



GREATER KOKSTAD MUNICIPALITY

**UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9
CONTRACT No. 30-23/24**

**CIDB CONTRACTOR GRADING
6CE OR HIGHER**

COMPILED BY:		ON BEHALF OF:	
	FMA ENGINEERS (PTY) LTD 18 YORK ROAD GILLITTS 3610		GREATER KOKSTAD MUNICIPALITY P O BOX 8 KOKSTAD 4700
Tel N°:	+27 31 764 2763	Tel N°:	+27 39 797 6674
Fax N°:	+27 86 542 4084	Fax N°:	+27 39 727 3676
Email:	admin@fmaengineers.co.za	Email:	Zamindlela.Godlimpi@kokstad.gov.za

**COMPULSORY BRIEFING MEETING DATE: 08 DECEMBER 2023 AT
11h00**

NAME OF TENDERER	
ADDRESS OF TENDERER	
TELEPHONE	
FAX	
TENDER SUM	

TENDER CLOSING DATE: 12 JANUARY 2024 AT 12h00



UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9

CONTRACT No. 30-23/24

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THE TENDER

T1: TENDERING PROCEDURES

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T1: TENDERING PROCEDURES

T1.1: TENDER NOTICE AND INVITATION TO TENDER



GREATER
KOKSTAD
MUNICIPALITY

PROVINCE OF KWAZULU-NATAL

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www.kokstad.gov.za

MUNICIPAL MANAGER'S OFFICE

UPGRADING OF HORSESHOE ROADS PHASE 2

BID NO: GKM 30-23/24

PUBLIC NOTICE

The Greater Kokstad Municipality hereby invites proposals from reputable Service Providers for the Upgrading of Horseshoe Roads Phase 2 with a CIDB Grading of **6CE or higher**.

The scope of work and bid requirements is stipulated in the bid document.

This advert is issued in compliance with the Preferential Procurement Regulation, 2022. Evaluation will be done on the following three-stages process in terms of National Treasury Circular No: 53:

Stage 1:

Assessment of Functionality. Only service providers who achieve a minimum of 60 points of the total available points as outlined in the bid documents as per each project will qualify for stage two of the Evaluation process.

Company Experience	(50 points)
Proposed Key Personnel	(20 points)
Schedule of Plant	(20 points)
Financial Viability	(10 points)

Stage 2:

Evaluation will be done based on the 80/20 preferential point system, where 80 points will be allocated for price and 20 points for specific goals. Bidders must submit the required documentation to claim preference points.

POINTS AWARDED SPECIFIC GOALS

The 80/20 preferential point system will be applied, where 80 points will be allocated for price and 20 points for Municipality's specific goals that is on ownership and RDP Goals.

PREFERENCE	80/20	Documents required for verification
GOAL 1 – Ownership- Maximum Points	10	
Business owned more than 50% by black person	3	- ID copy of director/Owner - Detailed CSD
Business owned less than 50% by black person	2	- ID copy of director/Owner - Detailed CSD
Business owned more than 50% by women black	3	- ID copy of director/Owner - Detailed CSD
Business owned less than 50% by women black	2	- ID copy of director/Owner - Detailed CSD
Business owned more than 50% by black youth	2	- ID copy of director/Owner - Detailed CSD
Business owned more than 50% by disabled person/military veterans	2	- ID copy of director/Owner - Detailed CSD

"A People-Centred City of Economic Possibilities by 2047"

GOAL 2 – RDP- Maximum Points	10	
Business falls under the SMME Category- QSE/EME	3	- BBBEE Certificate / Sworn Affidavit
Promotion of business located within KZN province	2	- Municipal accounts not older than 90 days or - Lease agreement if you are leasing or - Affidavit if you not liable to pay rates (to clarify reasons why you are not liable).
Promotion of business located within Harry Gwala District	5	- Municipal accounts not older than 90 days or - Lease agreement if you are leasing or - Affidavit if you not liable to pay rates (to clarify reasons why you are not liable).
Promotion of business located within Greater Kokstad Municipality	7	- Municipal accounts not older than 90 days or - Lease agreement if you are leasing or - Affidavit if you not liable to pay rates (to clarify reasons why you are not liable).

The tender document must be downloaded on the Greater Kokstad Municipality website www.kokstad.gov.za at no cost. The Greater Kokstad Municipality will not be held responsible for any incomplete documents downloaded on the Greater Kokstad Municipality website.

A COMPULSORY briefing meeting will be held on **08 December 2023 at 11h00**, at Adam Kok III Building, 75 Hope Street, Kokstad. No late comers will be admitted into the venue.

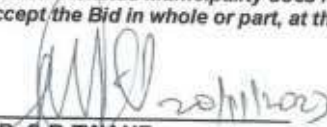
Sealed tenders, marked "**Bid No.: GKM 30-23/24 "UPGRADING OF HORSESHOE ROADS PHASE 2"**" must be deposited in the BOX located at the Reception Area, Adam Kok III Building, 75 Hope Street, Kokstad, not later than **12 January 2024 at 12H00**, where after, bids will be opened in public.

Late, telegraphic, e-mailed or faxed bids will not be considered.

Technical Enquiries: Mr. Z. Godlimpi on Tel: 039 797 6600; Fax: 039 727 3676, or email: zamindlela.godlimpi@kokstad.gov.za

Supply Chain Management enquiries: Ms. A. Mahlaka Tel. 039 797 6600, or email: andiswa.mahlaka@kokstad.gov.za

Greater Kokstad Municipality does not bind itself to accept the lowest or any bid and reserves the right to accept the Bid in whole or part, at the rates quoted


MR. S R ZWANE
MUNICIPAL MANAGER
NOTICE NO.: 68-2023/2024

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 Government Gazette No 38960 of 10 July 2016, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. Annexure F and Table G1 of that notice are deliberately not reproduced in this document; tenderers may review the standard on the CIDB website (see www.cidb.org.za).

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.

Please note that the word "Client" is used in this document and referred to as "Employer" in the Standard Conditions of Tender document.

Clause Number		Description
F.1		General
F.1.1		Actions
		The Employer is Greater Kokstad Municipality, represented by Mr. S. Zwane.
F.1.2		Tender Documents
		The tender documents issued by the employer comprise the following: THE TENDER T1: Tendering Procedures T1.1 Tender Notice and Invitation to Tender T1.2 Tender Data T2: Returnable Documents T2.1 List of Returnable Documents T2.2 Returnable Schedules THE CONTRACT C1: Agreements and Contract Data C1.1 Form of Offer and Acceptance C1.2 Contract Data C1.3 Performance Guarantee C1.4 Retention Money Guarantee C1.5 Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993

		C1.6 Functionality Criteria C2: Pricing data C2.1 Pricing Instructions C2.2 Schedule of Quantities C3: Scope of work C3.1 Standard Specifications C3.2 Project Specifications C3.3 Particular Specifications C4: Site information C4.1 Locality Plan C4.2 Drawings Not issued to Tenderer's, but available from the Master Builders Association, The South Institute of Architects, the Government printers, the Construction Industry Development Board, and the Employer, as applicable: 1. CIDB, "<i>The Standard for Uniformity in Construction Procurement Annex F, Standard Conditions of Tender</i>", Board Notice 136 of 2016 of Government Gazette 38960 of 10 July 2016. 2. GCCC SERIES 2015 "<i>General Conditions of Contract for Construction Works Agreement</i>", Third Edition– 2015. 3. The "<i>COLTO Standard Specifications for Road and Bridge Works for State Road Authorities</i>", 1998 edition. 4. The "<i>Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations 2014 (Government Gazette No 37305 of 7 February 2014, Notice No R. 84)</i>". 5. The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (November 2022).
F.1.4		Communication and the Employer's Agent
		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 Employers Agent in writing to tenderers will be regarded as amending the Tender Documents.
	The Employer's Agent is: Address: Tel N°: Fax N°: Contact Person Email:	FMA ENGINEERS (PTY) LTD 18 York Road GILLITTS 3610 +27 (31) 764 2763 +27 (86) 542 4084 Hlosokuhle Fuyana admin@fmaengineers.co.za

F.2		Tenderer's Obligations																
F.2.1		Eligibility																
F.2.1.1		Tenderers must satisfy the following criteria in order to be eligible to submit a tender; A. Construction Industry Development Board (CIDB) Registration 1. Be registered with the CIDB and reflect as “Active” at time of tender closing, 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, but not less than 6CE OR HIGHER class of construction work. B. Joint Ventures are eligible to submit a tender offer provided that: 1. Every member of the joint venture is registered (as “Active”) with the CIDB (at the time of tender closing). 2. The lead partner has a contractor grading designation in the CE class of construction work and has a grading designation of not lower than one level below the required grading designation; 3. The value of work to be undertaken by each partner must be within their CIDB grading limit. 4. The combined contractor grading designation calculated in accordance with the Construction Industry Development Board Regulations (2016) is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CE class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations: <table><tr><th>Designation</th><th>Deemed to satisfy joint venture arrangements</th></tr><tr><td>3</td><td>Three contractors registered in contractor grading designation 2</td></tr><tr><td>4</td><td>Three contractors registered in contractor grading designation 3</td></tr><tr><td>5</td><td>Two contractors registered in contractor grading designation 4 One contractor registered in contractor grading designation 4 and two registered in contractor grading designation 3</td></tr><tr><td>6</td><td>Two contractors registered in contractor grading designation 5 One contractor registered in contractor grading designation 5 and two registered in contractor grading designation 4</td></tr><tr><td>7</td><td>Two contractors registered in contractor grading designation 6 One contractor registered in contractor grading designation 6 and two registered in contractor grading designation 5</td></tr><tr><td>8</td><td>Three contractors registered in contractor grading designation 7</td></tr><tr><td>9</td><td>Three contractors registered in contractor grading designation 8</td></tr></table> 5. 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 authorized 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. 6. 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	Designation	Deemed to satisfy joint venture arrangements	3	Three contractors registered in contractor grading designation 2	4	Three contractors registered in contractor grading designation 3	5	Two contractors registered in contractor grading designation 4 One contractor registered in contractor grading designation 4 and two registered in contractor grading designation 3	6	Two contractors registered in contractor grading designation 5 One contractor registered in contractor grading designation 5 and two registered in contractor grading designation 4	7	Two contractors registered in contractor grading designation 6 One contractor registered in contractor grading designation 6 and two registered in contractor grading designation 5	8	Three contractors registered in contractor grading designation 7	9	Three contractors registered in contractor grading designation 8
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8	Three contractors registered in contractor grading designation 7																	
9	Three contractors registered in contractor grading designation 8																	

		Only Tenderers who are 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. D. Attendance of Compulsory Site Briefing Tenderers must attend the compulsory site briefing and have Form A4 "Certificate of attendance of Site Inspection Meeting" signed by the Employers agent or his representative will be eligible to submit a tender offer. E. Labour Intensive Construction The tenderer must demonstrate that they have in their employment suitable qualified management and supervisory personnel with an NQF 5 from a CETA accredited training provider in labour intensive construction. F. Tenderer's Tax Clearance Matters The Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
F.2.1.3		Only those tenderers who can demonstrate that; a. they will have in their employ, management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies; for supervisory and management staff during the validity of the contract, are eligible to submit tenders. Tender Qualification: Labour Intensive Contracts To qualify for award of the Contract, tenderers shall meet the following minimum qualifying criteria: a. Having participated in and graduated with fully satisfactory results from the relevant national qualification framework training organized under EPWP (or other similar project) and applying trained supervisory staff on a full-time basis for the execution of the works. LIC NQF Level 5. b. Liquid assets/or credit facilities covering the expected expenditures for two full work months c. Proposals for timely acquisition (own, lease, hire, etc.) of the essential minimum equipment d. The contractor will carry out the works using labour based work methods as described in the Special Conditions of Contract The tenderer must submit to the Employer, names of all management and supervisory staff that will be employed to supervise the labour intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirement. The contractor shall ensure that the minimum supervisor to worker ratio of 1:15 for effective supervision of Labour intensive works for all LI activities.

F.2.1.4		Schedule of Labour Content The minimum unskilled labour Content for this Project, i.e. the minimum job creation targets on the project shall be:																								
		<table><tr><td></td><td>Total</td><td>Men</td><td>Women</td><td>Youth</td><td>Disabled</td></tr><tr><td>Minimum Work Opportunities</td><td>21</td><td>4</td><td>5</td><td>11</td><td>1</td></tr><tr><td>Person Days</td><td>4,620</td><td>880</td><td>1,100</td><td>2,420</td><td>220</td></tr><tr><td>Training Days</td><td>12</td><td>3</td><td>3</td><td>3</td><td>3</td></tr></table>		Total	Men	Women	Youth	Disabled	Minimum Work Opportunities	21	4	5	11	1	Person Days	4,620	880	1,100	2,420	220	Training Days	12	3	3	3	3
		Total	Men	Women	Youth	Disabled																				
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Training Days	12	3	3	3	3																					
		A training schedule shall be provided to the tenderer by the Employer or his agent, and associated costs provisionally allowed for in the bill of quantities.																								
F.2.7		Clarification Meeting																								
		The arrangement for a compulsory clarification meeting is as stated in the Tender Notice and Invitation to Tender. Tenderers should be represented at the clarification meeting by a person or persons who are suitably qualified and experienced.																								
F.2.10.3		Pricing the Tender Offer																								
		This tender is NOT subject to Contract Price Adjustment.																								
F.2.12		Alternative Tender Offers																								
		No alternative offers will be accepted. This includes offering fixed rates in lieu of Contract Price Adjustment.																								
F.2.13		Submitting a tender offer																								
F2.13.2		“Return all returnable documents to the Employer after completing them in their entirety. Notwithstanding the format in which the tender documents are issued to Tenderers, no electronic form of tender offers will be accepted. Where additional supporting documentation is provided or required in terms of the Returnable Schedules listed in T2.1: List of Returnable Schedules, this shall be placed in a file labelled “Supporting Documentation”, and further labelled in accordance with F2.13.5 of T1.2: Tender Data. The file shall be provided with a Table of Contents matching the relevant items for T2.1 and shall be provided with labelled dividers for each of the corresponding sections wherein the supporting documentation shall be inserted. Failure to comply with these requirements may result in the tender being declared non-responsive. Notwithstanding any statement in any of the Returnable Schedules listed in T2.1 to the effect that supporting documentation must be attached to the associated Returnable Schedule, the supporting documentation must be placed in the supporting documentation files as stipulated above. The Schedule of Quantities must be fully and correctly filled in in by hand in black ink.”																								
F2.13.3		Number of copies required is One (1) original Copy. Telephonic, facsimile or e-mailed tender offers will not be accepted. The binding for the original volumes of the Tender Document may be dismantled but must be submitted in the original format in which they were issued by the Employer.																								
F.2.13.4		The tender shall be signed by a person duly authorised to do so.																								

F.2.13.5		The Employer's address for delivery of tender offers and identification details, to be shown on each tender offer package, are the following: Location of Tender Box: Greater Kokstad Municipality Offices Physical Address: Adam Kok III Building, 75 Hope Street, KOKSTAD, 4700 The identification details which must be stated in the tender offer outer package are: Tender Number: GKM 30-23/24 Title of Tender: UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9
F.2.13.6		A two-envelope Procedure as described in Clause F.3.5 will not be followed.
F.2.15		Closing Time
F.2.15.1		The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
F.2.16		Tender offer validity
F.2.16.1		The tender offer validity period is ninety (90) days from the closing date.
F.2.16.2		The maximum extension on the tender offer validity period is 90 days.
F.2.17		Clarification of Tender Offer after Submission
		a. 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. b. 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
		The certificates as required in the Returnable Schedules and Forms must be provided with the tender for each party to a consortium / joint venture.
F.3		The employer's undertakings
F.3.1		Respond to Requests from the Tenderer
F.3.1.1		The Employer will 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 tender documents.
F.3.4		Opening of Tender Submissions

F.3.4.1		The time and location for Public Opening of the tender offers received will be: Time: 12H00 Location: Greater Kokstad Municipality Offices
F.3.4.2		"number of points claimed for its BBBEE status level"
F.3.7		Grounds for rejection and disqualification
		Tenderers will be disqualified if any if, a. Any of the directors/shareholders of the Tenderer is listed on the National Treasury Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business in the public sector. b. If the Tender has completed the Compulsory Enterprise Questionnaire and is considered by the Employer to have a conflict of interest, which may impact on the Tenderers ability to perform the proposed contract in the best interest of the Employer or potentially compromise the tender process. c. If the Tenderer has persons in the service of the state who are not permitted to submit tenders or to participate in the contract".
F.3.8		Test for Responsiveness
F.3.8.2		"Tenders will also be considered non-responsive if: a. The Tenderer offer does not meet any one of the eligibility criteria specified in Clause F.2.1 as amended. b. The Tenderer has not fully and correctly completed the Offer portion of C1.1 Form of Offer and Acceptance i.e. the price has not been completed in words and numbers, the Tenderers details are not completed fully and correctly and the Tenderer has failed to sign the Offer portion of C1.1. c. If requested by the Employer during the tender evaluation process, the Tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the Employer's written request. d. The Tenderer's price is based on fixed rates in lieu of Contract Price Adjustment. e. There are any other material deficiencies whereby the price submitted is not for the identical requirements and scope of work as other correctly completed tenders (such as failing to incorporate the requirements of Addenda where these materially affected the pricing e.g. where the Notice to Tenderers required additions or replacements of part or all of the Bill of Quantities and the submitted Bill of Quantities does not reflect these changes)." f. Other requirements of the tender document.
F.3.11		Evaluation of tender offers
F.3.11.1		General
		The Procedure for the evaluation of responsive tenders is Method 2: Price and Preference. Quality (functionality) will be used as a prequalifying criterion, with tenderers required to meet a minimum quality score of 60% in order to qualify for further evaluation.
F.3.11.7		Scoring Price
		For details of scoring price refer to Returnable Schedule A13: Adjudication of Bids on Points Basis.
F.3.11.8		Scoring Preferences
		For details of scoring preference see Returnable Schedule A5: Preference Points Claim Form in Terms of preferential Procurement Regulations.

F.3.11.9		Scoring Functionality			
		The functionality will be applied as a prequalifying criterion to determine the tenderers that qualify for further evaluation. The quality shall be scored as per the table below. Points will be allocated only where the required supporting documentation has been submitted by the tenderer.			
		DETAILED BREAKDOWN OF FUNCTIONALITY POINTS			
	Quality criteria	Basis for points allocation	Score	Max. Points	Verification method
	Schedule of work carried out by Tenderer <i>(Reference name and contact details required)</i> NB: Further diligence may be done on subcontracted contracts	5 completed blacktop surface road projects 4 completed blacktop surface road projects 3 completed blacktop surface road projects 2 completed blacktop surface road projects 1 completed blacktop surface road projects	50 40 30 20 10	50	Letter of Appointment and Certificate of Completion for each of the projects must be attached and are required to claim points POINTS WILL ONLY BE GIVEN FOR EACH PROJECT WERE THE TENDERER HAS SUBMITTED ALL THE REQUIRED DOCUMENTS
	Proposed Key Personnel	1. CONTRACTS MANAGER Bsc/BTech Degree: Civil Engineer and at least 5 years or more post graduate experience and having been involved in 5 blacktop surface road projects. N. Diploma: Civil Engineering and at least 3 years or more post graduate experience and having been involved in 3 blacktop surface road projects. N. Diploma: Civil and less than 3 years post graduate experience and having been involved in 2 blacktop surface road projects.	8 5 3	8	CV with certified qualification certificates and ID copies of ALL key personnel must be attached and are required to claim any points. The submitted CVs must be signed by the proposed personnel, as well as the Tenderer's authorized signatory, to claim points. The CV template is attached as FORM B3.3 pg. RD 46. CERTIFICATION ON DOCUMENTS MUST NOT BE OLDER THAN 6 MONTHS. CERTIFICATION OF A PREVIOUSLY CERTIFIED DOCUMENT WILL NOT BE ACCEPTED. A COPY OF A PREVIOUSLY CERTIFIED DOCUMENT WILL NOT BE ACCEPTED FAILURE TO ADHERE TO THE ABOVE REQUIREMENTS WILL RESULT IN NO POINTS BEING AWARDED

		2. Additional points will be awarded if Contracts Manager has a CETA certified Labour-Intensive Certificate: NQF Level 5/7.	2	2	Certified Copy of proposed personnel's LIC NQF Level 5/7 certificate must be attached.
		3. CONSTRUCTION MANAGER • N. Diploma: Civil Engineering and at least 5 years or more post graduate experience and having been involved in 5 blacktop surface road projects. • N. Diploma: Civil Engineering and at least 2 years post graduate experience and having been involved in 3 blacktop surface road projects. • N. Diploma: Civil Engineering having less than 2 years post graduate experience and having been involved in 2 blacktop surface road projects.	5 3 1	5	CV and certified qualification certificates and ID copies of ALL key personnel must be attached and are required to claim any points. The submitted CVs must be signed by the proposed personnel, as well as the Tenderer's authorized signatory, to claim points. The CV template is attached as FORM B3.3 pg. RD 48 & RD 50 for construction manager & foreman respectively.
		4. FOREMAN • 10 years or more years' experience 5 blacktop surface road projects. • 5 to 9 years or more years' experience and having been involved in 3 blacktop surface road projects. • Less than 5 years' experience and having been involved in 2 blacktop surface road projects.	5 3 1	5	CERTIFICATION OF DOCUMENTS MUST NOT BE OLDER THAN 6 MONTHS. CERTIFICATION OF A PREVIOUSLY CERTIFIED DOCUMENT WILL NOT BE ACCEPTED. A COPY OF A PREVIOUSLY CERTIFIED DOCUMENT WILL NOT BE ACCEPTED. FAILURE TO ADHERE TO THE ABOVE REQUIREMENTS WILL RESULT IN NO POINTS BEING AWARDED.

	Schedule of Plant and Equipment	Tenderer to submit proof of ownership or access to the following plant: - Owns a Grader Will hire a Grader. - Owns a Roller (min. 12ton) Will hire a Roller (min. 12ton) - Owns a Watercart Will hire a Watercart. - Owns an Excavator Will Hire an Excavator - Owns 3x Tipper trucks (minimum 6m3) Will hire 3x Tipper trucks (minimum 6m3)	4 3 4 3 4 3 4 3 4 3	20	To claim points tenderers must submit proof of ownership or access to the required plant and equipment which will be verified as follows; i. Logbook in the name of the tenderer issued by the relevant authority if plant is owned; or, ii. Copy of logbook in the name of the financial institution through which the tenderer has bought plant via an instalment sale. The tenderer's name to appear on the logbook; or iii. Agreement of lease or hire between the tenderer and a registered supplier of the required plant. The agreement must be signed by authorized signatories from both parties. iv. Logbooks will be verified through the E-Natis System to prove ownership or to prove ownership of the lessor should the plant be leased. Should the plant not be registered under the Bidders' name or the Lessor, then it will lead to disqualification of the Bidder. NB: NO SCORE WILL BE AWARDED TO A BIDDER WHO DID NOT SUBMIT PROOF OF OWNERSHIP. OR A CONFIRMATION LETTER FOR PLANT HIRE CONFIRMING THAT THEY WILL HIRE THE PLANT/EQUIPMENT.
	Financial Viability	The Tenderer is to submit a Financial Status with a minimum bank rating of Code C for completing a project at a value of R11.6 million ,		10	The Tenderers must submit a Bank Rating with the following: i. Signature by the

		• Bank Rating with Code A • Bank Rating with Code B • Bank Rating with Code C	10 5 3		Bank Authority. ii. Bank stamp. iii. Alternatively, a bank rating letter with reference may be submitted. FAILURE TO SUBMIT BANK RATING WILL RESULT IN NO POINTS BEING AWARDED. Refer to Returnable Schedule FORM B3.4.
	TOTAL POINTS			100	
	TENDERERS WITH A SCORE OF LESS THAN 60% WILL BE REGARDED AS NON-RESPONSIVE AND WILL NOT BE EVALUATED FURTHER				
F.3.16		Notification to unsuccessful tenderers			
		If the Municipality's Bid Adjudication Committee has resolved that a tender be accepted, the unsuccessful tenderers shall be notified in writing. Any Tenderer wishing to exercise their right to appeal must submit their appeal in writing within 14 calendar days of publication of the <i>Intention to Award</i>. For the appeal to be considered, it must reach the municipality within the fourteen-day appeals period and be addressed to the Municipal Manager. Moreover, the appeal must be copied to the Supply Chain Manager and adhere to the following format: • Clearly set out the reasons for the appeal, • Clearly state in which way the appellant's rights have been affected by the decision, • Clearly state the relief or remedy sought by the appellant, and • be accompanied by a copy of the <i>Intention to Award</i> or notification advising the Tenderer of the decision of the Municipality. If no <i>bona fide</i> appeals have been received within the appeals period, the successful Tenderer will be notified of the Municipality's acceptance of their bid. The consideration of appeals and, if necessary, the invalidation of any decision made, shall be dealt with in terms of Municipality's appeals process.			
F.3.17		Provide Copies of the Contracts			
		"The number of paper copies of the signed contract to be provided by the Employer is ONE."			

T1.2.3 Additional Conditions of Tender

The additional conditions of tender are:

T.1.2.3.1	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 latest amended 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.

		In this regard the Tenderer shall submit with the tender, appended to Health and Safety Plan in T2.2 Returnable Documents, a detailed Health and Safety Plan prepared in accordance with the Health and Safety Specification (given in in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations).
T.1.2.3.2		T.1.2.3.2 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 Implementing Agent after the submission of any tender and the Tenderer shall be deemed to have: 1) Inspected the Tender 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 Tender 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 Implementing Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Implementing Agent in respect of errors in any tender due to the foregoing.
T.1.2.3.3		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.
T.1.2.3.4		Community Liaison Officer
		Democratically elected project area 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 R5 000 per month for the duration of contract.
T.1.2.3.5		Labour Intensive Construction / Use of Local Labour
		Aspects of this project will be carried out in accordance with the provisions of EPWP and as set out in clauses F.2.1.3 and F.2.1.4. The contractor must 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: • Excavation for shallow foundations • Steel fixing for foundations and other reinforced structures • Shuttering • Brick laying • Ancillary roadworks • General cleaning Recruitment of labour will be done in accordance with the Greater Kokstad Municipality's EPWP Recruitment Guidelines. The latest gazetted government labour rate for the Construction industry will to be used in the contract for remuneration of local labour.

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T2: RETURNABLE DOCUMENTS AND SCHEDULES

T2.1: LIST OF RETURNABLE DOCUMENTS (CHECKLIST)

The tenderer must complete and return documents all returnable document as listed below as part of his/her tender submission:

Form	Returnable Schedules (Documents) for Tender Evaluation Purposes	Yes/No
A1	Tax Compliance Status (MBD 2)	
A2	Tax Compliance Status (MBD 2)	
A3	Company / Cc / Partnership / JV / SP Registration Certificates and Certified ID copies of ALL directors, members and partners.	
A4	Certificate of attendance of Site Inspection Meeting	
A5	Declaration of Interest (MBD 4)	
A6	Declaration for Procurement Above R10 million (All applicable Taxes Included)	
A7	Preference Points claim form in terms of the Preferential Procurement Regulations 2022 (MBD 6.1)	
A8	Preference points for Specific goals	
A9	Declaration certificate for local production and content	
A10	Rates & Municipal Services Clearance Certificate (Proof of Locality)	
A11	Contractor's CIDB Registration Certificate	
A12	Central Supplier's Database registration certificate (to include all parties if tenderer is a Joint Venture or Consortium)	
A13	Letter of Good Standing with Compensation Fund (COID)	
A13	Declaration of Bidder's Past SCM (MBD 8)	
A14	Certificate of Independent Bid Determination (MBD 9)	
A15	Record of Addenda to Tender Documents	
A16	Labour Intensive Construction NQF 5/7 from CETA	
A17	Contractor's Health and Safety Declaration (Form concerning fulfilment of the Construction Regulations, 2014)	

MANDOTARY DOCUMENTS

Bidders must attach the following mandatory returnable documents to be considered for this bid and must note the applicable conditions:

- Price (s) quoted must be firm and must be inclusive of VAT.
- Copy of CSD (Central Supplier Database) summary report
- Copy of company registration documents (compulsory)
- For Joint Venture Agreements, attach the CK's of each of the joint venture members (if applicable)
- Certified ID(s) copies of company director(s)
- Proof of CIDB registration
- Copy of current municipal account for all Director/s and Company (must not be in arrears for a period longer than 90 days and not older than 90 days) or copy of lease agreement from the relevant authority if the director/s or company is leasing. If the business is operated from the residence of one of the Director/s, an original affidavit, certified, must be submitted stating the address of the premises. For any other arrangement that is not covered above, director/s must submit an original affidavit, certified clarifying the arrangement. All affidavits must be original affidavits, certified and must be from the SAPS. Affidavits must be signed by the company director/s.
- Printed copy of SARS Tax Pin for further verification.
- Completed and signed Municipal Bidding Document attached to the tender document.
- For Procurement above R10 Million, the tenderer must submit, if required by law to prepare annual financial statements for auditing, their audited annual financial statements:
 - (a) for the past three years; or
 - (b) since their establishment if established during the past three years.

The following conditions will apply:

- Price(s) quoted must be valid for at least (120) days from date of your offer.
- Price(s) quoted must be firm and must be inclusive of VAT and disbursements.
- The total bid price must be written on MBD 1
- All the required documents must be attached.

NB: No quotations will be considered from persons in the service of the state or persons who owe rates, services.

A1: INVITATION TO BID (MBD 1)

PART A

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF MUNICIPALITY/ MUNICIPAL ENTITY)					
BID NUMBER:	GKM 30-23/24	CLOSING DATE:	12 January 2024	CLOSING TIME:	12h00
DESCRIPTION	UPGRADING OF HORSESHOE ROADS PHASE 2				
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)					
75 HOPE STREET					
KOKSTAD					
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:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	☐ Yes ☐ No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
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	SCM		CONTACT PERSON	H. Fuyana	
CONTACT PERSON	Ms. A. Mahlaka		TELEPHONE NUMBER	031 764 2763	
TELEPHONE NUMBER	039 797 6600/44		FACSIMILE NUMBER	071 453 8431	
FACSIMILE NUMBER	039 727 3676		E-MAIL ADDRESS	admin@fmaengineers.co.za	
E-MAIL ADDRESS	Andiswa.Mahlaka@kokstad.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 DOCUMENT PROVIDED	
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? ☐ NO	☐ YES
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.	

A2: TAX COMPLIANCE STATUS (MBD 2)

The Bidder is to provide its Tax Compliance Status according to the South African Revenue Services (SARS) for the purposes of tendering.

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

1. Bidders must request a Tax Compliance Status (TCS) for tendering purposes either online via e-Filing or from any SARS branch office.
2. **Tenderers must provide a TCS PIN with their tender (in the form of the TCS result letter) to authorise the Employer to view the tenderer's current TCS online, as well as a copy of the Tax Clearance Certificate which is printable after completing the TCS request.**
3. In tenders where Consortia / Joint Ventures are involved, each party must submit a separate TCS PIN and Tax Clearance Certificate.

ATTACH PROOF TO THIS PAGE

A3: COMPANY / CC / PARTNERSHIP / JV / SP REGISTRATION CERTIFICATES

[NOTE: Registration Certificates for Companies, Close Corporations and Partnerships, or JV Agreements and Powers of Attorney for Joint Ventures, or ID documents for Sole Proprietors must be attached here. Bidders must include certified ID copies of all directors, members and partners]

In addition to the above, the tenderer must insert here certified copy of identity documents of directors, members or partners of the tendering entity.

ATTACH PROOF TO THIS PAGE

A4: CERTIFICATE OF ATTENDANCE OF SITE INSPECTION MEETING

**CONTRACT NO.: GKM 30-23/24
UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9**

(Please print)

It is hereby CERTIFIED that I, ... *(name)*
in my capacity as.....and a duly authorized
representative of..... *(the BIDDER)*
of *(address)*.....
in the company of.....*(the ENGINEER)*
attended the official Site Inspection on*(date)*
for and on behalf of the above-named Tenderer.

I hereby further DECLARE that I am satisfied with the description of the Works and the explanations given by the above-named Engineer.

Particulars of person(s) attending the meeting:

Name: Signature:

Capacity:

Name: Signature:

Capacity:

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

Name: Signature:

Capacity: Date and Time:



Municipality Stamp

A5: DECLARATION OF INTEREST (MBD 4)

1. No bid will be accepted from persons in the service of the state¹.
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, shareholder²):.....

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.....

.....

¹MSCM 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, 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,
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

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

A6: MBD 5 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

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

1. Are you by law required to prepare annual financial statements for auditing?

- 1.1. If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

***YES / NO**

.....

.....

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

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

***YES / NO**

- 2.2. If yes, provide particulars.

.....

.....

.....

.....

* Delete if not applicable

3. Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?

***YES / NO**

- 3.1. If yes, furnish particulars.

.....

.....

4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?

***YES / NO**

4.1 If yes, furnish particulars

.....
.....

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

**I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO
BE**

FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

A7: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022 (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 **To be completed by the organ of state**

(delete whichever is not applicable for this tender).

- a) The applicable preference point system for this tender is the 90/10 preference point system.
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/highest acceptable tender will be used to determine the accurate system once tenders are received.

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

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

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

The maximum points for this tender are allocated as follows:

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

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

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner 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
$Ps = 80 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)$	or	$Ps = 90 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)$
Where		
Ps = Points scored for price of tender under consideration		
Pt = Price of tender under consideration		
Pmin = Price of lowest acceptable tender		

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

3.2.1. POINTS AWARDED FOR PRICE

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

80/20	or	90/10
$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$	or	$Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$
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 (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
GOAL 1 – Ownership- Maximum Points		10		
GOAL 2 – RDP- Maximum Points		10		

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. 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]

4.6. 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:	

A8: PREFERENCE POINTS FOR SPECIFIC GOALS

PREFERENCE	80/20	Documents required for verification
GOAL 1 – Ownership- Maximum Points	10	
Business owned more than 50% by black person	3	- ID copy of director/Owner - Detailed CSD
Business owned less than 50% by black person	2	- ID copy of director/Owner - Detailed CSD
Business owned more than 50% by women black	3	- ID copy of director/Owner - Detailed CSD
Business owned less than 50% by women black	2	- ID copy of director/Owner - Detailed CSD
Business owned more than 50% by black youth	2	- ID copy of director/Owner - Detailed CSD
Business owned more than 50% by disabled person/military veterans	2	- ID copy of director/Owner - Detailed CSD
GOAL 2 – RDP- Maximum Points	10	
Business falls under the SMME Category- QSE/EME	3	- BBBEE Certificate / Sworn Affidavit
Promotion of business located within KZN province	2	- Municipal accounts not older than 90 days or - Lease agreement if you are leasing or - Affidavit if you not liable to pay rates (to clarify reasons why you are not liable).
Promotion of business located within Harry Gwala District	5	- Municipal accounts not older than 90 days or - Lease agreement if you are leasing or - Affidavit if you not liable to pay rates (to clarify reasons why you are not liable).
Promotion of business located within Greater Kokstad Municipality	7	- Municipal accounts not older than 90 days or - Lease agreement if you are leasing or - Affidavit if you not liable to pay rates (to clarify reasons why you are not liable).

ATTACH PROOF TO THIS PAGE

A9: RATES AND MUNICIPAL SERVICES CLEARANCE CERTIFICATE (PROOF OF LOCALITY)

Greater Kokstad Municipality reserves the right to reject any tender if any municipal rates and tariffs or municipal service charges owed by that tenderer and any of its directors to the municipality or to any other municipality or municipal entity are in arrears for more than 3 (three) months/90 days.

Tenderers are required to submit proof of payment of municipal rates and tariffs for the municipality in which the tender is being undertaken **and the** municipality in which their business address is recorded as per Companies and Intellectual Commission (CPIC) if different.

SCM certificates for the Greater Kokstad area are obtainable from the Greater Kokstad Municipality and the provision of this certificate is compulsory.

This serves to confirm that my **municipal rates and taxes are paid up to date and the following is attached:**

1. A municipal statement not owing more than 90 days and not older than 90 days, for the company and all its directors, indicating the status of payment of all municipal rates/ taxes, from the Municipality in which jurisdiction it's business/residence is situated or;
2. In the case where the tenderer does not own property/ is a tenant for the purpose of its business establishment or for the purpose of residence, the tenderer to provide copy of a valid lease agreement signed by both parties.
3. In a case where the directors are not liable for the payment of rates/taxes, an affidavit commissioned by SAPS clarifying reasons why the director/s is not liable for the payment of rates must be submitted.

NB: TENDERERS TO NOTE THAT THEY NEED TO SUBMIT PROOF THAT BOTH THE COMPANY AND THE DIRECTOR/S DO NOT OWE RATES/ TAXES

ATTACH PROOF TO THIS PAGE IN TERMS OF THE ABOVE

A10: CONTRACTOR'S CIDB REGISTRATION CERTIFICATE

The Tenderer shall attach the Proof of Registration with CIDB here. Where the tenderer is a Joint Venture or Consortium, they must attach the CIDB combined certificate for the respective entities, as calculated on the CIDB website.

**IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THEY
REFLECT AS "ACTIVE" ON THE CIDB'S ONLINE "REGISTER OF
CONTRACTORS" FOR THE DURATION OF THE TENDER VALIDITY
PERIOD. AN "INACTIVE" OR "SUSPENDED" REGISTRATION STATUS
WILL INVALIDATE THE TENDER.**

A11: CENTRAL SUPPLIER'S DATABASE REGISTRATION CERTIFICATE

The Tenderer shall attach the Proof of Registration with CSD here. Where the tenderer is a Joint Venture or Consortium, they must **all** attach the respective CSD registrations here. **Full registration report must be submitted with the tender and be printed not older than 7 days before the closing date of the bid)**

ATTACH PROOF HERE

A12: LETTER OF GOOD STANDING WITH COMPENSATION FUND (COID)

[NOTE: The tenderer's Workmen's Compensation Registration Certificate in accordance to the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993, is to be attached here].

ATTACH PROOF HERE

A13: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (MBD 8)

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐

4.3.1	If so, furnish particulars:		
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?	Yes ☐	No ☐
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?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

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

.....
SIGNATURE

.....
DATE

.....
POSITION

.....
NAME OF BIDDER

A14: CERTIFICATE OF INDEPENDENT BID DETERMINATION (MBD 9)

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 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.

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (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.

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.

.....
SIGNATURE

.....
DATE

.....
POSITION

.....
NAME OF BIDDER

A15: RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications received from the Employer or his representative before the date of submission of this tender offer, amending the tender documents, have been considered in this tender offer and are attached hereto.

Addendum No.	Date	Title or Details
1		
2		
3		
4		
5		

PLEASE ATTACH TO THIS PAGE A COMPLETE COPY OF EACH ADDENDUM ISSUED.

NAME: POSITION:

SIGNATURE: DATE:

(of person authorised to sign on behalf of the Bidder)

“FAILURE TO COMPLETE, SIGN AND DATE THIS FORM OR FAILURE TO ACKNOWLEDGE RECEIPT OF EACH ADDENDUM ISSUED OR FAILURE TO RETURN WITH THE TENDER SUBMISSION A COMPLETE COPY OF EACH ADDENDUM ISSUED SHALL RESULT IN THE TENDER BEING CONSIDERED NON-RESPONSIVE IN TERMS OF SUBCLAUSE F.3.8 OF THE CONDITIONS OF TENDER AND SUCH A TENDER SHALL BE REJECTED.”

A16: LABOUR INTENSIVE CONSTRUCTION (LIC) NQF LEVEL 5 OR 7 FROM CETA

The tenderer must demonstrate that they have in their employment suitable qualified management and supervisory personnel with an NQF 5 or 7 from a CETA accredited training provider in labour intensive construction.

ATTACH PROOF HERE

FAILURE TO SUBMIT THIS RETURNABLE DOCUMENT WILL INVALIDATE THE TENDER

A17: FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

[NOTE: this form must be completed concerning fulfilment of the construction regulations, 2014]

In terms of Regulation 4(3) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 7 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	

7 The Tenderer shall attach to this Form evidence that he is registered and in good standing with a compensation insurer who is approved by Department of Labour in terms of section 80 of the Compensation for Injury and Disease Act, 1993 (Act No 130 of 1993)(COID).

The Tenderer is required to disclose, by also attaching documentary evidence to this form, all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the Tenderer at any time during the 36 months preceding the date of this Tender.

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

1 ID NO:

2 ID NO:

T2.2: RETURNABLE SCHEDULES

The tenderer must complete and submit the following returnable schedules and documents:

Form	Returnable Schedules (Documents) that will be incorporated into the contract	Yes/No
B1	Certificate of Authority for Signatory	
B1.1	Certificate of Authority for Joint Ventures	
B1.2	Joint Venture Disclosure Form	

Form	Other Returnable Schedules (Documents)	Yes/No
B2	Schedule of Current Commitments	
B3	Forms for Functionality points	
B3.1	Company Experience	
B3.2	Schedule of plant and equipment	
B3.3	Proposed Key personnel	
B3.4	EPWP Requirements	
B4	Certificate for Insurance Cover	
B5	Preliminary Construction Programme	
B6	Estimated Monthly Expenditure	
B7	Compulsory Enterprise Questionnaire	

[NOTE: Each form must be completed fully the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure to complete the schedules and forms to the satisfaction of the Employer will, inevitably, prejudice the tender and may lead to rejection claiming the tender is not responsive].

B1: CERTIFICATE OF AUTHORITY FOR SIGNATORY

Signatories for close corporations and companies shall confirm their authority by attaching to this form a duly signed and dated copy of the relevant resolution of their members or their board of directors, as the case may be.

An example for a company is shown below:

"I/We*, the undersigned, am/are* duly authorised to sign the form of tender on behalf of

.....

by virtue of the Articles of Association/Resolution of the Board of Directors*, of which a certified copy is attached, or

.....

.....

*Delete whichever is inapplicable

NAME

SIGNATURE

DATE

NAME

SIGNATURE

DATE

WITNESSES

NAME

SIGNATURE

DATE

NAME

SIGNATURE

DATE

B1.1: CERTIFICATE OR AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed only if 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 :
		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 appended to this Schedule.

B1.2: JOINT VENTURE DISCLOSURE FORM (THIS IS REQUIRED IN ADDITION TO THE JV AGREEMENT)

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. IDENTITY OF EACH AFFIRMABLE JOINT VENTURE PARTNER

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 NONAFFIRMABLE 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.....

B2: SCHEDULE OF CURRENT COMMITMENTS

NOTE:

1. The Tenderer shall list below all Contracts currently under construction or awarded and about to commence and Tenders for which offers have been submitted but awards not yet made.
2. In the event of a joint venture enterprise, details of all the members of the joint venture shall similarly be attached to this form.
3. The lists must be restricted to not more than 20 Contracts and 20 Tenders. If a Tenderer's actual commitments or potential commitments are greater than 20 each, those listed should be in descending order of expected final contract value or sum tendered.]

Table 1 Contracts awarded				
Client	Project	Expected total value of contract (incl. VAT)	Duration (Months)	Expected completion date

Table 2 TENDERS NOT YET AWARDED				
Client	Project	Sum Tendered (incl. VAT)	Tendered Duration (Months)	Expected commencement

NAME:

POSITION:

SIGNATURE:

DATE:

(of person authorised to sign on behalf of the Bidder)

B3: FORMS FOR FUNCTIONALITY POINTS

B3.1: COMPANY EXPERIENCE

[NOTE: Each partner to a Joint Venture is to provide the information required below with respect to his company's contribution to the experience of the Joint Venture]

The Tenderer shall list below the last ten civil engineering contracts of a similar nature that they have been awarded. This information is material to the award of the Contract. The tenderer must also attach the Letter of Appointment and Completion Certificate for the respective projects.

EMPLOYER (Name, Tel and Fax number)	CONSULTING ENGINEER (Name, Tel and Fax number)	NATURE OF WORK (Brief summary with special mention of similarities with this project and Functionality Criteria)	VALUE OF WORK	YEAR OF COMPLETION

NAME:

POSITION:

SIGNATURE:

DATE:

(of person authorised to sign on behalf of the Bidder)

B3.2: SCHEDULE OF PLANT AND EQUIPMENT

Each partner to a joint Venture is to provide the information required below with respect to his company's contribution to the plant and equipment resourcing of the Joint Venture.

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

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

DESCRIPTION (type, size, capacity etc.)	QUANTITY	YEAR OF MANUFACTURE

Attach additional pages if more space is required

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

DESCRIPTION (type, size, capacity etc.)	QUANTITY	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

Attach additional pages if more space is required

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

NAME: POSITION:

SIGNATURE: DATE:

(of person authorised to sign on behalf of the Bidder)

The Tenderer shall list below the key personnel (including first nominee and the second choice alternate), whom he proposes to employ on the Contract should his Tender be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities. Form A3 will be used to evaluate the functionality of the submission. An organogram and employee CV's need to be appended to this form

DESIGNATION	NAME AND NATIONALITY OF: (i) NOMINEE (ii) ALTERNATE	SUMMARY OF QUALIFICATIONS, EXPERIENCE AND PRESENT OCCUPATION
CONTRACTS MANAGER	i. ii.	i. ii.
CONSTRUCTION MANAGER	i. ii.	i. ii.
FOREMAN	i. ii.	i. ii.

CURRICULUM VITAE OF KEY PERSONNEL (CONTRACTS MANAGER)
FILL IN TEMPLATE CV AND ATTACH CERTIFIED QUALIFICATIONS AND CERTIFICATES HERE

SURNAME	:	
FIRST NAME(S)	:	
DATE OF BIRTH	:	
PROFESSIONAL REGISTRATION No.	:	
YEAR OF JOINING FIRM	:	
ENVISAGED ROLE IN PROJECT	:	
YEARS OF EXPERIENCE	:	
SUMMARY OF PROJECT RELATED EXPERIENCE		
Project Description		Project Role and Duties
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		

Client:		
Employer:		
Project name:		
Project Value:		
EDUCATION		
Year	Institution	Qualification Obtained
PROFESSIONAL REGISTRATION		
Institution		Registration Category
OTHER TRAINING & CERTIFICATION		
CERTIFICATION BY KEY PERSONNEL		
I, the undersigned, _____ certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience. SIGNATURE: DATE:		

NAME: POSITION:

SIGNATURE: DATE:

(of person authorised to sign on behalf of the Bidder)

CURRICULUM VITAE OF KEY PERSONNEL (CONSTRUCTION MANAGER)
FILL IN TEMPLATE CV AND ATTACH CERTIFIED QUALIFICATIONS AND CERTIFICATES HERE

SURNAME	:	
FIRST NAME(S)	:	
DATE OF BIRTH	:	
PROFESSIONAL REGISTRATION No.	:	
YEAR OF JOINING FIRM	:	
ENVISAGED ROLE IN PROJECT	:	
YEARS OF EXPERIENCE	:	
SUMMARY OF PROJECT RELATED EXPERIENCE		
Project Description		Project Role and Duties
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		

Client:		
Employer:		
Project name:		
Project Value:		
EDUCATION		
Year	Institution	Qualification Obtained
PROFESSIONAL REGISTRATION		
Institution		Registration Category
OTHER TRAINING & CERTIFICATION		
CERTIFICATION BY KEY PERSONNEL		
I, the undersigned, _____ certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience. SIGNATURE: DATE:		

NAME: POSITION:

SIGNATURE: DATE:

(of person authorised to sign on behalf of the Bidder)

CURRICULUM VITAE OF KEY PERSONNEL (FOREMAN)
FILL IN TEMPLATE CV AND ATTACH CERTIFIED QUALIFICATIONS AND CERTIFICATES HERE

SURNAME	:	
FIRST NAME(S)	:	
DATE OF BIRTH	:	
YEAR OF JOINING FIRM	:	
ENVISAGED ROLE IN PROJECT	:	
YEARS OF EXPERIENCE	:	
SUMMARY OF PROJECT RELATED EXPERIENCE		
Project Description		Project Role and Duties
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		
Client:		
Employer:		
Project name:		
Project Value:		

Client:		
Employer:		
Project name:		
Project Value:		
EDUCATION		
Year	Institution	Qualification Obtained
OTHER TRAINING & CERTIFICATION		
CERTIFICATION BY KEY PERSONNEL		
I, the undersigned, _____certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience. SIGNATURE: DATE:		

NAME: POSITION:

SIGNATURE: DATE:

(of person authorised to sign on behalf of the Bidder)

B3.4: EPWP REQUIREMENTS

a. Schedule of Labour Content

The Tenderer shall be required to participate in job creation (employment of local labour) by executing various portions of the Works using local labour (unskilled or semi-skilled), recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project). Proof of citizenship or work visa may be audited during the contract period.

The creation of one job shall mean the employment, for any period of time, of one such unskilled or semi-skilled labourer from the local community.

The Tenderer shall note the requirements for Job Creation Reporting for EPWP as set out in Part E: Expanded Public Works Programme (EPWP) of the project specifications.

The number of jobs to be created using such local labour is inclusive of the local labour employed to execute various portions of the Works by both the main Contractor and any subcontractors, including the small development subcontractors in terms of Part F: Small Contractor Development of the project specifications.

The number of jobs to be created using such local labour shall include for a minimum percentage allocation to the following individual targeted groups:

- 60% Women;
- 55% Youth; and
- 2% Disabled.

The minimum required content of such local labour for this project shall be calculated as follows:

$$\begin{aligned} &\text{Minimum required content of such local labour (\%)} \\ = &\frac{(100 \times \text{amount spent on wages for such local labour (excluding VAT)})}{(\text{Subtotal 1* (excluding contingencies, contract price adjustment and VAT)})} \end{aligned}$$

*Subtotal 1 is obtained from the Tender Summary under in the Bill of Quantities

The minimum required content of such local labour for this project shall be 7.71%.

For purposes of completing the table on the next page containing the Tenderer's declaration with respect to participation in job creation using local labour, the value of Subtotal 1* (excluding contingencies, contract price adjustment and VAT) which is obtained from the Tender Summary under C2.2 Bill of Quantities, shall be used.

TENDERER'S DECLARATION WITH RESPECT TO PARTICIPATION IN JOB CREATION USING LOCAL LABOUR:

The Tenderer shall complete the table below reflecting the anticipated local labour force to be employed on this contract, including such local labour employed by subcontractors.

I/We hereby tender to participate in job creation through the employment of local labour by creating the following number of jobs using unskilled or semi-skilled labourers, recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project), including for a minimum allocation of 60% Women, 55% Youth and 2% Disabled:

The minimum required content of such local labour for this project shall be calculated as follows:

Local labour comprising unskilled or semi-skilled labourers recruited from the local community	Anticipated number of jobs to be created	Total number of person-days anticipated	Wage rate per person-day (excluding VAT) (Rand)	Total wage cost (excluding VAT) (Rand)
Contractor's local labour content				
Subcontractors' local labour content				
Total anticipated wage cost of local labour content (excluding VAT)				R
Subtotal 1* (excluding contingencies, contract price adjustment and VAT)				R
Hence anticipated local labour content expressed as a percentage of Subtotal 1* (excluding contingencies, contract price adjustment and VAT))				%
<i>Note: Should this percentage not equal or exceed the specified minimum percentage, the Tender will be considered non-responsive in terms of subclause F.3.8 of the Conditions of Tender and such a tender shall be rejected.</i>				
Specified minimum local labour content				7.71%

A penalty shall be applied to any shortfall in the local labour content achieved when measured against the specified minimum local labour content, as set out in Part E: Expanded Public Works Programme (EPWP) of the project specifications. The penalty shall not apply to shortfalls in the allocations to the individual target groups (i.e., Women/Youth/Disabled), only to shortfalls in the total local labour content achieved.

[NOTES:

- (1) Labour is defined as hourly paid personal
- (2) The penalty for non-compliance during the contract or fraudulent disclosure is discussed in CONTRACT DATA section.]

b. Name of Training Institution

Greater Kokstad Municipality will assess the proposed training and should it be in line with its current program, the same will be adopted. The municipality however reserves the right to formulate its own program or a combination of both, should the proposed training not be in line with its requirements.

Name of Program

Trainers Name	Qualification	Subject

[Notes:

(1) Provide details here, or attached hereto, the subjects to be covered and the manner in which training is to be delivered.]

The specifications as outlined in C.3.3 Particular Specifications of the SCOPE OF WORKS must be read in conjunction with this section.

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the Tenderer, confirms that he/she understands the conditions for such participation and confirms that the tender satisfies the conditions for participation in job creation through the employment of local labour.

Name:

Duly authorized to sign on behalf of:

SIGNATURE:

DATE:

(of person authorised to sign on behalf of the Bidder)

Failure to complete, sign and date this form shall result in the tender being considered non-responsive and rejected in terms of clause F.3.8 of the Conditions of Tender.

B4: CERTIFICATE FOR INSURANCE COVER

[NOTE: In the event of the Tenderer being a joint venture/consortium, the details of the individual members must also be provided.]

The Tenderer shall provide the following details of this insurance cover:

- i) Name of Tenderer:
- ii) Period of Validity:
- iii) Value of Insurance:
 - Insurance for Works: Performance Guarantee **(the allowable minimum value for costs incurred by the Employer due to the failure of the contractor to execute the Contract is 10% of the award value)**
Company:
Value:
 - Insurance for Works: Retention Guarantee **(the allowable minimum to safeguard the Employer against latent defects and to incentivise the Contractor to complete the contract is 10% of the award value)**
Company:
Value:
 - General Public Liability **(the allowable minimum value is R10 000 000.00)**
Company:
Value:
 - Insurance for Contractor's equipment and works taken by the contractor
Company:
Value:
 - Insurance for Contractor's personnel
Company:
Value:
 - SASRIA
Company:
Value:

B5: PRELIMINARY CONSTRUCTION PROGRAMME

The Tenderer shall attach a preliminary programme, to this Form.

This programme shall:

- be in the form of a bar chart (Gantt chart) or similar acceptable time/activity form reflecting the proposed sequence and tempo of execution of the various activities and the quantities that will be carried out every week under each of the elements, comprising the work for this contract. A sample of a typical programme is attached to C.3.2 Particular Specifications of the SCOPE OF WORKS,
- indicate the point where the Tenderer intends to commence work operations and the direction in which the work will proceed;
- be in accordance with the information provided in Form B4.2: Schedule of plant and equipment, Form B7: Estimated monthly expenditure, and with all other aspects of the Tender; and indicate planned working hours.

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

NAME:

POSITION:

SIGNATURE:

DATE:

(of person authorised to sign on behalf of the Bidder)

B6: ESTIMATED MONTHLY EXPENDITURE

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

The amount for contingencies must not be included.

MONTH	VALUE
1	R
2	R
3	R
4	R
5	R
6	R
	COMPLETION OF CONTRACT
TOTAL	R

NAME:

POSITION:

SIGNATURE:

DATE:

(of person authorised to sign on behalf of the Bidder)

B7: COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record of service of the state

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

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

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

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

*insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

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

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

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

*insert separate page if necessary

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

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

NAME:

POSITION:

SIGNATURE:

DATE:

(of person authorised to sign on behalf of the Bidder)

THE CONTRACT

C1: AGREEMENTS AND CONTRACT DATA

C2: PRICING DATA

C3: SCOPE OF WORK

C4: SITE INFORMATION

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C1: AGREEMENTS AND CONTRACT DATA

C1.1: FORM OF OFFER AND ACCEPTANCE

A: Offer

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

CONTRACT NO.: GKM 30-23/24: UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9

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

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

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

Amount 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.

For the Tenderer:

Signature:

Name:

Capacity:

Name and address of organisation:

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

Signature and name of witness:

Signature:

Name:

Date:

This form is to be completed by the Employer only

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

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

For the Employer:

Signature:

Name:

Capacity:

Name and address of organisation:

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

Signature and name of witness:

Signature:

Name:

Date:

This form is to be completed by the Employer and the successful tenderer only, upon acceptance of the successful tenderer's offer

C: 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 Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

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

FOR THE TENDERER:

Signature:

Name:

Capacity:

Tenderer: (*Name and address of organisation*)

.....

Witness:

Signature:

Name:

Date:

FOR THE EMPLOYER:

Signature:

Name:

Capacity:

Employer: (*Name and address of organisation*)

.....

Witness:

Signature:

Name:

Date:

C1.2: CONTRACT DATA

C1.2.1: GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works (3rd Edition 2015), (abbreviated title: "GCC 2015"), published by the South African Institution of Civil Engineering, is applicable to this Contract and is obtainable from www.saice.org.za.

Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel 011- 805 5947, Fax: 011 – 805 5971).

The Contract Data referred to in the General Conditions of Contract follow, with the Data to be completed Employer furnished. The Tenderer is to provide his details in the spaces provided.

It is agreed that the only variations from the GCC 2015 are those set out hereafter under "C1.2.1.2 SPECIAL CONDITIONS OF CONTRACT".

C1.2.1.2 SPECIAL CONDITIONS OF CONTRACT

C1.2.1.2.1 GENERAL

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

The clauses of the Special Conditions of Contract hereafter are numbered "SCC" followed in each case by the number of the applicable clause or subclause in the GCC 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 GCC 2015, and an appropriate heading.

C1.2.1.2.2 AMENDMENTS TO THE GCC 2015

SCC 1.1 Definitions

Add the following to the end of Clause 1.1:

"SCC 1.1.1.35 "Targeted Enterprise" means an enterprise as defined in Part B: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Works."

SCC 4.1.1 Extent of Contractor's obligations

Add the following new paragraph to the end of Clause 4.1.1:

"If the Contractor fails to achieve the monetary value of the target set by the Employer for contract participation by Targeted Enterprises in terms of Part G: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Works, the Contractor shall be liable to the Employer for a sum calculated in accordance with the Contract Data and the aforementioned Scope of Works as a penalty for such underachievement."

SCC 6.2 Security

SCC 6.2.1 Delivery of security

In the last two lines of Clause 6.2.1, delete the words "the type of security for the due performance of the Contract, as selected in the Contract Data" and replace them with the words "a fixed performance guarantees as security for the due performance of the Contract in accordance with the Contract Data Part A: Data Provided by the Employer".

Delete the entirety of Clause 6.2.2 and replace it with the following:

"SCC 6.2.2 Contractor failing to provide security

If the Contractor fails to provide the required fixed performance guarantee within the time period stipulated in the Contract Data, or if the performance guarantee shall differ substantially from the pro forma, it shall legally be deemed that the Contractor has selected a security of ten per cent retention of the value of the Works without limiting the Employer's right to terminate the Contract in terms of Clause 9.2."

SCC 6.2.3 Validity of performance guarantee

Delete the entirety of the first sentence of Clause 6.2.3 and replace it with the following:

"The Contractor shall ensure that the performance guarantee remains valid and enforceable until the Certificate of Completion is issued."

SCC 6.8.2 Application of the Contract Price Adjustment Factor

Add the following to the end of Clause 6.8.2:

"Referring to Clause 1 of the "CONTRACT PRICE ADJUSTMENT SCHEDULE" on page 86 of the GCC 2015, delete the paragraph describing the symbols "L", "P", "M" and "F", and replace it with the following:

"L", "P", "M" and "F" are defined as follows:

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

"P" is the "Contractor's Equipment Index" and shall be the Producer Price Index for "Civil engineering 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 engineering" 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 wholesale - Total" as published in Table 4 of the Statistical release P0151 of Statistics South Africa."

Additional Special Conditions of Contract

The following additional Special Conditions of Contract clauses SCC 1.1 and SCC 5.3 shall apply only in those circumstances where the Employer is required to apply for a construction work permit in terms of Construction Regulation 3(1):

SCC 1.1 Definitions

Delete the entirety of Clause 1.1.1.5 and replace it with the following:

"SCC 1.1.1.5 "Commencement Date" means the date 42 calendar days after the date that the Agreement, made in terms of the Form of Offer and Acceptance, comes into effect."

SCC 5.3 Commencement of the Works

Delete the entirety of Clauses 5.3.1, 5.3.2 and 5.3.3 and replace them with the following:

"SCC 5.3.1 Commencement of the Works

Upon the Employer's Agent's instruction, the Contractor shall, save as may be otherwise provided in the Contract, or be legally or physically impossible, commence carrying out the Works. Such instruction shall be provided not later than 14 days after the Commencement Date. Such instruction shall be subject to:

SCC 5.3.1.1 The timely submission by the Contractor, and approval by the Employer's Agent, of documentation required before commencing to carry out the Works and before the Employer applying for a permit to do construction work, as set out in the Contract Data,

SCC 5.3.1.2 Application by the Employer for a permit to do construction work in terms of Regulations 3(1) and (2) of the Construction Regulations 2014, and

SCC 5.3.1.3 Receipt by the Employer of the permit to do construction work.

SCC 5.3.2 Unacceptable documentation

If the documentation referred to in Clause SCC 5.3.1 is not submitted within the number of days stipulated in the Contract Data from the date that the Agreement, made in terms of the Form of Offer and Acceptance, comes into effect, or if such documentation is found to be unacceptable, the Employer may terminate the Contract in terms of Clause 9.2.

SCC 5.3.3 Time to instruct commencement of the Works

Where the Contractor delays the submission by the Employer of the application for a permit to do construction work and such permit is not received within 14 days following the Commencement Date such that the Employer's Agent's instruction to commence carrying out the Works cannot be given, without prejudice to the Employer's rights to terminate the contract under Clause 9.2, the Employer's Agent shall delay issuing the instruction to commence carrying out the Works until such time as the permit to do construction work has been received. The Contractor shall have no entitlement under Clause 5.12 to an extension of time for Practical Completion.

Where the permit to do construction work is not received within the 14-day period following Commencement of the Contract for reasons not attributable to the Contractor, the Employer's Agent shall delay the instruction to commence the Works and the Contractor shall be entitled to make a claim in accordance with Clause 10.1."

