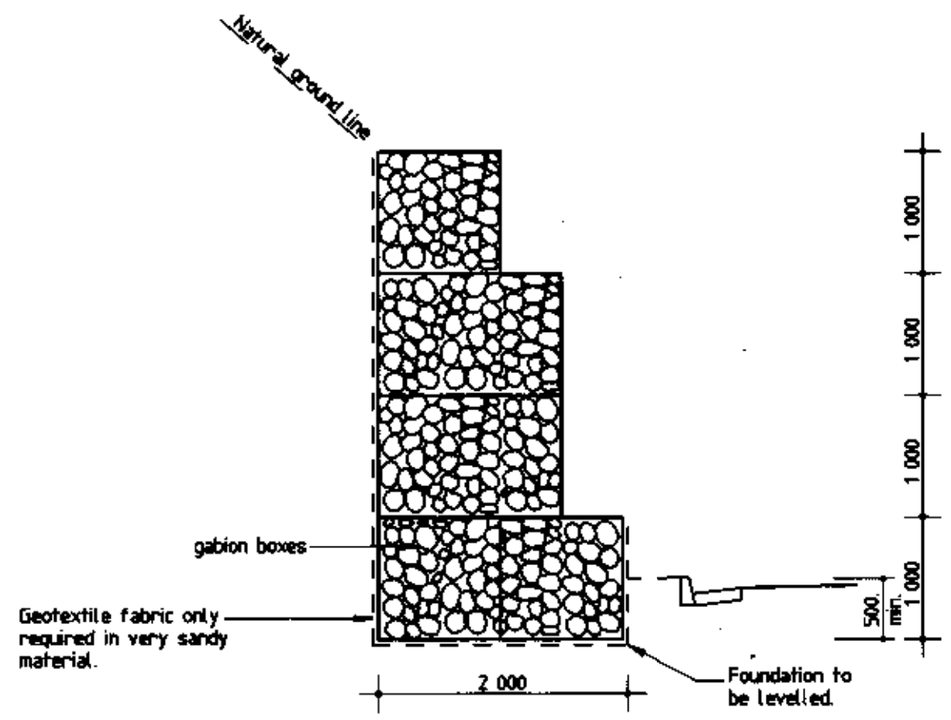
1. The gabion design shown is typical. Each application of gabion boxes shall be designed by the planning or bridge Engineer to suit the specific conditions prevailing.
2. Foundations to be stepped and prepared as instructed by the Engineer.
3. Geotextile fabric to be grade C or similar as instructed by the Engineer.
4. All wire used in the making of gabions shall be galvanised in accordance with the provisions S.A.B.S. 1580:1993 for Class A heavy galvanised mild-steel wire.
5. The standard sizes of gabions are as follows :
   Length : 1.0m , 2.0m , 3.0m & 4.0m
   Width : 1.0m 1.5m.
   Depth : 0.5m & 1.0m
   Diaphragm spacing : 1.0m
6. Lacing and bracing to be done in accordance with manufactures recommendations.

FILL CONDITION



3m GABION RETAINING WALL

Scale 1 : 50



4m GABION RETAINING WALL

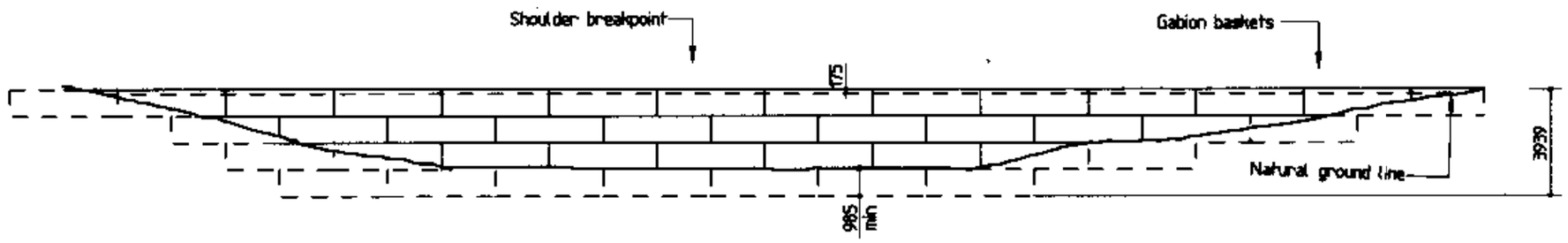
Scale 1 : 50

Depth of gabion (m)		Nominal mesh dimensions (mm)		Nominal wire diameter (mm)	
Exceeding	Not exceeding	Cross dimension b Tolerances: -2 +5	Long dimension l Tolerances: ±25	Mesh wire	Selvedge
-	0.3	80	100	2.5	3.0
0.3	1.0	80	100	2.7	3.4

(As per SABS 1580 / 1993)

Depth of cage (m)	Rock size according to the largest dimension of rock	
	Minimum (mm)	Maximum (mm)
0.2	100	125
0.3	100	200
0.5	100	250
1.0	100	250

CUT CONDITION



TYPICAL SIDE ELEVATION IN FILL CONDITION (4.0m WALL)

Scale 1 : 200

Nominal diameter of wire mm		Minimum mass of zinc coating per unit area (g/m²)
Exceeding	Not exceeding	
2.40	2.50	260
2.51	3.50	275
3.51	5.00	290

(As per SABS 1580 / 1993)

Symbol	Date	Description	Dir.
A	July 94	General updating and revision	

Amendments

PROVINCE OF KWAZULU-NATAL
DEPARTMENT OF TRANSPORT

Secretary : Transport
Date 94/12/12.

Standard Details

GABION RETAINING WALLS

Scale: As shown

Drawing Number: SD 0901/A

M 2335

Part C4: Site Information

		Page
C4.1	Geotechnical Investigation	156

C4.1. Geotechnical Investigation

Geotechnical report prepared by GPN Alluvia Ventures (Pty) Ltd

GPN Alluvia Ventures (Pty) Ltd

Geotechnical & Engineering Geology Services and Construction

Reg. No. 2018/041187/07
VAT. : 4700305339

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Office
Ikuba Farm 26, R61 Main
Seaview Centre, Mbizana, 4800, EC

Our Ref: 0014
Your Ref:

23rd June 2026

TGC Engineers
Suite 6, 4 The Crescent
Westway Office Park
Westville
3635

Attention: Mr S. Moodley Email: admin@tgcengineers.co.za.

Dear Sir,

FINAL GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED UPGRADE OF EMAROMENI ACCESS ROAD, WARD 14 AMANDAWE, UMDONI MUNICIPALITY

1. INTRODUCTION AND TERMS OF REFERENCE

Following the submission of our work proposal and quotation document, Reference 001/0426, GPN Alluvia Ventures (Pty) Ltd was appointed to carry out a geotechnical investigation for the proposed upgrade of the Emaromeni access road from a gravel to a black top asphalt surface.

The purpose of the investigation was to evaluate the subsurface conditions along the proposed road alignment and to determine the nature, thickness and engineering characteristics of the existing pavement layers and underlying subgrade materials. The investigation was also intended to identify any geotechnical constraints that may influence the design and construction of the proposed road upgrade.

Set out below are the findings of the field investigation, the geotechnical assessment of the results and recommendations for the proposed road upgrade.

2. INFORMATION PROVIDED

GPN Alluvia Ventures (Pty) Ltd was provided with GPS co-ordinates marking the start and end point of the existing gravel road proposed for upgrading. Furthermore, a contoured survey plan was provided. The supplied drawing was utilised during the planning and execution of the field investigation.

3. DEVELOPMENT PROPOSAL AND SITE DESCRIPTION

3.1 Site Location

Emaromeni access Road is situated within Ward 14 of Amandawe location, under the jurisdiction of the Umdoni Local Municipality in KwaZulu-Natal. This road is approximately 930 metres long starting from 30°15'35.05"S and 30°42'33.03"E to 30°15'45.04"S and 30°42'42.78"E. The approximate location of this road is shown on the Google earth image (Plate 1), below.

Plate 1 : Locality plan showing the route in red

3.2 Proposed Development

From the information supplied it is understood that the existing gravel road will be upgraded to top black. At the time of the field investigation, the entire route was accessible by standard two-wheeled drive vehicles.

3.3 Topography and Drainage

The entire route has a generally gently to moderate gradient. No river crossings are present along the entire length of the route. However, a localized topographic depression occurs between chainages 560 and 580 of the alignment, as indicated on Drawing No. 0014-01. This feature represents the primary drainage consideration for the proposed upgrade, as surface runoff may concentrate within this area during periods of heavy rainfall.

Apart from this depression, the route generally exhibits favourable drainage characteristics with no evidence of significant erosion, slope instability or standing water.

4. FIELD WORK

4.1 The fieldwork was carried out on the 1st June 2026 and consisted of the following;

- General route assessment
- Manual excavation of inspection pits
- CBR Dynamic Cone Penetrometer testing
- Sampling of representative materials for laboratory testing

The positions of the respective field tests are shown on the attached site layout plan, Drawing № GPN 0014-01 accompanying this report.

4.2 Inspection Pits

4.2.1 A total of seven inspection pits, IP1 - 7, were manually excavated at approximate 200m intervals along the existing gravel road to ascertain the prevailing geology and obtain samples of the in-situ subgrade beneath the entire route.

4.2.2 The subsoils exposed in the inspection pits were examined and logged by an Engineering Geologist in terms of the Guidelines for Soil and Rock Logging for South Africa recommended by Jennings, J.E, Brink, A.B.A and Williams, A.A.B (1973). This included recording the following parameters;

For soil: Moisture content, colour, consistency, soil structure (where applicable), soil type and origin.

For rock: Weathering, colour, bedding and joint spacing, hardness, rock type and origin.

4.2.3 The profiles for each of the inspection pits, IP's 1 - 7 are presented as logs in Appendix A of this report.

4.3 California Bearing Ratio Dynamic Cone Penetrometer (CBR DCP) Testing : CBR 1 - 8

The inspection pits along the proposed route were supplemented by eight CBR DCP tests. The CBR-DCP test probe records the subsoil density at 50mm intervals. The penetration depth is 1m maximum. The aim of these tests was to obtain an indication of the road layer works, upper subgrade, and the consistency of the soils thereunder. The cone apparatus was probed to a maximum depth of 1.0m or until refusal was met at shallow depths on weathered bedrock.

The results of the CBR DCP tests are graphically presented in Appendix B of this report. It should be noted that the CBR DCP provide a guide to strength of the subsoils but this information should not be used exclusively but rather in conjunction with the actual laboratory determined CBR values.

4.4 Material Sampling

In order to classify materials occurring across the site and assess their suitability for use in construction, four bulk samples, S 1 - 4, were retrieved from various horizons within the excavated inspection pits and returned to Thekwini Soils Laboratory in Margate, for testing purposes.

Testing on the retrieved samples included;

- Full Indicator in the form of grading analyses, hydrometer testing to 2µ size and Atterberg Limits to determine basic soil engineering properties.
- Mod AASHTO and CBR testing to determine compaction and strength characteristics of recompacted soils
- pH and Conductivity tests

The laboratory results are included as Appendix C of this report and discussed further in Section 6 and Section 8.2 of this report.

A schedule detailing the nature and depth of the sampled retrieved and the testing conducted thereon is set out in Table 1 below.