C1.2.2: CONTRACT DATA (APPLICABLE TO THIS CONTRACT)

PART A: DATA PROVIDED BY THE EMPLOYER

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
1	GENERAL
1.1.1.13	The Defects Liability Period is 12 months
1.1.1.14	The time for achieving Practical Completion is 06 months from the Commencement Date, including non-working days and special non-working days.
1.1.1.15	The Name of Employer is GREATER KOKSTAD MUNICIPALITY
1.1.1.16	The Name of Employer's Agent is FMA ENGINEERS (PTY) LTD
1.1.1.26	Pricing Strategy: The Contract is to be a Re-measurement Contract.
1.2.1.2	Address of the Employer: Adam Kok III Building 75 Hope Street KOKSTAD 3610 Email address: Zamindlela.Godlimpi@kokstad.gov.za Tel: +27 39 797 6674 Fax: +27 39 727 3676
1.2.1.2	Address of the Employer's Agent: 18 York Road GILLITTS 3210 Email address: admin@fmaengineers.co.za Tel: +27 31 764 2763 Fax: +27 86 542 4084
3	EMPLOYER'S AGENT
3.2.3	The Employer's Agent is required to obtain the specific approval of the Employer for any expenditure in excess of the Contract Price.
4	CONTRACTOR'S GENERAL OBLIGATIONS
SCC 4.1.1:	The contract participation goal for local labour content is 7.71%. The penalty for failing to achieve the monetary value of the above target set by the Employer for local labour content in terms of Part E: Expanded Public Works Programme of section C3.3 Particular Specifications in Part C3: Scope of Work, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value. The contract participation goal for Targeted Enterprises is 30.0%.

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
	The penalty for failing to achieve the monetary value of the above target set by the Employer for contract participation by Targeted Enterprises in terms of Part F: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Work, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value.
5	TIME AND RELATED MATTERS
5.3.1 and 5.3.2	Where the Employer is not required to apply for a permit to do construction work in terms of Construction Regulation 3(1), the following documentation is to be submitted within <u>14 days</u> from the Commencement Date: The documents required before commencing to carry out the Works: • 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 C1.5 '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 2015 and to paragraph E9. CONTRACTOR'S RESPONSIBILITIES in Part E of C3.3 Particular Specifications).
SCC 5.3.1 and SCC 5.3.2	Where the Employer is required to apply for a permit to do construction work in terms of Construction Regulation 3(1), the following documentation is to be submitted within <u>56 days</u> from the date that the Agreement, made in terms of the Form of Offer and Acceptance, comes into effect: The documents required before commencing to carry out the Works: • 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 C1.7 '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 2015 and to paragraph E9. CONTRACTOR'S RESPONSIBILITIES in Part E of C3.3 Particular Specifications). And: The documents required by the Employer to apply for a permit to do construction work in terms of Regulations 3(1) and (2) of the Construction Regulations 2014: • Temporary works designer's appointment duties in terms of Regulation 6(2) as have been agreed upon plus proof of registration with ECSA [CR 3(5)(b)(iii) read with CR 5(1)(e) and CR 6(2)]; • Evidence that the contractor has made adequate provision for the cost of Health and Safety, i.e., Bill of quantities [CR 3(5)(b)(iii) read with CR 5(1)(g)]; • Evidence that the Principal contractor has the necessary competencies to carry out construction work safely, viz., schedule of activities, relevant appointments and proofs of competency [CR 5(1)(h)]; • Valid Letter(s) of Good Standing for the appointed Principal Contractor(s) [CR 3(5)(b)(ii) read with CR 5(1)(j)].
5.8.1	The non-working days are Sundays. The special non-working days are the construction industry year end break, all foreseeable statutory election days as declared by National Government, and the following statutory public holidays as declared by National Government:

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
	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.
5.13.1	The penalty for failing to complete the Works is 0,05% of the Contract Sum per day up to a maximum of four thousand six hundred rands (R4,600.00) per day calculated in line with the Department of Public Works Procurement Documentation Guidelines.
5.14.1	The requirements for achieving Practical Completion are as stated in clause 1210 of the COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998 Edition, as amended in clause B1210 in Part B of C3.2: Project Specifications where applicable.
5.16.3	The latent defects period is 10 years.
6	PAYMENT AND RELATED MATTERS
6.2.1 and SCC 6.2.1	The security to be provided by the Contractor shall be: Fixed Performance Guarantee of 10% of the accepted Contract Sum.
6.5.1.2.3	The percentage allowance to cover overhead charges is 15%.
6.8.2 and SCC 6.8.2	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The values of the coefficients for calculating the Contract Price Adjustment Factor are: a = 0.20 b = 0.35 c = 0.35 d = 0.10 The "Consumer Price Index" will be as for the Province of <u>KwaZulu-Natal</u> The base month is the month prior to the month in which the closing date for the tender falls.
6.8.3	Price adjustments for variations in the costs of special materials are allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80% (subject to provision of Indemnity for Materials on Site)
6.10.3	The percentage retention on the amounts due to the Contractor is 10% of Contract Sum. A retention guarantee in lieu of a cash retention is permitted.
6.10.4	Payment to sub-contractor for work completed must be made within 30 days of the submission of the invoice from the sub-contractor to the main contractor.
8	RISKS AND RELATED MATTERS
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is nil.
8.6.1.1.3	The amount to cover professional fees for repairing or reinstatement of damage to the Works to be included in the insurance sum is 14%.

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
8.6.1.3	The limit of indemnity for liability insurance is R10 000 000,00 (ten million Rand only) for any single liability claim. Liability insurance shall include spread of fire risk.
10	CLAIMS AND DISPUTES
10.5.3	The number of Adjudication Board Members to be appointed is one.
10.7.1	Dispute Determination shall be by Arbitration with the arbitrator chose by the sitting chairperson of the Association of Arbitrators Southern Africa NPC.
G1003 Refer to Part C3: Scope of Works, section C3.3 Particular Specifications, Part G: Small Contractor Development	CONTRACT PARTICIPATION (b) Contract Participation Targets The Contract Participation Target for Targeted Enterprises is <u>30%</u>

PART 2: DATA PROVIDED BY THE CONTRACTOR

The following contract specific data are applicable to this contract.

REFERENCE	CONTRACT SPECIFIC DATA PROVIDED BY THE CONTRACTOR						
1.	GENERAL						
Clause 1.1.1.9:	Name of the Contractor:						
							
Clause 1.2.1.2:	Address of the Contractor:						
	<u>Physical:</u> <u>Postal:</u>						
							
							
							
							
6.	PAYMENT AND RELATED MATTERS						
Clause 6.8.3:	The Tenderer shall complete Table 1 below with respect to each of the special materials listed. This information shall be used to calculate the variation in cost of the special materials. The rates and prices for the special materials shall be furnished by the Tenderer, which rates and prices shall not include VAT but shall include all other obligatory taxes and levies. The quoted price to be provided by the Tenderer is the ruling price on the first of the month prior to the month in which the closing date for the Tender falls. Table 1 <table border="1"> <thead> <tr> <th>SPECIAL MATERIALS</th><th>UNIT*</th><th>RATE OR PRICE FOR THE BASE MONTH</th></tr> </thead> <tbody> <tr> <td>Bitumen</td><td>tonne</td><td>.....</td></tr> </tbody> </table> * Indicate whether the material shall be delivered in bulk or in containers. When called upon to do so, the Contractor shall substantiate the above rates or prices with acceptable documentary evidence. Signed on behalf of Tenderer:	SPECIAL MATERIALS	UNIT*	RATE OR PRICE FOR THE BASE MONTH	Bitumen	tonne	
SPECIAL MATERIALS	UNIT*	RATE OR PRICE FOR THE BASE MONTH					
Bitumen	tonne						

C1.3: PERFORMANCE GUARANTEE

PRO FORMA

PERFORMANCE GUARANTEE

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

1. GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means:

“Contractor” means:

“Employer's Agent” means:

“Works” means:

“Site” means:

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

“Contract Sum” means: The accepted amount inclusive of tax of R

Amount in words:

“Guaranteed Sum” means: The maximum aggregate amount of R

Amount in words:

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

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

2. CONTRACT DETAILS

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

3. GUARANTOR'S LIABILITY

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

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

3.3 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

4. CONDITIONS APPLICABLE TO THIS PERFORMANCE GUARANTEE

4.1 The Guarantor hereby acknowledges that:

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

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

4.2 Subject to the Guarantor's maximum liability referred to in 3.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.2.1 to 4.2.3:

4.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2.2;

4.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.2.1 and the sum certified has still not been paid;

4.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.2.

4.3 Subject to the Guarantor's maximum liability referred to in 3.1, 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:

4.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 4.3; or

4.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 4.3; and

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

4.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4.2 and 4.3 shall not exceed the Guarantor's maximum liability in terms of 3.1.

4.5 Where the Guarantor has made payment in terms of 4.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

4.6 Payment by the Guarantor in terms of 4.2 or 4.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

4.7 Payment by the Guarantor in terms of 4.3 will only be made against the return of the original Performance Guarantee by the Employer.

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

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

- 4.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 3.2, 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.
- 4.11 This Performance Guarantee, with the required demand notices in terms of 4.2 or 4.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 4.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C1.4: RETENTION MONEY GUARANTEE

PRO FORMA

GREATER KOKSTAD MUNICIPALITY
75 HOPE STREET
KOKSTAD
4700

ISSUED TO: GREATER KOKSTAD MUNICIPALITY, represented by the Municipal Manager (hereinafter called "the Employer")

ON BEHALF OF [insert name of contractor]
(hereinafter called "the Contractor")

in connection with CONTRACT No.: GKM 30-23/24 UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9 (hereinafter called "the Contract").

WHEREAS the Employer and the Contractor have agreed that the Contractor may provide a guarantee in lieu of the whole or a portion of the retention moneys provided for under the Contract;

NOW THEREFORE we, the undersigned, undertake, in accordance with the following provisions, to pay to the Employer such amounts as the Employer may, from time to time, demand from us.

1 Each demand by the Employer shall be in writing, signed by the Employer and delivered to us at

[INSERT GUARANTOR'S FULL STREET
ADDRESS].....

..... or such other address in

[INSERT NAME OF COUNTRY] as we shall in writing notify to the Employer
and shall be accompanied by a certificate complying with Clause 2, signed by the Engineer in office as such
in terms of the Contract.

2 The Engineer's certificates referred to in Clause 1 shall certify that:

- (a) he is the Engineer in office as such in terms of the Contract,
 - (b) the Contractor is in breach of his obligations under the Contract, and
 - (c) the amount demanded, which amount the certificate shall specify, does not exceed
-
- (i) the amount of retention moneys which, but for this guarantee, would have been retained by the Employer in terms of the Contract at the date of the certificate, less the aggregate of the amounts

of retention money retained by the Employer and the amounts previously paid by us to the Employer in terms hereof,

(ii) a genuine estimate of the cost to the Employer of having the breach referred to in paragraph (b) remedied less the aggregate of any amounts withheld by the Employer from payments due to the Contractor in terms of the Contract by reason of the breach referred to, and any amount of retention money actually held by the Employer save to the extent that the same had been deducted from any previous demand in terms hereof;

3 We shall within fourteen (14) days after our receipt of a demand complying with the provisions in Clauses 1 and 2 make payment to the Employer of the amount demanded at the employer's address as listed in the contract data or at such other address in the Republic of South Africa as the Employer shall in writing notify to us.

4 Subject to compliance with the provisions hereof, our liability to make the payments herein referred to shall be unconditional and shall not be affected or diminished by any disputes, claims or counterclaims between the Employer and the Contractor.

5 Our aggregate liability under this guarantee is limited to

..... (R)

6 This guarantee shall expire on the date on which the last of the retention moneys, which but for this guarantee would have been retained by the Employer, becomes payable to the Contractor.

7 This guarantee is not transferable and must be produced for endorsement if any part payment is made and must be returned to us against final payment of our aggregate liability or on the date of the expiry of the guarantee in terms of Clause 6, whichever is the earlier.

Signed in the presence of the subscribing witnesses:

At for and on behalf of

on this the day of 20.....

SIGNATURE :

CAPACITY :

ADDRESS :

:

:

AS WITNESSES: 1

2

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

THIS AGREEMENT is made between GREATER KOKSTAD MUNICIPALITY (hereinafter called the EMPLOYER) of the one part, herein represented by:

.....
in his capacity as:

AND:

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

.....
in his capacity as:

duly authorized to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of

CONTRACT No.: GKM 30-23/24 UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9 for the construction, completion and maintenance of the works;

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHSA Amendment Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the Employer's CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.
4. The CONTRACTOR agrees that any duly authorized officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at for and on behalf of the **CONTRACTOR**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at for and on behalf of the **EMPLOYER**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

C1.6: FUNCTIONALITY CRITERIA

This section must be read in conjunction with Clause F3.11.9 in T1.2 TENDER DATA.

C1.6.1 Target Values - Tender Evaluation Criteria

The Procedure for the evaluation of responsive tenders is Method 2: Price and Preference. Quality (functionality) will be used as a prequalifying criterion, with tenderers required to meet a minimum quality score of 60% in order to qualify for further evaluation.

Each evaluation criteria will be assessed in terms of five indicators and scores allocated according to the following:

C1.6.1.1: Schedule of work carried out by Tenderer

Company Experience - Form B4.1

C1.6.1.2: Schedule of plant and equipment

Schedule of plant and equipment - Form B4.2

C1.6.1.3: Proposed Key Personnel

Proposed Key Personnel - Form B4.3

Certified qualification certificates and ID copies of ALL key personnel must be attached and are required to claim any points.

The submitted CVs must be signed by the proposed personnel, as well as the Tenderer's authorized signatory, to claim points. The CV template is attached as FORM B4.3. This format MUST be used to claim points. The following shall also apply;

- a) CERTIFIED DOCUMENTS MUST NOT BE OLDER THAN 6 MONTHS.
- b) CERTIFICATION OF A PREVIOUSLY CERTIFIED DOCUMENT WILL NOT BE ACCEPTED.
- c) A COPY OF A PREVIOUSLY CERTIFIED DOCUMENT WILL NOT BE ACCEPTED.
- d) FAILURE TO ADHERE TO THE ABOVE REQUIREMENTS WILL RESULT IN NO SCORE BEING GIVEN.

C1.7 QUALITY CONTROL PLAN

Quality Control Plan - Form B4.4

Criteria	Sub-Criteria	Poor	Fair	Acceptable	Good
Quality Control Plan	Understanding of Complexity of the works	The tenderer has misunderstood certain aspects of the scope of work and has not dealt with the critical aspects of the project	The tenderer appears to understand the essential aspects of the scope of works but has not dealt with all the critical areas. All Milestones not indicated	The tenderer appears to understand the essential aspects of the scope of works and has dealt with all the critical areas. All stated milestones clearly indicated	Besides achieving an "Acceptable" score for the plan, important issues are dealt with in an innovative manner, indicating an excellent understanding of the complexities
	Due allowance in the preliminary programme for all aspects of construction	The preliminary programme omits important tasks or timing. There is a lack of clarity and logic in the sequencing	All key activities are included. There are minor inconsistencies between timing, project deliverables and the proposed approach	All key activities are included. There are no inconsistencies between timing, project deliverables and the proposed approach	Besides achieving an "Acceptable" score for the plan, decision points and timing of activities are very well defined, indicating an optimised use of resources.
	Plant and Equipment	Proposed plant is limited in capacity and is unlikely to meet the project requirements. Key plant is not immediately available and may have significant lead times	Plant and equipment to be used appears to be adequate and should be able to meet the project requirements. Key plant may have significant lead times	Plant and equipment to be used appears to be adequate and should be able to meet the project requirements. Key plant might have minimal lead times	The detailed plant list of equipment to be used ties up completely with the proposed methodology and majority of the plant is currently available.
	Methodology	The Methodology does not align with the scope of works and is unlikely to meet the project requirements	Methodology aligns with scope of work but isn't clearly defined and are unlikely to meet the project requirements	The methodology is adequate and should be able to meet the project requirements	The methodology statement provided is extensive and demonstrates that there will be no difficulty in meeting project requirements. The methodology correlates with the programme of works
	Quality Control Statement	Key issues of quality have not been addressed and the proposals are unlikely to meet the project requirements	The quality control statement is generic and will not meet the project requirements	The quality control statement, although mostly generic, should be able to meet the project requirements	Besides achieving an "Acceptable" score for the plan, detailed and innovative proposals have been developed to ensure high quality

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C2.2 SCHEDULE OF QUANTITIES	PD. 5

C2.1 PRICING INSTRUCTIONS

- 1 The Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications) and the Drawings shall be read in conjunction with the Bill of Quantities.
- 2 The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.

Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill. Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations

- 3 Descriptions in the Bill of Quantities are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bill or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized, Project, or Particular Specification as the case may be, shall prevail
- 4 Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.
- 5 The amounts and rates to be inserted in the Bill of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.
- 6 An amount or rate shall be entered against each item in the Bill of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bill.

The Tenderer shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the tendered rates shall apply should work under these items actually be required.

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

The tendered rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.

- 7 The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment.

Ordering of materials is not to be based on the Bill of Quantities, but only on information issued for construction purposes.

8 For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit	:	The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of work at which the Tenderer tenders to do the work
Amount	:	The quantity of an item multiplied by the tendered rate of the (same) item
Sum	:	An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

9 The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m ²	=	square metre
m ² -pass	=	square metre-pass
ha	=	hectare
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	meganewton
MN-m	=	meganewton-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

10 Payment for the Labour-Intensive Component of the Works:

Those parts of the works to be constructed using labour-intensive methods are marked in the bill of quantities with the letters LI either in a separate column or as a prefix or suffix against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a deviation from the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.

Where minimum labour intensity is specified in the design, the contractor is expected to use their initiative to identify additional activities that can be done labour-intensively in order to comply with the set minimum labour intensity targets.

Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict

11. Linkage of Payment for Labour-Intensive Component of Works to Submission of Project Data

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframes stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted. The client may institute a penalty relating to outstanding labour information.

The following information shall be maintained on site and submitted in electronic/hard copy formats:

- Certified ID copies of all locally employed labour
- Signed Contracts between the employer and the EPWP Participants
- Attendance Registers for the EPWP Participants
- Proof of Payment of EPWP Employees
- Monthly Reporting Template as per EPWP requirements

C2.2 SCHEDULE OF QUANTITIES

SECTION	DESCRIPTION	Tendered Amount R c
	UPGRADING OF HORSESHOE ROADS PHASE 2	
1	PRELIMINARY AND GENERAL	
2	ROAD 1	
3	ROAD 2	
4	ROAD 3	
5	ROAD 4	
6	ROAD 5	
7	ROAD 6	
SUMMARY OF ROADWORKS		
<u>ADD 10% FOR CONTINGENCIES</u>		
SUB TOTAL 1		
<u>ADD VAT (15%)</u>		
TOTAL TENDER SUM		

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
12.00		GENERAL REQUIREMENTS AND PROVISIONS				
B12.01		Proving and relocation of existing services				
		(a) Excavating material within the following depth ranges below ground level for the exposing of/or searching for services.				
		(1) 0m to 2m (by machine)				
		i) Soft material	m ³	200.0		
	LIC	(2) Extra over item B12.01 (a) for excavation by means of handtools such as picks, crowbars and pneumatic tools or mechanical breakers in close vicinity of services where no machine excavation is permitted.				
		i) Soft material	m ³	200.0		
		(3) 0m to 2m (by machine)				
		i) Hard material	m ³	150.0		
		(b) Lay relocated services				
		i) water pipelines including any additional couplings or fittings	m	1000.0		
		ii) sewer pipelines including any additional fittings	m	1000.0		
		iii) electrical cables	m	650.0		
		(c) Backfilling				
		(1) Using the excavated material	m ³	300.0		
		(2) Using imported selected material	m ³	150.0		
		(d) Extra over item for replaced services resulting from damages that occur during proving, relocation and/or works. All works to be reported to, measured with and approved by the Engineer prior to commencement.				
		i) water pipelines	P.C. Sum	1.00	25,000.00	R 25,000.00
		ii) sewer pipelines	P.C. Sum	1.00	25,000.00	R 25,000.00
		iii) electrical cables	P.C. Sum	1.00	25,000.00	R 25,000.00
CARRIED FORWARD						

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
Brought forward from previous page						
B12.02		Training Allowances (a) Provision for training Local Students engaged in Civil Engineering related studies with any South African recognised tertiary institution, or other as may be selected by the Employer (2) Contractor's Handling cost and profit on (c) (1) (b) Small Contractor Development Identify work for local subcontractors (CIDB Grade 1-3). Value of work to be up to 30% of the Nett Contract Value, as determined by the Employer. (1) Small Contractor Development (BoQ to be issued separately and in line with Part G of the Scope of Works).	Prov Sum % Sum	1.0 35,000.00 1.0	35,000.00	R 35,000.00
B12.03		Community Liason Officer (1) CLO Costs (at R5000/month) (2) CLO's cellphone costs (at R200/month) (3) Contractor's Handling cost and profit on (c) (1) and (2)	Prov Sum Prov Sum %	1.0 1.0 36,800.00	35,000.00 1,800.00	R 35,000.00 R 1,800.00
B12.04	EPWP	Payments associated with the EPWP programme (1) COIDA payments to the Compensation Commissioner for EPWP workers (2) Provision for specified EPWP branding on PPE for EPWP workers and replacement of the same	Prov Sum Prov Sum	1.00 2.00	5,000.00 5,000.00	R 5,000.00 R 10,000.00
B12.05		External Control Testing and Maintenance of beacons (a) Control testing costs (b) Contractor's Handling cost and profit on B12.05 (a)	P.C Sum %	1.00 5,000.00	5,000.00	R 5,000.00
B12.06		(a) Topographical Surveys (b) Contractor's Handling cost and profit on B12.06 (a)	P.C Sum %	1.00 45,000.00	45,000.00	R 45,000.00
B12.07		(a) OHS Officer (b) Contractor's Handling cost and profit on B12.07 (a)	P.C Sum %	1.00 50,000.00	50,000.00	R 50,000.00
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
13.00		CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
B13.01		Contractor's general obligations				
		(a) Fixed obligations	L/sum	1.0		
		(b) Value-related obligations	L/sum	1.0		
		(c) Time-related obligations	Month	6.0		
		(d) Geotechnical investigations to obtain updated information on the soil earthworks for proposed roads.	P.C Sum	1.0	35,000.00	R 35,000.00
		(e) Handling cost and profit in respect of item B13.01 (d)	%	35,000.00		
B13.02		Health and Safety obligations				
		(a) Provision of Personal Protective Equipment (PPE) & Clothing for all the Contractor's staff, including sub-contractors as per EPWP guidelines	Sum	1.0		
B13.03		Supply, transport to site and erection of the contract signboard				
		(a) Contract sign boards	No	1.0		
		(b) Information boards	No	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
15.00		ACCOMMODATION OF TRAFFIC				
15.01		Accommodating traffic and maintaining temporary deviations	km	2.1		
15.02		Earthworks for temporary deviations:				
		(a) Shaping of temporary deviations	km	1.0		
		(b) Cut and borrow to fill	m³	15.0		
		(c) Cut to spoil	m³	15		
15.03		Temporary traffic-control facilities:				
	LIC	(a) Flagmen	man-day	252.0		
		(b) Portable STOP and GO-RY signs	No	4.0		
		(e) Road signs, R and TR series, (900mm diameter)	No	4.0		
		(f) Road signs, TW series, (900mm diameter)	No	8.0		
		(h) Delineators (DTG50J) (600mmx150mm):				
		(i) Single	No	10.0		
		(ii) Mounted back to back	No	10.0		
		(j) Traffic cones (600mm)	No	10.0		
B15.03		(n) Extra signs as ordered by the engineer				
		(i) Provision of other signs or facilities	P.C. Sum	1.0	7,500.00	R 7,500.00
		(ii) Contractors handling charge and profit on subsubitem B15.03(n)(i)	%	7500.0		
15.04		Relocation of traffic-control facilities	Lump Sum	1.0		
15.06		Watering of temporary deviations	kl	100.0		
15.07		Blading by road grader of:				
		(a) Temporary deviations	km-pass	1.0		
15.10		Accommodation of traffic where the road is constructed in half widths	km	1.0		
B15.15		Penalties:				
		(a) (i) Fixed penalty for noncompliance of traffic safety requirements per occurrence	No	R/O		R/O
		(b) (ii) Time related penalty for B15.15 (a)(i) above	Hour	R/O		R/O
		(c) (i) Fixed penalty for noncompliance with COVID-19 Occupational Health and Safety measures in workplaces COVID-19 (C19 OHS), 2020	No	R/O		R/O
		(d) (ii) Time related penalty for B15.15 (c)(i) above	Hour	R/O		R/O
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
18.00		DAYWORKS				
B18.01		Vehicles, plant and equipment				
		(a) Lowbed: Transport of plant to or from site	hr	16.0		
		(b) Motor grader				
		(i) Up to 100Kw and mass 12 tonne	hr	16.0		
		(c) Loader				
		(i) Rubber tyred up to 60 Kw and mass 12 tonne	hr	16.0		
		(d) Backhoe excavators				
		(i) Rubber tyred up to 60 Kw and mass 12 tonne	hr	16.0		
		(e) Self propelled compactors				
		(i) With static mass between 6 and 8 tonnes	hr	8.0		
		(f) Walk behind vibrating roller				
		(i) Static mass greater than 800 kg	hr	8.0		
		(g) Tamping platecompactor				
		(i) Static mass greater than 60 kg	hr	8.0		
		(h) Trucks				
		(i) Tipper up to 6 m ³ capacity	hr	8.0		
		(ii) Tipper more than 6 m ³ capacity	hr	8.0		
		(iii) Flatbed truck more than 7 tonne capacity	hr	8.0		
		(i) Water Truck				
		(i) Up to 7000 litres	hr	8.0		
		(ii) Up to 12000 litres	hr	8.0		
		(j) Compressor				
		(i) Up to 10 m ³ /min	hr	8.0		
		(k) Concrete Mixer				
		(i) Up to 0.3 m ³ dry mix capacity	hr	8.0		
B18.02		Personnel				
		(a) Artisan (Member of Industrial Council)	hr	24.0		
		(b) Artisan (Non-member of Industrial Council)	hr	24.0		
		(c) Ganger	hr	24.0		
		(d) Labourer	hr	24.0		
B18.03		Materials				
		(a) Procurement of materials as directed by the Engineer on site	Prov Sum	1.00	65,000.00	R 65,000.00
		Contractors handling costs, profit and all other charges in respect of subitem B18.03(a)	%	65,000.00		
TOTAL CARRIED FORWARD TO SUMMARY						

SUMMARY		
SECTION	DESCRIPTION	AMOUNT
N		R c
	ROADWORKS	
1200	GENERAL REQUIREMENTS AND PROVISIONS	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1500	ACCOMMODATION OF TRAFFIC	
1800	DAYWORKS	
TOTAL CARRIED FORWARD TO COMPOSITE SUMMARY		

Item	LI	Description	Unit	Quantity	Rate	Amount R c
16.00 B16.02		OVERHAUL Overhaul on material hauled in excess of a freehaul distance of 1.0 km	m3-km	5625.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
17.00		CLEARING AND GRUBBING				
B17.01	LIC	Clearing and grubbing	ha	0.13		
17.03	LIC	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	0.10		
17.04	LIC	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	20.0		
17.05	LIC	Cleaning out of hydraulic structures:				
		(a) Pipes with an internal diameter up to and including 750 mm	m ³	10.0		
		(b) Pipes with an internal diameter exceeding 750 mm	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
21.00		DRAINS				
21.01		Excavation for open drains				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(i) 0 m up to 1,5 m	m ³	50		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	1.0		
		(b) Extra over sub-item 21.01(a) for excavation in hard material, irrespective of depth	m ³	1.0		
21.02		Clearing and shaping existing open drains:				
	LIC	(a) In soft material	m ³	5.0		
21.03		Excavation for subsoil drainage systems:				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(1) 0 m up to 1,5 m	m ³	25.0		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	2.0		
21.04		Impermeable backfilling to subsoil drainage systems	m ³	10.0		
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from commercial sources				
		(1) Fine Grade 13mm	m ³	15.0		
		(2) Handstone Grade 25-30mm (Including bidum cloth)	m ³	120.0		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from commercial sources				
		(1) Coarse Grade 0.5 - 1.0mm	m ³	10.0		
		(c)'110mm perforated subsoil pipe	m	75.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (1) 0 m up to 1.5 m (2) Exceeding 1,5 m and up to 3,0 m (b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³ m ³ m ³	440.0 40.0 5.0		
22.02		Backfilling: (a) Using the excavated material (b) Using imported selected material	m ³ m ³	140.0 220.0		
B22.03		Concrete pipe culverts: (c) On class C bedding (2) 600mm dia. Type 75D (2) 900mm dia. Type 75D	m m	130.0 75.0		
22.13		Removing and Relaying existing pipes. (b) 450 mm Dia. (c) 600 mm Dia. (d) 900 mm Dia.	m m m	100.0 20.0 5.0		
22.17		Manholes, catchpits, precast inlet and outlet structures complete Allowance for the Construction by the Local Sub-Contractors Contractors Handling cost and profit in respect of item (1)	SUM %	1.0 75000	75000	75,000.00
22.18	LIC	Brickwork (a) 115 mm thick	m ²	8.0		
	LIC	(b) 230 mm thick	m ²	32.0		
		Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m ³ .km	4400.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	50000	50,000.00
23.02		Contractors Handling cost and profit in respect of item (1)	%	50000		
23.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	50000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
33.00		MASS EARTHWORKS				
33.01 / B16.02		Cut, stockpile and borrow to fill, including free-haul up to 1.0 km				
		(a) Material in compacted layer thickness of 150 mm and less:				
		(ii) Compacted to 93% of modified AASHTO	m ³	185.0		
		(iii) Eight roller passes compaction	m ³	185.0		
33.03		Extra over item 33.01 for excavating and breaking down material in:				
		(a) Intermediate excavation	m ³	200.0		
		(b) Hard excavation	m ³	50.0		
33.04 / B16.02		Cut to spoil, including free-haul up to 1.0 km. Material obtained from:				
		(a) Soft excavation	m ³	600.0		
		(b) Hard Excavation	m ³	100.0		
33.07 / B16.02		Removal of unsuitable material (including free-haul of 1.0 km):				
		(a) In layer thicknesses of 200 mm and less:				
		(1) Stable material	m ³	30.0		
		(2) Unstable material	m ³	61.88		
33.10		Roadbed preparation and the compaction of material				
		(b) Compacted to 93% of modified AASHTO	m ³	375		
33.11		Three-roller-passes compaction:				
		(a) Vibratory roller	m ²	1225.0		
33.12		In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m ³	1225.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01		Pavement layers constructed from gravel, including free haul up to 1,0 km				
		(a) Gravel selected layer obtained from stockpile compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness)	m³	100		
34.14		(b) Gravel subbase obtained from commercial sources compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness G5)	m³	206		
		(ii) 95% of modified AASHTO density (150mm layer thickness G7)	m³	206		
		(d) Gravel subbase obtained from commercial sources (chemically stabilised material) compacted to:				
		(i) 95% of modified AASHTO density (150mm layer thickness)	m³	206		
		(g) Gravel shoulders compacted to:				
		(i) 93% of modified AASHTO density (specify compacted layer thickness)	m³	90		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
35.00		STABILIZATION				
B 35.01		Chemical stabilization extra over unstabilized compacted layers				
		(b) Sub-base				
		(2) 150mm thickness	m³	370		
35.02		Chemical stabilizing agent:				
		(b) CEM IIIA	t	15		
35.04		Provision and application of water for curing	kl	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
36.00		CRUSHED STONE BASE				
36.01		Crushed-stone base (c) Constructed from type G2 material obtained from commercial sources and compacted to 88% of apparent relative density, 150mm thick (1) 37mm nominal maximum size stone	m³	185.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
41.00		PRIME COAT				
41.01		Prime coat: (d) MC-30 cut-back bitumen 0.8l/m2	m ²	1200.0		
41.02		Aggregate for blinding	m ²	1200.0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	20.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
4200		ASPHALT BASE AND SURFACING				
42.02		Asphalt surfacing				
		(a) Continuously graded (Medium graded)				
		(i) 30mm thick, A-P1 Bitumen	m ²	1200.0		
42.04		Tack coat of 30% stable-grade emulsion	m ²	1200.0		
B42.08		100 mm cores in asphalt paving	No	5.0		
B42.23		Speed hump (80mm thickness using 60/40 pen bitumen)	m ²	20.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
51.00		PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
51.01		Stone pitching:				
	LIC	(b) Grouted stone pitching	m ²	5.0		
51.05		Concrete edge beams				
	LIC	(a) Class 25/19	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling:				
	LIC	(b) In all other classes of materials	m ³	5.0		
52.02	LIC	Surface preparation for bedding the gabions	m ²	5.0		
52.03		Gabions:				
		(a) Galvanized gabion boxes				
		(3) 1,0 m wide by 1,0 m high				
	LIC	(ii) by 2,0 m long	m ³	10.0		
		(c) Galvanized gabion mattresses				
		(1) 1,0 m diaphragm spacing, 6,0 m long by 2,0 m wide				
	LIC	(ii) by 0,3 m deep mesh	m ³	10.0		
52.04		Filter fabric				
	LIC	(b) Grade C	m ²	10.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
56.00		ROAD SIGNS				
56.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	15000	15,000.00
56.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
56.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
57.00		ROAD MARKINGS				
57.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	13000	13,000.00
57.02		Contractors Handling cost and profit in respect of item (1)	%	13000		
57.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	13000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
	LIC	(a) Machine trimming	m ²	150		
		(b) Hand trimming	m ²	100		
58.02		Using machines for trimming or shaping (alternative to sub-item 58.01(a))				
		(a) Bulldozer	h	8.00		
		(b) Motor grader	h	8.00		
58.03		Preparing the areas for grassing:				
	LIC	(c) Topsoiling within the road reserve, where the following materials are used:				
		(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	40		
		(e) Providing and applying chemical fertilisers and/or soil-improvement material:				
		(iv) Formula 2:3:2 (22)	t	1		
		(f) Stockpiling of topsoil (free-haul 1,0 km)	m ³	40		
B58.04		Grassing:				
		(c) Hydroseeding:	ha	0.03		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve: (b) Single carriageway road	km	0.250		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	Tendered Amount R c
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT SURFACING	
5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5800	LANDSCAPING AND PLANTING PLANTS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
CARRIED FORWARD TO SUMMARY		

Item	LI	Description	Unit	Quantity	Rate	Amount R c
16.00 B16.02		OVERHAUL Overhaul on material hauled in excess of a freehaul distance of 1.0 km	m3-km	5450.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
17.00		CLEARING AND GRUBBING				
B17.01	LIC	Clearing and grubbing	ha	0.21		
17.03	LIC	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	0.10		
17.04	LIC	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	20.0		
17.05	LIC	Cleaning out of hydraulic structures:				
		(a) Pipes with an internal diameter up to and including 750 mm	m ³	10.0		
		(b) Pipes with an internal diameter exceeding 750 mm	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
21.00		DRAINS				
21.01		Excavation for open drains				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(i) 0 m up to 1,5 m	m ³	40		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	2.0		
		(b) Extra over sub-item 21.01(a) for excavation in hard material, irrespective of depth	m ³	2.0		
21.02		Clearing and shaping existing open drains:				
	LIC	(a) In soft material	m ³	5.0		
21.03		Excavation for subsoil drainage systems:				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(1) 0 m up to 1,5 m	m ³	20.0		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	2.0		
21.04		Impermeable backfilling to subsoil drainage systems	m ³	10.0		
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from commercial sources				
		(1) Fine Grade 13mm	m ³	10.0		
		(2) Handstone Grade 25-30mm (Including bidum cloth)	m ³	5.0		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from commercial sources				
		(1) Coarse Grade 0.5 - 1.0mm	m ³	10.0		
		(c)'110mm perforated subsoil pipe	m	24.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (1) 0 m up to 1.5 m (2) Exceeding 1,5 m and up to 3,0 m (b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³ m ³ m ³	750.0 100.0 10.0		
22.02		Backfilling: (a) Using the excavated material (b) Using imported selected material	m ³ m ³	260.0 360.0		
B22.03		Concrete pipe culverts: (c) On class C bedding (2) 600mm dia. Type 75D (2) 900mm dia. Type 75D	m m	270.0 90.0		
22.13		Removing and Relaying existing pipes. (b) 450 mm Dia. (c) 600 mm Dia. (d) 900 mm Dia.	m m m	150.0 20.0 10.0		
22.17		Manholes, catchpits, precast inlet and outlet structures complete Allowance for the Construction by the Local Sub-Contractors Contractors Handling cost and profit in respect of item (1)	SUM %	1.0 75000	75000	75,000.00
22.18	LIC LIC	Brickwork (a) 115 mm thick (b) 230 mm thick Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m ² m ² m ³ .km	1.0 54.0 2200.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	50000	50,000.00
23.02		Contractors Handling cost and profit in respect of item (1)	%	50,000		
23.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	50,000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
33.00		MASS EARTHWORKS				
33.01 / B16.02		Cut, stockpile and borrow to fill, including free-haul up to 1.0 km				
		(a) Material in compacted layer thickness of 150 mm and less:				
		(ii) Compacted to 93% of modified AASHTO	m ³	305.0		
		(iii) Eight roller passes compaction	m ³	305.0		
33.03		Extra over item 33.01 for excavating and breaking down material in:				
		(a) Intermediate excavation	m ³	300.0		
		(b) Hard excavation	m ³	50.0		
33.04 / B16.02		Cut to spoil, including free-haul up to 1.0 km. Material obtained from:				
		(a) Soft excavation	m ³	1100.0		
		(b) Hard Excavation	m ³	110.0		
33.07 / B16.02		Removal of unsuitable material (including free-haul of 1.0 km):				
		(a) In layer thicknesses of 200 mm and less:				
		(1) Stable material	m ³	50.0		
		(2) Unstable material	m ³	30.0		
33.10		Roadbed preparation and the compaction of material				
		(b) Compacted to 93% of modified AASHTO	m ³	610		
33.11		Three-roller-passes compaction:				
		(a) Vibratory roller	m ²	6050.0		
33.12		In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m ³	6050.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01		Pavement layers constructed from gravel, including free haul up to 1,0 km				
		(a) Gravel selected layer obtained from stockpile compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness)	m³	170		
34.14		(b) Gravel subbase obtained from commercial sources compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness G5)	m³	271		
		(ii) 95% of modified AASHTO density (150mm layer thickness G7)	m³	271		
		(d) Gravel subbase obtained from commercial sources (chemically stabilised material) compacted to:				
		(i) 95% of modified AASHTO density (150mm layer thickness)	m³	271		
		(g) Gravel shoulders compacted to:				
		(i) 93% of modified AASHTO density (specify compacted layer thickness)	m³	130		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
35.00		STABILIZATION				
B 35.01		Chemical stabilization extra over unstabilized compacted layers				
		(b) Sub-base				
		(2) 150mm thickness	m³	615		
35.02		Chemical stabilizing agent:				
		(b) CEM IIIA	t	21		
35.04		Provision and application of water for curing	kl	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
36.00		CRUSHED STONE BASE				
36.01		Crushed-stone base				
		(c) Constructed from type G2 material obtained from commercial sources and compacted to 88% of apparent relative density, 150mm thick				
		(1) 37mm nominal maximum size stone	m³	271		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
41.00		PRIME COAT				
41.01		Prime coat:				
		(d) MC-30 cut-back bitumen 0.8l/m2	m ²	1804.0		
41.02		Aggregate for blinding	m ²	1804.0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	25.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
4200		ASPHALT BASE AND SURFACING				
42.02		Asphalt surfacing				
		(a) Continuously graded (Medium graded)				
		(i) 30mm thick, A-P1 Bitumen	m ²	1804.0		
42.04		Tack coat of 30% stable-grade emulsion	m ²	1804.0		
B42.08		100 mm cores in asphalt paving	No	5.0		
B42.23		Speed hump (80mm thickness using 60/40 pen bitumen)	m ²	20.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
51.00		PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
51.01		Stone pitching:				
	LIC	(b) Grouted stone pitching	m²	5.0		
51.05		Concrete edge beams				
	LIC	(a) Class 25/19	m³	6.2		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling:				
	LIC	(b) In all other classes of materials	m³	5.0		
52.02	LIC	Surface preparation for bedding the gabions	m²	5.0		
52.03		Gabions:				
		(a) Galvanized gabion boxes				
		(3) 1,0 m wide by 1,0 m high				
	LIC	(ii) by 2,0 m long	m³	10.0		
		(c) Galvanized gabion mattresses				
		(1) 1,0 m diaphragm spacing, 6,0 m long by 2,0 m wide				
	LIC	(ii) by 0,3 m deep mesh	m³	10.0		
52.04		Filter fabric				
	LIC	(b) Grade C	m²	10.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
56.00		ROAD SIGNS				
56.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	15000	15,000.00
56.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
56.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
57.00		ROAD MARKINGS				
57.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	16000	16,000.00
57.02		Contractors Handling cost and profit in respect of item (1)	%	16000		
57.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	16000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
	LIC	(a) Machine trimming	m ²	300		
		(b) Hand trimming	m ²	110		
58.02		Using machines for trimming or shaping (alternative to sub-item 58.01(a))				
		(a) Bulldozer	h	8.00		
		(b) Motor grader	h	8.00		
58.03		Preparing the areas for grassing:				
		(c) Topsoiling within the road reserve, where the following materials are used:				
	LIC	(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	60		
		(e) Providing and applying chemical fertilisers and/or soil-improvement material:				
		(iv) Formula 2:3:2 (22)	t	1		
		(f) Stockpiling of topsoil (free-haul 1,0 km)	m ³	60		
B58.04		Grassing:				
		(c) Hydroseeding:	ha	0.05		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve: (b) Single carriageway road	km	0.410		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	Tendered Amount R c
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT SURFACING	
5100	PITCHING, STONework AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5600		
5700	ROAD MARKINGS	
5800	LANDSCAPING AND PLANTING PLANTS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
CARRIED FORWARD TO SUMMARY		

Item	LI	Description	Unit	Quantity	Rate	Amount R c
16.00		OVERHAUL				
B16.02		Overhaul on material hauled in excess of a freehaul distance of 1.0 km	m3-km	7020.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
17.00		CLEARING AND GRUBBING				
B17.01	LIC	Clearing and grubbing	ha	0.32		
17.02		Removal and grubbing of large trees and tree stumps				
	LIC	(a) Girth exceeding 1m up to and including 2m	No	0.10		
17.03	LIC	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	20.00		
17.04	LIC	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	30.0		
17.05	LIC	Cleaning out of hydraulic structures:				
		(a) Pipes with an internal diameter up to and including 750 mm	m ³	10.0		
		(b) Pipes with an internal diameter exceeding 750 mm	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
21.00		DRAINS				
21.01		Excavation for open drains				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(i) 0 m up to 1,5 m	m ³	50		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	1.0		
		(b) Extra over sub-item 21.01(a) for excavation in hard material, irrespective of depth	m ³	1.0		
21.03		Excavation for subsoil drainage systems:		5.0		
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(1) 0 m up to 1,5 m	m ³	25.0		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	2.0		
21.04		Impermeable backfilling to subsoil drainage systems	m ³	10.0		
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from commercial sources				
		(1) Fine Grade 13mm	m ³	15.0		
		(2) Handstone Grade 25-30mm (Including bidum cloth)	m ³	10.0		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from commercial sources				
		(1) Coarse Grade 0.5 - 1.0mm	m ³	10.0		
		(c)'110mm perforated subsoil pipe	m	30.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (1) 0 m up to 1.5 m	m ³	1125.8		
		(2) Exceeding 1,5 m and up to 3,0 m	m ³	50.0		
		(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³	10.0		
22.02		Backfilling: (a) Using the excavated material	m ³	848.0		
		(b) Using imported selected material	m ³	330.0		
B22.03		Concrete pipe culverts: (c) On class C bedding				
		(2) 600mm dia. Type 75D	m	475.0		
		(2) 900mm dia. Type 75D	m	90.0		
22.13		Removing and Relaying existing pipes. (b) 450 mm Dia.	m	100.0		
		(c) 600 mm Dia.	m	50.0		
		(d) 900 mm Dia.	m	10.0		
22.17		Manholes, catchpits, precast inlet and outlet structures complete				
		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	75000	75,000.00
		Contractors Handling cost and profit in respect of item (1)	%	75000		
22.18		Brickwork				
	LIC	(a) 115 mm thick	m ²	1.0		
	LIC	(b) 230 mm thick	m ²	61.0		
		Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m ³ .km	1300.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1	50,000	50,000.00
23.02		Contractors Handling cost and profit in respect of item (1)	%	50000		
23.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	50000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
33.00		MASS EARTHWORKS				
33.01 / B16.02		Cut, stockpile and borrow to fill, including free-haul up to 1.0 km				
		(a) Material in compacted layer thickness of 150 mm and less:				
		(ii) Compacted to 93% of modified AASHTO	m ³	393.8		
		(iii) Eight roller passes compaction	m ³	380.0		
33.03		Extra over item 33.01 for excavating and breaking down material in:				
		(a) Intermediate excavation	m ³	380.0		
		(b) Hard excavation	m ³	30.0		
33.04 / B16.02		Cut to spoil, including free-haul up to 1.0 km. Material obtained from:				
		(a) Soft excavation	m ³	1400.0		
		(b) Hard Excavation	m ³	140.0		
33.07 / B16.02		Removal of unsuitable material (including free-haul of 1.0 km):				
		(a) In layer thicknesses of 200 mm and less:				
		(1) Stable material	m ³	70.0		
		(2) Unstable material	m ³	40.0		
33.10		Roadbed preparation and the compaction of material				
		(b) Compacted to 93% of modified AASHTO	m ³	788		
33.11		Three-roller-passes compaction:				
		(a) Vibratory roller	m ²	2400.0		
33.12		In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m ³	2400.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01		Pavement layers constructed from gravel, including free haul up to 1,0 km				
		(a) Gravel selected layer obtained from stockpile compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness)	m³	200		
34.14		(b) Gravel subbase obtained from commercial sources compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness G5)	m³	347		
		(ii) 95% of modified AASHTO density (150mm layer thickness G7)	m³	347		
		(d) Gravel subbase obtained from commercial sources (chemically stabilised material) compacted to:				
		(i) 95% of modified AASHTO density (150mm layer thickness)	m³	347		
		(g) Gravel shoulders compacted to:				
		(i) 93% of modified AASHTO density (specify compacted layer thickness)	m³	150		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
35.00		STABILIZATION				
B 35.01		Chemical stabilization extra over unstabilized compacted layers				
		(b) Sub-base				
		(2) 150mm thickness	m³	720		
35.02		Chemical stabilizing agent:				
		(b) CEM IIIA	t	25.89		
35.04		Provision and application of water for curing	kl	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
36.00		CRUSHED STONE BASE				
36.01		Crushed-stone base (c) Constructed from type G2 material obtained from commercial sources and compacted to 88% of apparent relative density, 150mm thick (1) 37mm nominal maximum size stone	m³	393.8		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
41.00		PRIME COAT				
41.01		Prime coat: (d) MC-30 cut-back bitumen 0.8l/m2	m ²	2400.0		
41.02		Aggregate for blinding	m ²	2400.0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
4200		ASPHALT BASE AND SURFACING				
42.02		Asphalt surfacing				
		(a) Continuously graded (Medium graded)				
		(i) 30mm thick, A-P1 Bitumen	m²	2400.0		
42.04		Tack coat of 30% stable-grade emulsion	m²	2400.0		
B42.08		100 mm cores in asphalt paving	No	5.0		
B42.23		Speed hump (80mm thickness using 60/40 pen bitumen)	m²	20.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
51.00		PITCHING, STONework AND PROTECTION AGAINST EROSION				
51.01		Stone pitching:				
	LIC	(b) Grouted stone pitching	m²	5.0		
51.05		Concrete edge beams				
	LIC	(a) Class 25/19	m³	7.9		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling:				
	LIC	(b) In all other classes of materials	m ³	5.0		
52.02	LIC	Surface preparation for bedding the gabions	m ²	5.0		
52.03		Gabions:				
		(a) Galvanized gabion boxes				
		(3) 1,0 m wide by 1,0 m high				
	LIC	(ii) by 2,0 m long	m ³	10.0		
		(c) Galvanized gabion mattresses				
		(1) 1,0 m diaphragm spacing, 6,0 m long by 2,0 m wide				
	LIC	(ii) by 0,3 m deep mesh	m ³	10.0		
52.04		Filter fabric				
	LIC	(b) Grade C	m ²	10.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
56.00		ROAD SIGNS				
56.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.00	15000	15,000.00
56.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
56.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
57.00		ROAD MARKINGS				
57.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1	24000	24,000.00
57.02		Contractors Handling cost and profit in respect of item (1)	%	24000		
57.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	24000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
	LIC	(a) Machine trimming	m ²	350		
		(b) Hand trimming	m ²	125		
58.02		Using machines for trimming or shaping (alternative to sub-item 58.01(a))				
		(a) Bulldozer	h	8.00		
		(b) Motor grader	h	8.00		
58.03		Preparing the areas for grassing:				
	LIC	(c) Topsoiling within the road reserve, where the following materials are used:				
		(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	75		
		(e) Providing and applying chemical fertilisers and/or soil-improvement material:				
		(iv) Formula 2:3:2 (22)	t	1		
		(f) Stockpiling of topsoil (free-haul 1,0 km)	m ³	75		
B58.04		Grassing:				
		(c) Hydroseeding:	ha	0.05		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve: (b) Single carriageway road	km	0.525		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	Tendered Amount R c
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT SURFACING	
5100	PITCHING, STONWORK AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5800	LANDSCAPING AND PLANTING PLANTS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
CARRIED FORWARD TO SUMMARY		

Item	LI	Description	Unit	Quantity	Rate	Amount R c
16.00 B16.02		OVERHAUL Overhaul on material hauled in excess of a freehaul distance of 1.0 km	m3-km	3350.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
17.00		CLEARING AND GRUBBING				
B17.01	LIC	Clearing and grubbing	ha	0.17		
17.02		Removal and grubbing of large trees and tree stumps				
	LIC	(a) Girth exceeding 1m up to and including 2m	No	0.10		
17.03	LIC	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	20.00		
17.04	LIC	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	30.0		
17.05	LIC	Cleaning out of hydraulic structures:				
		(a) Pipes with an internal diameter up to and including 750 mm	m ³	10.0		
		(b) Pipes with an internal diameter exceeding 750 mm	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
21.00		DRAINS				
21.01		Excavation for open drains				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(i) 0 m up to 1,5 m	m ³	50		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	1.0		
		(b) Extra over sub-item 21.01(a) for excavation in hard material, irrespective of depth	m ³	1.0		
21.02		Clearing and shaping existing open drains:				
	LIC	(a) In soft material	m ³	5.0		
21.03		Excavation for subsoil drainage systems:				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(1) 0 m up to 1,5 m	m ³	25.0		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	2.0		
21.04		Impermeable backfilling to subsoil drainage systems	m ³	10.0		
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from commercial sources				
		(1) Fine Grade 13mm	m ³	15.0		
		(2) Handstone Grade 25-30mm (Including bidum cloth)	m ³	10.0		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from commercial sources				
		(1) Coarse Grade 0.5 - 1.0mm	m ³	10.0		
		(c)'110mm perforated subsoil pipe	m	30.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (1) 0 m up to 1.5 m (2) Exceeding 1,5 m and up to 3,0 m (b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m³ m³ m³	482.2 40.0 5.0		
22.02		Backfilling: (a) Using the excavated material (b) Using imported selected material	m³ m³	400.9 150.0		
B22.03		Concrete pipe culverts: (c) On class C bedding (2) 600mm dia. Type 75D (2) 900mm dia. Type 75D	m m	110.0 40.0		
22.13		Removing and Relaying existing pipes. (b) 450 mm Dia. (c) 600 mm Dia. (d) 900 mm Dia.	m m m	110.0 5.0 5.0		
22.17		Manholes, catchpits, precast inlet and outlet structures complete Allowance for the Construction by the Local Sub-Contractors Contractors Handling cost and profit in respect of item (1)	SUM %	1.0 75000	75000	750,000.00
22.18	LIC	Brickwork (a) 115 mm thick (b) 230 mm thick	m² m²	10.0 40.0		
		Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m³.km	950.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	50000	50,000.00
23.02		Contractors Handling cost and profit in respect of item (1)	%	50000		
23.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	50000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
33.00		MASS EARTHWORKS				
33.01 / B16.02		Cut, stockpile and borrow to fill, including free-haul up to 1.0 km				
		(a) Material in compacted layer thickness of 150 mm and less:				
		(ii) Compacted to 93% of modified AASHTO	m ³	185.0		
		(iii) Eight roller passes compaction	m ³	185.0		
33.03		Extra over item 33.01 for excavating and breaking down material in:				
		(a) Intermediate excavation	m ³	200.0		
		(b) Hard excavation	m ³	50.0		
33.04 / B16.02		Cut to spoil, including free-haul up to 1.0 km. Material obtained from:				
		(a) Soft excavation	m ³	600.0		
		(b) Hard Excavation	m ³	100.0		
33.07 / B16.02		Removal of unsuitable material (including free-haul of 1.0 km):				
		(a) In layer thicknesses of 200 mm and less:				
		(1) Stable material	m ³	30.0		
		(2) Unstable material	m ³	20.0		
33.10		Roadbed preparation and the compaction of material				
		(b) Compacted to 93% of modified AASHTO	m ³	375		
33.11		Three-roller-passes compaction:				
		(a) Vibratory roller	m ²	1450.0		
33.12		In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m ³	1450.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01		Pavement layers constructed from gravel, including free haul up to 1,0 km				
		(a) Gravel selected layer obtained from stockpile compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness)	m³	120		
34.14		(b) Gravel subbase obtained from commercial sources compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness G5)	m³	220		
		(ii) 95% of modified AASHTO density (150mm layer thickness G7)	m³	220		
		(d) Gravel subbase obtained from commercial sources (chemically stabilised material) compacted to:				
		(i) 95% of modified AASHTO density (150mm layer thickness)	m³	220		
		(g) Gravel shoulders compacted to:				
		(i) 93% of modified AASHTO density (specify compacted layer thickness)	m³	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
35.00		STABILIZATION				
B 35.01		Chemical stabilization extra over unstabilized compacted layers				
		(b) Sub-base				
		(2) 150mm thickness	m³	450		
35.02		Chemical stabilizing agent:				
		(b) CEM IIIA	t	15		
35.04		Provision and application of water for curing	kl	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
36.00		CRUSHED STONE BASE				
36.01		Crushed-stone base (c) Constructed from type G2 material obtained from commercial sources and compacted to 88% of apparent relative density, 150mm thick (1) 37mm nominal maximum size stone	m³	220.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
41.00		PRIME COAT				
41.01		Prime coat: (d) MC-30 cut-back bitumen 0.8l/m2	m ²	1450.0		
41.02		Aggregate for blinding	m ²	1450.0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	25.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
4200		ASPHALT BASE AND SURFACING				
42.02		Asphalt surfacing				
		(a) Continuously graded (Medium graded)				
		(i) 30mm thick, A-P1 Bitumen	m²	1450.0		
42.04		Tack coat of 30% stable-grade emulsion	m²	1450.0		
B42.08		100 mm cores in asphalt paving	No	5.0		
B42.23		Speed hump (80mm thickness using 60/40 pen bitumen)	m²	20.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
51.00		PITCHING, STONEWORK AND PROTECTION AGAINST EROSION				
51.01		Stone pitching:				
	LIC	(b) Grouted stone pitching	m ²	5.0		
51.05		Concrete edge beams				
	LIC	(a) Class 25/19	m ³	6.2		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling:				
	LIC	(b) In all other classes of materials	m³	5.0		
52.02	LIC	Surface preparation for bedding the gabions	m²	5.0		
52.03		Gabions:				
		(a) Galvanized gabion boxes				
		(3) 1,0 m wide by 1,0 m high				
	LIC	(ii) by 2,0 m long	m³	10.0		
		(c) Galvanized gabion mattresses				
		(1) 1,0 m diaphragm spacing, 6,0 m long by 2,0 m wide				
	LIC	(ii) by 0,3 m deep mesh	m³	10.0		
52.04		Filter fabric				
	LIC	(b) Grade C	m²	10.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
56.00		ROAD SIGNS				
56.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	15000	15,000.00
56.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
56.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
57.00		ROAD MARKINGS				
57.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	15000	15,000.00
57.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
57.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
	LIC	(a) Machine trimming	m ²	200		
		(b) Hand trimming	m ²	100		
58.02		Using machines for trimming or shaping (alternative to sub-item 58.01(a))				
		(a) Bulldozer	h	8.00		
		(b) Motor grader	h	8.00		
58.03		Preparing the areas for grassing:				
	LIC	(c) Topsoiling within the road reserve, where the following materials are used:				
		(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	45		
		(e) Providing and applying chemical fertilisers and/or soil-improvement material:				
		(iv) Formula 2:3:2 (22)	t	1		
		(f) Stockpiling of topsoil (free-haul 1,0 km)	m ³	45		
B58.04		Grassing:				
		(c) Hydroseeding:	ha	0.40		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve: (b) Single carriageway road	km	0.3		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	Tendered Amount R c
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT SURFACING	
5100	PITCHING, STONework AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5800	LANDSCAPING AND PLANTING PLANTS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
CARRIED FORWARD TO SUMMARY		

Item	LI	Description	Unit	Quantity	Rate	Amount R c
16.00 B16.02		OVERHAUL Overhaul on material hauled in excess of a freehaul distance of 1.0 km	m3-km	2610.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
17.00		CLEARING AND GRUBBING				
B17.01	LIC	Clearing and grubbing	ha	0.15		
17.02		Removal and grubbing of large trees and tree stumps				
	LIC	(a) Girth exceeding 1m up to and including 2m	No	0.10		
17.03	LIC	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	20.00		
17.04	LIC	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	50.0		
17.05	LIC	Cleaning out of hydraulic structures:				
		(a) Pipes with an internal diameter up to and including 750 mm	m ³	10.0		
		(b) Pipes with an internal diameter exceeding 750 mm	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
21.00		DRAINS				
21.01		Excavation for open drains				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(i) 0 m up to 1,5 m	m ³	40		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	2.0		
		(b) Extra over sub-item 21.01(a) for excavation in hard material, irrespective of depth	m ³	2.0		
21.02		Clearing and shaping existing open drains:				
	LIC	(a) In soft material	m ³	5.0		
21.03		Excavation for subsoil drainage systems:				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(1) 0 m up to 1,5 m	m ³	20.0		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	2.0		
21.04		Impermeable backfilling to subsoil drainage systems	m ³	10.0		
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from commercial sources				
		(1) Fine Grade 13mm	m ³	10.0		
		(2) Handstone Grade 25-30mm (Including bidum cloth)	m ³	5.0		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from commercial sources				
		(1) Coarse Grade 0.5 - 1.0mm	m ³	10.0		
		(c)'110mm perforated subsoil pipe	m	24.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (1) 0 m up to 1.5 m (2) Exceeding 1,5 m and up to 3,0 m (b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³ m ³ m ³	280.0 30.0 5.0		
22.02		Backfilling: (a) Using the excavated material (b) Using imported selected material	m ³ m ³	190.0 130.0		
B22.03		Concrete pipe culverts: (c) On class C bedding (2) 600mm dia. Type 75D (2) 900mm dia. Type 75D	m m	140.0 90.0		
22.13		Removing and Relaying existing pipes. (b) 450 mm Dia. (c) 600 mm Dia. (d) 900 mm Dia.	m m m	200.0 20.0 5.0		
22.17		Manholes, catchpits, precast inlet and outlet structures complete Allowance for the Construction by the Local Sub-Contractors Contractors Handling cost and profit in respect of item (1)	SUM %	1.0 75000	75000	75,000.00
22.18	LIC	Brickwork (a) 115 mm thick	m ²	10.0		
	LIC	(b) 230 mm thick	m ²	40.0		
		Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m ³ .km	600.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	50,000	50,000.00
23.02		Contractors Handling cost and profit in respect of item (1)	%	50000		
23.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	50000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
33.00		MASS EARTHWORKS				
33.01 / B16.02		Cut, stockpile and borrow to fill, including free-haul up to 1.0km				
		(a) Material in compacted layer thickness of 150 mm and less:				
		(ii) Compacted to 93% of modified AASHTO	m³	150.0		
		(iii) Eight roller passes compaction	m³	150.0		
33.03		Extra over item 33.01 for excavating and breaking down material in:				
		(a) Intermediate excavation	m³	150.0		
		(b) Hard excavation	m³	20.0		
33.04 / B16.02		Cut to spoil, including free-haul up to 1.0 km. Material obtained from:				
		(a) Soft excavation	m³	550.0		
		(b) Hard Excavation	m³	80.0		
33.07 / B16.02		Removal of unsuitable material (including free-haul of 1.0 km):				
		(a) In layer thicknesses of 200 mm and less:				
		(1) Stable material	m³	60.0		
		(2) Unstable material	m³	10.0		
33.10		Roadbed preparation and the compaction of material				
		(b) Compacted to 93% of modified AASHTO	m³	300		
33.11		Three-roller-passes compaction:				
		(a) Vibratory roller	m²	2900.0		
33.12		In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m³	2900.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01		Pavement layers constructed from gravel, including free haul up to 1,0 km				
		(a) Gravel selected layer obtained from stockpile compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness)	m³	240		
34.14		(b) Gravel subbase obtained from commercial sources compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness G5)	m³	240		
		(ii) 95% of modified AASHTO density (150mm layer thickness G7)	m³	350		
		(d) Gravel subbase obtained from commercial sources (chemically stabilised material) compacted to:				
		(i) 95% of modified AASHTO density (150mm layer thickness)	m³	350		
		(g) Gravel shoulders compacted to:				
		(i) 93% of modified AASHTO density (specify compacted layer thickness)	m³	180		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
35.00		STABILIZATION				
B 35.01		Chemical stabilization extra over unstabilized compacted layers				
		(b) Sub-base				
		(2) 150mm thickness	m³	900		
35.02		Chemical stabilizing agent:				
		(b) CEM IIIA	t	15		
35.04		Provision and application of water for curing	kl	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
36.00		CRUSHED STONE BASE				
36.01		Crushed-stone base (c) Constructed from type G2 material obtained from commercial sources and compacted to 88% of apparent relative density, 150mm thick (1) 37mm nominal maximum size stone	m³	440.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
41.00		PRIME COAT				
41.01		Prime coat: (d) MC-30 cut-back bitumen 0.8l/m2	m ²	2900.0		
41.02		Aggregate for blinding	m ²	2900.0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	50.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
4200		ASPHALT BASE AND SURFACING				
42.02		Asphalt surfacing				
		(a) Continuously graded (Medium graded)				
		(i) 30mm thick, A-P1 Bitumen	m ²	2900.0		
42.04		Tack coat of 30% stable-grade emulsion	m ²	2900.0		
B42.08		100 mm cores in asphalt paving	No	5.0		
B42.23		Speed hump (80mm thickness using 60/40 pen bitumen)	m ²	20.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
51.00		PITCHING, STONework AND PROTECTION AGAINST EROSION				
51.01		Stone pitching:				
	LIC	(b) Grouted stone pitching	m ²	5.0		
51.05		Concrete edge beams				
	LIC	(a) Class 25/19	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling:				
	LIC	(b) In all other classes of materials	m³	5.0		
52.02	LIC	Surface preparation for bedding the gabions	m²	5.0		
52.03		Gabions:				
		(a) Galvanized gabion boxes				
		(3) 1,0 m wide by 1,0 m high				
	LIC	(ii) by 2,0 m long	m³	10.0		
		(c) Galvanized gabion mattresses				
		(1) 1,0 m diaphragm spacing, 6,0 m long by 2,0 m wide				
	LIC	(ii) by 0,3 m deep mesh	m³	10.0		
52.04		Filter fabric				
	LIC	(b) Grade C	m²	10.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
56.00		ROAD SIGNS				
56.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	15000	15,000.00
56.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
56.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
57.00		ROAD MARKINGS				
57.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	29000	29,000.00
57.02		Contractors Handling cost and profit in respect of item (1)	%	29000		
57.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	29000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
	LIC	(a) Machine trimming	m ²	450		
		(b) Hand trimming	m ²	130		
58.02		Using machines for trimming or shaping (alternative to sub-item 58.01(a))				
		(a) Bulldozer	h	8.00		
		(b) Motor grader	h	8.00		
58.03		Preparing the areas for grassing:				
	LIC	(c) Topsoiling within the road reserve, where the following materials are used:				
		(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	90		
		(e) Providing and applying chemical fertilisers and/or soil-improvement material:				
		(iv) Formula 2:3:2 (22)	t	1		
		(f) Stockpiling of topsoil (free-haul 1,0 km)	m ³	90		
B58.04		Grassing:				
		(c) Hydroseeding:	ha	0.06		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve: (b) Single carriageway road	km	0.6		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	Tendered Amount R c
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT SURFACING	
5100	PITCHING, STONWORK AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5800	LANDSCAPING AND PLANTING PLANTS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
CARRIED FORWARD TO SUMMARY		