Table 1: Summary of Sampled Materials and Laboratory Testing Schedule

Position	Layer Ref. №	Depth (m)	Material Description	Laboratory Testing			
				Ind	Mod	CBR	pH & Conductivity
IP1/S1	L1	0.4 – 0.8	Grey brown GRAVEL - Layerworks	x	x	x	
IP2/S2	L3	0.5– 0.8	Brown orange, sandy CLAY - Resid Tillite	x	x	x	
IP4/S3	L3	0.4 – 0.8	Silty Sand with gravel - Colluvium	x	x	x	x
IP7/S4	L4	0.4 – 0.8	Dark yellowy orange,sandy Clay – C/W Tillite	x	x	x	x

CW = completely weathered

5. GEOLOGY, SOILS AND GROUNDWATER

5.1 Site Geology

According to the 1:250 000 scale, Geological Series Port Shepstone (3030) Map published by the Council for Geoscience (1998), and based on the findings of the geotechnical assessment, it is evident that the site is underlain by the Dwyka Tillite bedrock and the residual material derived therefrom.

5.2 Prevailing Layerworks Profile

The geotechnical investigation at the tarred intersection joining route P197-3 identified three distinct soil horizons, designated L1 through L3 within the excavated test pits. The profile comprises two engineered layers and a subgrade layers. Whereas the gravel section of the road has no layerworks. Additionally, all the layerworks configurations and vertical depths vary by location.

The detailed description of the various materials can be appreciated in the soil profiles and pit photographs included in Appendix A of this report.

The following generalized layerworks profiles was encountered within the two inspection pits excavated at the intersection;

5.2.1 Prevailing Layerworks Profile at the intersection (IP1 – IP2)

Depth (m)	Material Description
0.0 – 0.04	Dull grey, dry, ASPHALT - (Road surfacing S1)
0.04 – 0.25/0.30	Slightly moist, grey and grey brown, dense to very dense, intact, stabilized layer comprising angular crushed hard rock (50-80%) in a slightly clayey SAND matrix (20-50%). - (Layerworks L1)
0.25/0.30 – 0.50	Slightly moist, dark brown orange, medium dense to dense, intact, stabilized layer comprising slightly clayey to sandy GRAVEL containing abundant rounded to semi-rounded gravel - (Layerworks L2)
0.50 – 0.80	Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite)
0.80 – 1.00	Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite

5.2.2 Prevailing Layerworks Profile along the entire gravel access road (IP3 – IP7)

Depth (m)	Material Description
0.0 – 0.1/0.15	Slightly moist, dark grey brown, medium dense, clayey `SAND containing abundant rock fragments – (Gravel Road Surfacing)
0.15 – 0.40/0.70	Slightly moist, dark grey brown mixed with brown orange, slightly `clayey `SAND containing gravel and foreign objects (occurs in rhythmic layers in places – (Fill)
0.15 – 0.40	Slightly moist, dark grey brown, firm, fissured, intact, slightly clayey, `SAND - (Topsoil / Colluvium)
0.40 – 0.80	Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite)
0.8 – 1.00	Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite

5.3 Groundwater Conditions

No groundwater seepage, discharge, standing water, or saturated embankments were observed along the alignment or within the inspection pits at the time of this assessment. While a minor topographic depression exists between chainages 560 and 580, marking the head of a natural drainage line—no active surface or subsurface seepage was detected. However, the deeply weathered state of the underlying Dwyka tillite bedrock indicates historical groundwater influence, necessitating the provision of subsoil drainage infrastructure. Overall, the current absence of a shallow water table provides favourable founding conditions for the proposed road upgrade.

6. LABORATORY RESULTS

The results of the grading analysis, Mod AASHTO density and CBR testing are included in the Laboratory Test Summary Table 3 below and discussed further in Section 8.4 of this report. Detailed materials analyses data are enclosed in Appendix B.

6.1 Grading Analyses

This test was carried out to determine particle size distribution of various materials occurring across the site. The indicator testing is comprised of Atterberg limits, sieve analysis and hydrometer testing.

Table 2 below summarizes the results of the grading analyses carried out. The results of the laboratory testing are included in the Laboratory Test Summary Table and the Materials Analyses attached herewith in Appendix C and is summarised overleaf;

Based on the Unified Soil Classification System (USCS), the site soils are broadly categorized into the following types:

SM – SC – Silty Sand to Clayey Sand
CL - Lean Clay
GP-GM – Poorly graded gravel with silt

Laboratory test results indicate that materials along the entire route alignment predominantly consist of silty clayey sand to sandy clay. An exception occurs at the intersection with Route P197-3, where existing engineered fill was encountered. This engineered fill exhibits low to moderate plasticity and generally favorable engineering properties.

Although the tested subgrade materials exhibit medium to high plasticity, evaluation using the Van der Merwe method for predicting swell indicates a "low" estimated heave potential of 2% or less for both the in-situ residual and completely weathered materials across the site.

It should be noted that at the time of writing this report, the pH and conductivity laboratory testing is still underway and thus no results are available

Table 3: Summary of Full Indicator test results

Pos	Sample Depth (m)	Material Description	Particle Size (%)					GM	LL %	PI %	LS %	Revised US Class.	AASHTO Class.
			Clay	Silt	Sand	Gravel	Cobble						
FILL													
IP1/S1	0.1 – 0.3	Grey brown GRAVEL - Layerworks -	3.5	4.0	21.7	62.7	8	2.45	22	0	0	GW-GM	A-1-a(0)
COLLUVIUM													
IP4/S3	0.2 – 0.4	Dark grey brown, silty clayey Sand - Colluvium	16.3	19.9	53.4	10.3	0	0.95	18	4	2	SM-SC	A-4(0)
RESIDUAL TILLITE													
IP2/S2	0.5 – 0.7	Dark brown orange, sandy CLAY – Residual Tillite	32.4	22.1	37	8.6	0	0.68	35	15	8	CL-OL	A-6(6)
HIGHLY TO COMPLETELY WEATHERED TILLITE													
IP7/S4	0.8 – 1.0	Dark yellow orange clayey SAND – CW Tillite	20.2	16.1	44.5	19.2	0	1.17	28	9	4.7	SC	A-4(0)

CW completely weathered LL = liquid limit PI = plasticity limit LS = linear shrinkage GM = grading modulus

6.2 Mod AASTHO and California Bearing Ratio (CBR) testing

Mod AASTHO density and CBR determinations were carried out on ten samples collected from excavated inspection pits. The results are summarised in Table 4 below.

Table 4: Summary of Modified AASTHO and CBR test results

Pos	Sample Depth (m)	Material Description	Modified AASHTO		CBR Results						TRH 14 Class
			MDD (kg/m³)	OMC (%)	90%	93%	95%	98%	100%	Swell %	
IP1/S1	0.1 – 0.3	Grey brown GRAVEL - Layerworks	2166	6.1	55	66	74	78	80	0.00	G5
IP4/S3	0.2 – 0.4	Dark grey brown, silty clayey Sand - Colluvium	1955	9.6	2	4	7	9	11	0.62	G10
IP2/S2	0.5 – 0.7	Dark brown orange, sandy CLAY – Residual Tillite	1800	13	2	3	4	4	5	2.08	>G10
IP3/S3	0.8 – 1.0	Dark yellow orange clayey SAND – CW Tillite	1850	13	2	3	3	3	4	2.25	>G10

7. GEOTECHNICAL ASSESSMENT

Based on the assessment of the site area, the prevailing subsoil conditions, as well as the intended development, the following geotechnical considerations should be borne in mind during the planning and construction phases;

7.1 Slope Stability

No evidence of any previous or on-going slope instability was noted on site during the assessment. Given the gentle to moderate topography and the competent nature of the underlying weathered tillite, the route is considered inherently stable in its current condition.

Localized instability may, however, occur where excessive cutting or poorly compacted fills are introduced during construction.

7.2 Problem Soils

The gravelly sandy materials encountered within the upper profile are generally suitable for road construction purposes.

7.2.1 Active Soils (Soils and Bedrock)

The residual tillite horizons contain moderate clay fractions and may exhibit moisture-related volume change (in the sense that they may undergo volume change, heave / shrinkage, upon fluctuation of their natural moisture content) if exposed and left unprotected for prolonged periods.

Appropriate drainage and compaction control measures should therefore be implemented during construction

Post construction all exposed and unpaved surfaces, such as in cut and fill embankments should be adequately vegetated as soon as possible to keep erosion to a minimum.

7.2.2 *Consolidation/Collapse Settlement Potential*

The colluvial and residual materials encountered are generally firm to stiff and exhibit low compressibility.

Significant settlement beneath the proposed pavement structure is therefore not anticipated.

7.3 <u>Earthworks and Excavatability</u>

Based on the excavation of inspection pits it is inferred that ‘soft excavation’ in terms of SABS 1200 standards will prevail within the existing pavement layerworks and in-situ materials (colluvium, residual tillite and completely weathered material along the entire length of the Road to depths in excess of 1.5 - 2m below existing ground level with normal plant moving equipment. However, the less weathered bedrock may require pneumatic tool to excavate to required depths.

7.4 Subgrade Assessment and DCP-Derived CBR Evaluation

The DCP investigations revealed generally consistent subgrade conditions along the alignment.

The existing gravel surfacing and upper sandy gravel horizons returned moderate to high inferred CBR values, reflecting relatively dense and competent near-surface materials.

The underlying colluvial horizon exhibited moderate strength characteristics, while the residual and completely weathered tillite horizons generally demonstrated increasing resistance with depth.

DCP correlations indicate that the upper subgrade is likely to achieve soaked design CBR values in the order of 10% to 15%, while the deeper weathered tillite horizon exhibits substantially higher bearing capacity.

Based on the DCP results, geological conditions and field observations, the route may be classified as having a generally good to fair subgrade for low- to medium-volume road construction.

The DCP data confirms that the underlying weathered tillite provides a competent founding horizon capable of supporting a conventional flexible pavement structure.

8. GEOTECHNICAL RECOMMENDATIONS

8.1 Cut and Fill Embankments

8.1.1 *Cuts*

No earthworks details were provided with regards to the proposed access road upgrade. However, given the existing site conditions some minor cutting and/or filling will be required at the isolated portions to be widened. In this regard the following cut and fill recommendations should be adhered to.

- All permanent cuts in the likely sandy to clayey sandy road embankment material should be trimmed back to a maximum batter of 1:2 (26.5°).

- Excavations greater than 1.2m below existing ground level should be battered back to the above angle or alternatively shored.

8.1.2 *Fills*

The construction of any fills on site should proceed in the following manner;

- Should filling along the outer edge of the existing road be required for the widening thereof, all vegetation below the proposed fill footprint must be grubbed clear prior to the placement of the fill. Where placed on slopes greater than 1:6 (10°) the fill must

be benched into competent weathered bedrock to increase the stability thereof. Benches should be a minimum of 0.5m deep and 3m wide. Where slopes exceed a gradient of 15° (1:4), surface should be concreted.

- Fill embankments should be constructed using a suitable granular material meeting the minimum requirements of a G10 type material in layers of maximum 200mm loose thickness and compacted to 93% and 95% Mod AASHTO density for the more clayey and sandy material, respectively, prior to placement of the next layer to minimise post construction settlement.

- The maximum particle size of material in the fill should be restricted to two thirds the layer thickness (i.e 200mm) to ensure adequate and uniform compaction therein.

- Fills should not exceed an outer batter of 1:2 (26°) and all unsupported cut and fill slopes should be vegetated as soon as possible after construction to limit the risk of sloughing of the subsoils.

- All unsupported cut and fill embankments should be grassed/vegetated as soon as possible after construction to ensure potential erosion is kept to a minimum.

- Use of the clayey materials and residual tillite for filling under floors should be avoided and imported granular material is recommended

8.2 Material Suitability

Based on the results of the laboratory testing, the suitability of the materials encountered throughout the investigated area have been classified for engineered fill/road layer works in accordance with TRH 14 (1985). It is evident from the laboratory tests results that materials tested which were encountered across the site ranges between G5 to >G10.

Based on the laboratory test results furnished in Tables 3 and 4, the stockpiled material sampled on site classifies as A-1-a (AASHTO) and G5 type material in terms of TRH 14 - 1985 and therefore considered suitable for use as subbase in road and pavement construction.

The colluvium sample retrieved from IP4, classifies as an A-4 (0), CL material and meets the requirements of a G10 type material as defined by TRH 14 – 1985. The colluvium (depending on the clay content) is likely to be suitable for use as bulk fill in road and pavement construction.

Laboratory testing indicates that the residual and completely weathered tillite materials classify lower than a G10 material in accordance with TRH 14 (1985). They are therefore deemed unsuitable for engineered fill or subgrade applications unless appropriate soil improvement techniques are implemented.

The volume of material achievable for use/re-use has not been determined and needs to be determined by the design Engineer from a practical and economic perspective.

Base, sub-base and selected layer-works materials will need to be imported from a suitable borrow pit or nearby commercial quarry.

8.3 Pavement Layerworks Design

Based on the prevailing subgrade conditions and DCP-derived design CBR values of approximately 10–15%, the road is considered suitable for a conventional flexible pavement structure.

The final pavement design should be based on anticipated traffic loading, the present geotechnical findings, laboratory CBR results and applicable road authority requirements.

8.4 Drainage

Drainage is considered the most important factor governing the long-term performance of the proposed pavement.

The road should be provided with adequate crossfall and side drains to prevent infiltration into the pavement structure.

Particular attention should be given to the localized depression identified along the route where runoff may accumulate.

In this area, consideration should be given to:

Raising the road formation level where practical;

Installation of suitable cross-drainage structures where required;

Provision of subsoil drainage measures if saturated conditions are encountered during construction.

All cut and fill batters should be protected against erosion through vegetation establishment and appropriate stormwater management measures.

9. DISCLAIMER

The information in this report is given in good faith, as an indication of the materials and conditions likely to be encountered during construction. However, there is no warranty that the information is totally representative of the entire area and no responsibility will be accepted for any consequences arising from actual conditions being different from those indicated in this report.

10. CONCLUSION

- The investigation has established that the proposed Emaromeni Access Road is underlain by residual soils and weathered Dwyka Tillite bedrock and the soils derived therefrom. These sediments are overlain by a variable thickness of layerworks.
- The subsurface profile generally comprises clayey sand with gravel overlying slightly clayey colluvial sands, residual tillite and competent completely weathered tillite.
- No groundwater seepage was encountered during the investigation and overall drainage conditions are considered favourable.
- CBR DCP testing indicates generally competent subgrade conditions with inferred design CBR values in the order of 10–15%, underlain by increasingly competent weathered tillite with depth.
- Soft excavation is anticipated to the required depth of 1.0m below ground level across the entire length of the road.
- The principal geotechnical consideration relates to the localized depression along the route (at chainage 570m) where runoff may concentrate and appropriate drainage measures will be required.
- Proper surface and subsurface drainage will be critical to long-term pavement performance.
- Provided the recommendations contained in this report are implemented, no significant geotechnical constraints are anticipated and the proposed upgrade of the Emaromeni Access Road to an asphalt-surfaced roadway is considered geotechnically feasible.

We trust that the above information meets your immediate requirements in this regard and will be pleased to furnish you with any additional information you may require.

Yours faithfully,

DRENNAN MAUD (PTY) LTD

G. NTAKA Pr.Sci.Nat.

Encl.	Appendix A	–	IP’s 1 - 7
	Appendix B	–	CBR Dynamic Cone Penetrometer Test Results (DCP1- 8)
	Appendix C	–	Laboratory Test Results
	Appendix D	–	Photos
	Site Plan	-	Drawing GPN 0014-01

DRAWING № gpn 0014-01

SITE PLAN

No.	By.	Revision/Issue	Date

Firm Name and Address

P O Box 1971 Margate 4275
MOBILE : 083 632 8559
EMAIL : gugupntaka@gmail.com

Project Name and Address

EMAROMENI ACCESS ROAD

Drawing Details

GEOTECHNICAL INVESTIGATION LAYOUT

DESIGNED BY:	DRAWN BY:	CHECKED BY:
GN	NT	GN
DATE: 24 JUNE 2026		PROJECT NUMBER: 0014
DRAWING NUMBER: **GPN 0014-1**		REVISION: **A**

A1

APPENDIX A

INSPECTION PIT PROFILES

(IP 1 - IP 7)

TEST3000.txt

CLIENT: TGC ENGINEERS
JOB TITLE: EMAROMENI ACCESS ROAD, AMANDAWE
JOB NO: GPN 0014
PROFILED BY: GN
DATE PROFILED: 01/06/2026
DATE DRILLED: NA
DRILLED BY: NA
CONTRACTOR: NA
MACHINE: HAND DUG
TypeSET BY : GN
DIAM: NA
INCLINATION : NA

HOLE NO: IP1
/

0.04 Dull grey, dry, ASPHALT - (Road surfacing S1)

0.30 Slightly moist, grey and grey brown, dense to very dense, intact, stabilized layer comprising angular crushed hard rock (50-80%) in a slightly clayey SAND matrix (20-50%). - (Layerworks L1)

0.50 Slightly moist, dark brown orange, medium dense to dense, intact, stabilized layer comprising slightly clayey to sandy GRAVEL containing abundant rounded to semi-rounded gravel - (Layerworks L2: Fill)

0.80 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/
Notes:
Pit excavated on left hand shoulder (looking eastwards)
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]
@ 0.1 – 0.3: IMC

ATTRIBUTE : Depth (m) [WIDTH 2]

//

HOLE NO: IP2
/

0.04 Dull grey, dry, ASPHALT - (Road surfacing S1)

0.25 Slightly moist, grey and grey brown, dense to very dense, intact, stabilized layer comprising angular crushed hard rock (50-80%) in a slightly clayey SAND matrix (20-50%). - (Layerworks L1)

0.40 Slightly moist, dark brown orange, medium dense to dense, intact, stabilized layer comprising slightly clayey to sandy GRAVEL containing abundant rounded to semi-rounded gravel - (Layerworks L2: Fill)

0.70 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/
Notes:
Pit excavated on right hand shoulder (looking eastwards)
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]
@ 0.5 – 0.7: IMC

ATTRIBUTE : Depth (m) [WIDTH 2]

//

HOLE NO: IP3
/

0.15 Slightly moist, dark grey brown, medium dense, clayey `SAND containing abundant rock fragments – (Gravel Road Surfacing

0.40 Slightly moist, dark grey brown mixed with brown orange, slightly `clayey `SAND containing gravel and foreign objects (occurs in rhythmic layers – (Fill)

0.40 Slightly moist, dark grey brown, firm, fissured, intact, slightly clayey, `SAND - (Topsoil / Colluvium)

0.80 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/
Notes:
Pit excavated on left hand shoulder (looking eastwards)
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
No Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]

ATTRIBUTE : Depth (m) [WIDTH 2]

//

HOLE NO: IP4
/

0.15 Slightly moist, dark grey brown, medium dense, clayey `SAND containing abundant rock fragments – (Gravel Road Surfacing

0.40 Slightly moist, dark grey brown, firm, intact, slightly clayey, `SAND - (Topsoil / Colluvium)

0.60 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/
Notes:
Pit excavated on right hand shoulder (looking eastwards)
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]
@ 0.2 – 0.4: IMC

ATTRIBUTE : Depth (m) [WIDTH 2]

//

HOLE NO: IP5
/

0.10 Slightly moist, dark grey brown, medium dense, clayey `SAND containing abundant rock fragments – (Gravel Road Surfacing

0.40 Slightly moist, dark grey brown, firm, intact, slightly clayey, `SAND - (Topsoil / Colluvium)

0.55 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/
Notes:
Pit excavated on left hand shoulder (looking eastwards)
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
No Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]

ATTRIBUTE : Depth (m) [WIDTH 2]

//

HOLE NO: IP6
/

0.15 Slightly moist, dark grey brown, medium dense, clayey `SAND containing abundant rock fragments – (Gravel Road Surfacing

0.40 Slightly moist, dark grey brown, firm, intact, slightly clayey, `SAND - (Topsoil / Colluvium)

0.65 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/

Notes:
Pit excavated on left hand shoulder (looking eastwards)
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
No Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]

ATTRIBUTE : Depth (m) [WIDTH 2]

//
HOLE NO: IP7
/

0.15 Slightly moist, dark grey brown, medium dense, clayey `SAND containing abundant rock fragments – (Gravel Road Surfacing

0.40 Slightly moist, dark grey brown mixed with brown orange, slightly `clayey `SAND containing gravel and foreign objects – (Fill)

0.70 Slightly moist, dark brown orange, firm, fissured ` clayey `SAND to sandy CLAY - (Residual Tillite: Subgrade)

1.00 Slightly moist, dark yellowy orange, stiff, slickensided, clay - Completely weathered Dwyka Tillite :Subgrade)

/
Notes:
Pit excavated at the centre adjacent to the school
No groundwater seepage encountered
No sidewall collapse encountered
No hand digging refusal encountered
Samples taken for laboratory testing

ATTRIBUTE : Smpl. [WIDTH 2]
@ 0.8 – 1.0: IMC

ATTRIBUTE : Depth (m) [WIDTH 2]