Item	LI	Description	Unit	Quantity	Rate	Amount R c
16.00 B16.02		OVERHAUL Overhaul on material hauled in excess of a freehaul distance of 1.0 km	m3-km	4050.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
17.00		CLEARING AND GRUBBING				
B17.01	LIC	Clearing and grubbing	ha	0.27		
17.02		Removal and grubbing of large trees and tree stumps				
	LIC	(a) Girth exceeding 1m up to and including 2m	No	0.10		
17.03	LIC	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	20.00		
17.04	LIC	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	50.0		
17.05	LIC	Cleaning out of hydraulic structures:				
		(a) Pipes with an internal diameter up to and including 750 mm	m ³	20.0		
		(b) Pipes with an internal diameter exceeding 750 mm	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
21.00		DRAINS				
21.01		Excavation for open drains				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(i) 0 m up to 1,5 m	m ³	50		
		(ii) Exceeding 1,5 m and up to 3,0 m	m ³	1.0		
		(b) Extra over sub-item 21.01(a) for excavation in hard material, irrespective of depth	m ³	1.0		
21.02		Clearing and shaping existing open drains:				
	LIC	(a) In soft material	m ³	5.0		
21.03		Excavation for subsoil drainage systems:				
		(a) Excavating soft material situated within the following depth ranges below the surface level:				
		(1) 0 m up to 1,5 m	m ³	25.0		
		(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³	2.0		
21.04		Impermeable backfilling to subsoil drainage systems	m ³	10.0		
21.06		Natural permeable material in subsoil drainage systems (crushed stone):				
		(b) Crushed stone obtained from commercial sources				
		(1) Fine Grade 13mm	m ³	15.0		
		(2) Handstone Grade 25-30mm (Including bidum cloth)	m ³	10.0		
21.07		Natural permeable material in subsoil drainage systems (sand):				
		(b) Sand from commercial sources				
		(1) Coarse Grade 0.5 - 1.0mm	m ³	10.0		
		(c)'110mm perforated subsoil pipe	m	30.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
22.00		PREFABRICATED CULVERTS				
22.01		Excavation (a) Excavating soft material situated within the following depth ranges below the surface level: (1) 0 m up to 1.5 m (2) Exceeding 1,5 m and up to 3,0 m (b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³ m ³ m ³	530.0 60.0 10.0		
22.02		Backfilling: (a) Using the excavated material (b) Using imported selected material	m ³ m ³	180.0 260.0		
B22.03		Concrete pipe culverts: (c) On class C bedding (2) 600mm dia. Type 75D (2) 900mm dia. Type 75D	m m	180.0 70.0		
22.13		Removing and Relaying existing pipes. (b) 450 mm Dia. (c) 600 mm Dia. (d) 900 mm Dia.	m m m	10.0 20.0 5.0		
22.17		Manholes, catchpits, precast inlet and outlet structures complete Allowance for the Construction by the Local Sub-Contractors Contractors Handling cost and profit in respect of item (1)	SUM %	1.0 75000	75000	75,000.00
22.18	LIC	Brickwork (a) 115 mm thick	m ²	12.0		
	LIC	(b) 230 mm thick	m ²	48.0		
		Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m ³ .km	1500.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
23.00		CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	50000	50,000.00
23.02		Contractors Handling cost and profit in respect of item (1)	%	50000		
23.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	50000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
33.00		MASS EARTHWORKS				
33.01 / B16.02		Cut, stockpile and borrow to fill, including free-haul up to 1.0 km				
		(a) Material in compacted layer thickness of 150 mm and less:				
		(ii) Compacted to 93% of modified AASHTO	m ³	289.5		
		(iii) Eight roller passes compaction	m ³	225.0		
33.03		Extra over item 33.01 for excavating and breaking down material in:				
		(a) Intermediate excavation	m ³	225.0		
		(b) Hard excavation	m ³	50.0		
33.04 / B16.02		Cut to spoil, including free-haul up to 1.0 km. Material obtained from:				
		(a) Soft excavation	m ³	800.0		
		(b) Hard Excavation	m ³	100.0		
33.07 / B16.02		Removal of unsuitable material (including free-haul of 1.0 km):				
		(a) In layer thicknesses of 200 mm and less:				
		(1) Stable material	m ³	50.0		
		(2) Unstable material	m ³	20.0		
33.10		Roadbed preparation and the compaction of material				
		(b) Compacted to 93% of modified AASHTO	m ³	450		
33.11		Three-roller-passes compaction:				
		(a) Vibratory roller	m ²	1225.0		
33.12		In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m ³	1225.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01		Pavement layers constructed from gravel, including free haul up to 1,0 km				
		(a) Gravel selected layer obtained from stockpile compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness)	m³	160		
34.14		(b) Gravel subbase obtained from commercial sources compacted to:				
		(i) 93% of modified AASHTO density (150mm layer thickness G5)	m³	319		
		(ii) 95% of modified AASHTO density (150mm layer thickness G7)	m³	319		
		(d) Gravel subbase obtained from commercial sources (chemically stabilised material) compacted to:				
		(i) 95% of modified AASHTO density (150mm layer thickness)	m³	319		
		(g) Gravel shoulders compacted to:				
		(i) 93% of modified AASHTO density (specify compacted layer thickness)	m³	120		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
35.00		STABILIZATION				
B 35.01		Chemical stabilization extra over unstabilized compacted layers				
		(b) Sub-base				
		(2) 150mm thickness	m³	580		
35.02		Chemical stabilizing agent:				
		(b) CEM IIIA	t	19.4		
35.04		Provision and application of water for curing	kl	100		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
36.00		CRUSHED STONE BASE				
36.01		Crushed-stone base (c) Constructed from type G2 material obtained from commercial sources and compacted to 88% of apparent relative density, 150mm thick (1) 37mm nominal maximum size stone	m³	300.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
41.00		PRIME COAT				
41.01		Prime coat: (d) MC-30 cut-back bitumen 0.8l/m2	m ²	1925.0		
41.02		Aggregate for blinding	m ²	1925.0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	30.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
4200		ASPHALT BASE AND SURFACING				
42.02		Asphalt surfacing				
		(a) Continuously graded (Medium graded)				
		(i) 30mm thick, A-P1 Bitumen	m²	1925.0		
42.04		Tack coat of 30% stable-grade emulsion	m²	1925.0		
B42.08		100 mm cores in asphalt paving	No	5.0		
B42.23		Speed hump (80mm thickness using 60/40 pen bitumen)	m²	30.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
51.00		PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
51.01		Stone pitching:				
	LIC	(b) Grouted stone pitching	m ²	5.0		
51.05		Concrete edge beams				
	LIC	(a) Class 25/19	m ³	5.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
52.00		GABIONS				
52.01		Foundation trench excavation and backfilling:				
	LIC	(b) In all other classes of materials	m³	5.0		
52.02	LIC	Surface preparation for bedding the gabions	m²	5.0		
52.03		Gabions:				
		(a) Galvanized gabion boxes				
		(3) 1,0 m wide by 1,0 m high				
	LIC	(ii) by 2,0 m long	m³	10.0		
		(c) Galvanized gabion mattresses				
		(1) 1,0 m diaphragm spacing, 6,0 m long by 2,0 m wide				
	LIC	(ii) by 0,3 m deep mesh	m³	10.0		
52.04		Filter fabric				
	LIC	(b) Grade C	m²	10.0		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
56.00		ROAD SIGNS				
56.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	15000	15,000.00
56.02		Contractors Handling cost and profit in respect of item (1)	%	15000		
56.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	15000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
57.00		ROAD MARKINGS				
57.01		Allowance for the Construction by the Local Sub-Contractors	SUM	1.0	20000	20,000.00
57.02		Contractors Handling cost and profit in respect of item (1)	%	20000		
57.03		Allowance for Contractor's additional site supervision of the works, preparation of CPG BoQs and Procurement process	%	20000		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
	LIC	(a) Machine trimming	m ²	250		
		(b) Hand trimming	m ²	140		
58.02		Using machines for trimming or shaping (alternative to sub-item 58.01(a))				
		(a) Bulldozer	h	8.00		
		(b) Motor grader	h	8.00		
58.03		Preparing the areas for grassing:				
	LIC	(c) Topsoiling within the road reserve, where the following materials are used:				
		(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	60		
		(e) Providing and applying chemical fertilisers and/or soil-improvement material:				
		(iv) Formula 2:3:2 (22)	t	1		
		(f) Stockpiling of topsoil (free-haul 1,0 km)	m ³	60		
B58.04		Grassing:				
		(c) Hydroseeding:	ha	0.60		
TOTAL CARRIED FORWARD TO SUMMARY						

Item	LI	Description	Unit	Quantity	Rate	Amount R c
59.00		FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01		Finishing the road and road reserve: (b) Single carriageway road	km	0.4		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	Tendered Amount R c
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
4100	PRIME COAT	
4200	ASPHALT SURFACING	
5100	PITCHING, STONework AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
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C3: SCOPE OF WORK

C3.1: STANDARD SPECIFICATIONS

The Standard Specifications on which this contract is based are the **COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998 edition**.

C3.2: PROJECT SPECIFICATIONS

The Project Specifications, consisting of two parts, form an integral part of the Contract and supplement the Standard Specifications.

Part A contains a general description of the Works, the Site and the requirements to be met.

Part B contains variations, amendments and additions to the Standard Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standard or Particular Specifications and the Project Specifications, the Project Specifications shall take precedence. In the event of a discrepancy between the Specifications (including the Project Specifications) and the drawings and / or the Schedule of Quantities, the discrepancy shall be resolved by the Employer's Agent before the execution of the work under the relevant item.

The Standard Specifications, which form part of this contract, have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

PART A: GENERAL

[NOTE: This description is a broad outline of the Contract Works and does not limit the work to be executed by the Contractor in terms of the contract. The quantities of some of the major items indicated in this section are indicative, not absolute, and are provided to define in general terms the overall scope of the project. [For Compiler information purposes only]

C3.2.1 Employer's Objective and Overview of the works

GREATER KOKSTAD MUNICIPALITY The objectives of the project are to formulate effective engineering solutions for the Upgrading of Horseshoe Roads Phase 2 in Ward 1 & 9 to serve the community of Greater Kokstad Municipality.

The scope of works will include improving the stormwater drainage by replacing the open drains with underground stormwater infrastructure. It will also encompass improving the surface of the identified roads through a design pavement layer works and asphalt surface.

The employer's objectives are also to deliver public infrastructure and services using labour-intensive methods in accordance with EPWP Guidelines.

Labour-intensive works comprise the activities such as those described in SANS 1921-5, Earthworks activities which are to be performed by hand, and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this Scope of Work.

The Contractor shall be required to attend meetings of the local Project Liaison Committee (PLC) from time to time. Requirements of the Expanded Public Works Programme (EPWP) are contained in Part F of section C3.3 Particular Specifications. These requirements include provisions for the National Youth Service programme. Requirements in terms of Government's initiatives for broad based black economic empowerment with respect to small contractor development are contained in Part G of section C3.3 Particular Specifications.

C3.2.2 Overview of the works

The project scope entails the surfacing of three residential arterial roads, whose lengths are broken down in the table below.

Table: Prioritised Roads and Approx Lengths

ROAD NAME	LENGTH (m)
Road 1	250
Road 2	410
Road 3	520
Road 4	277
Road 5	242
Road 6	386
TOTAL	2085

The broad scope of works entails the Design and Project Management for the proposed infrastructure is broken down as follows:

- Site establishment, Clearance, and grubbing, including the removing of topsoil.
- Proving and relocation of existing services including water, and electric infrastructure.
- Constructions of approximately 2 km long x 5.0m wide residential roads using imported material base.
- Paving a 30mm Asphalt to new section of road works.
- The construction of cut off drains as per situation on site.
- Supply, and laying of 600mm diameter concrete stormwater pipes with outlet headwalls at low level points along the proposed road route.
- Construction of pipe crossings with headwalls, inlets, outlets and wingwalls.
- Supply, bed, and lay stormwater pipes.
- Supply and erect gabions baskets and reno mattresses at steep sections.
- Installation of road signs, and
- Testing of material and workmanship

C3.2.3 Location of site and access

The site is located in the medium/low density residential area of Kokstad town, as depicted in the Locality Plan.

C3.2.4 Ground and Subsoil Investigations

Geotechnical investigations are ongoing on the site and the details of the subsoil conditions will be provided to the successful tenderer. Requests may be made via email by tenderers should they require a copy of the report.

C3.2.5 Ancillary works

The asphalt surfaced road is to be milled, the layer-works boxed out and new layer-works and surfacing constructed as depicted in the issued tender drawings.

C3.2.6 Climatic conditions

The proposed project area is in a high summer rainfall region with an average annual precipitation of 747 mm.

C3.2.7 Labour

A Project Liaison Committee shall be established and is a vital means of communication between all parties involved with the project. The composition of the PLC shall comprise representatives of the Employer, the Engineer and formal structures within the community.

The Contractor shall make use of these communication channels and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PLC, and this representative will be also required to attend the monthly PLC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labour is to be used and the employment of such labour is to be done in conjunction with the PLC. The PLC has formed a Labour Committee who shall assist the Contractor with the recruitment of local labourers to ensure an equal distribution of people employed between the various Traditional Leaders in the area.

Labour-intensive construction shall mean the economically efficient employment of as great a portion of labour as is technically feasible to produce a standard of construction as demanded by the specifications with completion by the Due Completion Date, thus bringing about the effective substitution of labour for plant and equipment.

Appropriate portions of the Works included in the Contract shall be executed using labour-intensive construction methods.

Except where the use of plant is essential in order, in the opinion of the Employer's Agent, to meet the specified requirements by the Due Completion Date, or where the use of plant is essential as a result of occupational health and safety considerations, the Contractor shall use only hand tools and equipment in the construction of those portions of the Works that are required in terms of these Project Specifications to be constructed using labour-intensive construction methods.

These portions of the Works shall be constructed utilizing only locally employed labour and/or the labour of local subcontractors, supplemented by the Contractor's key personnel to the extent necessary and unavoidable, unless otherwise instructed by the Employer's Agent and in accordance with the further provisions of the relevant sections of Portion B of the Project Specifications.

Subject to considerations of occupational health and safety, the portions of the Works to be executed using labour-intensive construction methods are:

- Site establishment;
- Clearing and grubbing of the Site;
- Proving and relocation of existing services including water, sewer and electricity;
- Mass earthworks.
- Construction of approximately 2km long x 5m wide residential roads using imported materials as per specifications and drawings;
- 30mm Asphalt overlay to the new road section;
- Excavation for structures up to 1,5 m deep;
- Bedding, selected fill, backfilling and compaction of all pipe trenches irrespective of depth, but assisted by mechanical compaction equipment in order to achieve the specified densities;
- Hauling and spoiling of all excavated materials.
- Supply, erect, excavate, install gabion baskets and reno mattresses as directed by the employer's agent;
- Erosion protection;
- Traffic accommodation through the supply an erect temporary and permanent road signs;
- Dismantling and re-erection of property fences;
- Mixing and placing of concrete; for V-Drains, Kerb and Channel (Kerbs to be sourced an to conform with the specifications), concrete for channel can be mixed on site without compromising the required started;
- Supply and lay pipe culverts;
- Installation of subsoil drainage as directed by the employer's agent;
- Construction of headwalls, wingwalls, inlet and outlets;

- Construction of all brickwork required for structures;
- Road marking;
- Cleaning and tidying up of the Site and
- Landscaping.

In respect of those portions of the Works which are not listed above, the construction methods adopted and the plant utilized shall be at the discretion of the Contractor, provided always that the construction methods adopted and the plant utilized by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

Task Based Activities: Labour Intensive activities are to be planned as task-based works where required. Task based refers to a specific amount of work to be performed which is clearly defined by a quantity and quality. Typically, a particular task can be completed within a working day.

C.3.2.8 Spoiling of surplus material

Surplus material shall be spoiled in designated areas approved by the Employer's Agent. The spoil material shall be disposed of in accordance with subclause 3306(f) of the COLTO standard specifications.

C.3.2.9 Material sources, spoil and stockpile areas

Where possible, the contractor shall source material from within 20km of the site utilizing local suppliers. The material which may be sourced locally:

- Cement;
- River sand (Coarse Grade Nom. 4.75mm); and
- 19mm sized crushed stone aggregates.

G2, G7 (portion of material) and G5/G6 material shall be obtained from commercial sources. G9 will be available from the existing road prism. Spoil areas and areas for the temporary stockpiling of construction materials shall be determined and agreed on site in conjunction with the Engineer. The Contractor shall be permitted to use only these agreed spoil and stockpile areas, which shall be landscaped and vegetated on completion of the work.

Spoil areas and areas for the temporary stockpiling of construction materials shall be determined and agreed on site in conjunction with the Engineer, the PLC (where applicable) and the local communities (where applicable). The Contractor shall be permitted to use only these agreed spoil and stockpile areas, which shall be landscaped and vegetated on completion of the work.

C.3.2.10 Accommodation of traffic

The accommodation of traffic forms and integral part of the contract.

C.3.2.11 Existing services

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services has commenced.

It is also expected that unknown domestic services crossings requiring relocation or protection may be encountered along the route as the work proceeds. The Contractor shall make every effort to establish the location of these services in any area prior to excavations commencing in that area. Such efforts shall include diligent enquiry and discussions with adjacent landowners, visual surface inspection and exploratory trenching investigation as necessary.

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

C.3.2.12 Employer's Agent's site offices and laboratory

The Contractor shall be required to provide furnished site office facilities, laboratory facilities, ablution facilities, and carports for the Engineer at a site located in close proximity to the Contractor's office establishment and to the Works. A possible area for such site establishment shall be indicated by the Engineer before the commencement of construction.

C.3.2.13 Temporary Works

Vertical, horizontal and inclined falsework and formwork will be used during the construction of the culvert structures. Provisions of access scaffolding and temporary propping will also be required. Temporary shoring will be utilised on unstable excavations.

The Temporary Works required under this Contract shall include the traffic accommodation measures implemented, the provision of drainage control, falsework and formwork during the construction of the minor drainage structures, and the provision of any scaffolding or temporary propping used during the erection of the road signs.

All Temporary Works shall be removed from the Site on completion of the Contract.

C.3.2.14 Maintenance of the Works during the construction period

The Contractor shall take note of the various requirements of the General Conditions of Contract 2015 and the standard specifications with respect to the care and protection of the Works.

The handing-over of the road reserve for this contract is described in clause B1224 of these Project Specifications. The Contractor shall be responsible for maintaining this portion of the road from the date of hand-over until the issue of the Certificate of Practical Completion.

C.3.2.15 Testing of materials

A provisional sum has been allowed in section 8100 of the Schedule of Quantities for all acceptance control testing laboratory work to be carried out by the Engineer using the laboratory facilities included in section 1400 and/or commercial laboratory facilities.

The Contractor shall carry out at his own cost the required process control testing as specified in terms of the COLTO standard specifications.

C.3.2.16 Power supply and other services

The Contractor shall make his own arrangements concerning the supply of electrical power and all other services. No direct payment shall be made for the provision of electrical and other services. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

C.3.2.17 Construction in confined areas

It may be necessary for the Contractor to work within confined areas. Except where provided for in the specifications, no additional payment shall be made for work done in restricted areas. In certain places the width of the fill material and pavement layers may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the Contractor's constructional plant.

However, the Contractor shall note that, unless otherwise provided for in terms of the scheduled payment items in the COLTO Standard Specifications or these project specifications, measurement and payment shall be in accordance with the specified cross sections and dimensions only, irrespective of the method used for achieving these cross sections and dimensions, and that the tendered rates and amounts shall include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions, and that no extra payment shall be made nor shall any claim for additional payment be considered in such cases.

C.3.2.18 Contractor's campsite

Possible locations for a campsite shall be pointed out at the clarification meeting.

The Contractor shall make his own arrangements for the provision of his campsite and housing for construction personnel but the chosen site shall be subject to the approval of the Engineer, the local authorities and, where applicable, the Project Liaison Committee (PLC) associated with the project.

The standard of the Contractor's camp, offices, accommodation, ablution, and other facilities must comply with the requirements of all local authority, environmental and industrial regulations concerned. In establishing and maintaining his campsite, due cognisance is to be taken of the requirements of clause B1233 of these Project Specifications.

The Contractor is to fully familiarise himself with all local by-laws and Government regulations for the employment, transport and accommodation of labour on site.

The Contractor shall particularly note that there is a high risk of theft, vandalism and damage to property in this area and strict security will be required for all plant, establishment, temporary works and partially completed works. The Contractor shall be responsible for providing security for all plant, establishment, temporary works and partially completed works.

No separate payment shall be made for the provision of such security since full compensation for these costs shall be deemed to be included in the amount tendered for item B13.01(c) (The contractor's general obligations: Time-related obligations).

C.3.2.19 Additional requirements for construction activities

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's tendered rates shall include full compensation for all costs which may arise from the construction and maintenance of deviations and construction under traffic. No claim for additional costs which may arise from these methods of traffic accommodation and no additional payment owing to inconvenience as a result of the Contractor's method of working shall be considered.

C3.2.20 Design

- The Contractor is responsible for the Temporary Works, Site Camp and Contractor's office accommodation design.
- Site layouts for the Engineer Representative's temporary office accommodation and a Monthly Meeting venue.

The costs of the designs will be deemed to have been included in the scheduled items in the Schedule of Quantities. No other additional payments will be certified to cover these activities.

The bid drawings are applicable to the contractor are detailed in this tender document. These drawings have been used for setting up the Bills of Quantities.

C3.2.21 Quality Assurance (QA) *(Read with SANS 1921 – 1: 2004 clause 4.4)*

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the

Engineer's representative to act as foreman or surveyor.

C3.2.22 Programme in terms of Clause 5.6 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the tender shall be used as basis for this programme.

C.3.2.23 Construction programme

In addition to any other restrictions accommodated by the Contractor in compiling the construction programme, the following constraints shall be considered in the preparation thereof:

- (1) The whole of the Works (and the portions of the Works if completion in portions is required) shall be completed within the time period(s) stated (refer to the Contract Data in section C1.2.2).
- (2) Working days lost due to abnormal rainfall shall be treated as set out in clause B1215.
- (3) Allowance shall be made for non-working days and special non-working days (refer to the Contract Data in section C1.2.2).
- (4) Construction activities must comply with all the specified environmental requirements including clause B1233 and the requirements of Part C: Environmental Management Specification contained in section C3.3 Particular Specifications.
- (5) Construction activities must comply with all the specified health and safety obligations including the requirements of the OHSA 1993 Health and Safety Specifications.
- (6) Strict control of access to and from local public roads shall be required when construction vehicles, plant or equipment leave or enter the site.
- (7) Throughout the contract period traffic must be accommodated through the site and all other contractors engaged on the UPGRADING OF HORSESHOE ROADS (PHASE 2) IN WARD 1 & 9 must be accommodated.
- (8) The Contractor's programme of work shall take due cognisance of risks by limiting the duration of the exposure of the various construction elements to natural phenomena.
- (9) Programme must clearly indicate work carried out by the nominated sub-contractors and its impact on the contractors works programme

For the guidance of Tenderers, a provisional preliminary construction programme is included below. This programme is given in good faith and no claims shall be entertained due to inaccuracies, discrepancies or omissions contained in the programme.

PRELIMINARY CONSTRUCTION PROGRAMME

ACTIVITY	DURATION	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6			
	(Weeks)																								
1. Site Establishment																									
2. Relocation of Services																									
3. Traffic Accommodation																									
4. Clear and Grub																									
5. Earthworks																									
6. Drainage																									
7. Subsoils																									
8. Kerb and channel																									
9. Selected Subgrade (Lower)																									
10. Selected Subgrade (Upper)																									
11. Cemented Subbase																									
12. Crushed Stone Base																									
13. Surfacing																									
14. Ancillary Items																									
15. Finishing Road Reserve																									
16. Pedestrian Sidewalks																									
17. De-Establishment																									
18. Road Marking																									
EXPECTED CASH FLOWS	(in Rands)																								

C.3.2.24 Management and disposal of water (Read with SANS 1921 - 1 : 2004 clause 4.6)

The Contractor shall pay special attention to the management and disposal of water and stormwater on the site. It is essential that all completed works or parts thereof are kept dry and properly drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

C.3.2.25 Earthworks (Read with SANS 1921 - 1 : 2004 clause 4.10)

Borrow pits and spoil areas

The borrow pits to be used for this contract, where possible, shall be pointed out at the Compulsory Site Inspection. It is however the contractor's responsibility to locate the closest borrow pit which will be tested by an approved Geotechnical Engineering specialist prior to the source being used. The rate for gravel material shall be deemed to include all overhaul based on the identified borrow pits' distance.

The Contractor shall be permitted to use only those borrow pits approved by the Engineer. The spoil sites shall be determined on site in conjunction with the Engineer and the Municipality. The Contractor shall be permitted to use only those spoil areas approved by the Engineer. Should the Contractor wish to use any other tip area for the disposal of soil, rubble, vegetation, etc., its use shall be subject to the approval of the Engineer and the landowner.

C.3.2.26 Testing (Read with SANS 1921 – 1 : 2004 clause 4.11)

Process control

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Engineer.

The Contractor may establish his own laboratory on site or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Engineer. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer may have further control tests carried out by a laboratory of his choice. The cost of such additional tests will be covered by a provisional sum provided in the schedule of quantities, but tests that failed to confirm compliance with the specifications, will be for the account of the Contractor.

C.3.2.27 Accommodation of Employees

No employees except for security guards will be allowed to sleep or be accommodated on the site in urban areas.

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site.

No informal housing or squatting will be allowed.

The Contractor shall provide the necessary ablution facilities at his camp site and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

C.3.2.28 Survey beacons (Read with SANS 1921 - 1 : 2004 clause 4.15)

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as bench-marks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

C.3.2.29 Health and Safety (Read with SANS 1921 - 1: 2004 clause 4.18)

C.3.2.29.1 General statement

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 2003 issued on 18 July 2003 by the Department of Labour.

For this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in section C1.2.4

C.3.2.29.2 Health and Safety Specifications and Plans

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification will be included in the tender documents as part of the Project Specifications.

[Note to compiler: The Employer's Safety Specification is available and must be included]

(b) Tenderer's Health and Safety Plan

The Tenderer shall submit with his tender his own documented Health and Safety Plan he proposes to implement for the execution of the work under the contract. His Health and Safety Plan must at least cover the following:

- i. a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 7 to 28;
- ii. pro-active identification of potential hazards and unsafe working conditions;
- iii. provision of a safe working environment and equipment;
- iv. statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 5*);
- v. monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- vi. details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 6 and other applicable regulations; and
- vii. details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2003.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

C.3.2.29.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety

Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

C.3.2.29.4 Management of the environment (Read with SANS 1921 - 1: 2004 clause 4.19)

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

(a) Natural Vegetation

The Contractor shall confine his operation to the limits of the road reserve for constructing the works and where applicable detours, shall be sited in consultation with the Engineer and the local communities.

Only those trees and shrubs directly affected by the works and those the Engineer may directly instruct, 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.

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

(c) Environmental Management Plan

In addition to the above all requirements according to the Environmental Management Framework prepared by the Municipality, and the project specific Environmental Management Plan will be adhered to.

C.3.2.30 EPWP Alignment Clauses

C.3.2.30.1 (1.2) Personal & Other Protective Equipment (Sections 8/15/23 or the OHS Act)

The Contractor is required to identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal Protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the Contractor is required to inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the said equipment be maintained by the Contractor, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The Contractor may not charge any fee for protective equipment prescribed by him/her but may

charge for equipment under the following conditions:

- Where the employee requests additional issue in excess of what is prescribed
- Where the employee has patently abused or neglected the equipment leading to early failure
- Where the employee has lost the equipment

All employees shall, as a minimum, be required to wear the following PPE on any infrastructure projects:

Protective overalls

- Protective footwear
- Protective headwear
- Eye/face protection

All PPE provided to local labour working on the Expanded Public Works Programme shall be branded in accordance with the EPWP CI Manual. Typical elements which shall be branded include:

- Protective overalls
- Reflective vests
- Protective headwear

The rate for local labour shall include for the supply of EPWP branded PPE in accordance with the Provincial EPWP specifications. The rate shall include the additional cost of the specified colours for the PPE and branding in accordance with CI manual.

C.3.2.30.2 (B1231) COMMUNITY LIAISON OFFICER (CLO)

The contractor or his appointed agent will appoint a Community Liaison Officer (CLO) after consultation with the local communities, the engineer and the employer. The contractor shall direct all his liaison efforts with the local communities through the appointed officer. The contractor shall, however, accept the appointed as part of his management personnel.

(a) Duties of the Community Liaison Officer

The Community Liaison Officer's duties will be:

- (i) To be available on site daily between the hours of (insert time) and ___(insert time) and at other time as the need arises. His normal working day will extend from ____morning until _____(insert time) in the afternoon.
- (ii) To determine, in consultation with the contractor, the needs of the temporary labour for relevant skills training. He will be responsible for the identification of suitable trainees and will attend one of each of the training sessions.
- (iii) To communicate daily with the contractor and the engineer to determine the labour requirements regarding numbers and skill, to facilitate in labour disputes and to assist in their resolution.
- (iv) To assist in and facilitate in the recruitment of suitable temporary labour and the establishment of a "labour desk".
- (v) To attend all meetings in which the community and/or labour are present or are required to be represented.
- (vi) To assist in the identification, and screening of labourers from the community in accordance with the contractor's requirements.
- (vii) To inform temporary labour of their conditions of temporary employment and to inform temporary labourers as early as possible when their period of employment will be terminated.
- (viii) To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- (ix) To keep a daily written record of his interviews and community liaison.
- (x) To attend monthly site meetings to report on labour and RDP matters.
- (xi) All such other duties as agreed upon between all parties concerned.
- (xii) To submit monthly returns regarding community liaison.

(b) Payment for the community liaison officer

A special pay item is incorporated in section 1200 of the bill of quantities relating to payment of the liaison officer on a prime cost sum basis. This payment shall only be made for the period for which the duties of the liaison officer are required and not necessarily for the full duration of the contract.

The remuneration of the CLO shall be determined jointly by the contractor, engineer and employer.

(c) Period of employment of the community liaison officer

The period of employment of the community liaison officer shall be as decided upon jointly by the contractor, engineer and employer.

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the COLTO Standard Specifications, allowance is made for 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 the necessary additional specifications required for this Contract.

The clauses and payment items dealt with in this part of the Project Specifications are numbered 'B' with a number corresponding to the relevant clause or item number in the COLTO Standard Specifications.

New clauses and payment items not covered by clauses or items in the COLTO Standard Specifications have been included here and have also been designated with the prefix 'B'. Such clauses and items have been given a new number following upon the last number used in the particular section referred to in the COLTO Standard Specifications.

(a) The following specifications shall apply to this contract:

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

The contractor may purchase copies from the South African Institution of Civil Engineers at:

SAICE

Waterfall Park / Postnet Suite 81
Howick Gardens/ Private Bag X65
Vorna Valley / Halfwayhouse
Becker Street/ 1685
Midrand

Tel: (011) 805-5947

Fax: (011) 805-5971

(b) SANS or BS Specifications and Codes of Practice

Wherever any reference is made to the South African National Standards(SANS) and the British Standards Specification (BSS) in either these Bill of Quantities or the Specification of Materials and Methods to be Used (OOG-001E), this reference shall be deemed to read "SANS or equivalent standard" and BS or equivalent standard" respectively.

(c) Various other specifications specified in the COLTO Standard Specifications or the Project Specifications.

SECTION 1100: DEFINITIONS AND TERMS

In all cases where “Directorate Land Transport” appears in the text or in drawings contained in this document it shall be read as “Province of KwaZulu-Natal”.

B1115 GENERAL CONDITIONS OF CONTRACT

Replace clause 1115 with the following:

“The General Conditions of Contract for Construction Works, 3rd edition 2015 (abbreviated elsewhere in C3.2 Project Specifications and C3.3 Particular Specifications as “GCC 2015” or as “General Conditions of Contract 2015”) published by the South African Institution of Civil Engineering (SAICE), together with the Special Conditions of Contract form part of the contract.

All references in the COLTO Standard Specifications for Road and Bridge Works are to the COLTO General Conditions of Contract for Road and Bridge Works for State Road Authorities. Consequently all references in the COLTO Standard Specifications have to be amended accordingly to reflect the appropriate General Conditions of Contract relevant to the Contract. The COLTO Standard Specifications have been scrutinized and the clauses, which refer to the COLTO General Conditions of Contract, identified. Each COLTO clause reference is tabulated in Table B1115 below (context of reference is also given) together with the relevant equivalent clause in the SAICE General Conditions of Contract for Construction Works 3rd edition 2015 applicable for this contract.

Whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the SAICE General Conditions of Contract for Construction Works 3rd edition 2015 reference, as amended by the Special Conditions of Contract in the Contract Data, shall apply and the Contractor shall be responsible for interpretation of the equivalent clause.

The COLTO Standard Specifications make frequent use of the term “engineer”. The Project Specifications and the Schedule of Quantities in turn make reference to the COLTO Standard Specifications and may use similar terminology in order to facilitate the reading and cross-referencing thereof.

Wherever in the COLTO Standard Specifications or in the Project Specifications or in the Schedule of Quantities reference is made to the “engineer” or the “Engineer”, this is to be interpreted as the “Employer’s Agent” as defined in subclause 1.1.1.16 of GCC 2015.

Wherever in the COLTO Standard Specifications or in the Project Specifications or in the Schedule of Quantities reference is made to the “engineer’s representative” or the “Engineer’s Representative”, this is to be interpreted as the “Employer’s Agent’s Representative” as defined in subclause 1.1.1.17 of GCC 2015.”

TABLE B1115: REFERENCES IN COLTO STANDARD SPECIFICATIONS TO THE COLTO GENERAL CONDITIONS OF CONTRACT AND RELEVANT SAICE GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS 3rd EDITION 2015

COLTO Standard Specification		COLTO General Conditions of Contract 1998		SAICE General Conditions of Contract for Construction Works 3 rd Edition 2015	
Clause No.	Page No.	Clause No.	Description or Reference	Clause No.	Description or Reference
1202	1200-2	15	Programme	5.6	Programme
1209(e)	1200-5	52:		6.9 & 6.10:	
		52(1)(e)	Monthly payments (documentary evidence of ownership of materials)	6.9	Vesting of Plant and materials
		52(2)	Valuation of material brought onto Site	6.10.2	Valuation of material brought onto Site
1210	1200-5	54:		5.14:	
		54(1)	Certificate of Practical Completion	5.14.1	Certificate of Practical Completion
		54(2)		5.14.2	
		54(3)		5.14.3	
1212(l)	1200-7	49:		6.8:	
		49(2)	Application of Contract Price Adjustment Factor	6.8.2	Application of the Contract Price Adjustment Factor
1215	1200-9	45	Extension of time for completion	5.12	Extension of time for Practical Completion
1217	1200-10	35	Care of the Works	8.2	Care of the Works
1303	1300-1 and 1300-2	49 & 53:		6.8 & 6.11:	
		49(2)	Application of Contract Price Adjustment Factor and Variation in cost of special materials	6.8.2	Application of the Contract Price Adjustment Factor and Variation in cost of special materials
		49(3)		and 6.8.3	
		53	Variations exceeding 20 per cent	6.11	Variations exceeding 15 per cent
1303	1300-2	12 & 45:		5.3 & 5.12:	
		12	Commencement of Works and Commencement Date	5.3	Commencement of the Works
		45	Extension of time for completion	5.12	Extension of time for Practical Completion
1403 (c)(ii)	1400-4	40(1)	Valuation of variations	6.4.1	Valuation of variations
1505	1500-3	40:		6.4:	
		40(1)	Valuation of variations	6.4.1	Valuation of variations
1517 Items: 15.08 15.09 15.11	1500-8	48:		6.6:	
		48.1	Provisional Sums	6.6.1	Provisional sums
3108 Note (2)	3100-4	40:		6.4:	
		40(1)	Valuation of variations	6.4.1	Valuation of variations
3204	3200-2	40:		6.4:	

COLTO Standard Specification		COLTO General Conditions of Contract 1998		SAICE General Conditions of Contract for Construction Works 3rd Edition 2015	
Clause No.	Page No.	Clause No.	Description or Reference	Clause No.	Description or Reference
(b)(iii)		40(1)	Valuation of variations	6.4.1	Valuation of variations
3303(b)	3300-2	2	Engineer and Engineer's Representative	3.	Employer's Agent
5803(c)	5800-3	40:		6.4:	
		40(1)	Valuation of variations	6.4.1	Valuation of variations
5805(d)	5800-4	40:		6.4:	
		40(1)	Valuation of variations	6.4.1	Valuation of variations
5809 Item 58.10	5800-10	48:		6.6:	
		48.1	Provisional Sums	6.6.1	Provisional sums
8103(c)	8100-1	40:		6.4:	
		40(1)	Valuation of variations	6.4.1	Valuation of variations
8117 Item 81.03	8100-26	22	Clearance of Site on completion	5.15	Clearance of Site

SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS

B1202 SERVICES

Add the following at the end of clause 1202:

"A provisional sum is included in the Schedule of Quantities to cover the costs of relocating the known services. This provisional sum shall be used to effect payments for the services relocation work carried out by the subcontractor selected by the Contractor in consultation with the Employer for this purpose."

B1205 WORKMANSHIP AND QUALITY CONTROL

Add the following paragraph to the end of clause 1205:

"Testing for quality control shall be conducted in accordance with the requirements of Section 8200 for Quality Control (Scheme 1)."

B1206 THE SETTING-OUT OF WORK AND PROTECTION OF BEACONS

Delete the first paragraph of clause 1206 in its entirety and replace it with the following:

"The Contractor shall comply with all legal provisions in regard to surveying and setting out work."

Add the following paragraph to the end of clause 1206:

"It may become necessary to construct, level and coordinate new survey beacons during the course of the contract, or to protect existing survey beacons. A provisional sum is included in the Schedule of Quantities to cover the costs of such work."

B1209 PAYMENT

(a) Contract rates

Add the following new paragraph at the end of subclause 1209(a):

"All rates tendered are to be exclusive of VAT."

B1212 ALTERNATIVE DESIGNS AND OFFERS

Add the following to the end of subclause 1212(m):

"The provision for contract price adjustment in the original Tender Summary must not under any circumstances be altered in an alternative offer."

B1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

Extension of time resulting from abnormal rainfall shall be calculated according to the requirements of Method (ii) (Critical-path method).

Method (ii) (Critical-path method)

Delete the words "(based on a five-day working week)" in the fifth and sixth lines of the second paragraph of Method (ii).

Add the following to the end of Method (ii):

"The value of "n" working days expected delay caused by normal rainy weather as referred to in Method (ii) shall be as given in Table B1215 below for each respective calendar month of any year:

Table B1215

Month	Expected delay of "n" working days due to normal rainy weather	Month	Expected delay of "n" working days due to normal rainy weather
January***	5	July	1
February	4	August	1
March	4	September	2
April	3	October	3
May	2	November	4
June	1	December***	5

*** Includes the whole month of December / January.

Each "n"-value in Table B1215 applies only to the calendar month immediately to the left of the number, and the "n"-values as specified shall not be taken as being carried forward so as to accumulate over the contract period. If no abnormal rainfall occurs during a particular calendar month in a particular year, then no extension of time for abnormal rainfall shall be granted with respect to that calendar month for that year, and no further consideration shall be given to that "n"-value in respect of that year.

Similarly, if the "n" working days expected delay caused by normal rainy weather during a particular calendar month in a particular year (for which the Contractor shall have made provision in his programme of work in accordance with Method (ii)) are not taken up (either in whole or in part) by standing time due to normal rainy weather during that month of that year, then no further consideration shall be given to those "n" working days (or portion thereof), which effectively have been gained, when any subsequent extension of time claims which may arise later during the contract period are assessed by the Employer's Agent."

B1219 WATER

Add the following paragraph to the end of clause 1219:

"The Contractor shall arrange for chemical tests to be carried out to confirm the suitability of his proposed water sources for use as drinking water and for use in the concrete construction. The Contractor shall ensure that these tests also include testing for salinity and sugar content levels.

The Contractor shall note that the necessary permission must be obtained from the Department of Water Affairs for the abstraction of water from streams and rivers."

B1224 THE HANDING-OVER OF THE ROAD RESERVE

Add the following paragraph to the end of clause 1224:

"The handing-over of the road reserve for this project shall be subject to the following restrictions:

- (a) Only that portion of the road reserve within the project scope shall be handed over to the Contractor. The Contractor shall be responsible for the maintenance along this portion of the road until completion of the contract.
- (b) The Contractor shall be required to accommodate public traffic as well as the Employer's other contractors working on various projects in the area related to the project scope
- (c) The Contractor shall be required to accommodate service owners and other contractors working on the services relocation and maintenance in the execution of their duties."

B1229 SABS CEMENT SPECIFICATIONS

Add the following paragraphs to the end of clause 1229:

"All cement used on this contract shall comply with SANS 50197-1: Cement Part 1: Composition, specifications and conformity criteria for common cements.

Where reference is made in these Project Specifications or in the COLTO Standard Specifications to the former SABS cement specifications (e.g., SABS 471, SABS 626, SABS 831, SABS 1491), such reference shall be replaced with the new specification:

- SANS 50197-1: Cement Part 1: Composition, specifications and conformity criteria for common cements.

The blending of cements on site shall not be permitted.”

Add the following new clauses at the end of Section 1200:

"B1230 DEVELOPMENT PROGRAMME

A Project Liaison Committee (PLC) is a vital means of communication between all parties involved with the project. The PLC comprises representatives of the Employer, the Employer's Agent and formal structures within the Community. The Contractor shall make use of these communication channels, and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PLC, and this representative shall also attend the monthly PLC meetings when so requested.

B1231 COMMUNITY PARTICIPATION

Purpose:

In order to give effect to the need for participation and transparency in the process of appointing labour, the community should participate in the decision-making process throughout the life of a project. This shall be achieved through structured engagement between those responsible for the delivery of the project and the community.

Structure and Composition:

A Project Liaison Committee (PLC) may be formed from representatives of the Employer, the Engineer, the Contractor and the Community if the project is such that a specific community can be identified.

Procedures:

- The PLC deals with labour and SMME involvement on the project and shall meet at least once every month until such time as it is of the opinion that it could fulfil its tasks by meeting less frequently.
- The PLC shall make recommendations by consensus. If consensus cannot be reached, the decision of the Employer will be final in cases that have no financial implications for the Contractor or where payment is to be made from PC items. Where the financial responsibility for the successful completion of the works rests with the Contractor, the Contractor's decision shall be final. In fulfilling its tasks, the PLC shall be guided by the relevant sections of this specification and the supplementary documents.

Tasks of the PLC

- To assist with community liaison and resolution of disputes.
- To devise fair and transparent procedures that will assist the Contractor in the engagement of labour and the award of sub-contracts to SMME's.
- To advise on and monitor labour issues.
- To assist in resolving labour disputes.

Assistance to the PLC

- The Employer may appoint a competent local person as a Community Liaison Officer to assist the Engineer and the Contractor in the day to day liaison with the communities directly affected by the project.

B1232 COMMUNITY LIAISON OFFICER (CLO)

The contractor or his appointed agent will appoint a Community Liaison Officer (CLO) after consultation with the local communities, the engineer and the employer. The contractor shall direct all his liaison efforts with the local communities through the appointed officer. The contractor shall, however, accept the appointed as part of his management personnel.

(a) Duties of the Community Liaison Officer

The Community Liaison Officer's duties will be:

- (i) To be available on site daily between the hours of 07h30 and 16h30 and at other time as the need arises. His normal working day will extend from 07h30 morning until 16h30 in the afternoon.
- (ii) To determine, in consultation with the contractor, the needs of the temporary labour for relevant skills training. He will be responsible for the identification of suitable trainees and will attend one of each of the training sessions.
- (iii) To communicate daily with the contractor and the engineer to determine the labour requirements with regard to numbers and skill, to facilitate in labour disputes and to assist in their resolution.
- (iv) To assist in and facilitate in the recruitment of suitable temporary labour and the establishment of a "labour desk".
- (v) To attend all meetings in which the community and/or labour are present or are required to be represented.
- (vi) To assist in the identification, and screening of labourers from the community in accordance with the contractor's requirements.
- (vii) To inform temporary labour of their conditions of temporary employment and to inform temporary labourers as early as possible when their period of employment will be terminated.
- (viii) To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- (ix) To keep a daily written record of his interviews and community liaison.
- (x) To attend monthly site meetings to report on labour and RDP matters.
- (xi) All such other duties as agreed upon between all parties concerned.
- (xii) To submit monthly returns regarding community liaison as illustrated in Part C5.1 of this document (form RDP 12(E)).

(b) Payment for the community liaison officer

A special pay item is incorporated in section 1200 of the bill of quantities relating to payment of the liaison officer on a prime cost sum basis. This payment shall only be made for the period for which the duties of the liaison officer are required and not necessarily for the full duration of the contract. The remuneration of the CLO shall be determined jointly by the contractor, engineer and employer.

(c) Period of employment of the community liaison officer

The period of employment of the community liaison officer shall be as decided upon jointly by the contractor, engineer and employer.

B1233 UNEMPLOYMENT INSURANCE FUND

The contractor will be responsible for payment or contribution of UIF for all labour employed under the project. Proof of payment of UIF shall be available upon request.

B1234 COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993

All labour employed on the site shall be covered by the Compensation for Occupational Injuries and Diseases Act, 1993, as amended. The Contractor shall pay in full, including the payment of the necessary levies, such amounts as are due in terms of the Act. The manner in which compensation in terms of this Act shall be handled shall be resolved by the Contractor at the commencement of the contract.

B1235 COMPLIANCE WITH THE ROAD TRAFFIC ACT

When a service necessitates vehicles or plant travelling or working on a public road, the following shall apply:

- The vehicles and plant shall be licensed in terms of the National Road Traffic Act 1996 (Act No. 93 of 1996) as amended.
- Every driver and operator of a vehicle or an item of plant shall be in possession of a valid permit in respect of the class of vehicle or item of plant he / she is driving or operating.

The Contractor shall provide, erect and maintain sufficient road signs, barricades, fencing and guarding as may be necessary or required by the Employer's Agent or by any act, regulation or statutory authority in order to minimise the danger and inconvenience caused to vehicle and pedestrian traffic. The Contractor by accepting this contract shall be deemed to have indemnified the Employer and the Employer's Agent against any claims, damages and / or costs that may arise in this regard.

B1236 ENVIRONMENTAL IMPACT CONTROL

In addition to aspects of the design which are intended to avoid or reduce environmental impact, and in addition to normal good construction practice expected of the Contractor, the following requirements shall also be observed:

- (a) The Contractor shall comply with the requirements of Part C: Environmental Management Specification contained in section C3.3 Particular Specifications.
- (b) Clearing shall be limited to the road prism and, where applicable, to detours, which shall be sited in consultation with the Employer's Agent and the local communities.
- (c) No littering by construction workers shall be allowed. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the Employer's Agent.
- (d) Adequate provision shall be made for temporary toilet requirements in construction areas. Use of the veld for this purpose shall not be allowed under any circumstances.
- (e) Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants, such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate tailings, wash water, organic materials and bituminous products. In the event of spillage, prompt action shall be taken to clear the affected area. Emergency measures in the event of spillage shall be set out and the responsible person shall be made aware of the required action. The construction of temporary and / or permanent dams shall be done with the necessary approvals from the Department of Water Affairs and Forestry and the Department of Environmental Affairs and Tourism.
- (f) Bituminous and / or other hazardous products shall not be spoiled on site and shall only be disposed of at licensed authorised disposal facilities.
- (g) Provision shall be made to prevent excessive erosion and siltation throughout the contract and in particular on adjacent land. Should excessive erosion and / or siltation take place outside the road reserve as a direct result of the Contractor's construction activities, the Contractor shall be responsible for making good the erosion / siltation to the satisfaction of the landowner and the Employer's Agent.
- (h) Invader species of plants shall be controlled.
- (i) Dust and noise pollution shall be restricted to acceptable levels.

No separate payment shall be made for observing these requirements as such payment shall be deemed to be included in the amount tendered for item B13.01(c) (The contractor's general obligations: Time-related obligations). Any avoidable non-compliance with these requirements shall be considered sufficient grounds for withholding payment of part or all of the amounts to be paid for the above item in order to pay for the repairs to any damages.

B1237 MEASUREMENT AND PAYMENT

Item	Unit
B12.01 Services:	
(a) Protection, relocation, realignment, removal or replacement of services	provisional sum
(b) Handling costs and profit in respect of subitem B12.01(a) above	percentage (%)

Expenditure under this item shall be made in accordance with clause 6.6 of the General Conditions of Contract 2015.

The tendered percentage is a percentage of the amount of expenditure approved by the Employer's Agent under subitem B12.01(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the protection, relocation, realignment, removal or replacement of the relevant services.

Item	Unit
B12.02 Construction of new survey beacons and protection of existing survey beacons:	
(a) Provisional sum for new survey beacons to be constructed or for existing survey beacons to be protected during construction.....	provisional sum
(b) Handling costs and profit in respect of subitem B12.02(a) above	percentage (%)

Expenditure under this item shall be made in accordance with clause 6.6 of the General Conditions of Contract 2015.

The tendered percentage is a percentage of the amount of expenditure approved by the Employer's Agent under subitem B12.02(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the construction of new survey beacons or the protection of existing survey beacons.

Item	Unit
B12.03 Provision of a Community Liaison Committee:	
(a) Wages, salary, allowances, etc.....	provisional sum

Expenditure under this item shall be made in accordance with clause 6.6 of the General Conditions of Contract 2015.

Item	Unit
B12.04 Provision of a Community Liaison Officer:	
(a) Wages, salary, allowances, etc.....	provisional sum
(b) Handling costs and profit in respect of subitem B12.03(a) above	percentage (%)

Expenditure under this item shall be made in accordance with clause 6.6 of the General Conditions of Contract 2015.

The tendered percentage is a percentage of the amount of expenditure approved by the Employer's Agent under subitem B12.03(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the provision of a Community Liaison Officer."

SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

B1302 GENERAL REQUIREMENTS

(c) Legal and contractual requirements and responsibility to the public

Add the following new paragraphs to the end of subclause 1302(c):

"Legislation imposes mutual obligations on the Employer and Contractor in the performance of their duties to society and to the built and natural environment. To assist the Contractor in understanding and assessing his obligations, and thus to make allowances for the cost of compliance with this legislation, Parts C, E, F and G are included in section C3.3 Particular Specifications in the project specifications.

The Contractor's general obligations shall also include the training of temporary labour, the management of labour enhanced work, the application of the Compensation for Occupational Injuries and Diseases Act, 1993, and compliance with the requirements of Part C: Environmental Management Specification, Part E: OHSA 1993 Health and Safety Specification, Part F: Requirements of the Expanded Public Works Programme (EPWP) and Part G: Small Contractor Development contained in section C3.3 Particular Specifications.

Part C: Environmental Management Specification contains the environmental management specification for this project. Its provisions regulate the Contractor's construction methods so as to ensure responsible conduct with respect to the environment and responsible treatment of the environment relevant to the project. No separate payment mechanism has been made available for the Contractor to allow for his compliance with the environmental management specification. The Contractor shall therefore include for such costs in the existing pay item B13.01 in section 1300.

Part E: OHSA 1993 Health and Safety Specification contains the specifications that regulate the Contractor's construction methods so as to ensure the health and safety of his employees and the public. A new pay item B13.02 is included in section 1300 to allow the Contractor to make separate provision for the cost of health and safety obligations during the construction process.

Part F: Requirements of the Expanded Public Works Programme (EPWP) contains requirements for employment and training in terms of the National Youth Service programme (where applicable – refer to Part F). Various pay items related to these requirements are included in Part F. However, to the extent that any costs relating to the requirements of Part F are not covered by the pay items in that section, the Contractor shall include for such costs in the existing pay item B13.01 in section 1300.

Part G: Small Contractor Development contains provisions that regulate the Contractor's construction processes for compliance with Government's initiatives towards broad-based black economic empowerment. Various pay items related to these requirements are included in Part G. However, to the extent that any costs relating to the requirements of Part G are not covered by the pay items in that section, the Contractor shall include for such costs in the existing pay item B13.01 in section 1300. The Contractor shall note that non-compliance with the provisions of Part G may lead to the imposition of penalties as described in clause G1003(d)."

B1303 PAYMENT

Add the following at the start of clause 1303:

"All references in clause 1303 to the final value of the work increasing or decreasing by "twenty (20) per cent" in terms of the COLTO Standard Specification shall be read as increasing or decreasing by "fifteen (15) per cent" in terms of the General Conditions of Contract 2015.

Separate provision has been made in the Schedule of Quantities for the pricing of the Contractor's "General Item" obligations with regard to Health and Safety."

Refer to the second sentence of the fourth last paragraph of clause 1303, page 1300-2 of the COLTO Standard Specifications and delete the words "from the date on which the Contractor has received the letter of acceptance in terms of clause 12 of the general conditions of contract," and replace these words with the following:

"from the Commencement Date in terms of clause 5.2.1 of the General Conditions of Contract 2015,".

Add the following at the end of clause 1303:

"The amount payable to the Contractor for time-related general obligations arising from extensions of time granted in accordance with Clause 5.12.1 and 5.12.2 of the GCC 2015, shall be calculated as follows:

(i) The Contractor shall apply for the extension of time in terms of the number of days' delay incurred calculated in accordance with clause 5.1 of the GCC 2015.

(ii) The number of days' extension of time calculated in accordance with clause 5.1 of the GCC 2015, finally granted shall then be added to the Due Completion Date of the contract by the Employer's Agent, commencing on the first working day after the day of the original Due Completion Date. Non-working days and special non-working days as defined in the contract data shall not be counted as working days in calculating the extended completion date.

(iii) The number of calendar days extension of time granted from the original completion date to the extended completion date as calculated in (ii) above shall then be calculated, commencing on the first calendar day after the day of the original completion date.

The following formula shall then be used to calculate the number of months extension of time granted:

No. of months extension of time granted

= $[(\text{No. of } \underline{\text{calendar}} \text{ days extension of time granted} / 365)] \times 12$

(iv) The number of months extension of time granted calculated as in (iii) above shall be the number of additional months measured for payment for time-related general obligations under item B13.01(c) and in accordance with clause 5.12.3 as a result of the extensions of time granted.

Note: The number of months extension of time granted calculated as in (iii) above shall also be included in the measurement of any other items scheduled under Sections 1300, 1400, 1500 or elsewhere in the Schedule of Quantities that involve the unit of measurement "month" and that were provided on site for the full duration of the extended period. Where such items were provided for a portion of the extended period only, a pro rata payment shall be made, based on the number of calendar days the item was provided on site after the original completion date divided by the number of calendar days as calculated in (iii) above for the extension of time granted."

Item	Unit

B13.01	The contractor's general obligations:

Add the following before the start of the first paragraph of item 13.01:

"Subitems B13.01(a), (b) and (c) are "General Items" as defined in clause 1.1.1.21 of GCC 2015."

After the end of subsubclause (iii) in the fourth paragraph of item 13.01, add the following new subsubclauses which further define the contractor's general obligations:

"(iv) Complying with the requirements and conditions of the additional specifications in Part C: Environmental Management Specification.

(v) Complying with the requirements and conditions of the additional specifications in Part F: Requirements of the Expanded Public Works Programme (EPWP) to the extent that any costs relating to the requirements of Part F are not covered by the pay items included in that section.

(vi) Complying with the requirements and conditions of the additional specifications in Part G: Small Contractor Development relating to the Government's broad-based black economic empowerment initiatives to the extent that any costs relating to the requirements of Part G are not covered by the pay items included in that section."

Add the following new payment items at the end of clause 1303:

“Item

Unit

B13.02 Health and Safety obligations:

- (a) Fixed obligations for the preparation of risk assessments, safe work procedures, the project Health & Safety file, the Health & Safety plan and any other Health & Safety matters that the Contractor deems necessary lump sum (Sum)
- (b) Fixed obligations for completing and checking the Project Health & Safety file and handing it over to the Employer on completion of the Works lump sum (Sum)
- (c) Time-related obligations for updating and amending the risk assessments, the safe work procedures, the project Health & Safety file and the Health & Safety plan, and for full compliance with all Health & Safety matters during the construction of the Works under the contract month

Payment of the lump sums tendered under subitems B13.02(a) and (b) and the rate per month for subitem B13.02(c) shall, for the three subitems together, include full compensation for all the Contractor's costs in respect of compliance with the OHS Act and Construction Regulations.

Payment of each of the lump sums tendered under subitems B13.02(a) and (b) shall be made in three instalments as specified in the COLTO standard specifications for the payment of the lump sum tendered under subitem 13.01(a).

The tendered rate for subitem B13.02(c) shall be paid as specified in the COLTO standard specifications for the payment of the tendered rate for subitem 13.01(c).

1. B13.03 Supply, transport to site and erection of the contract signboard

ITEM

UNIT

B13.03 Supply, transport to site and erection of the contract signboard

(a) Contract sign boards

No

(b) Information boards

No

The unit of measurement shall be the number of contract signboards erected as instructed by the Employer's Agent.

The tendered rate shall include full compensation for providing and erecting each contract signboard complete (refer to the typical signboard face detail shown in Section C4.2), including for timber poles and fixings, excavation and backfill, and for dismantling and removing the signboard structures and reinstating the signboard area on completion.”

The Contractor will be required to erect a signboard displaying the EPWP logo, indicating that this project is part of the EPWP. All costs related to the provision, erection and subsequent removal of the signboard shall be refunded to the Contractor through the provisional sum included in the Schedule of Quantities for this purpose.

B13.04 Professional Safety Officer (Registered SACPCMP)

ITEM

UNIT

B13.04 Professional Safety Officer (Registered SACPCMP)

month

The tendered rate for sub-item B13.02 (d) shall be paid per month to provide a professional safety officer registered (SACPCMP).

SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE EMPLOYER'S AGENT'S SITE PERSONNEL

B1402 OFFICES AND LABORATORIES

(a) General

Add the following new paragraph at the end of this sub-clause:

The offices and ablution shall, unless otherwise agreed, be erected in close proximity to the contractor's offices, and the entire area shall be fenced with security fencing and provided with a gate. The contractor shall take all reasonable precautions to prevent unauthorised entry to the Engineer's office and to ensure the general security of the offices.

Add the following after the last paragraph:

(b) Offices

Add the following items to the list of equipment under Sub-clause 1403(a):

(ixx) Provision of floodlights, which are to be controlled by a photocell for security purposes at the offices of the supervisory staff.