//

end of text file TEST3000.txt

APPENDIX B

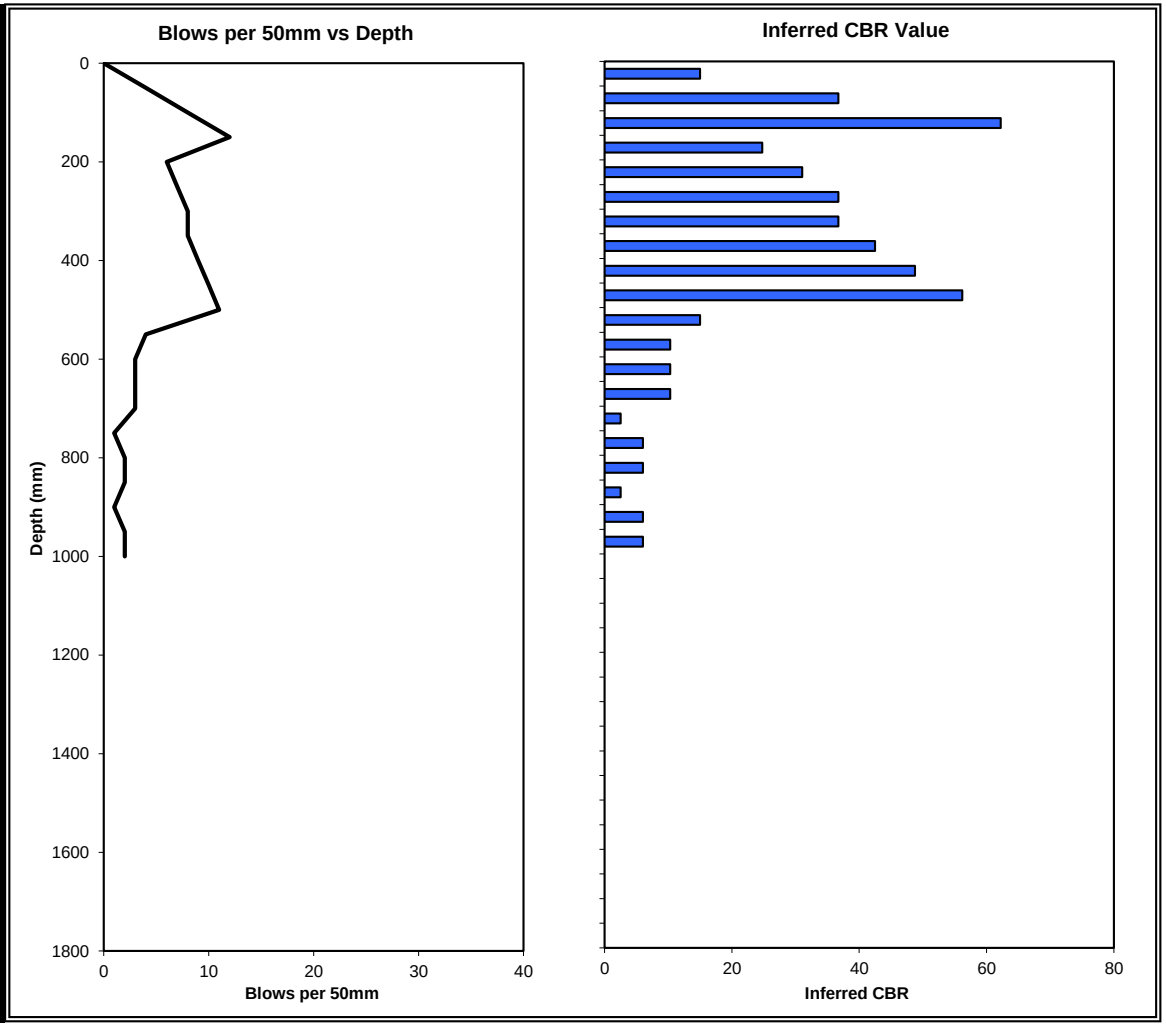
DYNAMIC CONE PENETROMETER TEST RESULTS (CBR DCP 1 - CBR DCP 8)

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP 1 - LHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	4	4	**15**
100	8	12	**37**
150	12	24	**62**
200	6	30	**25**
250	7	37	**31**
300	8	45	**37**
350	8	53	**37**
400	9	62	**43**
450	10	72	**49**
500	11	83	**56**
550	4	87	**15**
600	3	90	**10**
650	3	93	**10**
700	3	96	**10**
750	1	97	**3**
800	2	99	**6**
850	2	101	**6**
900	1	102	**3**
950	2	104	**6**
1000	2	106	**6**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty)Ltd

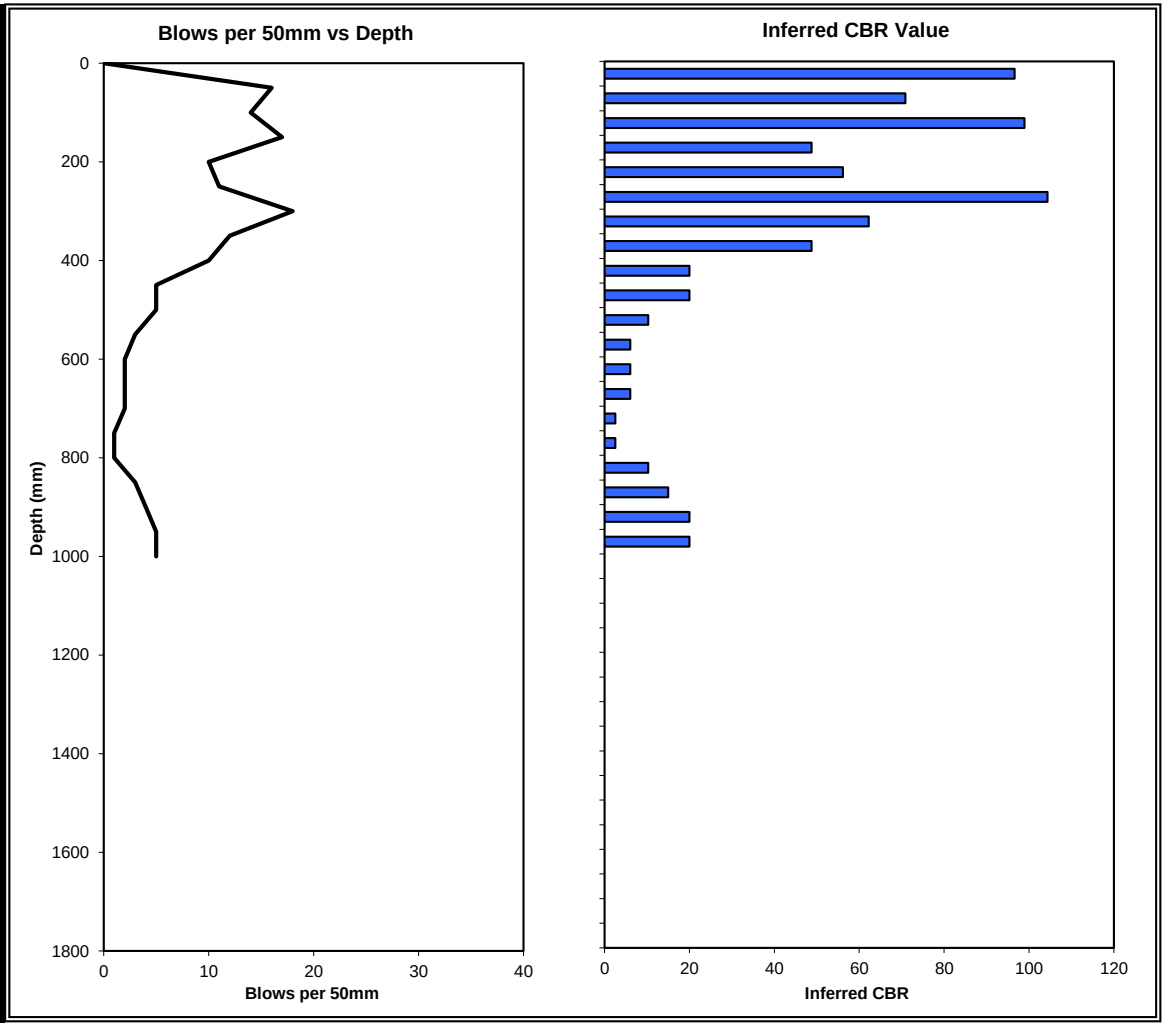
Figure no.: 2

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP 2 - RHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	16	16	**97**
100	14	30	**71**
150	17	47	**99**
200	10	57	**49**
250	11	68	**56**
300	18	86	**104**
350	12	98	**62**
400	10	108	**49**
450	5	113	**20**
500	5	118	**20**
550	3	121	**10**
600	2	123	**6**
650	2	125	**6**
700	2	127	**6**
750	1	128	**3**
800	1	129	**3**
850	3	132	**10**
900	4	136	**15**
950	5	141	**20**
1000	5	146	**20**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty) Ltd

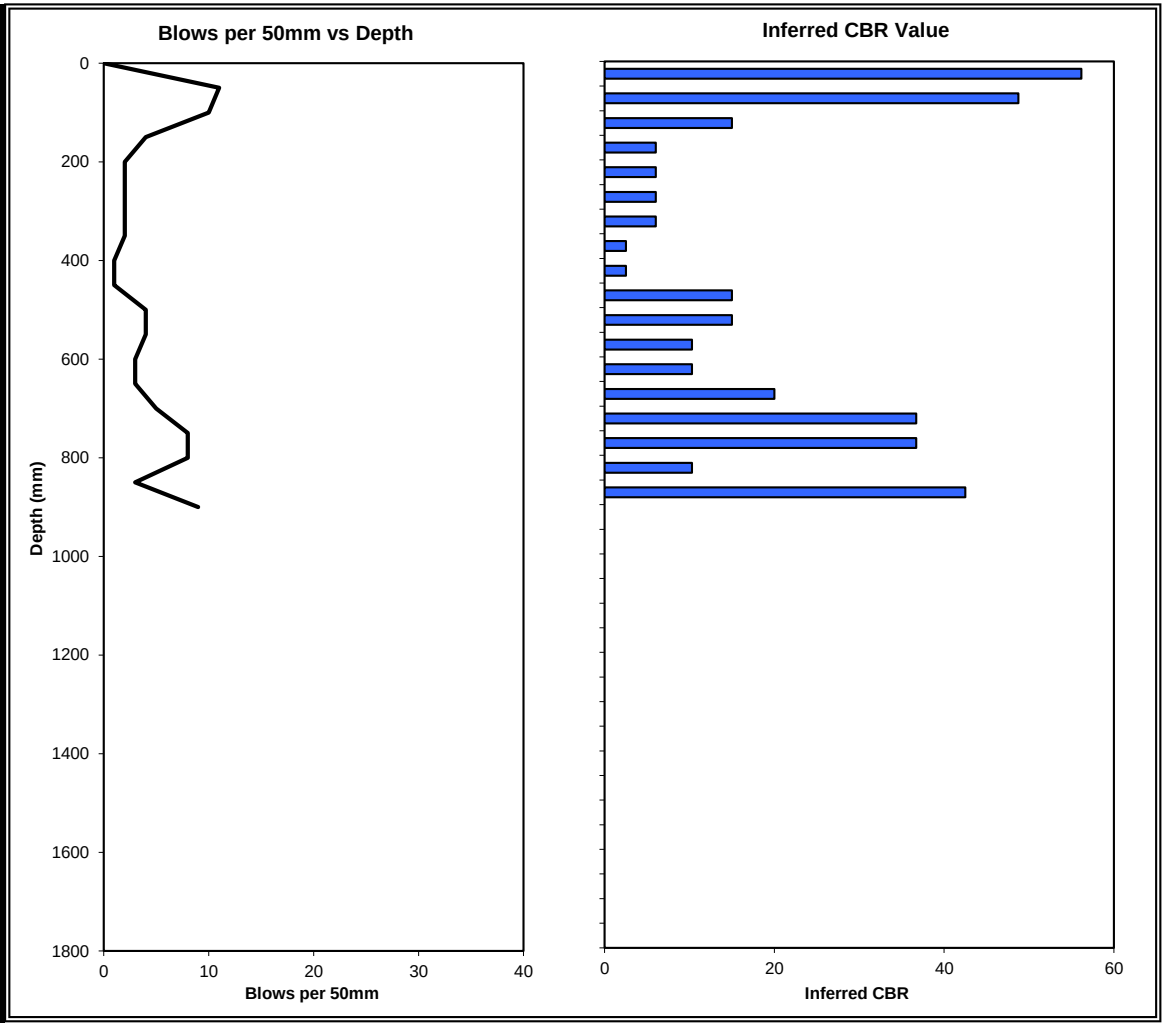
Figure no.: 3

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP RHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	11	11	**56**
100	10	21	**49**
150	4	25	**15**
200	2	27	**6**
250	2	29	**6**
300	2	31	**6**
350	2	33	**6**
400	1	34	**3**
450	1	35	**3**
500	4	39	**15**
550	4	43	**15**
600	3	46	**10**
650	3	49	**10**
700	5	54	**20**
750	8	62	**37**
800	8	70	**37**
850	3	73	**10**
900	9	82	**43**
950			
1000			
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty) Ltd