(xx) White boards (2 m x 1 m)

(xxi) Microwave (30 litre capacity)

B1404 SERVICES

(a) Water, electricity and gas

Add the following:

"The power supply to the Engineer's office and laboratory shall be regulated by a suitable voltage regulator in order to maintain a constant current and voltage level at all times to prevent damage to the office equipment and related machinery during power surges. Payment for the voltage regulator shall be deemed to be included in the rates tendered for the supply of power. In the event of damage to the office and laboratory equipment and related machinery because of a faulty voltage regulator, the contractor shall be liable for payment of all repair or replacement costs of such damaged items."

B1406 MEASUREMENT AND PAYMENT

Additional payment items to cover the requirements of the project specifications are listed below.

Add the following new payment items:

<u>ITEM</u>	<u>UNIT</u>
B14.03 Office and laboratory fittings, installations and equipment (a) Items measured by number	
(xx) White Boards (2m x 2m)	No
(xxi) Microwave oven (30 litres min. capacity)	No
<u>ITEM</u>	<u>UNIT</u>
B14.11 Sundries (a) Provisional sum for providing sundries as requested by the engineer.	Prov Sum

(b) Handling costs and profit in respect of subitem B14.11(a) above %

Expenditure under these items will be made in accordance with the General Conditions of Contract.

The tendered percentage is a percentage of the amount actually spent under Item B14.11(a), which shall include full compensation for the handling costs of the contractor, and the profit in connection with providing sundries as requested by the engineer.

SECTION 1500: ACCOMMODATION OF TRAFFIC

B1501 SCOPE

Add to Clause 1501 the following:

The scope of this section shall also include the preparation and submission to the Engineer for approval of traffic management plans. The traffic management plans shall demonstrate how the Contractor intends accommodating and controlling traffic through the site. The plans must incorporate all the requirements of the specifications in respect of the accommodation of traffic, including the traffic control devices and the personnel involved. A traffic safety officer shall be specifically named in the Plan together with 24 hour contact details. Copies of the plans shall be made available to the Engineer, the Employer, Local Authorities, the Police and Emergency Services.

The accommodation of traffic shall generally be undertaken in the following manner:

- (a) Via gravel diversions, where practical in terms of space and the terrain.
- (b) By dealing with traffic under construction where no diversions are possible.
- (c) By diverting traffic along the existing road where the route is being realigned

Add the following to the end of clause 1501:

"Throughout the course of the contract the contractor shall ensure that the works do not prevent service owners or the employer's other contractors from gaining access through the site.

The contractor shall be required to accommodate traffic in the vicinity of the points at which he accesses the site from the existing road network. All movements of the contractor's plant to and from the existing access road at these intersections shall be strictly controlled by means of appropriate signage, delineators, stop / go facilities and flagmen."

B1502 GENERAL REQUIREMENTS

- (a) Safety

Add to Sub-clause 1502(a) the following:

Information in respect of intersections, accesses, bus stops, traffic volumes, pedestrians etc is given in Part B of these Project Specifications.

- (b) Providing Temporary Deviations

Add to Sub-clause 1502(b) the following:

The contractor shall keep the provincial traffic police, the municipal traffic departments and the engineer fully informed with regard to any changes in the normal traffic flow and obtain their approval for these changes.

During the non-working hours, all unnecessary obstructions to the traffic shall be removed and all signs no longer applicable to the situation shall be removed or effectively covered.

It is a condition of this contract that not more than 10 km of deviation should be open to public traffic at any one time, and that not more than three separate deviations should be open at any one time. No additional payments will be made where situations arise that the contractor has deviations cross over the roadway under construction.

- (i) **Traffic Safety Officer**

Add to Sub-clause 1502(i) the following:

The Contractor shall submit a CV of the candidate to the Engineer for approval before the Traffic Safety Officer is appointed. The Traffic Safety Officer shall be made available to discuss road safety and traffic accommodation matters whenever required by the Engineer.

Delete Sub-clause 1502(i), sub-sub-clauses (ii) and (iii) and replace with the following:

- (ii) Record on neat and dimensioned sketches and submit to the Engineer the position and sign reference number where applicable of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature.

The position of each unit shall be adequately referenced to identifiable permanent features located along the site of the works.

These records shall also show the date and time at which the recorded traffic accommodation features are certified correct by the Traffic Safety Officer, and shall be signed by the Traffic Safety Officer before being submitted to the Engineer.

The records shall be amended whenever changes are made in the field and the revised detailed sketches shall be submitted to the Engineer. This shall include the recording of the position of flagmen and stop/go control men and their associated traffic accommodation equipment wherever they are used."

- (iii) Personally inspect the position and condition of each traffic accommodation feature on the whole site of works twice each day by 9:30 and by 16:30, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the Engineer such record sheets by 10:00 and by 17:00 each day. The traffic Safety Officer shall keep a duplicate book for this specific purpose.

The Traffic Safety Officer shall also submit to the Engineer by 10:00 each morning, a record of all matters pertinent to site safety and traffic accommodation throughout the site of works the previous day. He shall also record the daily labour returns of flagmen, stop/go and traffic signal control men employed.

The traffic safety officer shall be equipped with a cellular telephone and shall have a vehicle and 2 labourers at his disposal 24 hours a day, including public holidays and the shutdown period as instructed by the engineer. He shall also be directly answerable to the Contractor's Site Agent. The Traffic Safety vehicle shall be a truck with a capacity of 1 ton and shall be equipped with a high visibility rear panel. The traffic Safety Officer shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the Contract.

Add to Sub-clause 1502(i) the following new sub-sub-clauses:

- (ix) Ensure that all obstructions, soil and gravel heaps, related to the Contractors activities be removed before nightfall where applicable and as instructed by the Engineer and that the roads are safe for night traffic.
- (x) The Traffic Safety Officer shall, in addition to the duties listed in Clause 1502 (i), also be responsible for removal of broken down vehicles off the roadway and implementing actions requested by the traffic authorities with regard to the work to be carried out, and shall be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic."

Add the following new Sub-clauses to Clause 1502:

(j) Public traffic

The contractor must plan and conduct his activities so as to bring about the least possible disruption to the traffic on the road. All halting of traffic will require the prior approval of the engineer and must be pre-arranged with the appropriate traffic authorities. In all dealings with the public the Contractor shall bear in mind the public's right to enjoy the use of the road, and the Employer's desire to interfere as little as possible with this right. At all points of contact with the public, the Contractor shall deal with deliberate courtesy and understanding in any discussions or disputes.

(a) Failure to comply with provisions

The failure or refusal of the Contractor to provide barricades or traffic signs at the proper time, or to take the necessary precautions for the safety and convenience of public traffic as specified or instructed by the Engineer, shall be sufficient cause for the suspension of all work under this Contract without any additional compensation to the Contractor until the required accommodation of traffic has been completed to the satisfaction of the Engineer. The above shall be sufficient cause for the Engineer to deduct penalties as follows:

- **A fixed penalty of R5 000,00 per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of Section 1500 of the standard specifications and section B1500 of the Project Specifications.**
- **In addition a time-related penalty of R500,00 per hour over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after an instruction to this effect has been given by the Engineer. The Engineer's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.**
- **Furthermore, failure to comply with the provisions of clause B1502(i) will also result in a pro-rata penalty to be deducted from payment item B15.14 by the engineer.**

The penalties shall be deducted from the payment certificate for the month in which the non-compliance occurs.

(b) Access to work area

Construction traffic will only be permitted to enter or leave the work area at points approved by the Engineer and as clearly indicated on the traffic management plans. When any access point is in use, flagmen shall be provided for each such point. At least two flagmen shall be stationed at the access point to control the movement of construction traffic, and to warn public traffic on both lanes of the existing road. It is not the purpose of these flagmen to stop public traffic flow.

(c) Extension of time for completion

Accommodation of public traffic on the works or any delays caused thereby, as well as any suspensions due to failure by the Contractor to comply with the provisions for the accommodation of traffic, will not be regarded as special circumstances for an extension of time.

B1503 TEMPORARY TRAFFIC-CONTROL FACILITIES

Replace the first sentence of the first paragraph of clause 1503 with the following:

"The contractor shall provide, erect and maintain the necessary traffic-control devices, road signs, channelization devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control facilities) in accordance with these project specifications and as shown on the drawings and in the South African Road Traffic Signs Manual in conjunction with the latest edition of Road Signs Note No.13 - Roadworks, and shall remove them when no longer required.

The contractor shall replace at his own cost any traffic-control facilities that have been damaged, lost or stolen. The contractor shall also remove all bituminous or other foreign material from the traffic-control facilities in order to keep them clean and visible at all times. Traffic-control facilities that can no longer be cleaned effectively shall be replaced with new ones at the cost of the contractor."

Replace the first sentence of the third paragraph of clause 1503 with the following:

"The type of construction, spacing and placement of traffic-control facilities shall be in accordance with the latest edition of Road Signs Note No.13 - Roadworks, these project specifications, the drawings and the South African Road Traffic Signs Manual.

The details shown for spacing and placement of traffic-control facilities may, however, be revised at the discretion of the engineer where deemed necessary to accommodate local site geometry and traffic conditions."

(a) Traffic-control devices

Add the following new paragraph after the end of the second paragraph of subclause 1503(a):

"The reduction of the road width to a single lane carrying one-way traffic and controlled by "Stop / Go" boards shall be allowed only during daylight hours in clear weather conditions when work is actively taking place on the road, and such reduction of the road width shall always be accompanied by sufficient on-going watering to keep the dust down at all times on any trafficked gravel surfaces in order to maintain good visibility along the deviation. At least two lanes carrying two-way traffic shall be provided at all other times."

(b) Road signs and barricades

Add the following to the end of subclause 1503(b):

"The contractor shall be responsible for the protection and maintenance of all signs, and shall at his own cost replace any that have been damaged, lost or stolen.

The temporary road signs required for this contract shall generally be mounted on poles installed in the ground. Where temporary signs such as delineators are mounted on portable supports, the only permitted method of ballasting such sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent the signs from being blown over by wind. The cost of the sandbags shall be included in the tendered rates for the applicable types of temporary road signs.

The traffic-control devices, temporary signs and devices required in the contract are those designated in Road Signs Note No.13 - Roadworks.

The covering of permanent road signs, if applicable, shall be carried out by utilising a hessian bag which shall be pulled over the sign in the form of a hood and fastened to the sign posts using wire ties. Plastic bags or other materials, and fastening by means of adhesive tape, shall not be permitted for this purpose. The cost of covering permanent road signs shall be deemed to be covered by the tendered rates for items B15.01.

No work may proceed on any section where accommodation of traffic is required until such time as the relevant requirements with regard to signposting are met and the written approval of the engineer has been obtained. The contractor shall keep sufficient surplus signs, delineators and barricades on the site to allow for the replacement of damaged or missing items immediately upon discovery, or within three hours of instructions to such effect having been given by the engineer. Delineators shall be of the flexible plastic / rubber reversible variety and not of the rigid metal variety."

(c) Channelization devices and barricades

Add the following paragraphs at the end of subclause 1503(c):

"Delineators shall be manufactured from plastic / rubber materials and shall be adequately ballasted with sand bags to prevent the signs from being blown over by wind or wind turbulence from moving traffic.

Traffic cones shall be manufactured from fluorescent orange or red plastic material, and shall be used only at short term lane deviations during daylight hours. All traffic cones used on deviations shall be 750mm high. Lane closures which continue into the night time shall be demarcated by delineators only.

The use of steel drums as channelization devices shall not be allowed on this Contract. Channelization shall be effected by the use of delineators or cones as detailed in Road Signs Note No. 13 - Roadworks."

(e) Warning devices

Add the following to subclause 1503(e):

"All construction vehicles and plant used on the works shall be equipped with 200mm diameter rotating amber flashing lights and with "Construction Vehicle" warning signs. All vehicles and plant shall obtain a clearance permit from the engineer before being allowed onto the site. Rotating lights shall have an amber lens of minimum height of 200mm and shall be mounted to ensure clear visibility from all directions. The lights on construction vehicles shall be switched on as the vehicles decelerate to enter a construction area, while construction vehicles are operating within the accommodation of traffic area, and as the vehicles accelerate to the general speed when entering the road from a construction area. Lights on plant shall operate continuously while the plant is working alongside sections of road open to public traffic.

All LDVs and cars operating on site shall also be equipped with rotating amber flashing lights which shall be placed so as to be clearly visible and shall be operated continuously while the vehicles are manoeuvring in or out of traffic or while the vehicles are travelling alongside or parked alongside roads open to public traffic.

Rotating lights and the "Construction Vehicle" warning signs on the contractor's vehicles and plant shall not be paid for separately but shall be included in the rates covering the use of the vehicles.

The contractor shall apply and maintain to the approval of the engineer such rotating amber lights and warning signs, together with any temporary mounting brackets. Vehicles and plant that do not comply with these requirements shall be removed from the site."

Add the following new subclauses to clause 1503:

(g) Other signs and facilities

The engineer may instruct the contractor to provide any other road sign, reflective tape, etc. not measured in the standard pay items. Such other road signs, reflective tape, etc. shall conform to the requirements of the South African Road Traffic Signs Manual and any other specification provided by the engineer.

The Contractor shall inform the general public of the intended road works, construction period and accommodation of traffic proposal through press releases in local and provincial newspapers. Cones shall be manufactured and positioned in accordance with the details specified on the drawings. All traffic cones and road signs shall be kept clean and visible at all times. All bituminous or other foreign material shall be removed by the Contractor, or the dirty traffic cones and road signs shall be replaced with new ones at the cost of the Contractor, as directed by and to the satisfaction of the Engineer.

(h) High visibility safety vests

The contractor shall ensure that all his own personnel, excluding those who are permanently office bound, all other construction workers on the site, staff of the engineer and visitors are equipped with high visibility reflective safety vests. High visibility reflective safety vests shall be worn at all times when working on or near to the travelled way. High visibility reflective safety vests shall be kept in good condition and any such safety vests that are, in the opinion of the engineer, ineffective shall be replaced immediately by the contractor.

B1505 TEMPORARY DRAINAGE WORKS

Replace the following:

"Clauses 40 and 53" with "Clause 6.4 and 6.5"

B1511 MAINTENANCE OF GRAVEL TEMPORARY DEVIATIONS AND EXISTING GRAVEL ROADS USED AS TEMPORARY DEVIATIONS

Add to Clause 1511 the following:

Where applicable, all references to gravel roads and/or diversions shall also include gravel shoulders used as diversions.

B1517 MEASUREMENT AND PAYMENT

Amend the following payment item:

<u>ITEM</u>	<u>UNIT</u>
B15.01 Accommodating traffic and maintaining temporary deviations.	km

Delete the second sentence of the second paragraph.

The rest of the second paragraph of Payment Item 15.01 shall apply.

Delete the third paragraph and replace with:

The tendered rate shall also include for the preparation of traffic management plans and their submission to the Engineer for approval before the commencement of any construction works. The tendered rate shall also include for all costs associated with constructing the road under traffic and for complying with the restricted working.

<u>ITEM</u>	<u>UNIT</u>
B15.03 Temporary traffic-control facilities:	
(a) Flagmen	man-day

Add the following:

- 1) Competent staff must be used for controlling traffic, as their actions can affect the safety of both the road users and road workers.
- 2) Local labour shall be trained during traffic accommodation workshops prior to works being carried out.

Add the following new payment items:

<u>ITEM</u>	<u>UNIT</u>
B15.12 Temporary culverts:	
(a) Provision and laying of temporary and prefabricated culverts complete (1200mm dia. Spigot and Socket, Class 100D on class C bedding)	m
(b) Eventual removal of prefabricated culverts	m

Add the following to the end of the first paragraph:

The tendered rate shall also include for the removal of the temporary detour, including all associated earthworks and the rehabilitation of the river channel. Payment shall be regarded as included in the rates tendered for the applicable items for the above-mentioned work.

<u>ITEM</u>	<u>UNIT</u>
B15.14 Traffic Safety Officer	month

The unit of measurement will be a month worked by the Traffic Safety Officer. The tendered rate shall include full compensation for the provision of a full time traffic safety officer equipped with a dedicated vehicle, cellular telephone, 2 (two) labourers at his disposal 24 hours a day, including public holidays and the shutdown period as instructed by the engineer and all the duties performed by him as specified in Sub-Clause 1502 (i).

<u>ITEM</u>		<u>UNIT</u>
B15.15	Penalties:	
	(a) (i) Fixed penalty for noncompliance of traffic safety requirements per occurrence	No
	(b) (ii) Time related penalty for B15.15 (a)(i) above	Hour

A fixed penalty deduction of R 5000,00 per occurrence shall be applied in terms of subitem B15.15 (a)(i) for every occurrence of non-compliance with any of the requirements of Section 1500 of the standard specifications and section B1500 of the project specifications.

In addition to the fixed penalty deduction in item B15.15 (a)(i), a time related penalty deduction of R 500,00 per hour shall be applied in terms of subitem B15.15 (b)(ii) for non-compliance in rectifying any defects in the accommodation of traffic within the allowable time after an instruction to this effect was given by the engineer. The engineer's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the contractor fail to comply with this instruction within the allowable time, the time-related penalty shall be applied from the time the instruction was given.

SECTION 1600: OVERHAUL

B1602 DEFINITIONS

(a) Overhaul material

Add the following to the end of subclause 1602(a):

"Overhaul shall not be measured separately for payment for materials obtained from commercial sources, and the rates tendered for such materials shall be fully inclusive of all haul required."

(b) Overhaul

Delete the first two paragraphs of subclause 1602(b) and replace them with the following:

"Restricted overhaul shall not apply to fill material from cut and borrow and to spoil material from excavations when hauled in excess of a free-haul distance of 0,5 km in respect of haul up to and including 1,0 km, and no measurement and payment for restricted overhaul shall be made under any item in respect of material hauled between or over these distances.

Ordinary overhaul only shall apply in respect of haul in excess of 1,0 km."

Delete the final paragraph of subclause 1602(b) since restricted overhaul shall not apply to the work required under this contract.

(d) Free-haul distance

Delete the second sentence of subclause 1602(d) and replace it with the following:

"This distance shall be 1,0 km in the case of all overhaul materials."

B1603 MEASUREMENT AND PAYMENT

Delete item 16.01 since restricted overhaul shall not apply to the work required under this contract.

*Refer to the **Note** immediately below the description of the unit of measurement for item 16.02. Delete the first paragraph of this note since restricted overhaul shall not apply to the work required under this contract.*

ITEM

UNIT

B16.02 Overhaul on material hauled in excess of 1.0 km (ordinary overhaul)

m³ km

Delete the first paragraph of the first set of notes.

SECTION 1700: CLEARING AND GRUBBING

B1704 MEASUREMENT AND PAYMENT

Add to Payment Item 17.01 the following

<u>ITEM</u>	<u>UNIT</u>
B17.01 Clearing and grubbing	ha

The tendered rate shall also include full compensation for removal of existing fences, pipe culvert inlet and outlet structures and kilometre marker posts as instructed by the engineer. Clearing and grubbing for the construction of camp sites shall not be measured separately. Payment shall be regarded as included in the rates tendered for the applicable items for the above-mentioned work.

Within the road reserves clearing and grubbing will only be measured and paid for where required for road works. All topsoil removed in this process must be stockpiled in heaps not exceeding 1 m height for later use during rehabilitation and landscaping.

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- 1) Bush clearing: Medium to Dense Bush
- 2) Grass clearing: Removal of vegetation to ground surface
- 3) Destumping: Removal of stumps and major roots.
- 4) Grubbing: Root removal to 250 mm depth in soft loamy soil.

SECTION 2100: DRAINS

B2104 SUBSOIL DRAINAGE

(a) Materials

(i) Pipes

Add to Sub-clause 2104(a)(i) the following:

Slotted or perforated unplasticised PVC pipes shall be used for subsurface drainage.

(ii) Natural Permeable Material

Add to Sub-clause 2104(a)(ii) the following:

The crushed stone shall be coarse graded (19mm nominal size) and shall conform to the following requirements:

Percentage passing through a 26,5mm sieve: 100 %.

Percentage passing through a 19,0mm sieve: 60-85 %.

B2107 MEASUREMENT AND PAYMENT

Add the following new Clause after the last paragraph of item 21.01:

ITEM

UNIT

B21.01 Excavation for open drains:

(a) Excavating soft material situated within the following depth ranges below the surface level:

(i) 0 m up to 1,5 m m³

(b) Extra over subitem 21.01(a) for excavation in hard material, irrespective of depth m³

Add the following sentence to the end of paragraph two.

Local labour shall be utilised in the excavation of the soft material to the required lines, levels and grades using hand held tools only up to a depth of 1,5 m.

Add the following new Clause after the last paragraph of item 21.02:

ITEM

UNIT

B21.02 Clearing and shaping existing open drains m³

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Excavating the material;
- b) Protecting the existing drainage structures;
- c) Trimming the floors and sides of the open drains and

d) Disposing of material

ITEM

UNIT

B21.03 Excavating for subsoil drainage systems:

(a) Excavating soft material situated within the following depth ranges below the surface level:

(i)	0 m and up to 1,5 m	m ³
(ii)	Exceeding 1,5 m and up to 3,0 m	m ³

(b)	Extra over subitem 21.03(a) for excavation in hard material irrespective of depth	m ³

Add the following sentence to the end of paragraph two.

Local labour shall be utilised in the excavation of the soft material to the required lines, levels and grades using hand held tools only up to a depth of 1,5 m.

Add the following new Clause after the last paragraph of item 21.04:

ITEM

UNIT

B21.04	Impermeable backfilling to subsoil drainage systems	m ³

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Placing and
- b) Compacting the backfill

ITEM

UNIT

B21.06 Natural permeable material in subsoil drainage systems (crushed stone):

(a)	Crushed stone obtained from commercial sources (19 mm Nominal size)	m ³

Add the following sentence to the end of paragraph two.

Local labour shall be utilised for the placing of the approved crushed stone obtained from local suppliers (where possible).

Add the following new Clause after the last paragraph of item 21.12:

ITEM

UNIT

B21.12	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:	m ³

(a)	Outlet structures (As per SD 0501)	No

(b)	Manholes boxes (As per SD 0501)	No

(c) Cleaning eyes (As per SD 0501)

No

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Excavation;
- b) Backfilling
- c) Compacting to 90% modified AASHTO density;
- d) Disposing of surplus excavated material
- e) Erecting and removal of framework;
- f) Mixing and transporting concrete and
- g) Placing and curing the concrete

Add the following new Clause after the last paragraph of item 21.19:

ITEM

UNIT

B21.19 Selected backfill material under concrete lined side drains compacted to 93% of modified AASTHO density

m³

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- (a) Breaking down, placing and compacting the material to 150mm layers

SECTION 2200: PREFABRICATED CULVERTS

B2204 CONSTRUCTION METHODS

Add to Clause 2204 the following:

Generally, prefabricated stormwater drainage pipes and rectangular culverts will be installed using the 'trench method'.

Add the following:

"in all cases where soft founding materials is classified as suitable for culvert beddings construction, the in-situ material shall be ripped, moistened and compacted to 90 & to 93% modified aashto density. The depth of preparation and compaction of founding material shall be indicated on drawings as specified by the engineer. Allowance for measurement and payment for this work is made in the bill of quantities under this section"

HAND EXCAVATEABLE MATERIAL

Hand excavatable material is material:

- a. granular materials:
 - i. whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
 - ii. where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;
- b. cohesive materials:
 - i. whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
 - ii. where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

Note:

- 1) A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm; and
- 2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Trench excavation

All hand excavatable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers;

- a) to 90% Mod AASHTO;
- b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders; or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

B2210 LAYING AND BEDDING OF PREFABRICATED CULVERTS

(f) General

Add to Sub-clause 2210(f) the following:

Pipe culverts have been designed to the positions, lengths and elevations shown on the drawings. However, site conditions may dictate that changes are necessary. Any such changes will be agreed with the Engineer and recorded in writing.

- (b) Formwork of concrete under subitem 22.07(c) above (Vertical formwork for F1 surface finish) m²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Erecting and removing the formwork;
- b) Constructing the forms; and
- c) Mixing, transporting, placing and compacting concrete

Add the following new Clause after the last paragraph of item 22.10:

<u>ITEM</u>	<u>UNIT</u>
B22.10 Steel reinforcement	
(a) Welded steel fabric	kg

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Cutting, bending;
- b) Welding and Placing and fixing the steel reinforcement

Add the following new Clause after the last paragraph of item 22.12:

<u>ITEM</u>	<u>UNIT</u>
B22.12 Removing existing concrete:	
(a) Plain concrete	m ³
(b) Reinforced concrete	m ³

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Demolition and loading and
- b) Transporting and disposing of the products of the demolition

Add the following new Clause after the last paragraph of item 22.12:

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour.

Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- (a) Cutting straight grooves

Add the following new Clause after the last paragraph of item 22.17:

<u>ITEM</u>	<u>UNIT</u>
B22.17 Manholes, catchpits, precast inlet and outlet structures complete:	
(a) Manholes (for grid inlets) – SD 0602/B	
(i) 1,0 m to 1,5 m deep	No
(ii) 1,5 m to 2,0 m deep	No
(iii) 2,0 m to 2,5 m deep	No
(b) Catchpits – SD 0703/A	
(1) Brick Manholes for drainage: constructed on all pipes up to 750mm diam.	
(i) 1,0 m to 1,5m deep: Type S1	No
(ii) 1,5 m to 2,0 m deep: Type S1	No
(2) Brick Manholes for drainage: constructed on 750mm dia. pipes	
(i) 1, 0 m to 1,5 m deep	No
(ii) 1,5 m to 2,0 m deep:	No

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Laying of brickwork and
- b) Plastering and benching

Add the following new Clause after the last paragraph of item 22.18:

<u>ITEM</u>	<u>UNIT</u>
B22.18 Brickwork:	m ²
(a) 230 mm thick	

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- (a) Laying of brickwork for headwalls

Add the following new Clause after the last paragraph of item 22.20:

ITEM

UNIT

B22.20 Benching:

m²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- (a) Placing the concrete benching

SECTION 2300: CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS

B2304 CONSTRUCTION

(b) Prefabricated concrete kerbing and channelling

Add to Sub-clause 2304(b) the following:

Kerbing of radius 1m and less shall be cast in situ in accordance with sub-clause 2304(e) and as shown on the drawings.

All precast kerbs shall be provided with continuous in-situ concrete backing (haunching), the cost of which shall be included in the tendered rate.

Dimensions of the triangular-shaped (in cross-section) haunching shall be calculated as follows:

If the difference in levels between the top of the kerb and the sub-base on which the kerb is laid is (h), then the height of the haunch is $2/3h$ and the width of the haunch is h.

Add the following new Sub-clauses to Clause 2304:

(l) Shrinkage joints for cast in-situ concrete work.

Unless shown otherwise on the drawings, cast in situ channels shall be provided with shrinkage joints spaced a maximum of 2m apart. Shrinkage joints shall be constructed so that shrinkage cracks are generated at the joints. Sections of channel which have cracked between shrinkage joints shall be removed and replaced by the contractor at his own cost.

(m) Formwork and finish

All visible edges of cast in-situ channels shall be rounded with a rounding tool.

B2307 MEASUREMENT AND PAYMENT

Add the following new Clause after the last paragraph of item 23.05:

<u>ITEM</u>	<u>UNIT</u>
B23.05 Inlet, outlet, transition and similar structures (typical designs):	
(a) 500mm wide combined precast kerb to SABS 927 (Figure 6) and cast in situ channel (Refer to SD 0701/A)	m
(b) Pipe to open chute including splash walls with 1m transition channels and erosion protection as shown in SD 0704	No
(c) 1000 V-Drain Outlet chute including 5m transition, 2m straight channel and stone pitching erosion protection (As shown on Drawing SD 0603/A and SD 0603/2)	No

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Placing formwork;
- b) Excavating, trimming and backfilling; and

c) Mixing and placing concrete

Add the following new Clause after the last paragraph of item 23.07:

ITEM

UNIT

B23.07 Trimming of excavations for concrete-lined open drains:

(a) In soft material m²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

(a) Preparing the areas for placing concrete

Add the following new Clause after the last paragraph of item 23.08:

ITEM

UNIT

B23.08 Concrete lining for open drains:

(a) Cast in situ concrete lining (Class 20/19 for open drains) m³

(b) Class U2 surface finish to cast in situ concrete (Open Drains) m²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Erecting and removing the formwork;
- b) Constructing the forms; and
- c) Mixing, transporting, placing and compacting concrete

Add the following new Clause after the last paragraph of item 23.08:

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Erecting and removing the formwork;
- b) Constructing the forms; and
- c) Mixing, transporting, placing and compacting concrete

Add the following new Clause after the last paragraph of item 23.09:

<u>ITEM</u>		<u>UNIT</u>
B23.09	Formwork to cast in situ concrete lining for open drains (class F2 surface finish):	
	(a) To sides with formwork on the internal face only	m ²
	(b) To ends of slabs	m ²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Erecting and removing the formwork;
- b) Constructing the forms; and
- c) Mixing, transporting, placing and compacting concrete

Add the following new Clause after the last paragraph of item 23.10:

<u>ITEM</u>		<u>UNIT</u>
B23.10	Sealed joints in concrete linings of open drains(Polysulphide sealant):	m

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- (a) Sealing the joints

Add the following new Clause after the last paragraph of item 23.12:

<u>ITEM</u>		<u>UNIT</u>
B23.12	Steel reinforcement:	
	(a) High-tensile steel bars	t
	(b) Welded steel fabric	kg

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Cutting, bending;
- b) Welding and
- c) Placing and fixing the steel reinforcement

**SECTION 3200: SELECTION, STOCKPILING AND BREAKING DOWN THE MATERIAL FROM
BORROW PITS, CUTTING AND EXISTING PAVEMENT LAYERS, AND PLACING AND COMPACTING
THE GRAVEL LAYERS**

B3204 BREAKING DOWN THE MATERIAL

Replace the following in subclause (b) (iii):

"Clauses 40 and 53" with Clause 6.4".

SECTION 3300: MASS EARTHWORKS

B3301 SCOPE

Add to Clause 3301 the following:

The Contractor shall note the restricted nature of the earthworks in general, and where the widening of existing cuts and fills are required in particular. No extra over rates for widening of cuts, widening of fills or for working in restricted areas shall be applicable to this Contract.

B3303 CLASSIFICATION OF CUT AND BORROW

(a) Classes of excavation

Add to Sub-clause 3303(a) the following:

Cut material for fills will, apart from natural in-situ material, also consist of existing fill and pavement layers from the existing road. Excavation from existing fill and pavement layers varies in depth, but no distinction is made between this excavation and excavation in other materials, except for classification as soft, intermediate and hard materials.

Payment items 33.14 and 33.15 will not apply on this Contract.

B3306 CUT AND BORROW

(a) Dimensions of Cuts

Delete the third paragraph from Clause 3306(a), apart from the first sentence thereof.

Add the following:

Cut and borrow to fill will be measured under Item 33.01. The Contractor shall take note of the nature of the earthworks alongside the existing road. No extra over payments will be made in respect of the nature of the site or due to the dimensions of a particular cutting.

B3312 MEASUREMENT AND PAYMENT

General directions

Delete Note (3) Work in Restricted Areas and replace with the following:

On this Contract, no extra over payment will be made due to the nature of the site or the size of the work area available. All costs associated with carrying out the works are deemed to be included in the tendered rates for the items in the Schedule of Quantities.

Amend the payment items under Clause 3312 as follows:

B33.01 In the description of Item 33.01, delete "free-haul up to 0.5 km" and replace with "free-haul up to 1.0 km."

In the fifth paragraph, referring to the tendered rates, delete the words "free-haul distance of 0.5 km" and replace with "free-haul distance of 1.0 km."

Also in the fifth paragraph, after the words "the cutting of benches" insert the words "including benches in existing fill slopes to be widened."

B33.04 In the description of Item 33.04, delete "free-haul up to 0.5 km" and replace with "free-haul up to 1.0 km."

In the fourth paragraph delete "free-haul distance of 0.5 km" and replace with "free-haul distance of 1.0 km."

B33.07 Ditto above.

SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL

B3402 MATERIALS

(a) General

Add to Clause 3402(a) the following:

The pavement for the road shall consist of:

Subbase 200mm G5/G6 material, from commercial
Upper selected 150mm G7 material, from road prism/stockpile/borrow/ from commercial
Lower selected 150mm G9 material, from road prism /stockpile/borrow

All layers shall comply with the requirements of Tables 3402/1, 3402/2, 3402/4 and 3402/5 of the Standard Specification. The requirements of Section 3500: Stabilization shall also apply to the relevant layers.

(b) Compaction Requirements

Add to Clause 3402(b) the following:

The compaction requirements of the pavement layers shall be:

Subbase 97% of modified AASHTO density
Upper selected 95% of modified AASHTO density
Lower selected 93% of modified AASHTO density

B3406 QUALITY OF MATERIALS AND WORKMANSHIP

Add to Clause 3406 the following:

Test results and re-measurements shall be assessed in accordance with the provisions of Section 8200: Quality Control (Scheme 1), Judgement Plan B of the Standard Specifications, as amended in these project specifications.

B3407 MEASUREMENT AND PAYMENT

Delete the note at the start of the measurement and payment clause dealing with work in restricted areas. On this Contract, no extra over payment will be made due to the nature of the site or the size of the work area available. All costs associated with carrying out the works are deemed to be included in the tendered rates for the items in the Schedule of Quantities.

Add the following new payment item:

<u>ITEM</u>	<u>UNIT</u>

B33.14 Pavement layers constructed from gravel obtained from commercial sources:	

(a) Gravel selected layer compacted to:	

(i) 95% of modified AASHTO density (150mm G7-Upper selected subgrade)	m ³

(b) Gravel subbase (chemically stabilized material) compacted to:	

(i) 97% of modified AASHTO density (200mm G5/G6)	m ³

The tendered rate shall include full compensation for procuring, breaking down, placing and compacting the material, including transporting the material and its removal, disposal and transporting for a distance of 1km and up to 5% of volume of oversize material and the protection and maintenance of the layer and the conducting of tests, all as specified. Overhaul shall not be measured separately for payment of materials obtained from commercial sources, and the rates tendered for such materials shall be fully inclusive of all haul required. Special reference is made to clause B1156 "Commercial Source".

SECTION 3500: STABILISATION

B3502 MATERIALS

(a) Chemical stabilizing agents

Delete sub-clauses (ii) Ordinary Portland cement and (iii) Portland blast-furnace cement and replace with the following:

"Cement shall comply with the relevant requirements of SANS 50197-1:2000. The use of strength classes greater than 32,5 shall not be permitted."

B3503 CHEMICAL STABILIZATION

(i) Construction limitations

Add to Sub-clause 3503(i) the following:

Cement stabilization shall not be carried out during falling temperatures when the ambient air temperature falls below 7°C or during rising temperatures when the ambient temperature is below 3°C.

The surface temperature of a compacted stabilized layer shall not be allowed to fall below 1°C during the first three (3) days after stabilization. The Contractor shall be responsible for taking all measures necessary in this regard and shall especially refrain from stabilizing when such night temperatures are probable.

All stabilized layers which have been damaged by frost or by the formation of ice in the layer shall be removed and replaced by the Contractor at his expense unless agreed otherwise by the Engineer. The Contractor shall make due allowance for these requirements in his construction programme, and no claims in this regard will be considered.

B3509 QUALITY OF MATERIALS AND WORKMANSHIP

Add to Clause 3509 the following:

Test results and re-measurements shall be assessed in accordance with the provisions of Section 8200: Quality Control (Scheme 1), Judgement Plan B of the standard specifications, as amended in these project specifications.

The Contractor shall advise the Engineer at least 24 hours in advance of any stabilization work to enable him to organise and conduct his own control tests.

Where the stabilising agent is to be spread by hand, the pockets of stabilising agent shall be placed on the layer at regular intervals. However, spreading shall not be carried out before the engineer is satisfied that the correct quantity of stabilising agent can be spread.

Stabilised layers shall be covered for curing within 24 hours, as specified. If the stabilised layer is found to have failed, the cover material shall be removed and the layer rectified if instructed by the engineer. No additional payment shall be made for such removal and remedial work.

B3510 MEASUREMENT AND PAYMENT

Delete the note at the start of the measurement and payment clause dealing with work in restricted areas. On this Contract, no extra over payment will be made due to the nature of the site or the size of the work area available. All costs associated with carrying out the works are deemed to be included in the tendered rates for the items in the Bill of Quantities.

Add the following note to this payment item:

<u>ITEM</u>	<u>UNIT</u>
B35.02 Chemical stabilizing agent:	
(i) Road Lime	t
(ii) Ordinary Portland Cement (SANS 50197-1:2000)	t

The notation used for Portland cement and Portland blast-furnace cement corresponds with the notation specified in SANS 50197-1:2000.

Add the following new Clause after the last paragraph of item 35.02:

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Placing pockets of the stabilising agent at regular intervals; and
- b) Spreading by hand, under supervision.

SECTION 3600: CRUSHED STONE BASE

B3607 QUALITY OF MATERIALS AND WORKMANSHIP

Delete the second paragraph and add the following:

Test results and re-measurements shall be assessed in accordance with the provisions of Section 8200: Quality Control (Scheme 1) of the standard specifications, as amended in these project specifications.

B3608 MEASUREMENT AND PAYMENT

Amend the following payment item as follows:

<u>ITEM</u>	<u>UNIT</u>
B36.01 Crushed-stone base:	
(a) Constructed from type G2 material obtained from commercial sources and compacted to 102% of modified AASHTO density (150mm thickness) 37.5 mm nominal maximum size stone.	m ³

SECTION 3800: BREAKING UP EXISTING PAVEMENT LAYERS

B3807 MEASUREMENT AND PAYMENT

Add the following payment item:

ITEM

UNIT

B38.16 Sweeping of the milled areas

m²

The unit of measurement shall be square metres. The rate tendered shall include for the removal of all loose material within the milled area to create a clean surface for the application of tack.

SECTION 4100: PRIME COAT
B4102 MATERIALS

(a) Priming Material

Add to the words “, such as MSP 1 or similar,” to the last of the listed priming materials, that is inverted bitumen emulsion.

“Unless otherwise directed, MC 30 cut-back bitumen or an invert bitumen emulsion manufactured from 70/100 penetration grade bitumen such as MSP/1 or similar, shall be used for priming. If the cut-back bitumen prime does not penetrate adequately, between 5% and 10% by volume of power of paraffin may be added to and mixed with the cut-back bitumen by sucking it into the binder distributor and then using the circulating system to achieve mixing.”

(b) Aggregate for blinding

Add the following sentence:

“Blinding of the primed surface with aggregate shall only be permitted to facilitate vehicular access to adjoining properties”

B4104 WEATHER AND OTHER LIMITATIONS

Delete adverse condition (g) of Clause 4104 and replace with the following:

(g) Priming will only be permitted when the moisture content of the top 50mm of the subbase layer is less than 3% as determined by TMH1 Method 10(b).

B4106 APPLICATION OF THE PRIME COAT

Add the following to subclause (c)

The nominal application rate of the prime shall be 0,7l/m². Unless directed otherwise by the engineer or indicated on the drawings, the width of the primed surface shall be 150mm wider than the edges of the surfacing on each side.

Add the following sub-clause:

“(j) Application in areas treated by reworking and construction of a new base shall be primed using a mechanical distributor complying with sub-clause 4103(a). The edges of the previously constructed or existing surfacing shall be adequately protected by approved means to ensure that an overlap of prime not exceeding 50mm is sprayed onto the previously constructed or existing surfacing.”

B4107 MAINTENANCE AND OPENING TO TRAFFIC

Delete this entire clause and replace with the following:

“Primed layers shall not be opened to traffic prior to the construction of the asphalt wearing course.”

B4108 TOLERANCES

Replace the first paragraph with the following:

“The actual spray rates measured at spraying temperature shall not deviate by more than 8.0% from that ordered by the engineer. The engineer may, at his discretion, conditionally accept application rates falling outside this tolerance at reduced payment in accordance with Table B4108/1.

Table B4108/1: Payment Reduction Factors for Conditionally Accepted Prime Coat

Deviation specified spray rate at spraying temperature. (%)	Payment reduction factor of tendered rate.
±8,0	1.00
±9,0	0.97
±10,0	0.95
±11,0	0.90
±12,0	0.85
±13,0	0.80

Any deviation outside these limits shall not be paid for, however, the engineer shall have the right to instruct the contractor to make up any deficiency, or blind excessive prime without additional payment. Where so instructed, the material for blinding shall consist of approved, but shall consist of screened 4,75mm nominal single size aggregate. The use of crusher dust for blinding shall not be permitted. If under-spraying occurs, and it is accepted by the engineer, only the actual quantities applied shall be paid for."

B4109 TESTING

Add the following:

No payment shall be made if this condition is not adhered to. The contractor shall, at his cost, provide to the engineer's representative samples of every batch of prime delivered to site.

SECTION 4200: ASPHALT BASE AND SURFACING

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STOCKPILING OF MIXED MATERIAL

(b) Moisture

Add the following at the end of the second last paragraph after “engineer”:

“even if the underlying layer has been previously primed.”

(c) Surface Requirements

(iii) Tack Coat

Add the following new paragraph:

“Hand spraying shall only be permitted on areas approved by the engineer. The binder distributor shall be capable to apply the binder evenly over the full area. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush.” Tack coat shall be uniformly applied to all transverse and longitudinal joint faces by hand utilising a paint brush.”

The tack coat shall be a spray grade 60% cationic or anionic emulsion conforming to S.A.N.S 548 OR 309 respectively

B4206 PRODUCING AND TRANSPORTING THE MIXTURE

(b) Production of the mixture

(ii) Using drum-type mixer plants:

Add the following:

“The contractor shall ensure that sufficient cold-feed bins are installed to accommodate each individual aggregate fraction, including the filler. Pre-blending of aggregate fractions shall not be permitted.”

(c) Transporting the mixture

Add the following paragraph:

“Special precautions shall be taken by the contractor to ensure that the temperature of the total mass of asphalt does not decrease by more than 10°C from point of despatch to the point where it is to be paved. The use of the thermal blankets shall be obligatory in instances of cold weather and where the haul time is in excess of 30 minutes.” The contractor shall ensure that trucks used to haul asphalt are not overloaded and the legal axle loads are not exceeded. Before any asphalt can be transported, the contractor must provide the engineer with the certified carrying capacity of each truck intended for the purpose of transporting the mix. The contractor shall provide the engineer with a weigh bridge ticket before discharging into the paver hopper.

Any truck that is over loaded shall not be allowed to discharge its load and shall return to the depot/batching plant for adjustment of the load. In addition a penalty shall be applied for the overload.”

Add the following sub-clause:

(f) Approval of asphalt mixes

Before any asphalt is placed on the road, the engineer shall approve the mix design. The approval process shall be as follows:

(a) Laboratory mix design

The contractor shall prepare and submit a laboratory design mix together with test results at four different bitumen contents on the prescribed form D3 of TMH 10. In addition, the proposed asphalt mixture shall be subjected to gyratory testing. All the expenses in preparing and submitting the laboratory design mix shall be to the contractor's cost.

The proposed design, as well as samples of all aggregates and bitumen intended for use, shall be submitted to the engineer for check testing at least six weeks prior to the intended date of commencement with any asphalt production.

(ii) Plant Mix Design

After approval is obtained for the laboratory design mix, a plant mix at varying binder contents of approximately 5 to 10 tons each shall be produced. The purpose of the plant mix is for the contractor to prove that the laboratory design mix can be produced successfully and that the plant is accurately calibrated. The engineer shall conduct the necessary testing on the plant mix, which may include "wheel tracking" or other specialised testing, as may be ordered by the engineer, to further evaluate the mix. The plant mix shall not be placed on the road. During the production of the plant mix, the engineer shall be afforded the opportunity to inspect the asphalt plant.

(iii) Trial Section

After the plant mix is approved, permission shall be given for laying a trial section at varying binder contents in accordance with the requirements of section 4211 of the specifications. The engineer may require that the mix be further assessed by means of CSIR Wheel Tracking or MMLS testing, the cost of which will be borne by the Employer. Provision is made for payment for the first approved section only including the cost of the specialized testing. Mass production of asphalt shall only commence after approval of the trial section, which should be given within a maximum of ten days.

The engineer may instruct the contractor at any time to halt his paving process and to review the whole or part of the above process should a change of aggregate properties occur, the specified asphalt requirements not being met and/or a consistent asphalt mixture not be produced."

The specification for the Continuously Graded Medium asphalt base is as follows:

1. The surfacing shall consist of 13.2mm Continuously Graded Medium Asphalt with a 35/50 pen binder.
2. The nominal binder content shall be 5,5%.
3. The asphalt mixing temperature shall be between 145°C and 170°C.
4. The approved target grading shall comply with Table 4202/11.
5. ITS shall be between above 800.
6. The Marshall voids (75 blows/side) shall be between 3% and 6%.
7. VMA shall be more than 14%.
8. The modified Lottmanns (TSR) > 0,8.
9. MMLS 3 Rutting <2.5mm. Test to be wet at 100k axels, 2400 repetitions per hour, 50°C, 800 kPa tyre pressure, 2.9KN wheel load, briquette thickness 60mm, sample compaction Gyratory.
10. Air permeability at 7% voids shall be less than 1×10^{-8} .
11. Minimum voids after 300 gyrations with the gyratory compactor shall be > 2,0%.
12. The binder film thickness shall be between 5,5 and 8,5 microns.

Table 4202/11

SIEVE SIZE (mm)	CONTINUOUSLY GRADED MEDIUM ASPHALT SURFACING	
	MIN	MAX
26.5		
19		
13.2	100	100
9.5	82	100
6.7		
4.75	54	75
2.36	35	50
1.18	27	42
0.6	18	32
0.3	11	23
0.15	7	16
0.075	4	10
Aggregate	93.5%	
Binder Content	5.5%	
Modified Binder	35/50 Pen Bitumen	
Active Filler	1,0% Hydrated Lime	

B4208 JOINTS

Add the following to this clause:

The position of the longitudinal construction joints shall be such that they do not fall on the wheel paths or on shoulder line markings where the width of the shoulder is less than 2,0m.

Where the difference in level between the new work and the existing road surface exceeds 25mm and public traffic is to use the partially surfaced road, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with clause 4208 of the specification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level between the old and new work.

All costs involved in the provision and removal of these temporary ramps shall be deemed to have been included in the rates tendered for the relevant asphalt pay item.

B4210 COMPACTION

Add the following:

No roller sensitive asphalt mixes will be allowed on this contract. The asphalt will be classified as roller sensitive if any movement takes place under a steel wheel roller of mass 9t when the temperature of the asphalt layer on the road has dropped to below 110°C. Vibration rollers will not be permitted for the compaction of asphalt layers.

B4214 QUALITY OF MATERIAL AND WORKMANSHIP

(b) Coring of asphalt layers

Add the following:

"A suitable coring machine shall be available on a daily basis when asphalt paving is taking place. Cores shall only be drilled, when the road temperature is 20°C or less. Core holes shall be filled with hot mix asphalt and compacted, all within 24 hours of the core being drilled. Coring shall be carried out within 48 hours after the paving has been completed and supplied to the engineer. The test results of cores shall be submitted to the engineer within 24 hours after coring."

(c) Routine inspection and tests

Add the following paragraphs:

"The contractor shall keep accurate records of:

- (i) The position where every truckload of asphalt is paved (chainage, lane, time and date).
- (ii) The temperatures of the asphalt in the trucks both at the mixing plant and at the paving equipment immediately prior to discharging the load.
- (iii) The truck and load number from which control samples are taken. All samples taken shall be appropriately numbered.

Test results and measurements will be assessed in accordance with the provisions of Section 8200: Quality Control (Scheme1) Judgement Plan B."

Add the following sub-clause:

(d) Special tests

n-Heptane-Xylene Equivalent (Spot test) (AASHTO-T102)

If the engineer suspects that bitumen or asphalt has been overheated, he may order that the bitumen, or the bitumen recovered from the asphalt, be subjected to the Spot Test. Recovery of binder for use in the Spot Test shall be carried out according to an approved method.

Any bitumen having an n-Heptane-Xylene equivalent in excess of 36, or in excess of the manufacturers test result on the dispatched stock, shall be considered to have been overheated and shall be deemed to be rejected unless proven otherwise."

B4215 MEASUREMENT AND PAYMENT

Add the following note to this payment item:

<u>ITEM</u>	<u>UNIT</u>
B42.07 Trial sections	m ²

The tendered rate shall include for approximately 100 tonnes of asphalt to be laid for the trial section. The asphalt paved for the trial section will remain part of the permanent works upon approval. Any remedial work (milling out and relaying new asphalt) in case of failure of the trial section shall be to the contractor's account.

The rate shall include two days standing time while the testing and approval of the trial section is done.

Amend the following payment item:

<u>ITEM</u>	<u>UNIT</u>
B42.08 100 mm cores in asphalt paving	No

Add the following to the first sentence of the first paragraph of item 42.08 after the word “drilled:”
“(irrespective of the depth of the core)”

Add the following new pay item at the end of clause 4215:

<u>ITEM</u>	<u>UNIT</u>
B42.21 Penalty deduction for overloading (refer to item B42.21 in clause B4215 of the project specifications for the calculation of the tendered rate in each case):	
(a) Penalty deduction with respect to item 42.02	t

The unit of measurement for the calculation of the penalty deduction shall be the ton of asphalt mix transported in excess of the legal load.

The magnitude of the tendered per ton penalty rate applied shall be calculated as twice the contractor's tendered rate for placing the asphalt surfacing mix under item 42.02 (duly converted to a “per ton” rate), or under item 42.09 per ton, multiplied by minus one:

Rate tendered for subitem B42.21(a) per ton = [(2 x rate tendered per m² for item 42.02 (duly converted to a “per ton” rate)) x (-1)]

SECTION 5200: GABIONS

B5202 MATERIALS

(f) Filter fabric below the gabions

Add the following at the end of subclause 5202(f):

"In the case of the filter fabric used to line the earth faces of the gabion mattresses at the box culvert inlet/outlet, the following properties shall apply:

Penetration load (minimum)	3500 Newton
Puncture resistance (maximum)	15 mm
Water percolation (minimum)	20 litre / m ² / sec"

B5205 MEASUREMENT AND PAYMENT

Add the following new Clause after the last paragraph of item 52.03:

<u>ITEM</u>	<u>UNIT</u>
B52.03 Gabions:	
(a) Galvanized gabion boxes, hexagonally woven mesh, 80mm x 100mm, 2.7mm dia. with additional PVC coating, as follows:	
(i) 1.0 m x 1.0 m x 1.0 m	m ³
(b) Galvanized gabion mattresses, hexagonally woven mesh, 80mm x 100mm, 2.7mm dia. with 1.0m diaphragm spacing:	
(i) 2.0m wide by 0.3m high by 6.0m long	m ³

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Tying and connecting wires;
- b) Loading, transporting and off-loading; and
- c) Assembling and filling of the cages

Add the following new Clause after the last paragraph of item 52.04:

<u>ITEM</u>	<u>UNIT</u>
B52.04 Filter fabric	
(a) Grade B	m ²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Cutting; and
- b) Placing, joining, overlapping, and securing the material in position

SECTION 5400: GUARDRAILS

B5402 MATERIALS

(a) Guardrails

Add to Sub-clause 5402 (a) the following:

All holes in guardrail sections shall be drilled prior to galvanising. The Contractor shall submit SABS test certificates certifying the galvanising complies with the specification.

End treatment will involve the dipping of the last 3 sections of guardrails into the ground as detailed on the drawings.

(b) Guardrail posts

Add to Sub-clause 5402 (b) the following:

(i) Timber posts

“The tops of all timber guardrail posts and spacer blocks shall be sealed with a coat of 50/70 pen. bitumen. Galvanised gang-nail plates shall then be nailed on top of the guardrail posts.”

B5404 REQUIREMENTS

After the first paragraph at the start of Clause 5404, add the following:

The vertical tolerance to which the completed guardrail shall comply shall be 3 mm. On straights and on curves the completed guard-rail shall not be out of line by more than 10 mm and 15 mm respectively.

SECTION 5700: ROAD MARKING

B5702 MATERIALS

(a) Paint

- (ii) Retro-reflective road-marking paint

Add to Sub-clause 5702(a)(ii) the following:

During actual painting the Contractor shall supply sealed samples of the paint to be used to the Engineer together with details of the paint batch numbers and testing carried out on these particular batches by the paint manufacturer to prove compliance with this specification. These samples shall be kept until the end of the defects liability period.

B5704 MECHANICAL EQUIPMENT FOR PAINTING

Add to Clause 5704 the following:

The machine shall always operate in the direction of the traffic when applying lane markings

SECTION 5800: LANDSCAPING AND PLANTING PLANTS

B5801 SCOPE AND DEFINITION

(a) Scope

Add to sub-clause 5801(a) the following:

The Contractor shall also note the requirements of the Environmental Management Procedures in Part C of these Project Specifications, with particular reference to the protection of existing trees and shrubs. Due to the nature of the project site, and the erosion which occurs when trees and grasses are removed, existing vegetation shall be disturbed as little as possible.

B5812 MEASUREMENT AND PAYMENT

Add the following new Clause after the last paragraph of item 58.01:

<u>ITEM</u>	<u>UNIT</u>
B58.01 Trimming:	
(a) Machine trimming	m ²
(b) Hand trimming	m ²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Trimming the areas to the specified requirements;
- b) Moving of small quantity material; and
- c) Removal of surplus material and stone

Add the following new Clause after the last paragraph of item 58.03:

<u>ITEM</u>	<u>UNIT</u>
B58.03 Preparing the areas for grassing:	
(a) Topsoiling within the road reserve, where the following materials are used:	
(i) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0km)	m ³
(b) Stockpiling of topsoil (free-haul 1,0km)	m ³

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Excavating and loading the topsoil;
- b) Placing and spreading the topsoil to required thickness;

- c) Levelling the topsoil to smooth surface and removing the stones; and
- d) Placing it in the stockpile

Add the following new Clauses after the last paragraph of item 58.04:

ITEM

UNIT

B58.04 Grassing:

(a) Sodding by using the following types of sods:

(i) Veld sods

m²

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Excavating, loading, transporting, off-loading, placing and watering sods for replanting dead areas.

B58.04 Grassing:

(continue

d)

(b) Hydroseeding:

(i) Hydroseeding

ha

A portion of this work shall include for labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors, supplemented by the contractor's key personnel for the use of labour intensive construction.

Labour intensive construction specific to these activities shall be carried out subsequent to the training of local labour. Local labour shall be trained during workshops prior to works being carried out.

The labour intensive activities shall comprise of the following:

- a) Mixing;
- b) Watering,
- c) Weeding and re-hydroseeding bare patches

SECTION 6100: FOUNDATIONS FOR STRUCTURES

B6101 SCOPE

Add the following paragraph to the end of clause 6101:

"This section shall also cover the provision of a temporary access to the site."

B6104 ACCESS AND DRAINAGE

(a) Drainage

Add the following after the end of the third paragraph of subclause 6104(c):

"The Contractor shall be required to provide and maintain such sumps, pumping equipment and temporary stream diversion works as may be necessary, in order to keep the works dry during the construction period.

Immediately after concreting has taken place, the Contractor shall continue to keep the excavations dry for a sufficiently long period to ensure that the constituent concrete materials are not washed out from the freshly cast member."

B6106 FOUNDING

Add the following clause at the end of the last paragraph:

"Where foundation slabs are cast directly against the face of the excavations, the volume of concrete measured for payment shall be the total volume of concrete placed or the volume based on the plan dimensions detailed on the drawings plus a 100mm allowance for over break on each applicable side whichever is the lesser. No formwork to the footing shall be measured when the concrete is cast against the face of the excavations".

B6108 BACKFILL AND FILL NEAR STRUCTURES

(d) Fill within restricted area

In the second paragraph replace "93%" with "95%".

Add the following:

In narrow widths where it is difficult or impossible for appropriate mechanical compaction equipment to be used, the fill material may be substituted with soilcrete with the approval of the Engineer.

B6111 FOUNDATION DOWELS

Add the following before the third sentence of the first paragraph of clause 6111:

"The dowel holes shall be dewatered and cleared with compressed air immediately before the grout is introduced."

Delete the last sentence of the first paragraph of clause 6111 and replace it with the following:

"The grout to be used shall be FOSROC Lokset S40 polyester resin grout or similar approved high-strength expansive grout, mixed and applied in accordance with the manufacturer's instructions."

B6115 MEASUREMENT AND PAYMENT

Amend the following payment item:

ITEM

UNIT

B61.0 Excavation:
2

(a) Excavating soft material situated within the following successive depth ranges:

(i) 0 m up to 2 m m²

Add the following to the first paragraph:

This work shall be carried out using labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors for the use of labour intensive construction.

ITEM

UNIT

B61.0 Access and drainage
3

(a) Access Lump Sum

Add the following to the end of item B61.03

"The tendered rate shall include for the provision of access to the site and for the construction of any temporary roads required for the delivery of all materials, structural members and plant for the construction of the works. The rate shall include for the maintenance of the access for the duration of the contract and the subsequent removal thereof on completion of the works. The final payment for item 13.01(a) will be made once the Contractor has completed the removal of the temporary road to the satisfaction of the Engineer."

ITEM

UNIT

B61.0 Fill within a restricted area (extra over item B33.01)
5

m³

Add the following to the first paragraph:

This work shall be carried out using labour intensive construction. The tenderer shall make allowance for the employment of local labour and/or the labour of local subcontractors for the use of labour intensive construction.

ITEM

UNIT

B61.0 Foundation fill consisting of:
8

(a) Mass concrete (Class 15/38) m³

(b) Concrete screed (75mm minimum thickness, Class 15/19) m³

Add the following to the end of item B61.08

"Formwork will not be measured for payment for any mass concrete foundation fill, irrespective of depth, or for concrete blinding screed. The cost of forming these items shall therefore be included in the rates tendered for the mass concrete or concrete screed."

SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH

B6203 GENERAL

Add the following to the end of the first paragraph of clause 6203:

"The Contractor shall also comply with his obligations for ensuring the safety of all falsework and formwork in terms of Part E: OHSA 1993 Health and Safety Specification in section C3.3 Particular Specifications.

The design of the entire falsework and formwork infrastructure used to access and temporarily support the bridge structure (including the pier columns, the abutment walls and the bridge deck), shall be carried out by specialists in the design of falsework and formwork and signed by a Professionally Registered Engineer with ECSA. The same specialists shall inspect and approve the falsework and formwork as erected."

B6204 DESIGN

(a) General

Add the following to the end of the second paragraph of subclause 6204(a):

"The Contractor shall respond within 72 hours to any queries the Engineer may have with respect to the design and drawings and calculations for the falsework and formwork."

B6205 CONSTRUCTION

(b) Formwork

(ii) Formwork to exposed surfaces

Add the following:

"The formwork at construction joints shall have moulding strips 25mm x 25mm neatly butted and set at the position of the construction joint".

B6210 MEASUREMENT AND PAYMENT

The various tendered rates under section 6200 of the Bill of Quantities shall include full compensation for the Contractor's obligations with regard to ensuring the safety of all falsework and formwork in terms of Part E: OHSA 1993 Health and Safety Specification in section C3.3 Particular Specifications.

Add the following new pay items at the end of clause 6210:

ITEM

UNIT

B62.	Contractor's Health and Safety obligations with regard to falsework and formwork	Lump Sum
10		

The unit of measurement shall be the lump sum.

The tendered rate shall include full compensation for the Contractor's obligations with regard to ensuring the safety of all falsework and formwork in terms of Part E: OHSA 1993 Health and Safety Specification in section C3.3 Particular Specifications.

The tendered rate shall also include for the design and all inspections by the specialist Professional Engineer (refer to Clause B6203 above) of the entire falsework and formwork infrastructure used to access and temporarily support the structure".

SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES

B6303 STORING THE MATERIALS

Add the following at the end of the first paragraph of clause 6303:

“The Contractor shall set aside areas cleared of vegetation for storing reinforcing steel. The reinforcement shall be kept at least 300mm above ground level at all times.”

B6305 SURFACE CONDITION

Add the following new paragraph to the end of clause 6305:

“After placing concrete, the Contractor shall have cleaned off all concrete splatter from the protruding starter bars and clips and any other affected reinforcement, and shall present the resulting product to the Engineer for approval before he will be permitted to commence fixing the shuttering and reinforcement to the next section.”

B6306 PLACING AND FIXING

Delete the second paragraph and replace with the following:

Prior to fixing the steel, samples of the proposed spacers shall be submitted to the Engineer along with a written statement for in-situ manufacture, if applicable, for approval.

Overlap of steel reinforcement bars shall be such that the bars lie in a plane parallel to the nearest side of the concrete element and not perpendicular to it.

B6307 COVER AND SUPPORT

Add the following to the end of the fifth paragraph:

“Concrete cover blocks shall be made using the same cement and aggregate type as the main concrete with the same water/ cement ratio so that differences in colour, shrinkage, thermal movements and strain are minimised. Cover blocks shall be cured by submersion in water for a minimum of 7 days and thereafter kept submerged in water until immediately before fixing onto reinforcing steel. Where cover blocks, subsequent to fixing, have visually dried out they shall be remoistened by an appropriate method so that they are damp before the placing of concrete.”

SECTION 6400: CONCRETE FOR STRUCTURES

B6402 MATERIALS

(a) Cement

Remove the colon at the end of the first paragraph, replace it with a comma, and add the following:

“taking into account the adaption of the new SANS 50197-1 and SANS 50197-2 code for cements.”

Add the following new paragraph:

The type of cement to be used in any concrete element shall take into account the environmental conditions and durability requirements at the location of the site of the Works and shall be selected according to Table B6402/1.

Table B6402/1: Selection of Cement Type

Condition of Exposure	Placing Temperature of Concrete	Type of Cement*
1. MODERATE Concrete surfaces above ground level and protected against alternately wet and dry conditions caused by water, rain and sea-water spray	< 20°C	CEM II A – S CEM II B – S
	20°C - 30°C	CEM II A – S CEM II B – S CEM II A – V (or W) CEM II B – V (or W) CEM III A
2. SEVERE Concrete surfaces exposed to hard rain and alternatively wet and dry conditions	< 20°C	CEM II A – S CEM II B – S
	20°C - 30°C	CEM II A – S CEM II B – S CEM II A – V (or W) CEM II B – V (or W) CEM III A
3. VERY SEVERE Concrete surfaces exposed to aggressive water, sea-water spray or a saline atmosphere	< 20°C	CEM II B – S 42.5 CEM III A CEM II B – V 32.5
	20°C - 30°C	CEM II B – S CEM III A CEM II B – V
4. EXTREME Concrete surfaces exposed to the abrasive action of sea water or very aggressive water	< 20°C	CEM II B – S CEM III A
	20°C - 30°C	CEM II B – S CEM III A

Notes*

1. CEM I cements shall only be used in environments where concrete is not prone to chloride attack i.e. in inland drier environments.
2. Where a strength class of 42,5 or greater is required, and the placing temperature of concrete is between 20°C to 30°C, a set and hydration retarding admixture shall be used where required so as not to exacerbate bleeding.

Cement types CEMII and III may be blended, provided that the final product conforms to the requirements of SANS 50197-1 for the proportion of extender used and provided that the proportion of extender in the original unblended cement is known.

The Environmental Condition of Exposure for this site is SEVERE.

(b) Aggregates

Add the following new subclause:

(vi) The maximum chloride ion content of fine aggregate shall be 0,03% by mass of aggregate as measured by SANS 1083:2002. Where concrete is situated in a chloride environment the value shall be reduced from 0,03% to 0,01%.

(vii) The grading of the fine aggregate shall comply with the following table:

Sieve Size	<u>Cumulative % Passing Sieve</u>	
4 750µm	90 – 100	
2 360µm	75 – 100	
1 180µm	60 – 90	
600µm	40 – 60	
	300µm	20 – 40
	150µm	10 – 20
	75µm	5 – 10

(d) Water

Delete the second sentence and substitute:

Water from rivers or from boreholes may only be used if tests conducted by an approved laboratory prove the suitability of the water for concreting purposes. Tests shall be repeated as often as may be deemed expedient by the Engineer.

(e) Admixtures

Add the following subsubclauses:

(v) Admixtures, which have a retarding effect on the rate of hydration of the cement, may not be used when the concrete temperature is below 20° C.

(vi) A retarding admixture shall be used if temperatures of concrete mixes using cements of strength class 42.5R or 42.5 are between 20 to 30° C or where the ambient temperature is between 20 to 30° C .

B6404 CONCRETE QUALITY

(e) Bleeding

Delete the existing paragraph and replace with the following:

The concrete shall be proportioned with suitable materials that total bleeding does not exceed 0,3mm/cm² as measured by ASTM C232-92.

B6406 MIXING

(f) Ready-mixed concrete

Add the following:

The concrete batching plant is to be inspected by the Engineer for the compliance with latest SANS tolerances (SANS 878 and SANS 1083) and his approval is to be obtained in writing before commencement of the concrete works.

The maximum delivery period of 90 minutes from the time water is added to the concrete mix to the actual discharge of concrete on site shall be permitted unless an alternative written instruction is obtained from the Engineer. The discharge period (including placing the concrete) shall not exceed 30 minutes.

The concrete slump of every truck shall be measured on delivery and shall comply with Clause 6404 COLTO 1998 Edition (Table 6404/2) prior to any concrete from that truck is placed. A detailed computer printout of the constituents of the concrete mix from the batching plant is to be handed over to and retained by the Engineer's representative on site on arrival (i.e. truck registration, mix proportions and the time water was added to the mix). The masses of the concrete constituents of each truck shall be checked against that of those submitted on the D2 form with the trial mix, subject to the batching accuracy as specified in SANS 0100-2: 1992. The arrival time of each truck on site and the time that the concrete discharge is completed shall also be recorded by the Engineer's representative.

When required the Contractor shall satisfy the Engineer that acceptable alternative means of supplying concrete have been arranged to be brought into operation in the event of disruption in the supply of concrete. In this connection, the Engineer may require that the alternative means of supply shall commence if the disruption in the supply of ready-mixed concrete has lasted for an elapsed period in time of 1½ hours.

The use of ready-mixed concretes shall in no way relieve the Contractor of any of his responsibilities for providing concrete complying with the specifications. The concrete mixes for the grades of concrete as specified in the Bill of Quantities shall be designed by an approved concrete design laboratory and submitted to the Engineer for approval on a D2 form. At least four weeks before placing any structural concrete on the site, the Contractor shall supply and deliver to the laboratory, at his own cost, samples of the aggregates and the concrete mix design he proposes to use for the works. The Contractor shall include in his tender all fees and charges levied as well as all other costs incurred in designing and testing the required strength concrete mix.

B6408 CONSTRUCTION JOINTS

(a) General

Add the following:

No construction joints other than those indicated on the drawings will be permitted without the written approval of the engineer. In all cases the proposed method of forming the joint shall be discussed and agreed with the engineer.

B6409 CURING AND PROTECTION

Add the following to the end of subclause 6409(f):

Only a curing compound consisting of an approved water based low viscosity clear wax emulsion applied in accordance with the manufacturer's instructions may be used.

Add the following new paragraphs to the end of the clause:

Where curing by retention of formwork is used as the only method of curing the concrete, it must be left in place for the minimum period specified in Table 6206/1 but in no instance shall it be less than 7 days.

The materials used for formwork shall take into account properties such as thermal insulation and moisture absorption when assessing the suitability of the material, to the approval of the Engineer.

If impermeable curing membranes are to be used as a curing method, they shall be installed at the same time as formwork is removed and no portion of a concrete surface may be left unprotected for a period in excess of 2 hours. If the surface is an unformed finish e.g. top of deck slab, then the surface must be protected immediately by appropriate methods approved by the Engineer after it is finished, without damage to that surface, since it is vulnerable to plastic shrinkage cracking due to high rates of evaporation while the concrete is still in a plastic state. Plastic shrinkage and settlement shall not be permitted on any of the structural elements since it compromises the durability of the concrete.

All concrete shall be cured for the equivalent moist curing periods as shown in table B6409/1 below:

Table B6409/1
EQUIVALENT MOIST CURING PERIODS

Weather	Minimum moist curing Period (Days)
Normal: 18 to 22°C, 65% RH, Low wind speeds	5
Hot: With drying winds	7
Cold: 5 to 12° C	9

For all abutments, deck, wingwalls, earwings, piers and approach slabs, curing shall be excluded from the make-up of rates for measurement under items B64.01 and paid for separately under pay item B64.07. Where the application of a curing compound is instructed by the Engineer, the type and nominal application rate thereof shall be as specified in the bill of quantities or to the manufacturer's nominal specified rates.

B6410 ADVERSE WEATHER

Add the following new sub clause:

- (d) Temperature and Hydration of Concrete

Site Batched Concrete:

The temperature of concrete at point of delivery shall be within the range 10° C to 30° C. Concrete which has a temperature outside of this range shall not be placed in the structure.

Ready Mix Concrete:

In the case of ready mix concrete the temperature limits at point of delivery shall be as specified in SANS 878 2004 unless the Engineer has specified other limits due to specific design requirements. If slump loss occurs at concrete temperatures of over 30°C and more than two hours after mixing, the concrete shall be rejected. Also if after addition of allowed water the concrete begins to stiffen again such as to place in doubt that full compaction and finishing can be achieved, the concrete shall be rejected.

Care must also be taken not to cast concrete onto hot steel shutters as this might induce cracking.

The rate of hydration of the cement in the concrete shall be such that the concrete can be placed and properly compacted within 2 hours after the addition of water to the mix ingredients. The initial set of the concrete shall not be unduly delayed due to inappropriateness of admixtures or cement type, which could promote bleeding.

B6416 MEASUREMENT AND PAYMENT

Amend the following payment items:

<u>ITEM</u>	<u>UNIT</u>
B64.01 Cast in situ concrete:	
(a) Class 30/19 in abutments, earwings and wingwalls	m ³
(b) Class 40/19 in deck	m ³
(c) Class 30/19 in piers	m ³
(d) Class 30/19 in approach ramps	m ³

Add the following to the second paragraph:

In the case of concrete for all structural elements, curing shall not be included in the rate for concrete, but shall be paid for separately under Item B64.07.

Add the following payment item:

<u>ITEM</u>	<u>UNIT</u>
B64.06 Demolishing existing concrete:	
(b) Reinforced concrete in:	
(i) Existing structure	m ³

Amend the payment paragraph as follows:

"The tendered rate shall include full compensation for all labour, plant (including access and carnage) and equipment (including concrete cutters) required to demolish the existing concrete (irrespective of strength) and the disposal of the product of the demolishing to a borrow pit within a free-haul distance of 15km. The tendered rate shall also include full compensation for any necessary measures to ensure no debris falls into rivers and for any debris that has fallen into rivers to be recovered.

Payment shall distinguish between plain and reinforced concrete. For the purposes of this item, reinforced concrete is defined as concrete containing at least 0,2% of steel reinforcement measured by volume."

Add the following payment item:

<u>ITEM</u>	<u>UNIT</u>
B64.07 Curing of concrete:	
(a) Bridge substructure, deck sides and parapets using an approved curing compound	m ²
(b) Bridge deck top surface using moisture curing	m ²
(c) Bridge approach ramps using moisture curing	m ²

The unit of measurement shall be the square metre of completed concrete element cured using an approved method specified in clause B6409 of the project specifications.

The tendered rate shall include full compensation for providing the curing agent and its application according to the manufacturer's specified nominal rates of application by means of an approved pressure distributor to the fresh concrete surface or other approved methods of application. Partial payment shall be applied in the event that the Engineer allows conditional acceptance.

<u>ITEM</u>	<u>UNIT</u>
B64.08 Percussion drilling and grouting in of reinforcement steel	
(a) Drilling into existing piers, abutments, wingwalls and foundations (Y16 bars, 1000mm long; hole depth = 500mm; hole diameter = 20mm) and grouting in with epoxy resin grout (Fischer FIS V or similar approved)	No.
(b) Drilling into existing deck (Y20 bars, 2000mm long; hole depth = 1000mm, hole diameter = 24mm) and grouting in with epoxy resin grout (Fischer FIS V or similar approved)	No.

The unit of measurement shall be the number of wet cored holes drilled in accordance with the drawings to accept grout-in reinforcing steel. Holes for the installation of dowels shall be drilled within tolerance of

20mm of the specified position and +/- 5mm of the specified depth. The surface condition of dowels shall comply with Clause 6305.

The tendered rate shall include full compensation for all matters necessary for wet coring holes, the provision and placing of epoxy resin grout or a proprietary grout specific to wet cored holes that is specifically designed for the application. Only grouts that use an injection technique for inserting the epoxy resin grout will be allowed. The tendered rate shall be inclusive of testing the total number of dowel bars installed. The placing of reinforcing steel shall exclude the material cost of the reinforcing steel which is included in pay item 63.01.

The contractor will be required to show proof that within the specified embedment depth, 117 kN per dowel bar can be achieved with the proposed epoxy resin grout. The epoxy resin grout shall be used strictly in accordance with the manufacture's specified procedures, methods and requirements.

ITEM

UNIT

B64.09 Preparation of existing concrete surfaces

(a) Existing structure

m²

The unit of measurement of preparation of concrete of existing structures shall be the square meter prepared to receive fresh concrete.

The tendered rate shall include full compensation for the preparation of existing concrete and exposed reinforcing by applying a non-corrosive agent Sika ArmaTec 110 Epo Cem or similar approved product to a condition that is suitable to prepare the existing concrete surfaces as specified and approved by the Engineer, including plant, labour and materials necessary for the work.

SECTION 6600: NO FINES CONCRETE, JOINTS, BEARING, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES

B6603 JOINTS IN STRUCTURES

- (a) Materials
- (ii) General

Add the following after the last paragraph

"It is a firm requirement that all contracts have **full** Agrément certification for bridge deck joints, with the following target dates:

- (1) current Agrément assessments: 1 September 2004
- (2) new applications for Agrément assessment one year from receipt and acceptance by Agrément South Africa of each application. Proof of original acceptance of application by Agrément is required in such a case.

- (iii) Sealants

Add the following:

The silicone sealants required for sealing movement joints shall be Dow Corning 888 or similar approved.

- (g) Installing the expansion joints

Delete the first paragraph and replace with the following:

All deck expansion joints shall be installed by approved specialist subcontractors only. Installed deck expansion joints shall have the following guarantees:

Asphalt plug type joints	-	10 years
Joint sealant	-	5 years

All deck expansion joints will only be considered for use on this contract if the manufacturer has obtained Agrément certification. New applications for Agrément assessment takes up to one year from receipt to acceptance by Agrément South Africa."

B6606 DRAINAGE FOR STRUCTURES

- (c) Synthetic-fibre filter fabric:

Replace the last paragraph with the following:

Synthetic-fibre filter fabric shall be:

manufactured from a polymeric material processed into a continuous, permeable, homogeneous, non-woven sheet, which shall be mechanically, heat or chemically bonded;

made from polyester, polypropylene or polyethylene.

It shall show no detectable reduction of the specified properties when subjected to chemical and biochemical conditions found in soils or in saline solution, specifically:

soil and ground water with a pH in the range 4 to 12 (pH to be determined by Method A20, TMH1)

soil (as paste) and ground water containing salts with a conductance of up to 1,0 Siemens per metre (S/m) (conductivity to be determined by Method A20T, TMH1).

It shall not be attractive to rodents or termites, shall be rot-proof, not support the growth of algae and shall maintain at least 80% of the original tensile strength after direct exposure of 1500 hours to sunlight.

Synthetic-fibre fabric shall be classified according to the following:

Grade	Penetration Load (kN)	Elongation At rupture (%)		Permeability (litre/sq.m/s)
		min	max	
A	4,5	10	50	20
B	3,0	20	50	20
C	2,5	20	--	20
D	2,0	20	--	20
E	1,5	20	--	20

The above properties shall be measured in accordance with the test methods of SABS 0221-1988.

B6608 MEASUREMENT AND PAYMENT

Add the following new payment items:

<u>ITEM</u>		<u>UNIT</u>
B66.05	Expansion joints:	m
	(a) Asphalt plug joints (400x75mm deep)	

Add the following to the measurement clause of sub-item (a)

"The joint measured shall be the complete joint shown on the drawings including termination details and recesses at balustrades and cover plates and fixings."

Add the following to the end of the second paragraph:

"The tendered rate for sub-item (a) shall also include for water test required to prove the joint. The water shall be ponded and maintained to a minimum depth of 150mm above the top of the joint for a period of one hour each."

Add the following new payment items:

<u>ITEM</u>		<u>UNIT</u>
B66.15	Concrete parapets:	
	(a) F-shape parapets including end blocks, transition kerbs, draw wires, etc. in Class 40/19 concrete	m
	(b) Barrier between sidewalk and carriageway including end blocks, transition kerbs, draw wire	m

Add the following to the measurement clause of sub-item (b)

"The joint measured shall be the complete joint shown on the drawings including termination details and recesses at balustrades and cover plates and fixings."

Add the following to the end of the second paragraph:

"The tendered rate for sub-items (a) and (b) shall also include for water test required to prove the joint. The water shall be ponded and maintained to a minimum depth of 150mm above the top of the joint for a period of one hour each."

Add the following new payment items:

<u>ITEM</u>	<u>UNIT</u>
B66.27 Drainage Strips - 300mm min. engineer approved drainage strips covered with filter fabric Grade B	m

The unit of measurement shall be the linear metre of drainage strips laced behind the earth faces as shown on the drawing.

The tendered rate shall include full compensation for all material, labour, and equipment to supply and install the strips as shown.

<u>ITEM</u>	<u>UNIT</u>
B66.28 Drainage cores - M65 engineer approved perforated drainage pipe wrapped in filter fabric Grade B	m

The unit of measurement shall be the linear metre of drainage cores placed behind the earth faces as shown on the drawing.

The tendered rate shall include full compensation for all material, labour, and equipment to supply and install the cores as shown including the 200mm wide by 75mm thick mortar bed under the core.

<u>ITEM</u>	<u>UNIT</u>
B66.29 Additional water tests for joints ordered by the engineer	No

The unit of measurement shall be the number of additional water tests for proving the expansion joints, as ordered by the engineer. The test shall be executed by ponding water to a minimum depth of 150mm deep above the top of the joint for a period of one hour each. Testing should follow the installation of the various sections of joints to take advantage of the existing traffic accommodation and each test shall cover the length of each joint installed (generally half width of bridge)".

The tendered rate shall include full compensation for providing the pond of water and maintaining its minimum depth of 150mm for the full one hour period, and clearing away the ponding materials on completion.

<u>ITEM</u>	<u>UNIT</u>
B66.30 Sidewalk complete with new jersey barrier	m

The unit of measurement shall be the metre of side walk complete in accordance with the drawings.

The tendered rate shall include full compensation for providing fine graded river sand infill bedding, 3x110mm diameter uPVC pipes, in-situ 60mm thick concrete slab with mesh ref 193, 5mm expansion joints every 1m apart, formwork, new jersey barrier, labour, equipment and expenses required for completing the work.

SECTION 7400: PATENTED EARTH RETAINING SYSTEMS

7405 MEASUREMENT AND PAYMENT

Add the following payment items:

<u>ITEM</u>	<u>UNIT</u>
B74.02 Excavation for concrete bases for earth retaining systems:	
(a) Excavating soft material situated within the following depth ranges below the surface level:	m ³
(b) Extra over subitem 74.02(a) for excavation in hard material	m ³

Add the following sentence to the end of paragraph two.

Local labour shall be utilised in the excavation of the soft material to the required lines, levels and grades using hand held tools only up to a depth of 1,5 m.

<u>ITEM</u>	<u>UNIT</u>
B74.04 Backfill to excavations utilizing:	
(a) Gravel material obtained from commercial sources compacted to 95% of modified AASHTO density (150mm layer thickness – G7)	m ³

The unit of measurement shall be the cubic metre of backfill material measured in the excavation. The quantity measured shall be calculated from within the neat outlines defined for the excavation and the height to which the backfilling is constructed.

The tendered rate shall include full compensation for furnishing and placing all materials within the entire excavation, transporting the material, preparing, processing, shaping, watering, mixing and compacting the material to the specified densities. Local labour shall be utilised in the backfilling of the material to the required lines, levels and grades using hand held tools only.

<u>ITEM</u>	<u>UNIT</u>
B74.05 Chemical stabilization (150mm layer thickness) extra over item B74.04 for unstabilized compacted layer (G7) to achieve 3Mpa UCS	m ³

The unit of measurement shall be the cubic metre of stabilized material.

The tendered rate for chemical stabilization shall be paid as extra over the rates tendered for constructing the unstabilized layers. The tendered rate shall therefore include full compensation for spreading and mixing the stabilized agent, curing the stabilized sections, any extra water required, and all materials, supervision, labour, plant, equipment, tools and incidentals necessary for completing the specified work, but excluding the costs of supplying the stabilizing agent.

<u>ITEM</u>	<u>UNIT</u>
B74.06 Fill within restricted area extra over item B74.04	m ³

The unit of measurement shall be the cubic metre and the quantity shall be taken as the total volume of material within the restricted area. The tendered rates shall include full compensation for all additional work necessitated by working in the restricted area and the increased density required in the restricted area. Local labour shall be utilised in the backfilling of the material to the required lines, levels and grades using hand held tools only.

SECTION 8100: TESTING MATERIALS AND WORKMANSHIP

B8105 TESTING THE AGGREGATES

Add the following sub-clause:

(g) Determination of Ethylene Glycol Durability Index

The Ethylene Glycol Durability Index shall be determined as follows:

(i) Apparatus

Suitable pans or basins
Ethylene Glycol Solution
Stirring rod

(ii) Method

Obtain three or more representative samples from the source to be evaluated.

If not already crushed, crush the material in order to obtain sufficient minus 19mm plus 13mm sized aggregate in order to totally cover the bottom of the basin or pan with a single layer of stone. Add sufficient ethylene glycol to each basin ensuring that every aggregate particle is completely submerged.

After soaking for 24 hours, gently stir the aggregate, allow to settle and observe and record the response of the aggregate to the ethylene glycol according to the criteria listed in (iii) below. Continue the above cycle at intervals of 24 hours for a further 4 days, in each case recording the observed response. After 5 days allow the samples to remain submerged in the solution and observe and record the disintegration response after a total period of 15, 30 and 60 days have elapsed.

(iii) Classification of response

After each cycle, classify and record the response of the aggregate as follows:

DISINTEGRATION CLASS

Class 1 : No obvious effects, or only very minor spalling of sand sized particles or very small flakes.

Class 2 : Splitting of rock, accompanied by any other disintegrative effects.

Class 3 : Fracturing (spheroidal and/or internal) without extensive spalling or distortion.

Class 4 : Fracturing (spheroidal and/or internal) with extensive spalling or distortion.

Class 5 : Complete disintegration.

The time factor in the above disintegrative process is classified according to the time taken for the most serious effect of the expansive stresses to occur i.e.

TIME CLASS

Class 4 : 0 - 5 days

Class 3 : 6 - 15 days

Class 2 : 16 - 30 days

Class 1 : 31 - 60 days

Class 0 : Over 60 days

(iv) Determination of Glycol Durability Index

The Ethylene Durability Index is determined by adding the class number as assigned for the specific disintegrative response observed to the class number as assigned for the period for this response to occur. A durability index ranging from 1 (no response) to 9 (rapid and complete disintegration) is thus determined."

B8110 TESTS RELATING TO CHEMICAL STABILIZATION

Add the following subclause:

(d) The Wet-Dry Durability Test for cement-treated materials using the hand brush method

(i) Scope

This method covers the procedure for determining the soil-cement losses obtained by repeated wetting, drying and hand brushing of hardened soil-cement specimens (see (v)(3).

(ii) Apparatus

(1) A moisture curing room capable of maintaining a relative humidity of 95 to 100 percent and a temperature of 22 to 25°C, or suitable plastic bags capable of holding specimens and carriers in an air tight condition in a water bath as described in (2) below.

(2) A suitable water bath with thermostatic control capable of maintaining a temperature of 22 to 25°C.

(3) A balance to weigh up to 10 kg, accurate to 0.5 g.

(4) A drying oven capable of maintaining temperatures of $71 \pm 3^\circ\text{C}$ and $110 \pm 5^\circ\text{C}$.

(5) A wire scratch brush made of 50 mm by 1.6 mm flat 26 gauge wire bristles assembled in 50 groups of 10 bristles and mounted to form five longitudinal rows and 10 transverse rows on a 200 by 65 mm wooden block.

(iii) Method

(1) Preparation of specimens

Prepare specimens in accordance with the procedure described in the Appendix to method A19 in the TMH 1 with the following exceptions:

Use the material passing the 37.5 mm sieve and discard the material remaining on the sieve. Use the apparatus and compaction method as described in TMH 1 method A7 (modified AASHTO).

(2) Curing of specimens

Rapid cure the specimens (see (v)(5)). Alternatively, the specimens may be cured for seven days at a relative humidity of 95% to 100% and a temperature of 22°C to 25°C in a suitable curing room or in plastic bags and a suitable water bath.

(3) Wetting, drying and brushing

After curing, remove the specimens from the curing room or plastic bags, allow to cool if necessary, and submerge them in water at room temperature for a period of five hours.

Remove the specimens from the water and place them in an oven at 71°C for 42 hours.

Remove the specimens from the oven. Give each specimen two firm strokes on all areas with the wire scratch brush. The brush must be held parallel to the long axis of the specimen or parallel to the ends as required to cover all areas of the specimen. Apply these strokes to the full height and width of each specimen with a firm stroke corresponding to approximately 13.5 kN force (see note (v)(2)).

(4) Determination of soil-cement losses

After 12 cycles, dry the specimens to constant mass at 100°C and determine the oven dry mass of the specimens. The data collected will permit the calculation of the soil-cement losses of the specimens after the prescribed 12 cycle test.

(iv) Calculations

(1) Calculate the soil-cement loss of the specimens as a percentage of the original oven-dry mass of the specimens as follows:

$$L = \frac{W - M}{W} * 100$$

Where

L = soil-cement loss (%)

W = original calculated oven-dry mass (g) (calculated according to paragraph 3.5 in the Appendix to method A19 in the TMH 1).

M = final oven-dry mass (g).

(2) The percentage loss shall be calculated and reported to the nearest 0.1 percent. The results are normally required for designing a mix and are reported graphically against relevant cement contents.

(v) Notes

(1) Mass determination of the specimens before and after brushing are usually made at the end of each cycle during research or special investigations.

(2) If it not possible to run the cycle continuously because of Sundays or holidays or for any other reason, the specimens should be held in the oven during the lay-over period.

(3) The test was originally developed to determine wet-dry durability of cement-treated material. It can, however, be used with equal success on material tested with other chemical stabilizers, for example lime, or mixes of lime and milled blast furnace slag, or cement and milled blast furnace slag.

(4) The pressure is measured as follows:

Clamp a specimen in a vertical position on the edge of a platform scale and zero the scale. Apply vertical brushing strokes to the specimen and note the force necessary to register approximately 1.36 kg.

(5) Rapid curing:

Seal each specimen air tight in a suitable container or plastic bag. Carefully place the briquettes on suitable holders or in pans and place in the oven at the relevant temperature and period given below:

<u>Stabilizing agent</u>	<u>Temp (° C)</u>	<u>Time (Hours)</u>
CEM 11 B-S	70 - 75	24 ± 0.5
CEM 11 1A	70 - 75	24 ± 0.5
Lime	60 ± 2	45 ± 1
Lime/FA	60 ± 2	45 ± 1
Lime/MBFS	60 ± 2	45 ± 1"

B8117 MEASUREMENT AND PAYMENT

Replace item 81.02 with the following sub-items B81.02(a) and (b) which shall be used to cover payments to the commercial laboratories and specialised testing firms carrying out acceptance control testing as directed by the Engineer.

<u>ITEM</u>	<u>UNIT</u>
B81.02 Acceptance control testing as requested by the engineer	
(a) Cost of Testing	Prov Sum
(b) Contractor's handling costs, profit and all other charges in respect of sub item B81.02 (a)	%

The provisional sum provided to cover the cost of special tests as requested by the Engineer in terms of clause 8115 shall be expended in accordance with clause 6.6 of the General Conditions of Contract 2010.

The tendered percentage is a percentage of the amount of expenditure approved by the Engineer under the Provisional Sum B81.02(a), and shall include full compensation for the handling costs of the Contractor, and the profit in connection with providing the specified testing service."

<u>ITEM</u>	<u>UNIT</u>
B81.03 Acceptance control testing as requested by the engineer	Prov Sum
(a) Other specialist tests requested by the Engineer	
(b) Contractor's handling costs, profit and all other charges in respect of sub item B81.03 (a)	%

The provisional sum provided to cover the cost of special tests as requested by the Engineer in terms of clause 8115 shall be expended in accordance with clause 6.6 of the General Conditions of Contract 2010.

The tendered percentage is a percentage of the amount of expenditure approved by the Engineer under the Provisional Sum B81.03(a), and shall include full compensation for the handling costs of the Contractor, and the profit in connection with providing the specified testing service."

SECTION 8200: QUALITY CONTROL (SCHEME 1)

B8201 SCOPE

Add the following:

“Quality Control Scheme 1, Judgement Plan B shall be applicable to this contract.”

B8206 JUDGEMENT PLAN B

Notes (Table 8206/3)

(1) Asphalt base or surfacing: Specifications limits for:

(c) Voids

Delete and replace with the following:

“Ls = specified values -1.0% points
L's = specified values + 1.0% points”

C3.3: PARTICULAR SPECIFICATIONS

PART C: ENVIRONMENTAL MANAGEMENT SPECIFICATION

C.1 General

In order to ensure that the construction work is carried out in an environmentally sensitive manner, strict compliance with the Environmental Management Plan (EMP) guidelines is required. The purpose of the EMP is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
 - i. Minimise disturbance of the natural environment,
 - ii. Prevent pollution of land, air and water,
 - iii. Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimise adverse environmental impact,
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

C.2 Training and Induction of Employees

- The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes subcontractors, casual labour, etc.). The EMP shall be part of the terms of reference for all contractors, subcontractors and suppliers.

C.3 Complaints Register and Environmental Incident Book

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the Construction Manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter, etc.),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken and
- Actions taken and by whom.

All complaints received will be investigated and a response given to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident,
- Actions taken and by whom.

C.4 Site Cleanliness and Neatness

- Location of a construction camp is to be approved by the Employer's Agent and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1.8m Bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.
- A dedicated area must be made available for construction staff to change and store their personal belongings.

C.5 Access

- i Access to existing roads, schools, buildings, shops and residential properties must not be impeded during construction.
- ii Access roads utilised by the Contractor must be maintained in good condition.

C.6 Borrow Pits

- Mining authorisations (permits) for borrow pits must be obtained from the Department of Minerals and Energy (DME) in consultation with the Department of Water Affairs and Forestry (DWAF).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DME and DWAF.

C.7 Dust Control / Air Quality

- Dust suppression measures must be implemented during construction by ensuring that all surfaces prone to dust generation are kept damp (e.g. use of water tanker).
- Ensure that vehicles and equipment are in good working condition and that emissions are not excessive.
- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

C.8 Fauna

- Contractors and sub-contractors staff and workers may not chase, catch or kill animals encountered during construction.

C.9 Fire Prevention and Control

- Smoking is prohibited in the vicinity of flammable substances.
- The Contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owners' lands.

C.10 Grave Sites

- Gravesites in close proximity to the road must not be disturbed during construction.

C.11 Materials Handling and Spills Management

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc.,) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.
- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately (Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc.,).
- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The Contractor should keep Peat Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

C.12 Noise

- Noise generating activities must be restricted to between 07h00 and 17h00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.

- All equipment, vehicles and machinery must be in good working condition and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary noise such as hooting and shouting.

C.13 Pollution Control

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

C.14 Rivers and Streams

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

C.15 Safety

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road under construction.
- The relevant signage (e.g. speed control signs) must be erected alongside the road during the operation phase in order to control traffic.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.

C.16 Soil Management

- Storm water drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimised by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of storm water.
- Spoil from cuts may be used in existing erosion gullies.
- Stone pitching and gabions should be constructed at pipe culvert outlets.
- Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.
- If necessary an absorbent such as Peat Sorb should be used to aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and refuelling of vehicles must only be carried out at the construction camp.

C.17 Worker Conduct

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.
- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

C.18 Traffic Disturbances and Diversions

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

C.19 Vegetation

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

C.20 Waste Management

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The Contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, contaminated wash water, etc.) must be stored in leakproof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimise the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Employer's Agent.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood, concrete packets, etc.) on completion of the day's work.

Any spill around the container(s) should be treated as per Section C.11 and C.16.

In line with the municipality's COMPULSORY SUBCONTRACTING policy, as captured in clause 2 (1) (a) (ii) of the approved *Supply Chain Management Policy*; "all contracts with a value from R5 000 000 and above" are subject to a compulsory subcontracting. In terms of this clause, the successful Tenderer (Main contractor) is compelled to Sub-contracting a minimum of 30 % of the contract value. The subcontract firms shall be;

- in the Level 1 CIDB grading category of the specific project category (GB, CE, etc.);
- residents of GREATER KOKSTAD MUNICIPALITY,

- Black owned emerging contractor entities. Preference should be given to youth, disabled and female contractors or co-operatives.

The 30% requirement shall not be made up entirely of construction materials sourcing, this aspect will be capped at 10%.

Allocations will be made within the Bill of Quantities for specific works to be done by subcontractors, with an allocation for the full-time supervision by the Main Contractor. The works produced by the subcontractor is solely the responsibility of the Main Contractor.

A list of subcontractors meeting a pre-qualifying criterion will be provided to the Main Contractor by the municipality. However, the municipality indemnifies itself from any claim that may arise in the event of a dispute herein.

PART D: DAYWORK

This part of the Particular Specifications deals with the provision for daywork in the Schedule of Quantities. Rates for daywork shall be entered in the Schedule of Quantities in accordance with the following specifications.

D1. SCOPE

According to Clause 6.5 of the General Conditions of Contract 2015, certain work may be carried out using rates tendered in the daywork schedule. A schedule of personnel, plant and equipment which may be necessary to perform work on a daywork basis is included in the Schedule of Quantities. The quantities used in the Schedule of Quantities are for tender evaluation purposes only and the use or not of these items shall not constitute a variation in terms of Clause 6.3 of the General Conditions of Contract 2015.

No work will be paid for as daywork without the written instruction or approval of the Employer's Agent.

D2. TYPE OF WORK

The Employer's Agent may order daywork in certain cases where it is necessary to vary or to extend the works due to new or unforeseen circumstances to such an extent that the tendered rates for specific items of work are no longer applicable, or where no suitable combination of tendered rates can be used to pay for such work.

As a general rule, applicable rates for additional work items will be agreed between the Contractor and the Employer's Agent. Daywork will only be used in exceptional circumstances.

D3. MATERIALS

Materials for use in works carried out under daywork shall be purchased by the Contractor who shall also arrange for delivery to site, and shall be responsible for any other requirements associated with specific materials. A Provisional Sum has been allowed in Section D of the Schedule of Quantities for daywork materials. The Contractor shall enter a tendered percentage in the Schedule of Quantities to cover his handling costs and profit, as per other provisional and prime cost sums in this Contract.

Materials shall be paid for using the method described in C2.1, 'Pricing Instructions'. No contract price adjustment will be applicable to materials.

The Contractor shall submit proof of ownership for any materials used in daywork with his daywork claim to the Employer's Agent. Further, if specific materials are required for daywork, quotations will be called for as per Clause 6.5.2 of the General Conditions of Contract 2015.

D4. CONSTRUCTION PLANT HIRE

Where daywork is ordered, the tendered rates for plant hire in Section D of the Schedule of Quantities shall be used in calculating the payment due for any plant required to execute the daywork. If no rate is included in the Schedule of Quantities for a particular piece of equipment, and where no other rate or combination of rates would provide suitable compensation, then the daywork method of payment described in Clause 6.5.1.3 of the General Conditions of Contract 2015 will be used.

The tendered rates for each item of constructional plant shall include for all operating costs associated with the said item of plant. Such costs are deemed to include fuel, re-fuelling costs, lubrication and routine servicing / maintenance, breakdowns and spares, all overhead costs, site management costs and administration costs. The tendered rates shall also include the plant operator and the general supervision of the plant while it is engaged in the daywork.

D5. SALARIES AND WAGES OF WORKMEN

The salaries and wages of workmen executing daywork shall be paid for using the tendered rates in the Schedule of Quantities. The tendered rates shall include for all costs associated with the employment of personnel, including salaries, wages, allowances, workmen's compensation, medical aid and pension contributions, government levies and taxes, training costs and any costs associated with living on the site. The tendered rates shall also include for the transportation of the workmen to the site of the daywork.

All overhead costs, administration costs, site management costs and the Contractor's profit are deemed to be covered by the daywork rates and no additions or mark ups will be made to the tendered rates.

The tendered rates shall also include any hand tools normally associated with the workmen's job description e.g. picks, shovels, hammers, saws, spirit levels, etc. The tendered rate for labourers shall also include for the casual supervision by a gang boss or foreman. Only when specifically called for by the Employer's Agent, will payment be made for the use of a gang boss or foreman supervising on a continuous basis.

D6. MEASUREMENT AND PAYMENT

The following principles shall also apply to the measurement and payment of daywork.

The unit of measurement for plant shall be the number of Vibroclock hours worked and each item of plant shall be fitted with a Vibroclock, the cost of which shall be included in the rates. Excessive non-productive time when the engine is idling will not be paid for. Where there is ambiguity between the flywheel horsepower and mass of the machine, the flywheel horsepower shall govern the measurement category. Where width and mass are specified, mass shall govern the measurement category.

The Contractor's attention is drawn to the requirements of Clauses 6.5.3 and 6.5.4 of the General Conditions of Contract 2015 with regard to the submission of daywork claims.

PART E: OHS 1993 HEALTH AND SAFETY SPECIFICATION

E1. SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy working environment for all employees, subcontractors, the Employer, the Employer's Agent, inspectors and all other persons entering the site of works.

This specification shall be read in conjunction with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993 and the corresponding Construction Regulations 2014, and all other safety codes and specifications referred to in the said Act and Construction Regulations.

In terms of the OHS Agreement in Section C1.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible for compliance with all provisions of OHS 1993 and the Construction Regulations 2014.

This specification and the Contractor's own Health and Safety Plan as well as the Construction Regulations 2014, shall be displayed on site or made available for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representatives of trade unions and any other persons entering the site of works.

E1.1 Information based on the Employer's baseline risk assessment

The information presented in this subclause E1.1 is based on the Employer's baseline risk assessment prepared specifically for this contract.

This information describes the type of work required in terms of this contract that will be accompanied by dangers, hazards and risks which the Contractor shall be required to identify, analyse, manage, monitor and review in terms of the Health and Safety Plan and risk assessments.

This information is neither prescriptive nor exhaustive, and is provided as a guideline to Tenderers in preparing their tender submissions, and to the successful Contractor as a basis for the preparation of the site specific risk assessments to be performed by the Contractor in terms of Construction Regulation 9.

Tenderers shall make their own assessment of the dangers, hazards and risks that can be expected during the course of this contract, which may include dangers, hazards and risks not identified in the baseline risk assessment, including those that may arise from specific methods of construction employed by the Contractor, and shall make due allowance in their tendered rates and prices for all costs related to complying with the provisions of the Act and Construction Regulations.

This information is given in good faith for the guidance of Tenderers, and no additional payment shall be made as a result of any inaccuracies, discrepancies or omissions contained therein.

The following aspects of this project carry the risk of possible injuries:

- Operation and maintenance on the site of heavy civil engineering plant such as excavators, bulldozers, front end loaders, tippers, TLBs, compaction equipment, rock breaking plant, water pumps, concrete mixers, ready mixed concrete trucks, batch plants, cranes, concrete pumps, compressors, pneumatic tools, generators, etc.
- Use on the site of power tools and hand tools.
- Handling of materials such as scaffolding, formwork, timber planks, steel wire, reinforcement, cement bags, concrete materials and hand stone.
- Storage and handling of flammable materials such as fuels, oils, adhesives, and painting and cleaning products including bituminous paint.
- Storage and handling of herbicides and ant poisons.
- Presence of open excavations for the box culvert, manholes and stormwater pipe trenches.
- Risks related to general safety and security on site.

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessarily covered in the above.

E2. DEFINITIONS

For the purpose of this contract the following shall apply:

- (a) **Employer** where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract 2015 and it shall have the exact same meaning as **client** as defined in the Construction Regulations 2014. **Employer** and **client** are therefore interchangeable and shall be read in the context of the relevant document.
- (b) **Contractor** wherever used in the contract documents and in this specification, shall have the same meaning as **Contractor** as defined in the General Conditions of Contract 2015.

In this specification the terms **principal contractor** and **contractor** are replaced with **Contractor** and **subcontractor** respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatary, without derogating from his status as an employer in his own right.

- (c) **Employer's Agent** where used in this specification, means the Employer's Agent as defined in the General Conditions of Contract 2015. In terms of the Construction Regulations the Employer's Agent may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

E3. TENDERS

This Health and Safety Specification forms an integral part of the Contract and Tenderers are required to use it during the tender phase for pricing the preparation of a project specific Health and Safety Plan prior to commencing any work and for pricing the costs of ensuring compliance thereto during construction. Tenderers must forward a copy of this Specification to all other persons or organisations that may be submitting prices to the Tenderer during the tender stage to enable them to include the cost of preparing their own Health and Safety Plan, relevant to their particular operation, and for compliance with the health and safety requirements during construction. Payment items are included in the Schedule of Quantities for compliance with the Occupational Health and Safety Act and Construction Regulations and with this Specification.

Tenderers are required to complete Form J 'Contractor's Health and Safety Declaration' in section T2.2 'Returnable Schedules'.

Failure to submit the foregoing with his tender and/or to provide realistic rates for relevant payment items will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely, in accordance with the Act and Construction Regulations and his tender shall be deemed non-responsive.

E4. NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

Where the contract meets the requirements of Construction Regulation 4, the Contractor shall, before commencement of the work and in accordance with the requirements of Regulation 4, notify the Provincial Director of the Department of Labour of the intention to carry out the construction work, using the pro forma form included as Annexure 2 to this Health and Safety Specification.

A copy of the notification form must be kept on site, available for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representative trade unions and any other persons on the site. A copy of the notification form shall also be kept on the health and safety file, and a further copy shall be forwarded to the Employer for his records.

E5. HEALTH AND SAFETY PLAN

Before commencement of any construction work, the Contractor shall prepare a project specific Health and Safety Plan complying with the requirements of Construction Regulation 7(1)(a) and this Health and Safety Specification.

The Health and Safety Plan must include a risk assessment performed and recorded in writing by a competent person as required in terms of Construction Regulation 9. The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include

a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards identified.

The Health and Safety Plan shall be available on site for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representative trade unions, and health and safety representatives and committee members, and must be monitored and reviewed periodically by the Contractor.

E6. APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

E6.1 Appointments

The Contractor shall appoint in writing all employees.

The Contractor shall appoint in writing all subcontractors, and such appointments shall be in compliance with the requirements of Construction Regulation 7.

E6.2 Health and safety induction training

No person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the site.

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo health and safety induction training by a competent person before commencement of construction work in compliance with Construction Regulations 7(5) and 9(3) and (4).

The Contractor shall ensure that all visitors to the construction site undergo health and safety induction and are provided with the necessary personal protective equipment in compliance with Construction Regulation 7(6).

E6.3 Medical certificate of fitness

The Contractor shall ensure that every employee, including subcontractors and their employees, has a valid medical certificate of fitness issued in compliance with Construction Regulation 7(1)(g) or 7(8) as applicable.

E7. APPOINTMENT OF SAFETY PERSONNEL

E7.1 Construction manager

Refer to Construction Regulation 8(1), (2), (3) and (4).

The Contractor shall appoint a full-time **Construction Manager** with the duty of managing all the construction work on the site, including the duty of ensuring occupational health and safety compliance.

The Contractor may also have to appoint one or more **assistant construction managers** to assist the Construction Manager where justified by the scope and complexity of the works.

E7.2 Construction health and safety officer

Refer to Construction Regulation 8(5) and (6).

Taking into consideration the size of the project and the dangers, hazards or risks that can be expected, the Contractor shall appoint in writing a full-time or part-time **construction health and safety officer** to assist in the control of all health and safety related aspects on the site. The construction health and safety officer shall be registered as required by the Chief Inspector of the Department of Labour and shall have the necessary competence and resources to perform his/her duties diligently.

E7.3 Construction supervisor

Refer to Construction Regulation 8(7), (8), (9) and (10).

The Contractor shall appoint a **construction superintendent** responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

The Contractor may also have to appoint one or more competent employees to assist the construction superintendent where justified by the scope and complexity of the works.

E7.4 Health and safety representatives

In terms of **Sections 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 50 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery, etc. on a regular basis, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

E7.5 Health and safety committee

In terms of **Section 19 of the Act (OHSA 1993)**, the Contractor (as employer) shall establish one or more **health and safety committee(s)** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

E7.6 Competent persons

The Contractor shall appoint in writing designated competent employees and/or other competent persons as required by the Act and Regulations. Such appointments shall be in accordance with the relevant applicable sections of the Act and Regulations as determined by the requirements of the contract.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work in all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities for compliance with all requirements of the Construction Regulations.

E8. RECORDS AND REGISTERS

The Contractor is bound to keep records and registers related to health and safety on site as required by the relevant applicable sections of the Act and Regulations as determined by the requirements of the contract. Such records and registers shall be available for periodic inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees and representatives of trade unions.

E9. CONTRACTOR'S RESPONSIBILITIES

For this contract the Contractor will be the mandatary of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2014.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) in terms of C1.4 'Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993', to confirm his status as mandatary (employer) for the contract under consideration.

The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.

E10. MEASUREMENT AND PAYMENT

It is a condition of this contract that contractors who submit tenders for this contract shall make provision in their various tendered rates and prices for all costs related to the health and safety measures required in terms of the Act and Regulations during the construction process.

(a) Safety appointments

No separate additional payment will be made to cover the costs related to persons appointed as required in terms of the Act and Regulations to fulfil the various health and safety functions. Such persons include the Construction Manager, any assistant construction managers, the construction health and safety officer, the construction superintendent, any assistant construction superintendents, health and safety representatives, health and safety committee members and competent persons, all as referred to in subclauses E7.1 to E7.6 above. The Contractor shall therefore make provision in the various tendered rates and prices for all costs related to such persons.

(b) Records and registers

The keeping of records and registers related to health and safety on site as described in clause E8 above shall be regarded as a normal duty of the Contractor for which payment shall be deemed to be included in the Contractor's various tendered rates and prices, and for which no separate additional payment will be made except to the extent provided in item B13.02 of the Schedule of Quantities.

(c) Medical certificates

No separate additional payment will be made to cover the costs related to obtaining the medical certificates of fitness required for every employee, including subcontractors and their employees, issued in compliance with Construction Regulation 7(1)(g) or 7(8) as applicable. The Contractor shall therefore make provision in the various tendered rates and prices for all costs related to such medical certificates.

PART F: REQUIREMENTS OF THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

F1. INTRODUCTION

The Expanded Public Works Programme (EPWP) is a multi-sectoral government initiative to create jobs. In the case of the infrastructure sector, existing government expenditure is realigned using labour intensive technologies to create job opportunities. This involves the use of plant and labour, where labour is preferred and plant is used appropriately.

As much as is economically feasible, all work shall be implemented by employing Labour Intensive Construction methods. Over and above the normal Building and Allied works to be implemented by employing skilled and unskilled labour the works specified in the "Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)" shall be undertaken using Labour Intensive Construction methods.

F1.1. Employment of Unskilled and Semi-Skilled Workers in Labour Intensive Works

Requirements for the sourcing and engagement of labour.

1.1.1 Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

1.1.2. The rate of pay set for the EPWP is R 23.19 per hour.

1.1.3. Tasks established by the contractor must be such that:

- a) The average worker completes 5 tasks per week in 40 hours or less; and
- b) the weakest worker completes 5 tasks per week in 55 hours or less.

1.1.4. The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.

1.1.5. The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

- a) Where the head of the household has less than a primary school education;
- b) That have less than one full time person earning an income;
- c) Where subsistence agriculture is the source of income; and
- d) Those who are not in receipt of any social security pension income.

1.1.6. The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

- a) 55 % women;
- b) 55% youth who are between the ages of 18 and 35; and
- c) 2% on persons with disabilities.

Note: The Contractor shall not be required to employ NYS youth workers in terms of this contract.

F1.2. Payment for the Labour-Intensive Component of the Works

Those parts of the works to be constructed using labour-intensive methods are marked in the bill of quantities with the letters LI either in a separate column or as a prefix or suffix against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a deviation from the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.

Where minimum labour intensity is specified in the design, the contractor is expected to use their initiative to identify additional activities that can be done labour-intensively in order to comply with the set minimum labour intensity targets.

Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

F1.3. Linkage of Payment for Labour-Intensive Component of Works to Submission of Project Data

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframes stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted. The client may institute a penalty relating to outstanding labour information.

The following information shall be maintained on site and submitted monthly in electronic/hard copy formats:

- Certified ID copies of all locally employed labour;
- Signed Contracts between the employer and the EPWP Participants;
- Attendance Registers for the EPWP Participants;
- Proof of Payment of EPWP Employees; and
- Monthly Reporting Template as per EPWP requirements.

F1.4. Training of EPWP workers

All EPWP workers will be placed on an extensive training programme that will include:

- (a) an induction into EPWP;
- (b) life skills training;
- (c) technical training focusing on a vocational skill to be used on the project (e.g., painting, carpentry, etc.);
- (d) entrepreneurship and business skills training.

All training will be arranged by the EPWP programme manager, with whom the Contractor will be required to work closely to schedule the training sessions so that the timing of the training is aligned with the Contractor's work schedule and his demand for workers with specific skills. The EPWP programme manager will make full details of the training programme available to the Contractor.

The Contractor shall maintain comprehensive records of the training received by each EPWP worker throughout the course of the contract, and shall submit to the Employer at each monthly site meeting a summary of the accumulated training received by each EPWP worker.

The training venue facility to be provided by the Contractor shall be constructed, furnished and fully serviced for the duration of the contract in accordance with section 1400 of the COLTO standard specifications. The facility shall accommodate a class of up to 10 learners and shall comprise the following:

(a)	Lecture room (interior area)	=	24 m ²
(b)	Ablutions (male)	=	6 m ²
(c)	Ablutions (female)	=	6 m ²
(d)	Chairs for learners (individual chairs, with backs)	=	10 off
(e)	Desk area for 10 learners (500 mm width)	=	5 m ²
(f)	Chairs for trainers and management (individual chairs, with backs)	=	3 off
(g)	Table area for trainers and management	=	3 m ²
(h)	220/250 volt power points	=	4 off
(i)	Double 80 watt fluorescent light fittings complete with ballast and tubes	=	4 off
(j)	Single incandescent light fittings complete with 100 watt globes	=	4 off
(k)	Wash hand basins complete with taps and drains	=	2 off
(l)	Fire extinguishers, 9,0 kg, all purpose dry powder type, complete, mounted on wall with brackets	=	2 off

(m)	Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	=	2 off
(n)	Voltage stabilizers	=	2 off
(o)	Floodlights complete with poles and 500 Watt minimum globes and controlled by photocells	=	2 off
(p)	White boards (3 m x 1,5 m)	=	1 off
(q)	Venetian blinds	=	6 m ²

F1.5. Contractor's obligations towards persons employed under the EPWP programme

All persons employed under the EPWP programme are to comply with the Ministerial Determination 4: Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment act of 1997 by the Minister of Labour in Government Notice NR347 of 4 May 2012. This document notes that the sector rates for labour do not apply to employees under the EPWP programme. Over and above implementing in accordance with the Ministerial Determination 4: Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment act of 1997 by the Minister of Labour in Government Notice NR347 of 4 May 2012, it shall be the responsibility of the Contractor to carry out the following functions with respect to the EPWP programme worker beneficiaries:

- (a) ensure that all beneficiaries receive induction on site safety prior to commencing with work on site;
- (b) ensure that all beneficiaries are covered by the Compensation for Occupational Injuries and Diseases Act, 1993 for as long as they are contracted to the Contractor, and to pay in full to the Compensation Commissioner such amounts as are due in terms of the Act;
- (c) implement health and safety procedures with respect to the beneficiaries, ensuring that the health and safety regulations are adhered to;
- (d) provide all beneficiaries with the necessary protective clothing and equipment as required by law for the specific trades in which the beneficiaries are involved, in addition to the overalls stipulated for EPWP workers;
- (e) assist in the assessment of beneficiaries with regards to their competencies in their respective trades;
- (f) provide overall supervision and day-to-day management of beneficiaries;
- (g) implement strict quality control to ensure that the work carried out by the beneficiaries is of the required standard, and, where necessary, to train and mentor the beneficiaries to assist them in achieving the standards required;
- (h) ensure that all beneficiaries are paid their wages on time through the pre-agreed payment method as stipulated in the beneficiary contract;
- (i) provide safe on-site storage facilities for tools and apparel issued to the beneficiaries.

F1.6. Apparel and tools for EPWP workers

The Contractor will provide each EPWP worker with two orange overalls with markings as specified in F5. EPWP BRANDING SPECIFICATION.

The Contractor shall also provide the EPWP workers with all such listed tools and apparel necessary for their on-site work, including appropriate safety apparel, as well as with safe storage facilities on site, the cost of which shall be refunded to the Contractor through the provisional sums included in the Schedule of Quantities for this purpose. The EPWP workers shall be responsible for the safe on-site storage of all tools and apparel issued to them, using the storage facilities provided on site by the Contractor.

Certain specified apparel and tools issued to the EPWP workers will become the property of the EPWP workers after the completion of their cycle of work on the project, in order to enable them to continue to practise their trade on future projects. Such apparel and tools shall be specified and authorised by the Employer's Agent.

F2. JOB CREATION REPORTING FOR EPWP

In order to assist the Employer in complying with the goals of creating EPWP job opportunities, the Contractor must provide the following information for reporting purposes:

F2.1 Type of project data required per project

Every EPWP project shall collect and keep specific project data for the purpose of EPWP progress reporting. The data that is required to be kept and maintained for each project includes:

F2.1.1 Participant data

A participant list must be maintained for every project. The data required in this participant list is indicated below. This data shall be recorded, checked and signed off by the Contractor on a weekly basis, and shall be submitted to the Employer at each monthly site meeting. The participant list shall contain the following data and shall be kept and maintained on site for audit purposes:

- (a) Participant identity – name, surname, initials, date of birth and identity number (or other unique identifier) plus certified copy of ID book, certified in the calendar year, address and contact number.
- (b) Participant profiles – nationality, gender, age, education level, language(s), government grant and disability status.
- (c) Monthly work data for participants – daily wage to be received, number of calendar days training attended and number of calendar days worked. Participants cannot work more than 23 days in any given month.

F2.1.2 Project work data

This generally seeks to confirm the number of people at work daily on the project. The following data must be recorded and maintained on site by the Contractor, in order that it can be provided by the Employer to the National Department of Public Works upon request when the latter is undertaking sample auditing. The documentation that should be kept includes:

- (a) Daily attendance register – register for each day showing all the workers that were registered as being at work on that day. Attendance registers shall be completed on site on a daily basis and signed off by the Contractor on a weekly basis.
- (b) Summary of monthly attendance.
- (c) Training register for each training course undertaken. This includes both formal and informal training such as induction, toolbox talks and on-the-job training. The training register must detail:

- Training course
- The accreditation of the course (accredited or non-accredited)
- Training provider
- ID number of participant trained
- Name and Surname of participant trained
- Gender of participant trained
- Signature of participant
- Duration of training

F2.1.3 Project payment data

This generally seeks to confirm what was paid, for how much work and to whom. It is required that the Contractor adopt one of the following methods as standard procedure for recording and maintaining this information:

- (a) Payment register – this is a list of the workers showing the wages paid to each worker, and signed off by each worker as proof of receipt and acceptance of payment. Information on this register must include the name of the worker, either an identity number or other unique identifier, the number of calendar days that the pay period covers, the wage rate and the total wages paid.

Alternatively,

(b) Bank records showing the transfers to each worker account, signed off by the Contractor as proof of payment – these bank records must specifically show the name of the worker, either an identity number or other unique identifier, the period which the pay covers and the total wages paid.

The project payment data, as recorded and maintained by the Contractor in terms of either (a) or (b) above, must be available and applicable for the entire period for which the Employer claims an incentive reward for person-days of work created in terms of the project.

F2.1.4 Employment output data

The Contractor shall submit to the Employer at each monthly site meeting the data necessary to enable the Employer to calculate the following employment output data:

(a) Number of work opportunities created (where one work opportunity = paid work created for one individual on an EPWP project, for any period of time).

(b) Number of person-days of work created (where one person-day = one day of work carried out by one individual). The total number of person-days of work created on a particular EPWP project shall be obtained by summing the total number of person-days worked by each individual employed during the course of that EPWP project.

(c) Number of Full Time Equivalents (FTEs) created (= total number of person-days of work created on the EPWP project divided by 230 working days). In terms of EPWP policy, one year of work created for one individual is assumed to comprise a total of 230 days of paid work carried out by that individual.

(d) Average duration of work opportunities created (= total number of person-days of work created on the EPWP project divided by the number of work opportunities created on that EPWP project).

(e) Average daily wage rates paid (= accumulated total of the wages paid to all individuals employed on an EPWP project divided by the total number of person-days of work created on that EPWP project).

The above information is to be compiled and submitted to the Employer by the 2nd of each month in addition to a completed latest revision of the EPWP reporting tool received from the Employer.

F3. PROVISION OF TRAINING

This specification covers the requirements for the provision of training to be arranged by the contractor over the period of this contract.

F3.1. Generic Training

3.1.1. The contractor shall, from the commencement of the contract, implement a structured progressive training programme for local workers who meet the minimum criteria for the training courses.

3.1.2. The generic training will inter alia comprise, but not be limited to the following subjects:

Course Description	Estimated No. of Trainees	Estimated Duration (Days)
1. Road safety for construction workers		
2. Flagmen		
3. Concrete handling, placing and finishing		
4. Guardrails		
5. Bituminous road surfacing		

3.1.3. Training shall be at or by an approved accredited organisation and shall be delivered by suitably qualified and experienced trainers.

3.1.4. The tenderer shall provide with his tender full details of the structured training programme he intends to implement; which details shall include the following:

- (a) The name of the training institution and programme;
- (b) The manner in which the training is to be delivered; and
- (c) The numbers and details of the trainers.

Such details shall be entered on or attached to Returnable Schedule P included herein.

3.1.5. The contractor shall be responsible for the provision of everything necessary for the delivery of the generic training programme, including the following:

- (a) A suitable venue with sufficient furniture, lighting and power;
- (b) All necessary stationery consumables and study material;
- (c) Transport of the students (as necessary);
- (d) Payment of wage to all trainees during the classroom training at a rate equal to the minimum wage as set in the Ministerial Determination for the Expanded Public Works Programme on an annual basis;
- (e) Relevant PPE required for the project works; and
- (f) Additional supervision of learners during the practical learning stages of the works. Wage for the learners during this stage of the training will be paid through the outputs.

3.1.6. Generic training courses shall commence within one month of possession of site and be completed before the end of the contract period.

3.1.7. The contractor's training programme shall be subject to the approval of the engineer, and the contractor shall if so instructed by the engineer alter or amend the programme and course content if a need is identified once the contract commences.

3.1.8. The contractor shall keep comprehensive records of the training given to each student and whenever required shall provide copies of such records to the engineer. At the successful completion of each course each student shall be issued with a certificate indicating the course contents as proof of attendance and completion.

In addition to the above, a monthly return shall be submitted by the contractor. An example of the form is illustrated in Section C4.7 of this document.

F4. PERSONAL & OTHER PROTECTIVE EQUIPMENT (SECTIONS 8/15/23 OR THE OHS ACT)

The Contractor is required to identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal Protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the Contractor is required to inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the said equipment be maintained by the Contractor, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The Contractor may not charge any fee for protective equipment prescribed by him/her except under the following conditions:

- Where the employee requests additional issue in excess of what is prescribed
- Where the employee has patently abused or neglected the equipment leading to early failure
- Where it is proven that the employee has lost the equipment

All employees shall, as a minimum, be required to wear the following PPE on any Rehabilitation projects:

- Protective overalls
- Protective footwear
- Protective headwear
- Eye/face protection

All PPE provided to local labour working on the Expanded Public Works Programme shall be branded in accordance with the EPWP CI Manual. Typical elements which shall be branded include:

- Protective overalls
- Reflective vests
- Protective headwear

The rate for local labour shall include for the supply of EPWP branded PPE in accordance with the Provincial EPWP specifications. The rate shall include the additional cost of the specified colours for the PPE and branding in accordance with CI manual.

F5. EPWP BRANDING SPECIFICATION



Printing on PPE: PPE (Overalls) shall be orange with/without reflective tape and shall be branded as follows:

- EPWP logo (printed or embroidered) on the left front pocket location i.e. over the heart position (full colour).
- DOT's Logo on the right front pocket (printed or embroidered) location (full colour).
- The height of the departmental logo (including text) shall not exceed the height of the EPWP logo (including text).
- The letters EPWP on the back of the PPE in BLACK.
- The program name eg Vuk'uphile is to be printed on the left sleeve of short sleeved apparel and may not have to be placed on long sleeved apparel.
- Where required orange safety vests are to be branded with similar specification above. In this instance the Overalls may not necessarily be branded provided that the works never allow for labour to work without high visibility vests.
- All artwork,PPE samples and Construction Sign Board design shall be approved and signed off by the consultant prior to printing/embroidering.

F6. MEASUREMENT AND PAYMENT

The following payment items shall be used to effect the payments for EPWP.

Item	Unit

F6.01	Payments associated with the EPWP programme:

(a)	COIDA payments to the Compensation Commissioner for EPWP workers	Prov Sum
(b)	Provision for specified EPWP branding on PPE for EPWP workers	Prov Sum
(c)	Additional supervision during practical training	L/Sum

The provisional sums provided under subitems F6.01(a) and (b) shall be expended in accordance with Clause 6.6 of the General Conditions of Contract 2015.

The provisional sum under subitem F6.01(a) shall be used to cover the cost of the COIDA payments made by the Contractor to the Compensation Commissioner for EPWP workers, all as authorised by the Employer's Agent.

No payment shall be made for time spent during any other on-site liaison, telephonic liaison, e-mail or written correspondence liaison between these parties, or for liaison conducted with the training service provider by any other member of the Contractor's site staff or head office personnel, the cost of all of which shall be deemed to be included in the Contractor's time-related obligations under subitem B13.01(c).

The provisional sum under subitem F6.01(b) shall be used to cover all costs associated with the provision of the necessary EPWP branded PPE including safety apparel for the EPWP workers as determined in the risk assessments and as required for full duration of the contract. See F5. EPWP BRANDING SPECIFICATION.

The lump sum tendered under subitem F6.01(c) shall include full compensation for the provision of additional supervisory staff to manage the output generated from the learners during practical training.

The Contractor shall note that no direct payment will be made to cover the Contractor's costs associated with implementing the on-site work programme for the EPWP employees, for planning, organising, directing, controlling and administering their day to day activities, including the setting of daily tasks, record keeping and any on-site liaison, training and mentoring required, and for the associated job creation reporting, and such costs shall therefore be built into the other rates tendered for the various items of work scheduled throughout the Schedule of Quantities.

F6.02 Provision for training of EPWP workers:

(a)	Generic skills training	L/Sum
(b)	Handling costs and profit in respect of subitem F6.02(a) above	%
(c)	Training venue facility (only if required)	L/Sum
(d)	Transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site	L/Sum

The lump sum under subitem F6.02(a) are provided to cover the actual costs of the training (including wages, COIDA, UIF, tools and branded PPE) for attendance of accredited training courses as agreed with the engineer and shall be expended in accordance with the provisions of sub-clause 48(2) of the general conditions of contract. The wages paid during the classroom training must be the minimum EPWP wage rate.