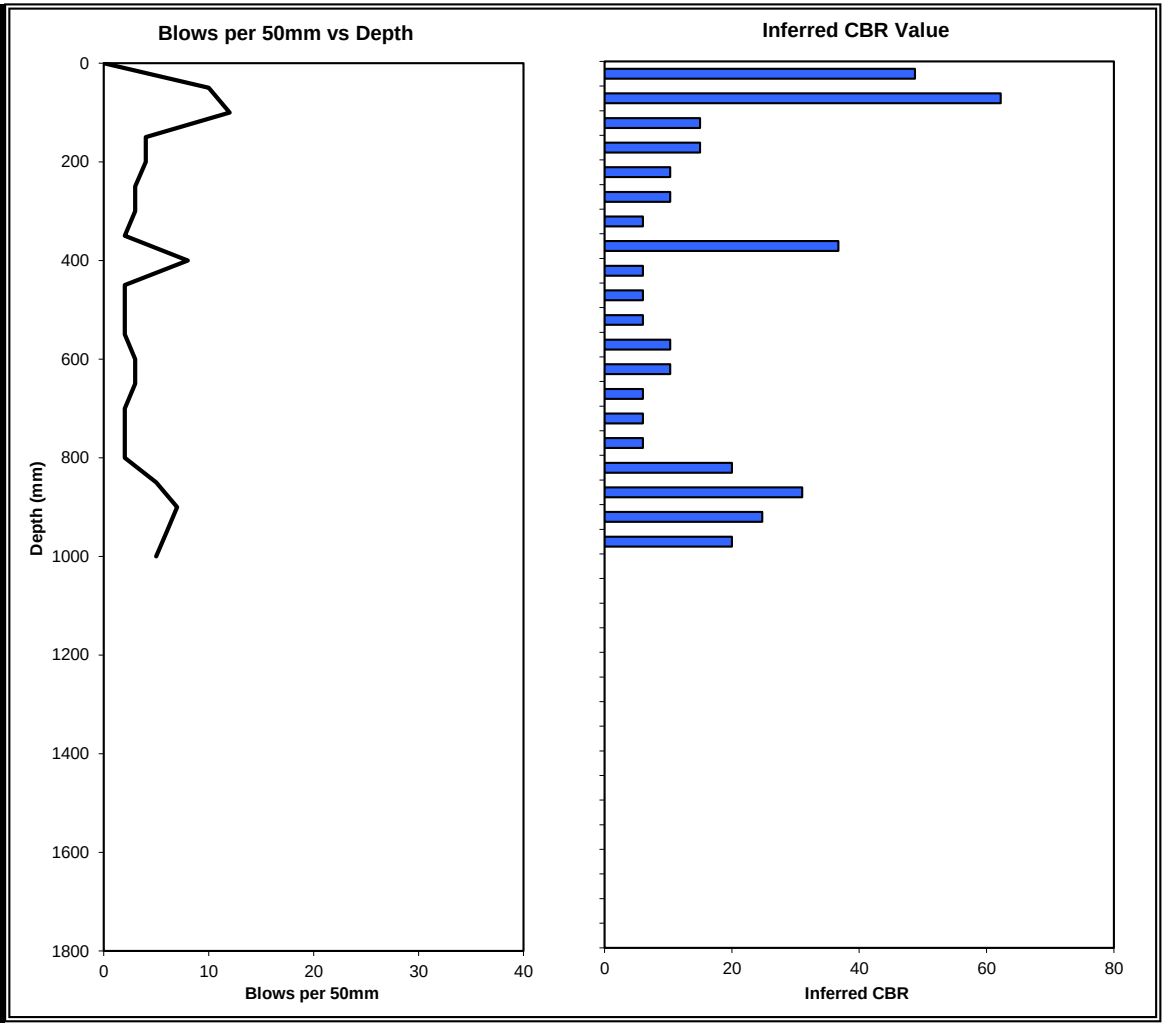
Figure no.: 4

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP LHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	10	10	**49**
100	12	22	**62**
150	4	26	**15**
200	4	30	**15**
250	3	33	**10**
300	3	36	**10**
350	2	38	**6**
400	8	46	**37**
450	2	48	**6**
500	2	50	**6**
550	2	52	**6**
600	3	55	**10**
650	3	58	**10**
700	2	60	**6**
750	2	62	**6**
800	2	64	**6**
850	5	69	**20**
900	7	76	**31**
950	6	82	**25**
1000	5	87	**20**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty)Ltd

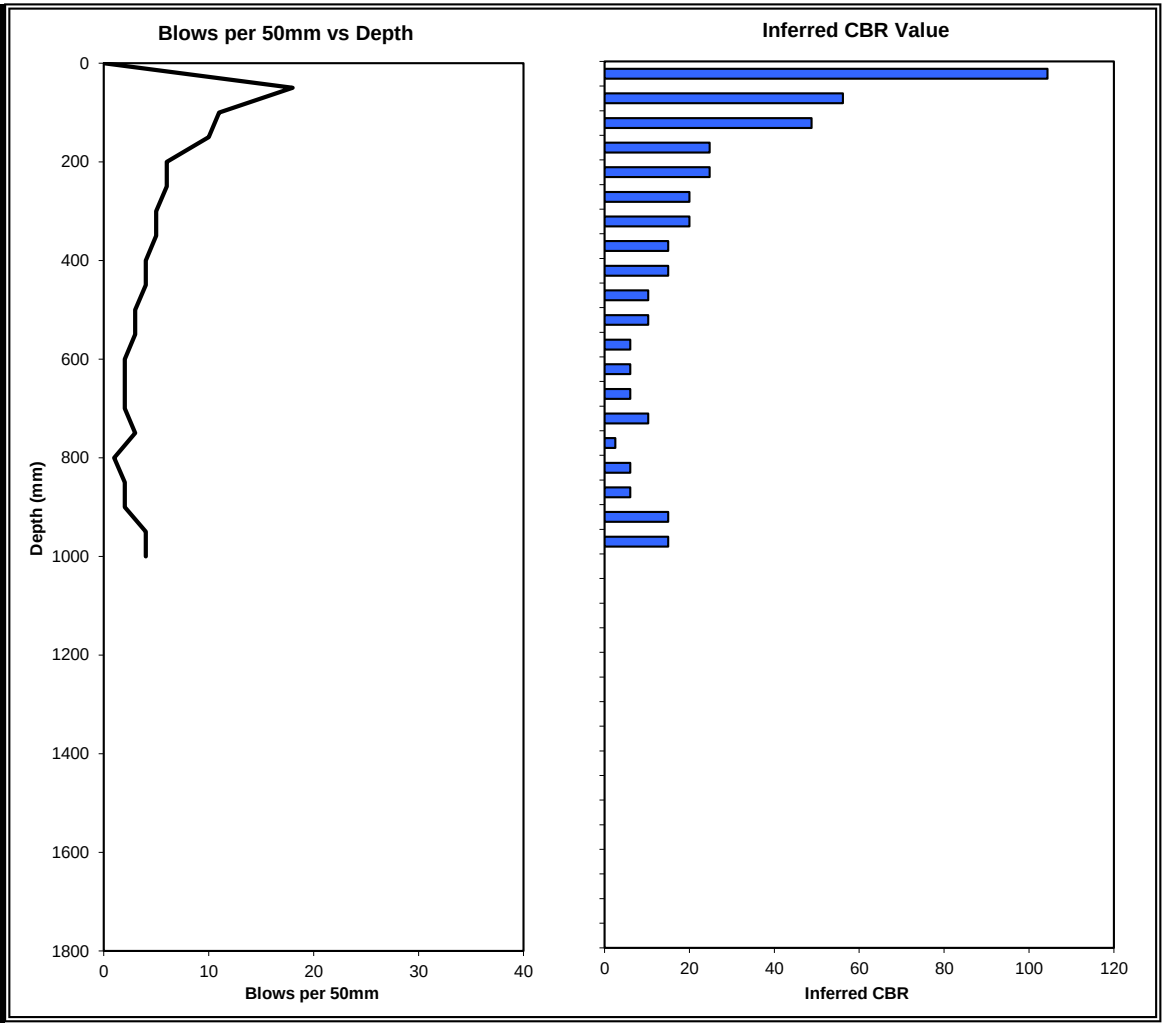
Figure no.: 5

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP 5 - LHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	18	18	**104**
100	11	29	**56**
150	10	39	**49**
200	6	45	**25**
250	6	51	**25**
300	5	56	**20**
350	5	61	**20**
400	4	65	**15**
450	4	69	**15**
500	3	72	**10**
550	3	75	**10**
600	2	77	**6**
650	2	79	**6**
700	2	81	**6**
750	3	84	**10**
800	1	85	**3**
850	2	87	**6**
900	2	89	**6**
950	4	93	**15**
1000	4	97	**15**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty)Ltd

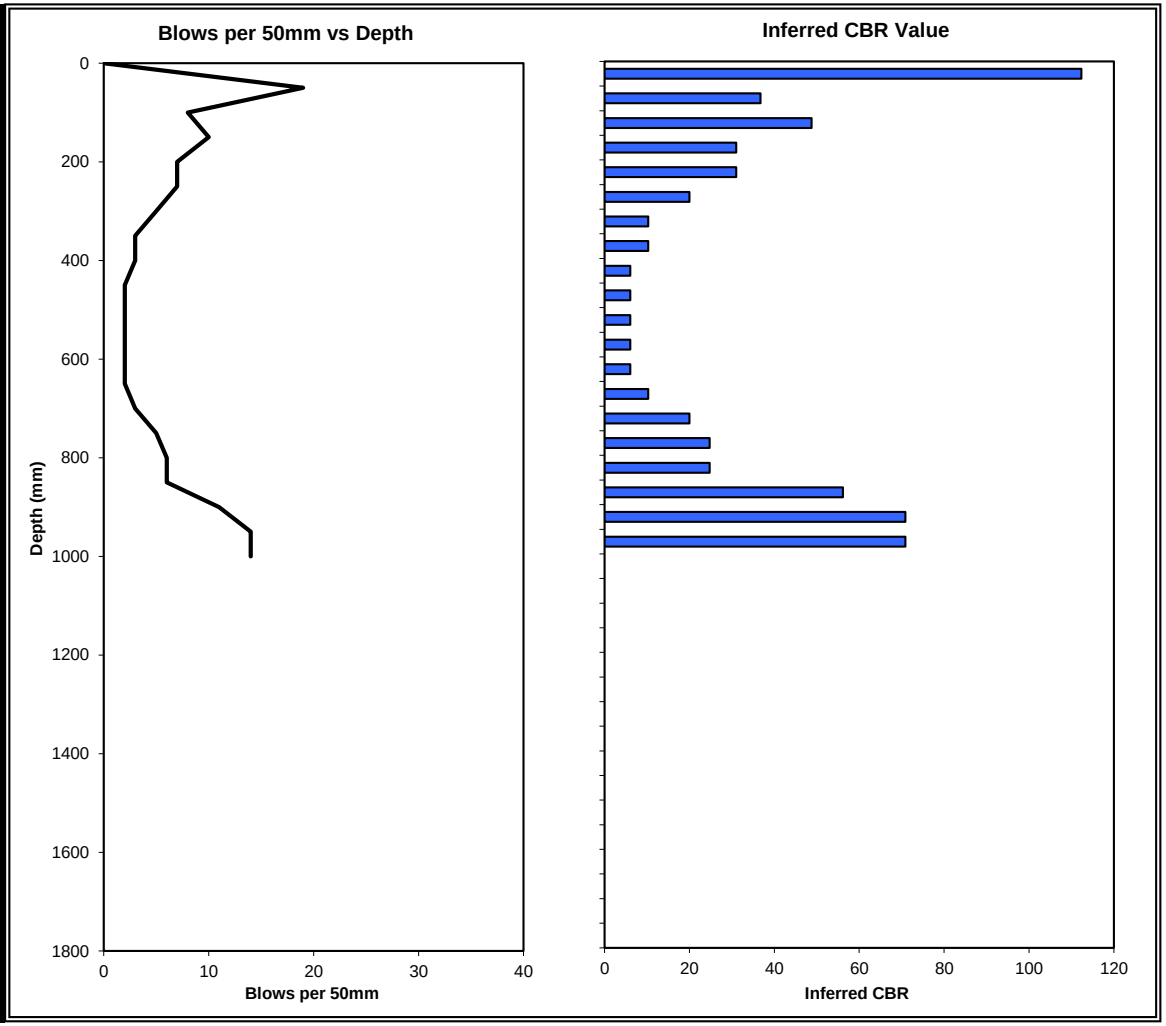
Figure no.: Figure no.:

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP 6 - RHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	19	19	**112**
100	8	27	**37**
150	10	37	**49**
200	7	44	**31**
250	7	51	**31**
300	5	56	**20**
350	3	59	**10**
400	3	62	**10**
450	2	64	**6**
500	2	66	**6**
550	2	68	**6**
600	2	70	**6**
650	2	72	**6**
700	3	75	**10**
750	5	80	**20**
800	6	86	**25**
850	6	92	**25**
900	11	103	**56**
950	14	117	**71**
1000	14	131	**71**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty)Ltd

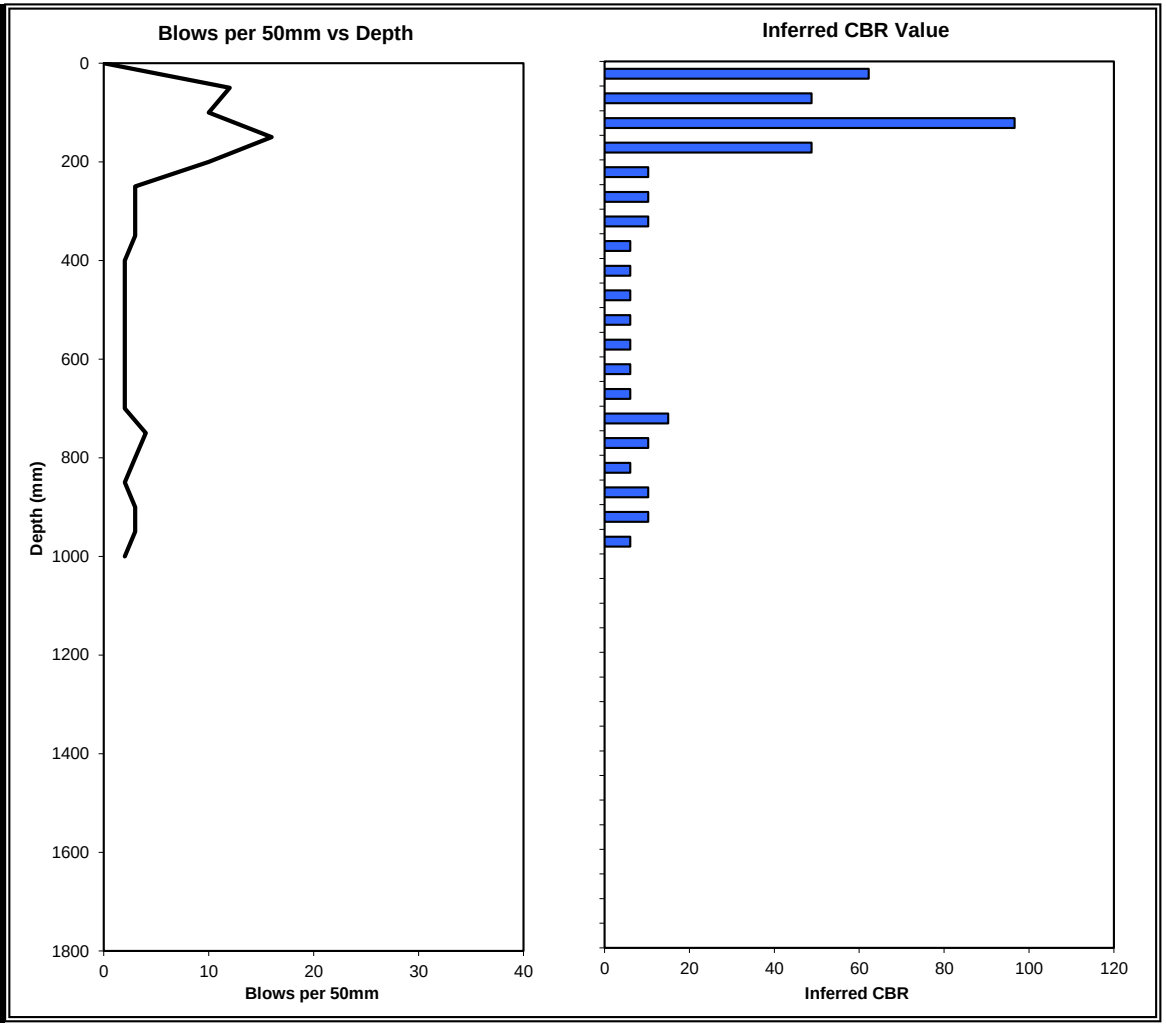
Figure no.: 7

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP 7 - LHS
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	12	12	**62**
100	10	22	**49**
150	16	38	**97**
200	10	48	**49**
250	3	51	**10**
300	3	54	**10**
350	3	57	**10**
400	2	59	**6**
450	2	61	**6**
500	2	63	**6**
550	2	65	**6**
600	2	67	**6**
650	2	69	**6**
700	2	71	**6**
750	4	75	**15**
800	3	78	**10**
850	2	80	**6**
900	3	83	**10**
950	3	86	**10**
1000	2	88	**6**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty)Ltd

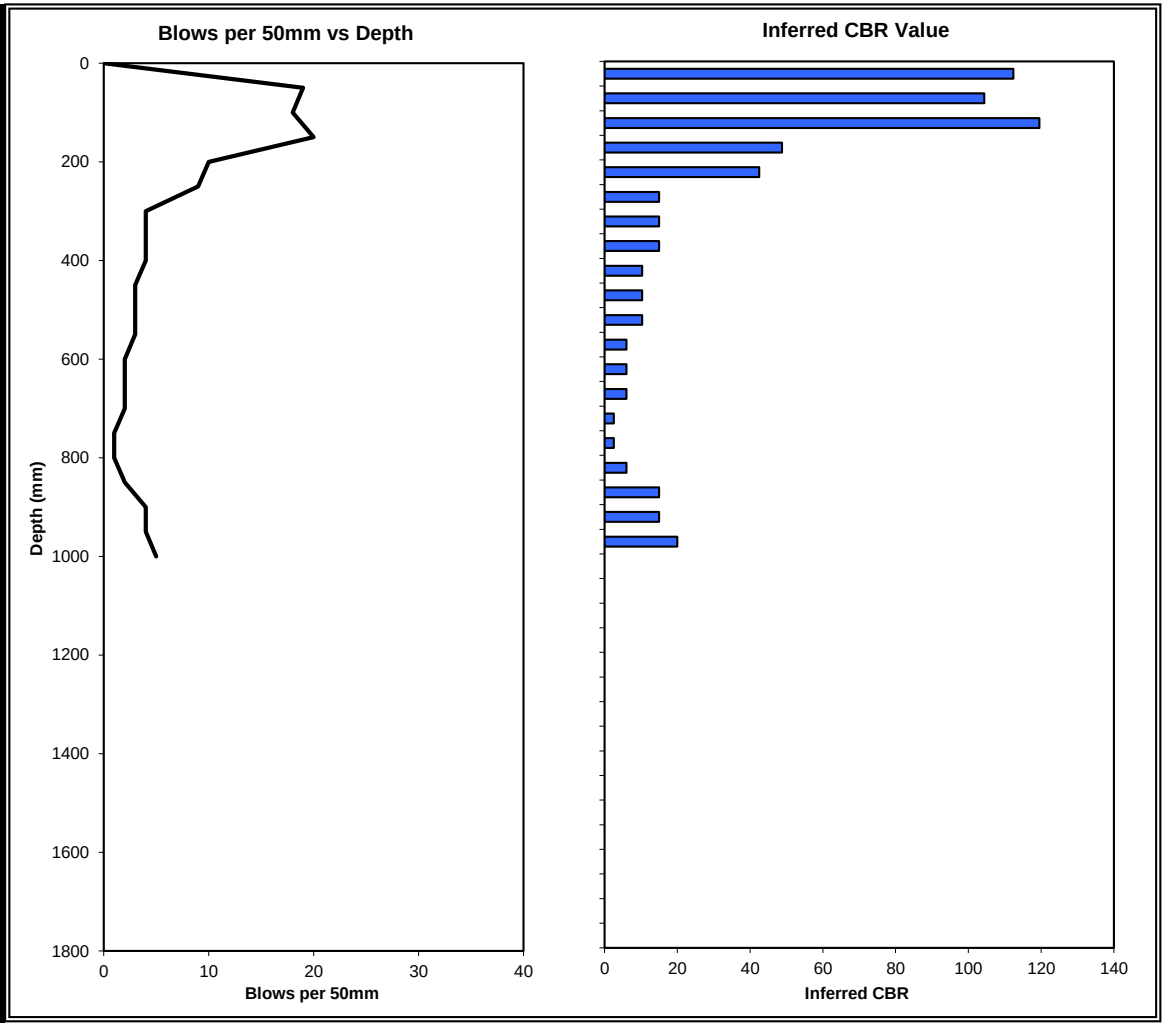
Figure no.: 8

CBR DCP Test Results

Job.: Emaromeni Access Road, Amandawe
Ref.: GPN 0014
Date.: 08.06.2026
Date of Test.: 01.06.2026
Test no.: CBR DCP Centre
Figure no.: -