The tendered percentage under subitem F6.02(b) is a percentage of the amount actually spent under subitem F6.02(a) which shall include full compensation for the contractor's handling cost, profit, mentoring, record keeping, reporting and all other costs in connection therewith.

The lump sum tendered for under subitem F6.02(c) shall include full compensation for the provision of the training venue, for all necessary lighting, power, furniture, stationery, consumables and study material and for

transportation of the students to and from the training venue. Payment of the lump sum will be made in two instalments as follows:

- (i) The first instalment, 75% of the lump sum, will be paid after the contractor has met all his obligations regarding the provision of the training venue as specified.
- (ii) The second and final instalment, 25% of the lump sum, will be paid after the provision of all the accredited training as specified in the document.

The lump sum tendered under subitem F6.02(d) shall include full compensation for the provision of transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site.

EXPANDED PUBLIC WORKS PROGRAMME EMPLOYEE CONTRACT

1. THE PARTIES

This agreement is made between

The Employer

Represented by and

The Employee

Employee Identity Number:

Gender: Male or Female Age:

1.1. *This contract must be read in conjunction with the Basic Conditions of Employment as well as the Ministerial Determination 4: Expanded Public Works Programme.*

1.2. *The Employer hereby appoints the Employee to work on the project:*

EPWP Project No:

Project Name:

1.3. *The Employee is appointed as a: and will be paid by the Employer: R_____ for every day task properly completed to the satisfaction of the Employer.*

1.4. *The Employee shall be paid by _____ for day tasks completed properly between _____ and _____.*

2. OBLIGATIONS OF EMPLOYEE

- 2.1. The Employee is required to carry out the work assigned by the Employer/his representative carefully, properly and within the required time for the tasks assigned, and will only be paid for completed day tasks and not on a daily wage;
- 2.2. The Employee is required to abide by the decisions of the Employer at all time; and
- 2.3. Notwithstanding the date of signature of this contract the employment relationship is deemed to have commenced on _____ and shall continue until the completion of this contract _____ OR OTHERWISE STATED.

3. POOR WORKMANSHIP

- 3.1. Should the quality of the work produced by the Employee be considered to be poor by the Employer/representative, then the Employer will not pay the Employee for the work done until the Employee has completed the work to his/her satisfaction.

4. OBLIGATIONS OF THE EMPLOYER

- 4.1. The Employer shall pay the Employee for all work assigned to the Employee which is completed satisfactorily and shall provide the Employee with the necessary tools, materials and training for the Employee to carry out the assigned work.

5. TERMINATION OF CONTRACT

- 5.1. The employer may terminate the employment of an Employee for good cause after following a fair procedure.
- 5.2. The Employer may terminate this agreement at its sole discretion in the following circumstances:
 - a) If funding for the project is stopped for whatever reason;
 - b) If the Employee continues to provide poor workmanship after being issued on warning in writing to rectify poor workmanship;
 - c) If the Employee refuses to carry out the work assigned by the Employer/representative;
 - d) If the Employee is drunk or disorderly or troublesome at work on the project;
 - e) If the Employee is found to have stolen tools or materials from the project;
 - f) If the Employee is absent from work without permission or good reason for more than three successive days.
 - g) If an Employee does not attend required training events, without good reason.
- 5.3. A worker will not receive severance pay upon termination.

6. SETTLING OF DISPUTES

- 6.1. Any dispute or claim arising out of this agreement, which cannot be settled between the parties, shall be referred, without legal representation, to the Project Programme Manager for resolution. The Project Programme Manager shall investigate the dispute and shall decide fairly on the matter. The parties shall comply with the decision of the Programme Manager with respect to settlement of the dispute. Should either party fail to comply with the decision of the Programme Manager, the Programme Manager may take whatever measures he/she considers necessary to enforce compliance, including inter alia withholding further funding to the project until such time as compliance has occurred.

7. MEAL BREAKS

- 7.1. An Employee may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 7.2. An employer and Employee may agree on longer meal breaks.
- 7.3. An Employee may not work during a meal break. However, an employer may require an Employee to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another Employee. An employer must take reasonable steps to ensure that an Employee is relieved of his or her duties during the meal break.
- 7.4. An Employee is not entitled to payment for the period of a meal break. However, an Employee who is paid on the basis of time worked must be paid if the Employee is required to work or to be available for work during the meal break.

8. DAILY REST PERIOD

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

9. WEEKLY REST PERIOD

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

10. KEEPING RECORDS

- 10.1. The Employee must provide to the Employer the following:
 - 10.1.1. Certified copy of ID
 - 10.1.2. Signed contract
 - 10.1.3. Standard ID picture
 - 10.1.4. Banking details corresponding to the details on the ID document

11. PAYMENT

- 11.1. Wages paid to the Employee will be deposited into the Employee's bank account. Cash payments will not be made.
- 11.2. The Employee will only be paid for tasks that have been completed.
- 11.3. The Employee will be paid within five weeks of the work being completed and the work having been approved by the manager.
- 11.4. An Employee will be entitled to payment only if he/she completes the assigned task to the satisfaction of the employer's site representative.
- 11.5. Employees given due notice of inclement weather will not be paid.
- 11.6. Employees will be paid if inclement weather forces work to stop while on site.
- 11.7. The Employee will be provided with the following information in writing –
 - 11.7.1. The period for which payment is made;
 - 11.7.2. The numbers of tasks completed or hours worked;
 - 11.7.3. The Employee's earnings;
 - 11.7.4. Any money deducted from the payment;
 - 11.7.5. The actual amount paid to the Employee.
- 11.8. The quantity of task rate will vary from depending on the type of activity to be performed. The Employee will be informed at the beginning of each task or group of tasks how much to be completed as a daily task work (individual or group of tasks).

- 11.9. If an Employee's employment is terminated, the employer must pay all monies owing to that Employee within one month of the termination of employment.

12. TRAINING

- 12.1. The Employee will be provided with training relevant to the work that will be undertaken by the Employee. The Employee commits to:
- 12.1.1. Provide the training provider with true and accurate information
 - 12.1.2. Attend all training sessions provided
 - 12.1.3. Behave in a manner conducive to training and in consideration of other learners
 - 12.1.4. Maintain learning materials and equipment issued
 - 12.1.5. Follow instructions issued by the training service provider
 - 12.1.6. Follow disciplinary procedures of the Employer and the training provider
- 12.2. The Employee will be paid R 83.59 per day of classroom training.
- 12.3. The Employee will be paid R 100.00 per day of practical training.

13. DEDUCTIONS

- 13.1. An employer may not deduct money from an Employee's payment unless the deduction is required in terms of a law.
- 13.2. An employer must deduct and pay to the SA Revenue Services any income tax that the Employee is required to pay.
- 13.3. An employer who deducts money from an Employee's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
- 13.4. An employer may not require or allow an Employee to
- 13.4.1. Repay any payment except an overpayment previously made by the employer by mistake;
 - 13.4.2. State that the Employee received a greater amount of money than the employer actually paid to the Employee; or
 - 13.4.3. Pay the employer any other person for having been employed.

14. HEALTH AND SAFETY

- 14.1. The employer will take all reasonable steps to ensure that the working environment is healthy and safe.
- 14.2. An Employee must:
- 14.2.1. Work in a way that does not endanger his/her health and safety or that of any other person;
 - 14.2.2. Obey any health and safety instruction;
 - 14.2.3. Obey all health and safety rules of the EPWP;
 - 14.2.4. Use any personal protective equipment or clothing issued by the employer;
 - 14.2.5. Report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

15. COMPENSATION FOR INJURIES AND DISEASES

- 15.1. It is the responsibility of the employer to arrange for all persons employed on EPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- 15.2. An Employee must report any work-related injury or occupational disease to the employer or designated representative.
- 15.3. The employer must report the accident or disease to the Compensation Commissioner.
- 15.4. The employer will pay an Employee who is unable to work because of any injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

16. CERTIFICATE OF SERVICE

- 16.1. On termination of employment, an Employee is entitled to a certificate stating:
- 16.1.1. The Employee's full name;
 - 16.1.2. The name and address of the employer;
 - 16.1.3. The EPWP on which the Employee worked;

- 16.1.4. The work performed by the Employee;
- 16.1.5. Any training received by the Employee as part of the EPWP;
- 16.1.6. Any other information agreed on by the employer and Employee.

In addition to the above conditions all the terms and conditions of employment on EPWP and the Basic Conditions of Employment apply to your employment as well. If you are found in breach of any of these terms your contract may be terminated.

17. SIGNATURES

Signed on this day of

Employer: Date:

Employee: Date:

Witness: Date:

Annexure A: Form - Participant Details

Participant details must be filled out and attached to contract with certified copy of ID
This form must be used to complete the latest EPWP reporting template obtained from the Employer.

Field	Response																																							
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Surname on certified ID document																																								
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District Municipality– completed by official																																								
Local Municipality – completed by official																																								

The contractor must note the target local labour area and provide preference to participants in close proximity to the project		
Nationality	RSA	Non-RSA
If non-RSA, provide details		
Work Permit number		
Country of origin		
Number of people in Household		
Number of Dependents in Household		
Number of Children attending school		

PART G: SMALL CONTRACTOR DEVELOPMENT

G1001 SCOPE

This section covers construction aspects relating to the processes by which the construction industry develops emerging small contractors.

In terms of this contract, the Contractor shall effect such development by subcontracting portions of the Works to Targeted Enterprises (as defined in clause G1002(a) below) such that the combined accumulated monetary value of the work undertaken and achieved by such Targeted Enterprises equals or exceeds the monetary value of the target set by the Employer for such work.

G1002 DEFINITIONS AND APPLICABLE LEGISLATION

(a) Definitions

Unless inconsistent with the context, in these specifications the following terms, words or expressions shall have the meanings hereby assigned to them:

Contract Participation

Contract Participation in terms of this contract is a process by which the Employer implements Government's objectives by setting a target relating to small contractor development which the Contractor shall achieve as a minimum.

Contract Participation Goal (CPG)

Contract Participation Goal is the monetary value of the target set by the Employer in the Contract Participation process.

Contract Participation Performance (CPP)

Contract Participation Performance is the measure of the Contractor's progress in achieving the CPG.

Project Management Team (PMT)

A team established at the commencement of the contract, comprising a representative from each of the Employer, the Employer's Agent and the Contractor, that will be responsible for various functions related to the implementation of the Contract Participation process.

Targeted Enterprise

A Targeted Enterprise is any company engaged by the Contractor as a subcontractor and which is registered with the Construction Industry Development Board (CIDB) in a contractor grading designation equal to 1CE or 2CE or 3CE and which is also registered by the CIDB as Potentially Emerging (PE).

The CPG scope in terms of Part G of this contract has been reserved for execution using only the following prescribed numbers of Targeted Enterprises registered with the CIDB in each of the contractor grading designations indicated:

- Grade 1CE PE (2 x Targeted Enterprise subcontractors prescribed)
- Grade 2CE PE (2 x Targeted Enterprise subcontractors prescribed)
- Grade 3CE PE (1 x Targeted Enterprise subcontractors prescribed)

Targeted Labour

Targeted Labour means individuals, employed by the Contractor and subcontractors in the performance of the contract, who permanently reside in the target area or who are recognised as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area, and excludes any labour employed by suppliers and manufacturers.

Youth means persons between the ages of 18 and 35.

(b) Applicable Legislation

The following Acts, as amended from time to time, are predominant amongst those which apply to the construction industry and are listed here for reference purposes only:

- The Constitution of South Africa;
- Public Finance Management Act No. 1 of 1999;
- Preferential Procurement Policy Framework Act No. 5 of 2000;
- Construction Industry Development Board Act No. 38 of 2000;
- Broad-Based Black Economic Empowerment Act No. 53 of 2003.

G1003 CONTRACT PARTICIPATION

(a) Objective

In order for the Employer to realise its social and development objectives, the Contractor is required to provide business and labour opportunities through the participation of Targeted Enterprises and Labour in the construction of the Works. The participation of Targeted Enterprises and Labour, measured in monetary terms, is specified by the Employer as a contract participation goal, for the Contractor to achieve.

(b) Contract Participation Targets

Contract participation is the process by which the Employer Implements Government's objectives. The Employer sets a target for construction by specified entities, the rand value of which is based on the services and work undertaken by the specified entities. The target rand value will be measured as that specified target percentage of the Contractor's final certified value of work completed (excluding CPA and VAT) measured at the date of issue of the Certificate of Completion. The Contractor is obliged to commit to or exceed the target stated in section C1.2.2 Contract Data, Part A: Data Provided by the Employer.

(c) Contract Participation Goal (CPG)

The CPG is the monetary value of the target set by the Employer and will be calculated as follows:

CPG = final contract value (excluding Contingencies, CPA and VAT) x (target % set by the Employer for Targeted Enterprises)

The final contract value is the total value of certified work measured at the date of issue of the Certificate of Completion.

The value of the Provisional Sums scheduled under item G10.02 of Part G of the schedule of quantities shall not necessarily make up the full value of the works required to meet the CPG target set by the Employer. It is the Contractor's responsibility to assess the work required to meet the CPG target and, if necessary, to engage Targeted Enterprises to execute work on the main contract as well to ensure that the CPG target is achieved.

(d) Contract Participation Performance (CPP)

The CPP is the monetary value of the Contractor's actual progress towards achievement of the CPG calculated as follows:

CPP = total value (excluding CPA and VAT) of contribution by Targeted Enterprises

The Contractor's Contract Participation Performance will be measured monthly in order to monitor the extent to which he is striving to reach the CPG. The basis of monitoring shall be the levels of the individual contributions for Targeted Enterprises. Monthly returns, in a format approved by the Employer, are required from the Contractor and shall be submitted with each interim payment certificate. Failure to adhere to this requirement shall result in the delay of any payment due until the Employer's Agent confirms that the information has been received.

To assist in the measurement of CPP, the Contractor shall include in his contract programme details of how he will achieve the CPG. This shall include CPG achievement details for both the specific work indicated for CPG in terms of this contract for completion by Targeted Enterprises as well as details for any other work that the Contractor may use towards achieving the CPG. The detail shall be provided not later than one month

after the Employer's Agent has accepted the original construction programme and shall be updated with every subsequent revision of the programme.

In the event that the Contractor fails to substantiate that any failure to achieve the Contract Participation Goal (CPG) is due to quantitative under runs, the elimination of items contracted to Targeted Enterprises, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable for a penalty as prescribed in clause SCC 4.1.1 of section C1.2.1.2 Special Conditions of Contract. The penalty shall be calculated as follows:

$$\begin{aligned}\text{Penalty} &= 5\% \text{ of the monetary value by which the achieved monetary value (CPP) falls short of the target} \\ &\text{monetary value (CPG)} \\ &= 5\% \text{ of } (\text{CPG} - \text{CPP})\end{aligned}$$

The penalty shall be applied on a pro rata basis according to a monthly evaluation of achievements against the programmed utilisation.

(e) Accredited Registration

CPP for Targeted Enterprises shall only be accepted if the respective Targeted Enterprises for which services or work is being claimed as having been performed are registered with the CIDB in one of the defined categories. In addition, documentary evidence that such Targeted Enterprises are registered with the South African Revenue Services (SARS) shall be lodged with the Employer's Agent before the work or service may be considered as having been performed by a Targeted Enterprise. The responsibility for producing evidence of such registration documentation shall rest with the Contractor.

(f) Record keeping and Portfolio of Evidence

The Contractor shall assume responsibility for the compilation and maintenance of comprehensive records detailing each Targeted Enterprise's progress during construction, starting from the award of a subcontract to a Targeted Enterprise until the successful completion of the subcontract work or termination of the subcontract.

The Contractor shall keep comprehensive records of the training given to each trainee and, at the successful completion of each training course, each trainee shall be issued with a certificate indicating the course content as proof of attendance and completion. The Contractor shall keep a register of certificates issued. Whenever required, the Contractor shall provide copies of such records to the Employer's Agent.

The Contractor is also required to develop and/or maintain a portfolio of evidence for each Targeted Enterprise as described in clause G1009.8 below.

The Contractor shall prepare and submit monthly to the Employer's Agent in a form approved by the Employer's Agent, the following:

- i). a brief report which describes the commercially useful functions performed by the Targeted Enterprises and Labour in the performance of the contract, both during the interim period and on a cumulative basis;
- ii). a schedule reflecting the estimated total value of the contracts, the cumulative value of the contracts, and the value of goods provided, and work and services performed over the period for which payment is claimed with respect to each and every Targeted Enterprise; and
- iii). a schedule which lists the names, identity numbers, gender, trade/occupation, period of employment, employment number and the like, as directed by the Employer's Agent, together with the respective wage rates payable in respect of Targeted Labour, including the monetary value of wages paid both on a cumulative basis and over the period for which payment is claimed.

Should random inspections conducted by the Employer's Agent on Targeted Enterprise and Labour activities indicate that such Targeted Enterprises and Labour are not performing in accordance with the requirements of the contract, the Contractor shall provide, in addition to the monthly reporting requirements, separate weekly resource returns and any other relevant information with respect to such Targeted Enterprises and Labour in a form approved by the Employer's Agent.

G1004 TENDER PROCESS FOR TARGETED ENTERPRISE SUBCONTRACTOR PROCUREMENT

The Contractor shall refer to the schedule of quantities contained in these Particular Specifications and to any other construction activities required to execute the Works in terms of this contract to determine how he intends to unbundle or package specific subcontracts for Targeted Enterprises and shall present his proposal to the PMT for approval.

The Contractor shall be responsible for compiling the tender documents that will enable him to engage the Targeted Enterprises.

In compiling the subcontract tender documents, the Contractor shall also include in each tender document any Tender Rules that may be relevant, and shall also include the proposed subcontract agreement. The Contractor shall compile each subcontract tender document in such a manner that it shall facilitate the achievement of all objectives and principles pertaining to the development of the Targeted Enterprises.

Draft tender documents shall be approved by the PMT before the Contractor invites tenders from Targeted Enterprises, who will be invited in consultation with the PMT and the local PLC.

The PMT shall conduct a compulsory briefing session to explain the Works required and the tender process to the Targeted Enterprises.

Tenders for the subcontracted works must close at a stipulated time and date. Tenders shall be placed in a suitable formal Tender Box of design approved by the PMT, located at the Contractor's site office. The tender opening shall be conducted by the PMT.

The Contractor shall evaluate the tenders and shall submit the tender adjudication report for each subcontract to the PMT for review prior to award of each subcontract.

It shall be a condition of tender that the subcontractors appointed as Targeted Enterprises are registered with the Construction Industry Development Board (CIDB) in a contractor grading designation equal to 1CE or 2CE or 3CE or 4CE or 5CE or 6CE and are also registered by the CIDB as Potentially Emerging (PE).

It shall also be a condition of tender that Targeted Enterprises shall include in their tender submission the following documentation:

1. Valid letter of good standing from the Department of Labour.
2. A tax compliance status report.
3. A BEE verification certificate
4. Bank account details certified by the bank.
5. Certificate of registration of the tenderer in the required CIDB contractor grading designation, confirming the tenderer's registration Status as "Active" at the closing date of tender.

The tender documents shall also contain the proposed subcontract agreement, which shall also include for:

- (a) An entitlement of the subcontractor to receive such training as is contemplated in this contract.
- (b) An obligation on the Targeted Enterprise to participate and co-operate in such training as is provided for in this contract.
- (c) The allowable sources from which workers may be drawn in terms of the contract.
- (d) The terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract.
- (e) The training to be provided to the temporary workforce.
- (f) The terms and conditions relating to payment of the Targeted Enterprise subcontractor.

G1005 PROJECT MANAGEMENT TEAM (PMT)

(a) Appointment

A Project Management Team (PMT) is to be set up comprising a representative from each of the Employer, the Employer's Agent and the Contractor.

(b) Duties and functions of the PMT

The duties and functions of the PMT are as follows:

- (i) determine the scope and extent of the works to be included in any particular subcontract;
 - (ii) determine the target tender price according to the scope of work, and adjust the target rates where relevant;
 - (iii) monitor the management of the tender process for the subcontracts to be executed by the Targeted Enterprises;
- (iv) adjudicate and approve tenders for Targeted Enterprise subcontracts;
- (v) monitor the management of the subcontracts involving Targeted Enterprises;
- (vi) monitor the training, mentoring and development of Targeted Enterprises.

G1006 general responsibilities of the contractor towards TARGETED ENTERPRISE SUBCONTRACTORS

(a) Obligations

The Contractor shall ensure that he complies with the following obligations:

- (i) institute a quality assurance system;
- (ii) provide adequate training, coaching, guidance, mentoring and assistance to Targeted Enterprises;
- (iii) provide financial support and other assistance to ensure that the Targeted Enterprises are able to meet their obligations and commitments with respect to their subcontracts, including acquisition of labour, equipment and materials; and
- (iv) ensure that the contract participation goals and objectives are achieved.

G1007 management of targeted enterprise subcontracts

The Contractor shall conclude the subcontract agreements, and provide the necessary management support to the Targeted Enterprise subcontractors. Failure by the subcontractor to comply with the terms and conditions of the subcontract agreement shall result in penalties being applied or the subcontract terminated.

G1007.1 Compilation of Subcontract conclusion agreement

(a) The Contractor in liaison with the PMT shall be responsible for the conclusion of each subcontract agreement. The agreement shall be in accordance with the provisions of subclause 4.4 of the General Conditions of Contract for Construction Works 3rd Edition 2015 and shall be consistent with the terms and conditions in this contract. The agreement shall be subject to approval by the Project Management Team.

(b) The terms and conditions of the subcontract agreement shall also specify the following:

- (i) an entitlement of the subcontractor to receive such training as is contemplated in this contract;
- (ii) an obligation on the Targeted Enterprise to participate and co-operate in such training as is provided for in this contract;
- (iii) the allowable sources from which workers may be drawn in terms of the contract;
- (iv) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract;
- (v) the training to be provided to the temporary workforce; and
- (vi) the terms and conditions relating to payment of the Targeted Enterprise subcontractor.

G1007.2 Quality of work and performance of the subcontractor

(a) The Contractor shall closely monitor and supervise all Targeted Enterprises and shall train, mentor, guide and assist each Targeted Enterprise in all aspects of management, execution and completion of his subcontract. This shall typically include assistance with planning of the works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures. The extent and level of such training, mentoring, guidance and assistance to be provided by the Contractor shall be commensurate with the basic level of subcontract applicable and shall be directed at enabling the Targeted Enterprise to achieve the successful execution and completion of their subcontract.

(b) The Contractor shall closely monitor and supervise all Targeted Enterprises and shall give reasonable warning to the Targeted Enterprise when any contravention of the terms and conditions of the subcontract has occurred or appears likely to occur. The Contractor shall, whenever feasible, give the Targeted Enterprise reasonable opportunity to make good any such contravention, or to avoid such contravention, and shall render all reasonable assistance to the Targeted Enterprise in this regard.

G1007.3 Dispute avoidance and resolution procedures

(a) When taking any disciplinary action or imposing a penalty as provided for in the subcontract, the Contractor shall explain fully to the Targeted Enterprise that such actions are provided for in the subcontract. If such action is contemplated this shall be discussed with the PMT before any action is taken.

(b) If the subcontractor, in the opinion of the Employer's Agent, fails to comply with any of the criteria listed below, the Employer's Agent shall issue a written warning to the Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Employer. The criteria are as follows:

- (i) acceptable standard of work as set out in the specifications;
- (ii) progress in accordance with the time constraints in the subcontractor's tender document;
- (iii) punctual and full payment of the workforce and suppliers;
- (iv) site safety; and
- (v) accommodation of traffic.

(c) The subcontractor shall have 21 days from the date of receipt of the letter of warning by the Contractor to address and rectify the issues raised by the Employer's Agent, with the exception of the above subclauses (b)(iv) and (v) for which the reaction time shall be in accordance with the relevant specifications for those aspects of the Works but shall not be longer than 24 hours. Failure by the subcontractor to comply with deadline set, will be sufficient grounds for the Contractor to apply a penalty, or terminate the subcontract provided that the PMT is satisfied that the Contractor has made every effort to correct the performance of the subcontractor.

(d) The Targeted Enterprise shall have the right to dispute any ruling given or deemed to have been given by the Contractor, Employer's Agent or Employer. Provided that, unless the Targeted Enterprise shall, within 21 days after his receipt of a ruling or after a ruling shall have been deemed to have been given, give written notice (hereinafter referred to as a Dispute Notice) to the Contractor, referring to this clause, disputing the validity or correctness of the whole or a specified part of the ruling, he shall have no further right to dispute that ruling or the part thereof not disputed in the said notice.

G1008 specific work to be carried out by targeted enterprise subcontractors

For this particular contract, the following listed work has been identified in terms of this Particular Specification, Part G, as suitable for execution by Targeted Enterprises in order to assist the Contractor in achieving his CPG:

1. Construction and clearing of drains.
2. Installation of prefabricated culverts including inlet and outlet structures.
3. Concrete channelling and concrete linings for open drains.
4. Pitching, stonework and protection against erosion.
5. Construction of gabions.
6. Erection of road signs.
7. Road Marking
8. Landscaping.
9. Other work identified by the Employer to be executed in the community area.

The work to be carried out by Targeted Enterprises is not limited to the work listed above, and the Contractor may need to engage Targeted Enterprises on other aspects of the main contract work in order to achieve his CPG.

G1009 Training, coaching, guidance and mentoring

G1009.1 Obligations

This section provides details of the Contractor's obligations of implementing the National Skills Development Strategy. This strategy sets priorities for the skills development of workers. The Sector Education and Training Authorities (SETA) and provincial offices of the Department of Labour will play key roles in transforming the vision of the strategy into reality.

Supervision is included as part of the contractor's general obligations for the administration and management of the Targeted Enterprises. However training, coaching, guidance and mentoring are not included as part of the Contractor's general obligations unless specific provision to that effect has been made in the project specifications.

The Contractor shall, from the commencement of the contract, provide a structured development programme designed to improve the entrepreneurial and basic business management skills of identified Targeted Enterprises and hired labour that show initiative, as well as to improve their specific task skills (engineering skills) commensurate with the applicable levels of subcontract that will enable the Targeted Enterprises to achieve the successful execution and completion of their subcontracts. The ultimate objective of training, coaching, guidance and mentoring is to develop the Targeted Enterprise subcontractors as far as their potential allows.

G1009.2 Definitions

(a) Training:

Training refers to the process of teaching a learner – usually in a classroom or simulated work environment situation. Training usually takes place with one teacher/trainer and several learners. Principles and theory are taught. Demonstrations are given. Assignments are then set to ensure that the learner is able to apply what has been taught. Training is done by a specialist in the subject, who is also qualified to train.

Example: Use of a dumpy level

Training would involve the theory of how a dumpy level works and how to calculate levels. A demonstration of how to set up and read a level could be given.

(b) Coaching:

Coaching refers to hands-on training and is mostly on a one-on-one basis of tangible and measurable skills. It is typically on-site training, or learning-on-the-job. Coaching is training by the process of “watch-do-correct-practice”. The coach does the task while the learner watches and asks questions. Then the learner does the same task while the coach watches. The learner is corrected until the coach feels that he has the gained competence in the function. The learner is then left to practise the task or skill, which the coach oversees. Coaching is imparting a skill – usually manual or physical. A coach is usually a person doing the same type of work on a higher or more competent level, or a person who has a mastery of the skill/task. While training gives the theory or shows/explains the principles, coaching helps the learner become competent and master a skill. A coach is often in the direct reporting line, i.e. someone in authority. Coaching could be part of the management function and would make the job run more smoothly.

Example: Use of a dumpy level

Coaching would involve taking the learner onto site, setting up a dumpy level, reading levels. Then the coach would get the learner to do the job, while the coach checked the setting up and reading. Once the learner understands and can do the tasks, the coach checks periodically to ensure the learner is still doing the job properly.

The desired outcome of coaching is for the learner to “fit-the-mould”, and to do things the same way and to the same standard as the coach.

(c) Guidance:

Guidance is anticipating where one might go wrong, or where one is doing a task in a complicated, inefficient or ineffective way, and giving advice as to how to achieve a better result. Guidance is mostly given by a person in the direct reporting line, but can be given by anyone. Guidance is not imparting skills, but suggesting ways to improve performance.

Example: Use of a dumpy level

A person who knows how to use a dumpy level would be given guidance as to where he would next set up the level to limit the number of set-ups. Guidance could be an extension of coaching.

(d) Mentoring:

Mentoring is developing a person on a long-term career path. It is mostly about imparting skills that are often intangible and non-measurable. A mentor is seldom anyone in the direct reporting line – although he could be a person several levels higher in that reporting line. Mentoring is more about developing a relationship and

taking a personal interest in an individual. A mentor looks out for that individual and gives him advice that cannot be found in a book or in the normal course of business. The sort of issues a mentor discusses with the protégé include company politics, how to pick up work before others get wind of it, how to position one's company to get a better competitive advantage, how to tender such that the tender is lowest but the profit is as good as or better than the next person, how to determine and assess risk. Mentoring helps the protégé think strategically, sharpen entrepreneurial skills and grow – both personally and in terms of the company. A mentor helps the protégé to develop insight and shrewdness. It is more about business skills to survive long-term than the technical, tactical or day-to-day activities of doing business.

The desired outcome of mentoring is for the protégé to develop his own style, i.e., to shape his own “mould”.

(e) Supervision:

Supervision is instruction regarding the work to be performed, and ensuring it is carried out to specification and to the satisfaction of the supervisor. It is not instruction on how the work is to be performed, but rather on what work has to be performed, and usually has specific time frames.

G1009.3 Assessment of Targeted Enterprise potential

It is the responsibility of the Contractor to determine the level of development required by each Targeted Enterprise. This will require that the Contractor determine the level at which the Targeted Enterprise can operate competently and determine the skills already acquired by the Targeted Enterprise subcontractor in terms of training and on-the-job experience. In some circumstances Adult Basic Education Training (ABET) will need to be started before any formal training can commence. The assessment of each appointed Targeted Enterprise is to be produced by the Contractor for discussion at the first Project Management Team meeting following the appointment of the Targeted Enterprise.

G1009.4 Development Plan

Within a month of the first PMT meeting on the Targeted Enterprise assessments, the Contractor is to present a development plan, specific to each Targeted Enterprise. The development plan is to be reviewed by the PMT for appropriateness before being implemented.

The development plan is to include the following:

- specify the development needs of each Targeted Enterprise contracting entity – the systems the entity lacks;
- specify the development needs of the individuals comprising the entity – the skills the individuals within the entity lack;
- the level to which that activity will be developed within the period of the contract;
- whether training, coaching, guidance and/or mentoring is to be given in each activity;
- the person/s responsible for each activity.

G1009.5 Identification and general training of potential Targeted Enterprises

(a) The progression of training, coaching and mentorship may need to start with the identification and general training of potential Targeted Enterprises and hired labour that show initiative, and should end with their acquisition of sufficient management skills that will equip them to compete confidently for subcontract work beyond the duration of this contract. In addition, generic skills shall be taught where the need for these has been identified as being necessary amongst Targeted Enterprise workforces and hired labour.

(b) Before commencing with any structured training the Contractor shall submit his intended programme to the Project Management Team for approval of its subject content and proposed trainers, and the Contractor shall, if so instructed by the PMT, alter or amend the programme and/or course content.

The Contractor shall be responsible for the provision of everything necessary for the delivery of the various training workshops and modules including:

- (i) Provision of a suitable fully serviced training venue facility as specified in this Part G;
- (ii) Procurement of suitable accredited trainers;
- (iii) Provision, in conjunction with the accredited trainers, of all the necessary training materials, including stationery and study materials; and

(iv) transportation of the learners to and from the training venue facility (it is therefore in the Contractor's interest that the training venue facility be provided on the site in order to reduce these transportation costs).

Payment to the Contractor for carrying out the training function shall be effected through the pay items provided in this Part G.

G1009.7 Activities

The tasks for each of the activities making up the development plan are described below in further detail.

G1009.7.1 Technical

G1009.7.1(a) Technical Administrative Functions

General Tasks

(i) Understanding and interpreting drawings:

On Roadwork Construction Contracts, the reading of drawings is required at high levels of Targeted Enterprise development. The relevant drawings that would need to be understood include all relevant roadwork and concrete brick wall details for construction. Understanding and interpreting drawings includes the following:

- Understanding the cross referencing to drawings from the contract documents and the bill of quantities;
- Understanding the layout of the drawings;
- Understanding the plan view and elevations and cross sections;
- How to interpret, accurately lay out and construct the details.

(ii) Setting out construction works:

This skill requires an understanding of the function and use of instruments such as the dumpy level, the theodolite, and procedures such as stringing a line.

(iii) Technical know-how of all relevant Roadwork construction activities, and typically includes:

- Traffic control/safety precautions;
- Environmental management;
- Clearing and grubbing;
- Excavations and backfilling;
- Pre-cast and in-situ cast concrete works (including reinforcing where applicable);
- Storm water channelling and catch pits / chutes;
- Mass earthworks and pavement layers;
- Asphalt paving;
- Concrete block paving;
- Concrete brick laying;
- Plastering and bag washing;
- Guardrails;
- Fencing;
- Finishing up and tidying of works.

The development plans shall maximise the exposure of each Targeted Enterprise to as many activities as is practicable.

(iv) Task organization:

This activity involves the correct supervision of labour and organisation of tasks to ensure that labour is utilised most effectively. This includes the following:

- Allocation of the appropriate number of people for the task;
- Availability on site of the correct type and amount of material and equipment at the point of use;
- Planning tasks ahead so that labour does not stand around waiting.

(v) Task prioritization:

Task prioritization must cover an understanding of critical paths, including identifying which tasks can be postponed and which are urgent. It includes planning and monitoring so that time targets are achieved. It must also cover gaining an understanding of the penalties applicable to late completion of tasks.

(vi) Work schedule:

This is the ability to produce daily work plans and will assist with task organization. Daily work plans need to be developed into weekly and monthly work plans and vice versa. These plans assist in material ordering, plant scheduling, labour allocation, timeous completion of the work, and keeping track of profits/losses.

(vii) Effectiveness:

Effectiveness is ensuring that a job gets done right, or properly.

Effectiveness is doing the right things.

(viii) Efficiency:

Efficiency is ensuring that the job is done with the least effort and cost possible.

Efficiency is doing things right.

(ix) Quality control:

Quality control requires knowledge of specifications and tolerances and ensuring that the work adheres to these, as well as understanding the requirements of the Employer.

(x) Measuring work done for payment certificates:

This is the ability to measure actual work done and to translate these measurements into a payment certificate. Knowledge must be gained of how to calculate escalation, how to claim for VOs and how to handle other claims.

(xi) Site meetings:

Knowledge needs to be gained of the following:

- The importance of site meetings;
- Identifying the relevant personnel to attend site meetings;
- Preparing for a site meeting;
- Understanding progress reports including why they are important and how to prepare them;
- Recording issues discussed at the meeting;
- Implementing and follow through of issues recorded;
- Understanding the process of the meeting and when to bring up various concerns is needed.

(xii) Handling site instructions and VOs:

This is the ability to distinguish between site instructions and variation orders and how to respond to such instructions.

Materials Tasks

(xiii) Materials planning:

This includes the following:

- Determining the quantity of materials required for each task and planning ordering;
- Determine appropriate lead times to ensure that everything required to do a job is on hand;
- Quantity take-offs for pricing a bill at higher levels of development.

(xiv) Receiving, storing and handling materials:

Receiving includes checking materials delivered against the delivery note and the order placed. Storage involves knowing what quantities and type of materials to store, planning accessibility, and safety of materials from theft, the weather, etc. Handling of materials needs to be carried out to ensure no wastage or damage.

(xv) Waste control:

This includes the importance of waste control to reduce costs and the management of reducing waste of materials in storage and in use.

(xvi) The handling/installation of precast units:

Knowledge of precast units, handling and installation must be gained.

Equipment Tasks

(xvii) Machine Analysis:

This is the analysis of the use of equipment. It includes calculating fuel and hourly costs. This will enhance an understanding of the effective use of equipment, how to reduce costs and provide a background for pricing of equipment for tenders.

(xviii) Maintenance Schedule:

This covers the importance of maintenance of equipment and how to schedule this so that there is minimal disruption in day-to-day work.

(xix) Appropriate and correct use of tools and equipment:

Provide coaching on the correct use of tools and equipment.

(xx) Care of tools and equipment:

Care of tools and equipment includes the proper handling, cleaning, storage, stacking, etc.

The coaches of the above listed activities are generally the Foreman, Site Clerk, Mechanic, Construction Manager, Plant Manager or Contracts Manager.

G1009.7.1(b) Technical Management Functions

General Tasks

(i) Site set-up:

This involves gaining an understanding of site set-up procedures and principles, including establishing a site office and facilities, providing access to the site, initial layout of the works, storage facilities, security, etc.

(ii) Construction program / work plan:

Knowledge of how to develop a construction program / work plan, monitor and assess the production, and correct the programme where necessary.

(iii) Understanding tests:

Understanding what tests are required, reading and interpreting results relating to specifications and quality, and how to make the corrections required.

(iv) Productivity:

Recording productivity and understanding the principles. Knowing where to make corrections and how to implement solutions.

Material Tasks

(v) Materials schedule:

This involves gaining knowledge of how to develop a materials schedule from a Bill of Quantities, the Drawings and any other relevant contractual document. It also includes linking the works program to an ordering schedule, and sourcing of suitable materials.

Equipment

(vi) Determine appropriate levels of equipment:

The determination of the appropriate type and number of tools, and equipment required.

(vii) Proper use of equipment:

This is gaining knowledge, understanding and competency in the proper use of equipment.

(viii) Productivity of equipment:

The productivity of equipment must be understood to know how this affects his ability to perform.

(ix) Allocation of equipment:

This involves the ability to competently allocate equipment to the various tasks.

(x) Waste control:

Waste control is an essential aspect of running a site well and making a profit. The principles of this, together with the practical ways to control waste need to be understood.

The coach/mentor of these activities is generally the Construction Manager, Contracts Manager, or Equipment Supplier.

G1009.7.2 Financial

G1009.7.2(a) Financial Administrative Functions

(i) Basic Finance:

This includes knowledge of the definition and difference between debtors and creditors as well as gaining competency in basic bookkeeping. Knowledge of keeping and managing accounts and other financial documents also needs to be developed. A basic financial course may be appropriate to develop in this area.

(ii) Bank account:

The opening of a bank account, making deposits, the difference between stop-orders and debit-orders, overdraft facilities and generally managing a bank account needs to be understood. This can also be done through a course, and/or with a supportive bank manager, and/or with the appointed coach/mentor.

(iii) Orders and systems:

This will require the setting up of systems and procedures that will take into consideration delivery lead-times, non-availability of items, alternate sources, preparation of storage areas ready for delivery, and the area/volume of storage space.

(iv) Invoices:

The development of systems within the Targeted Enterprise entity that will check materials received versus what was ordered, check quantities delivered, and check actual prices paid against quotes/tender prices.

(v) Stock Control:

The importance of controlling stock needs to be understood. Systems to implement stock control need to be imparted.

(vi) Payroll:

This involves the establishment of a payroll system within the Targeted Enterprise entity. This could include developing an internal system, outsourcing the payroll or learning a commercially acquired payroll system. The system needs to record days worked, pay rate, legal deductions and a leave register.

(vii) Legal requirements:

The financial requirements of legal obligations of companies must be imparted to the Targeted Enterprise subcontractor. This includes payment of company tax, VAT (Value Added Tax), Skills Development Levy (SDL), Work Unemployment Insurance Fund (UIF), Workman's' Compensation (WC), and any applicable municipal levies as well as the applicable minimum wages for the area (also refer below to G1009.7.5 Legislative).

(viii) Payment certificates:

This includes the compilation and submission of a payment certificate. As well as knowing how to determine work done to date, how to present it in terms of the Bill of Quantities, and how to claim for materials on site.

G1009.7.2(b) Financial Management Functions

(i) Claims and VO's:

The following types of claims may be applicable: Claims for additional work done, inclement weather, etc., claims for Variation Orders implemented. Understanding claims includes knowing when a claim can be submitted, the procedure and paperwork for the submission of a claim and which claims are worth pursuing.

(ii) Cash Flow:

The concept of cash flow, as well as the development of cash flow projections and the monitoring of the cash flow are vital aspects of running a business. Included under this topic is knowing how long it takes from placing an order for material until payment is due, and time lags between ordering materials and using the materials and receiving payment for work done. The concept of sufficient working capital also needs to be imparted.

(iii) Costing System:

Costing systems must be set up and understood. Aspects include capturing costs, monitoring profit, analysing costs and using this information to determine productivity levels.

(iv) Tendering:

A knowledge is required of how to build up rates, how to obtain prices, how to negotiate better discounts, how to be creative to achieve the desired result more cost effectively, how to calculate and accommodate P&Gs, and what Provisional Sums are and how they are handled.

(v) Budgeting:

The difference between tendering and budgeting must be understood as well as gaining skills on how to develop a budget. Knowledge of how to monitor actual expenses against budgeted expenses, how to analyse the differences, and the value budgeting is needed.

(vi) Risk assessment:

This involves learning how to assess the financial risks associated with the job in terms of his performance and profitability and the management of these risks. This becomes increasingly important as the Targeted Enterprise grows.

(vii) Insurance:

This includes an understanding of why insurance is required, how to obtain insurance, the benefits and costs, insurance providers and what can be claimed from different types of insurance. The different types of insurance to be included are Short term insurance, Public Liability and Contractors All Risk insurance.

(viii) Interest Rates:

Interest Rates can have a dramatic impact on the profit margins. Therefore an understanding must be gained of what interest rates are, how they impact on profit margins, how to cater for fluctuating interest rates in preparing a tender, and how to find and/or negotiate the best interest rates.

(ix) Bridging Finance:

This includes understanding what bridging finance is and the different forms of bridging finance. Guidance should be given on when bridging finance should be used, where it can be obtained, what securities are needed, and how to go about securing funds.

(x) Sureties:

This involves understanding what Sureties are, why and when they are needed, how they can be obtained, what they cost and how they can be redeemed.

(xi) Procurement of Plant and Equipment:

The difference between purchasing, leasing, hire purchase and hiring plant needs to be understood. Also included is gaining knowledge of all aspects of these options as well as the benefits and implications for the business for each option.

(xii) Procurement:

Procurement of materials includes sourcing suppliers, getting quotes, placing an order and negotiating discounts. The managing contractor can assist in introducing higher level Targeted Enterprises to the relevant materials suppliers.

(xiii) Subcontract:

At the lower levels, this will involve the Targeted Enterprise understanding the subcontract agreement between himself and the managing contractor and the obligations of this document. With a Targeted Enterprise operating at a higher level, this will include sourcing other subcontractors, as well as interpreting the tender/quote, adjudication and awarding of subcontracts.

(xiv) Productivity:

This includes taking production rates and translating them into financial terms to help build up rates for tendering and to monitor profit margins.

The coach and/or mentor for these functions are typically the Bookkeeper, Site Clerk, Foreman, Construction Manager, Contracts Manager, Accountant, Estimator and Buyer.

G1009.7.3 Human Resources

G1009.7.3.(a) Human Resource Administrative Functions

(i) Labour Supervision:

This involves the supervising of labour effectively. This includes knowing the level of competencies of labour, being able to motivate workers to ensure that productivity levels are achieved and maintained. It also includes the allocation of tasks to labour.

(ii) Team Sizes:

This is ensuring the size of the work team is appropriate for the matching activity and understanding that teams that are too large are unproductive and teams that are too small are not effective.

(iii) Productivity:

The principles of productivity and how it is best achieved for various tasks is to be understood and applied. It also involves being able to determine realistic productivity levels, such as square metres of grass cut with a machine per hour, length of guardrail installed per day, etc.

(iv) Time sheet:

A system of time sheets which accurately records the time each employee spends on the job needs to be in place.

(v) Leave Registers:

A system for recording leave needs to be in place, which includes the dates that leave was taken, what type of leave it was and whether the employee qualifies for paid or unpaid leave in terms of legislation.

(vi) Employee records:

This involves knowing and complying with legislation for conditions of employment. Employment contracts must be in place for all labour employed and a formal system of keeping employee records must be established. Employee records must be in line with legislation including recording of employee details and copies of identification documents, termination of service procedures, certificates of service etc.

(vii) Disciplinary procedure:

Knowledge of the legal aspects of Disciplinary procedures is essential. The ability to set up these procedures, and ensure that all staff understand and adhere to them is required. Warning systems must include records of verbal warnings, warning forms, disciplinary hearings, dispute resolutions and termination procedures.

(viii) Training:

This involves understanding the concept of the Skills Development Levy, and how to claim from CETA for training provided. Service Providers have CETA funded Skills Facilitators available to assist Targeted Enterprises in identifying training needs and compiling work place skills plans (WPSP) at no cost to the Targeted Enterprise. An understanding of the importance of providing training for staff with regards to AIDS awareness, Safety, Productivity, Development and Accountability is essential.

(ix) Community Liaison:

The management and importance of Community Liaison must be understood.

G1009.7.3(b) Human Resource Management Functions

(i) Labour recruitment:

Employment of labour with the appropriate skills is essential. Therefore sourcing of appropriate labour and knowledge of how to assess the range of skills and level of competency in potential employees needs to be gained.

(ii) Labour allocation:

Allocation of labour is a skill that needs continual refining. It requires knowing the specific strengths of staff employed, the numbers of labourers and level of skill required for specific tasks, as well as being able to build effective cohesive teams that understand their roles without continual supervision.

(iii) Labour schedules / planning:

This involves learning how to compile labour schedules from the works program and the consequent allocation of staff to the work planned.

(iv) Histogram / manpower plan:

A manpower plan includes establishing how many people are needed on the job at what times. This is an important skill even at the most elementary level. As the Targeted Enterprise develops, the management of moving people from site to site in such a way that there are neither too many nor too few labourers and/or supervision becomes an important skill to obtain.

(v) Management of supervision:

This activity involves understanding the principles of supervision, and how to effectively manage to ensure that these principles are applied and/or developed by the appointed supervisor.

(vi) Productivity:

Productivity applies to labour as well as tasks and plant. Skills must be developed on how to determine appropriate levels of labour productivity and how to ensure that staff achieves these levels.

(vii) Labour Law:

A basic understanding of labour legislation, specifically Labour Relations Act (LRA), and Basic Conditions of Employment Act (BCEA), Employment Contracts, and Termination of Service is essential as well as an understanding of the implications of these laws on business.

(viii) Accountability systems:

This requires that accountability systems are developed and implemented for supervisory staff.

Coaching, guidance and mentoring on the above listed functions are typically undertaken by the Foreman, Construction Manager, Site Clerk, HR Manager, Trainer and Contracts Manager.

G1009.7.4 Contractual

G1009.7.4(a) Contractual Administrative Functions

(i) Relationships and communication:

This involves the development and maintenance of good relationships and the establishment of good communication systems within the Targeted Enterprise business. This includes communication between the Targeted Enterprise and the other role players such as the Managing contractor, the Employer's Agent and the Employer. An understanding of the importance of good communication is also important. Good communication starts with the right attitude, and involves listening as well as talking. It is also listening to what is not being said. Allowances need to be made for differences in culture and economic backgrounds.

(ii) Setting up contractual administration requirement (systems):

Contractual administration systems need to be established and implemented. This includes the use and importance of site dairies and keeping rainfall/weather records, as well as developing progress reports.

(iii) Implementing EMP:

This activity involves understanding the design and implementation of an Environmental Management Plan.

G1009.7.4(b) Contractual Management Functions

(i) Contract Law:

Knowing and understanding the content and implications (including costs) of the Conditions of Contract and the Specifications that will be required. This will include understanding the content and implications of penalty clauses.

(ii) Risk Assessment:

This activity involves being able to assess the contractual risks associated with the contract both in terms of performance and in terms of the risks associated with the Employer.

(iii) Managing Contract Administration:

Managing Contract Administration ensures that all the required reports, such as accident reports and progress reports are completed and submitted.

(iv) Administration of subcontractors:

Identification and separation of the responsibilities of the managing contractor from the responsibilities of the subcontractors needs to be understood and applied. The management of subcontractors to ensure that contractual obligations are met is essential knowledge to be gained by higher level Targeted Enterprises.

(v) Subcontractor agreements:

Understanding the contents of the subcontract agreement between the Targeted Enterprise and the contractor is an important skill to be learnt.

(vi) Disputes:

This activity involves understanding the procedures used in handling disputes or disagreements with the Contractor and/or the Employer.

The Contracts Manager and Construction Manager would normally be involved in this function.

G1009.7.5 Legislative

G1009.7.5(a) Legislative Administrative Functions

(i) Legal Registrations:

The legal requirements for registration of companies must be imparted to the Targeted Enterprise subcontractor. This includes company tax, VAT (Value Added Tax), PAYE, Skills Development Levy (SDL), Unemployment Insurance Fund (UIF), Workman's Compensation (WC), and any applicable municipal levies. An understanding of what each registration is, what benefits he gets from being registered, and how to register must be developed.

G1009.7.5(b) Legislative Management Functions

(i) Labour Law:

Knowledge of the labour legislation and the implications for the business is required. This includes Skills Development Levy (SDL), Work Place Skills Plans (WPSP), Unemployment Insurance Fund (UIF), Workman's Compensation (WC), Labour Relations Act (LRA), Basic Conditions of Employment Act (BCEA), and the applicable minimum wages for the area.

(ii) OHS Act:

All aspects of the OHS Act (dealing with safety and health) and the implications must be understood. A safety officer who has the appropriate level of understanding and knowledge must be appointed within each Targeted Enterprise.

(iii) Environmental Management Plan:

An environmental management plan needs to be submitted regarding how the environment will be managed for the duration of the contract, and what restoration will take place at the end of the contract. An understanding of the importance and content of this plan must be gained.

(iv) Adjudication/Arbitration:

This activity involves knowing what legal recourse is available when disputes/disagreements are not resolved. This knowledge must include the processes to be followed and where to go to implement proceedings.

These functions will generally require the input of the company lawyer, company accountant, HR manager, Health and Safety Specialist, and Environmental Specialist.

G1009.7.6 General

G1009.7.6(a) Administrative Functions

(i) Filing systems:

This activity includes establishing company filing systems that are efficient and effective. It also includes knowing the importance of filing, what must be filed and how it should be filed.

(ii) Office set-out:

Knowledge of the layout of the site office buildings position and the organisation of the offices and systems within the buildings is to be imparted.

(iii) Record keeping:

This activity involves developing knowledge of what records need to be kept and how best to keep them.

(vi) Good housekeeping:

Good housekeeping is about developing a work approach of keeping the site tidy, cleaning putting away tools and working in an orderly way. Developing good housekeeping assists a company in working efficiently and improving profit margins.

(v) Communications with staff:

The importance of good communication with staff needs to be understood as well as the effects of good relations with the staff in terms of loyalty and productivity. An understanding must also be gained that good communication enhances supervision and management of the work.

(vi) Communications on site:

This activity involves establishing communication systems between the site and the office and understanding that effective communication on site leads to good relations and contributes to the smooth running of the site.

The Construction Manager, site clerk and HR Manager will train/coach or mentor the above listed functions.

G1009.8 Portfolio of Evidence

The Contractor is to develop and/or maintain a portfolio of evidence for each Targeted Enterprise. The Portfolio of Evidence is a collection of proof of the training, coaching, guidance and mentoring inputs provided to the Targeted Enterprise and is similar to a log book used by technical students completing experiential training. It is a living document which records the development progress of the Targeted Enterprise and will need to be updated continually throughout the duration of the contract. It remains the property of the Targeted Enterprise and they take it with them to their next contract.

The Portfolio of Evidence should include the following documentation:

- The development path designed for each Targeted Enterprise;
- The training courses completed by the Targeted Enterprise;
- The hours of guiding, coaching and mentoring received for each activity listed in the development plan;
- A list of outcomes achieved at each level for each activity;
- Six-monthly progress reports on the development provided (inputs) versus the actual progress made (output) by the Targeted Enterprise;
- A list of competencies.

G1009.9 Training Requirements

Only qualified trainers employed by training agencies that are accredited by the relevant Sector Education and Training Authorities (SETA), or other institutions recognised by the Department of Labour shall deliver any training. "Accredited training" refers to both the trainers as well as to the training material. Certificates affirming the successful participation in the various courses shall be presented to each attendant.

The Contractor shall facilitate in the delivery of training by instructing and motivating the hired labour and relevant Targeted Enterprises regarding attendance and participation. All training shall take place within normal working hours, or as agreed with the trainees.

G1009.10 Development training

The Contractor will arrange training to support the development of the Targeted Enterprise. This training must be provided by training providers accredited with the relevant SETA pertaining to the course material being presented. The training will take place at hours agreed with the trainees, possibly on a part time basis after hours.

The following training courses are recommended to support the development programme detailed in the contract document:

- NQF Level 2: Construction Contractor - Business owner and administration officer;
- Tender training NQF Level 3 – Business owner / Technical expert;
- Computer literacy training - Business owner and admin officer – Microsoft Windows, email, Microsoft Word and Microsoft Excel;
- General bookkeeping relevant to construction - Business owner and admin officer;
- Tendering NQF Level 4 and 5 – Business owner / Technical expert;
- Construction supervision (Roadworks) NQF Level 4 – Business owner / Technical expert.

G1009.11 Safety Training

The Targeted Enterprise safety representative is to be fully trained in all aspects of safety and his duties in this regard. The owner of the Targeted Enterprise is to be trained on their responsibilities regarding safety regulations.

G1009.12 Engineering skills training

The focus of training provided on the contract should be to support the development of the Targeted Enterprise. Engineering skills training will only be approved by the PMT when appropriate.

The Targeted Enterprise, their workforce and hired labour that show initiative will be entitled to receive structured training that will improve on-task skills necessary for the execution and successful completion of the works. The Contractor, in conjunction with the Employer's Agent, shall monitor the progress of the hired labour and each Targeted Enterprise closely and shall identify those who, in their collective opinion, will benefit from structured engineering skills training as may be provided for in the contract, and where required by the Employer's Agent shall make recommendations in this regard. The final list of candidates shall be decided between the Contractor and the Employer's Agent, and those selected shall receive formal engineering skills training in a programmed and progressive manner throughout the duration of the contract.

The training programme shall offer complete courses that could comprise some or all of the following modules:

- (i) Use and maintenance of hand tools;
- (ii) Operation of equipment;
- (iii) Manufacture and installation of minor precast concrete units;
- (iv) Erect, dismantle and maintain formwork;
- (v) Basic concrete skills;
- (vi) Excavation, backfill and compaction;
- (vii) Bricklaying;
- (viii) Erosion protection using stone pitching, gabions or renos.

G1009.13 Training venue facility

The training venue facility to be provided by the Contractor shall be constructed, furnished and fully serviced for the duration of the contract in accordance with section 1400 of the COLTO standard specifications. The facility shall accommodate a class of up to 25 learners and shall comprise the following:

- (a) Lecture room (interior area) = 48 m²
- (b) Ablutions (male) = 6 m²
- (c) Ablutions (female) = 6 m²
- (d) Chairs for learners (individual chairs, with backs) = 25 off
- (e) Desk area for 25 learners (500 mm width) = 12,5 m²
- (f) Chairs for trainers and management (individual chairs, with backs) = 5 off
- (g) Table area for trainers and management = 3 m²
- (h) 220/250 volt power points = 6 off
- (i) Double 80 watt fluorescent light fittings complete with ballast and tubes = 6 off
- (j) Single incandescent light fittings complete with 100 watt globes = 4 off
- (k) Wash hand basins complete with taps and drains = 4 off
- (l) Fire extinguishers, 9,0 kg, all purpose dry powder type, complete, mounted on wall with brackets = 2 off
- (m) Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection = 4 off
- (n) Voltage stabilizers = 2 off
- (o) Floodlights complete with poles and 500 Watt minimum globes and controlled by photocells = 2 off
- (p) White boards (3 m x 1,5 m) = 1 off
- (q) Venetian blinds = 12 m²

G1010 measurement and payment

Item Unit

G10.01 Procurement of Targeted Enterprise subcontractors as described in Part G:

(a) Contractor's charge for the management and execution of the Targeted Enterprise procurement process:

(i) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 1CE Targeted Enterprise subcontractors (2 x individual tenders prescribed, 150 copies of the tender document required for each individual tender) Prov. Sum

(ii) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 2CE Targeted Enterprise subcontractors (2 x individual tenders prescribed, 150 copies of the tender document required for each individual tender) Prov. Sum

(iii) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 3CE Targeted Enterprise subcontractors (1 x individual tenders prescribed, 150 copies of the tender document required for each individual tender) Prov. Sum

The unit of measurement shall be the number of individual subcontract agreements concluded with Targeted Enterprise subcontractors in accordance with the procurement process described in this Part G.

Each tendered rate shall be in full compensation for the management and execution of the Targeted Enterprise procurement process in the relevant CIDB contractor grading designation scheduled, including for the compilation, printing, binding and issue of the tender documents for each tender, for the advertising of each tender, for the provision of the venue and the conducting of each compulsory briefing session for tenderers, for the conducting of each tender opening process, for the adjudication of the tenders received for each tender, for the preparation of each tender adjudication report and the review thereof in conjunction with the PMT, for the award of each tender and for the conclusion of the subcontract agreement with each successful Targeted Enterprise tenderer.

Item Unit

G10.02 Construction Works for Targeted Enterprises:

(a) Payments associated with the construction Works carried out by Targeted Enterprise subcontractors appointed in terms of Part G PC sum (PC Sum)

(b) Handling costs and profit in respect of subitem G10.02(a) above percentage (%)

(c) Supply of materials and small plant to assist Targeted Enterprise subcontractors appointed in terms of Part G provisional sum (Prov. Sum)

(d) Handling costs and profit in respect of subitem G10.02(c) above percentage (%)

(e) Contractor's charge for the management of the Targeted Enterprise subcontractors appointed in terms of Part G lump sum (Sum)

Expenditure under subitems G10.02(a) and (c) shall be in accordance with clause 6.6 of the General Conditions of Contract, 3rd Edition 2015.

The provisional sum for subitem G10.02(a) is provided to cover the total cost of the construction Works carried out by the Targeted Enterprises as certified by the Employer's Agent, in separate payments for each Targeted Enterprise in accordance with Part G of the Particular Specifications.

The tendered percentage for subitem G10.02(b) is the percentage of the amount actually spent under subitem G10.02(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the construction Works carried out by the Targeted Enterprise subcontractors.

The provisional sum for subitem G10.02(c) is provided to cover the total cost of the materials and small plant supplied by the Contractor to assist the Targeted Enterprises as certified by the Employer's Agent, in separate payments for each Targeted Enterprise in accordance with Part G of the Particular Specifications.

The tendered percentage for subitem G10.02(d) is the percentage of the amount actually spent under subitem G10.02(c), and shall include full compensation for the handling costs of the Contractor and the profit

in connection with the supply of materials and small plant by the Contractor to assist the Targeted Enterprise subcontractors.

The tendered lump sum for subitem G10.02(e) shall include full compensation for the registration of all the subcontract agreements and the management of all the Targeted Enterprise subcontracts, including for the provision of the necessary management support, coaching, guidance and mentoring to the Targeted Enterprise subcontractors.

Item Unit

G10.03 Training of learners employed by Targeted Enterprise subcontractors:

- (a) Generic skills:
 - (i) Training costs prime cost (PC) sum
 - (ii) Handling costs and profit in respect of subsubitem G10.03(a)(i) above percentage (%)
- (b) Entrepreneurial skills:
 - (i) Training costs prime cost (PC) sum
 - (ii) Handling costs and profit in respect of subsubitem G10.03(b)(i) above percentage (%)
- (c) Engineering skills:
 - (i) Training costs prime cost (PC) sum
 - (ii) Handling costs and profit in respect of subsubitem G10.03(c)(i) above percentage (%)
- (d) Training venue facility, including the cost of transporting the learners to and from this facility lump sum (Sum)
- (e) Transportation and accommodation costs of selected learners only, while receiving off-site training:
 - (i) Transportation and accommodation costs provisional sum (Prov. Sum)
 - (ii) Handling costs and profit in respect of subsubitem G10.03(e)(i) above percentage (%)

Expenditure under subsubitems G10.03(a)(i), (b)(i), (c)(i) and (e)(i) shall be in accordance with clause 6.6 of the General Conditions of Contract, 3rd Edition 2015.

The prime cost sum for each of subsubitems G10.03(a)(i), (b)(i) and (c)(i) is provided to cover the total costs of the required training in generic skills, entrepreneurial skills and engineering skills respectively, including for the procurement of the services of the accredited trainers and their delivery of the training courses to the learners employed by Targeted Enterprise subcontractors, the provision of all training materials including all stationery and study materials, and the wages of the learners for the duration of the courses. The payment of wages to learners in terms of subsubitems G10.03(a)(i), (b)(i) and (c)(i) will only be made to those learners who attend and successfully complete each course of the approved training programme. Payment shall not be made to learners who, once selected, do not attend or only partially complete structured training courses.

The Contractor's own personnel shall be permitted to attend the training courses provided for the learners employed by the Targeted Enterprise subcontractors only to the extent that the venue and its facilities can efficiently and comfortably accommodate the additional number of learners. All additional costs relating to such attendance by the Contractor's own personnel shall be carried by the Contractor and shall not be considered for payment in terms of item G10.03, including for any additional costs related to the accredited trainers and their delivery of the training courses, the provision of additional training materials, and the wages of the learners from the Contractor's own personnel for the duration of the courses.

The tendered percentage for each of subsubitems G10.03(a)(ii), (b)(ii) and (c)(ii) is the percentage of the amount actually spent under each of subsubitems G10.03(a)(i), (b)(i) and (c)(i) respectively, and shall include full compensation for the handling costs of the Contractor and the profit in connection with the provision of the

training in generic skills, entrepreneurial skills and engineering skills respectively, including for the costs of record keeping and reporting with respect to the training received by each learner, and the costs of the compilation of the portfolio of evidence with respect to each Targeted Enterprise.