Depth (mm)	Blows	Cumulative Blows	CBR
0	0	0	**0**
50	19	19	**112**
100	18	37	**104**
150	20	57	**120**
200	10	67	**49**
250	9	76	**43**
300	4	80	**15**
350	4	84	**15**
400	4	88	**15**
450	3	91	**10**
500	3	94	**10**
550	3	97	**10**
600	2	99	**6**
650	2	101	**6**
700	2	103	**6**
750	1	104	**3**
800	1	105	**3**
850	2	107	**6**
900	4	111	**15**
950	4	115	**15**
1000	5	120	**20**
1050			
1100			
1150			
1200			
1250			
1300			
1350			
1400			
1450			
1500			
1550			
1600			
1650			
1700			
1750			
1800			

Graphic Plot



GPN Alluvia Ventures (Pty) Ltd

Figure no.: 9

APPENDIX C

LABORATORY TEST RESULTS

Laboratory Test Summary

THEKWINI S
V.A.T. REGISTRATIO
68 Ridge Road,
Tollgate, DURBAN
Tel : (031) 201-8992

Job Description: GPN ALLUVIA VENTURES \ EMAROMENI ACCESS ROAD
Job no.: M2793
Date: 12,06,2026

Lab no.		260601	260602	260603	260604					
Location		IP1	IP2	IP4	IP7					
Depth		0	0	0	0					
Description		0	0	0	0					
		0	0	0	0					
Binder Material		-	-	-	-					
Particle Size (mm)	75	100								
	53	88								
	37,5	79								
	26,5	68		100	100					
	19	56		98	96					
	13,2	51	100	97	96					
	9,5	46	98	96	95					
	4,75	38	95	93	90					
	2	29	91	90	81					
	0,425	18	85	78	65					
	0,25	14	78	68	56					
	0,15	11	69	56	47					
	0,075	8	55	37	37					
	0,05	7	54	36	36					
	0,02	7	51	32	34					
	0,005	5	43	27	26					
	0,002	4	32	16	20					
Soil Mortar	Coarse Sand <2.0 >0.425mm	39,8	7,2	13,1	19,6					
	Fine Sand <0.425>0.05mm	55,7	42,8	56,0	51,6					
	Silt <0.05 >0.005	1,3	10,5	7,3	8,0					
	Clay <0.005	3,1	39,5	23,6	20,8					
Atterberg Limits	Liquid Limit	22	35	18	28					
	Plasticity Index	0	15	4	9					
	Linear Shrinkage	0	8	2	4,7					
	Natural MC	-	-	-	-					
Mod AASHTO Density	Dry Density kg/m^3	2166	1800	1955	1850					
	OMC	6,1	13	9,6	13					
CBR	100%	80	5	11	4					
	98%	78	4	9	3					
	95%	74	4	7	3					
	93% (Inferred)	66	3	4	3					
	90%	55	2	2	2					
	CBR Swell	0,00	2,08	0,62	2,25					
AASHTO Soil Classification		A - 1 - a (0)	A - 6 (6)	A - 4 (0)	A - 4 (0)					
Grading Modulus		2,45	0,68	0,95	1,17					
TRH 14 (1985)		G5	>G10	G10	>G10					

OILS LAB. CC

N NO. 4590210961.

P.O. Box 30464,
MAYVILLE, 4058
Fax : (031) 201-7920

MATERIALS ANALYSIS

THEKWINI SOILS LAB. CC
V.A.T. REGISTRATION NO. 4590210961.
68 Ridge Road, Tollgate, DURBAN
Tel : (031) 201-8992
P.O. Box 30464, MAYVILLE, 4058
Fax : (031) 201-7920

Project: GPN ALLUVIA VENTURES \ EMAROMENI ACCESS ROAD

Ref no.: M2793 **Lab no.:** 260601 **Borehole/Pit no.:** IP1 **Fig no.:** -

Depth: 0

Grading Analysis	
Grain Size (mm)	%Passing
75	100,0
53	88,2
37,5	78,9
26,5	68,3
19	55,7
13,2	50,8
9,5	46,3
4,75	38,0
2	29,3
0,425	17,6
0,25	14,0
0,15	11,0
0,075	7,8
0,05	7,4
0,02	6,7
0,005	5,2
0,002	3,5

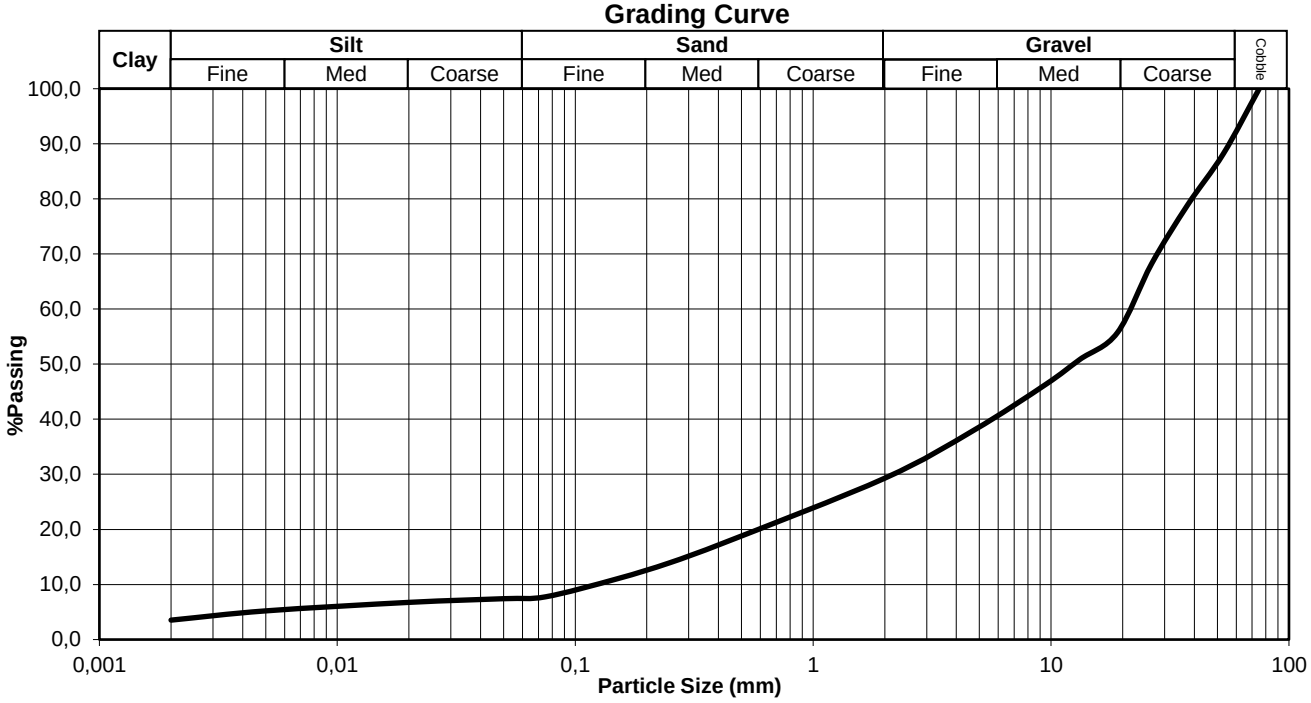
M.I.T SIZE CLASSIFICATION		
Cobble%		8,0
Gravel%	62,7	
Coarse		34,6
Medium		17,2
Fine		10,9
Sand%	21,7	
Coarse		10,4
Medium		6,4
Fine		4,9
Silt%	4,0	
Coarse		0,8
Medium		1,4
Fine		1,8
Clay%	3,5	

PLASTICITY	
Liquid Limit	22
Plasticity Index	0
Linear Shrinkage	0

GRADING	
D10 Size (mm)	0,12
Uniformity Coefficient	>99
Grading Modulus	2,45

CLASSIFICATION	
Potential Expansiveness	Low
Group Index	0
AASHTO Soil Classification	A - 1 - a
Unified Classification	GW - GM

Grading Curve



Ref no.: M2793 Fig no.: -

MATERIALS ANALYSIS

THEKWINI SOILS LAB. CC
V.A.T. REGISTRATION NO. 4590210961.
68 Ridge Road, Tollgate, DURBAN
Tel : (031) 201-8992
P.O. Box 30464, MAYVILLE, 4058
Fax : (031) 201-7920

Project: GPN ALLUVIA VENTURES \ EMAROMENI ACCESS ROAD

Ref no.: M2793 **Lab no.:** 260602 **Borehole/Pit no.:** IP2 **Fig no.:** 0

Depth: 0

Grading Analysis	
Grain Size (mm)	%Passing
75	100,0
53	100,0
37,5	100,0
26,5	100,0
19	100,0
13,2	100,0
9,5	98,3
4,75	95,3
2	91,4
0,425	84,8
0,25	78,4
0,15	69,0
0,075	55,3
0,05	53,9
0,02	50,9
0,005	42,6
0,002	32,4

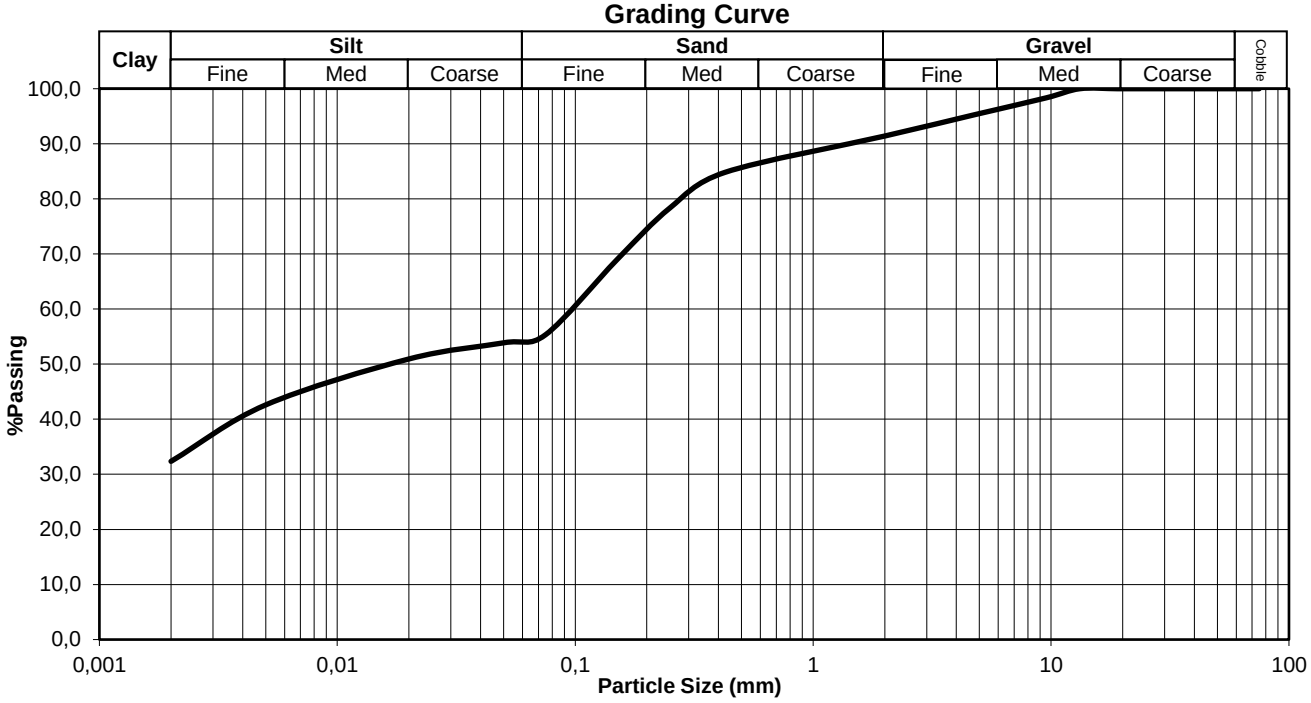
M.I.T SIZE CLASSIFICATION		
Cobble%		0,0
Gravel%	8,6	
Coarse		0,0
Medium		3,9
Fine		4,7
Sand%	37,0	
Coarse		5,9
Medium		11,9
Fine		19,2
Silt%	22,1	
Coarse		3,5
Medium		7,8
Fine		10,8
Clay%	32,4	