The tendered lump sum for subitem G10.03(d) shall include full compensation for the provision of the training venue facility complete and serviced as specified, including for the provision of power, water, sewerage and cleaning services for the duration of the contract, for lighting, power points and voltage stabilizers, for air conditioning, blinds, fire extinguishers, floodlights, furniture and whiteboards, for the provision of security at the facility, for all other costs necessary to maintain the facility for the duration of the contract, and for the removal of the facility on completion of the contract. The tendered lump sum shall also include full compensation for transporting the learners on each day of training from their place of work to this training venue facility, and back again after the training for the day has been delivered by the accredited trainers. Payment of the lump sum shall be made in three instalments as follows:

The first instalment, 50% of the lump sum, shall be paid after the contractor has met all his obligations regarding the provision of the training venue facility, complete and serviced as specified, and the facility has been successfully commissioned for use.

The second instalment, 35% of the lump sum, shall be paid when 75% of the training courses proposed in accordance with the Contractor's structured training programme, as approved by the PMT, have been delivered to the learners by the accredited trainers.

The third and final instalment, 15% of the lump sum, shall be paid when training for all the Targeted Enterprise subcontracts has been concluded and the facility has been dismantled and removed from the site.

The provisional sum for subsubitem G10.03(e)(i) is provided to cover all costs related to the transportation and accommodation costs of selected learners only, while receiving off-site training, where such learners have been specifically selected in conjunction with the PMT to receive such off-site training and where such training cannot be delivered using the training venue facility provided by the Contractor in terms of subitem G10.03(d).

The tendered percentage for subsubitem G10.03(e)(ii) is the percentage of the amount actually spent under subsubitem G10.03(e)(i), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the transportation and accommodation costs of selected learners only, while receiving off-site training.

Add the following new payment item:

ITEM

UNIT

G10.04 Penalties:

(a) Fixed penalty for non-compliance for Contract Participation	No
Goals requirements per occurrence requirements per	
occurrence	

A fixed penalty deduction will be calculated in accordance with item G1003(d)

Add the following new payment item:

ITEM

UNIT

G10.05 Part G:

(a) The Contract Participation Target for Targeted Enterprise	Prov. Sum

Expenditure under these items will be made in accordance with the Part G

PRESCRIBED CIDB CONTRACTOR GRADING DESIGNATION ALLOCATION DIAGRAM FOR WORKS TO BE CONSTRUCTED BY TARGETED ENTERPRISE SUBCONTRACTORS IN TERMS OF PART G

The prescribed CIDB contractor grading designation allocation diagram for the Works to be constructed by Targeted Enterprise subcontractors in terms of this contract is given below

SECTION	DESCRIPTION	TARGETED ENTERPRISE CIDB CONTRACTOR GRADING DESIGNATION		
		1CE PE Max: R0,20 m	2CE Max: a) R1,0 m	3CE Max: R2,00 m
2100	DRAINS			X₍₁₎
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS			
2200	PREFABRICATED CULVERTS		X₍₁₎	
5100	PITCHING, STONWORK AND PROTECTION AGAINST EROSION		X₍₁₎	
5600	ROAD SIGNS	X₍₁₎		
5700	ROAD MARKINGS			
5800	LANDSCAPING AND PLANTING PLANTS	X₍₁₎		
	TOTAL NUMBER OF TARGETED ENTERPRISE SUBCONTRACTORS PRESCRIBED FOR EACH CIDB CONTRACTOR GRADING DESIGNATION	2	2	1

ANNEXURE A

SCHEDULE OF QUANTITIES

PART G: SMALL CONTRACTOR DEVELOPMENT

TABLE OF CONTENTS

	PAGE NO.
C4: SITE INFORMATION.....	Sl. 2
C4.1: LOCALITY PLAN	Sl. 2
C4.2: DRAWINGS	Sl. 3

C4: SITE INFORMATION

C4.1: LOCALITY PLAN

The location of the site is as per the attached Locality Plan.



C4.1.1: Access

The site shall not only include the proclaimed road reserve but shall be extended in the broader sense to take account of all areas occupied by the Contractor, be it deliberate or unintentional, in the execution of the contract. Incidental intrusion into private or tribal property outside the road reserve shall not be permitted without the owner's written authority. Any such agreement reached with a private or tribal landowner (occupier) shall include the proviso that any material or equipment on that site shall remain the exclusive property of the Employer in terms of the contract.

C4.2.1: Geotechnical Report

The detailed Geotechnical investigation was undertaken, and a Geotechnical Report prepared. The report will be emailed to tenderers upon request.

C4.2: DRAWINGS

The drawings issued to tenders as part of the tender documents must be regarded as provisional and preliminary for the tenderer's benefit to generally assess the scope of work. The drawings are issued as a separate book of drawings. The work shall be carried out in accordance with the latest available revision of the drawings approved for construction (AFC)

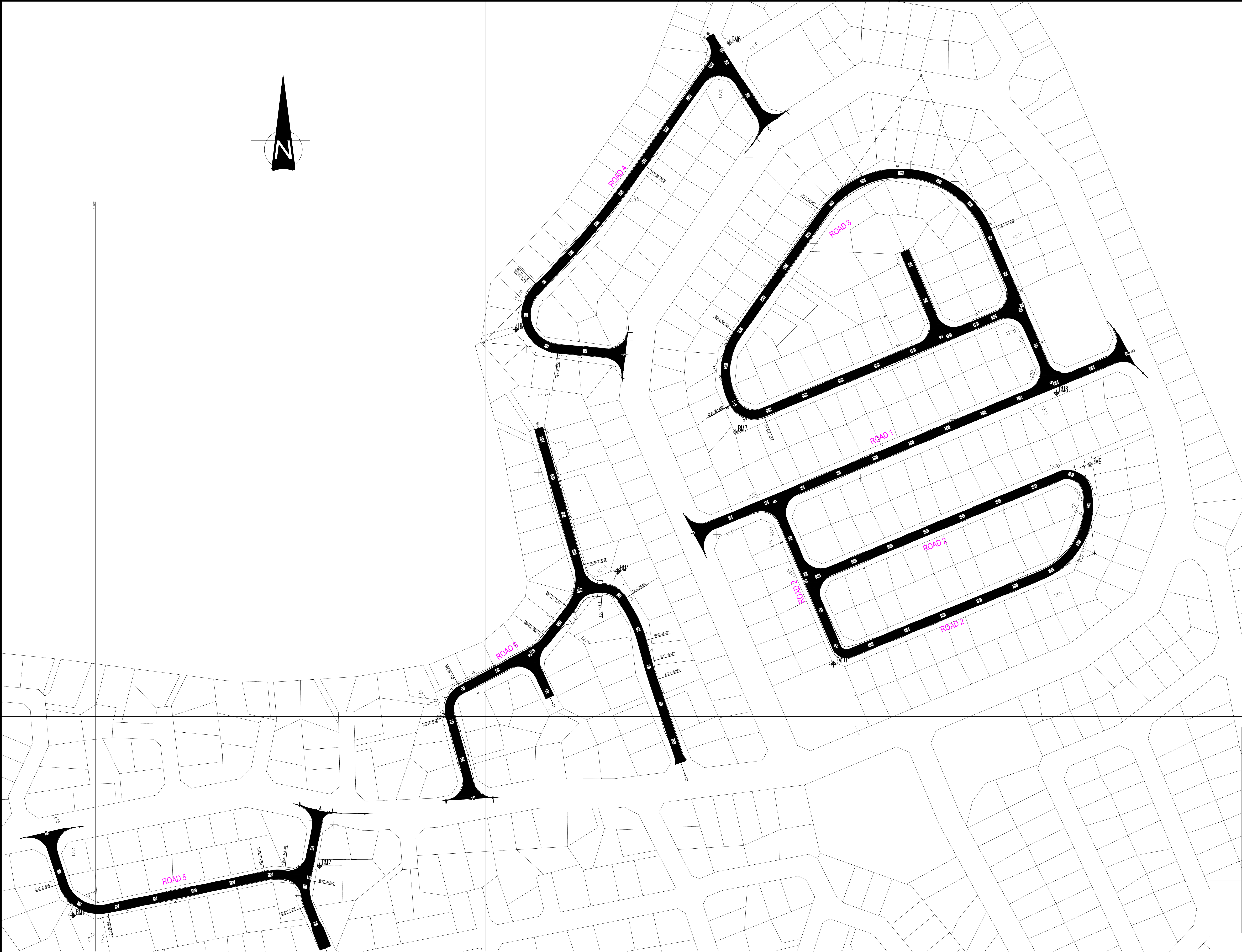
At commencement of the contract, the Engineer shall deliver to the Contractor copies of the AFC drawings and any instructions required for the commencement of the works. From time to time thereafter during the progress of the works, the Engineer may issue further drawings for construction purposes as may be necessary for adequate construction, completion and defects correction of the works.

All drawings and specifications and copies thereof remain the property of the Employer, and the Contractor shall return all drawings and copies thereof to the Employer at the completion of the contract.

C4.2.1 List of drawings attached.

Tender drawings are issued separately and are listed hereunder:

K068.2-R0T-100	Overall Roads Layout Plan
K068.2-R0T-101	Road 1 Layout Plan, Longitudinal Section, Cross Sections and Setting Out Data
K068.2-R0T-102	Road 2 Layout Plan, Longitudinal Section, Cross Sections and Setting Out Data
K068.2-R0T-103	Road 3 Layout Plan, Longitudinal Section, Cross Sections and Setting Out Data
K068.2-R0T-104	Road 4 Layout Plan, Longitudinal Section, Cross Sections and Setting Out Data
K068.2-R0T-105	Road 5 Layout Plan, Longitudinal Section, Cross Sections and Setting Out Data
K068.2-R0T-106	Road 6 Layout Plan, Longitudinal Section, Cross Sections and Setting Out Data



- NOTES:
1. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKET PIPES, CLASS 1000 ON CLASS 'C' BEDDING AND BACKFILL UNLESS OTHERWISE INDICATED ON THE LONGITUDINAL SECTIONS.
 2. STORMWATER MANHOLES TO BE IN FACE OR NFX BRICK, AS PER CITY ENGINEERS' STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
 3. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
 4. LEVELS OF ALL LAID PIPES TO BE CHECKED BY ENGINEER BEFORE BACKFILLING.
 5. CONTRACTOR IS TO ENSURE THAT THE NECESSARY PROVISIONS ARE MADE TO ENSURE THAT EXISTING SERVICES ARE PROTECTED AT ALL TIMES.
 6. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
 7. EXISTING WATERMAIN IS TO BE PROVIDED AND ALL DETAILS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF EXTENSION OF CULVERTS.

DESIGN PLAN GENERAL 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 0402, SD 0403 OR SD 0406 MIN. DIAMETER = 450mm FOR MINOR ACCESS ROADS AND ACCESS BELLMOUTHS, AND MIN. DIAMETER = 600mm FOR MAJOR ROAD CROSS DRAINAGE.
5. FOR EROSION CONTROL GABION MATTRESSES ARE RECOMMENDED AT CULVERT INLETS AND OUTLETS.
6. EARTH BERMES ARE TO BE CONSTRUCTED AT CULVERT INLETS TO DIRECT STORMWATER INTO CULVERTS WHERE NECESSARY.
7. ROCK BOLSTERS ARE TO BE PLACED ACROSS THE INVERT OF DRAINS SUSCEPTIBLE TO EROSION FOR EVERY 2m VERTICAL DROP.
8. GRASSED / CONCRETE LINED V-DRAINS AS PER SD 0601/3 & 4 ARE RECOMMENDED FOR SHALLOW CUTTINGS OF DEPTH < 5m MEASURED AT POINT 6m FROM EDGE OF CARRIAGEWAY. CONCRETE LINED 1000 V-DRAINS AS PER SD 0601/2 ARE RECOMMENDED FOR DEEP CUTTINGS OF DEPTH > 5m MEASURED AT A POINT 6m FROM EDGE OF CARRIAGEWAY.
9. SUBSOIL DRAINS AS PER SD 0501 ARE TO BE INSTALLED WITH 1000 V-DRAINS, OR WHERE HIGH WATER TABLES ARE ENCOUNTERED.
10. KERB AND CHANNEL DRAINS AS PER SD 0701 ARE TO BE PROVIDED WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT.
11. WHERE SURFACE RUNOFF IS TOWARDS THE ROAD, CATCHWATER BANKS ARE TO BE PROVIDED TO DIVERT STORMWATER TO MAJOR CROSS DRAINAGE STRUCTURES.
12. NEW FILLS AND EXPOSED CUTTINGS ARE TO BE TOPSOILED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
13. 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.
14. EXISTING ROAD SIGNS, SERVICES AND FENCING AFFECTED BY CONSTRUCTION ARE TO BE REMOVED / RELOCATED WHERE NECESSARY.
15. THE POSITION OF ACCESSES ARE TO BE DETERMINED IN CONSULTATION WITH THE LOCAL COMMUNITY. DAYLIGHTING REQUIREMENTS ARE TO BE DECIDED BY THE ENGINEER ON SITE. CONCRETE WEDGES AS PER SD 0303 OR ACCESS RAMPS AS PER SD 0306 IN THE CASE OF KERBING MAY BE USED IN PLACE OF SURFACED BELLMOUTHS FOR ACCESSES SERVING SINGLE RESIDENTIAL PROPERTIES UNLESS OTHERWISE SHOWN. ACCESS CLOSURES ARE TO BE PHYSICALLY BARRICADED WITH GUARDRAILS WHERE ACCESS IS STILL POSSIBLE AFTER COMPLETION OF THE WORKS.
16. UNDERGROUND SERVICES CROSSINGS AND MARKERS ARE TO BE IN ACCORDANCE WITH SD 1001-3.
17. ALL NEW ROAD SIGNS AND ROADMARKING REQUIREMENTS ARE TO CONFORM TO THE SOUTHERN AFRICAN DEVELOPING COMMUNITY ROAD TRAFFIC SIGNS MANUAL (SADC-RTSM). NECESSARY.
18. ALL ROADMARKING IS TO BE VERIFIED ON SITE.
19. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH SANS 1200 SPECIFICATIONS.
20. BELLMOUTHS TO BE CONSTRUCTED TO ACCOMMODATE EXISTING ACCESSES TO PROPERTIES.
21. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKETPIPPES, CLASS 1000 ON CLASS 'C' BEDDING AND BACKFILL UNLESS OTHERWISE INDICATED ON THE LONGITUDINAL SECTIONS.
22. STORMWATER MANHOLES TO BE IN FACE OR NFX BRICK AS PER CITY ENGINEERS' STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
23. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
24. LEVELS OF ALL LAID PIPES TO BE CHECKED BY ENGINEER BEFORE BACKFILLING.
25. CONTRACTOR IS TO ENSURE THAT THE NECESSARY PROVISIONS ARE MADE TO ENSURE THAT EXISTING SERVICES ARE PROTECTED AT ALL TIMES.
26. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
27. EXISTING WATERMAIN IS TO BE PROVIDED AND ALL DETAILS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF EXTENSION OF CULVERTS.

BENCH MARKS
16mm Iron Pegs in Concrete
WGS84 Lo 29

BM1	-42988.461	3380701.936	1275.424
BM2	-43114.843	3380676.555	1273.650
BM3	-43176.074	3380600.375	1270.537
BM4	-43267.576	3380525.681	1275.205
BM5	-43215.447	3380401.736	1271.224
BM6	-43324.786	3380254.827	1269.777
BM7	-43328.104	3380454.235	1274.339
BM8	-43492.476	3380434.150	1269.527
BM9	-43509.633	3380470.993	1269.394
BM10	-43378.148	3380573.214	1269.467

OVERALL LAYOUT PLAN
NTS

T	ISSUED FOR TENDER	22/11/2023	T. GOOLI	H. FUYANA	
△	DESCRIPTION OF REVISION(S)	DATE	CHECKED	APPROVED	

DESIGNED	A. JUWLAL
CHECKED	H. FUYANA
DRAWN	T. GOOLI
CHECKED	H. FUYANA
PROJECT ENGINEER	HLOSOKUHLLE FUYANA
REGISTRATION NO.:	201670323

PHYSICAL ADDRESS:
18 YORK ROAD
KOKSTAD
3610

TEL: (031) 764 2763
FAX: (086) 542 4084
e-mail: admin@maengineers.co.za



H. FUYANA
(REGISTRATION NO.: 201670323)

SIGNATURE: _____

PHYSICAL ADDRESS:
75 HOPE STREET
KOKSTAD
4700

TEL: (039) 797 6600



**GREATER
KOKSTAD
MUNICIPALITY**
ENGINEERS OF KOKSTAD TOWN

POSTAL ADDRESS:
PO BOX 8
KOKSTAD
4700

ON BEHALF OF CLIENT: NAME: _____

SIGNATURE: _____

PROJECT/DRAWING TITLE
GREATER KOKSTAD LOCAL MUNICIPALITY
UPGRADE OF HORSESHOE ROADS : PHASE 2
OVERALL ROADS LAYOUT PLAN

SCALE:
AS SHOWN

SHEET
1

DRAWING No.

REVISION

CONTRACT No.

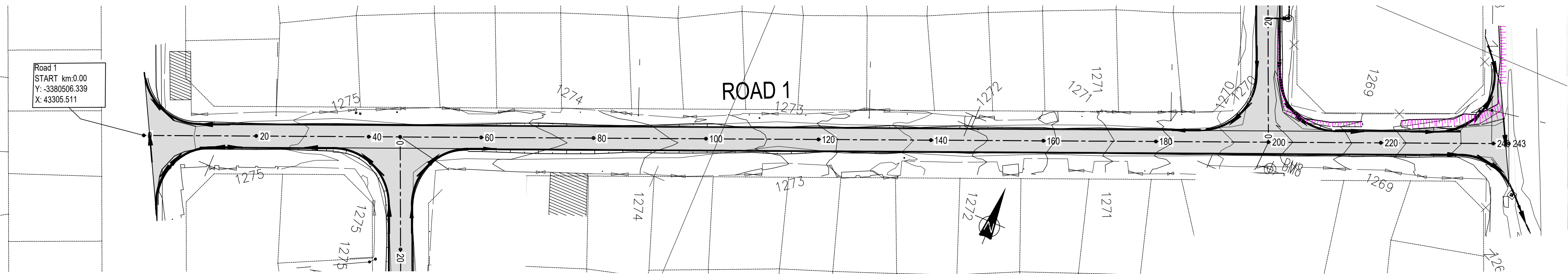
GKM 30-23/24

PROJECT No.

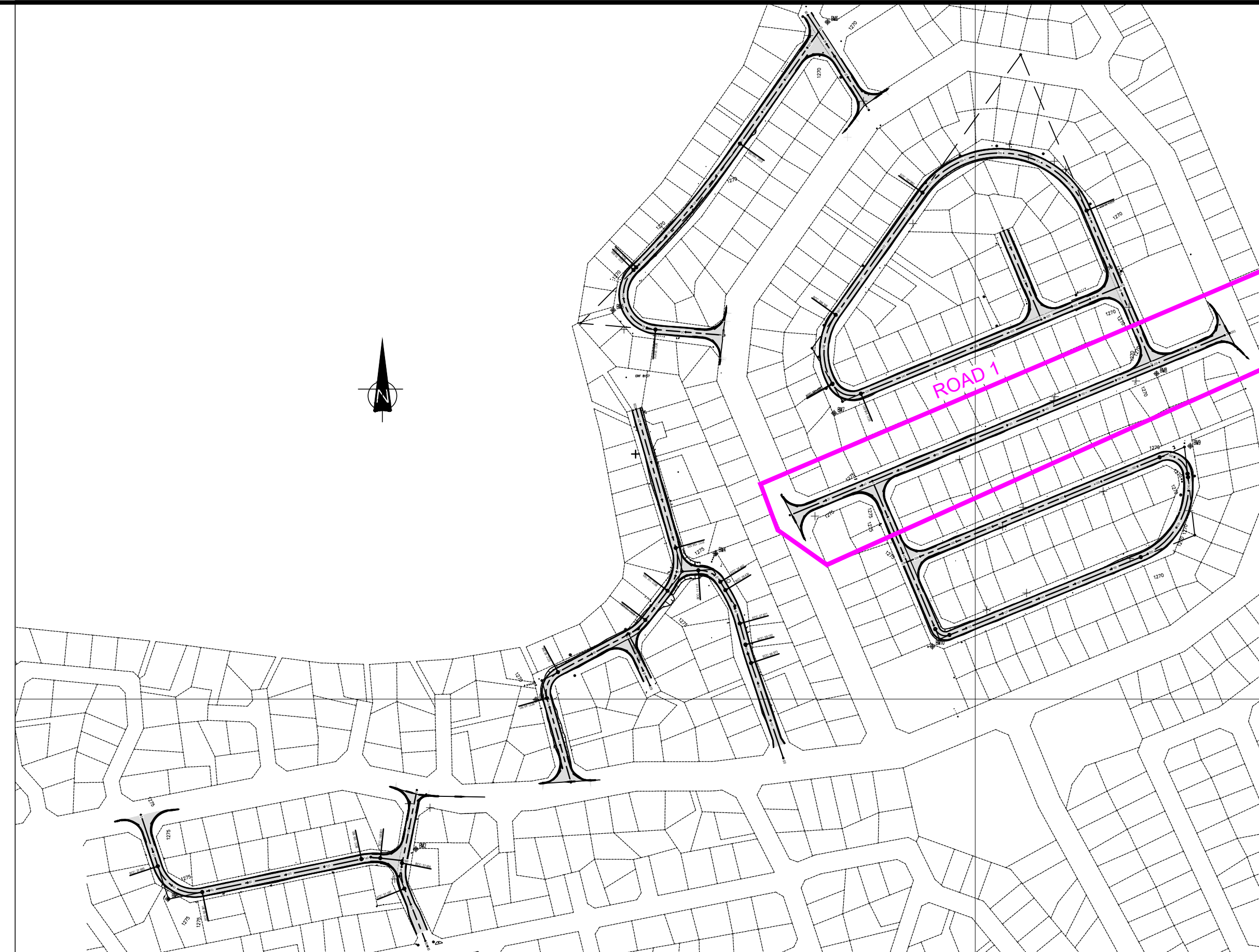
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K068.2-ROT-100

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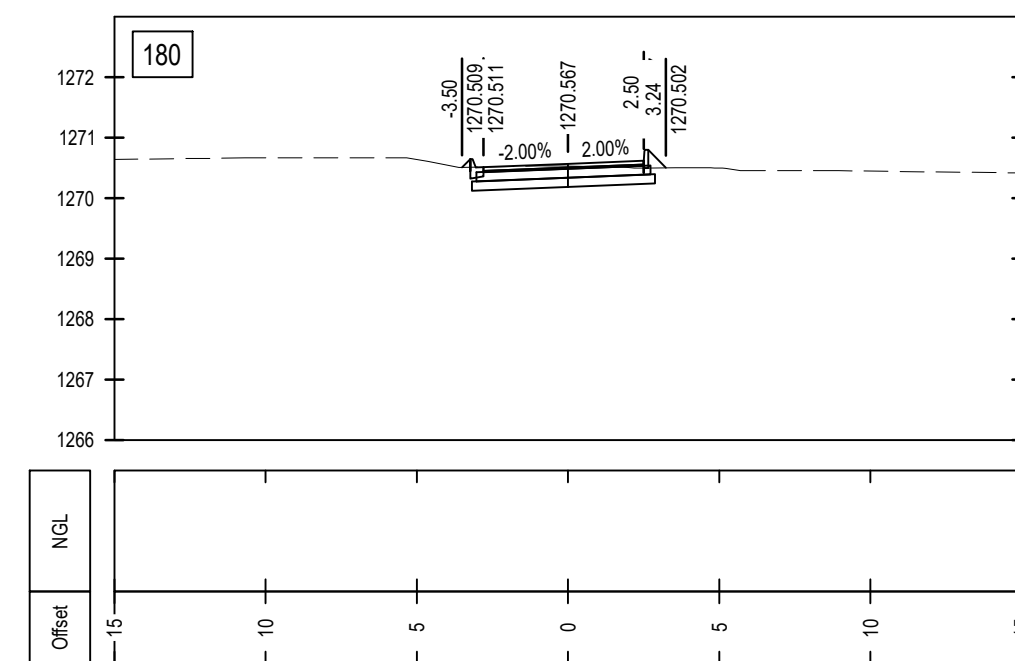
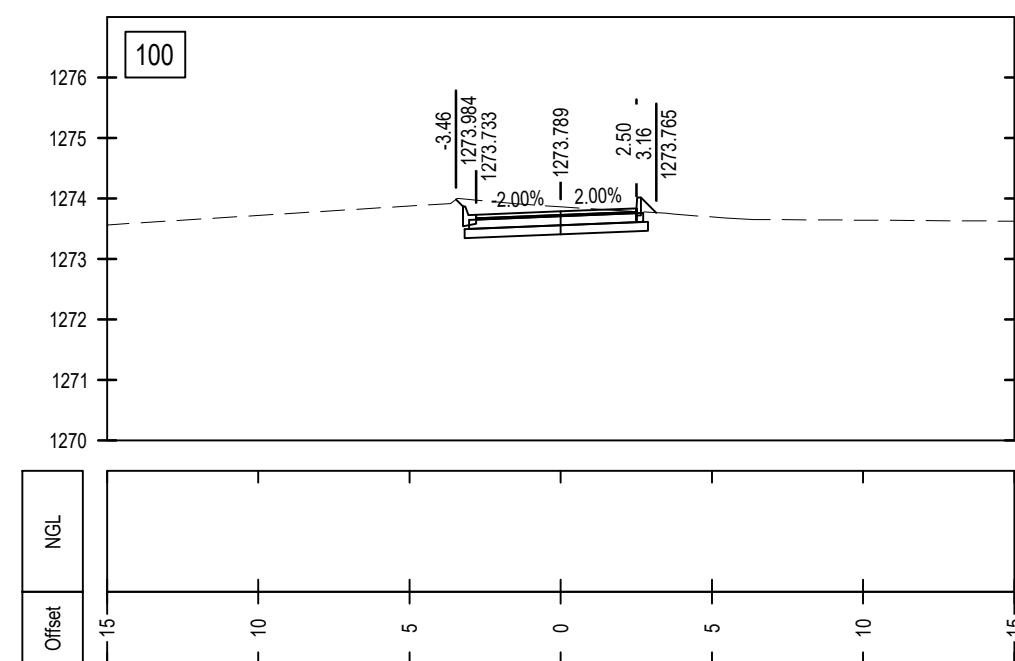
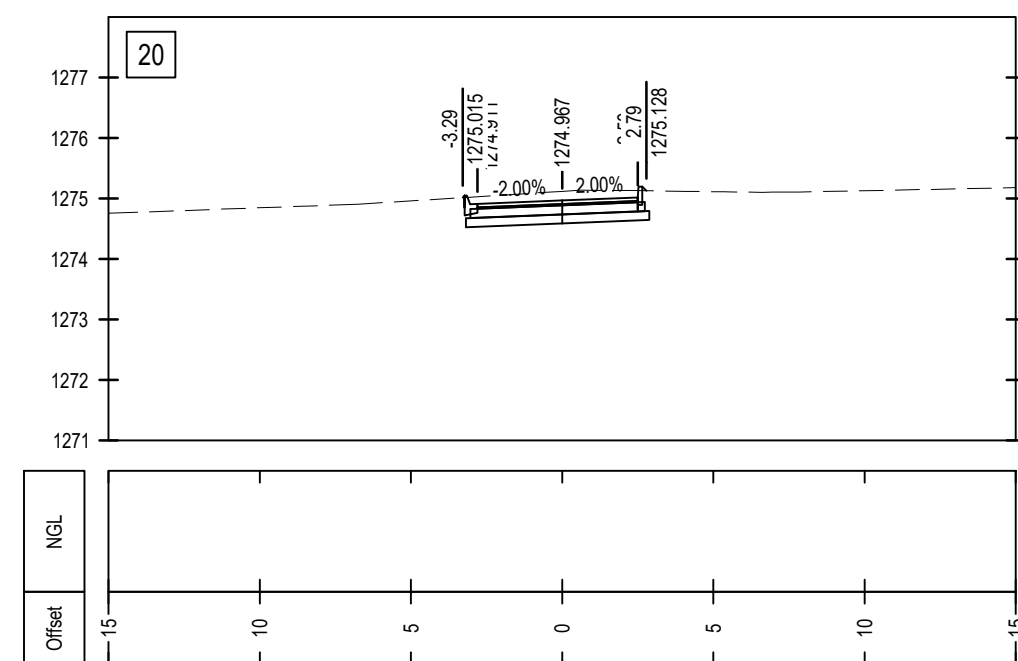


LAYOUT PLAN - ROAD 1
SCALE 1:1000



KEY PLAN
1:2000

SETTING OUT DATA-Road 1				
NAME	CH	X	Y	LENGTH (m)
START	0.000	43 305 511	-3 380 506 339	242.772
END	242.772	43 529 815	-3 380 413 469	
START	0.000	43 305 511	-3 380 506 339	
END	242.772	43 529 815	-3 380 413 469	242.772



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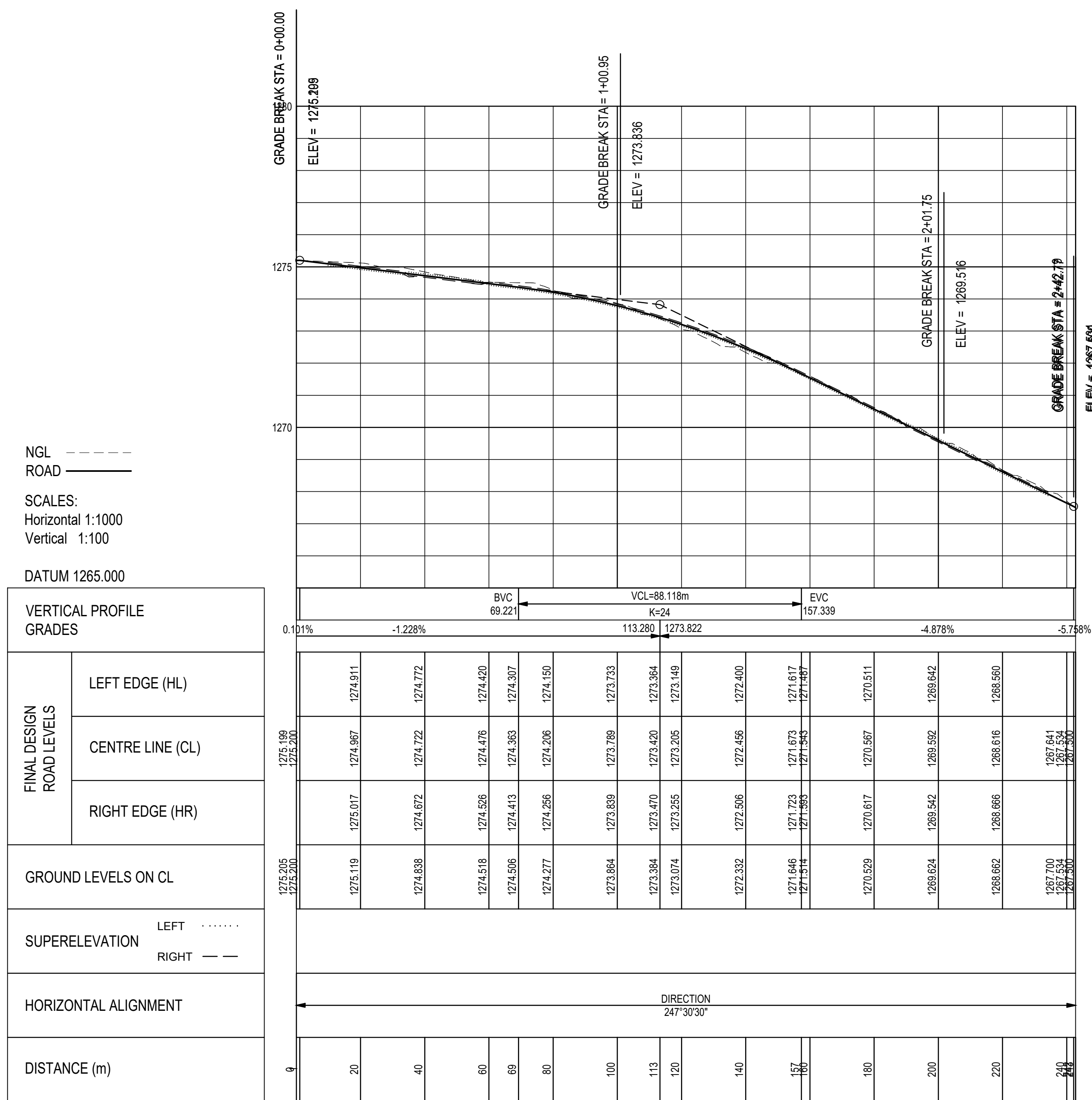
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13. GUARDRAILS ARE TO BE INSTALLED IN ACCORDANCE WITH SD 1101 AND SD 1102 WHERE FILL EMBANKMENTS EXCEED 3m IN HEIGHT OR WHERE HAZARDOUS OBSTRUCTIONS CANNOT BE REMOVED.
14. EXISTING ROAD SIGNS, SERVICES AND FENCING AFFECTED BY CONSTRUCTION ARE TO BE REMOVED / RELOCATED WHERE NECESSARY.
15. THE POSITION OF ACCESSSES ARE TO BE DETERMINED IN CONSULTATION WITH THE LOCAL COMMUNITY. DAYLIGHTING REQUIREMENTS ARE TO BE DECIDED BY THE ENGINEER ON SITE. CONCRETE WEDGES AS PER SD 0303 OR ACCESS RAMPS AS PER SD 0306 IN THE CASE OF KERBING MAY BE USED IN PLACE OF SURFACED BELLMOUTHS FOR ACCESSSES SERVING SINGLE RESIDENTIAL PROPERTIES UNLESS OTHERWISE SHOWN. ACCESS CLOSURES ARE TO BE PHYSICALLY BARRICADED WITH GUARDRAILS WHERE ACCESS IS STILL POSSIBLE AFTER COMPLETION OF THE WORKS.
16. UNDERGROUND SERVICES CROSSINGS AND MARKERS ARE TO BE IN ACCORDANCE WITH SD 1001-5.
17. ALL NEW ROAD SIGNS AND ROADMARKING REQUIREMENTS ARE TO CONFORM TO THE SOUTHERN AFRICAN DEVELOPING COMMUNITY ROAD TRAFFIC SIGNS MANUAL (SADC-RTSM).
18. ALL ROADMARKING IS TO BE VERIFIED ON SITE.
19. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH SANS 1200 SPECIFICATIONS.
20. BELLMOUTHS TO BE CONSTRUCTED TO ACCOMMODATE EXISTING ACCESSSES TO PROPERTIES.
21. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKET PIPES, CLASS 1000 ON CLASS 'C' BEDDING AND BACKFILL UNLESS OTHERWISE INDICATED ON THE LONGITUDINAL SECTIONS.
22. STORMWATER MANHOLES TO BE IN FACE OR R/FX BRICK, AS PER CITY ENGINEERS' STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
23. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
24. LEVELS OF ALL LAID PIPES TO BE CHECKED BY ENGINEER BEFORE BACKFILLING.
25. CONTRACTOR IS TO ENSURE THAT THE NECESSARY PROVISIONS ARE MADE TO ENSURE THAT EXISTING SERVICES ARE PROTECTED AT ALL TIMES.
26. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
27. EXISTING WATERMAIN IS TO BE PROVIDED AND ALL DETAILS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF EXTENSION OF CULVERTS.

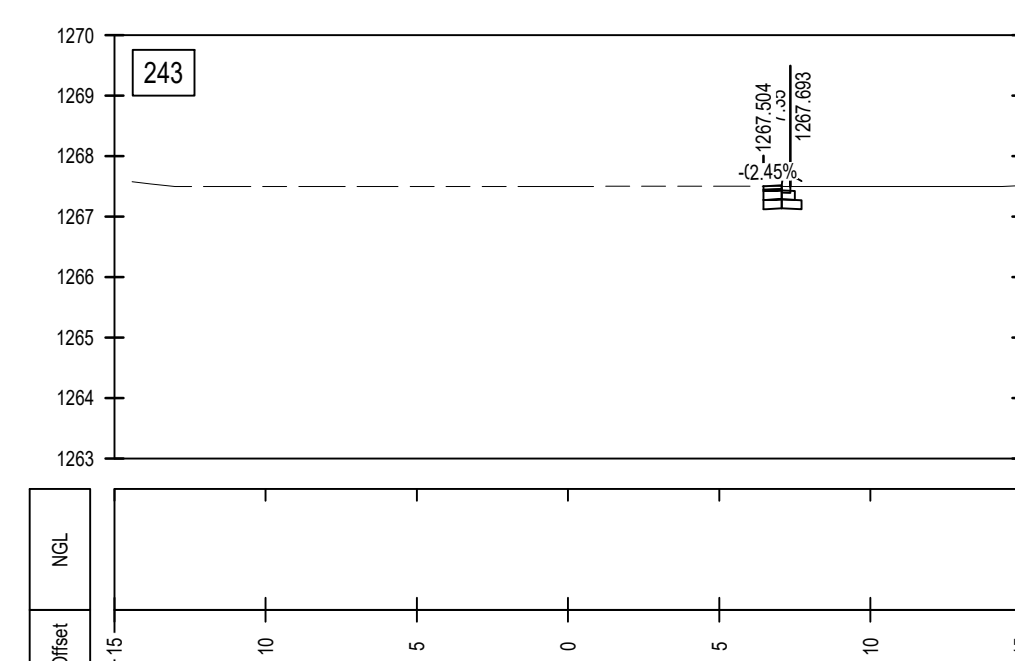
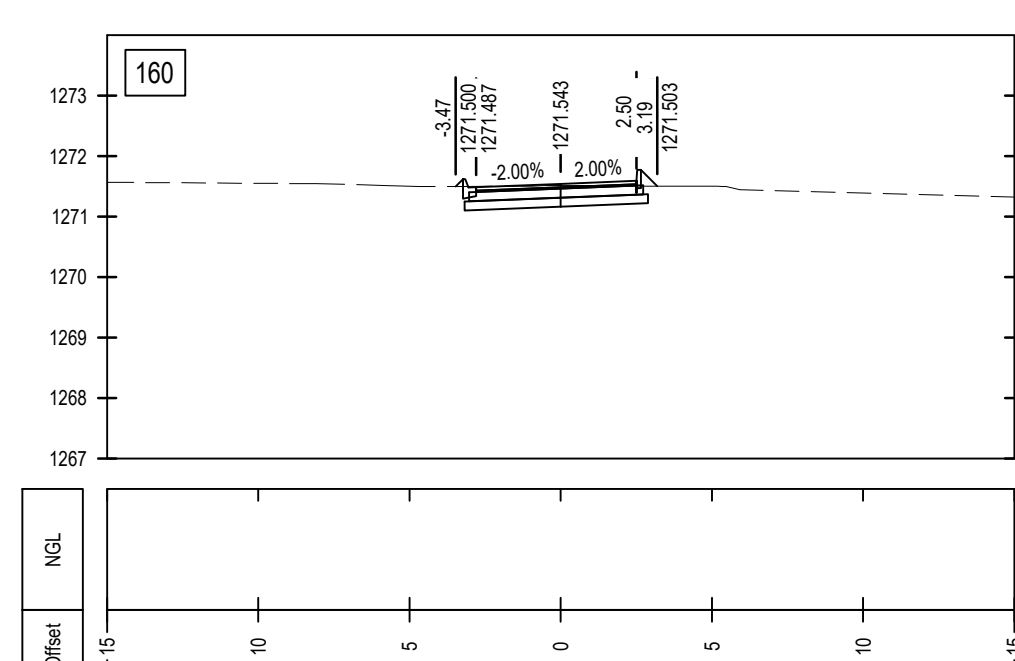
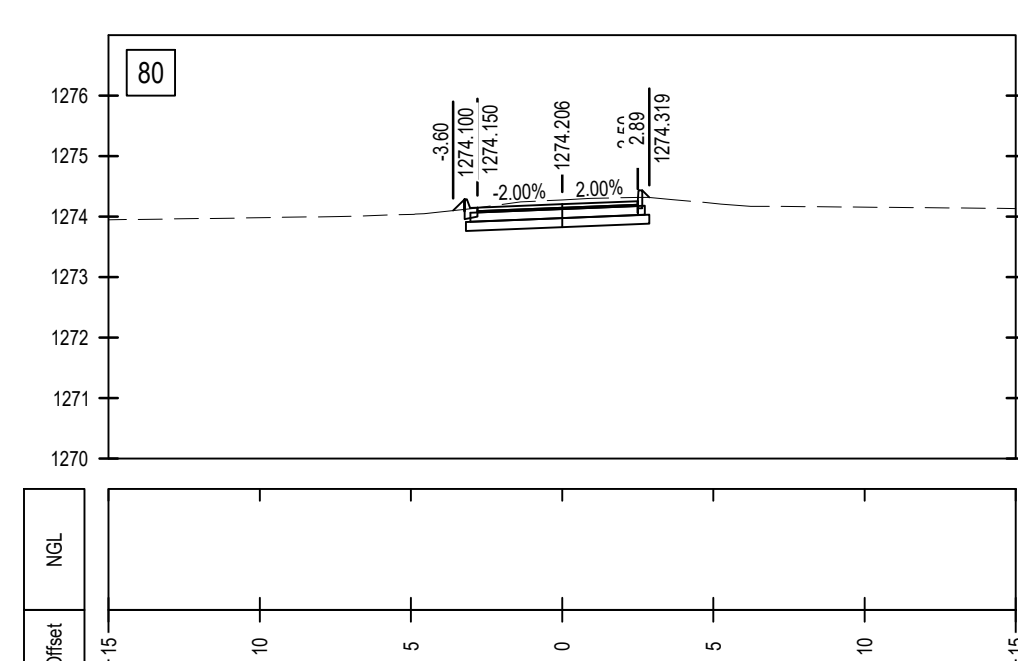
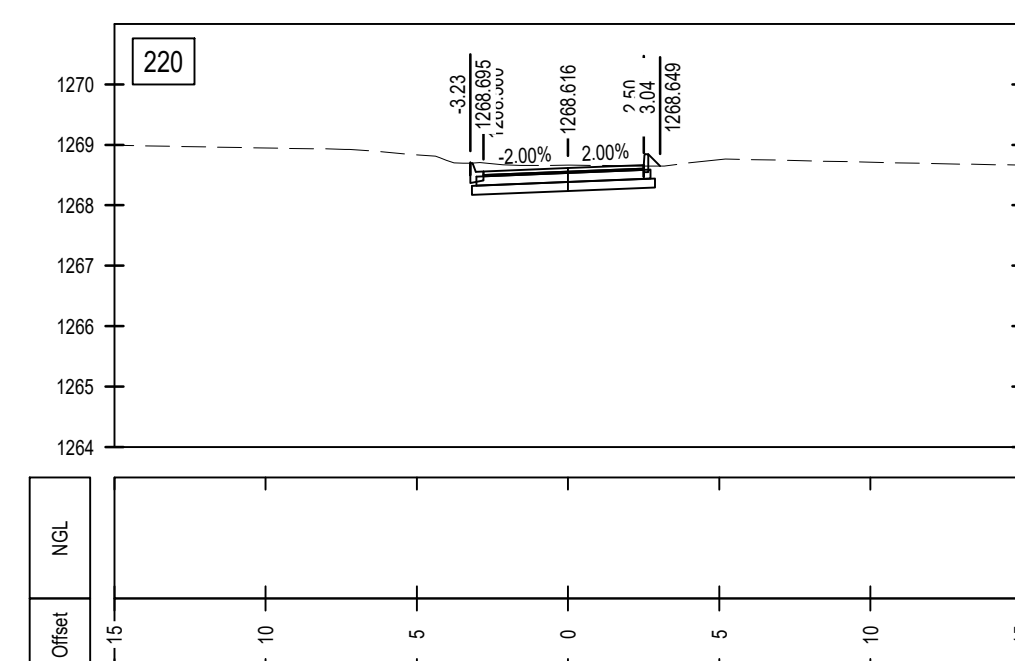
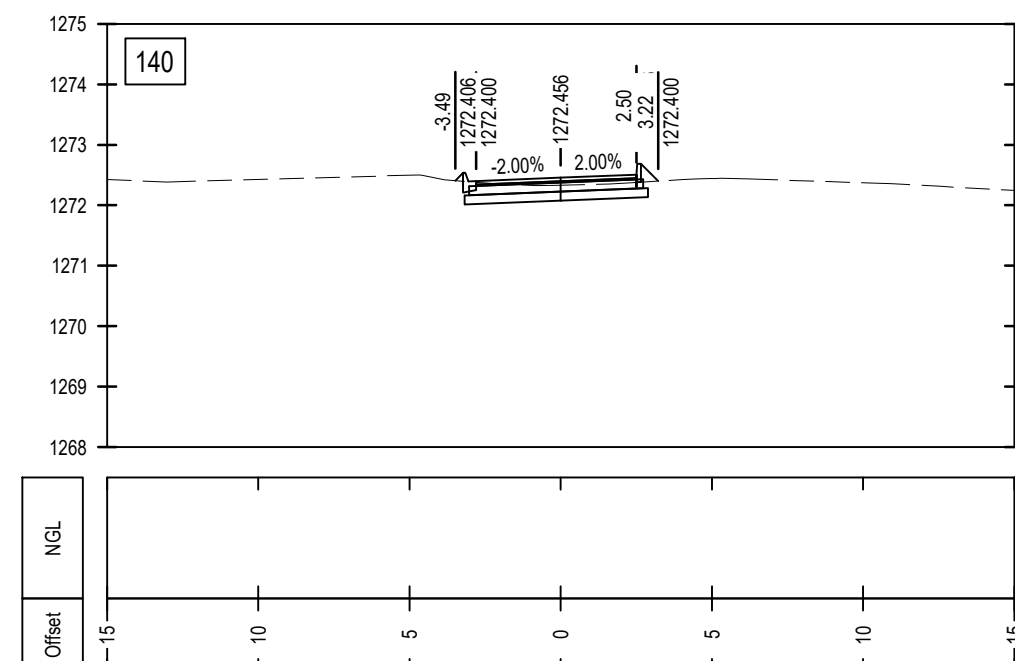
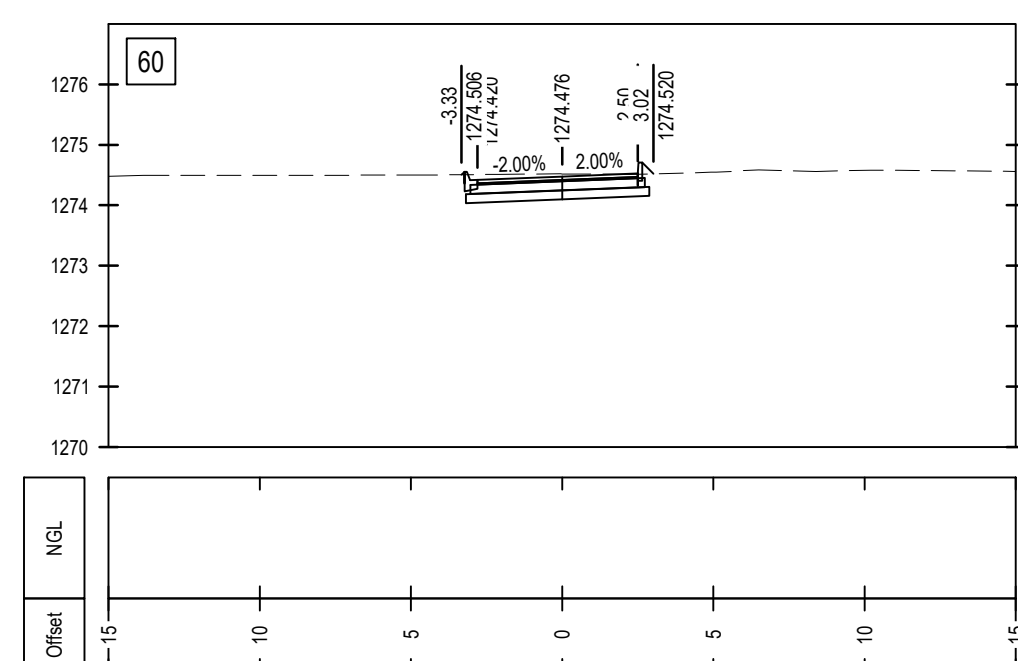
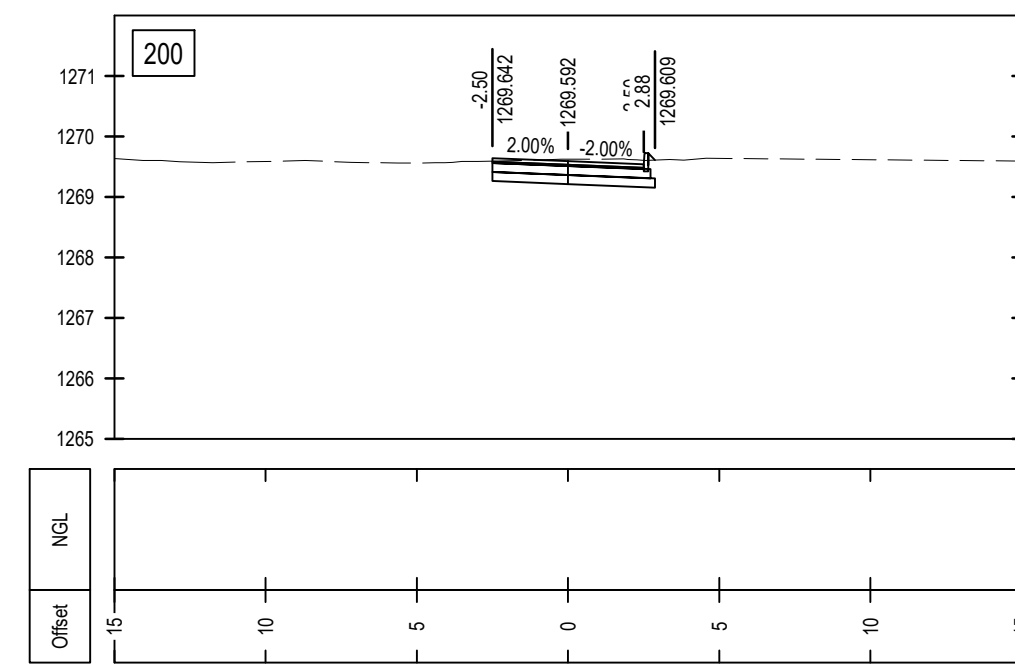
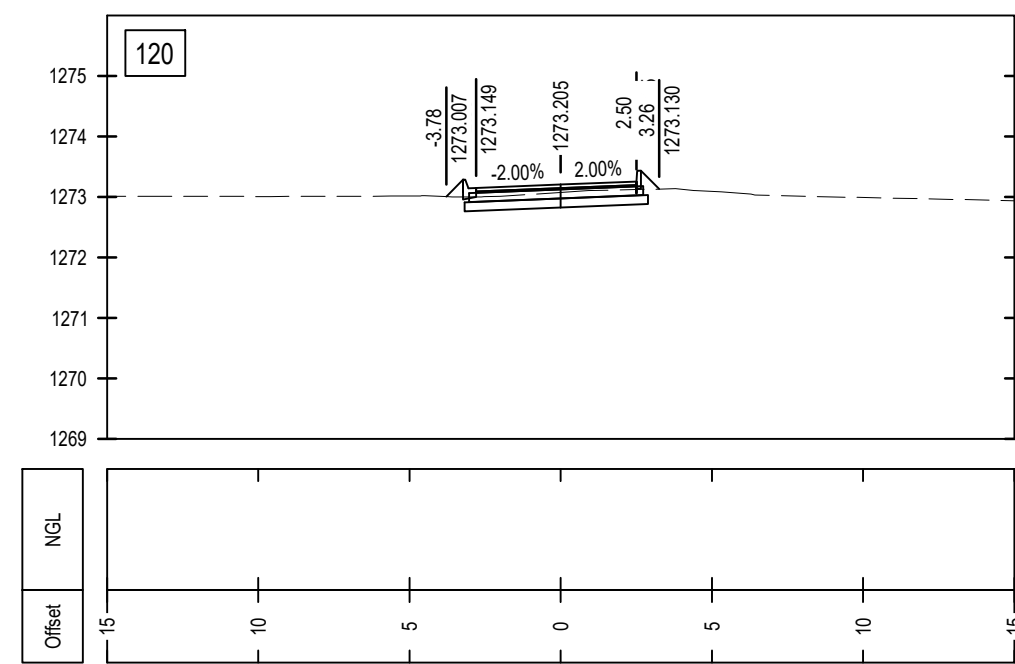
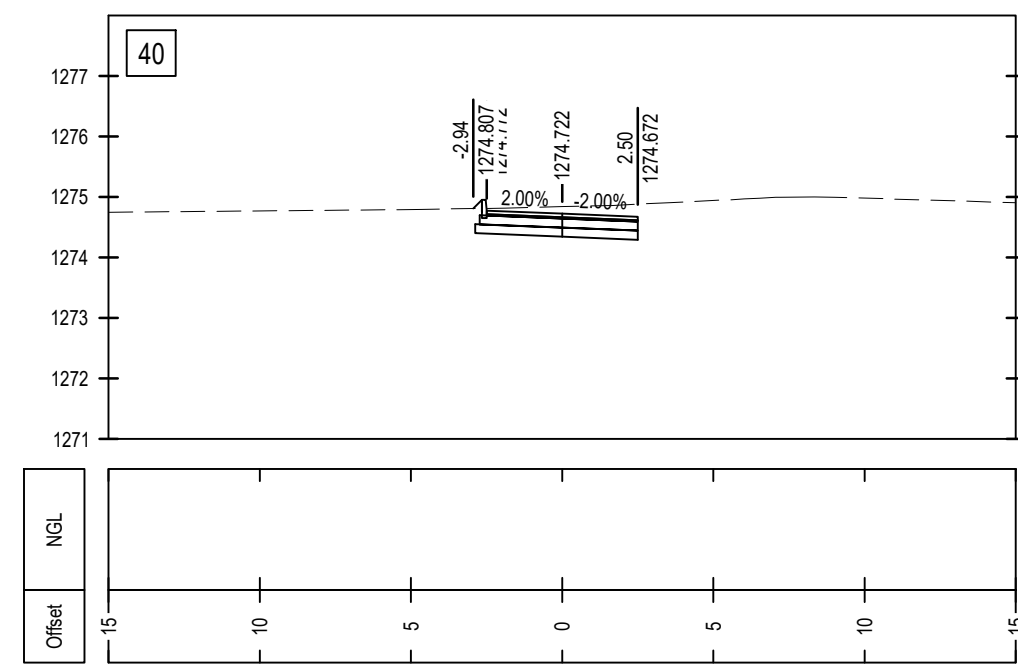
BENCH MARKS
18mm Iron Pegs in Concrete
VGS84 Lo 29

BM1	-42988.461	3386701.936	1275.424
BM2	-43114.843	3386076.555	1273.650
BM3	-43176.074	3386060.375	1270.537
BM4	-43267.576	3386025.681	1275.205
BM5	-43215.447	3386041.736	1271.224
BM6	-43324.786	33860254.827	1269.777
BM7	-43328.104	33860454.235	1274.339
BM8	-43492.476	33860434.150	1269.527
BM9	-43509.833	33860470.993	1269.394
BM10	-43378.148	33860573.214	1269.467

1. All heights and measurements given in metres.
2. Survey based on WGS29
3. Heights based on mean sea level
4. Contours shown at 0.20m intervals
5. All data and measurements to be checked on site prior to commencement of work.
6. Only visible services and structures were surveyed



ROAD 1 - LONGITUDINAL SECTION
FROM 0.000 TO 243.00



ROAD 1 - CROSS-SECTIONS
SCALE 1:200 (H)
SCALE 1:100 (V)

T	ISSUED FOR TENDER	22/11/2023	T. GOOLI	H. FUYANA	
△	DESCRIPTION OF REVISION(S)	DATE	CHECKED	APPROVED	

DESIGNED	A. JUWLAL
CHECKED	H. FUYANA
DRAWN	A. JUWLAL
CHECKED	H. FUYANA
PROJECT ENGINEER	H. LOSOKUHLI FUYANA
REGISTRATION NO.:	201670323

PHYSICAL ADDRESS:
18 YORK ROAD
GILLITTS
3610



POSTAL ADDRESS:
PO BOX 01
CAVERSHAM GLEN
PINETOWN
3616

TEL: (031) 764 2763
FAX: (086) 542 4084
e-mail: admin@fmaengineers.co.za

H. FUYANA
(REGISTRATION NO.: 201670323)

SIGNATURE: _____

PHYSICAL ADDRESS:
75 HOPE STREET
KOKSTAD
4700



POSTAL ADDRESS:
PO BOX 8
KOKSTAD
4700

TEL: (039) 797 6600

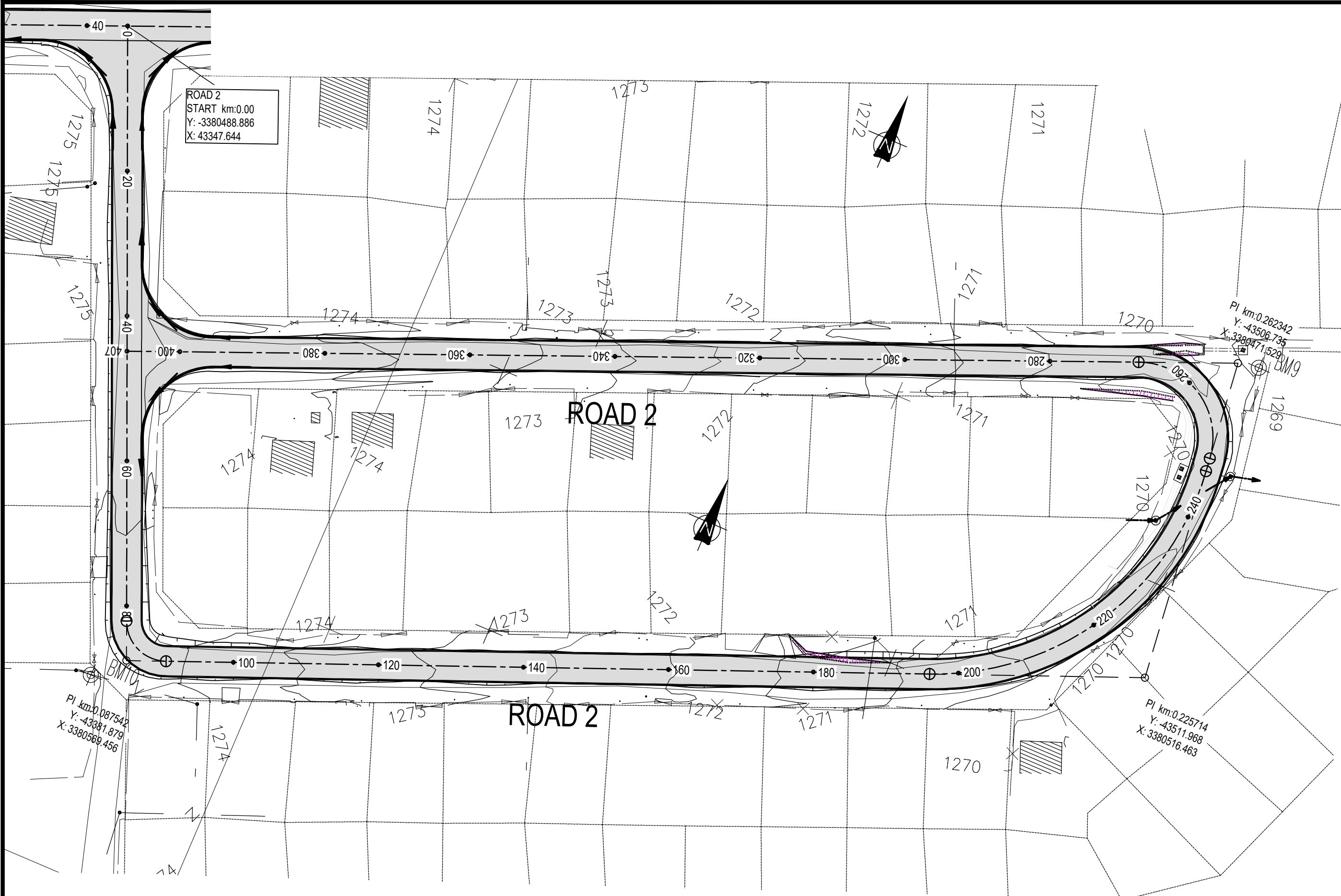
ON BEHALF OF CLIENT: NAME: _____

SIGNATURE: _____

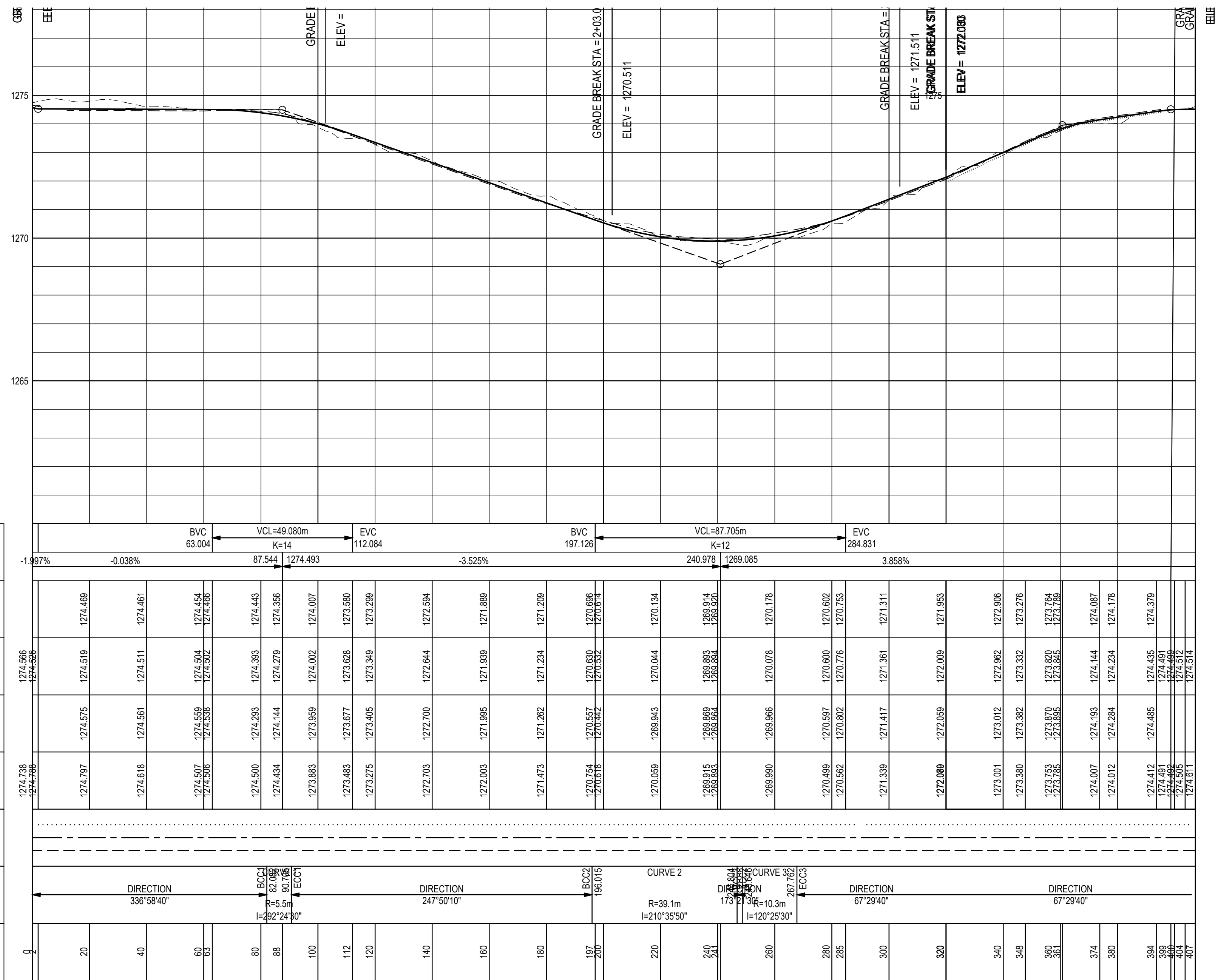
PROJECT/DRAWING TITLE
KOKSTAD LOCAL MUNICIPALITY
UPGRADE OF SHAYAMOYA ROADS : PHASE 2

ROAD 1: LAYOUT PLAN, LONGITUDINAL SECTION, CROSS SECTIONS AND
SETTING OUT DATA

SCALE: AS SHOWN	CONTRACT No. GKM 30-23/24
SHEET 1 OF 1	PROJECT No. K068.2
DRAWING No.	K068.2-ROT-101
REVISION	T



LAYOUT PLAN - ROAD 2
SCALE 1:1000



ROAD 2 - LONGITUDINAL SECTION
FROM 0.000 TO 320.00

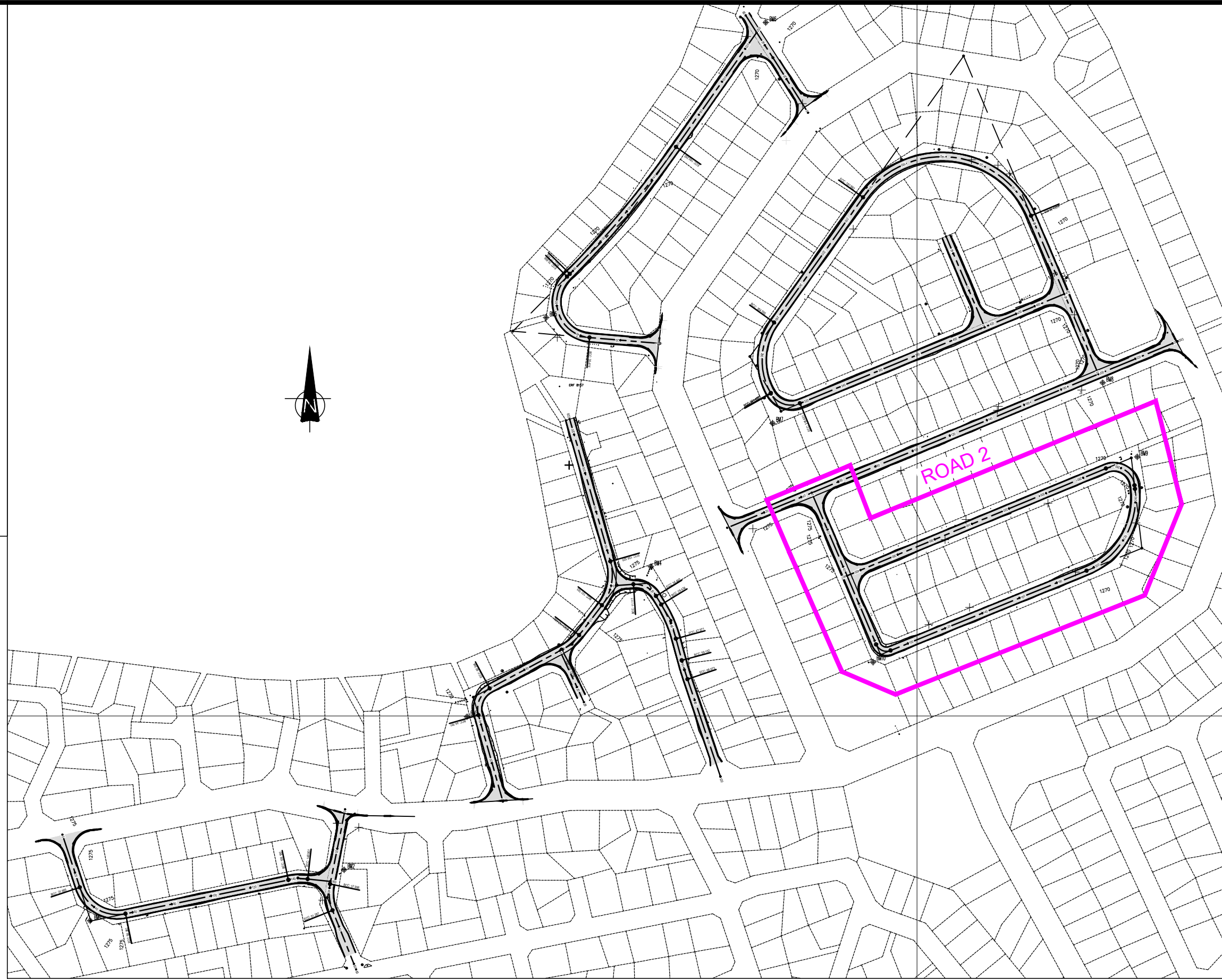
NOTES:

1. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKET PIPES, CLASS 100D ON CLASS 'C' BEDDING AND BACKFILL UNLESS OTHERWISE INDICATED ON THE LONGITUDINAL SECTIONS.
2. STORMWATER MANHOLES TO BE IN FACE OR RFX BRICK, AS PER CITY ENGINEERS' STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
3. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
4. LEVELS OF ALL LAID PIPES TO BE CHECKED BY ENGINEER BEFORE BACKFILLING.
5. CONTRACTOR IS TO ENSURE THAT THE NECESSARY PROVISIONS ARE MADE TO ENSURE THAT EXISTING SERVICES ARE PROTECTED AT ALL TIMES.
6. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
7. EXISTING WATERMAIN IS TO BE PROVED AND ALL DETAILS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF EXTENSION OF CULVERTS.

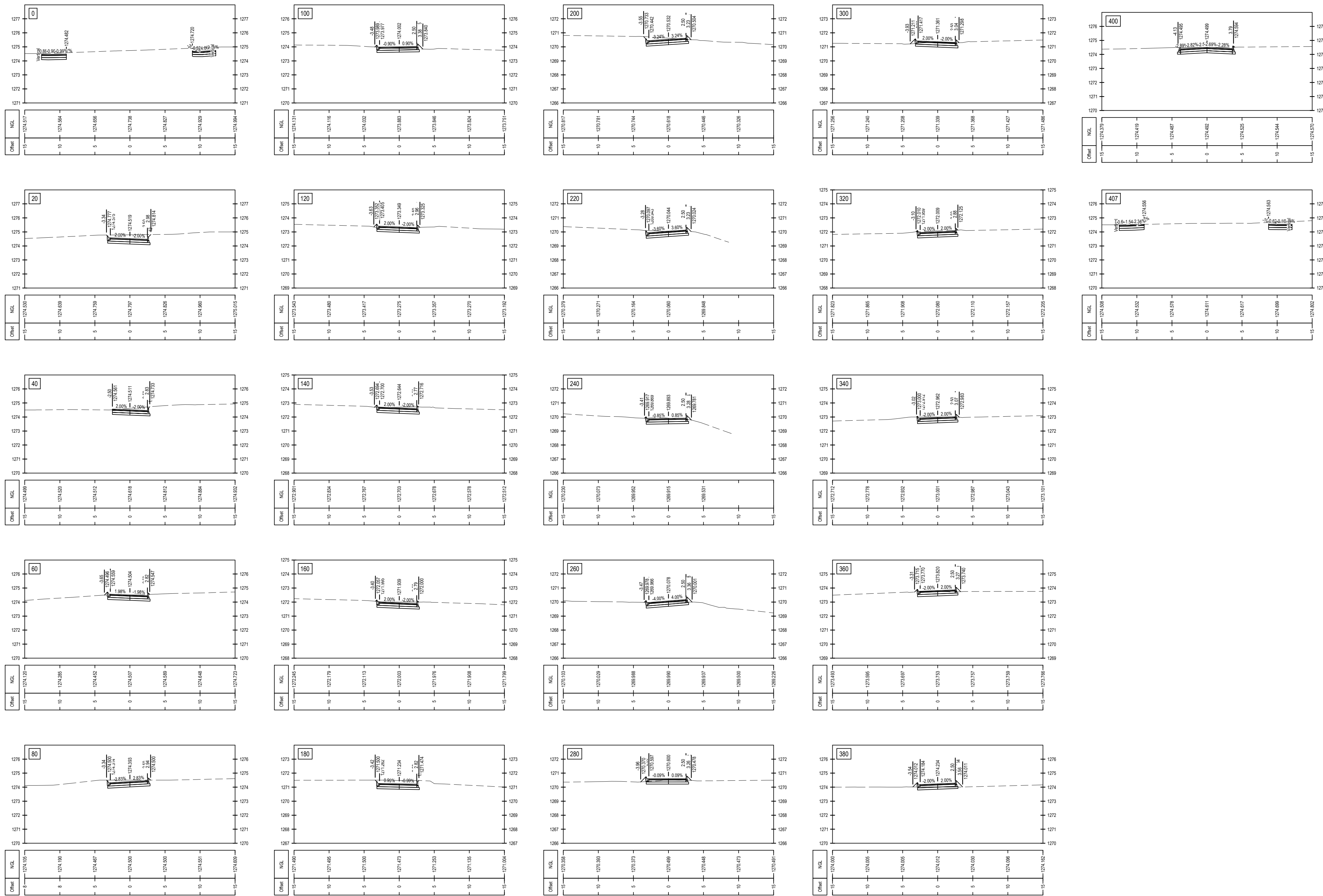
BENCH MARKS
16mm Iron Pegs in Concrete
WGS84 Lo Z9

BM1	-42988.461	3380701.936	1275.424
BM2	-43114.843	3380676.555	1273.650
BM3	-43176.074	3380600.375	1270.537
BM4	-43267.576	3380525.681	1275.205
BM5	-43215.447	3380401.736	1271.224
BM6	-43324.786	3380254.827	1269.777
BM7	-43328.104	3380454.235	1274.339
BM8	-43402.476	3380434.150	1269.527
BM9	-43509.633	3380470.993	1269.394
BM10	-43378.148	3380573.214	1269.467

1. All heights and measurements given in metres.
2. Survey based on WGS29
3. Heights based on mean sea level
4. Contours shown at 0.20m intervals
5. All data and measurements to be checked on site prior to commencement of work.
6. Only visible services and structures were surveyed



KEY PLAN
1:2000



ROAD 2 - CROSS-SECTIONS
SCALE 1:200 (H)
SCALE 1:100 (V)

T	ISSUED FOR TENDER	22/11/2023	T.GOOI	H. FUYANA	
△	DESCRIPTION OF REVISION(S)	DATE	CHECKED	APPROVED	

DESIGNED	A. JUWLAL
CHECKED	H. FUYANA
DRAWN	A. JUWLAL
CHECKED	H. FUYANA
PROJECT ENGINEER	HLOSKUHLIE FUYANA
REGISTRATION NO.:	201670323

PHYSICAL ADDRESS:
18 YORK ROAD
GILLITTS
3610



TEL: (031) 764 2763
FAX: (086) 542 4084
e-mail: admin@fmaengineers.co.za

H. FUYANA
(REGISTRATION NO.: 201670323)

SIGNATURE: _____

PHYSICAL ADDRESS:
75 HOPE STREET
KOKSTAD
4700



POSTAL ADDRESS:
PO BOX 8
KOKSTAD
4700

TEL: (039) 797 6600

ON BEHALF OF CLIENT: NAME: _____

SIGNATURE: _____

PROJECT/DRAWING TITLE	KOKSTAD LOCAL MUNICIPALITY UPGRADE OF SHAYAMOYA ROADS : PHASE 2 ROAD 2: LAYOUT PLAN, LONGITUDINAL SECTION, CROSS SECTIONS AND SETTING OUT DATA

SCALE: AS SHOWN	CONTRACT No. GKM 30-23/24
SHEET 1	OF 1
DRAWING No.	K068.2
REVISION	T



SETTING OUT DATA-Road 3:

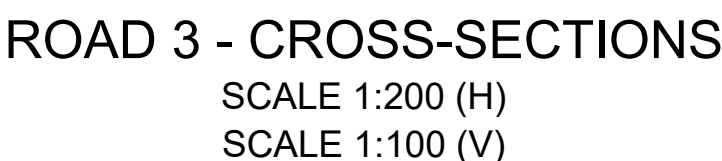
SETTING OUT DATA-Road 3b

SETTING OUT DATA-Road 3c

1. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKET PIPES, CLASS 1000 ON CLASS 'C' BEDDING AND BACKFILL UNLESS OTHERWISE INDICATED ON THE LONGITUDINAL SECTIONS.
2. STORMWATER MANHOLES TO BE IN FACE OR NFX BRICK, AS PER CITY ENGINEER'S STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
3. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
4. LEVELS OF ALL LAID PIPES TO BE CHECKED BY ENGINEER BEFORE BACKFILLING.
5. CONTRACTOR IS TO ENSURE THAT THE NECESSARY PROVISIONS ARE MADE TO PROTECT UNDERGROUND SERVICES FROM DAMAGE AND PROTECTED AT ALL TIMES.
6. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD. AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
7. EXISTING WATERMAIN IS TO BE PROVIDED AND ALL DETAILS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF EXTENSION OF CULVERTS.

BENCH MARKS				
16mm Iron Pegs in Concrete				
WGS84 Lo 29				
BM1	-29988.464	33800701.936	1275.424	
BM2	-31114.843	33800676.555	1273.650	
BM3	-31376.074	33800600.375	1270.537	
BM4	-32657.576	33800525.681	1275.205	
BM5	-43215.447	33804001.736	1271.224	
BM6	-43234.786	33800454.827	1269.777	
BM7	-43328.104	33800254.235	1274.339	
BM8	-43492.473	33800434.150	1269.527	
BM9	-43509.633	33800470.993	1269.324	
BM10	-43578.148	33805753.214	1269.467	

- 1: All heights and measurements given in metres
- 2: Survey based on WG29
- 3: Heights based on mean sea level
- 4: Contours shown at 0,20m intervals
- 5: All data and measurements to be checked on site prior to commencement of work.
- 6: Only visible services and structures were surveyed



					DESIGNED	A. JUWALAL	PHYSICAL ADDRESS:		H. FUYANA (REGISTRATION NO.: 201670323)	SIGNATURE: _____	PHYSICAL ADDRESS:	 GREATER KOKSTAD MUNICIPALITY (PRODUCE OF KWAZULU-NATAL)	POSTAL ADDRESS:	KOKSTAD LOCAL MUNICIPALITY UPGRADE OF SHAYAMOYA ROADS : PHASE 2 ROAD 3: LAYOUT PLAN, LONGITUDINAL SECTION, CROSS SECTIONS AND SETTING OUT DATA	SCALE: AS SHOWN	CONTRACT No. GKM 30-23/24					
				CHECKED	H. FUYANA	18 YORK ROAD KOKSTAD 3610	18 HOPE STREET KOKSTAD 4700				PO BOX 8 KOKSTAD 4700		SHEET OF 1 1		PROJECT No. K068.2						
				DRAWN	A. JUWALAL																
				CHECKED	H. FUYANA																
T	ISSUED FOR TENDER	22/11/2023	T.GOOLI	H. FUYANA	PROJECT ENGINEER	HLOSOKUHLE FUYANA	TEL: (031) 764 2763 FAX: (086) 542 4084 e-mail: admin@fmaengineers.co.za													DRAWING No.	K068.2-R0T-103
△	DESCRIPTION OF REVISION(S)	DATE	CHECKED	APPROVED	REGISTRATION NO.:	201670323										ON BEHALF OF CLIENT: NAME: _____				REVISION	T

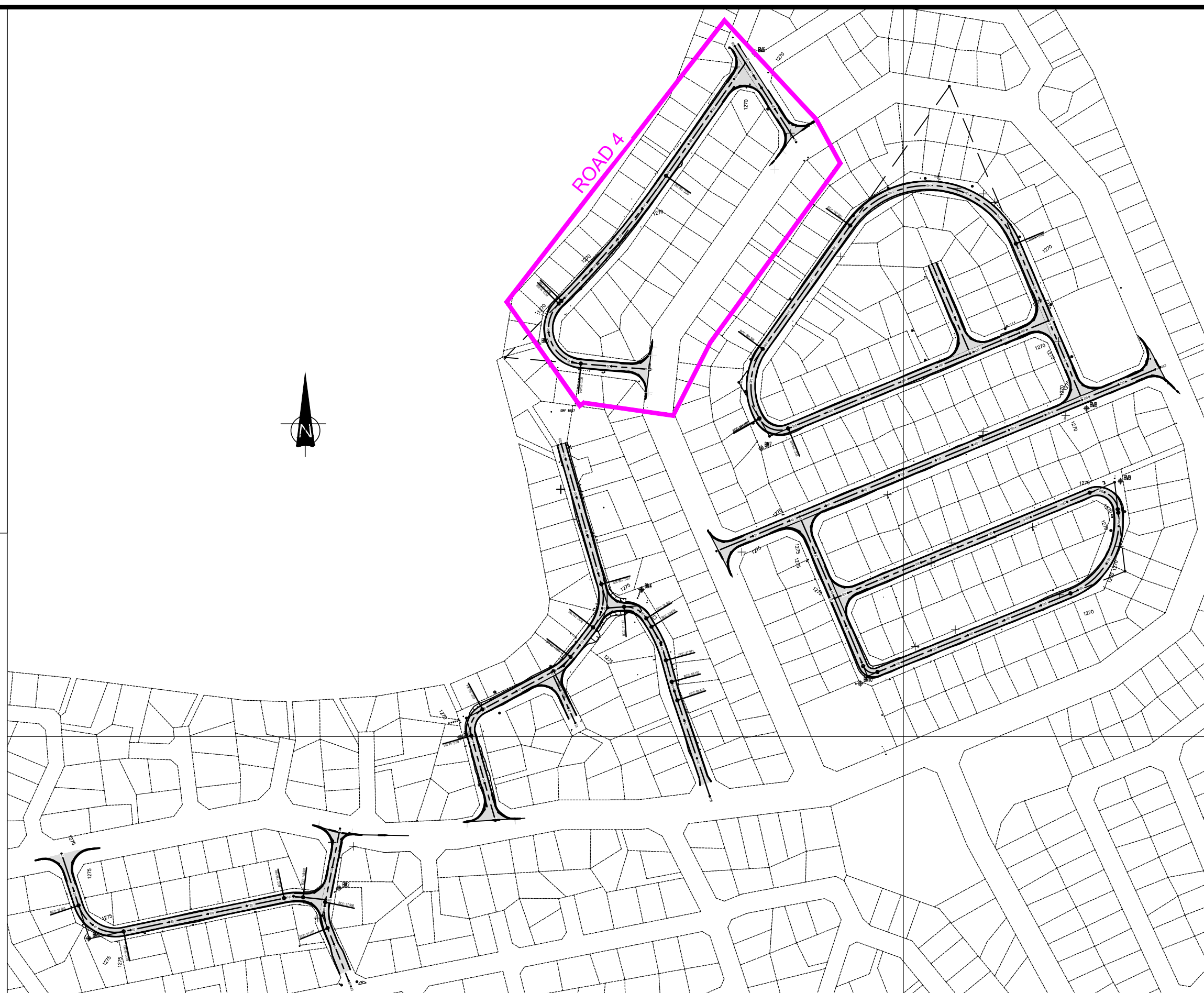


LAYOUT PLAN - ROAD 4
SCALE 1:1000

1. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKET PIPE, CLASS 1000 ON CLASS "C" BEDDING AND BACKFILL, UNLESS OTHERWISE INDICATED ON THE LONGITUDINAL SECTIONS.
2. STORMWATER MANHOLES TO BE IN FACE OR IN/EX BULK, AS PER CITY ENGINEER'S STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
3. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
4. LEVELS OF ALL LAID PIPES TO BE CHECKED BY ENGINEER BEFORE BACKFILLING.
5. CONTRACTOR IS TO ENSURE THAT THE NECESSARY PROVISIONS ARE MADE TO ENSURE THE PROTECTION OF EXISTING UTILITIES AT ALL TIMES.
6. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD. AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
7. EXISTING WATERMAIN IS TO BE PROVED AND ALL DETAILS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF EXTENSION OF CULVERTS.

BENCH MARKS				
16mm Iron Pegs in Concrete				
WGS84 Lo 29				
BM1	-42988.461	3380701.938	1275.424	
BM2	-43114.843	3380676.555	1273.650	
BM3	-43176.074	3380680.375	1270.537	
BM4	-43267.576	3380525.681	1275.205	
BM5	-43215.447	3380401.736	1271.224	
BM6	-43234.786	3380254.827	1269.777	
BM7	-43328.104	3380544.235	1274.439	
BM8	-43502.673	3380343.150	1269.527	
BM9	-43509.633	3380470.993	1269.394	
BM10	-43378.148	3380573.214	1269.487	

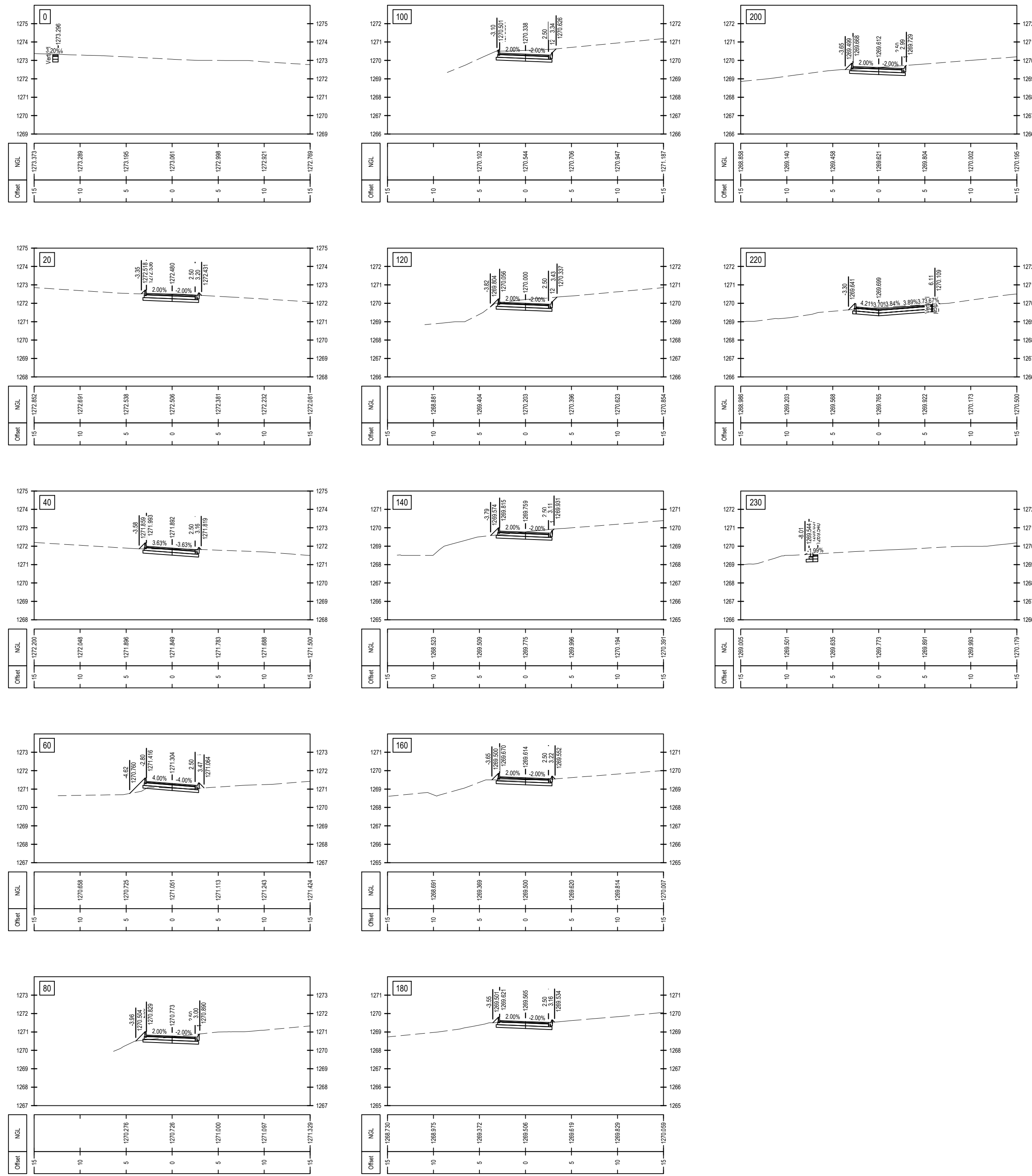
- 1: All heights and measurements given in metres
- 2: Survey based on WG29
- 3: Heights based on mean sea level
- 4: Contours shown at 0,20m intervals
- 5: All data and measurements to be checked on site prior to commencement of work.
- 6: Only visible services and structures were surveyed



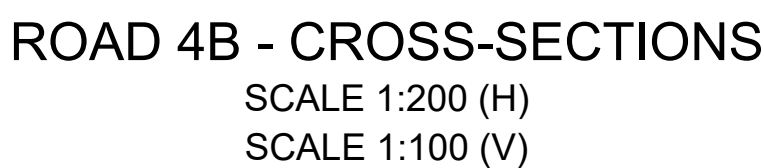
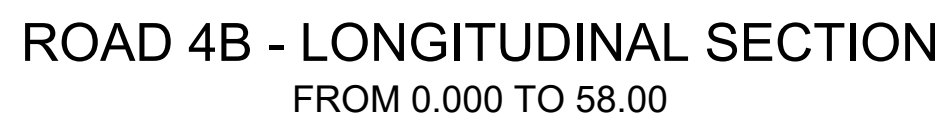
KEY PLAN
1:2000

SETTING OUT DATA-Road 4				
NAME	CH	Y	X	DETAILS
START	0.000	-43 272.309	3 380 414.590	L 35.414m
BCC PI ECC	35.414 75.666	-43 272.018 -43 198.855 -43 225.870	3 380 411.638 3 380 408.449 3 380 381.321	R 17.816m DA 130°03'20" TL 38.265m L 40.442m
BCC PI ECC	77.788 100.253	-43 227.232 -43 256.376 -43 280.134	3 380 379.951 3 380 350.643 3 380 316.821	R 484.515m DA 4°45'10" TL 41.533m L 82.465m
END	77.788	-43 227.232	3 380 379.951	L 1.932m
END	229.971	-33 320.209	3 380 259.771	L 69.718m

SETTING OUT DATA-Road 4b				
NAME	CH	Y	X	LENGTH (m)
START	32.528	-43 328.303	3 380 272.370	25.119
END	57.645	-43 314.726	3 380 251.237	



ROAD 4 - CROSS-SECTIONS
SCALE 1:200 (H)
SCALE 1:100 (V)



						DESIGNED	A. JUWLAL
						CHECKED	H. FUYANA
						DRAWN	A. JUWLAL
						CHECKED	H. FUYANA
T	ISSUED FOR TENDER	22/11/2023	T.GQOLI	H. FUYANA		PROJECT ENGINEER	HLOSOKUHLU FUYANA
△	DESCRIPTION OF REVISION(S)	DATE	CHECKED	APPROVED		REGISTRATION NO.:	201670323

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H. FUYANA
(REGISTRATION NO.: 201670323)

PHYSICAL ADDRESS
75 HOPE STREET
KOKSTAD
4700

TEL: (039) 797 6600

ON BEHALF OF CLIENT: NAME:



**GREATER
KOKSTAD
MUNICIPALITY**
PROVINCE OF KWAZULU NATAL

POSTAL ADDRESS:
PO BOX 8
KOKSTAD
4700

URE:

PROJECT/DRAWING TITLE
KOKSTAD LOCAL MUNICIPALITY

UPGRADE OF SHAYAMOYA ROADS : PHASE 2

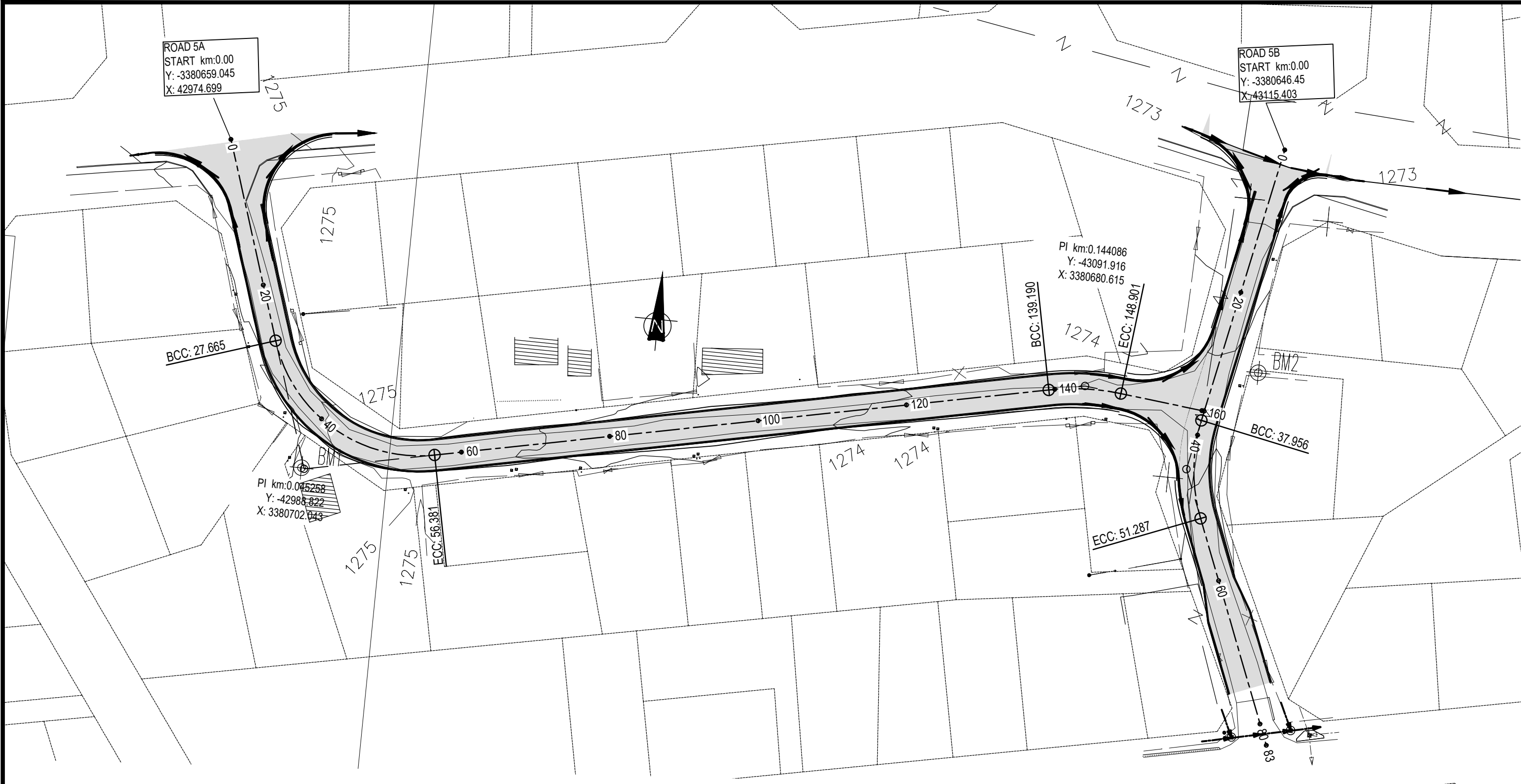
ROAD 4: LAYOUT PLAN, LONGITUDINAL SECTION, CROSS SECTIONS AND SETTING OUT DATA

SCALE: AS SHOWN	CONTRACT No. GKM 30-23/24

SHEET	OF	PROJECT No.
1	1	K068.2

DRAWING No.	K068.2-R0T-10

REVISION	T



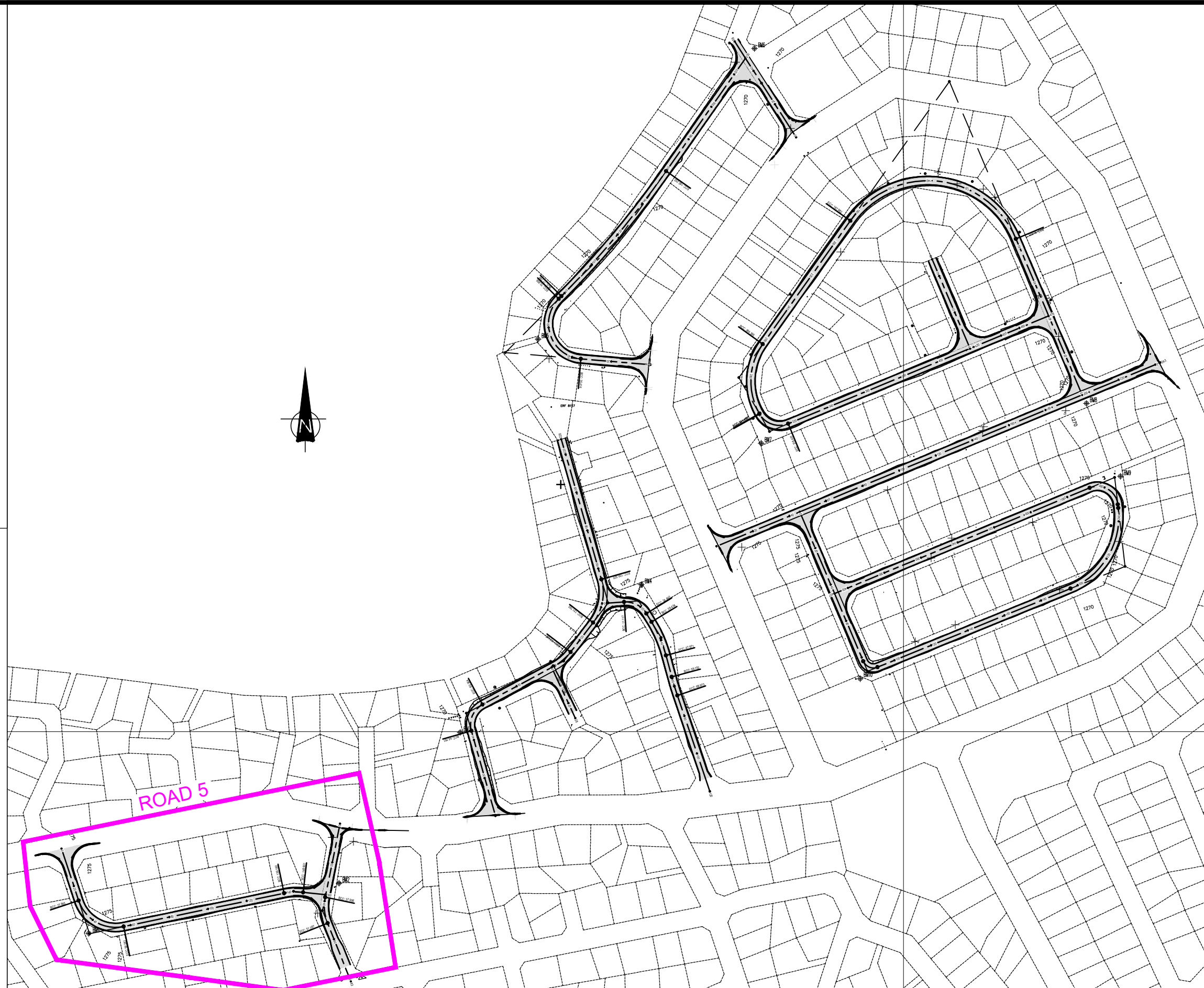
LAYOUT PLAN - ROAD 5
SCALE 1:1000

SETTING OUT DATA-Road 5a				
NAME	CH	Y	X	DETAILS
START	0.000	-42 974.699	3 380 659.045	L 27.665m
BCC1	27.665	-42 983.332	3 380 685.329	R 19.890m DA 83°33'30"
PI1		-42 988.822	3 380 702.343	TL 17.592m
ECC1	56.381	-43 006.046	3 380 696.463	AL 28.776m
BCC2	139.190	-43 087.123	3 380 681.811	R 31.017m
PI2		-43 091.916	3 380 680.015	DA 17°56'20"
ECC2	149.901	-43 096.763	3 380 681.143	TL 4.896m AL 9.711m
START	139.190	-43 087.123	3 380 681.811	L 82.809m
END	139.190	-43 087.123	3 380 681.811	L 82.809m
END	160.329	-43 108.144	3 380 682.377	L 11.427m

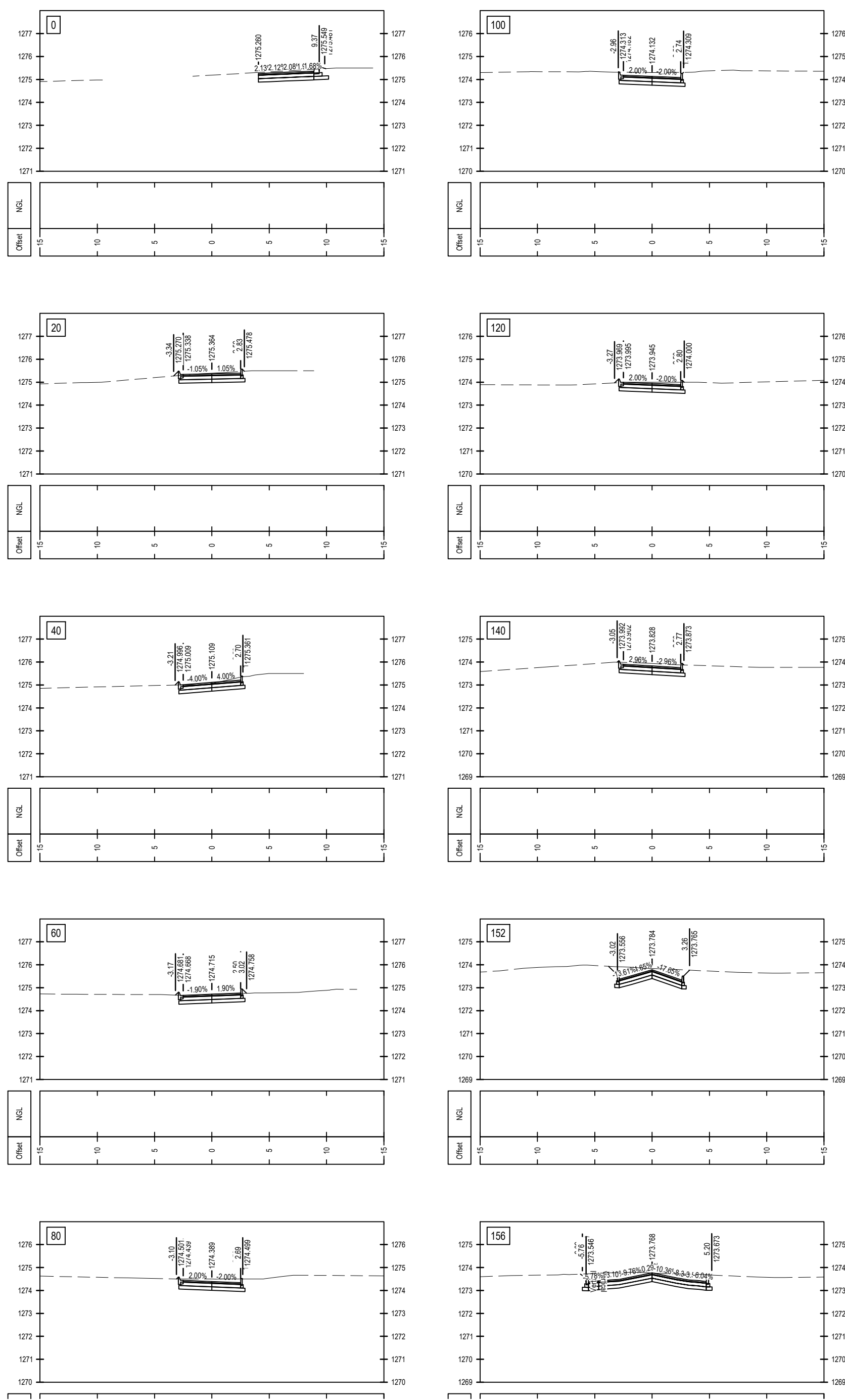
SETTING OUT DATA-Road 5b				
NAME	CH	Y	X	DETAILS
START	0.000	-43 115.403	3 380 646.450	L 37.856m
BCC	37.856	-43 107.885	3 380 683.654	R 22.963m
PI		-43 106.527	3 380 680.377	DA 33°14'00"
ECC	51.287	-43 109.075	3 380 696.745	TL 6.898m AL 13.331m
END	82.988	-43 120.854	3 380 726.177	L 31.701m

BENCH MARKS 16mm Iron Pegs in Concrete WGS84 Lo Z9			
BM1	-42988.461	3380701.936	1275.424
BM2	-43114.843	3380676.555	1273.650
BM3	-43176.074	3380600.375	1270.537
BM4	-43267.576	3380625.681	1275.205
BM5	-43215.447	3380401.736	1271.224
BM6	-43324.786	3380254.827	1269.777
BM7	-43328.104	3380454.235	1274.339
BM8	-43402.476	3380434.150	1269.527
BM9	-43509.633	3380470.993	1269.394
BM10	-43378.148	3380573.214	1269.467

- 1: All heights and measurements given in metres.
- 2: Survey based on WG29
- 3: Heights based on mean sea level
- 4: Contours shown at 0.20m intervals
- 5: All data and measurements to be checked on site prior to commencement of work.
- 6: Only visible services and structures were surveyed



KEY PLAN
1:2000



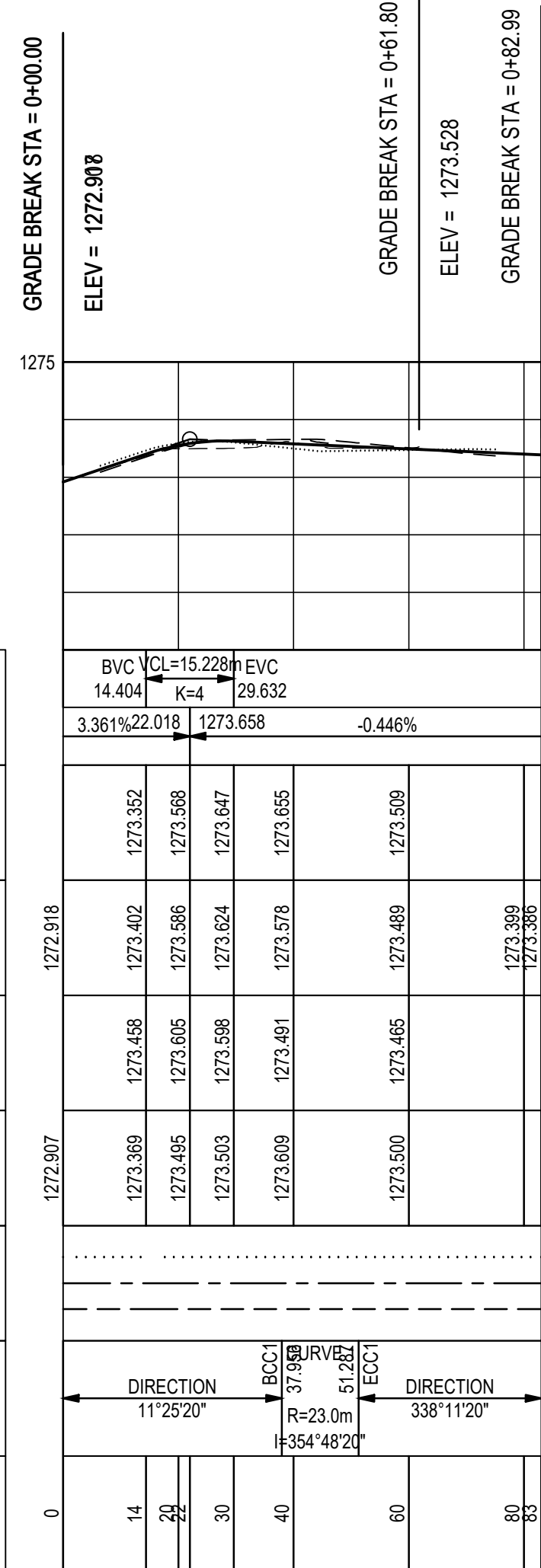
ROAD 5A - CROSS-SECTIONS
SCALE 1:200 (H)
SCALE 1:100 (V)

NGL ---
ROAD ---

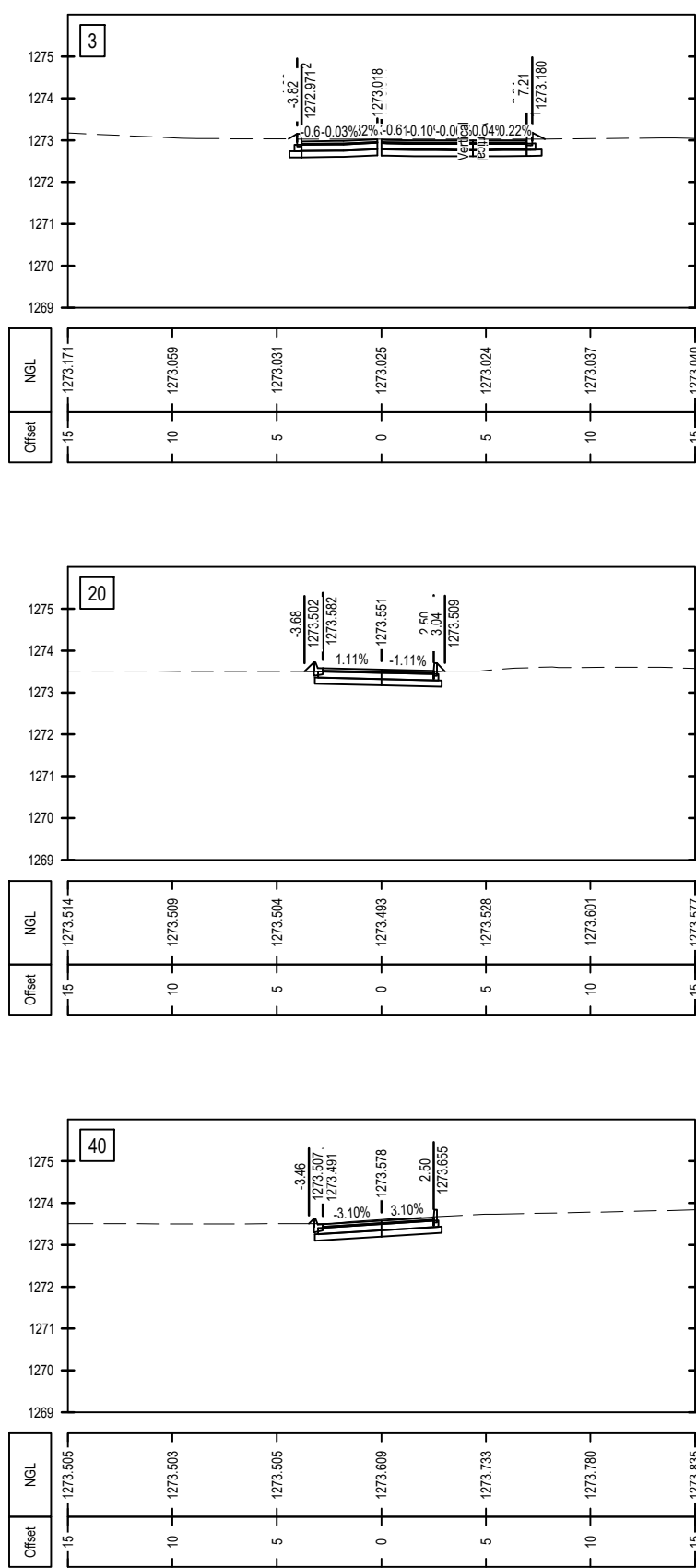
SCALES:
Horizontal 1:1000
Vertical 1:100

DATUM 1270.000

VERTICAL PROFILE GRADES	
FINAL DESIGN ROAD LEVELS	LEFT EDGE (HL)
	CENTRE LINE (CL)
	RIGHT EDGE (HR)
GROUND LEVELS ON CL	
SUPERELEVATION	
HORIZONTAL ALIGNMENT	
DISTANCE (m)	



ROAD 5B - LONGITUDINAL SECTION
FROM 0.000 TO 83.00



ROAD 5B - CROSS-SECTIONS
SCALE 1:200 (H)
SCALE 1:100 (V)

T	ISSUED FOR TENDER	22/11/2023	T.GOOI	H. FUYANA	
△	DESCRIPTION OF REVISION(S)	DATE	CHECKED	APPROVED	

DESIGNED	A. JUWAL
CHECKED	H. FUYANA
DRAWN	A. JUWAL
CHECKED	H. FUYANA
PROJECT ENGINEER	HLOSOUKHLE FUYANA
REGISTRATION NO.:	201670323

PHYSICAL ADDRESS:
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GILLITTS
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TEL: (031) 764 2763
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e-mail: admin@fmaengineers.co.za



H. FUYANA
(REGISTRATION NO.: 201670323)

SIGNATURE:

PHYSICAL ADDRESS:
75 HOPE STREET
KOKSTAD
4700

TEL: (039) 797 6600

ON BEHALF OF CLIENT: NAME:



GREATER
KOKSTAD
MUNICIPALITY
REPUBLIC OF SOUTH AFRICA

POSTAL ADDRESS:
PO BOX 8
KOKSTAD
4700

SIGNATURE:

PROJECT/DRAWING TITLE	
KOKSTAD LOCAL MUNICIPALITY UPGRADE OF SHAYAMOYA ROADS : PHASE 2 ROAD 5: LAYOUT PLAN, LONGITUDINAL SECTION, CROSS SECTIONS AND SETTING OUT DATA	

SCALE: AS SHOWN	CONTRACT No. GKM 30-23/24
SHEET 1	OF 1
DRAWING No.	PROJECT No. K068.2
REVISION	T



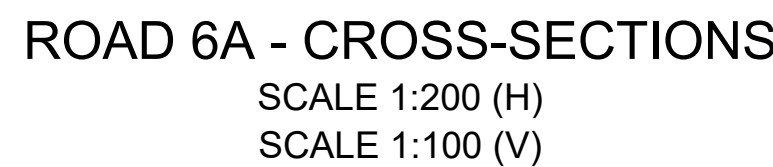
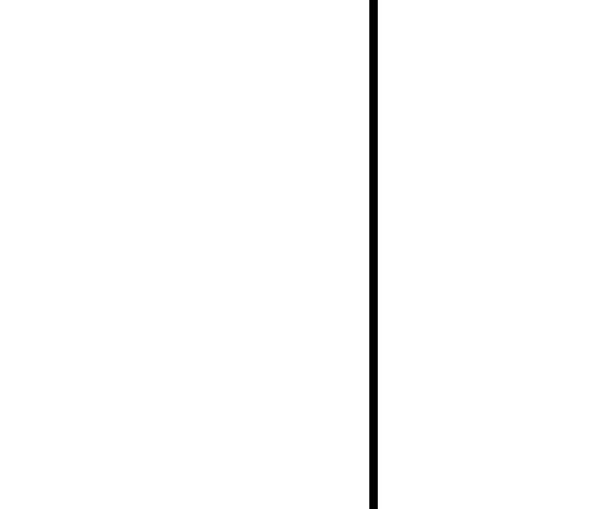
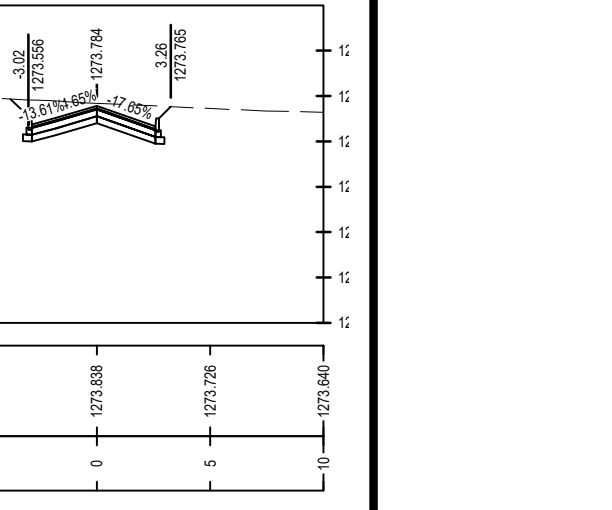
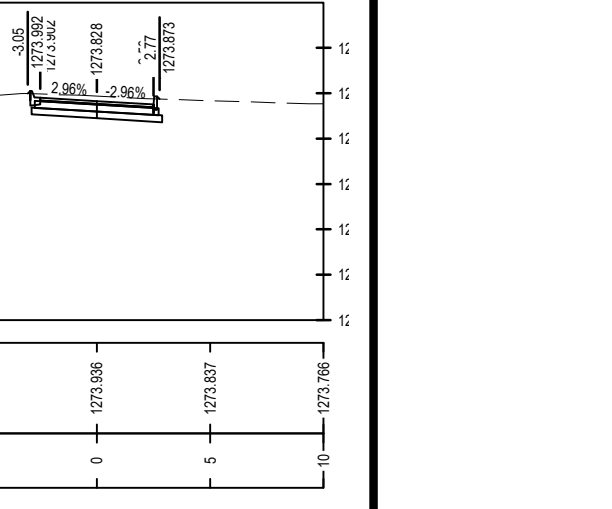
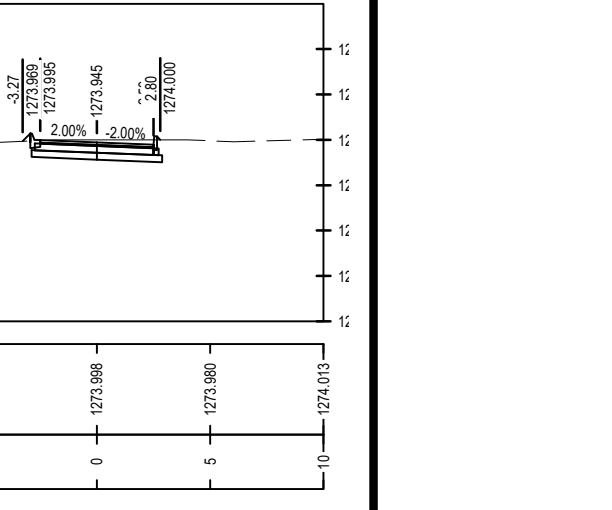
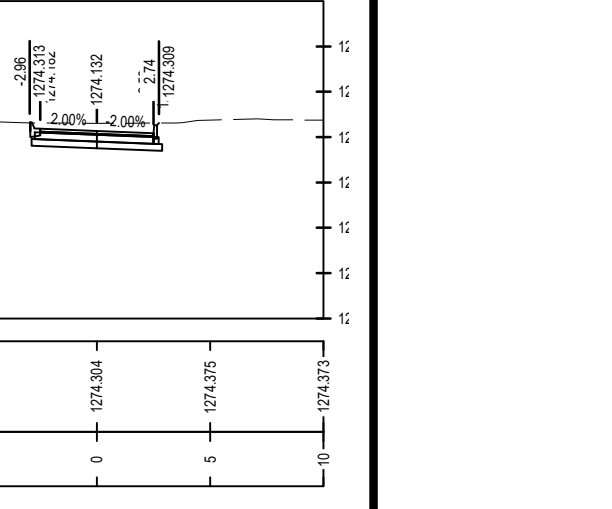
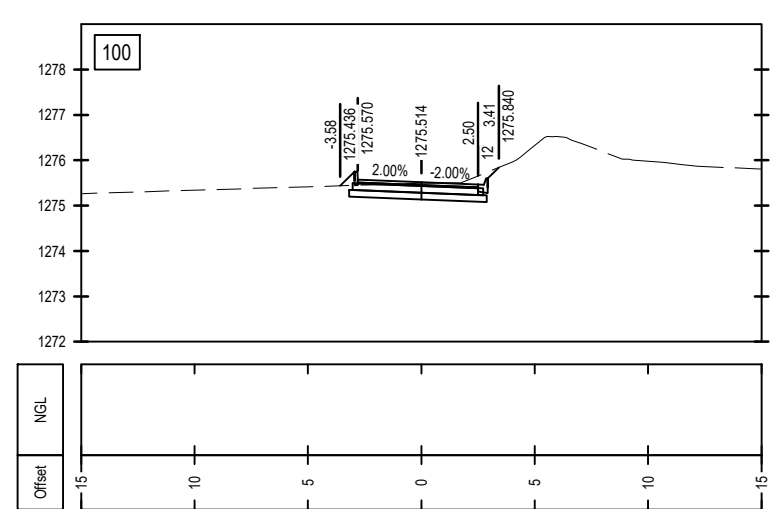
1. ALL STORMWATER MAINS ARE PRECAST CONCRETE SPIGOT AND SOCKET PIPES, CLASS 1000 ON CLASS "C" BEDDING AND BACKFILL UNLESS OTHERWISE INDICATED ON THE GEOTECHNICAL SECTIONS.
2. STORMWATER MAINS SHALL BE 15% FREEBOARD, AS PER CITY ENGINEERS' STANDARDS. TYPE A MANHOLES TO BE CONSTRUCTED.
3. CONTRACTOR MUST CHECK EXISTING SEWER AND STORMWATER PIPE LEVELS AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ANY DEVIATIONS OVER 20MM FROM PLAN TO THE ENGINEER IMMEDIATELY.
4. ALL EXISTING STORMWATER MAINS TO BE CHECKED FOR DEPTH AND BACKFILLING.
5. CONTRACTOR IS TO ENSURE ALL NECESSARY PRELIMINARY WORK IS MADE TO ENSURE THAT EXISTING SERVICES ARE PROTECTED AT ALL TIMES.
6. ALL NORMAL EARTHWORKS TO BE COMPACTED TO 93% MOD. AASHTO OR AS DIRECTED BY ENGINEER ON SITE.
7. EXISTING CURBS, SIDEWALKS, DRIVEWAYS AND ALL DETAILS ARE TO BE PROTECTED TO THE DEEPEST REPAIR TO COMMENCEMENT OF EXCAVATIONS OF CURB.

- 1: All heights and measurements given in metres
- 2: Survey based on WG29
- 3: Heights based on mean sea level
- 4: Contours shown at 0.20m intervals
- 5: All data and measurements to be checked on site prior to commencement of work.
- 6: Only visible services and structures were surveyed



SETTING OUT DATA-Road 6b				
NAME	CH	Y	X	LENGTH (m)
START	0.000	-43 222.283	3 380 567.562	28.286
END	28.286	-43 234.290	3 380 593.173	

SETTING OUT DATA-Road 6				
NAME	CH	Y	X	DETAILS
START	0.000	+43 193.649	330 642.642	1.44 761.01
BOC	44.661	+41 161.719	330 589.585	R 1:512m T 1:750m
EC	67.364	+41 170.187	330 589.072	T 1:750m A 1:630m
		+41 167.352	330 586.293	
BOC	101.090	+42 223.244	330 567.040	R 2:851m
EC	112.448	+42 228.333	330 564.317	T 2:410m T 1:570m
		+42 231.851	330 550.736	
START	101.090	+42 223.244	330 567.040	L 4:02 721m
END	101.090	+42 223.244	330 567.040	L 4:02 721m
	131.193	+43 243.255	330 544.884	R 1:748m T 2:325m
		+43 259.858	330 534.963	T 2:460m A 1:312m
EC	154.320	+43 247.422	330 502.982	
	131.193	+43 243.255	330 544.884	R 1:725m
	131.193	+43 243.255	330 544.884	R 1:725m
END	229.912	+42 227.165	330 452.232	T 1:550m



SCALE: AS SHOWN		CONTRACT No. GKM 30-23/24
SHEET 1	OF 1	PROJECT No. K068.2
DRAWING No.		K068.2-R0T-106
REVISION		T