PLASTICITY	
Liquid Limit	35
Plasticity Index	15
Linear Shrinkage	8

GRADING	
D10 Size (mm)	<0.002
Uniformity Coefficient	NA
Grading Modulus	0,68

CLASSIFICATION	
Potential Expansiveness	Low
Group Index	6
AASHTO Soil Classification	A - 6
Unified Classification	CL or OL

Grading Curve



Ref no.: M2793 Fig no.: 0

MATERIALS ANALYSIS

THEKWINI SOILS LAB. CC
V.A.T. REGISTRATION NO. 4590210961.
68 Ridge Road, Tollgate, DURBAN
Tel : (031) 201-8992
P.O. Box 30464, MAYVILLE, 4058
Fax : (031) 201-7920

Project: GPN ALLUVIA VENTURES \ EMAROMENI ACCESS ROAD

Ref no.: M2793 **Lab no.:** 260603 **Borehole/Pit no.:** IP4 **Fig no.:** -

Depth: 0

Grading Analysis	
Grain Size (mm)	%Passing
75	100,0
53	100,0
37,5	100,0
26,5	100,0
19	97,6
13,2	97,0
9,5	95,5
4,75	93,4
2	89,7
0,425	77,9
0,25	67,9
0,15	56,0
0,075	37,4
0,05	35,6
0,02	32,0
0,005	27,1
0,002	16,3

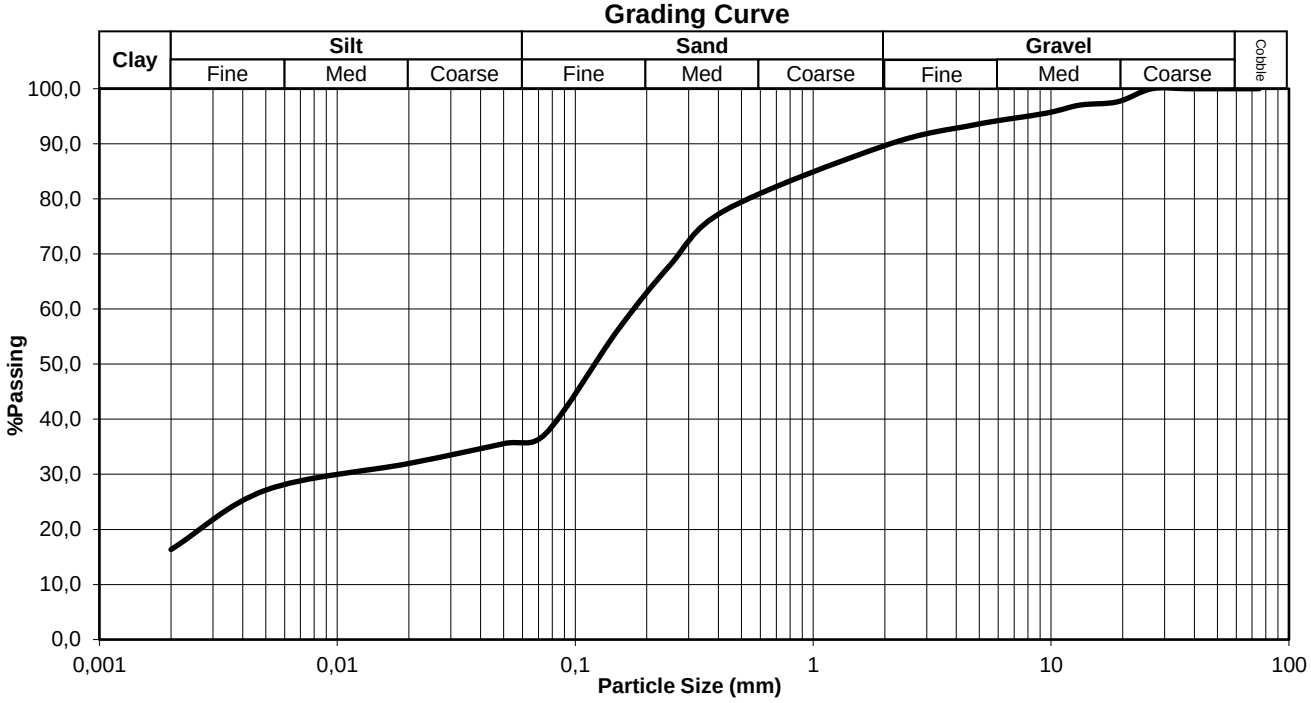
M.I.T SIZE CLASSIFICATION		
Cobble%		0,0
Gravel%	10,3	
Coarse		2,1
Medium		3,9
Fine		4,3
Sand%	53,4	
Coarse		10,5
Medium		17,2
Fine		25,7
Silt%	19,9	
Coarse		4,3
Medium		4,5
Fine		11,1
Clay%	16,3	

PLASTICITY	
Liquid Limit	18
Plasticity Index	4
Linear Shrinkage	2

GRADING	
D10 Size (mm)	<0.002
Uniformity Coefficient	NA
Grading Modulus	0,95

CLASSIFICATION	
Potential Expansiveness	Low
Group Index	0
AASHTO Soil Classification	A - 4
Unified Classification	SM - SC

Grading Curve



Ref no.: M2793 Fig no.: -

MATERIALS ANALYSIS

THEKWINI SOILS LAB. CC
V.A.T. REGISTRATION NO. 4590210961.
68 Ridge Road, Tollgate, DURBAN
Tel : (031) 201-8992
P.O. Box 30464, MAYVILLE, 4058
Fax : (031) 201-7920

Project: GPN ALLUVIA VENTURES \ EMAROMENI ACCESS ROAD

Ref no.: M2793 **Lab no.:** 260604 **Borehole/Pit no.:** IP7 **Fig no.:** -

Depth: 0

Grading Analysis	
Grain Size (mm)	%Passing
75	100,0
53	100,0
37,5	100,0
26,5	100,0
19	96,5
13,2	95,6
9,5	95,0
4,75	89,6
2	80,8
0,425	65,0
0,25	56,2
0,15	46,7
0,075	37,0
0,05	35,9
0,02	33,5
0,005	25,9
0,002	20,2

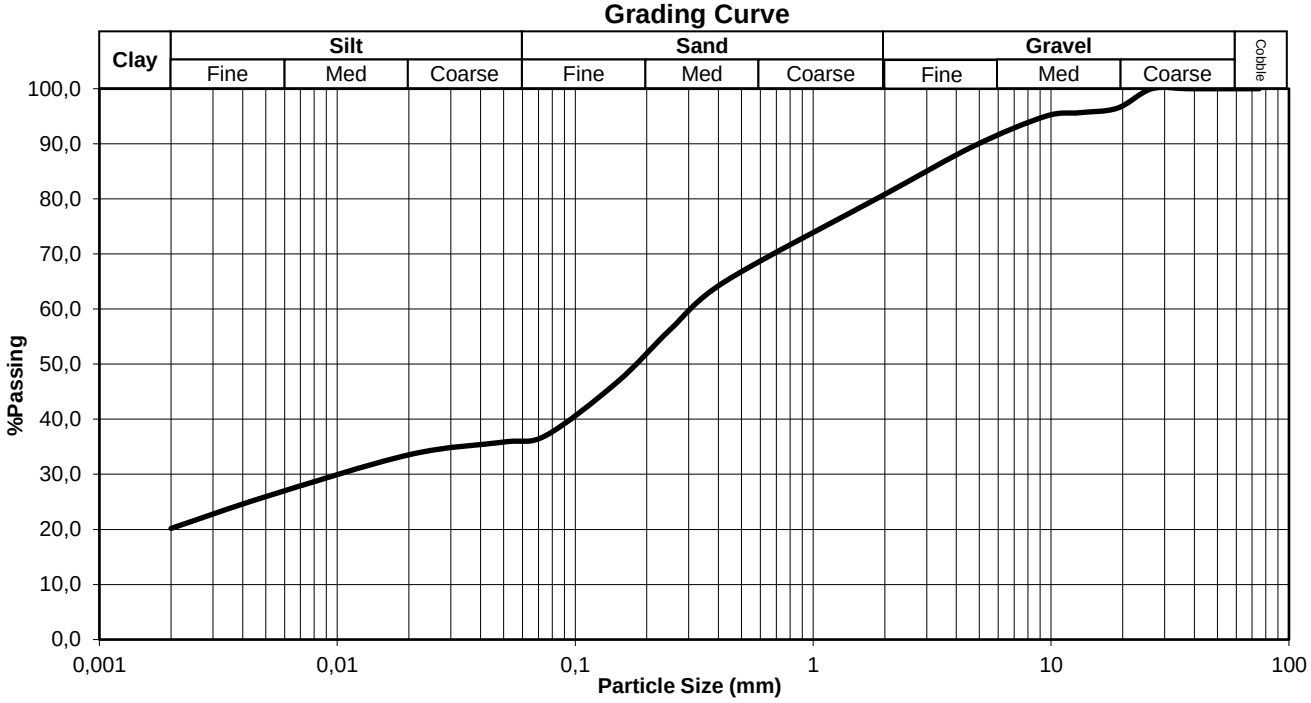
M.I.T SIZE CLASSIFICATION		
Cobble%		0,0
Gravel%	19,2	
Coarse		3,1
Medium		5,9
Fine		10,2
Sand%	44,5	
Coarse		14,1
Medium		15,3
Fine		15,2
Silt%	16,1	
Coarse		2,8
Medium		7,1
Fine		6,3
Clay%	20,2	

PLASTICITY	
Liquid Limit	28
Plasticity Index	9
Linear Shrinkage	4,7

GRADING	
D10 Size (mm)	<0.002
Uniformity Coefficient	NA
Grading Modulus	1,17

CLASSIFICATION	
Potential Expansiveness	Low
Group Index	0
AASHTO Soil Classification	A - 4
Unified Classification	SC

Grading Curve



Ref no.: M2793 Fig no.: -

APPENDIX D

PLATES 1 - 7

Plate 1: IP 1

Plate 2: IP 2

Plate 3: IP 3

Plate 4: IP 4

Plate 5: IP 5

Plate 6: IP 6

Plate 7: IP 7